

Biological Resource Assessment

Marble Mountain Kennels Zone Change and Use Permit Project Siskiyou County, California



Prepared for:

Pete Morrill
Marble Mountain Kennels
1521 S. Phillippe Lane
Montague, CA 9553
Phone: (530) 598-1527
Email: Pete@mmkennels.com

Prepared by:

Quercus Consultants, Inc.
PO Box 465
Mt. Shasta, CA 96067



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1.0 Introduction

As requested, Quercus Consultants, Inc. (Quercus) performed a biological survey to document sensitive biological habitats and special-status species that have the potential to be affected by the proposed construction of a breeding dog facility at Marble Mountain Kennels located in Siskiyou County, California (**Figure 1**). Surveys were conducted on May 31st by biologist Bob Damschroeder, botanist Diane Chakos, with assistance from wetland ecologist Jonathan Foster and on July 6th, 2023, by Bob Damschroeder and Diane Chakos to determine the presence of sensitive natural resources and to determine if these resources would be impacted by the proposed project within the study area.

2.0 Project Location and Description

The Marble Mountain Kennels Project is located just north-northwest of the junction of East Oberlin Road and South Phillippe Lane between the communities of Yreka and Montague in rural Siskiyou County, California and is associated with the address 1532 South Phillippe Lane, Montague, CA. Marble Mountain Kennels requested a Zone Change 23-01 and Use Permit 23-04 to construct a breeding dog kennel facility with capacity to hold 350 domestic dogs. The precise locations of proposed buildings and roads have not been determined and are dependent on the outcome of this and the Preliminary Aquatic Resources Delineation report which will determine if sensitive resources can be avoided to minimize impacts. The 80-acre primary project area proposed for rezone and use is largely undeveloped and includes two 40-acre parcels that meet at one corner. The 80-acre project area is located in Section 25, T45N R7W, Mt. Diablo Meridian, of the Montague U.S.G.S. 7.5-minute quadrangle. Representative photographs are provided in **Appendix C**.

3.0 Regulatory Overview

The following laws and regulations were identified as possible constraints to development within the study area based on the identified resources:

3.1 Federal


Federal Endangered Species Act

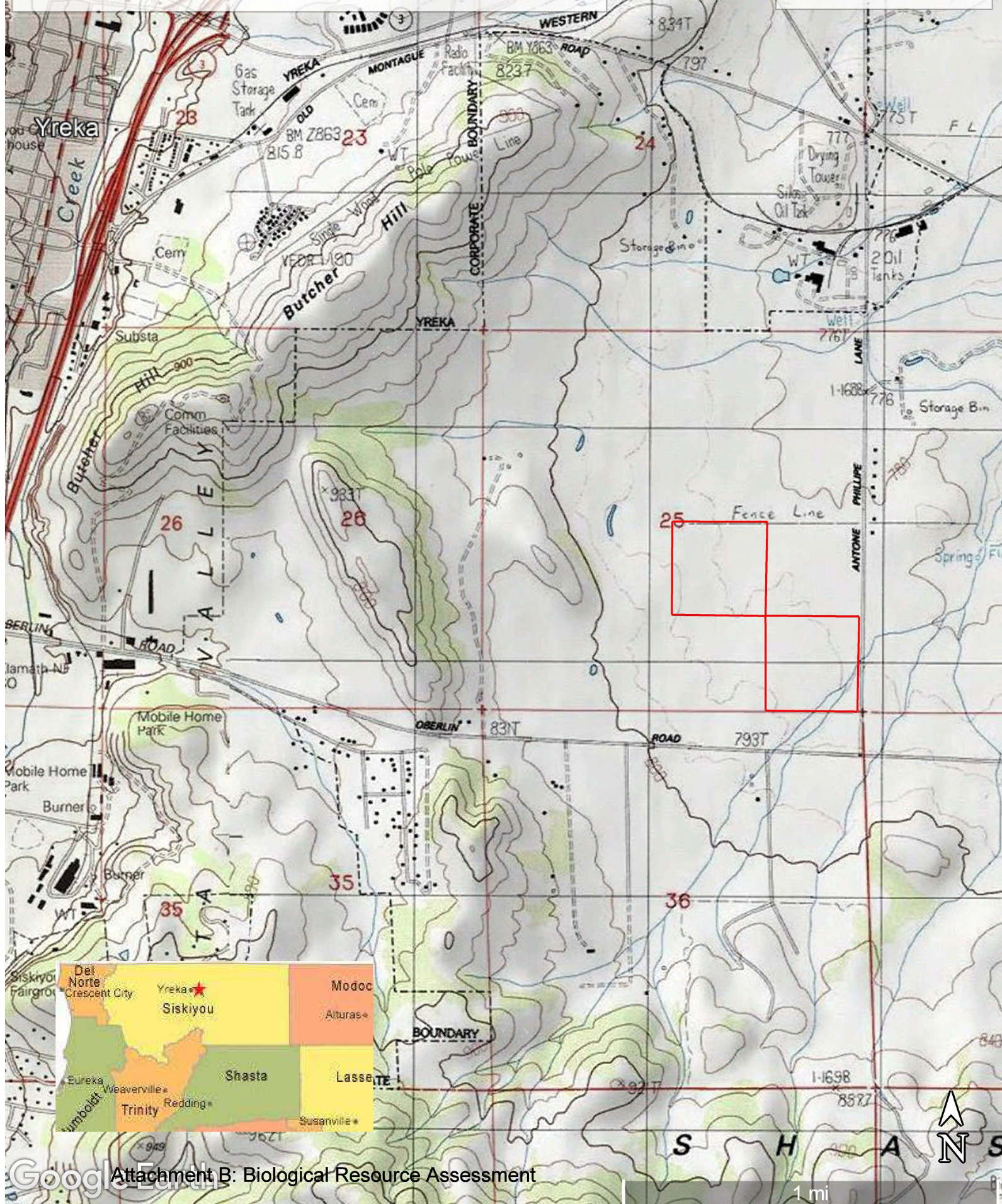
The U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) have jurisdiction over species listed as threatened or endangered under Section 9 of the federal Endangered Species Act (ESA). The ESA protects listed species from harm, or “take”, which is broadly defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct, Under Section 7 of the ESA, a federal agency must consult with the USFWS and NOAA Fisheries if the agency’s action may affect a threatened or endangered species and/or its critical habitat under the authority of each agency. Pursuant to the requirements of the ESA, an agency reviewing a proposed project within its

Figure 1. Project Location/Vicinity Map

Marble Mountain Kennels

Legend

 Project Boundary



jurisdiction must determine whether any federally listed species may be present within the study area and vicinity and determine whether the proposed project will have a potentially significant impact upon such species. Under the ESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536[3], [4]). Therefore, project-related impacts to these species, or their habitats, would be considered significant and require mitigation.

Migratory Bird Treaty Act

Most bird species, especially those that are breeding, migrating, or of limited distribution, are protected under federal and/or State regulations. Under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Subsection 703-712), migratory bird species, their nests, and their eggs are protected from injury or death. Project construction has the potential to take nests, eggs, young, or individuals of species protected by the MBTA. As such, project-related disturbances must be reduced or eliminated during migratory bird nesting season.

Aquatic Resources

The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters of the U.S. (including wetlands), under Section 404 of the Clean Water Act (CWA). Section 404 of the CWA regulates the discharge of dredged or fill material into waters of the U.S. The USACE requires that a permit be obtained if a project proposes the placement of structures within, over, or under navigable waters and/or discharging dredged or fill material into waters below the ordinary high-water mark (OHWM). The USACE has established a series of nationwide permits (NWP) that authorize certain activities in waters of the U.S.

In addition, a Section 401 Water Quality Certification Permit is required to comply with CWA Sections 301, 302, 303, 306, and 307 and has been delegated by EPA to the Regional Water Quality Control Board (RWQCB). Anyone that proposes to conduct a project that may result in a discharge to U.S. surface waters and/or “waters of the state” including wetlands (all types) year-round and seasonal streams, lakes, and all other surface waters would require a federal permit. At a minimum, any beneficial uses lost must be replaced by a mitigation project of at least equal function, value, and area. Waste Discharge Requirements Permits are also required pursuant to California Water Code Section 13260 for any persons discharging or proposing to discharge waste, including dredge/fill, that could affect the quality of the waters of the state. The RWQCB addresses both the federal and State requirements in the issuance of a discharge permit.

Potential impacts to aquatic resources are addressed in the Preliminary Aquatic Resources Delineation report and further discussion is omitted from this report.

