CALIFORNIA ENVIRONMENTAL QUALITY ACT

DRAFT
INITIAL STUDY AND
MITIGATED NEGATIVE DECLARATION
FOR
LOOKOUT PEAK TRAIL PROJECT

City of Ukiah
COMMUNITY DEVELOPMENT DEPARTMENT

July 3, 2025
SCH No: XXXXXXXXX

Prepared by:

City of Ukiah
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NOTICE REGARDING UPDATED ENVIRONMENTAL ANALYSIS AND PROJECT REVISIONS FOR THE LOOKOUT PEAK TRAIL PROJECT

This Initial Study/Mitigated Negative Declaration (ISMND), originally released on July 3, 2025, has been substantially updated following the public review period and in direct response to comments received from various stakeholders, particularly the Ukiah Valley Fire Authority (UVFA). These updates reflect a more comprehensive environmental analysis of the Project, now explicitly including the ongoing implementation of the Western Hills Watershed Protection Area (WHWPA) Road and Fire Break Maintenance Plan (**Attachment G**), and new Mitigation Measures PS-1 and PS-2, which were refined based on agency and public input.

Furthermore, the Project scope itself has been revised to directly address community concerns. These revisions include the elimination of the second proposed trailhead on Helen Avenue, the realignment of trail #101 to enhance privacy for adjacent residences, and the proposed painting of parking space delineators on Helen Avenue to improve parking availability. These project revisions and comprehensive mitigation measures serve to clarify, amplify, and further mitigate potential impacts, ensuring all potential environmental impacts are reduced to a less-than-significant level. Accordingly, these updates do not identify new significant environmental impacts or a substantial increase in the severity of previously identified impacts that would necessitate recirculation of this document under the California Environmental Quality Act (CEQA).

The full updated document is available for review at: https://cityofukiah.com/lookout-peak-trails/

I. PROJECT INFORMATION

Project Title:

Lookout Peak Trails

Lead Agency Address and Phone Number:

City of Ukiah
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Ukiah, California 95482
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Project Location: The trail would be located on a City-owned parcel located in the City on Ukiah's Western Hills Watershed Protection Area

General Plan Designation: Public (P)
Zoning District: Public Facilities (PF)

II. PROJECT DESCRIPTION

1. Project Location

The project is located in the City of Ukiah approximately 100 miles north of San Francisco. The approximately 760-acre project site is situated to the immediate west of the City of Ukiah in the City's Western Hills Watershed Protection Area (WHWPA). **Figure 1** below provides a location map for the WHWPA. Photographs of the existing site and conditions are included as **Attachment A**.

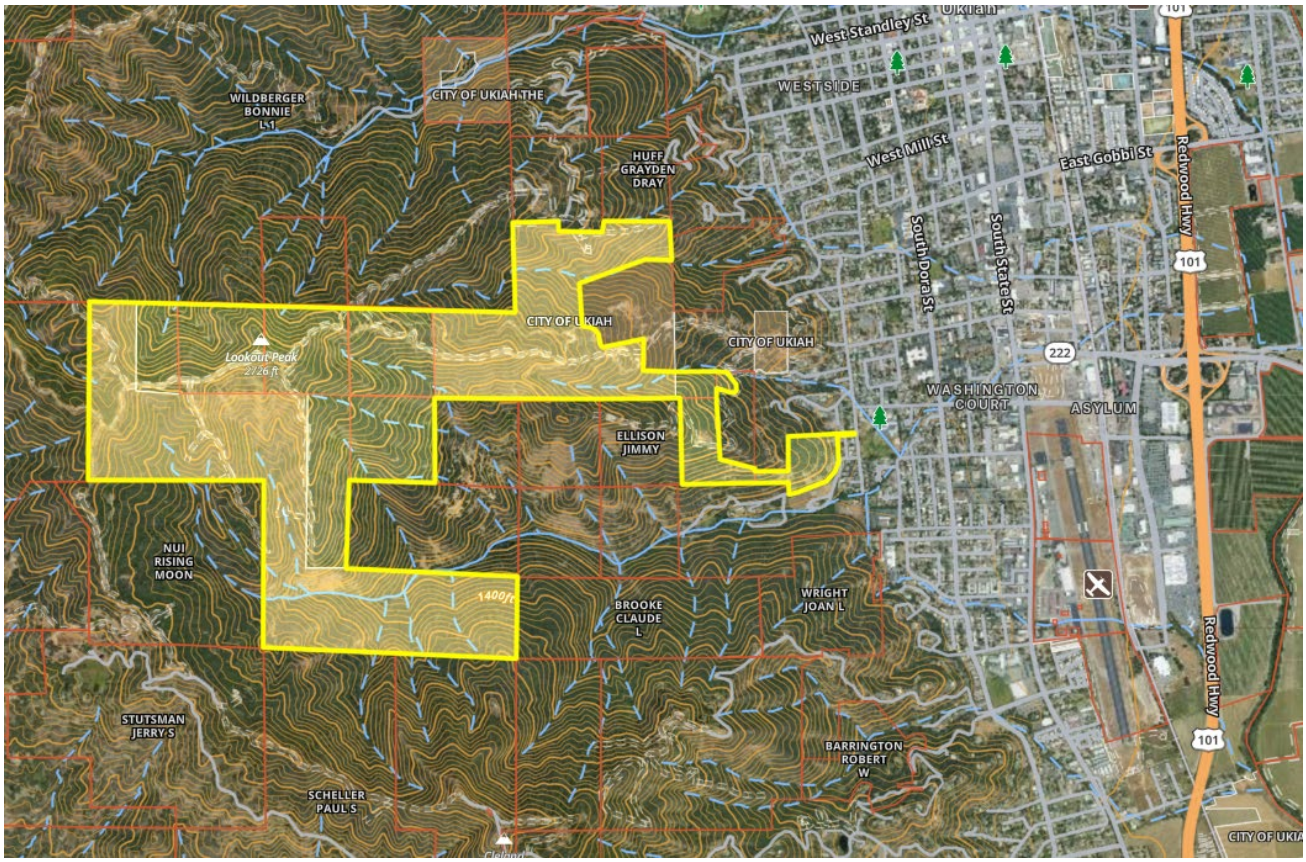


Figure 1, Project Location; City of Ukiah Western Hills Watershed Protection area in yellow.

2. Environmental Setting

The Project area is situated within the Coast Range geologic province. The North Coast Range is comprised of a geologic feature unique to California, the Franciscan Formation, which dictates the vegetative communities. The Franciscan Formation is comprised of serpentine, sandstone, and other sedimentary rocks. This area is characterized by a Mediterranean climate; the winters are cool and wet, and the summers are hot and dry. Annual average temperatures for this region range from about 30 to 100 degrees Fahrenheit.

The Project is located within the Ukiah Valley in central Mendocino County. The Ukiah Valley is located approximately 30 miles east and inland from the Pacific Ocean. It runs north-south for approximately

nine miles, with a maximum width of three miles, with elevations varying from approximately 600-feet above mean sea level up to approximately 3,000 feet in the hills surrounding the city, including the Western Hills. The Russian River enters the valley at the north end and runs south along the valley floor. The City of Ukiah is located along the Highway 101 corridor and near the east/west intersection of Highway 20, two hours north of the Golden Gate Bridge. Incorporated in 1876, Ukiah is the county seat and largest city in Mendocino County.

Vegetation communities in the area include mixed oak, isolated and sparse redwood and Douglas fir forest stands, chaparral, and manzanita. The project will create a trail system of approximately twenty-two miles. Trails will be predominantly under a substantial tree canopy cover or hidden by high chamise rendering it invisible from the valley floor. The project area includes ridge roads and a one acre area that was used as a cannabis grow site but is otherwise substantially native and undisturbed which will be restored as part of the project. The southern portion of the project area drains to the class I Doolin Creek, and the northern area drains to two un-named class III drainages.

3. Background

A series of three sequential Lot Line Adjustments were recorded over the last year, resulting in the current parcel configuration (**Figure 2**), approved by the City Engineer on January 24, 2025. **Attachment B** includes the Final Recorded Map and analogous Quitclaim Deed

An existing road, installed in the 1960's, climbs from the end of Redwood Ave directly up the spine of the ridge for two and a half miles to the western edge of the property. The road was improved in 2015-2017 and the lower section is now paved as it crosses private property for approximately three quarters of a mile. The City of Ukiah holds an access easement across this property for city staff and maintenance access. Approximately 300 yards up the private portion of Redwood Avenue, a half-mile-long spur road provides access to the south. A previous owner of this portion of the property cleared and levelled a one-acre area for cannabis cultivation. Remnants of the grow site remain including footings from a "grow house." The cannabis grow site will be cleaned and restored as part of the project. A variety of fire breaks and roads extend parallel and perpendicular to the main road adding 2.5 miles to the system for a total of five and a half miles of roads and firebreaks on the site.

Public access to the trail system will be from a single trailhead on Doolin Canyon Road.

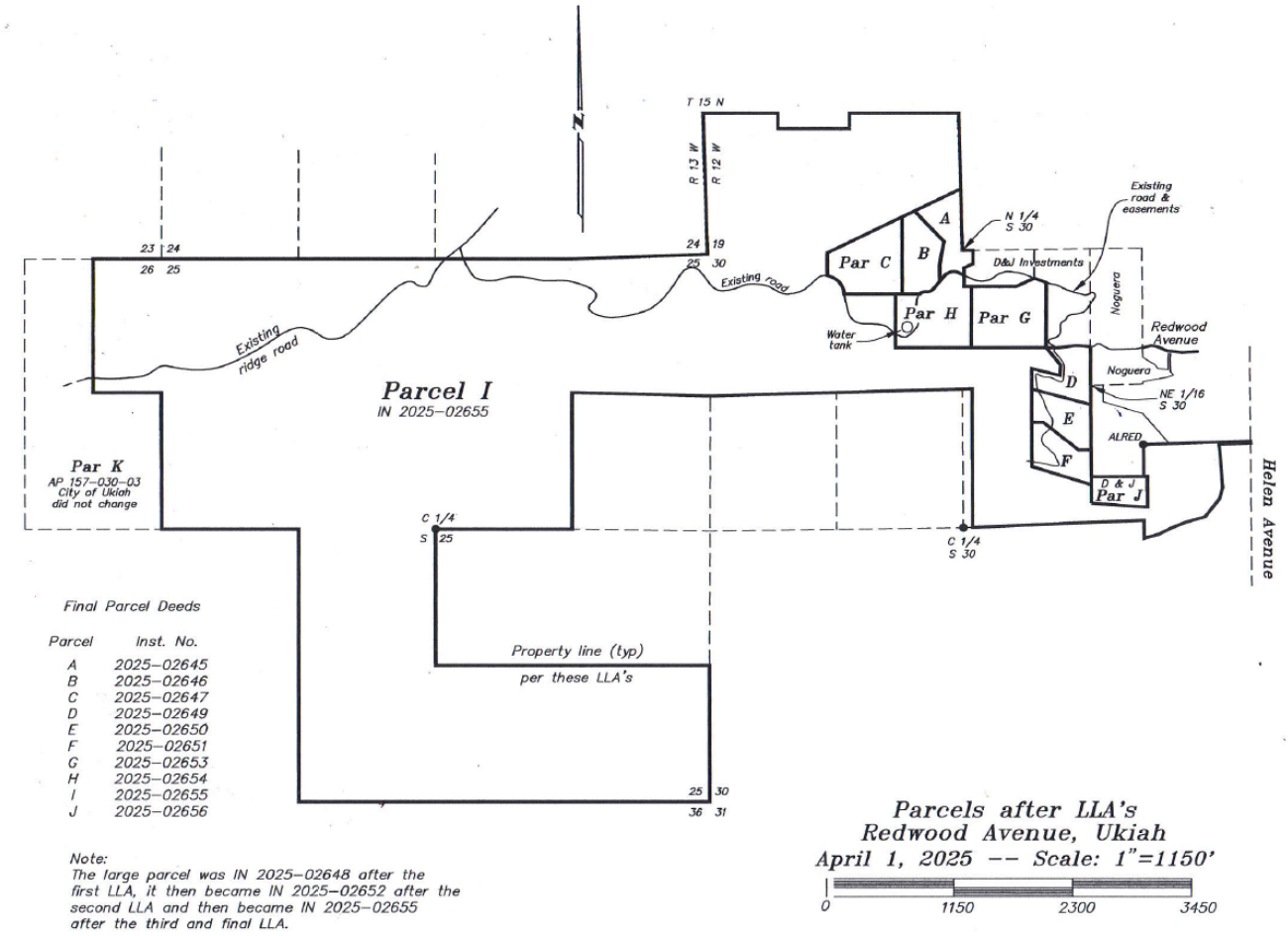


Figure 2, Lot Line Adjustment; File No. LLA25-000003 Parcel I (Inst. No. 2025-02655)

The use of the WHWPA is governed by the City's Western Hills Watershed Protection Area Management Plan (Adopted, 2023). Recreational non-motorized trails are an allowed use per the Plan.

The proposed trail routes and design (**Figure 2**) were established by *Rock Solid Trail Contracting* and Jon Schubbe Consulting. Additionally, the routes have been reviewed and approved by the Ukiah Valley Trail Group (UVTG), a volunteer non-profit organization dedicated to preserving, enhancing, and establishing trails in the Inland of Mendocino County. UVTG staff and volunteers have extensive experience in trail design, building, and maintenance and will build and maintain the trails.

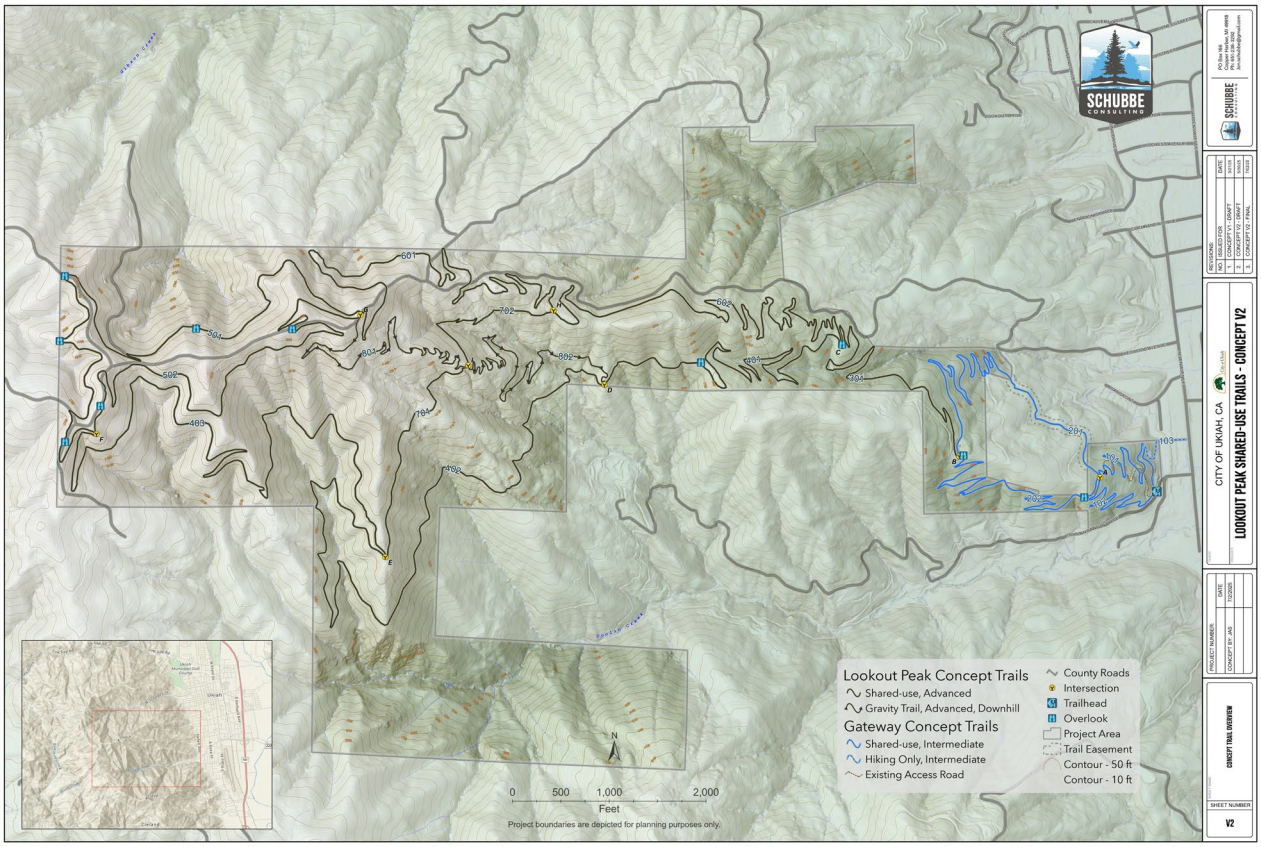


Figure 3, Concept Trail Plan (Attachment I)

4 Project Components

The Project proposes the development of a passive use public access trail system for hiking, mountain biking, and access to nature. GIS mapping of the trail system has been completed and is represented in Figure 2. The concept trail alignments were created by Jon Schubbe Consulting. The alignments were informed by onsite evaluations and scoping followed by computer assisted layout design. As a direct revision in response to public comment, the trail system will now be accessed exclusively from a single trailhead located at the bottom of Doolin Canyon Road, with the previously proposed second trailhead on Helen Avenue eliminated. Additionally, trail #103 has been eliminated from the plan, and Ukiah Valley Trail Group (UVTG) trail designers have realigned trail #101 to place the trail as high as possible above neighboring houses. With this new alignment, trail #101 is expected to be more than 150 feet away from, and fifty feet in elevation above, the nearest neighboring houses, significantly enhancing privacy for adjacent residences.

The trail system provides a “Stacked Loop” design allowing users a wide variety of options with up to 22 miles of trails. The system lays out approximately four miles of trail in the “Gateway” area and an additional eighteen miles of trails in the Lookout Peak area. The Gateway area will provide two small loops identified on the map as the 100 and 200 series segments that are expected to see the most use. A single out and back trail (segment 301) will connect the Gateway area (lower loops) to the upper loops of the Lookout Peak area (400 500, 600, 700, and 800 series segments). The 600 through 800 segments will create three loops with a mountain bike downhill-only trail bisecting two of the upper

loops **(Figure 3).** The top loop will circumnavigate the upper extent of the property and provide 360-degree views of three different watersheds. Additionally, the Lookout Peak area trails will provide multiple interfaces with existing truck roads providing additional options for users who care to experience the roads.

At the top of the Gateway area at the intersection of trail segments 201, 202, and 301 (Intersection B in Figure 2) there is a one-acre flat area that was created by a previous owner for a Cannabis grow site **(Figure 4).** The concrete footings and galvanized steel poles remain from a cannabis "grow house." This project will remove these footings and any remaining detritus and restore the area with native plants. Restoration will be provided by Ukiah Valley Trail Group staff, volunteers, and or contractors with consultation from subject matter experts and informed by the City of Ukiah's Native Plant Palette (**Attachment C**)



Figure 4, Remnants of Cannabis Grow Site

The trails will be built in accordance with the UVTG Design and Maintenance Standards (**Attachment D**) and the Lookout Peak Shared-Use Trails; Concept Plan Review (**Attachment E**). Trail construction will utilize a variety of power and hand tools. Concept trail alignments will be verified on the ground with the assistance of GIS mapping tools to finalize trail alignments and mark the path of construction.

Vegetation and detritus materials will be removed to establish the trail's path and contour. The trail is designed to minimize impacts on this natural vegetation, but the grading required to establish the 2 to 4-foot-wide trail at a relatively even grade will require the removal of groundcover and bushes along its entire length. The initial trail cutting and shaping will utilize a small excavator designed specifically for trail construction. Base cuts will be made to remove the uppermost organic layer and expose base soils while causing minimal disturbances to trailside banks. This method also allows for the construction of a combination of three percent out-slopes, rolling dips, grade reversals, and tapered shoulders that are designed to allow sheet water drainage patterns over the trail to reduce erosion and subsequent maintenance. Finishing and shaping of the trail will utilize a variety of power and hand tools such as power wheelbarrows, vibra-plates, jackhammers, and hand tools.

Trail grades will vary according to topography with average grades of 7 to 8 percent, for the majority of the trails, with some shorter trail sections in the steeper areas reaching approximately 12 percent. Trail stairs may be used in particularly steep sections. However, trail routes will ensure that the average grade for the entirety of the trail does not exceed the 10 percent threshold suggested in the UVTG standards. The proposed trail will run almost entirely beneath a substantial tree canopy cover of natural woodlands consisting mainly of native tree and understory species (see photos in **Attachment A).** In accordance with the UVTG Design and Maintenance Standards, the trail will be 2 to 4 feet wide, back sloped to create an angle of repose and built using a variety of best-practice methods including out sloping and rolling dips to allow sheet water drainage. The proposed trail alignments will not cross or approach Doolin Creek . All construction will follow the UVTG Design and Maintenance Standards intended to reduce erosion. Seasonal and class III drainages and swales will be hardened or spanned with small footbridges with footings outside of the bed and bank of the drainage.

After construction the UVTG will consult with the Ukiah Valley Fire Authority to assess trail segments that may be appropriate for "fire-hardening" (**Attachment F**). A Fire-Hardened Trail is a designated and managed corridor that combines both vegetation management and recreational trails. It is a corridor where the preservation and 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 are similar to shaded fuel breaks and 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.

The proposed trail route and design was established by Rock Solid Construction, Jon Schubbe Consulting, and the UVTG. Trail alignments were selected to maintain consistent slope integrity and to keep disturbances to natural areas at minimal levels. Trimming of encroaching tree branches will be required along portions of the trail. Tree branch pruning, trimming, and root care activities will be limited to those branches and roots that would represent hazards to trail users or cause extensive detours and additional grading for the trail route. The trail crosses a few areas of dense, immature redwood and other trees of less than 6 feet diameter breast height (dbh). Thinning of these small, immature trees will be required to create a trail corridor. Clearing of these dense stands of immature trees will reduce fuel load while leaving many small trees on both sides of the trail for continued growth.

Safe access to the project area, both for trail construction as well as for the potential need for future Search and Rescue operations, will require the roads and fire breaks in the area to be adequately maintained. Road and fire break maintenance will be performed in accordance with the City of Ukiah's WHWPA Road and Firebreak Maintenance Plan (**Attachment G**)

Project funding is expected to come from donations, grants, and UVTG fundraising. Maintenance will be provided by the UVTG in collaboration with the City of Ukiah.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

Purpose of the Initial Environmental Study: This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the Project, as proposed, would have a significant impact upon the environment.

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture & Forestry	☒ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology / Soils	☐ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials
☒ Hydrology/Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☒ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☒ Wildfire	☒ Mandatory Findings of Significance

Summary of Findings: The Project proposes the development of up to 22 miles of narrow-gauge natural surface trail for hiking and mountain biking in the City of Ukiah's Western Hills Watershed Protection Area. Following the public review period for the Initial Study and in direct response to comments received, particularly from the Ukiah Valley Fire Authority (UVFA), the Project has been clarified to explicitly include the ongoing implementation of the WHWPA Road and Fire Break Maintenance Plan (**Attachment G**). This Plan details essential maintenance activities such as vegetation clearing, road work, understory thinning, and dead tree removal for approximately five and a half miles of roads and fire breaks within the Western Hills Watershed Protection Area.

The proposed trail routes and design were established by Rock Solid Trail Construction, John Schubbe Consulting and the Ukiah Valley Trail Group (UVTG) and are designed to maintain consistent slope integrity and keep disturbances to natural areas at minimal levels, built in accordance with the UVTG Design and Maintenance Standards (**Attachment D**).

Without mitigation, the Project (including both trail construction and WHWPA maintenance activities) could potentially have significant negative impacts in the areas of Air Quality, Biological Resources, Hydrology/Water Quality, Hazards and Hazardous Materials, Public Services, and Wildfire. However, with the incorporation of identified mitigation measures, all potential impacts would be reduced to a less-than-significant level.

Environmental Impact Categories Summary:

Aesthetics: The Project, including the narrow trails and maintenance activities, will be predominantly under substantial tree canopy cover or hidden by high chamise, rendering it largely invisible from the valley floor. The trails themselves are part of the aesthetic experience trail users seek. As such, the project will have no significant impact on Aesthetics.

Agriculture & Forestry Resources: The Project site does not contain Unique Farmland, or Farmland of Statewide Importance, and is not subject to agricultural zoning or Williamson Act contracts. No forest land will be lost, and the Project does not involve changes that would result in the conversion of agricultural or forest land to non-agricultural or non-forest uses. No impact would occur.

Air Quality: Trail construction will utilize small excavators and power tools. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** includes maintenance activities that involve equipment such as hand crews, dozers, or masticators for vegetation clearing, and grading equipment for road work. These activities have the potential to generate dust and exhaust emissions. However, **Mitigation Measures AQ-1 and AQ-2** (regarding vegetation removal methods and diesel equipment permits, respectively) will be implemented to ensure that construction and ongoing maintenance activities adhere to air quality regulations, resulting in less than significant impacts with mitigation incorporated.

Biological Resources: Both trail construction and WHWPA Road and Fire Break Maintenance activities **(Attachment G)** have the potential to impact special-status wildlife and plant species, as well as sensitive natural communities. A Biological Assessment (**Attachment H**) identified 22 special-status wildlife species with moderate to high potential to occur and anecdotal reports of Redwood Lilies. However, **Mitigation Measures BIO-1** through **BIO-7** (including worker awareness, nesting bird surveys, bat surveys, mammal den surveys, Monarch butterfly surveys, carbon loss replacement, and watercourse protections) will be strictly implemented. Notably, the WHWPA Maintenance Plan itself includes embedded mitigation measures such as conducting nesting bird surveys, avoiding work during Redwood Lily blooming periods, leaving a minimum of 6 "snags" per acre, and adhering to a 50-foot no-work buffer from Class III or higher flow streams. With these comprehensive measures, potential impacts on sensitive biological resources would be reduced to a less than significant level with mitigation incorporated.

Cultural Resources: Records searches and archaeological surveys found no historical or archaeologically significant sites within the project area. The site has a low potential for such resources due to topography. Construction activities will adhere to CEQA Guidelines Section 15064.5 (e-f) for accidental discoveries. All required tribal notifications have been fulfilled. Impacts are anticipated to be less than significant.

Energy: The project does not risk significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation nor does the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Geology / Soils: The Project site is within the Franciscan Complex, generally not known for significant fossil findings at shallow depths. Given the minimal ground disturbance for trail construction and adherence to best practices for road work in the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** to manage erosion, impacts to geology or soils would be less than significant.

Greenhouse Gas Emissions: The project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, nor does it conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Hazards & Hazardous Materials: The Project site is designated as having a "Very High" fire severity risk within a Local Responsibility Area. Temporary construction activities for the trail, as well as the operation of equipment for WHWPA maintenance **(Attachment G)**, could introduce temporary ignition sources. However, **Mitigation Measure HAZ-1** requires fire-safe precautions for gasoline-powered equipment. No hazardous waste sites are present, and the project would not create a safety hazard

related to airport operations. With HAZ-1, impacts would be reduced to less than significant with mitigation incorporated.

Hydrology/Water Quality: The project area contains one Class I and various Class III watercourses. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** includes road work and vegetation clearing activities that could potentially affect water quality. However, the WHWPA Plan explicitly states that "No work will be done under this management plan within 50 feet of a class III or higher flow stream". All road work will be in accord with the *Handbook for Forest, Ranch, & Rural Roads (2015)*. **Mitigation Measure BIO-7** also requires standard erosion and sediment control measures for all earthwork near watercourses. These robust measures ensure impacts associated with erosion, siltation, drainage, and water quality would be less than significant with mitigation.

Land Use / Planning: The Project is consistent with the Ukiah 2040 General Plan and does not divide an established community or interfere with any land use plans. No impact would occur.

Mineral Resources: The project will have no impact on the availability of a known mineral resource.

Noise: Temporary noise and vibration will be generated during trail construction and WHWPA maintenance activities **(Attachment G)**, which involve equipment such as small excavators, dozers, masticators, and chippers. However, due to the temporary, intermittent nature, adherence to City noise ordinances (7:00 a.m. to 7:00 p.m. work hours), and the distance to sensitive receptors, noise impacts would be less than significant.

Population / Housing: The Project would not affect the number of students served by local schools, nor would it increase new residents, thus not requiring expanded school facilities. No impact would occur.

Public Services: The Project, including the new trails, could lead to prolonged, difficult medical responses for injured trail users without mitigation. To address this, **Mitigation Measure PS-1** requires consultation with Ukiah Valley Fire Authority (UVFA) officials prior to construction to incorporate best approaches for search and rescue operations, including medical rescue life-flight landing zones and trail connectors for first responder access. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** further supports this by including maintenance of Medevac Landing Zones and ensuring roads are open for emergency access. Additionally, **Mitigation Measure PS-2** commits the City to develop and implement a Road and Fire Break maintenance schedule utilizing the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** to manage wildfire risk and maintain emergency access. This minimizes the use of City park staff for trail maintenance, as it will be predominantly handled by UVTG volunteers. With these measures, impacts on public services would be less than significant with mitigation incorporated.

Recreation: The Project will provide new recreational opportunities and is consistent with City goals for parks, recreational facilities, and trails. To address public feedback, the Project was revised to feature a single trailhead on Doolin Canyon Road, and parking on Helen Avenue will be optimized with delineators to ensure adequate availability for residents and trail users. No significant impact on recreation would occur.

Transportation: Emergency access would continue to be provided, and **Mitigation Measure PS-1**, supported by the explicit provisions in the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** for maintaining Medevac Landing Zones and assuring safe ingress/egress, ensures efficient emergency response for trail users and the overall WHWPA area. Project revisions, including the elimination of the second trailhead on Helen Avenue, further reduce potential traffic and safety concerns in residential areas. The Project would not create new safety hazards or result in inadequate emergency access. Impacts would be less than significant.

Tribal Cultural Resources: No tribal cultural resources have been identified, and all required tribal notifications have been fulfilled. Impacts are anticipated to be less than significant.

Utilities/Service Systems: The Project will not result in the construction or expansion of utilities, have insufficient water supplies, inadequate wastewater treatment capacity, or exceed solid waste infrastructure capacity. No impact would occur.

Wildfire: The Project site is in a "Very High" fire severity risk area. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** is an integral, proactive component of this Project, specifically designed to reduce inherent wildfire risks by implementing comprehensive fuel modification, road maintenance for emergency access, and maintaining shaded fuel breaks. **Mitigation Measure PS-2** formalizes the implementation of this maintenance schedule. Temporary construction fire risks are mitigated by **HAZ-1**. **Mitigation Measure PS-1** also enhances emergency response capabilities in this high-risk area. With these robust measures, the Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and impacts would be less than significant with mitigation incorporated.

Mandatory Findings of Significance: As described throughout this Initial Study, all potential impacts, including those associated with WHWPA Road and Fire Break Maintenance activities, would be reduced to a less than significant level with mitigation incorporated. The Project does not have the potential to substantially degrade the quality of the environment, substantially reduce habitat, cause populations to drop below self-sustaining levels, threaten plant or animal communities, reduce the range of rare or endangered species, or eliminate important historical/prehistorical examples.

Cumulative Impacts: Cumulative impacts were considered in analyses of Air Quality, Biological Resources, Hydrology/Water Quality, Hazards and Hazardous Materials, Public Services, Noise, and Wildfire. The Proposed Project, including the WHWPA Road and Fire Break Maintenance activities, would have less than significant impacts on these resources with mitigation incorporated. Short-term construction and maintenance impacts would not significantly contribute to cumulative impacts

In summary, based upon the analysis contained within this Initial Study and Mitigated Negative Declaration, all potential impacts resulting from the Lookout Peak Trail Project and the WHWPA Road and Fire Break Maintenance Plan would be less than significant with the incorporation of identified mitigation measures.

IV. DETERMINATION

On the basis of the initial evaluation that follows:

____ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

__X__ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures and project revisions have been identified that would reduce all impacts to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

_____ I find that the proposed Project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT is required.

_____ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

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

Katherine Schaefers

Signature

Katherine Schaefers, Planning Manager
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V. EVALUATION OF ENVIRONMENTAL IMPACTS

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to provide an analysis of the potential environmental consequences as a result of the proposed Project. The environmental evaluation relied on the following categories of impacts, noted as column headings in the IS checklist, in accordance with CEQA Guidelines Appendix G.

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."

"Less Than Significant Impact" applies where the Project would not result in a significant effect (i.e., the Project impact would be less than significant without the need to incorporate mitigation).

"No Impact" applies where the Project would not result in any impact in the category or the category does not apply. This may be because the impact category does not apply to the proposed Project (for instance, the Project Site is not within a surface fault rupture hazard zone), or because of other project-specific factors.

1. Aesthetics

AESTHETICS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

Significance Criteria: Aesthetic impacts would be significant if the Project resulted in the obstruction of any scenic vista open to the public, damage to significant scenic resources within a designated

State scenic highway, substantial degradation to the existing visual character or quality of the site and its surroundings from public views, or generate new sources of light or glare that would adversely affect day or nighttime views in the area, including that which would directly illuminate or reflect upon adjacent property or could be directly seen by motorists or persons residing, working or otherwise situated within sight of the Project.

Environmental Setting: As discussed in the City of Ukiah's 2040 General Plan, one of the most notable scenic resources in the City limits is the Western Hills. The surrounding hills frame the valley, creating an aesthetic resource for residents and visitors. Views of expansive undeveloped hillsides to the north, east and south, within the County jurisdiction, also surround the City. Many open space and scenic areas in Mendocino County are protected under easements managed by land trusts, none of which are located within the vicinity of the Proposed Project. Some surrounding hillsides are densely forested with evergreen trees, while others are relatively open in comparison, dominated by mature oak trees set amid scrub and grasslands. Some residential development is visible within the Western Hills from the valley floor. Water in the form of creeks, streams, and rivers is often a prominent feature in the landscape as well. Protecting the natural scenic features has been a priority for the City of Ukiah.

The Project site consists of an undeveloped parcel immediately west and uphill from Helen Avenue. Jacobszoon & Associates conducted a biological assessment and botanical survey of the area (**Attachment H**) and identified the area as classified under three MCV2 classification systems: (1) Quercus wislizeni-Quercus chrysolepis (shrub) Shrubland Alliance, (2) Arctostaphylos (canescens, manzanita, stanfordiana) Shrubland Alliance, and (3) Pinus sabiniana Woodland. These communities are considered non-sensitive and thus require no special protection. No sensitive biological communities were identified.

Three watercourses flow through the Study Area including Doolin Creek, a Class I watercourse, and two unnamed Class III watercourses. The Class I watercourse is classified by the United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) (Appendix D: Map 7, National Wetlands 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). No trails are planned to cross or provide views of Doolin Creek. Segments 301 and 401will cross class III water courses providing trail users with a seasonal opportunity to view running water.

No special-status species were observed during the biological site assessment. The biological site visit and botanical survey was conducted during the blooming period for the species identified.

Discussion: (a & c) Less than significant impact. Scenic vistas are typically described as areas of natural beauty with features such as topography, watercourses, rock outcrops, and natural vegetation that contribute to the landscape's quality. The Western Hills are considered a scenic vista as viewed from the valley floor. Generally speaking, public views of the Western Hills are available from roadways, and adjacent residential areas within the valley floor. Conversely, expansive views of the valley are provided from vantage points within the Western Hills, particularly from trails such as will become available with the completion of this project.

Almost the entire trail system will be situated beneath the natural forest canopy (see photos in **Attachment A**) and would not be seen from public vantage points. The fairly narrow (2 to 3-foot) proposed trail has been designed to avoid substantial vegetation and tree removal. Although some

vegetation removal will be required, it would not result in a substantial impact to views of the Western Hills, as the trail would not be visible from public vantage points within the valley floor, and the trail would be similar in nature to the existing City View and Sol y Sombra Trails, as well as other trails in the surrounding area. Similarly, impacts associated with the period of trail construction would be considered temporary and minimal. Lastly, the trail would offer vantage points containing views of valuable aesthetic resources. For the aforementioned reasons, the Project would not result in a significant impact to scenic vistas, nor the visual character of the site or area.

(a) Impacts would be **less than significant.**

(b) **No impact.** According to the California Department of Transportation's (Caltrans) State Scenic Highway System Map, there are no designated state scenic highways within the vicinity of the Project. In addition, there are no highways identified as eligible for state designation. Therefore, the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Lastly, the City's General Plan, the County General Plan does not designate any local scenic roads in the Project area; **no impact** to scenic resources within a designated scenic corridor would occur.

(c) No Impact

(d) No impact. Construction would take place during daylight hours and no lighting is proposed along the trail. **No impact** would occur.

Mitigation Measures: None

2. Agriculture and Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Significance Criteria: The Proposed Project would have a potentially significant impact on agricultural resources if it would convert prime farmland to a non-agricultural use, conflict with a Williamson Act contract, or disrupt a viable and locally important agricultural use. The Project would have a potentially significant impact on forestry resources if it would result in the loss, rezoning or conversion of forestland to a non-forest use.

Environmental Setting: Early agricultural efforts in the Ukiah Valley included the raising of livestock, and the growing of various grains, hay, alfalfa, and hops. When the Northwestern Pacific Railroad was completed in 1889; prunes, potatoes, pears, and hops could be grown and sent to San Francisco and other regional markets. Wine grapes were planted, and irrigation was practiced on a small scale. Through the 1950's, hops, pears, prunes and grapes were the most widely planted crops in the Ukiah Valley. After the railroad was completed, lumber mills sprang up in the Ukiah Valley and became the major industry in Mendocino County as trains took redwood logs and processed boards south to the San Francisco region. Today, much of the active agricultural land is located on the valley floor and lower elevations along the Russian River system. Only a limited percentage of the valley's agricultural lands are currently protected under Williamson Act Agricultural Preserve contracts. According to the County of Mendocino's Public GIS system, there are no Williamson Act contracts within the Project site.

There are no zoning districts within the City limits for Agriculture or Timber Preserve. While there is an overlay for agriculture in the Zoning Ordinance, it is not applied over any parcel within the City limits. There are a small number of City parcels which have current agricultural use, such as existing vineyards. However, they are ongoing non-conforming uses within non-agricultural zoning districts. According to the California Department of Conservation Farmland Mapping & Monitoring Program, California Important Farmland Finder, the majority of lands within the City of Ukiah are identified as "Urban Built-Up Land".

Discussion: (a-e) No Impact. According to the California Department of Conservation Farmland Mapping & Monitoring Program, California Important Farmland Finder, the Project site does not contain Unique Farmland, or Farmland of Statewide Importance. The site is zoned Public Facilities, consistent with the Ukiah 2040 General Plan's Public land use designation, which allows for natural resource areas as a typical use. There are no agricultural uses or Williamson Act contracts on-site or in the immediate vicinity. The Project would not convert Farmland, conflict with existing zoning for agriculture or forest land, and would not involve changes to the environment that would result in the conversion of agricultural resources to non-agriculture uses. No impact would occur.

Mitigation Measures: None

3. Air Quality

AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☒	☐	☐

Significance Criteria: The Proposed Project would have a significant impact to air quality if it would conflict with an air quality plan, result in a cumulatively considerable net increase of criteria pollutant which the Mendocino County Air Quality Management District (MCAQMD) has designated as non-attainment, expose sensitive receptors to substantial concentrations of air pollutants, or result in

emissions that create objectionable odors or otherwise adversely affect a substantial number of people.

Environmental Setting: The Project is located within the North Coast Air Basin (NCAB), which includes Del Norte, Humboldt, Trinity, Mendocino, and northern Sonoma Counties, and is under the jurisdiction of the Mendocino County Air Quality Management District (MCAQMD). The area's climate is considered Mediterranean, with warm, dry summers and cooler, wet winters. Summer high temperatures average in the 90's with high temperatures on very warm days exceeding 105 degrees. Summer low temperatures range between 50-60 degrees. Winter high temperatures generally range in the 50's and 60's. The average annual temperature is 58 degrees. Winter cold-air inversions are common in the valley from November to February.

Prevailing winds are generally from the north. Prevailing strong summer winds come from the northwest; however, winds can come from the south and east under certain short-lived conditions. In early autumn, strong, dry offshore winds may occur for several days in a row, which may cause air pollution created in the Sacramento Valley, Santa Rosa Plain, or even San Francisco Bay Area to move into the Ukiah Valley.

The MCAQMD, which includes the City of Ukiah and surrounding areas, is designated as non-attainment for the State Standard for airborne particulate matter less than 10 microns in size (PM^{10}). Particulate matter (PM) has significant documented health effects. The California Clean Air Act requires that any district that does not meet the PM^{10} standard make continuing progress to attain the standard at the earliest practicable date. The primary sources of PM^{10} are wood combustion emissions, fugitive dust from construction projects, automobile emissions and industry. Non-attainment of PM^{10} is most likely to occur during inversions in the winter. Regulation 1 of the MCAQMD contains regulations (known as "Rules") to regulate particulate matter; these Rules prohibit activities that would result in the injury, detriment, or annoyance of a considerable number of people, or which endanger the health and safety of the public.

The MCAQMD also provides the following significance thresholds for construction emissions:

1. 54 pounds per day of ROG (reactive organic gas)
2. 54 pounds per day of NOx (oxides of nitrogen as nitrogen dioxide)
3. 82 pounds per day of PM^{10} (particulate matter less than 10 microns in size)
4. 54 pounds per day of $PM^{2.5}$ (airborne particulate matter with a diameter of 2.5 microns or less)
5. Best Management Practices for Fugitive Dust – PM^{10} and $PM^{2.5}$

Discussion: (a-d) Less than significant with mitigation incorporated. Short-term construction-related air quality impacts from emissions and dust typically result from projects requiring significant grading or new construction, in addition to vehicle trips and operation of diesel equipment. The Lookout Peak Trail Project involves trail construction using small excavators and power tools. In addition, the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)**, which is being reviewed as part of this Project, includes ongoing maintenance activities such as "Clearing of encroaching vegetation with hand crews, dozers, or masticators," "Grading and shaping of the running surface of the road," "Understory Thinning/Brushing," "Piling, Burning," "Chipping/Hauling," and "Dead Tree Removal" [6, WHWPA Road And Fire Break Maintenance Plan.pdf, Proposed Activities, previous conversation]. These activities, which involve heavy equipment and vegetation disturbance, have the potential to generate particulate matter (dust) and exhaust emissions from various types of construction and maintenance equipment.

All such activities, whether for trail construction or ongoing WHWPA maintenance, will adhere to all applicable Mendocino County Air Quality Management District (MCAQMD) regulations, including Best Management Practices (BMPs) for fugitive dust and emissions, to reduce air quality impacts to a less than significant level. Specifically, **Mitigation Measure AQ-1** mandates vegetation removal methods that minimize air pollutants and prohibits burning without appropriate permits. This measure directly applies to the vegetation clearing, thinning, and piling/burning activities specified in the WHWPA Maintenance Plan. **Mitigation Measure AQ-2** requires off-road equipment with diesel engines (such as the dozers and masticators identified in **Attachment G**) to have valid Air Quality permits or state Portable Equipment Registration Program (PERP) Registrations, ensuring equipment meets emissions standards

The nearest sensitive receptors (residences on Helen Ave. and San Jacinto Ave, and Nokomis School approximately 1,000 feet east of the easternmost section of the proposed trail) are sufficiently distant from the majority of project activities. The limited, temporary nature of these activities, combined with strict adherence to Mitigation Measures AQ-1 and AQ-2, ensures that the Project is not anticipated to expose sensitive receptors to substantial pollutant concentrations. The Project would not exceed the construction thresholds established by the MCAQMD, and air quality impacts associated with short-term construction and ongoing WHWPA maintenance activities would be less than significant with mitigation. Once completed, the trail and its associated maintenance would not result in long-term air quality impacts.

Mitigation Measures:

AQ-1: Vegetation Removal. Vegetation removal methods shall include chopping larger materials on-site to be disbursed with materials largely in contact with the ground; burning of vegetation shall not be allowed without obtaining the appropriate burn permits.

AQ-2: Diesel Engines – Stationary and Portable Equipment and Mobile Vehicles:

a. Off-road equipment with auxiliary diesel engines rated at 50 brake horsepower or greater, must have either a valid Air Quality permit, or a state Portable Equipment Registration Program (PERP) Registration.

4. Biological Resources

BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Significance Criteria: Project impacts upon biological resources would be significant if any of the following resulted: substantial direct or indirect effect on any species identified as a candidate, sensitive, or special status species in local/regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS) or any species protected under provisions of the Migratory Bird treaty Act (e.g. burrowing owls); substantial effect upon riparian habitat or other sensitive natural communities identified in local/regional plans, policies, or regulations or by the agencies listed above; substantial effect (e.g., fill, removal, hydrologic interruption) upon state or federally protected wetlands; substantially interfere with movement of native resident or migratory wildlife species or with established native resident or migratory wildlife corridors; conflict with any local policies/ordinances that protect biological resources or conflict with a habitat conservation plan.

Environmental Setting: Regionally, the Project area (Ukiah Western Hills) has historically been used primarily for recreation, timber harvest, homesite development, and undeveloped open space/wildlife habitat. The hills rise steeply from the valley floor and are predominated by eastern facing slopes. A number of unclassified drainages create small sections of north-east and south-east facing slopes. The Project area is classified under three MCV2 classification systems: (1) Quercus wislizeni-Quercus chrysolepis (shrub) Shrubland Alliance, (2) Arctostaphylos (canescens, manzanita, stanfordiana) Shrubland Alliance, and (3) Pinus sabiniana Woodland.

A Biological Assessment was prepared for the Project by Jacobzsoon and Associates (August 21, 2024; **Attachment H**) and included a Biological (wildlife) Assessment and a Botanical Survey The purpose of the assessment was to identify sensitive communities within the Study Area. The Biological Assessment is also designed to address the potential for cumulative impacts to biological resources that may occur as a result of the Project and to make recommendations to reduce or mitigate potential impacts. The Biological Assessment includes the analysis and comparison of existing habitat conditions within the Study Area with the documented range and habitat requirements of sensitive wildlife species described in the California Department of Fish and Wildlife's (CDFW's) California Wildlife Habitat Relationships System (CWHR) to determine if they would be directly or potentially impacted by the Proposed Project. As a part of the assessment field surveys were conducted on April 17th, April 18th, May 22nd, May 23rd, and July 18th.

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 Purdy's 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).

Discussion: (a) Less than significant impact with mitigation incorporated.

The Lookout Peak Trail Project, including the ongoing road and fire break maintenance activities outlined in the WHWPA Road and Fire Break Maintenance Plan (**Attachment G**), has the potential to affect biological resources. A Biological Assessment prepared by Jacobszoon and Associates (**Attachment H**) identified 22 special-status wildlife species with a moderate or high potential to occur within the Study Area based on habitat features present. Activities such as vegetation clearing, understory thinning, and dead tree removal, as detailed in Attachment G, could potentially impact these species or their habitats

To avoid or substantially lessen these potential impacts to a less-than-significant level, several mitigation measures from this ISMND will be implemented in conjunction with embedded measures within the WHWPA Maintenance Plan. **Mitigation Measure BIO-1** requires a Worker Awareness and Education Program for sensitive amphibians, mammals, insects, and plants. **Mitigation Measure BIO-2** mandates pre-construction nesting bird surveys prior to any vegetation removal or ground-disturbing activities during the nesting season (March 1 to August 31), ensuring active nests are not disturbed. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** explicitly complements this by requiring nesting bird surveys from April 1st to August 31st prior to any project activities. **Mitigation Measure BIO-3** requires pre-construction bat surveys if evidence of roosts is observed, and **BIO-4** similarly calls for pre-construction surveys for special-status mammal dens or burrows if observed. **Mitigation Measure BIO-5** addresses over-wintering Monarch butterflies, requiring surveys if observed. Furthermore, the WHWPA Maintenance Plan specifically addresses the protection of Lilium rubescens (Redwood Lily), a species identified in BIO-1, by prohibiting work during

its blooming period (May 15-June 30th) unless surveys confirm its absence or seed dispersal has occurred. The plan also commits that "Clearing of deadfall trees will ensure that a minimum of 6 “snags” per acre remain to provide habitat", which is an embedded mitigation for wildlife. The maintenance activities are also designed to thin "overgrown to an unhealthy degree" and "dense and unhealthy western forests", potentially leading to long-term benefits for ecosystem health while managing short-term disturbance. With these combined measures, the Project's potential impacts on sensitive species and their habitats would be less than significant.

(b) Less than significant impact with mitigation incorporated. Sensitive natural communities, as identified in the CNDDB or observed, are afforded special protection. During the Biological Assessment, the habitat within the Study Area was classified under three MCV2 classification systems, which are considered non-sensitive and thus require no special protection. However, the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** includes ongoing activities such as vegetation clearing, understory thinning, and dead tree removal. To address potential carbon loss and ecological impacts from tree removal, **Mitigation Measure BIO-6** requires that any tree greater than 6 inches dbh removed during construction or maintenance shall be replaced at a ratio of 6 to 1 at the nearest available and appropriate site. This mitigation, applied to both trail construction and WHWPA maintenance activities, alongside the non-sensitive designation of the existing communities, ensures that impacts to natural communities remain less than significant.

(c) Less than significant impact with mitigation incorporated. Aquatic resources, communities, and habitats (e.g., watercourses) are considered sensitive communities and are afforded special protections. Three watercourses flow through the Study Area: Doolin Creek (Class I) and two unnamed Class III watercourses. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)** explicitly addresses water quality protection. It states that "Objective 3 of the plan outlines the need to control erosion, protect water quality, and maintain facilities. This objective requires that road work be in accord with the Handbook for Forest, Ranch, & Rural Roads (2015)". Furthermore, the Maintenance Plan includes a critical embedded mitigation measure: "No work will be done under this management plan within 50 feet of a class III or higher flow stream". This 50-foot buffer significantly reduces the potential for direct impacts to watercourses from maintenance activities. Projected trail alignments do not cross or come near the Class I watercourse. For Class III watercourses, trail construction and any necessary maintenance activities will adhere to **Mitigation Measure BIO-7**, which requires standard methods of erosion and sediment control (e.g., straw, mulch, seeding, wattles, silt fencing) for all earthwork within or adjacent to (50 feet) any watercourse. Work will also be completed, if possible, while the channel is dry to reduce sediment load downstream. The commitment to adhere to the *Handbook for Forest, Ranch, & Rural Roads (2015)* further ensures best practices for water quality protection during road work activities. With these robust measures, impacts to aquatic resources and watercourses from both trail construction and WHWPA maintenance activities would be less than significant.

(d) Less than significant impact. There are no established native resident or migratory wildlife corridors, or native wildlife nursery sites within the Project area. As noted above, there are fish bearing streams on-site. Impacts would be **less than significant**.

(e-f) Less than significant impact. There are no adopted Habitat Conservation Plans for the City of Ukiah, nor the larger Ukiah Valley that are applicable to the Project. Impacts would be **less than significant**.

Mitigation Measures:

BIO – 1 Sensitive Amphibians, Mammals, Insects, and Plants. A Worker Awareness and Education Program (WAEP) will be conducted with trail crew leaders to provide information regarding sensitive species most likely to occur, even though they were not seen in the Biological or Botanical Surveys. This program will be conducted by a qualified professional and include red-bellied newt (*(Taricha rivularis),* Sonoma tree vole (*Arborimus pomo*), North American porcupine (*Erethizon dorsatum*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), and fisher [West Coast DPS] (*Pekania pennanti*), western bumble bee (Bombus occidentalis), and Redwood Lily (Lillium rebescens). Education shall include monitoring for evidence of bat roosts (i.e. bat guano, ammonia odor, grease stained cavities) around trees or structures. Should evidence of these species be noted, it will trigger additional surveys conducted by a qualified biologist for activities that may affect the noted species.

BIO-2: Nesting Birds. No special status avian species were noted in the project area. However, Federal and State law protects all native birds. Pre-construction surveys shall be conducted by a qualified biologist prior to any vegetation removal or ground disturbing activities occurring between March 1 and August 31 of any year. All active bird nests shall not be removed, relocated, or otherwise disturbed for any purpose until all fledglings have left the nest

BIO-3: Roosting Bats. If evidence of bat roosts are observed (i.e. bat guano, ammonia odor, grease stained cavities) around trees, cavities, or structures proposed for removal, pre-construction bat surveys should 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.

BIO-4. Mammal Dens or Burrows. 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.

BIO-5: Over-Wintering Monarchs. Monarch Butterflies “Over-Winter” in groups between November 1st and January 31st. If monarchs are observed in this time frame monarch surveys should be conducted by a qualified biologist no more than 14 days prior to the commencement of tree/shrub removal.

BIO- 6: **Carbon Loss.** Any tree greater than 6 inches dbh removed during construction shall be replaced at a ratio of 6 to 1 at the nearest available and appropriate site as approved by a qualified professional.

BIO-7: Watercourses. The Project shall adhere to UVTG Design and Maintenance Standards for trail construction related to erosion, and all earthwork within or adjacent to (50 feet) any watercourse or other body of water shall adhere to standard methods of erosion and sediment control (placement of straw, mulch, seeding, straw wattles, silt fencing, etc.) and, if possible, work shall be completed while the channel is dry to reduce sediment load downstream. Additionally, if any structures are proposed for placement within the bed or bank to allow for the trail crossing, consultation with CDFW shall be required and all necessary permits shall be obtained.