3.2 State

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of State-listed threatened and endangered species. Under the CESA, State agencies are required to consult with the California Department of Fish and Wildlife (CDFW) when preparing CEQA documents. Under the CESA, the CDFW is responsible for maintaining a list of rare, threatened, and endangered species designated under State law (California Fish and Game Code 2070-2079). The CDFW also maintains lists of candidate species and species of special concern. Candidate species are those taxa which have been formally recognized by the CDFW and are under review for addition to the State threatened and endangered list. Species of special concern are those taxa which are considered sensitive and this list serves as a “watch list”. Pursuant to the requirements of the CESA, agencies reviewing proposed projects within their jurisdictions must determine whether any State-listed species have the potential to occur within a proposed project site and if the proposed project would have any significant impacts upon such species. Project-related impacts to species on the CESA’s rare, threatened, and endangered list would be considered significant and require mitigation. The CDFW can authorize take if an incidental take permit is issued by the Secretary of the Interior or Commerce in compliance with the ESA, or if the director of the CDFW issues a permit under Section 2081 in those cases where it is demonstrated that the impacts are minimized and fully mitigated.

California Environmental Quality Act

Section 15380(b) of the CEQA Guidelines provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Section 15380 defines “endangered” species of plants, fish, or wildlife as those whose survival and reproduction in the wild are in immediate jeopardy and “rare” species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project will normally have a significant effect on the environment if it will substantially affect a rare or endangered species or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

California Fish and Game Codes

The California Fish and Game Code defines take (Section 86) and prohibits taking of a species listed as threatened or endangered under the CESA (California Fish and Game Code Section 2080), or otherwise fully protected (California Fish and Game Code Sections §3511, §4700, §5050, and §5515). Section 2081(b) and (c) of the CESA allows the CDFW to issue an incidental take permit for a State listed threatened and endangered species if specific criteria outlined in Title 14 CCR, Sections 783.4(a), (b) and California Fish and Game Code Section 2081(b) are met. The California Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code. Section 3503.5 states that it

is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird. Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA. If a project is planned in an area where a species or specified bird occurs, an applicant must design the project to avoid all take of non-listed migratory birds; the CDFW cannot provide take authorization under the CESA. The CDFW protects plants designated as endangered or rare under Fish and Game Code Section 1900.

California Fish and Game Code Sections 1600-1619 regulate impacts to State waters and stream and lake beds. Section 1602 requires notification before beginning any activity that may obstruct or divert the natural flow of a river, stream, or lake; change or use any material from the bed, channel, or bank of a river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. California Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. Notification to the CDFW will be required prior to installation of the proposed outfall. The County and the CDFW must enter into an agreement prior to any action which will result in such an impact.

4.0 Methods

4.1 Literature Review/Informal Agency Consultation

Quercus staff consulted the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), the California Native Plant Society (CNPS) rare plant inventory, and the California Natural Diversity Database (CNDDDB), a positive-sighting database managed by the California Department of Fish and Wildlife (CDFW), to identify potential and/or known occurrences of special-status species within the study area. Prior to plant surveys, staff consulted with CDFW for reference population phenology.

For purposes of this evaluation, special-status plant species are plants that are (1) listed as threatened or endangered under the California Endangered Species Act (CESA) or the federal Endangered Species Act (i.e., "listed species"); or (2) are proposed for listing as rare, threatened, or endangered; and/or (3) are state or federal candidates for listing as threatened or endangered; and/or (4) are listed as Species of Concern by the (USFWS); and/or (5) are included on the California Native Plant Society (CNPS) Rank 1A, 1B, and 2. Rank 1A plants are plants that are presumed extirpated in California and either rare or extinct elsewhere. Rank 1B plants are rare, threatened, or endangered in California and elsewhere. Rank 2 plants are plants that are rare, threatened or endangered in California, but more common elsewhere.

Special-status fish and wildlife species include taxa that are (1) listed as threatened or

endangered under the CESA or ESA (i.e., "listed species"); or (2) are proposed or petitioned for federal listing as threatened or endangered; and/or (3) are state or federal candidates for listing as threatened or endangered; and/or (4) are identified by the USFWS as Species of Concern; and/or (5) are identified by the California Department of Fish and Game (CDFG) as Species of Special Concern.