5. Cultural Resources

CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Significance Criteria: The proposed Project would significantly impact cultural resources if the significance of a historical or archaeological resource were substantially changed, or if human remains were disturbed.

Under CEQA, cultural resources must be evaluated to determine their eligibility for listing in the California Register of Historic Resources (CRHR). If a cultural resource is determined ineligible for listing on the CRHR the resource is released from management responsibilities and a project can proceed without further cultural resource considerations.

As set forth in Section 5024.1(c) of the Public Resources Code for a cultural resource to be deemed "important" under CEQA and thus eligible for listing on the California Register of Historic Resources (CRHR), it must meet at least one of the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California History and cultural heritage; or
2) Is associated with the lives of persons important to our past; or
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possess high artistic value; or
4) Has yielded or is likely to yield, information important to prehistory or history.

Archaeological resources are commonly evaluated with regard to Criteria 4 (research potential). Historic-era structures older than 50 years are most commonly evaluated in reference to Criteria 1 (important events), Criteria 2 (important persons) or Criteria 3 (architectural value). To be considered eligible under these criteria the property must retain sufficient integrity to convey its important qualities. Integrity is judged in relation to seven aspects including: location, design, setting, materials, workmanship, feeling, and association.

Guidelines for the implementation of CEQA define procedures, types of activities, persons, and public agencies required to comply with CEQA. Section 15064.5(b) prescribes that project effects that would "cause a substantial adverse change in the significance of an historical resource" are significant effects on the environment. Substantial adverse changes include both physical changes to the historical resource, or to its immediate surroundings.

Public Resources Code Section 21083.2 also defines "unique archaeological resources" as "any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely

adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and show that there is a demonstrable public interest in that information.
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person."

This definition is equally applicable to recognizing “a unique paleontological resource or site.” CEQA Section 15064.5 (a)(3)(D), which indicates “generally, a resource shall be considered historically significant if it has yielded, or may be likely to yield, information important in prehistory or history,” provides additional guidance.

Assembly Bill 52 (effective July 1, 2015) mandates that before preparing a negative declaration, mitigated negative declaration, or environmental impact report for a project, the lead agency must seek consultation with tribes associated with the project's location. Tribes must have previously submitted a written request to the lead agency to be consulted on projects within their geographic areas of interest. The Guidiville Rancheria of California is the only tribe that has made such a request. In compliance with AB 52, a notification was sent to the Guidiville Rancheria of California on June 17, 2025, offering the opportunity for consultation. No response has been received to date. Should a response or consultation request be received within the AB 52 response window, the environmental review will be updated accordingly.

Environmental Setting: The Ukiah Township lies in a valley of the Russian River, bounded on the north by Calpella Township, on the east by Lake County, on the south by Sanel Township, and on the west by Anderson Township. The City of Ukiah was first settled in 1856 by Samuel Lowry. Initially incorporated into Sonoma County, an independent Mendocino County government was established in 1859 with Ukiah as the chosen county seat. Logging, cattle, and agricultural ventures contributed to the early settlement and growth of Ukiah throughout the remainder of the 19th century and early 20th century. 1889 is the date recorded for the first arrival of the train to Ukiah, quickly resulting in increased settlement of the City and its environs. The City of Ukiah is within the territory of the Northern Pomo. Permanent villages were often established in areas with access to staple foods, often times along eco-tones (transitions between varying environments), with access to good water, and generally flat land

The late 19th century saw slow growth in the community, with a slight decline after the turn of the century. The 1906 earthquake damaged a number of Ukiah buildings, particularly in the commercial core, and considerable re-building and remodeling activity occurred after that time. The City appears to have prospered in the following years, through the early 1920’s. The City contains a number of Colonial Revival and Craftsman style derivations, popular during this era, that reflect the community’s prosperity. An Historical and Architectural Survey Update was last prepared for the City by P.S. Preservation Services in 1999. The survey identified 23 properties with historic importance within the City limits. City Ordinance No. 838 was passed by the City in 1983, requiring that prior to the demolition of any building over 50 years old, the approval of the City Council must be obtained. The ordinance is a positive preservation tool, allowing some review and public input opportunity regarding the potential loss of historically significant buildings.

Discussion: (a) No impact. No historical or archaeologically significant sites as defined in §15064.5 have been documented in the project area. On June 17, 2025, the City requested a records search at the Northwest Information Center (NWIC) located on the campus of Sonoma State University. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural, archaeological, and historical records and reports for an 18-county area that includes Mendocino County. The records search included a review of all study reports on file within the Western Hills Watershed Protection area. A review of historic registers and inventories indicates that no historical landmarks or points of interest are present in the Project area. Additionally, no National Register listed or eligible properties are located within the Project area. An Archaeological Survey Report (ASR), prepared by Alta Archaeological Consulting (Alta) in March 2021, covering a portion of the Project area, also found no cultural resources (report omitted for confidentiality). Therefore, the Project area would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.. **No impact.**

Discussion: (b) Less than significant impact. The NWIC records search and the Alta ASR also included a search of cultural resources included within the WHWPA. The NWIC records search indicated that two cultural resources studies had been completed on portions of the site, identifying no cultural resources within the Project area. The Alta ASR similarly found no on-site cultural resources.

As noted in the City's General Plan Historic and Archeological Resources Element (1995), the Project site is not identified as an area of high cultural sensitivity; areas that are most typically culturally sensitive include those adjacent to streams, springs, and mid-slope benches above watercourses because Native Americans and settlers favored easy access to potable water. Because the Project has been designed with minimal ground disturbance and the site does not have a high potential for cultural resources to occur, less than significant impacts would occur as a result of the Project. Additionally, construction of the Project will be required to adhere to CEQA Guidelines Section 15064.5 (e-f) which specifically addresses what to do in the event that human remains or archeological resources are accidentally discovered.

As noted above, in accordance with AB 52, a notification was sent to the Guidiville Rancheria of California on June 17, 2025, offering the opportunity for consultation. No response has been received to date. Should a response or consultation request be received within the AB 52 response window, the environmental review will be updated accordingly. Therefore, impacts to cultural and archaeological resources are anticipated to be **less than significant**.

Mitigation Measures: None

6. Energy

ENERGY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒

ENERGY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Significance Criteria: The Proposed Project would significantly impact energy if construction or operation of the Project would result in wasteful, inefficient or unnecessary consumption of energy resources or if the Project would conflict with a state or local plan for renewable energy or energy efficiency.

Environmental Setting: Senate Bill 100 (SB 100, De León, Chapter 312, Statutes of 2018), the state's landmark policy requiring that renewable and zero-carbon energy resources supply 100 percent of electric retail sales to customers by 2045. The bill was signed into law in 2018 and calls for these resources to replace fossil fuels for generating electricity in the state. According to the California Air Resources Board (CARB), California has already made significant progress toward a clean energy future. Due to many efforts that promote renewable energy, energy efficiency and the storage technologies needed to retire fossil fuel resources, the state's electricity mix is already more than 60 percent carbon free. Approximately 36 percent of that comes from renewable sources, predominantly wind and solar. Specific to construction projects, CARB and the Environmental Protection Agency (EPA) standards regulate energy consumption through Green Budling Standards to ensure construction does not result in wasteful, inefficient or unnecessary consumption of energy resources.

Discussion: (a-b) Less than significant impact. The Project involves both the construction of new trails and the ongoing maintenance activities outlined in the WHWPA Road and Fire Break Maintenance Plan (Attachment G). Both sets of activities will require the use of fossil fuels for various pieces of equipment. Trail construction will utilize small excavators and smaller power tools such as chainsaws, power wheelbarrows, vibro-plates, or jackhammers. The WHWPA Maintenance Plan specifies activities such as "Clearing of encroaching vegetation with hand crews, dozers, or masticators," "Grading and shaping of the running surface of the road," "Chipping/Hauling," and "Dead Tree Removal". These maintenance activities will involve equipment like dozers, masticators, and chippers, which consume fossil fuels

However, the fuel energy consumed during both trail construction and ongoing WHWPA maintenance activities would be temporary and intermittent, spread across the approximately five and a half miles of roads and fire breaks and 22 miles of trails. This consumption would not represent a significant, wasteful, inefficient, or unnecessary demand on energy resources. All equipment used for Project construction and WHWPA maintenance will be required to comply with the latest California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) engine emissions standards, which promote highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Once constructed, the trail itself would not consume any sources of energy, and the operational energy needs for the WHWPA maintenance are limited to the periodic fueling of equipment. With adherence to these aforementioned regulations and the nature of the activities, impacts from the Proposed Project related to energy consumption would be less than significant. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Mitigation Measures: None

7. Geology and Soils

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

Significance Criteria: The Proposed Project would result in a significant impact to geological or soil resources if it exposed people or structures to seismic risk; ruptured a known fault; produced strong seismic ground shaking, ground failure, liquefaction, landslides or substantial soil erosion; is located on expansive soil or unstable ground, or would create unstable ground; or destroyed a unique paleontological resource or geologic feature.

Environmental Setting: The Ukiah Valley is part of an active seismic region that contains the Mayacama Fault, which traverses the valley in a generally northwest-southeast direction east of the Project area. Based on California Geological Survey maps and the Background Report for the County of Mendocino General Plan Update (prepared by P.M.C., 2003), lands within the Western Hills are identified as being located on a somewhat unstable geologic formation but are not located within the Alquist Priolo Fault Zone, or in a landslide or liquefaction zone. In addition, according to the U.S. Geological Survey (USGS) Interactive Fault Map, there are no faults identified within the Project area.

The Project area is located at approximately 1,000-1,400 feet in elevation and is situated within the Coast Range geologic province. The North Coast Range is comprised of a geologic feature unique to California, the Franciscan Formation, which dictates the vegetative communities. The Franciscan Formation is comprised of serpentine, sandstone, and other sedimentary rocks. The soils within the Project site are characterized as both Hopland, which consists of very deep, well drained soils formed in colluvium and residuum weathered from sandstone or shale on steep hills and slopes (50 to 75 percent), and Maymen soils that are shallow, somewhat excessively drained soils that formed in residuum weathered from shale, schist, greenstone, sandstone and conglomerate. These soils have a shallow depth to bedrock.

Discussion: (a, c & d) No Impact. As noted above, the Project site does not contain earthquake faults. The site does not contain expansive or unstable soils and is not susceptible to landslides, nor strong seismic ground shaking. Lastly, the Project has been designed with minimal ground disturbance. Impacts to geology and soils related to these issues would be **less than significant**.

(b) Less than significant impact. Development and use of the proposed trail, if not carefully performed, has the potential to cause erosion. Trail grades are typically 7-8 percent, with some switchback grades along the steeper sections of hillside with slopes of 12 percent for very short sections of the trail. The UVTG Design and Maintenance Standards (**Attachment D**) provide guidance for the construction of trails in the Ukiah Valley to reduce erosion. These standards include, but are not limited to, the following:

- Construction of trails that are three feet wide, or less if physical constraints are present, to reduce the disturbance footprint;
- Trails should be built with the contour of the topography (± 10%) to allow for sheet flow drainage and minimize concentrated runoff;
- Average trail grade of less than10%, with short sections over 10% and followed by a relatively flat section or grade reversal;
- Grade of the trail should not be greater than half the grade of the side slope the trail traverses to prevent erosion caused by water flowing down the trail rather than down the hillside;
- Maximum trail grades of less than 15% wherever possible to reduce the potential for erosion and user damage;
- Incorporation of grade reversals every 10 to 50 feet to provide areas for water to drain off trails;
- Outer edges of trails should be built and maintained to allow either a 3-5% outslope or frequent drainage lenses to create sheet flow; and
- Build in a backslope where the area uphill of the trail is sloped upward from the trail to prevent a waterfall effect that creates concentrated flow on the trail.

Trail construction is anticipated to take approximately two weeks and will be scheduled during optimal weather and soil moisture conditions in order to reduce the duration that soils are exposed to water-borne erosion.

For the above reasons, impacts to geology from the loss of topsoil or erosion would be **less than significant.**

(e) No impact. No septic tanks or other waste water disposal systems are proposed. **No impact**.

(f) Less than significant impact. The geology of the Western Hills area is of the Franciscan Complex that dates to the Jurassic Period, approximately 199.6 to 145.5 million years ago. The Franciscan complex consists of arkosic sandstone interbedded within shale. Arkose is a coarse and well sorted quartz with a fine-grained matrix. Additionally, the Franciscan Complex can include rocks such as chert, serpentinite, basalt, and greenstone. The Franciscan complex, widespread in coastal California, has produced only small collections of significant fossils. Additionally, construction of the trail would only disturb the first few feet of soil where fossils are generally not known to be found. Therefore, the Project would not destroy unique paleontological resources or site or unique geologic features. Impacts would be **less than significant.**

Mitigation Measures: None

8. Greenhouse Gas Emissions

GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Significance Criteria: The Project would have a significant effect on greenhouse gas emissions if it would generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment; or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Environmental Setting: Climate change is caused by greenhouse gases (GHGs) emitted into the atmosphere around the world from a variety of sources, including the combustion of fuel for energy and transportation, cement manufacturing, and refrigerant emissions. GHGs are those gases that have the ability to trap heat in the atmosphere, a process that is analogous to the way a greenhouse traps heat. GHGs may be emitted a result of human activities, as well as through natural processes. Increasing GHG concentrations in the atmosphere are leading to global climate change.

Carbon dioxide (CO_2) is the most important anthropogenic GHG because it comprises the majority of total GHG emissions emitted per year and it is very long-lived in the atmosphere. Typically, when evaluating GHG emissions they are expressed as carbon dioxide equivalents, or CO_2e, which is a

means of weighting the global warming potential (GWP) of the different gases relative to the global warming effect of CO_2, which has a GWP value of one. In the United States, CO_2 emissions account for about 85 percent of the CO_2e emissions, followed by methane at about eight percent, and nitrous oxide at about five percent.

The state of California has adopted various administrative initiatives and legislation relating to climate change, much of which set aggressive goals for GHG emissions reductions statewide. Although lead agencies must evaluate climate change and GHG emissions of projects subject to CEQA, the CEQA Guidelines do not require or suggest specific methodologies for performing an assessment or specific thresholds of significance and do not specify GHG reduction mitigation measures. No state agency has developed binding regulations for analyzing GHG emissions, determining their significance, or mitigating significant effects in CEQA documents. Thus, lead agencies exercise their discretion in determining how to analyze GHGs. Because there are no adopted GHG thresholds applicable to the Project, and because the Project is considered “small scale”, the below qualitative analysis is appropriate.

Discussion: (a-b) Less than significant impact. The Project, which includes both the construction of up to 22 miles of new trails and the ongoing maintenance activities detailed in the WHWPA Road and Fire Break Maintenance Plan (**Attachment G**), will generate greenhouse gas (GHG) emissions. These emissions will primarily result indirectly from the combustion of fossil fuels by construction equipment and maintenance vehicles. Equipment used for trail construction includes small excavators and power tools. WHWPA maintenance activities will involve equipment such as dozers, masticators, chippers, and other vehicles for tasks like vegetation clearing, road grading, chipping, and dead tree removal across approximately five and a half miles of roads and fire breaks.

The generation of GHG emissions from these activities will be temporary and intermittent. The Project does not involve significant grading or extensive new construction that would lead to a substantial, long-term increase in GHG emissions, nor does it induce population growth or extend infrastructure that would indirectly increase emissions. All construction and maintenance equipment will comply with applicable state and federal emissions standards (e.g., CARB and EPA standards), which help to reduce overall emissions.

Furthermore, the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)**, an integral part of this Project, includes vegetation management and forest thinning as primary objectives. These activities, by reducing hazardous deadfall and maintaining "shaded fuel breaks", contribute to forest health and wildfire risk reduction. This proactive management can help prevent larger, catastrophic wildfires, which are significant sources of GHG emissions. While the Project involves some tree removal, **Mitigation Measure BIO-6** requires a 6-to-1 replacement ratio for any tree greater than 6 inches dbh removed, thereby addressing potential carbon loss. The project does not conflict with any adopted plan, policy, or regulation for the purpose of reducing GHG emissions, such as California's efforts toward 100 percent renewable and zero-carbon energy by 2045 (SB 100).

Considering the temporary and intermittent nature of emissions, adherence to regulatory standards, the lack of growth inducement, and the long-term wildfire risk reduction benefits, the Project's direct and indirect generation of GHG emissions would not have a significant impact on the environment. Therefore, impacts would be less than significant.

Mitigation Measures: None

9. Hazards and Hazardous Materials

HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

Significance Criteria: The Project would result in significant hazards or hazardous materials impacts if it exposed people to hazardous materials or placed them into hazardous situations; if it released hazardous materials or emissions into the environment or within 0.25 miles of a school; if it is located on a listed hazardous materials site; if it would create a hazard due to its proximity to a public airport or private airstrip; if it would create excessive noise for people in the area; if it would interfere with an emergency response or evacuation plan; or if it would expose people or structures to significant risks due to wildland fire.

Environmental Setting: Mendocino County has adopted numerous plans related to hazard management and mitigation including, but not limited to: Community Wildfire Protection Plan, Hazardous Waste Management Plan, Operational Area Emergency Plan, etc. The most recent plan, the Mendocino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) was adopted by the County in December, 2020. The MJHMP provides an explanation of prevalent hazards within the

County, identifies risks to vulnerable assets, both people and property, and provides a mitigation strategy to achieve the greatest risk reduction based upon available resources. The four cities within Mendocino County, including the City of Ukiah, participated in preparation of the MJHMP to individually assess hazards, explore hazard vulnerability, develop mitigation strategies, and create their own plan for each respective city (referred to as a "jurisdictional annex" to the MJHMP). The City of Ukiah adopted its jurisdictional annex chapter of the MJHMP on November 18, 2020. Hazards identified for the City if Ukiah include earthquakes, wildfire, dam failure, flood and pandemic. Table 1-13 of the City's jurisdictional annex lists each hazard and mitigation action for City of Ukiah. Mitigation number ma-WF-UK-60 from the plan describes the need to implement a fuel modification program. The inclusion of Fire Hardened trails in the construction plan helps realize this goal.

The Ukiah Municipal Airport is located within the City of Ukiah jurisdictional limits. The Ukiah Municipal Airport Land Use Compatibility Plan (UKIALUCP) was adopted by the Mendocino County Airport Land Use Commission on May 20, 2021 and adopted by the Ukiah City Council on June 16, 2021. The UKIALUCP identifies areas (known as "compatibility zones") with potential hazards and impacts to persons using or working within the vicinity of the airport.

The site does not include any known hazardous waste sites, as mapped by the State Water Resources Control Board (SWRCB) or the California Department of Toxic Substances Control (DTSC) on the GeoTracker and EnviroStor databases, respectively, nor are there any listed sites within the vicinity of the site.

All lands within the City of Ukiah are within the jurisdiction of the Ukiah Valley Fire Authority. None of the lands within the City of Ukiah are located within a California Department of Forestry (CalFire) State Responsibility Area (SRA). However, some parcels within the western boundary of the City limits, including the Project site, are designated as "Very High" fire severity within the Local Responsibility Area (LRA).

Discussion: (a-b) Less than significant impact. Construction activities limited to the use of powered equipment, as needed, may include the routine transport, use, storage, and disposal of small quantities of common hazardous materials, such as gasoline, diesel fuel, hydraulic fluids, and oils. However, the types and quantities of materials to be used are not expected to pose a significant risk to the public and/or environment and would be managed in accordance with federal, state, and local regulations. Impacts would be **less than significant.**

(c) Less than significant impact. Ukiah High School and Pomolita Middle School are located more than one-half mile away from the proposed trail alignment and as noted above, the use of hazardous materials for construction would be in accordance with all applicable regulations; impacts would be **less than significant**.

(d) No impact. As previously noted, under Government Code Section 65962.5, both the State Water Resources Control Board and the California Department of Toxic Substances Control are required to maintain databases of sites known to have hazardous substances present in the environment. Both agencies maintain such databases on their websites, known as GeoTracker and EnviroStor. According to these databases, the Project site(s) do not contain any listed hazardous sites; **no impact** would occur.

(e) Less than significant impact. The Project parcel is located approximately 1.86 miles northwest of the Ukiah Municipal Airport within the Other Airport Environs (OAE) Compatibility Zone of the

UKIACLUP, which is identified as having a low risk level associated with airport operations. Occasional overflights may be intrusive to some outdoor activities but the OAE zone does not contain any regulations regarding intensity of use or other standards specific to airport safety concerns that would be applicable to the Project. According to Table 3A of the UKIALUCP, most land-use categories, including recreation facilities, parks and open land areas are considered normally compatible in the OAE compatibility zone. Based on this information, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. Impacts would be **less than significant.**

(f) Less than significant impact. There are no components of the Project that would impair or interfere with emergency response or evacuation. The proposed trail would be accessed from an existing park and parking lot. There are no components of the Project that would impair implementation of, or physically interfere with, the adopted MJHMP or other emergency response plan or evacuation plan. Impacts would be **less than significant**.

(g) Less than significant impact with mitigation incorporated. As previously noted, the Project site is designated as having a "Very High" fire severity within a Local Responsibility Area (LRA). However, the use of the Proposed trail would not substantially increase the risk of wildfire in the area. Temporary construction activities involving the occasional use of gasoline-powered tools and equipment could introduce new temporary sources of ignition that could increase fire risk. However, with implementation of Mitigation Measure HAZ-1, impacts would be reduced to less than significant. For the reasons stated, the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. See Section V.20, Wildfire, for more information. Impacts would be **less than significant with mitigation incorporated.**

Mitigation Measures:

HAZ-1: Should portable gasoline-powered equipment be used on site, the following firesafe precautions shall be taken:

a. Spark arresters are required on all portable gasoline-powered equipment.
b. Equipment shall be maintained in good working condition, with exhaust systems and spark arresters in proper working order and free of carbon buildup.
c. Fuel the equipment in a safe place where spills can be contained and a fire extinguisher is nearby. Use the recommended gas/oil mixture and do not top off. Use a funnel or spout for pouring. Wipe off any spills.
d. Do not refuel running or hot equipment. Dispense fuel at least 10 feet from sources of ignition.
e. Do not use equipment in areas of dry vegetation. Keep leaves and dry materials away from a hot muffler.
f. No smoking or open flame allowed near gasoline-powered equipment.

10. Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY: Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☐	☐
i) result in a substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Significance Criteria: The Project would significantly impact hydrology and water quality if it violated water quality standards or waste discharge requirements or substantially degraded surface or groundwater quality; substantially decreased groundwater supplies or impeded sustainable groundwater management; altered drainage patterns in a manner that would cause substantial on- or off-site erosion, polluted runoff or excessive runoff that caused flooding; impeded or redirected flood flows; risked a release of pollutants due to inundation if in a flood hazard, tsunami or seiche zone; or conflicted with a water quality plan or sustainable groundwater management plan.

Environmental Setting: Average rainfall in Ukiah is slightly less than 35 inches. Most of the precipitation falls during the winter. Rainfall is often from brief, intense storms, which move in from the northwest. Virtually no rainfall occurs during the summer months.

The Project area includes the Russian River Hydrologic Unit, Upper Russian River Hydrologic Area, Ukiah Hydrologic Subarea. The Russian River is on the State Water Resources Control Board's

(SWRCB) 303(d) list of impaired water bodies for water temperature and sedimentation/siltation. Sediment impairments in tributaries led to listing the entire Russian River Watershed for sediment. Surface water supplies for the Ukiah Valley include the Eel River, from which water is diverted into the Russian River watershed through the Potter Valley Project, Lake Mendocino, and the Russian River. Groundwater is drawn from the Ukiah Valley groundwater basin. The Ukiah Valley groundwater basin is the northernmost basin in the Russian River water system and underlies an area of approximately 60 square miles. Water enters the groundwater system via percolation of surface waters and through the soil. The creeks and streams in the Ukiah Valley provide drainage channels for groundwater recharge, as well as domestic and agricultural water supply. The City of Ukiah 2020 Urban Water Management Plan (UWMP) was adopted by City Council on June 2, 2021. The UWMP considers several growth scenarios including an additional 2,500 and 5,000 new hookup scenarios and determined that there is capacity through the 2045 planning horizon to serve these growth projections.

Discussion: (a-b & e) No impact. No groundwater would be used for construction or operation of the trail. No new facilities are proposed. The Project would not require water to be discharged and groundwater would not be impacted by the Project. **No impact**.

(ci-iii) Less than significant impact with mitigation. The project area contains one Class I and a variety of III watercourses. The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)**, which will be implemented by the City as part of this Project, includes ongoing maintenance activities such as "Road Work" (clearing vegetation, grading, shaping road surfaces, and identifying repair needs) and "Understory Thinning/Brushing". These activities, if not properly managed, have the potential to cause erosion, alter drainage patterns, and impact water quality.

However, the WHWPA Maintenance Plan itself specifies that "No work will be done under this management plan within 50 feet of a class III or higher flow stream". This 50-foot no-work buffer serves as a primary protective measure for water quality during maintenance activities. For areas outside this buffer, and for trail construction near drainages, adherence to the UVTG Design and Maintenance Standards is required. Critically, the WHWPA Plan states that "road work be in accord with the Handbook for Forest, Ranch, & Rural Roads (2015)", a widely recognized best practice guide for minimizing hydrological impacts from forest roads. Furthermore, **Mitigation Measure BIO-7** from this ISMND requires that all earthwork within or adjacent to (50 feet) any watercourse or other body of water shall adhere to standard methods of erosion and sediment control (e.g., placement of straw, mulch, seeding, straw wattles, silt fencing). Work will be completed during the dry season when possible to reduce sediment load downstream. These combined practices ensure that activities under the WHWPA Maintenance Plan, as well as trail construction, minimize erosion and prevent substantial alterations to drainage patterns that could cause flooding or polluted runoff. The maintenance activities are specifically undertaken "to control erosion, protect water quality, and maintain facilities". Therefore, impacts associated with erosion, siltation, drainage, and water quality would be **less than significant with mitigation incorporated**.

(d) No impact. The Project is not located within a tsunami hazard zone, nor a flood zone, as identified by the Federal Emergency Management Agency. **No impact** would occur.

Mitigation Measures:

Implementation of **BIO-7**

11. Land Use and Planning

LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Significance Criteria: The Project would significantly impact land use if it physically divided an established community or conflicted with a land use plan, policy or regulation intended to avoid or mitigate an environmental impact, such as the general plan or zoning code.

Environmental Setting: The City of Ukiah includes approximately 4.72 square miles. It serves as the County Seat of Mendocino County, as well as the county's commercial hub. Predominant land uses in the City include single-family residential, multi-family residential, and commercial uses ranging from local commercial to service commercial, as well manufacturing, industrial and public facilities.

The City of Ukiah is governed by the City's 2040 General Plan adopted on December 7,2022. More specifically, zoning and land use are governed by the City's Zoning Ordinance, as outlined in Division 9, Chapter 2 of the Ukiah City Code. The purpose of the Ukiah Zoning Code is to promote the growth of the City in an orderly manner and to promote and protect the public health, safety, peace, comfort and general welfare. The larger Ukiah Valley is governed by the Ukiah Valley Area Plan (UVAP; 2011), which is a comprehensive and long range inter-jurisdictional planning document that represents the vision and foresight of the people who live and work in the Ukiah Valley. This plan governs land use and development on the unincorporated lands in the Ukiah Valley. Further, the Western Hills Watershed Protection Area Master Plan (adopted February 2024) guides the use of the project area and site.

Discussion: (a) Less than significant impact. Physical division of an existing community would typically be associated with construction of a new highway, railroad, park or other linear feature being constructed in a manner that would bifurcate an established neighborhood or community. Although the project would be near existing homes, it will not be in between homes. Future development may lead to the trail being between homes, but an existing easement across the effected parcel predates the homes being built so therefore the project would not result in the division of an established community. Impacts would be **less than significant**.

(b) Less than significant. The approximate 760 acre project site lies within the City owned Western Hills Watershed protection area with one short section of trail crossing a private property parcel via an existing trail easement. The Project site is zoned Public Facilities and carries a 2040 General Plan Land Use designation of Public Facility. Objective 13 of the Western Hills Watershed Protection Area Master Plan commits the City to "Provide Safe Public Access for Citizen Science, Education, Volunteer Management, and Recreation."

The proposed trail would not be detrimental to surrounding residences, nor would it prohibit the potential development of residences in the area. Accordingly, it was determined that in this case, the public hiking trail is an “allowed” use and does not require discretionary review.
The project supports 2040 General Plan Goals in elements A1 Land Use, A4 Public Facilities, and A5 Environment and Sustainability.

> LU-6.3 Open Space Access. The City shall encourage new hillside developments to provide public access (as appropriate) to adjacent greenways, open space corridors, trails, and parks if development is proposed adjacent to such facilities.
>
> PFS-12 To provide parks, recreational facilities, and trails for residents and visitors.
>
> PFS-12.1 Connected Park System. The City shall provide an interconnected park system that creates an urban greenbelt and links all trail systems within the City.
>
> PFS-12.3 Equitable Access to Parks and Recreation Facilities . The City shall establish new parks and recreation facilities to ensure all residents have access within a one-mile radius of their place of residence regardless of socioeconomic status.
>
> ENV-6.7 Public Open Space. The City shall work with Mendocino County and the Public Spaces Commission to identify and select appropriate locations along creek channels, hillsides, and ridgelines that would be appropriate for future acquisition and development as trails, pocket parks, wildlife preserves, or other public open space.

Based on the aforementioned, the Project is consistent with all applicable land use plans and regulations; the Project would not result in a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be **less than significant**.

Mitigation Measures: None

12. Mineral Resources

MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Significance Criteria: Impacts to mineral resources would be considered significant if the proposed Project were to result in the loss of a known mineral resource that has value to the region and state or is otherwise locally important as designated on a local land use plan.

Environmental Setting: The most predominant of the minerals found in Mendocino County are aggregate resource minerals, primarily sand and gravel, found along many rivers and streams. The Ford Gravel Bars are located in Ukiah, along the Russian River.

Discussion: (a-b) No impact. There are no identified mineral resources within the Project area. No impact would occur.

Mitigation Measures: None

13. Noise

NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	☐	☐	☒	☐

Significance Criteria: The Project would have a significant impact if it temporarily or permanently exceeded local noise standards in the vicinity of the Project, generated excessive ground borne noise or vibration; or would expose people residing or working in the area to excessive noise levels from public airports or private airstrips.

Environmental Setting: The Ukiah City Code does not contain thresholds for analyzing noise impacts from construction-related noise but guidance documents from the Federal Highway Administration and the Federal Highway Administration provide information on maximum noise and vibration levels associated with construction equipment and thresholds of significance for analyzing such impacts.

Although the Ukiah City Code does not contain thresholds of significance for analyzing construction-related noise, UCC §6054, *Construction of Buildings and Projects*, states that it shall be unlawful for any person within a residential zone, or within a radius of five hundred feet (500') therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist or any other construction type device (between the hours of 7:00 p.m. of one day and 7:00 a.m. of the next day) in

such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the Director of Public works.

The UCC's Noise Ordinance (Division 7, Chapter 1, Article 6) establishes ambient base noise level standards that apply to specific zoning districts within the City of Ukiah. These are specific to operation (not construction). "Ambient noise" is the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of the Noise Ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen (15) minutes without inclusion of noise from isolated identifiable sources, at the location and time of day near that at which a comparison is to be made. Land uses exceeding these standards for long periods of time are considered to be significant.

Discussion: (a) Less than significant impact. Construction activities for the Lookout Peak Trail Project and ongoing maintenance activities under the WHWPA Road and Fire Break Maintenance Plan (**Attachment G**) will generate temporary increases in ambient noise levels. Equipment used, as detailed in Attachment G, can include dozers, masticators, chippers, and chainsaws for vegetation clearing, road work, and dead tree removal. Maximum noise levels associated with such tools typically range from 73 to 89 decibels (dBA)

The nearest sensitive receptors are residences on Helen Avenue, Doolin Canyon Drive, and San Jacinta Drive, as well as Nokomis Elementary School. While these areas are sensitive to noise, over 80% of the total trail alignments and the majority of WHWPA maintenance activities will occur greater than a half-mile from the closest residence and the school. All construction and maintenance activities will occur between the hours of 7:00 a.m. and 7:00 p.m., in accordance with City of Ukiah Code (UCC) Section 6054, which restricts such activities within residential zones or within 500 feet thereof. Given the temporary, intermittent nature and geographic distribution of these activities, along with adherence to City noise ordinances, noise impacts associated with the Project would be **less than significant.**

(b) Less than significant impact. Project construction and WHWPA maintenance activities, particularly those involving equipment like vibratory rollers/compactors ("vibraplates"), dozers, or masticators, can generate ground-borne vibration. The Federal Transit Administration's *Transit Noise and Vibration Impact Assessment Manual* identifies 0.2 inches per second peak particle velocity (in/sec PPV) as the level for potential damage to non-engineered timber and masonry buildings. Although a vibratory roller/compactor might generate up to 0.210 in/sec PPV at 25 feet, the Project's nearest residence is approximately 1,200 feet away. Given this distance and the non-constant operation of such equipment along the trail alignments and road/fire break routes, the Project would not result in significant ground-borne vibration. Therefore, impacts would be **less than significant**.

(c) Less than significant impact. The Project parcel is located approximately 1.86 miles northwest of the Ukiah Municipal Airport within the Other Airport Environs (OAE) Compatibility Zone of the UKIACLUP, which is identified as having a low risk level associated with airport operations. Occasional overflights may be intrusive to some outdoor activities but the OAE zone does not contain any regulations regarding intensity of use or other standards specific to airport safety concerns that would be applicable to the Project. According to Table 3A of the UKIALUCP, most land-use categories, including recreation facilities, parks and open land areas are considered normally compatible in the OAE compatibility zone. Based on this information, the Project would not result in a safety hazard or excessive noise for people residing or working in the Project area. Impacts would be **less than significant.**

Mitigation Measures: None

14. Population and Housing

POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Significance Criteria: The proposed Project would result in significant impacts to the local population or housing stock if it directly or indirectly induced substantial unplanned population growth or displaced a substantial number of people or housing such that the construction of replacement housing would be required.

Environmental Setting: The City of Ukiah comprises of approximately 4.72 square miles within Mendocino County. Overall, the City of Ukiah's population has increased moderately over the past nearly 30 years, with a more accelerated increase in the last four years. Projections from the California State University Chico Center for Economic Development- Mendocino County Economic/Demographic Profile show this trend continuing. As described in the City's Housing Element (2019) of the General Plan, the City's annual growth rate between 1990 and 2018 averaged approximately 0.3%. Between 2000 and 2010, the City added 545 residents, or 3.7%, to its population. According to the California Department of Finance, the population in the County of Mendocino was 59,985 in 2018 and 16,226 in the City of Ukiah. The newly released 2020 Census data identifies the City of Ukiah population as 16,607.

Discussion: (a-b) No Impact. The Project would not involve the construction of new homes or businesses, or the extension of roads that would induce population growth, nor would the Project displace any people or housing, as no residences are located on-site. **No impact.**

Mitigation Measures: None

15. Public Services

PUBLIC SERVICES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☒	☐	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

Significance Criteria: The Project would result in a significant impact to public services if it resulted in a requirement for increased or expanded public service facilities or staffing, including fire or police protection, schools and parks.

Environmental Setting: Police protection services for the entire City limits is provided by the Ukiah Police Department, while the Mendocino County Sherriff's Department provides police services for areas outside of the City limits. Fire protection services in the City are provided by the Ukiah Valley Fire Authority. Educational facilities in the City are provided by the Ukiah Unified School District (UUSD) and County Office of Education. Additionally, there are several private and charter schools serving residents within the City of Ukiah. As mentioned below in Section 16, Recreation, of this Initial Study, there are 13 City parks, a municipal golf course, and a skate park managed by the City of Ukiah, as well as other recreational facilities in the area.

Discussion: (a) Less than significant impact. To further strengthen the environmental review, and in direct response to comments received during the public review period, particularly from the Ukiah Valley Fire Authority (UVFA), this ISMND has been updated to explicitly incorporate and analyze the ongoing maintenance activities outlined in the WHWPA Road and Fire Break Maintenance Plan (**Attachment G**). Mitigation Measures PS-1 and PS-2, along with other applicable mitigation measures throughout this document, comprehensively address the environmental effects of these maintenance activities, ensuring all impacts remain less than significant.

City of Ukiah Police Department and Ukiah Valley Fire Authority will be responsible for emergency response in the Project area. Without mitigations the project could lead to prolonged, difficult medical responses for injured trail users. Mitigation measures will ensure collaboration between Ukiah Valley Fire Authority officials and trail designers to assure trail alignments and features support the most efficient possible rescue of injured trail users.

The Project would not affect the number of students served by local schools, nor would it increase the number of new residents to the area, which could require the construction of expanded school facilities.

The trail will be predominantly maintained by UVTG volunteers in order to minimize or avoid the use of City park staff.

As such, the Project would not result in result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. Impacts would be **less than significant**.

Mitigation Measures:

PS-1 – Prior to construction of new trail sections, trail designers and/or builders will consult with Ukiah Valley Fire Authority (UVFA) officials to identify and incorporate, as required, specific approaches to facilitate search and rescue operations, thereby ensuring efficient rescue and reducing response times to a less-than significant level. These approaches shall include, but not be limited to:

a. Medical rescue life-flight landing zones.
b. Trail connectors between trail sections and access roads to facilitate first responder access.

PS-2 – City of Ukiah will develop and implement a Road and Fire Break maintenance schedule utilizing the City's Road and Fire Break Maintenance Plan outlining City departments responsible for individual maintenance tasks.

16. Recreation

RECREATION.	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Significance Criteria: Impacts to recreation would be significant if the Project resulted in increased use of existing parks or recreational facilities to the extent that substantial deterioration was accelerated or if the Project involved the development or expansion of recreational facilities that would have an adverse effect on the physical environment.

Environmental Setting: The City of Ukiah manages several recreation facilities, including more than 13 City parks. In addition, there are approximately 30 miles of trails located throughout the Ukiah Valley, under City, County, and federal jurisdiction.

Discussion: (a-b) Less than significant impact. Opening the Western Hills Watershed Protection Area to the public for recreational trail use will involve the development of additional recreational facilities in the City of Ukiah. Both existing and new trail users will be attracted to the site. While many users will walk or bike to the site, some will drive creating additional traffic and reduced on street parking in the neighborhood. On the other hand, existing trail users are expected to divert some of their recreational time from other sites to this new trail system thereby offsetting the impact to this area by decreasing the impact on the other trail systems in surrounding neighborhoods.

The trailhead will be in a residential neighborhood off Helen Ave at the bottom of Doolin Canyon Drive. The neighborhood has no through traffic and reaches a dead end at the southern end of Helen Avenue. The limited number of homes in this isolated area results in very low baseline traffic volumes. Traffic impacts are discussed in section 17. “Transportation. “

While the elimination of the proposed second trailhead on Helen Avenue in response to public comment reduces potential parking demand in that immediate vicinity, the remaining single trailhead on Doolin Canyon Road could still affect on-street parking for residents on Helen Avenue. To mitigate this concern, the City proposes to paint parking space delineators along the east side of Helen Avenue. These delineators are expected to increase the amount of available parking space by reducing inefficient spacing between parked cars, thereby optimizing the existing parking capacity. From the intersection at Washington Street to its terminus, Helen Avenue is over 1200 feet long with on-street parking on both sides of the street. This provides room for over 100 cars to be parked on existing on-street locations. On-street parking also extends further to the north on Helen Avenue and to the east on Washington Avenue providing additional parking. As a point of comparison, Low Gap Park is the closest available trailhead providing parking for trail users, skateboarders, tennis players, and other park users to the very popular park. The parking lot at Low Gap Park has room for about 50 cars and is rarely full. Similar to Low Gap Park, parking on Helen will serve multiple neighborhood activities including trail users, overflow parking for Nokomis Elementary School, families and sports teams using the fields at Nokomis Elementary School, and residential parking. The comparison with Low Gap Park, with half as many parking spots, suggests there is adequate on street parking for the new use in the area while acknowledging parking may be limited on weekends and during events at the Nokomis fields. However, equestrian use will not be permitted on the trails due to a lack of adequate parking and the increased expense of building and maintaining trails that will withstand the greater impact of horses and mules.

Impacts would be **less than significant**.

Mitigation Measures: None

17. Transportation

TRANSPORTATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b), Criteria for Analyzing Traffic Impacts?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Significance Criteria: Impacts to transportation and traffic would be significant if the Project conflicted with a local plan, ordinance or policy addressing transit, roadway, bicycle and pedestrian facilities; conflicted with CEQA Guidelines Sec. 15064.3(b), which contains criteria for analyzing transportation impacts; substantially increased hazards due to geometric design features; or resulted in inadequate emergency access.

Traditionally, transportation impacts had been evaluated by using Level of Service (LOS) analysis to measure the level of congestion on local roadways. However, on September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law, initiating an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal to better measure the actual transportation-related environmental impacts of a given project. This change was formally adopted into CEQA Guidelines effective July 1, 2020. VMT measures the additional miles traveled by vehicles as a result of a project. If a project causes substantial increase in VMT, it may result in a significant environmental impact.

In 2018, the Governor's Office of Land Use and Climate Innovation (LCI), formerly the Office of Planning and Research (OPR), published the *Technical Advisory on Evaluating Transportation Impacts in CEQA,* offering nonbinding guidance to assist lead agencies in implementing VMT-based analysis. This advisory also identifies certain low-VMT generating project types that can be presumed to have a less than significant impact and provides screening thresholds that may be used to avoid the need for detailed modeling.

On behalf of the Mendocino Council of Governments (MCOG), Fehr & Peers prepared the *SB 743 Vehicle Miles Traveled Regional Baseline Study* (May, 2020). This study provides localized data and recommended VMT thresholds, and incorporates applicable goals and policies from transportation plan including:

- Ukiah Bicycle and Pedestrian Master Plan (2015)
- City of Ukiah Safe Routes to School Plan (2014)
- Mendocino County Rail Trail Plan (2012)

- Ukiah Downtown Streetscape Improvement Plan (2009)
- City of Ukiah 2040 General Plan (Mobility Element)
- MCOG's Regional Transportation Plan (2017)
- Section 5, Circulation and Transportation, of the Ukiah Valley Area Plan (2011)

Although the 2040 General Plan was adopted after the Baseline Study, its policies are aligned with VMT reduction strategies.

CEQA allows the lead agency to choose the most appropriate method for evaluating VMT. If an existing tool or model is unavailable for the project's location, the lead agency may apply a qualitative analysis in accordance with the CEQA Guidelines and LCI's advisory.

Environmental Setting: The City of Ukiah generally lies west of U.S. 101 between the U.S. 101/North State Street interchange, and the U.S. 101 / South State Street interchange. Three major interchanges along U.S. 101, Talmage Road, Gobbi Street, and Perkins Street (from south to north), provide access to southern and central Ukiah. The City of Ukiah is developed in a typical grid pattern with streets generally oriented north to south and east to west. Bicycle lanes are located throughout the City and public transit is provided by the Mendocino Transit Authority (MTA).

The gateway to the Project site will be located on Doolin Canyon Road immediately off Helen Ave, a City-maintained two-lane road that is developed with on-street parking, and a pedestrian sidewalk on the east side of the road. The Nearest MTA bus stop is located approximately 600 yards away at the corner of Dora and Washinton Ave.

Discussion: (a-b) Less than significant impact. As outlined above, transportation impacts are considered significant if the project conflicts with applicable circulation plans or causes a substantial increase in VMT under CEQA Guidelines §15064.3(b).

The project proposes construction of a non-motorized, Class trail, consistent with local and regional transportation and land use plans. LCI's 2018 *Technical Advisory* identifies trails and bicycle/pedestrian facilities as project types that generally do not result in significant VMT increases. Similarly, the MCOG Baseline Study provides screening criteria (Section 3.3) for exempting projects that are located in low-VMT areas, are low VMT-generating by type (e.g. trails), generate minimal new trips, and are consistent with a jurisdiction's General Plan or other regional plans. This trail project meets those criteria. It will generate few or no new vehicle trips, supports active transportation, and is consistent with both the City of Ukiah 2040 General Plan and MCOG's Regional Transportation Plan. While the VMTscreening tool developed for MCPG by Fehr & Peers does not currently include the project location, CEQA allows for qualitative VMT analysis when modeling is infeasible. Given the project's limited scale, recreational nature, and consistency with transportation goals, impacts related to circulation and VMT would be **less than significant.**

(c-d) Less than significant impact. The proposed trails would be accessed from a single trailhead located at the bottom of Doolin Canyon Road, and would not introduce new road or roadway modifications. Emergency access would continue to be provided through existing facilities, and the Project does not propose any changes that would impair access or emergency response capabilities. No geometric design features such as sharp curves, new intersections, or incompatible land uses are proposed.

Furthermore, the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)**, which is an integral part of this Project, outlines "Road Work" activities including the clearing of encroaching vegetation and grading of road surfaces to "assure safe ingress and egress for routine maintenance, site monitoring, and emergency access" for the total of five and a half miles of roads and fire breaks within the WHWPA. The primary objectives of this Maintenance Plan are to "assure existing roads and fire breaks are open and available to emergency personnel and vehicles". The plan also explicitly includes the maintenance of Medevac Landing Zones in feasible locations to allow medevac helicopter landing.

These proactive measures are formalized through **Mitigation Measure PS-1 (Public Services)**, which requires that prior to construction of new trail sections, trail designers and/or builders will consult with Ukiah Valley Fire Authority (UVFA) officials to identify and incorporate, as required, specific approaches to facilitate search and rescue operations, thereby ensuring efficient rescue and reducing response times to a less-than-significant level. These approaches shall include, but not be limited to, medical rescue life-flight landing zones and trail connectors between trail sections and access roads to facilitate first responder access. This comprehensive commitment ensures that potential emergency access needs for the new trail system and the broader WHWPA are adequately addressed, supporting the finding that impacts related to emergency access would be less than significant. Therefore, the project would not create new safety hazards or result in inadequate emergency access. Impacts would be **less than significant**.

Mitigation Measures: Implementation of **PS-1**

18. Tribal Cultural Resources

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

Significance Criteria: An impact to tribal cultural resources would be significant if the Project were to substantially reduce the significance of a tribal cultural resource, a listed or eligible historic resource, or a resource considered significant by a California Native American tribe. Tribal cultural resources include “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to

a California Native American Tribe" that are eligible for inclusion in the California Register of Historical Resources (California Register) or included in a local register of historical resources. Lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project." The consultation process must be completed before a CEQA document can be certified.

Environmental Setting: As discussed in Section 5, Cultural Resources, areas that are most typically culturally sensitive include those adjacent to streams, springs, and mid-slope benches above watercourses because Native Americans and settlers favored easy access to potable water.

Tribes known to be present within the Ukiah area include (but are not limited to) the following:

- Coyote Valley Band of Pomo Indians
- Guidiville Indian Rancheria of Pomo Indians
- Hopland Band of Pomo Indians
- Pinoleville Pomo Nation
- Potter Valley Rancheria
- Redwood Valley Little River Band of Pomo Indians
- Scotts Valley Band of Pomo Indians
- Yokayo Tribe, not federally recognized

Discussion: (a-b) Less than significant impact. As described in Section 5, Cultural Resources, of this Initial Study, no cultural resources were identified within the Project area as a result of the records search, literature review, or archaeological field surveys. In addition, due to its topography, the site is considered to have a "low potential" for cultural, archeological, and historic resources. Because the Project has been designed with minimal ground disturbance and the site does not have a high potential for resources to occur, less than significant impacts would occur as a result of the Project. Regardless, construction of the Project will be required to adhere to CEQA Guidelines Section 15064.5 (e-f) which specifically addresses what to do in the event that human remains or archeological resources are accidentally discovered.

As noted above, in accordance with AB 52, a notification was sent to the Guidiville Rancheria of California on June 17, 2025, offering the opportunity for consultation. To date, no response has been received. Should a response or consultation request be received within the AB 52 response window, the environmental review will be updated accordingly. Therefore, impacts to cultural and archaeological resources are anticipated to be **less than significant.**

Mitigation Measures: None

19. Utilities and Service Systems

UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Significance Criteria: Impacts to utility and service systems would be significant if the Project resulted in the construction or expansion of utilities that could cause significant environmental effects; have insufficient water supplies available to the Project during normal to extremely dry years; resulted in inadequate capacity of the wastewater treatment plant; generated solid waste exceeding the capacity of local infrastructure or impairing the achievement of solid waste reduction goals; or failed to comply with any management and reduction statutes or regulations related to solid waste.

Environmental Setting: The majority of City properties are served by City water, sewer, electricity and trash collection as summarized below.

Electric. The City of Ukiah's Electric Utility Department provides electric services to properties within the City limits, while Pacific Gas & Electric (PG&E) provides services to properties outside of the City.

Water. Water services in the City of Ukiah are provided by the Ukiah Valley Water Authority (UVWA), which is a Joint Powers Authority (JPA) formed between the City of Ukiah, Millview County Water District, Redwood Valley County Water District, Calpella County Water District, and Willow County Water District. The City of Ukiah 2020 Urban Water Management Plan (UWMP) was adopted by City Council on June 2, 2021. The UWMP considers several growth scenarios including an additional 2,500

and 5,000 hookup scenarios and determined that there is capacity through the 2045 planning horizon to serve these growth projections.

Sewer and Wastewater. The Ukiah Valley Sanitation District (UVSD) and the City of Ukiah provide public sewer services to customers within their boundaries under the purview of the State Water Quality Control Board. The City's sewage treatment plant and Waste Water Treatment Plant (WWTP), operational since 1958, serves the City of Ukiah and the Ukiah Valley Sanitation District, however the Project parcel is not located within the service area.

Solid Waste. The Ukiah landfill, outside City limits on Vichy Springs Road, stopped receiving municipal solid waste in 2001 and the City is working on capping the landfill. No new waste generated will be processed through the landfill. Solid waste generated in the Ukiah Valley is exported for disposal to the Potrero Hills Landfill in Solano County. The Valley's solid waste disposal system consists of a large volume transfer station, Ukiah Transfer Station, which receives waste for export.

Discussion: (a-e) No Impact. Users of the proposed trial would utilize existing infrastructure, including access roads, parking lots, water fountains and restrooms; no additional utilities are needed for the proposed trail. Any waste produced from construction activities would be disposed of at the Ukiah Transfer Station in accordance with all applicable local, state and federal regulations. **No impact** to utilities and service systems would occur.

Mitigation Measures: None

20. Wildfire

WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒	☐	☐

Significance Criteria: Impacts to wildfire would be significant if the Project were located in or near a State Responsibility Area (SRA) or lands classified as very high fire hazard severity zones and

substantially impaired an emergency response plan; exposed Project occupants to wildfire pollutants or uncontrolled spread of wildfire due to site conditions such as slope and prevailing winds; require the installation or maintenance of infrastructure that could exacerbate fire risk; or expose people or structures to significant risks as a result of post-fire runoff, slope instability or drainage changes.

Environmental Setting: All lands within the City of Ukiah are within the jurisdiction of the Ukiah Valley Fire Authority. None of the lands within the City of Ukiah are located within a California Department of Forestry (CalFire) State Responsibility Area (SRA). However, some parcels within the western boundary of the City limits, including the Project site, are designated as “Very High” fire severity within the Local Responsibility Area (LRA).

As discussed in Section 9, Hazards and Hazardous Materials, the County’s Emergency Operations Plan (EOP) and Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) address emergency operations, natural disasters (including wildfire), as well as mitigation strategies to reduce potential risks. The City of Ukiah adopted its “jurisdictional annex” chapter of the MJHMP on November 18, 2020. Hazards identified for the City of Ukiah include earthquakes, wildfire, dam failure, flood and pandemic. Table 1-13 of the City’s jurisdictional annex lists each hazard and mitigation action for City of Ukiah.

Discussion: (a) Less than significant impact. The proposed trail would be accessed via existing streets. There are no components of the Project that would conflict with, or impair the adopted Mendocino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), Emergency Operations Plan (EOP), or other adopted emergency response plan or emergency evaluation plan. To further ensure efficient emergency response for trail users and to enhance overall wildfire emergency access within the project area, the **WHWPA Road and Fire Break Maintenance Plan (Attachment G)** explicitly includes "Road Work" activities to "assure safe ingress and egress for routine maintenance, site monitoring, and emergency access" on the five and a half miles of roads and fire breaks. The primary objectives of this plan are to "assure existing roads and fire breaks are open and available to emergency personnel and vehicles". The plan also details the maintenance of Medevac Landing Zones in feasible locations, to be kept clear at specific dimensions (at least 75’x75’, 100’x100’ if possible) to allow helicopter landing for emergency medical transport

These measures are formalized through **Mitigation Measure PS-1 (Public Services)**, which requires pre-construction consultation with Ukiah Valley Fire Authority (UVFA) officials to identify and incorporate, as required, specific approaches such as medical rescue life-flight landing zones and trail connectors between trail sections and access roads. These measures are designed to facilitate search and rescue operations, thereby ensuring efficient rescue and reducing response times to a less-than-significant level. With the implementation of PS-1, supported by the specific provisions of the WHWPA Maintenance Plan, impacts related to emergency response plan impairment would be **less than significant**.

Discussion: (b & d) Less than significant with mitigation incorporated. The Project site is located within an area designated as having "Very High" fire severity risk within a Local Responsibility Area (LRA). The area is "steep with slopes ranging from 30-70 percent" and the "vegetation is overgrown in some locations and wildfire has been suppressed for decades," leading to "increasingly dense and unhealthy western forests". These conditions inherently exacerbate wildfire risks.

The WHWPA Road and Fire Break Maintenance Plan **(Attachment G)**, which will be implemented as part of this Project, is specifically designed as a proactive strategy to reduce these inherent wildfire risks and enhance safety for both trail users and emergency personnel within this high-risk area.

Mitigation Measure PS-2 (Public Services) commits the City of Ukiah to develop and implement a Road and Fire Break maintenance schedule utilizing the City's WHWPA Road and Fire Break Maintenance Plan. This plan outlines comprehensive fuel modification activities including "Clearing of encroaching vegetation with hand crews, dozers, or masticators," "Understory Thinning/Brushing," "Piling, Burning" (with permits), "Chipping/Hauling," and "Dead Tree Removal". These activities are explicitly aimed at ensuring "forest lands are thinned of hazardous deadfall," "shaded fuel breaks along roads are maintained," and the area is "safe for future anticipated public access". The plan also acknowledges that roads, while an asset for firefighting, can be a liability due to fuel loading, and maintenance is needed to "ensure safe access during a fire event". These actions directly reduce fuel loads and contribute to a healthier, more resilient forest, thereby mitigating wildfire risks and supporting the broader fuel modification program identified for the City in its MJHMP.

While temporary construction activities for the trail, involving the use of gasoline-powered tools and equipment, could introduce temporary sources of ignition that might increase fire risk, **Mitigation Measure HAZ-1 (Hazards and Hazardous Materials)** requires fire-safe precautions, including spark arresters on all portable gasoline-powered equipment and proper maintenance of equipment. Furthermore, after construction, the UVTG will consult with the Ukiah Valley Fire Authority to assess trail segments for "fire-hardening" (**Attachment F**), a strategy that combines vegetation management and recreational trails for fuels reduction and enhanced access. The active wildfire risk reduction efforts under the WHWPA Maintenance Plan, coupled with Mitigation Measure HAZ-1, ensure that the Project would not exacerbate wildfire risks or expose people or structures to significant risks from wildland fires, and impacts would be less than significant with mitigation incorporated. Impacts from post-fire runoff, slope instability, or drainage changes would also be mitigated by the ongoing maintenance and erosion control specified in the WHWPA Plan (Objective 3) and BIO-7.

(c) Less than significant with mitigation incorporated. The Project, through its integration with the WHWPA Road and Fire Break Maintenance Plan **(Attachment G)**, does require the ongoing maintenance of existing infrastructure, specifically roads and fire breaks, within the Western Hills Watershed Protection Area. This is contrary to the prior discussion's statement that the Project would "not require the installation or maintenance of infrastructure... that would exacerbate fire risk" [Source: Lookout Peak Trails Draft ISMND9_9.pdf, p. 50]. However, the specific purpose of this required maintenance, as detailed in the WHWPA Plan, is explicitly to reduce, rather than exacerbate, fire risk. Activities such as clearing encroaching vegetation, grading roads for emergency access, and thinning hazardous deadfall are designed to create a "safe environment" and maintain "safe ingress and egress" for emergency personnel. **Mitigation Measure PS-2 (Public Services)** formalizes the City's commitment to implement a maintenance schedule for these vital fire breaks and access roads utilizing the WHWPA Plan [Source: Mitigation Measures, PS-2]. Therefore, the ongoing maintenance of this infrastructure, as governed and mitigated by PS-2 and explicitly guided by the objectives and activities of the WHWPA Maintenance Plan, serves to reduce fire risk and would not result in temporary or ongoing adverse impacts to the environment. Impacts would be **less than significant with mitigation incorporated**.

Mitigation Measures:

Implementation of **HAZ-1** and **PS-2**.

21. Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion: (a) Less than significant impact with mitigation incorporated. As described throughout the Initial Study, temporary ground disturbing activities associated with vegetation removal and trail construction could result in direct significant impacts to Air Quality, Biological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, and Wildfire. However, mitigation measures identified within the aforementioned sections would reduce impacts to **less than significant with mitigation incorporated**.

(b) Less than significant impact with mitigation incorporated. Cumulative impacts are generally considered in analyses of Air Quality, Biological Resources, Cultural Resources, Noise, and Traffic. As discussed throughout the Initial Study, the Proposed Project would have less than significant impacts on these resources with implementation of mitigation measures described herein. Short-term construction impacts associated with the Project would not significantly contribute to cumulative impacts in the area as there are no known past projects nor current projects within the vicinity of the site. Based on the findings and conclusions contained in the Initial Study, cumulative impacts related to the Proposed Project would be **less than significant with mitigation incorporated**.

(c) Less than significant impact with mitigation incorporated. Based on the findings and conclusions contained in the Initial Study, the Proposed Project would not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. Impacts would be **less than significant with mitigation incorporated.**

VI. REFERENCES

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VII. MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Monitoring and Documentation Sheet

Potential Impact	Mitigation Measures	Implementation Responsibility	Monitoring Responsibility	Timing	Date Implemented
Air Quality					
AQ-1: Vegetation Removal.	Vegetation removal methods shall include chopping larger materials on-site to be disbursed with materials largely in contact with the ground; burning of vegetation shall not be allowed without obtaining the appropriate burn permits.	Contractor	COU	TC	
AQ-2: Diesel Engines – Stationary and Portable Equipment and Mobile Vehicles:	Off-road equipment with auxiliary diesel engines rated at 50 brake horsepower or greater, must have either a valid Air Quality permit, or a state Portable Equipment Registration Program (PERP) Registration.	Contractor	COU	TC	
Biology					
BIO-1: Sensitive Species	A Worker Awareness and Education Program (WAEP) will be conducted with trail crew leaders	COU	COU	PC	
BIO-2: Nesting Birds.	Pre-construction surveys shall be conducted by a qualified biologist prior to any vegetation removal or ground disturbing activities occurring between March 1 and August 31 of any year	Contractor	COU	PC	
BIO-3: Roosting Bats.	If evidence of bat roosts are observed pre-construction bat surveys should be conducted no more than 14 days prior to groundbreaking activities.	Contractor	COU	PC	
BIO-4: Mammal Dens or Burrows.	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	Contractor	COU	PC	
BIO-5: Over-Wintering Monarchs.	Monarch Butterflies “Over-Winter” in groups between November 1st and January 31st. If monarchs are observed in this time frame monarch surveys should be conducted by a qualified biologist no more than 14 days prior to the commencement of tree/shrub removal.	Contractor	COU	PC	

BIO- 6: Carbon Loss.	Any tree greater than 6 inches dbh removed during construction shall be replaced at a ratio of 6 to 1 at the nearest available and appropriate site as approved by a qualified professional.	Contractor	COU	BC	
BIO-7: Watercourses	The Project shall adhere to UVTG Design and Maintenance Standards	Contractor	COU	TC	
Hazards and Hazardous Materials					
HAZ-1	Should portable gasoline-powered equipment be used on site firesafe precautions a-f shall be taken	Contractor	COU	TC	
Hydrology and Water Quality					
BIO-7	The Project shall adhere to UVTG Design and Maintenance Standards	Contractor	COU	TC	
Public Services					
PS-1	PS-1 – Prior to construction of new trail sections, trail designers and/or builders will consult with Ukiah Valley Fire Authority (UVFA) officials to identify and incorporate, as required, specific approaches to facilitate search and rescue operations, thereby ensuring efficient rescue and reducing response times to a less-than significant level. These approaches shall include, but not be limited to: a. Medical rescue life-flight landing zones. b. Trail connectors between trail sections and access roads to facilitate first responder access.	Contractor, COU	COU	TC	
PS-2	City of Ukiah will develop and implement a Road and Fire Break maintenance schedule utilizing the City's Road and Fire Break Maintenance Plan outlining City departments responsible for individual maintenance tasks.	COU	COU	TC	
Wildfire					
HAZ-1	Should portable gasoline-powered equipment be used on site firesafe precautions a-f shall be taken	Contractor	COU	TC	

*Mitigation measures are abbreviated for this documentation sheet. Implementation and monitoring must comply with all aspects of the measure as outlined in the ISMND.
* COU = City of Ukiah
* TC = Throughout Construction
* PC = Prior to Construction
* BC = Before Completion

VIII. ATTACHMENTS

A. Existing Conditions Photographs
B. Final Recorded Map and Deed (LLA25-000003)
C. City of Ukiah Native Plant Palette
D. Ukiah Valley Trail Group Philosophy and Design and Maintenance Standards
E. Lookout Peak Shared-Use Trails: Concept Plan Review
F. Fire- Hardened Trails (Vegetation Management Corridors)
G. WHWPA Road and Fire Break Maintenance Plan
H. Biological Assessment Report
I. Concept Trail Map

Attachment A – Existing Conditions Photos



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



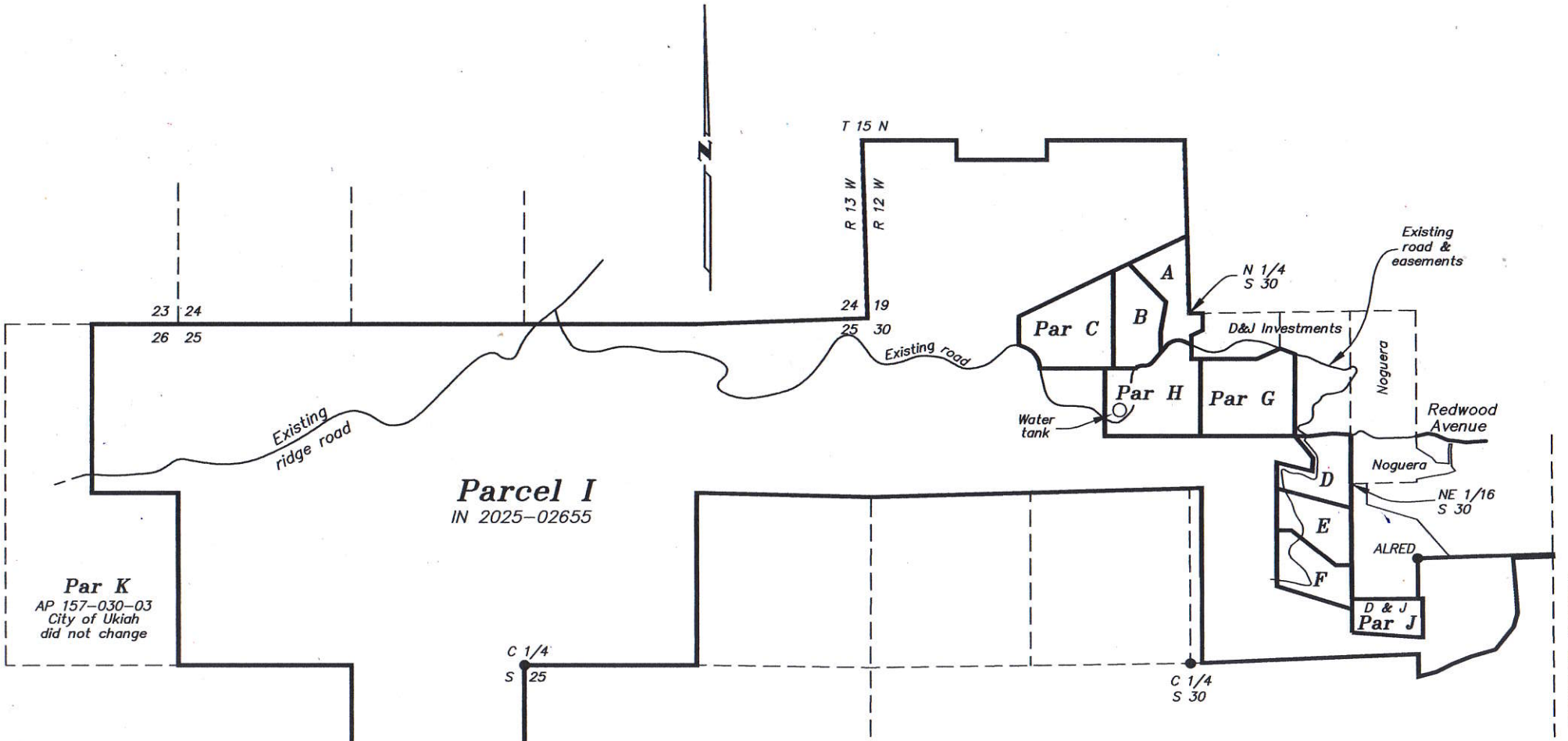
Sol y Sombra Trai.l ~1 mile to north in Mixed woodland



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

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

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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

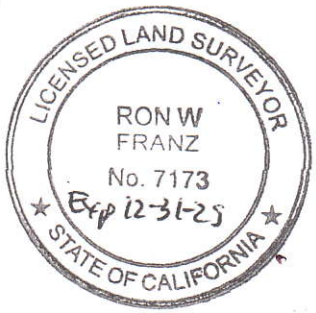
This deed is given pursuant to City of Ukiah Lot Line Adjustment File LLA25-000003 and is intended to create no new parcel.

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

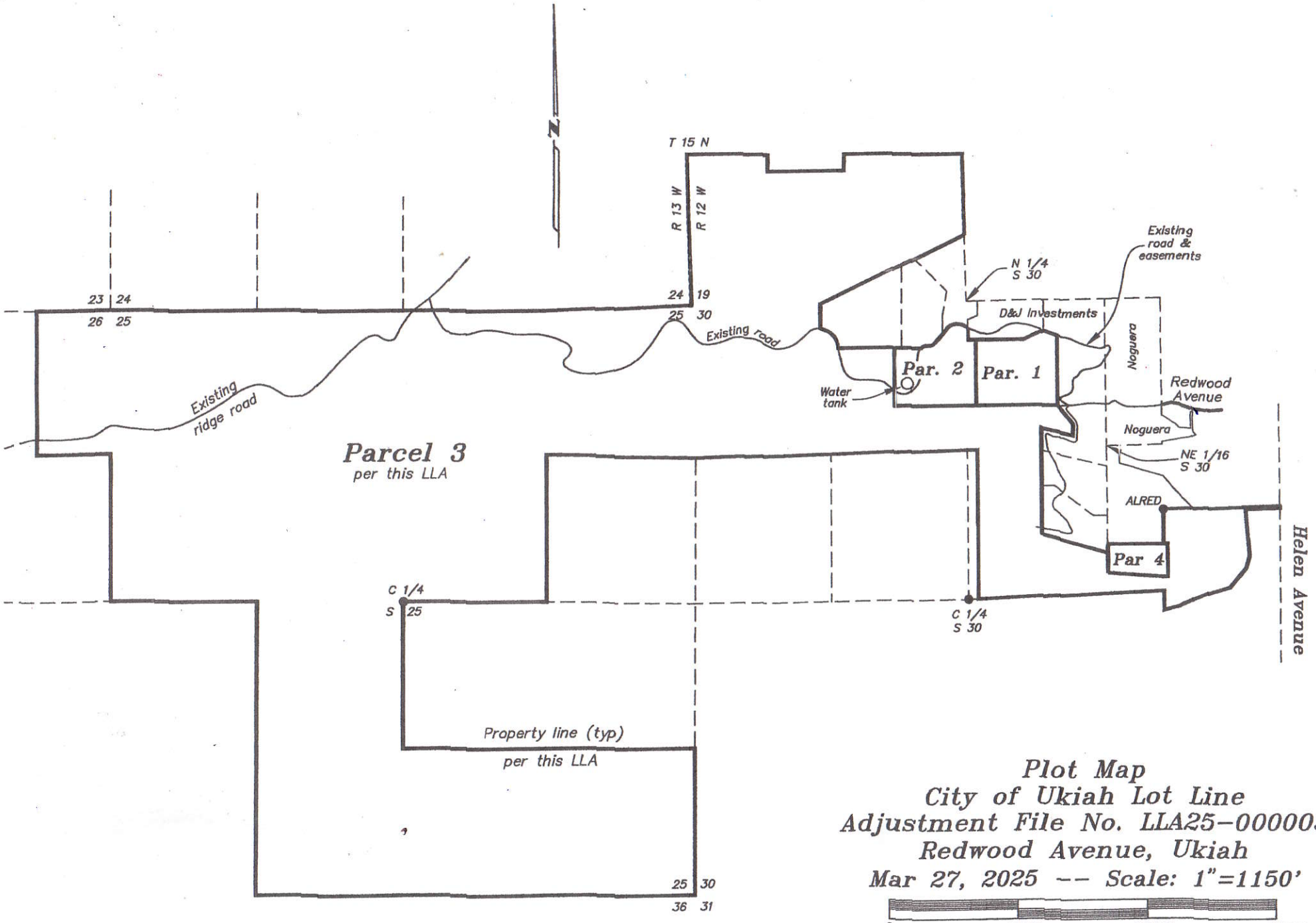


Exhibit "B"

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

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		

Attachment D - Ukiah Valley Trail Group Design and Maintenance Standards

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

Attachment E

Lookout Peak Shared-Use Trails: Concept Plan Review

Prepared on behalf of The City of Ukiah, CA
September 3, 2025

Primary Author:
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Purpose

This document describes a conceptual, native-tread, soft-surface singletrack network near Ukiah, California, in Mendocino County. Its purpose is to establish a baseline plan to guide trail design and construction. It outlines the landscape's challenges and opportunities for trail development and identifies the next steps needed to move the project successfully from concept through design and into construction.

This document is not intended to serve as a comprehensive technical or legal environmental review as required by the California Environmental Quality Act (CEQA) or other state regulations.

Introduction & Overview

The City of Ukiah, California ("the City"), in collaboration with the Ukiah Valley Trail Group (UVTG), is leading the development of approximately 20.62 miles of shared-use and bike-optimized singletrack trails within an 800+ acre area of mountainous terrain owned and managed by the City, west of Doolan Canyon Drive. Collectively, these trails are referred to as the Lookout Peak Shared-Use Trails.

The Lookout Peak Shared-Use Trails are designed to serve residents, visitors, and recreational events. Natural-surface singletrack will accommodate walkers, hikers, trail runners, and mountain bikers. With nearly 2,000 feet of vertical relief and steep hillsides, the project area is best suited for intermediate and advanced trails. While the landscape could accommodate expert-level routes, no expert trails are included in the plan at the time of publication. Trails will primarily feature native tread, constructed from onsite materials and designed to blend into the natural environment.

The trail system is divided into two distinct concept zones:

Gateway Zone – Situated at the lower elevations of the project area, the Gateway Zone is organized into a stacked loop configuration consisting of upper and lower loops totaling approximately 3.71 miles. This zone includes two trailheads: the Doolan Canyon Drive Primary Trailhead and the Helen Avenue Staircase Trailhead. Trails in the Gateway Zone are envisioned to be of intermediate difficulty and provide primary access to the larger system. The configuration will allow users to make a shorter loop, catering to those who may not have the time or ability to take on an adventure into the Lookout Peak Zone

Lookout Peak Zone – Occupying the higher-elevation portion of the project area, the Lookout Peak Zone contains the majority of the planned trails, totaling approximately 16.91 miles. Trails here are primarily of advanced difficulty and are configured in an all-mountain, traverse style. This design allows riders to ascend to the Lookout Peak ridgeline, complete a loop around the

summit zone, and descend back to the Gateway Zone on a different route. A mid-mountain traverse trail is also planned, offering users the ability to create shorter loops or more varied routes. Additionally, adventurous riders will have the option to descend on a gravity trail dedicated to cyclists.

Together, the Gateway and Lookout Peak zones form a cohesive trail system that provides diverse opportunities for outdoor recreation while showcasing the rugged terrain, scenic vistas and natural character of the West Hills.

Site Visit Summary

Jon Schubbe of Schubbe Consulting conducted a site visit to the project area on January 27–30, 2025. The survey relied primarily on pedestrian reconnaissance of the greater project area, supplemented by windshield reconnaissance using a side-by-side (SxS) and a medium pickup truck to cover the road and fire break network.

During the visit, positive and negative control points were documented using GPS and photography:

- **Positive control points** included suitable stream or drainage crossing locations, scenic overlooks, unique forest stands, unique geology and areas appropriate for berm placement.

- **Negative control points** included impassable or excessively steep terrain (particularly near crossings), dense vegetation zones, areas of erosion associated with historic fire break construction and grow sites.

Findings from this site visit provide the baseline field data used to inform the shared-use trail concept alignments, technical assessments of the project area, and design considerations presented in this report.

Project Area Description

The Project Area is located in the “West Hills,” which form the western slopes of Ukiah Valley. Its boundaries form an irregular, multi-sided polygon that generally encompasses the Lookout Peak Summit, a prominent ridgeline descending from the summit toward Redwood Drive, and a portion of the Doolan Creek headwaters. Vertical relief ranges from approximately 740 feet at the Doolan Canyon Drive Trailhead to 2,700 feet at the summit.

The Lookout Peak Summit zone consists of an alpine parkland-type landscape, where multiple summits occur as subtle rises along the ridgeline. The ridgeline itself is relatively flat and is traversed by a single-lane fire road, with slopes dropping steeply to either side. The main fire

road follows the summit ridgeline and provides access to several dead-end spur roads that extend along prominent ridgelines descending to the south and north of the summit zone.

Below the summit, the landscape is characterized by steep slopes shaped by radial and dendritic ravines, valleys, and canyons. Slopes reflect the mountainous character of the terrain and often range between 45% and 65%. Slopes exceeding 65% are common. Zones between 10% and 45% are present but do not occupy significant portions of the Project Area, while slopes of less than 10% are largely absent, occurring only in “passes” or where fire roads flatten at grade transitions.

Exposed rock is relatively uncommon but was observed along ridgelines and on the southeast-facing slopes below the summit. These areas of exposed rock are generally associated with slopes greater than 65%.

The Project Area includes the headwaters of Doolan Creek, located south of Lookout Peak Summit. The southern portion of the Project Area also encompasses a segment of the Doolan Creek channel itself, along with adjacent hillsides and canyon walls. A prominent, unnamed ephemeral stream and valley are present in the northern portion of the Project Area. The Project Area further includes a small portion of the Gibson Creek Watershed, which drains the north side of Lookout Peak.

Exposed & Difficult Terrain

A zone of particularly steep slopes and steep exposed rock is present in the southern portion of the project area, along Doolan Creek. Due to the challenging terrain, and abundance of more suitable terrain elsewhere (uphill) in the project area, this area is not considered for trails at this time.

Additional scouting may identify viable routes to access this scenic and rugged zone in the future.

Boulders & Rocks

Native boulders and rock outcrops are primarily confined to stream channels and areas of concentrated flow. Where present, most material falls within size classes that can be managed by hand crews or with a mini-excavator. Outside of these channels, surface rock and large boulders are relatively uncommon and are not expected to pose significant challenges during trail design or construction.

Design and Construction Ramifications Related to Terrain & Rocks

Many areas of the project area fall between 45% and 65% side slopes with some zones exceeding 65%. Foot travel becomes difficult due to the extreme steepness of slopes. Construction is also typically more challenging due to this exposure to elevation.

Rocky terrain, large boulders, scree fields or bedrock is not anticipated to reduce the efficiency of design or construction.

Soils

The predominant soil classes within the Lookout Peak Shared-Use Trail Project Area are the Hopland-Wohly loams (Map Unit 151) and the Maymen-Etsel-Snook complex (Map Unit 160). According to the USDA Web Soil Survey (USDA WSS), these soils occur on steep mountainous slopes ranging from 30 to 75 percent, which reflects onsite observations. Hopland and Wohly loams are moderately deep, well-drained soils formed in sedimentary rock, while the Maymen, Etsel, and Snook soils are shallow to moderately deep, well-drained soils derived from metamorphic parent material. Together, these two map units account for a significant portion of the Project Area.

Other soil map units present across the Project Area include the Witherell-Hopland-Ashokawna complex, Hopland loam (50–75% slopes), Yorkville-Yorktree-Ashokawna complex, and Cummiskey gravelly loam. These soils are also mapped on steep slopes and are characterized by loamy or gravelly surface horizons over shallow or moderately deep subsoils. Other minor soil types are likely present, at low acreages, within the project area.

Design and Construction Ramifications Related to Soil

Soils within the Project Area are primarily loams and gravelly loams on steep slopes. Loam-textured soils, such as those in the Hopland-Wohly and Hopland units, typically compact well during trail construction to provide a stable tread surface when properly drained. Gravelly loams, such as the Cummiskey and Ashokawna complexes, also compact adequately, though their coarse fragments may cause them to break down more quickly. In these areas, capping or armoring may be incorporated into design to ensure a sustainable and user-friendly trail surface.

In contrast, soils within the Maymen-Etsel-Snook complex are shallow and rocky, with limited fine material available to bind the tread. These soils have lower compaction potential and fine particles may get stripped from the soil matrix, particularly on steeper grades. Trail design in these units should anticipate the need to moderate grade, and incorporate frequent grade reversals and drainage features to minimize soil displacement.

To allow for soil texture to be considered during field design and construction, the extent of different soil textures should be mapped and included on field maps for reference during trail flagging.

Overall, compaction potential across the Project Area is moderate to high in loam-dominated units and low to moderate in shallow, rocky complexes. To achieve a durable tread and reduce long-term erosion and maintenance, trail construction will require full-bench excavation, tread outsloping, mechanical compaction, and careful drainage design. Complexes may require capping if loss/movement of fine cohesive particles becomes a serious challenge.

Vegetation

Vegetation and Natural Communities

The project area supports a mix of oak woodlands, chaparral, manzanita thickets, and scattered stands of gray pine and redwood. Most of the site remains in a native and relatively undisturbed condition, with vegetation reflecting both the ridgeline parkland setting and the dissected canyons below.

Field surveys conducted in 2024 identified several vegetation types using state and federal classification systems. According to the Holland system, the site falls primarily within *Valley and Foothill Grassland* and *Chamise Chaparral*. CALVEG mapping refines this further, identifying *Interior Live Oak Alliance* and *Lower Montane Mixed Chaparral Alliance* as dominant. Manual of California Vegetation (MCV2) classifications observed on site include:

- **Oak Chaparral (Quercus wislizeni – Quercus chrysolepis Shrubland Alliance):** Dense shrub communities dominated by interior and canyon live oak, often intermixed with chamise, ceanothus, and manzanita.

- **Manzanita Chaparral (Arctostaphylos Shrubland Alliance):** Mid- to upper-slope chaparral dominated by hoary, common, and Stanford manzanita, sometimes forming extensive old-growth thickets.

- **Gray Pine Woodland (Pinus sabiniana Woodland Alliance):** Open pine woodland with scattered oaks and buckeye, generally on shallow, rocky soils. Shrubs are common or infrequent.

Additional features include mixed oak stands and small, sparse redwood groves occurring in cooler or more sheltered microsites.

Aspect strongly influences vegetation patterns across the site. South-facing slopes are typically dominated by shrubby species such as chamise and manzanita, reflecting hotter, drier conditions. In contrast, east- and north-facing slopes support closed-canopy woodlands of oak, pine, and occasional redwood, where cooler and moister conditions favor taller tree growth.

Overall, the vegetation provides substantial canopy cover across much of the project area, with many trail segments passing beneath oak and pine woodland or screened by tall chamise and manzanita. Ridge roads are the primary existing clearings, while the remainder of the landscape retains its native character.

No sensitive natural communities, as defined by the California Department of Fish and Wildlife, were documented within the study area.

Invasive Species

Invasive or exotic plant species are mostly limited to Eurasian grasses associated with grasslands and pasturelands. Other invasive species were not found to be widespread. Invasive species are not anticipated to affect design.

To prevent introducing new invasive species and their seeds to the site, contractors should wash all equipment prior to mobilizing onsite.

Thorn Bushes

Thickets of Ceanthus spp were encountered along the Summit Ridgeline, growing in disused fire roads and in overgrown fire breaks.

Poison Oak

Poison Oak was not observed to be abundant in the project area, but is likely present as dispersed individuals, especially in shrub thickets.

Windfall and Hazard Trees

Extensive areas of windfall or with large/expansive log piles were not observed during scouting. It is very likely some small areas of windfall or small log piles will be encountered during design, but overall, zones with abundant fallen or down timber are not anticipated to significantly impact productivity.

Design Ramifications Related to Vegetation

The vegetation communities present in the project area will directly affect how trail alignments can be identified, flagged, and refined during the design phase.

- **Chaparral, Chamise, and Manzanita Stands (Impenetrable Vegetation)**
  These shrub-dominated communities often form nearly solid thickets that are extremely difficult to traverse. In such areas, it may not be feasible to flag alignments directly through vegetation. Instead, control points must be flagged at accessible locations such as ridgelines, drainages, crossings, or other significant features that define trail direction. Designers may need to rely on topographic mapping, drone images and/or aerial interpretation rather than continuous on-the-ground flagging.

- **Closed-Canopy Forest (Oak, Pine, Redwood)**
  In woodland and mixed forest communities, the understory is typical of low to moderate density, allowing designers to move more freely across the landscape. These conditions permit more detailed flagging of the trail alignment and provide moderate sight lines, which are important for evaluating user experience and controlling grades. Trail layout in

these communities is constrained more by scattered mature trees than by dense chaparral.

Existing Infrastructure

A network of fire roads and fire breaks is present within the Project Area. Most notably, a primary fire road extends uphill from Redwood Avenue to reach the summit and continues westward beyond the project boundary. A second access road extends from San Jacinta Drive to the old grow site.

The main trailhead for the project will be accessed from Doolan Canyon Drive, which forms part of the southeastern/eastern project boundary.

Several dead-end spur roads extend from the primary fire road, generally following ridgelines. Where ridgelines were too steep to accommodate a road, fire breaks have been constructed by bulldozer.

Built infrastructure within the Project Area is limited to a single cell phone tower located mid-mountain.

Barbed Wire Fence

Barbed wire fence was observed along the project boundary in some locations, but fencelines were not observed within the project area.

Grow-Sites

Many areas within and adjacent to the project area have been used as unregulated cannabis grow sites. At least one known, historic grow site is located in the Gateway Zone, in the general vicinity of Intersection *G*. Efforts to clean up and restore the known site are in progress. Other unknown sites may exist within the project area. Debris and leftover infrastructure from this grow site, (or any other) is not expected to significantly hamper design or construction, but designers and builders may encounter trash and debris associated with this historic land use. Trash and debris typically includes, plastic piping, plastic sheeting, metal greenhouse hoops, plastic grow pots, soils and fertilizer bottles/bags.

Designers should flag any large debris or trash fields encountered while completing flagging, for further evaluation & consideration.

Utilities and Buried Infrastructure

A repeater station for a cellular network exists along the main fire break, at approximately 2,000’ of elevation. No known restrictions or setbacks are affiliated with this facility and it is not serviced by underground utility lines.

Design and Construction Ramifications Related to Existing Infrastructure

The existing roadway and fire break infrastructure will be valuable during both design and construction. The entire ridge line fire road is accessible to 4x4 vehicles, which will help improve efficiency of design, since long distances will not have to be walked to access the trail alignment.

Trail System Description

The Lookout Peak Shared-Use Trails are organized into two primary zones totaling approximately 20.62 miles: the Gateway Zone at lower elevations and the Lookout Peak Zone at higher elevations. Each zone contains multiple trail segments intended to provide a range of user experiences.

Gateway Zone (~3.7 miles)

Lower Loop – Segments 101 & 102 (~1.1 miles)

Originates at the Doolan Canyon Drive Primary Trailhead. This loop provides the main access into the system by connecting the trailhead with Intersection A. The alignment follows moderate slopes, weaving through mixed oak woodland.

- **Challenges**
    - Locating suitable berm sites.
    - Managing proximity to private property boundaries.
    - Maintaining sustainable grades on short, steeper pitches, especially near trailhead.

- **Opportunities**
    - Shaded corridors beneath tree canopy.
    - Convenient neighborhood connections to the trailhead via Doolan Canyon Drive.

Upper Loop – Segments 201 & 202 (~2.4 miles)

Extends from the Lower Loop and climbs into steeper terrain to form a stacked loop network, by connecting Intersections A and B. The route traverses mixed oak and pine woodlands, with some open-canopy areas on south-facing slopes.

- **Challenges**
    - Constrained corridor near property boundaries.
    - Steep hillsides above Intersection A, especially along Segment 202.

    - Dense shrub zones in south-facing oak forests.

- **Opportunities**
    - Varied trail character across woodland and open-slope environments.
    - Scenic overlook and gathering space at the former grow site.

Helen Avenue Staircase Connector – Segment 103 (~0.13 miles)

Provides secondary access to Segment 101 from Helen Avenue via an existing public alley right-of-way.

- **Challenges**
    - Proximity to adjacent residences.
    - Steep terrain requiring stair construction for a sustainable alignment.

- **Opportunities**
    - Enhanced walkable access from nearby neighborhoods.
    - Dedicated hiker/walker connection.

Lookout Peak Zone (Approx. 16.9 miles)

Connector Trail – Segment 301 (~0.8 miles)

Main two-way connection between Intersection B in the Gateway Zone and Intersection C in the Lookout Peak Zone.

- **Challenges**
    - Property boundary constraints.
    - Grade management while reaching stream crossings.
    - Dense, nearly impenetrable chamise on south-facing slopes.

- **Opportunities**
    - Multiple suitable stream crossing sites.
    - Scenic views near Intersection C.

South Ascent/Descent Trails – Segments 401, 402 & 403 (~5.65 miles)

Connect Intersection C (1,250’ el.) and Intersection F (2,700’ el.) via Intersections D and E, forming the southern link between the base of the Lookout Peak Zone and the Summit Loop.

- **Challenges**

    - Berm siting on steep slopes.
    - Dense understory and shrubby vegetation.

- **Opportunities**
    - Natural topography that supports grade reversals.
    - Scenic overlooks.

Summit Loop – Segments 501 & 502 (~3.5 miles)

Circles the Lookout Peak ridgeline, connecting Intersections F and G. Terrain includes oak woodland on west/north slopes and chaparral/chamise on south/east slopes.

- **Challenges**
    - Limited vegetation cues to aid grading on exposed slopes.
    - Wind exposure.
    - Limited shade on south-facing aspects.

- **Opportunities**
    - 360-degree views.
    - A signature destination loop at the summit.

North Ascent/Descent Trails – Segments 601 & 602 (~3.6 miles)

Connect Intersection G (2,600’ el.) and Intersection C (1,250’ el.) via Intersection H, forming the northern link between the Summit Loop and lower elevations.

- **Challenges**
    - Constrained corridor between the northern project area boundary, main access road and ridgeline.
    - Berm siting on steep slopes.
    - Grade management near Intersection G.

- **Opportunities**
    - Long, sustained climbs.
    - Panoramic views.

Mid-Mountain Traverse – Segments 701 & 702 (~1.1 miles)

Contours across the slope below the summit, connecting Intersection E with Intersection H via Intersection I.

- **Challenges**
    - Thick shrubby vegetation limiting corridor access.

- **Opportunities**
    - Appealing closed-canopy forest corridors.
    - Multiple loop and route linkage options for users that help disperse use and provide for engaging experiences.

Gravity Trail (Bike-Only Descent) – Segments 801 & 802 (~2.1 miles)

Bike optimized descent trail linking Intersection G (2,600’ el.) and the Summit Zone with Intersection D (1,770’ el.) via Intersection I.

- **Challenges**
    - Dense chamise and manzanita clearing.
    - Berm and switchberm sitting on steep slopes.
    - Grade management near Intersection G.

- **Opportunities**
    - Flow-oriented design with speed control and safety features.
    - A signature gravity experience for advanced riders.

Next Steps Toward Implementation

To advance the Lookout Peak Shared-Use Trails from concept to shovel-ready, the following technical tasks are required:

Field Flagging/Design

- Complete detailed, on-site field flagging of trail alignments.
- Verify grades, drainage crossings, and control points such as intersections & berms under on-site conditions.
- Identify appropriate build techniques
- Adjust concept alignments as needed to consider unforeseen circumstances and optimize flow.
- Prepare Design Overview Figure & Detailed Design Figures to aid with bidding and construction.

Novel Design Techniques

In areas of dense chaparral and manzanita, continuous flagging of the trail corridor may not be feasible. In such cases, control points should be flagged at ridgelines, crossing

locations, and where feasible at proposed berm locations. This ensures that viable crossings can be selected and that grades can be managed by measuring distance and elevation change between control points.

Where continuous flag lines cannot be established, high-resolution, spatially controlled drone imagery should be used as a supplemental reference for construction contractors. This approach increases the risk of unforeseen conditions during construction; however, given the general absence of extensive boulder fields or rock outcrops in the project area, such issues are not anticipated to be significant.

Engineering Drawings

- Prepare typical plan and profile drawings for all trail building techniques prescribed during flagging.
- Include typical design details for crossings, drainage structures, retaining features, and specialized trail elements (berms, switchberms, gravity trail features).
- Include basic schematic drawings depicting intersection configuration.

Design Manual

- Develop a project-specific design and construction manual to accompany guide contractors and volunteer crews.
- Document construction standards, specifications for native tread, compaction, drainage, and vegetation management.

Bid Package (If Required)

- If construction will be publicly bid, prepare a bid package including drawings, specifications, and a basis of payment document.
- Provide pay item descriptions and quantities to support contractor pricing and payment applications.

Construction Estimate

Construction Estimate by Segment

Segment	Miles	Premium	Low ($)	Med ($)	High ($)
Lower Loop: 101–102	1.10	+25%	55,000	68,750	82,500

Upper Loop: 201–202	2.40	+25%	120,000	150,000	180,000
Helen Stairs 103 *(*includes stairs)*	0.13	—	24,000	36,000	48,000
Connector: 301	0.80	0%	32,000	40,000	48,000
South Ascent/Decent 401–403	5.65	0%	226,000	282,500	339,000
Summit Loop 501–502	3.50	0%	140,000	175,000	210,000
North Ascent/Decent 601–602	3.60	+25%	180,000	225,000	270,000
Mid Traverse 701–702	1.10	0%	44,000	55,000	66,000
Gravity Trail 801–802	2.10	+50%	126,000	157,500	189,000
Mileage reconciliation (0.24 mi)	0.24	0%	9,600	12,000	14,400
Subtotal – Trail Construction (~20.62 mi)	—	—	**956,600**	**1,201,750**	**1,446,900**

Supporting Elements

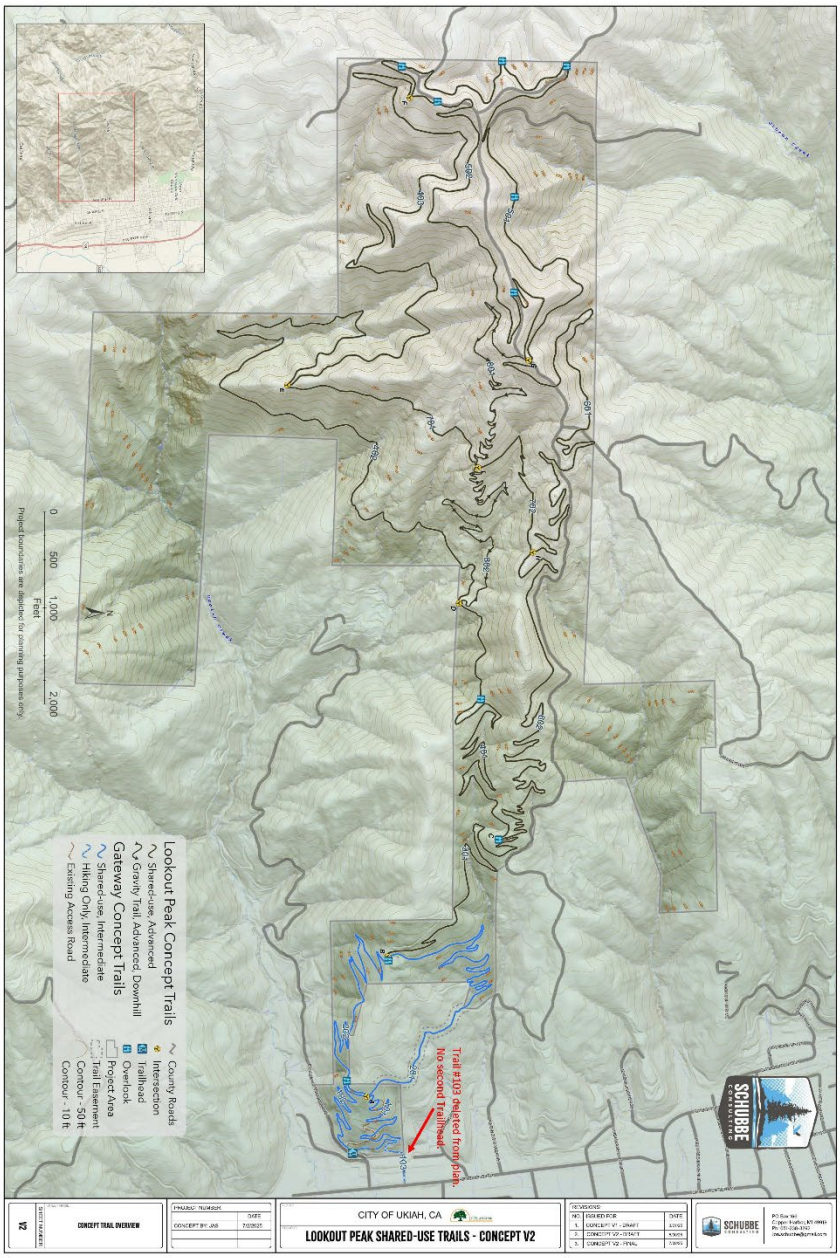
Item	Basis	Low ($)	Med ($)	High ($)
Design & Engineering	8% / 9% / 10% of construction subtotal	76,528	108,158	144,690
Wayfinding & Signage	$2k / $3k / $4k per mile × 20.62 mi	41,240	61,860	82,480

Total Estimated Cost

- **Low:** 956,600 + 41,240 + 76,528 = **$1,075,000** (rounded)
- **Med:** 1,201,750 + 61,860 + 108,158 = **$1,372,000** (rounded)

- **High:** 1,446,900 + 82,480 + 144,690 = **$1,675,000** (rounded)

Appendix A - Concept Map



Attachment F – Fire Hardened Trails

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

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.

Fire- Hardened Trails (Vegetation Management Corridors)

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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

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.

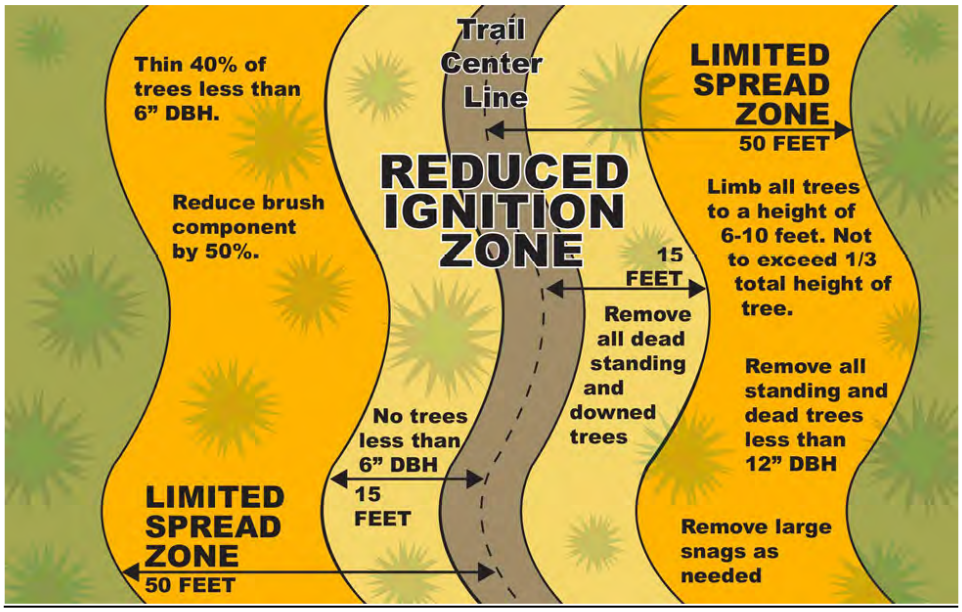
Reduced Ignition Zone - Within 15 feet of both sides of centerline of the trail:

- Remove all trees less than 6 inch DBH.

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- Remove all dead standing or downed trees and brush.

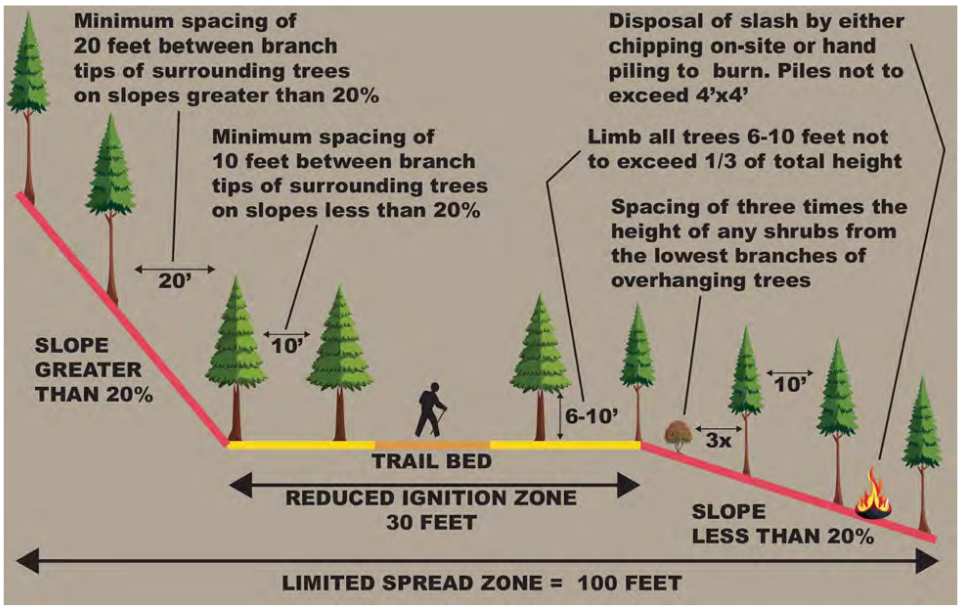


Limited Spread Zone - Within 50 feet of both sides of the centerline of the trail:

- 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.

Fire- Hardened Trails (Vegetation Management 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).

Fire- Hardened Trails (Vegetation Management Corridors)

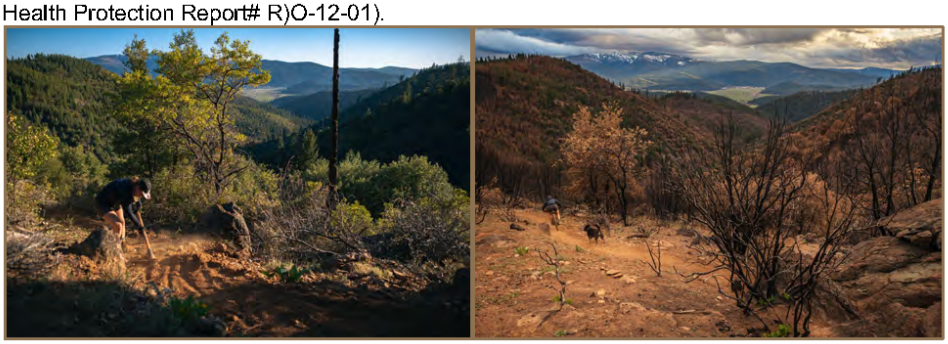
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Proposed Design Criteria

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).



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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.

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:

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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.

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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.

Attachment G

SCOPE OF WORK

Western Hills Watershed Protection Area Road and Fire Break Maintenance Plan

Project Background and Statement of Need

The Western Hills Watershed Protection Area (WHWPA) extends from the valley floor at 760 feet to its highest point at Lookout Peak at 2,726 feet in elevation. Overall, the WHWPA is steep with slopes ranging from 30-70 percent. The vegetation is overgrown in some locations and wildfire has been suppressed for decades. Looking to the west from the highest ridge, views of Pine Mountain and the headwaters of Robinson Creek can be seen. Looking to the east provides views of Lake Mendocino, the Ukiah Valley, and the mountain tops of Sanhedrin, Hull, Snow, Red, and Konocti Mountains. Two forks of Doolin Creek flow east out of the central and southern parts of the WHWPA. The headwaters of Gibson Creek lie in the northwesternmost corner of the WHWPA and an unnamed creek in the northeastern parcel of the WHWPA flows east toward Hillcrest Avenue.

The WHWPA Management Plan (2024) identifies road and forest management needs but provides no “Scope of Work” specifics. Objective 3 of the plan outlines the need to control erosion, protect water quality, and maintain facilities. This objective requires that road work be in accord with the *Handbook for Forest, Ranch, & Rural Roads* (2015). Objective 11 of the plan identifies the need for routine vegetation control to maintain safe ingress and egress and create a safe environment for current and future property uses. Decades of fire suppression have led to increasingly dense and unhealthy western forests.

Redwood Avenue extends past a locked gate crossing approximately a quarter mile of private property before heading up hill and due east along the main ridge line at the center of the WHWPA. A number of secondary roads and old fire breaks combine for a total of five and a half miles of roads and fire breaks that require maintenance.

These roads are an asset to firefighting as well as a liability, due to fire risks associated with road use. The community of Ukiah as well as outlying rural communities to the north, south and east, benefit from fire suppression opportunities provided along the ridgeline; however maintenance of these roads and fire breaks is needed to ensure safe access during a fire event, due to fuel loading as well as the present condition of the running surface of the road. Facilities including public schools, parks, and county offices are concentrated at the east end of the boundary of the WHWPA. These make the roads and fire breaks of the WHWPA a key resource in defense of these assets. Additionally, Nokomis Elementary would be a potentially useful staging area for suppression resources, further enhancing the strategic value of this ridge system.

Maintenance Project Goals

The primary objectives of this WHWPA maintenance plan are to assure existing roads and fire breaks are open and available to emergency personnel and vehicles, forest lands are thinned of hazardous deadfall, shaded fuel breaks along roads are maintained, and the area is safe for future anticipated public access.

The project area includes oak and mixed hardwood forests that have overgrown to an unhealthy degree. Clusters of knobcone pines have died from old age and create a hazard.

Project Area and Measures to Avoid Adverse Impacts

- Project activities will be limited to the ~760 acres of the Western Hills Watershed Protection Area.
- No work will be done under this management plan within 50 feet of a class III or higher flow stream.
- No work will be done during the blooming period of Lilium rubescens (Redwood Lily) and until after it has naturally dispersed seed (May 15-June 30th) unless a survey has been performed and no Lilys are present.
- From April 1st to August 31st nesting bird surveys will be conducted prior to any project activities.
- Clearing of deadfall trees will ensure that a minimum of 6 “snags” per acre remain to provide habitat.

Proposed Activities

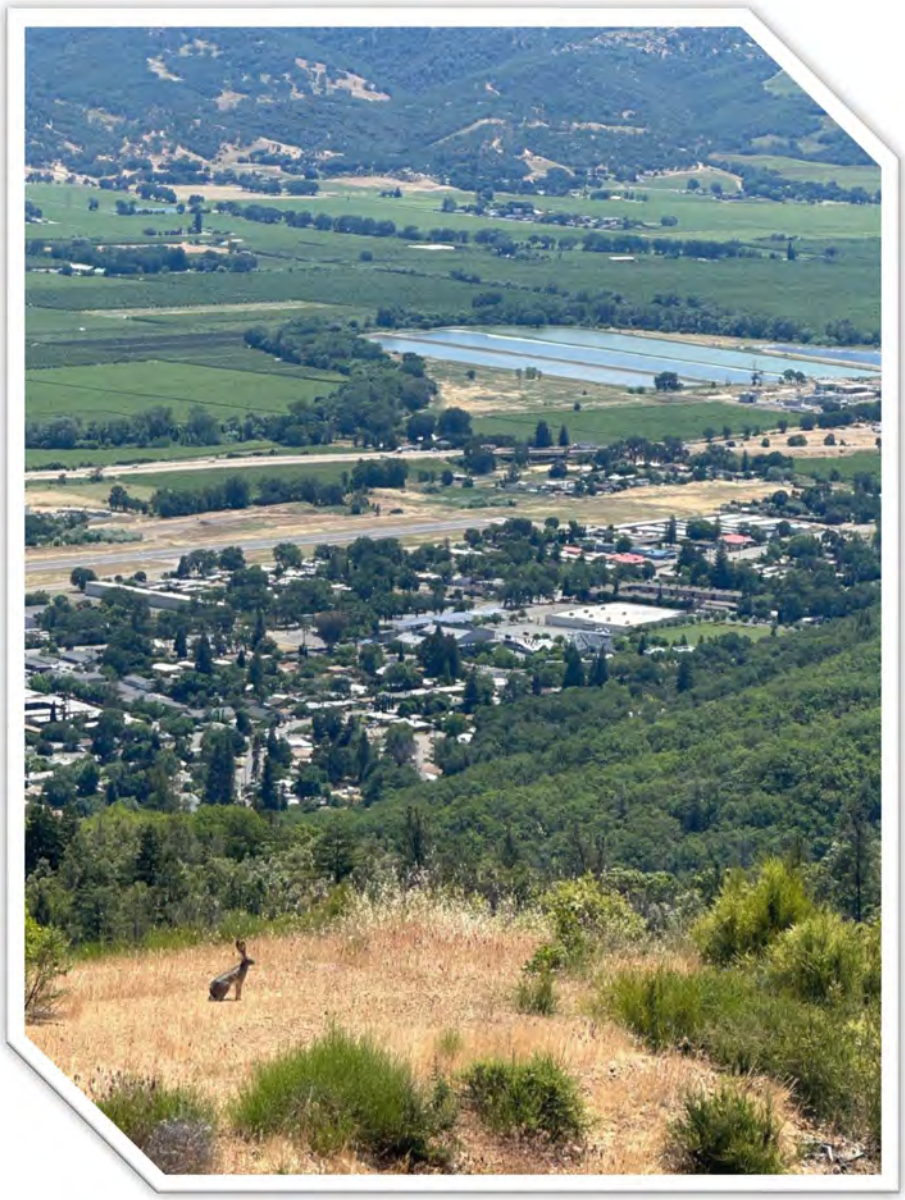
1) *Road Work*: Clearing of encroaching vegetation with hand crews, dozers, or masticators will assure safe ingress and egress for routine maintenance, site monitoring, and emergency access. Grading and shaping of the running surface of the road will be required to keep the roads open and available for emergency access and to manage erosion. The City Engineer or designated staff may identify additional necessary repair needs, such as deep ruts, failing fill, or inadequate drainage features. Road work be in accord with the *Handbook for Forest, Ranch, & Rural Roads* (2015).
2) *Hand Crew - Understory Thinning/Brushing To Promote Healthy Growth*: Manual thinning of understory bush and ladder fuels will be conducted by hand crews. Lop and scatter and piling material in the unit will process most of the biomass. Some material, where feasible, will be staged on a landing where it will be processed by grinder or left for later burning. This activity can be conducted year-round.

3) *Piling, Burning:* Where feasible, understory fuels including brush, small trees, and invasive species removed in manual thinning units will be piled in-unit and burned during wetter months (September through March).
4) *Chipping/Hauling*: When feasible slash will be staged at landings and will be processed by a grinder and spread on the site or at other City owned locations.
5) *Dead Tree Removal*: Clusters of dead trees (primarily knobcone pines) will be felled to improve safety of the area and ensure roads remain unblocked. A cluster of trees is a grouping or three or more trees wherein one falling tree may hit another dead tree. Dead trees that risk falling and blocking an access road or fuel break may also be felled. Felled trees will be limbed up with slash treated as in sections 2-4 above.
6) *Vegetation Management Plan Development*: City staff will begin the process of developing and submitting a Vegetation Management Plan for the WHWPA to cover more intensive fuel reduction strategies such as controlled burns and mastication.
7) *Maintenance of Medevac Landing Zones*: In feasible locations, flat areas that have already been cleared of brush for historic reasons will be maintained as flat (less than 10 degrees), firm, and clear for at least 75’x75’ (100’ x 100’ if possible), to allow medevac helicopter landing.

Attachment H

JACOBSZOON & ASSOCIATES, INC.

natural resource planning & management



Biological Assessment Report

Prepared For:

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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).

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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
Biological and Botanical Program Manager
Jacobszoon & Associates, Inc.

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

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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



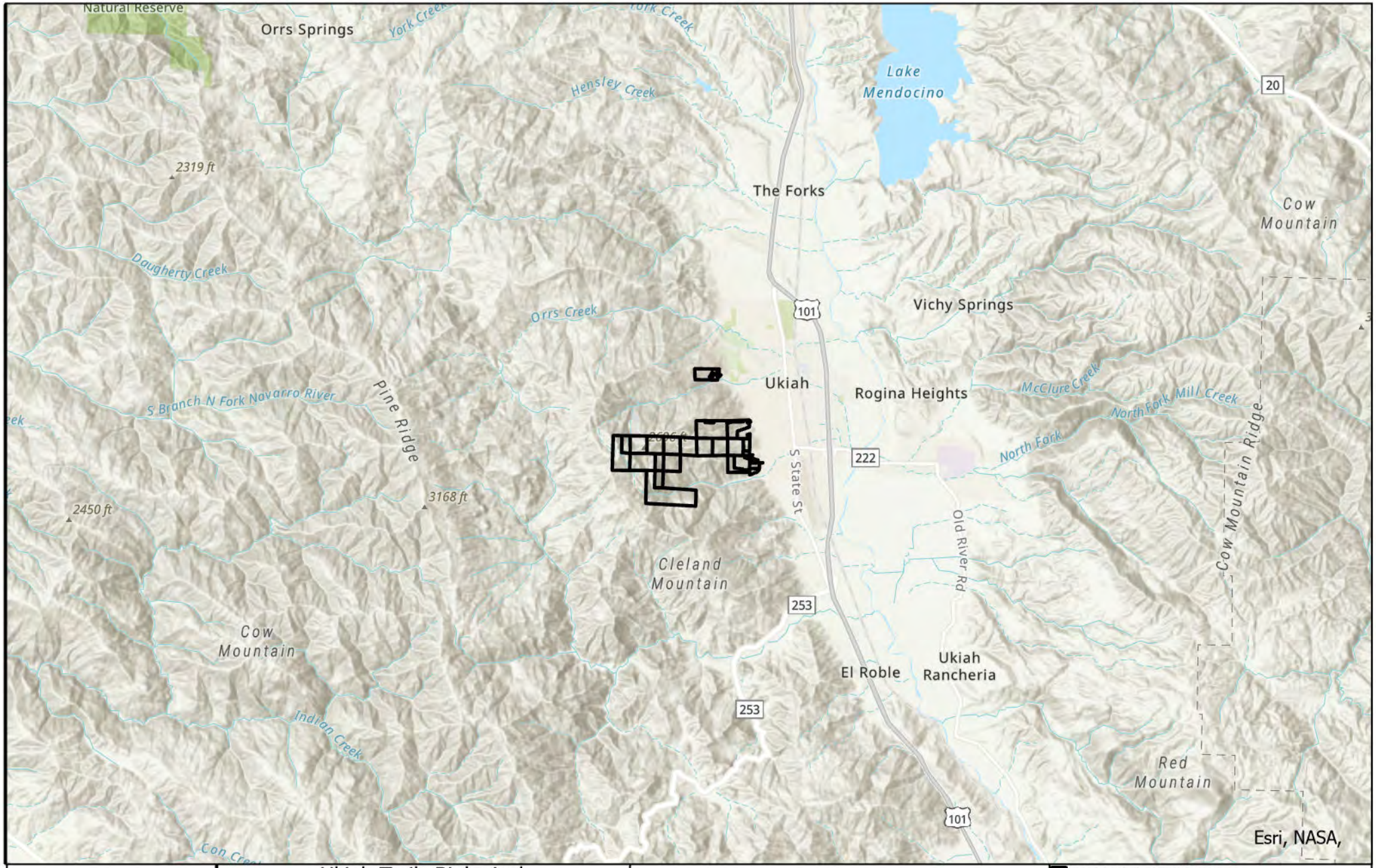
Photo 5:

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

Date:

July 18th, 2024

Appendix D: Maps



N

0 5,000 10,000 Feet

Ukiah Trails Biological Vicinity Map

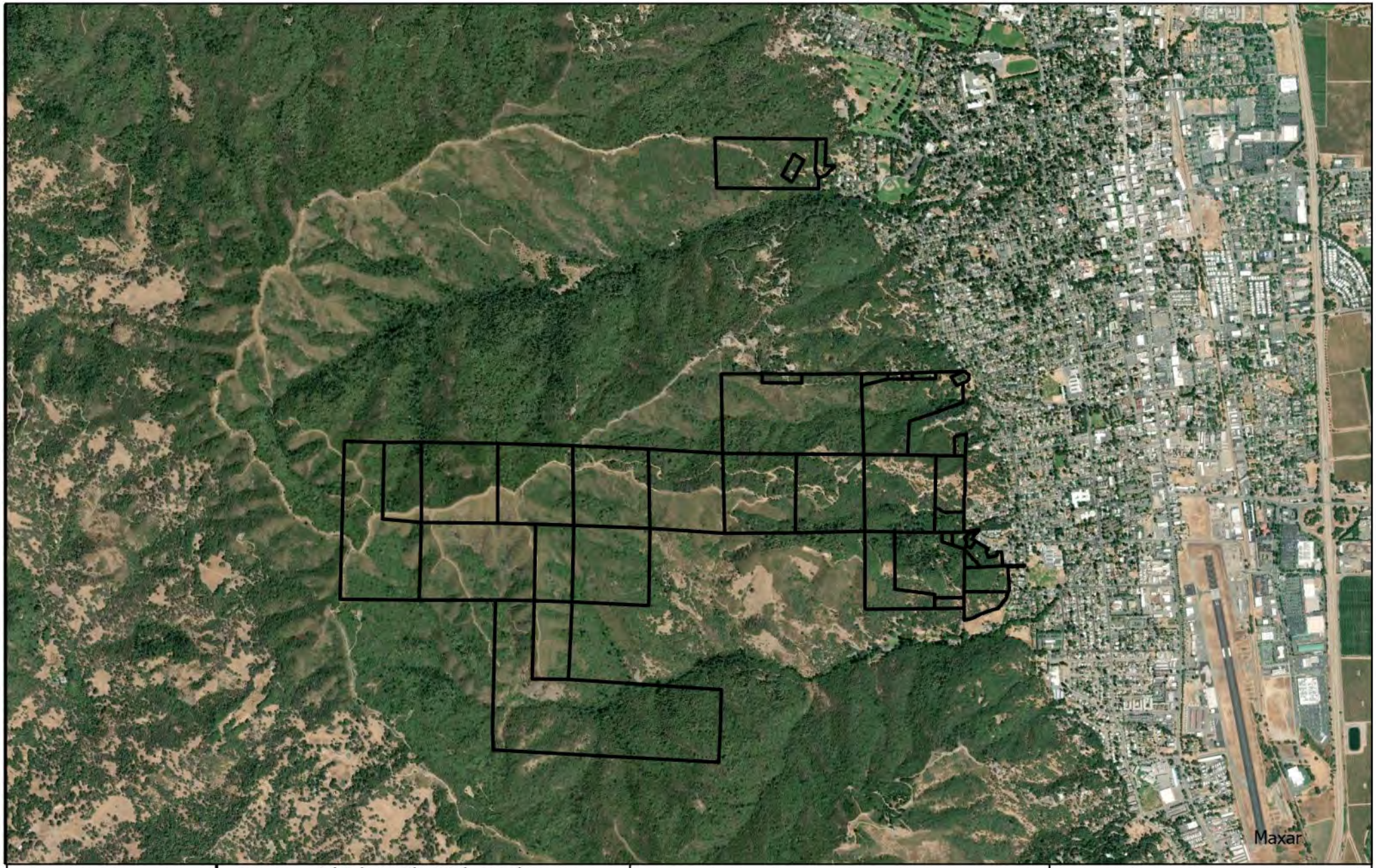
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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



N

0 1,000 2,000 Feet

Ukiah Trails Biological Study Area (Imagery)

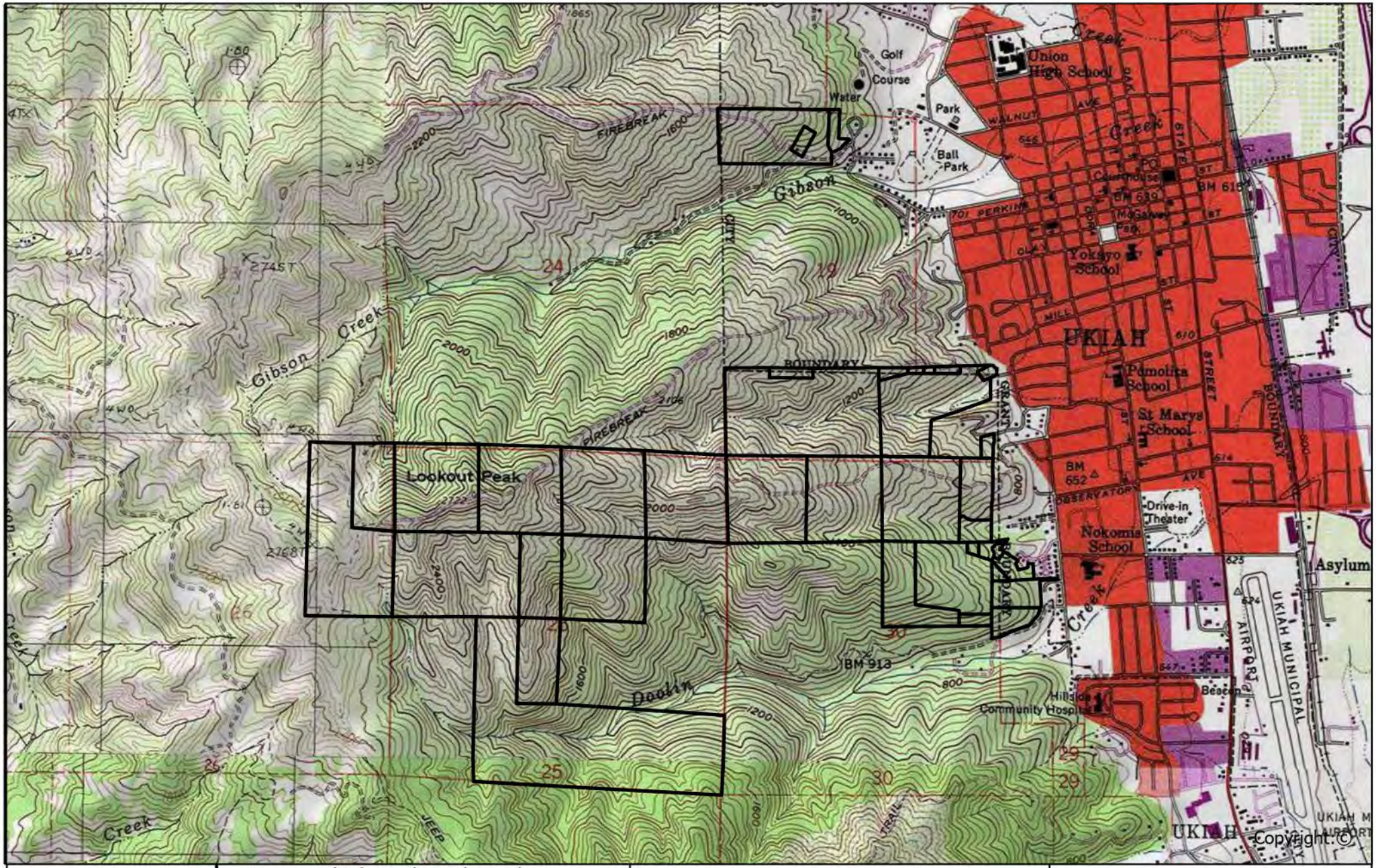
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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



N

0 1,000 2,000 Feet

Ukiah Trails Biological Study Area (Topographic)

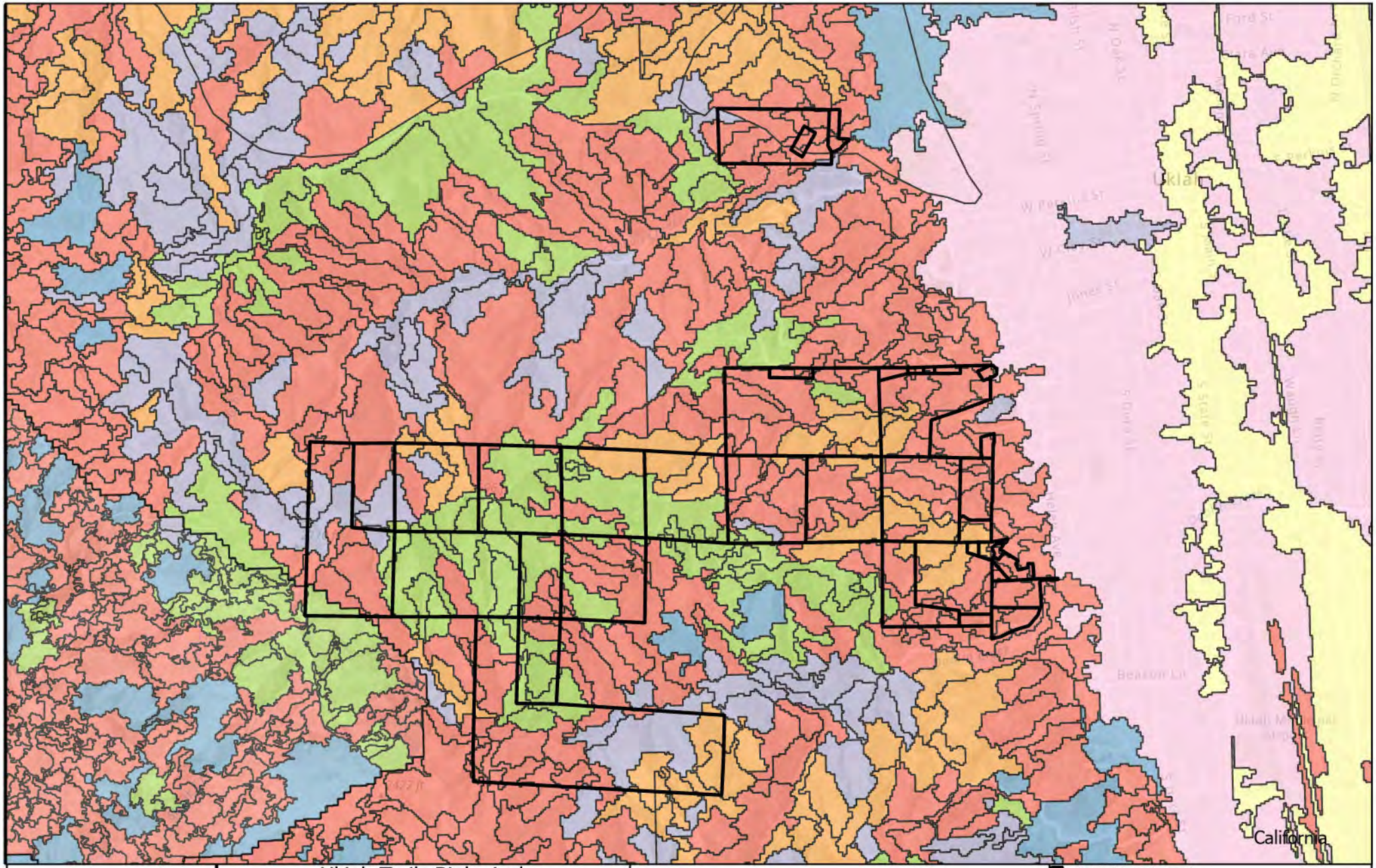
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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



N

0 1,000 2,000 Feet

Ukiah Trails Biological
CAL Vegetation Cover Map

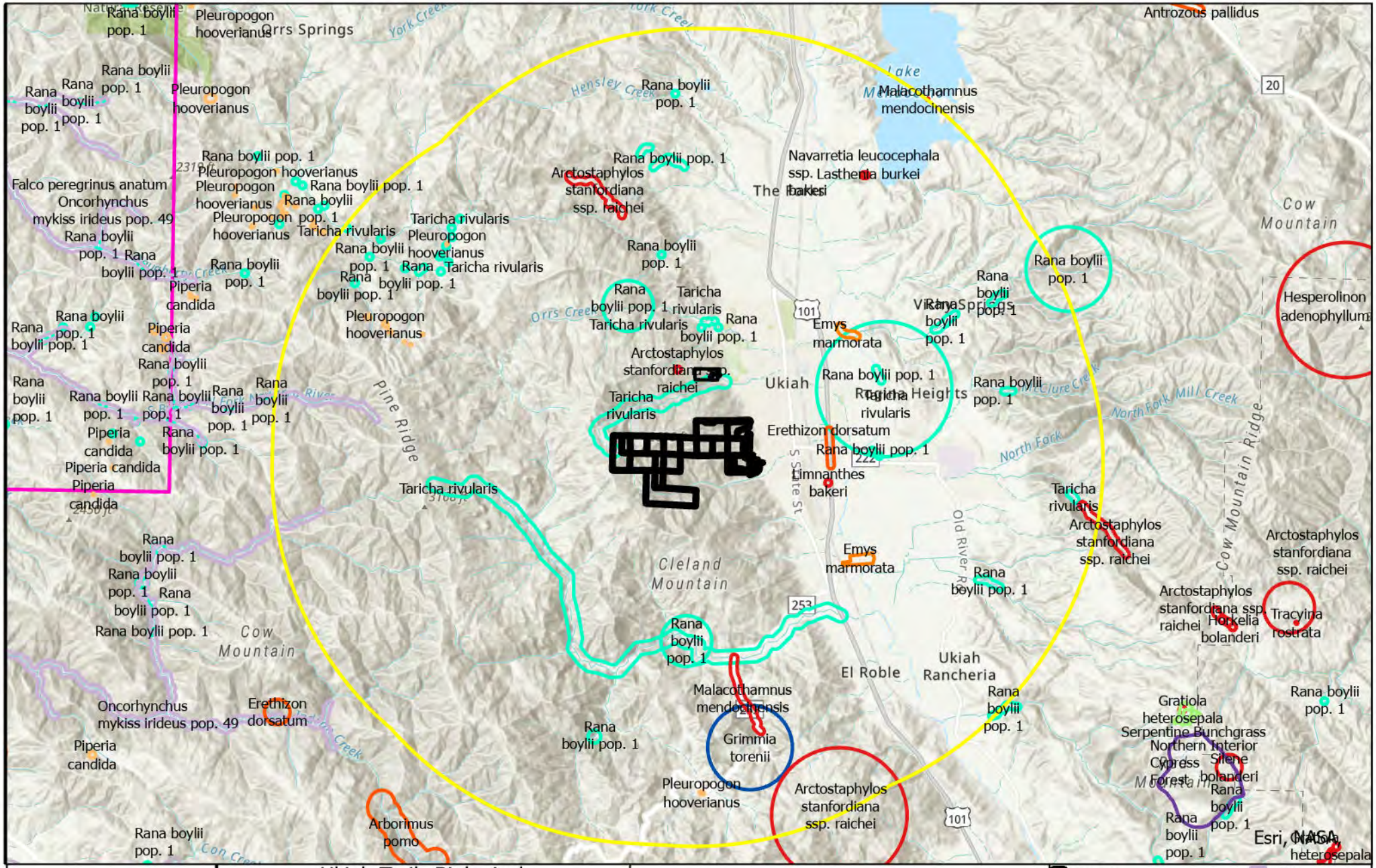
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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



N

0 5,000 10,000 Feet

Ukiah Trails Biological CNDDB Vicinity Map

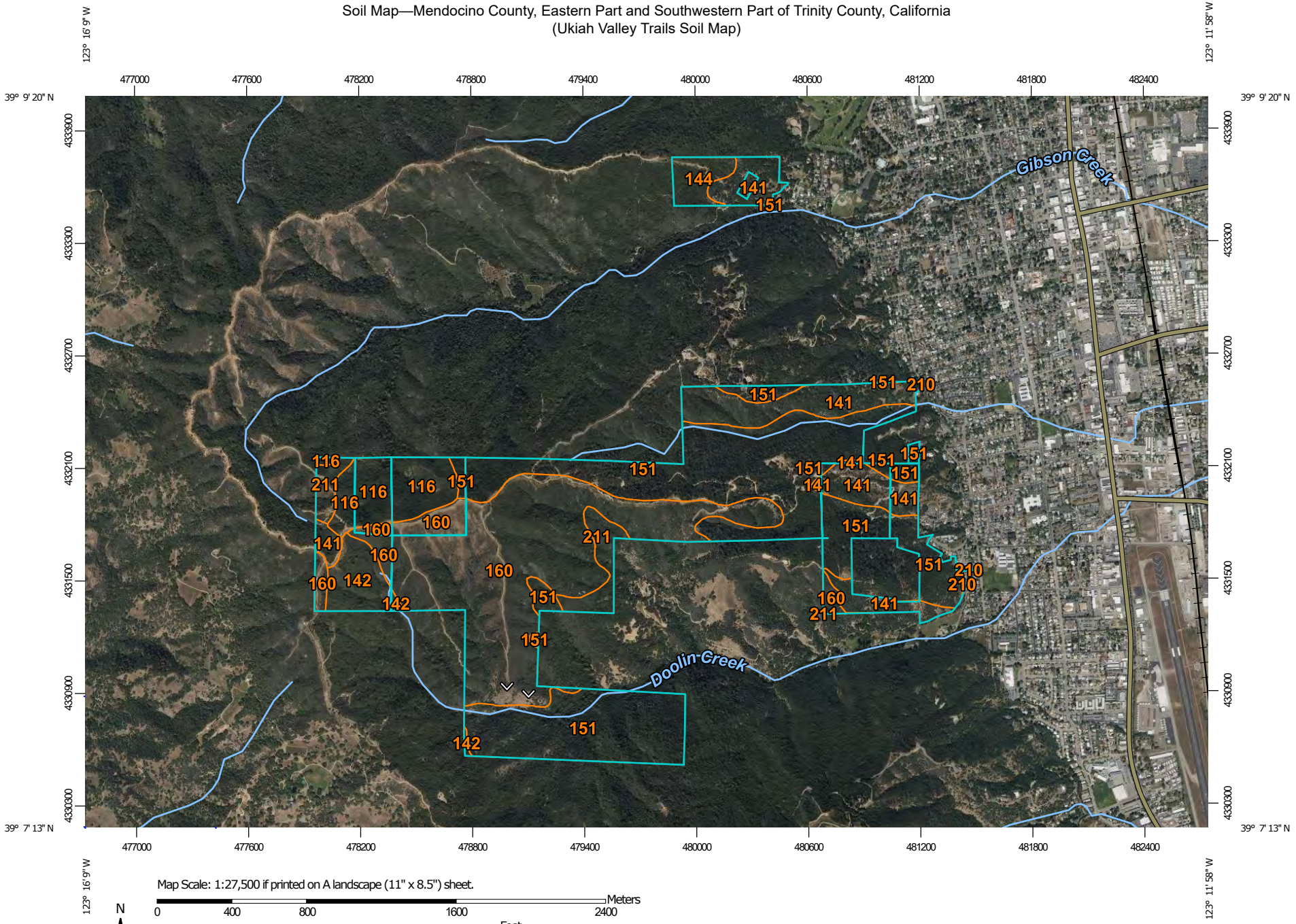
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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


123° 16' 9" W
123° 11' 58" W
39° 9' 20" N
39° 7' 13" N
477000
477600
478200
478800
479400
480000
480600
481200
481800
482400
4333900
4333300
4332700
4332100
4331500
4330900
4330300
Gibson Creek
Doolin Creek
144
141
151
210
116
211
160
142
Map Scale: 1:27,500 if printed on A landscape (11" x 8.5") sheet.
N
0
400
800
1600
2400
Meters
0
1000
2000
4000
6000
Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

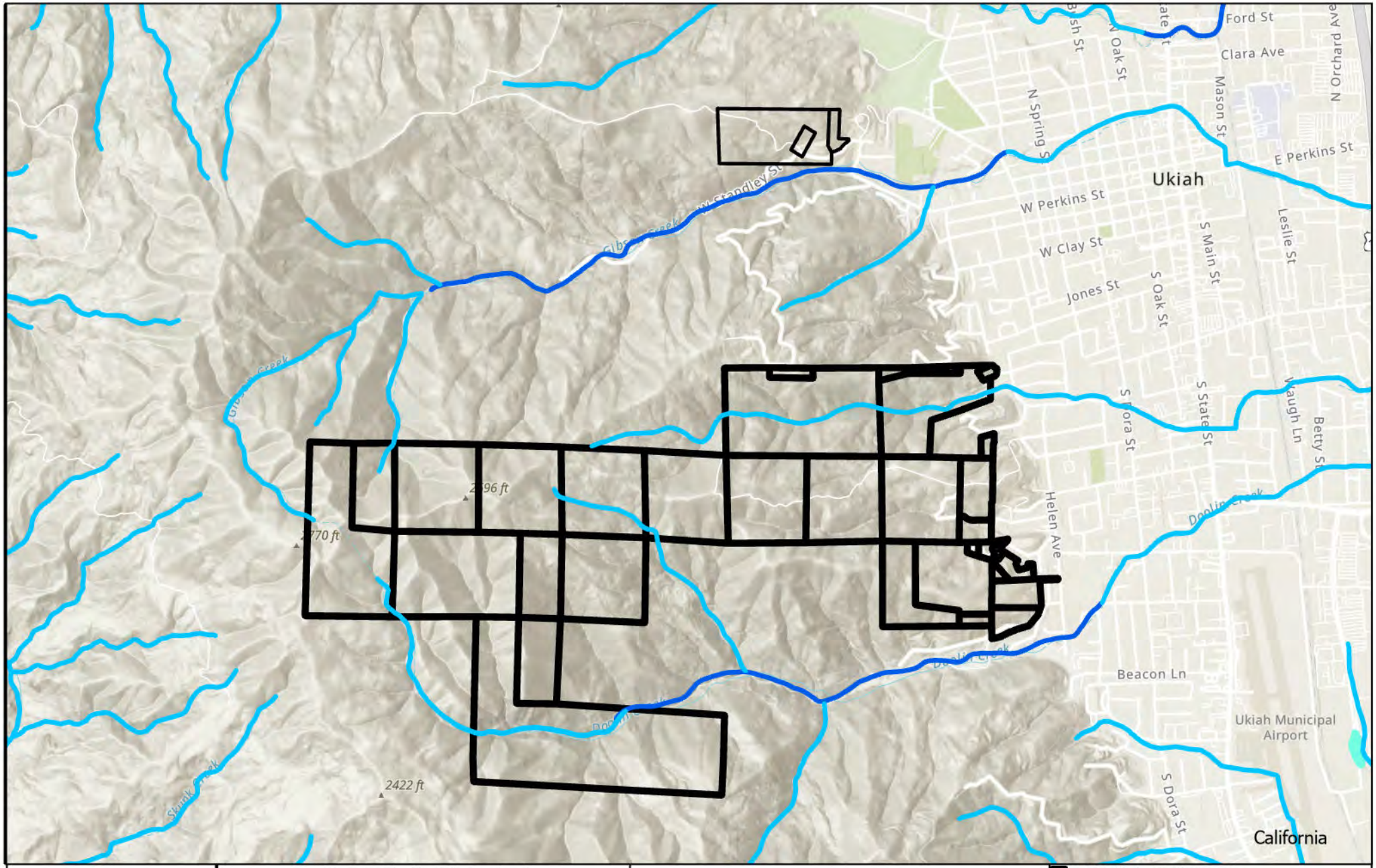
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

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%**



N

0 1,000 2,000 Feet

Ukiah Trails Biological National Watershed Inventory

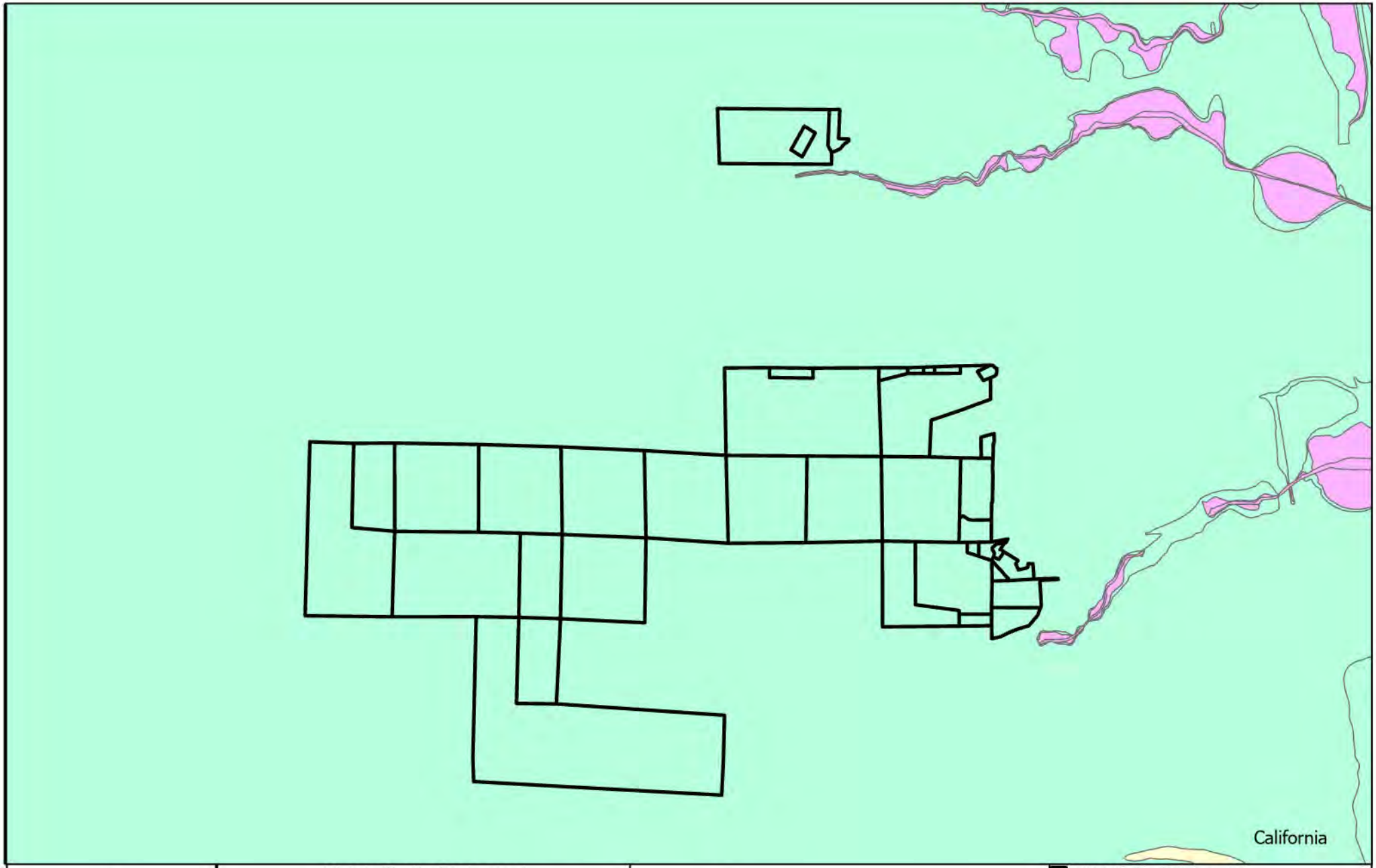
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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



N

0 1,000 2,000 Feet

Ukiah Trails Biological
National Floodplain Hazard Rating

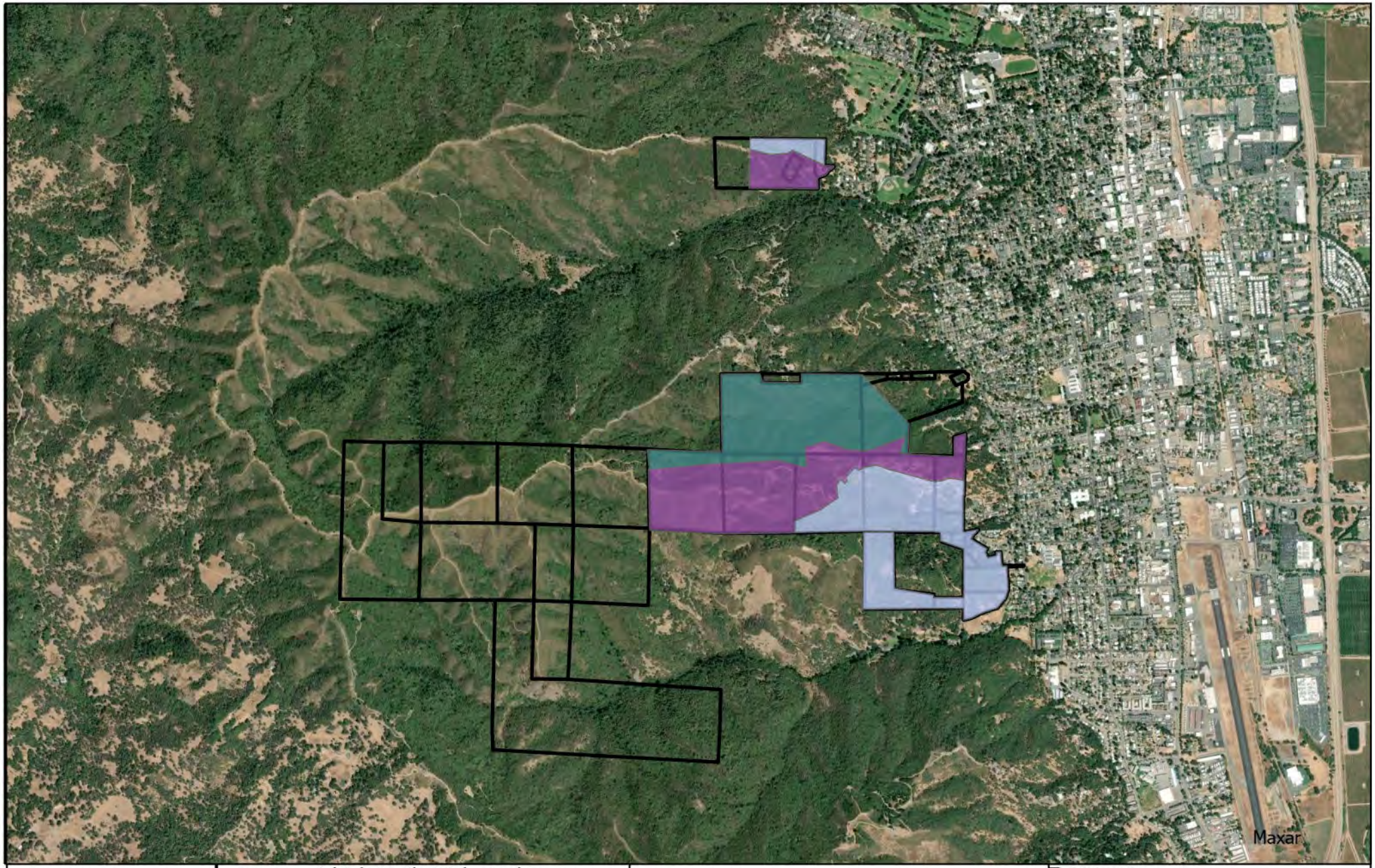
Property Owner:	City of Ukiah
Applicant:	Ukiah Valley Trails
Site Address:	Ukiah, CA
APN(s):	Multiple APN
Acreage:	833 acres

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



N

0 1,000 2,000 Feet

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".

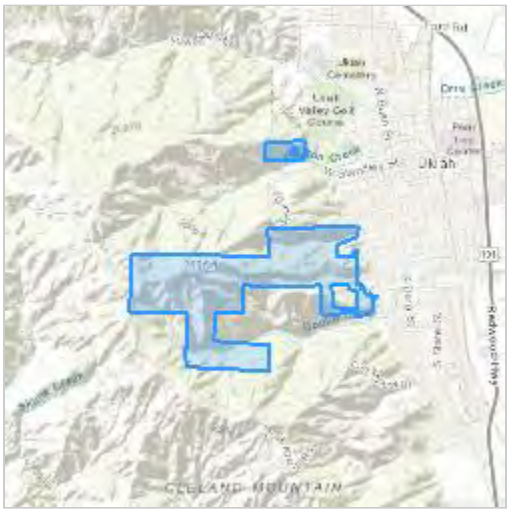
This species list is provided by:

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.

---

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.

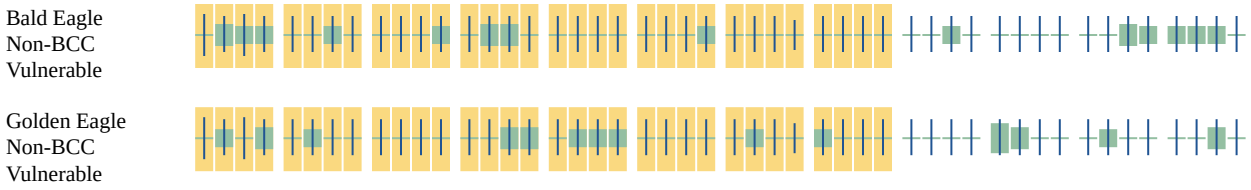
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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.

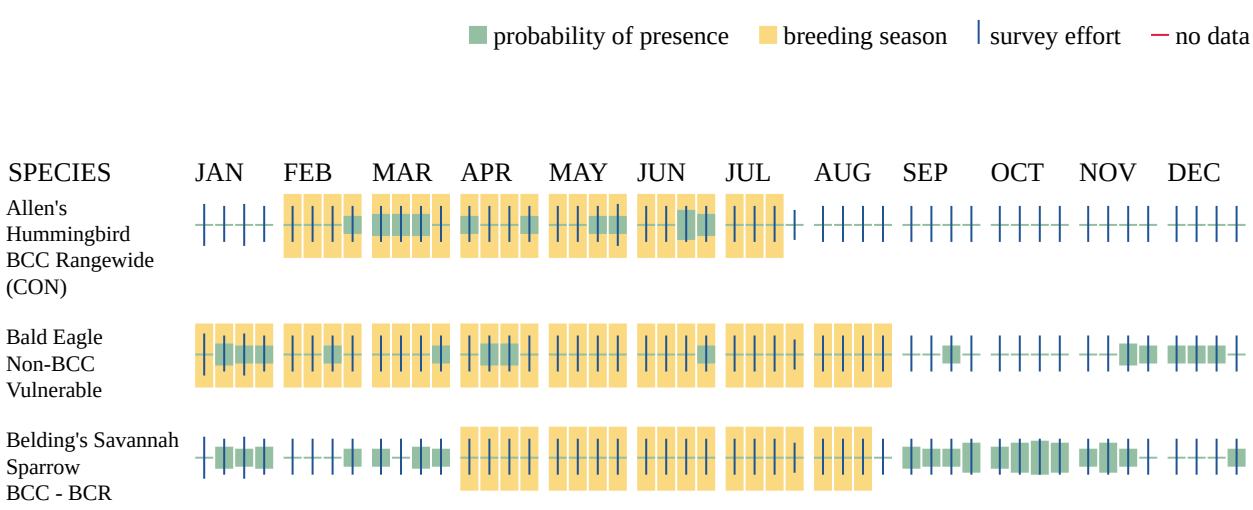
Probability of Presence (■)

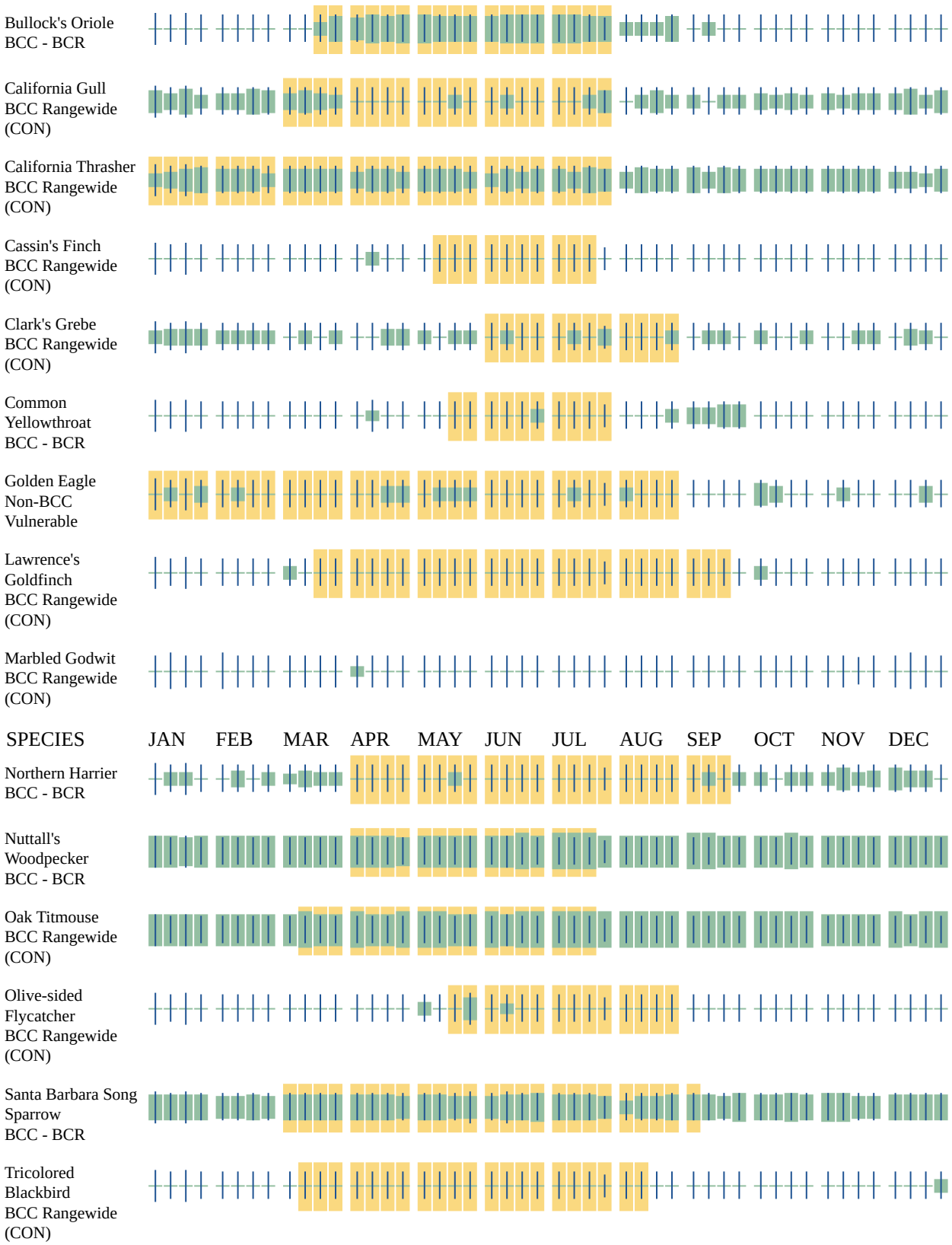
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

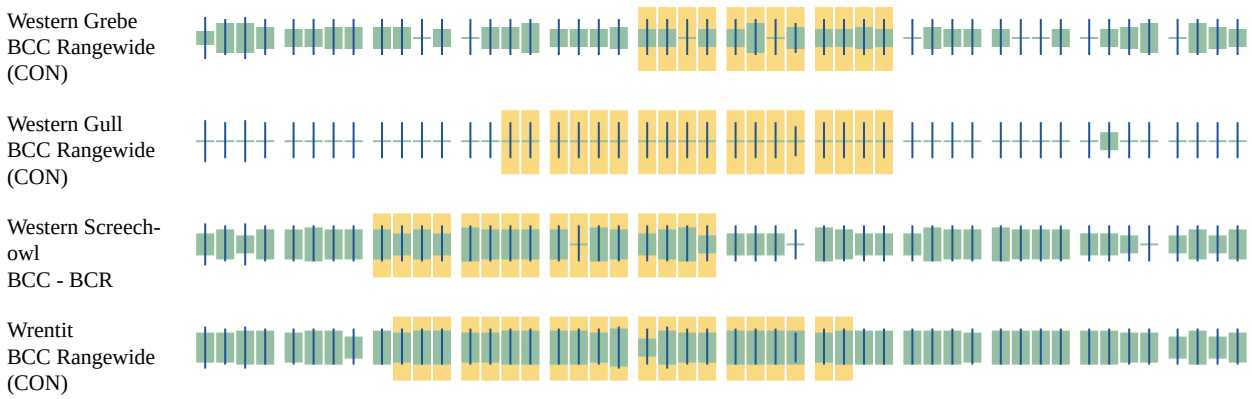
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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.




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)



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

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
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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

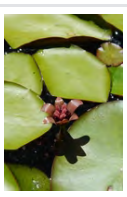
CALIFORNIA NATIVE PLANT SOCIETY

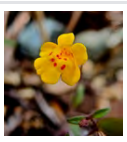
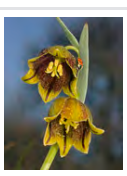
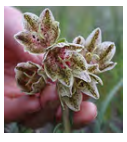
CNPS Rare Plant Inventory

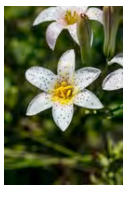
Search Results

43 matches found. Click on scientific name for details

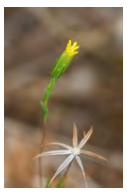
Search Criteria: 9-Quad include [**3912331:3912321:3912311:3912323:3912322:3912332:3912333:3912313:3912312**]

▲ 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

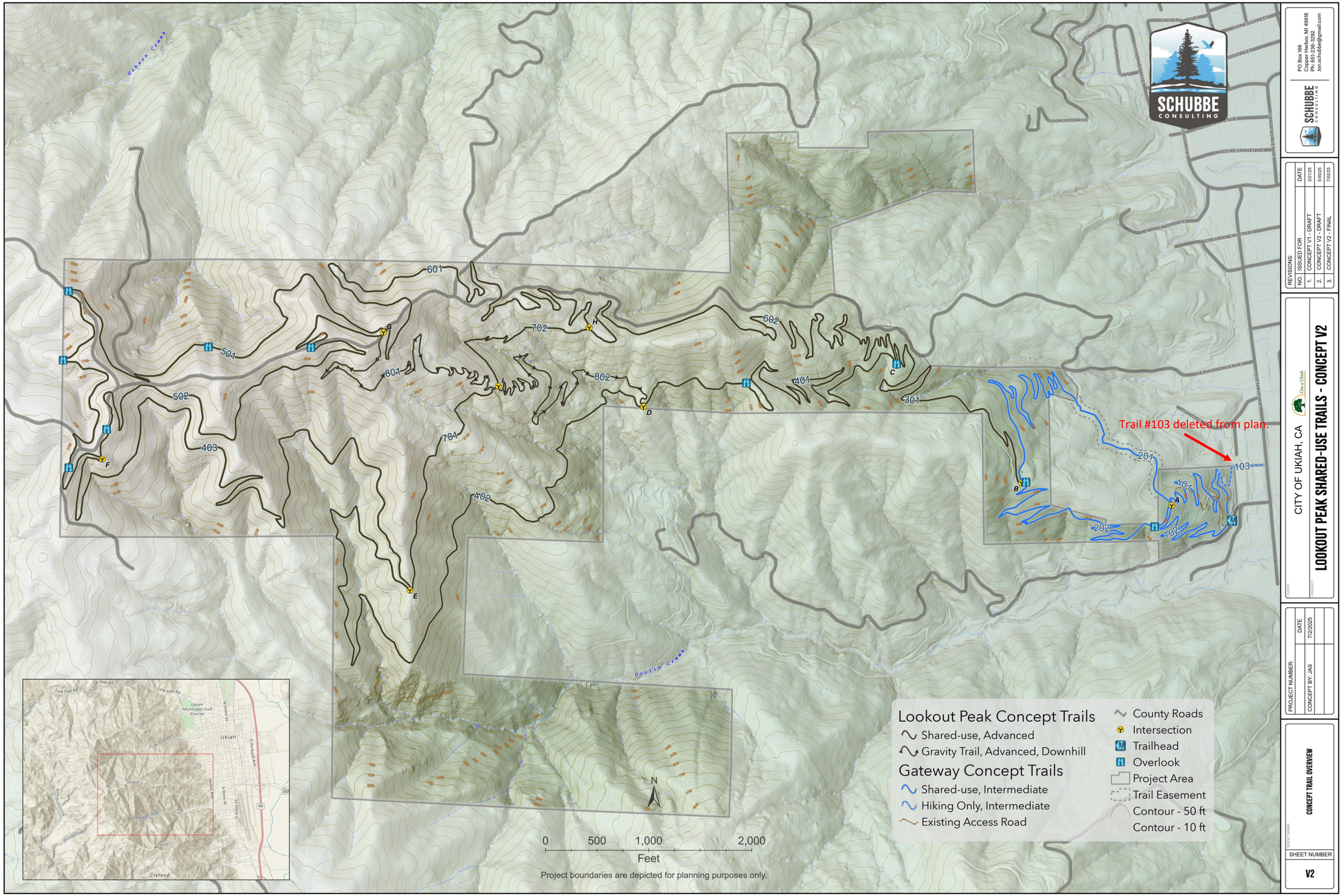
Tracyina rostrata	beaked tracyina	Asteraceae	annual herb	May-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	 ©2018 John Game
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	No Photo Available
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose 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

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Attachment I



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SCHUBBE CONSULTING

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:

CONCEPT BY: JAS	DATE 7/2/2025

SHEET NAME: CONCEPT TRAIL OVERVIEW

SHEET NUMBER: V2