The USFWS maintains a website, IPaC, which lists the federally listed species that occur in or may be affected by projects in or near a project area. This database was searched to acquire a list of special-status plant and wildlife species that have the potential to occur on the site.

The California Natural Diversity Database (CNDDDB) (California Department of Fish and Game 2023) was queried for occurrence records for the Montague and the eight adjacent U.S. Geological Survey (USGS) quadrangles. The CNDDDB is a state-maintained database consisting of historic observations of special-status plant species, wildlife species, and special plant communities. The CNDDDB is limited to reported sightings and is not a comprehensive list of floral and faunal species that may occur in a particular area.

A database search was also performed using CNPS's Electronic Inventory, which allows users to query the Inventory of Rare and Endangered Plants of California (California Native Plant Society 2023) using a set of search criteria (e.g., quadrangle map name, habitat type, etc.). Because the Inventory of Rare and Endangered Plants of California is also limited to reported sightings, it is not a comprehensive list of plant species that may occur in a particular area. However, it is useful in refining the list of special-status plant species that have the potential to occur on a site.

Tables listing all plants and wildlife with habitat descriptions and rationale for potential to occur considered during the biological analysis for the project based on the above queries are found in **Appendix A**. Of nineteen total plant species, nine have low or no potential to occur in the study area and are eliminated from further consideration in this document; the following ten plant species have moderate or high potential to occur:

- Woolly balsamroot (*Balsamorhiza lanata*)
- Green's mariposa lily (*Calochortus greenei*)
- Single flowered mariposa lily (*Calochortus monanthus*)
- Ashland thistle (*Cirsium ciliolatum*)
- Alkali hymenoxys (*Hymenoxys lemmonii*)
- Peck's lomatium (*Lomatium peckianum*)
- Brittle prickly pear (*Opuntia fragilis*)
- Shasta orthocarpus (*Orthocarpus pachystachyus*)
- Pendulous bullrush (*Scirpus pendulus*)
- Siskiyou clover (*Trifolium siskiyouense*)

Of these ten species, seven species - woolly balsamroot, single flowered mariposa lily, alkali hymenoxys, Peck's lomatium, Shasta orthocarpus, pendulous bullrush, and Siskiyou clover - have occurrences within five miles of the study area. Four additional species - Siskiyou mariposa lily (*Calochortus persistens*), serpentine cryptantha (*Cryptantha*

dissita), Yreka phlox (*Phlox hirsute*), and Oregon polemonium (*Polemonium carneum*) - have occurrences within five miles of the study area but no suitable habitat occurs within the study area.

Based on the above queries, twenty-two species of fish, amphibians, reptiles, birds, mammals, insects, and crustaceans were considered for this analysis; six of these species - Crotch bumble bee, foothill yellow-legged frog, Franklin's bumble bee, greater sandhill crane, Lower Klamath marbled sculpin, and western pond turtle - have CNDDDB occurrences within five miles of the study area. No USFWS designated critical habitat occurs within the study area. Of these twenty-two species, sixteen have low or no potential to occur in the study area and are eliminated from further consideration in this document; the following six species have moderate potential to occur:

- Western pond turtle (*Emys marmorata*)
- Greater sandhill crane (*Antigone canadensis*)
- Golden eagle (*Aquila chrysaetos*)
- Swainson's hawk (*Buteo swainsoni*)
- American badger (*Taxidea taxus*)
- Monarch butterfly (*Danaus plexippus*)

4.2 Field Surveys

Field surveys were conducted on May 31st, and July 6th, 2023, by biologist Bob Damschroeder and botanist Diane Chakos. On May 31st the surveys began at 0900 hours, the temperature was 65 degrees Fahrenheit, and it was sunny with a few clouds. On July 6th the surveys began at 0800 hours, the temperature was 85 degrees Fahrenheit, and sunny with a clear sky. The study area was systematically surveyed on foot in accordance with the 2018 CDFW Plant and Vegetation Survey Protocols (CDFW 2018) to ensure complete coverage and optimal bloom time. A reference population for Peck's lomatium (*Lomatium peckianum*) was visited on May 30, 2023, prior to initiating the surveys to determine the current phenology for this species. This species in particular has been observed in a similar habitat to the study area in the Shasta Valley (CNDDDB 2023). There were several plants at the reference population site located at an elevation of 3,049 feet, approximately 24 miles south of the study area. The plants had gone to seed which informed us to anticipate which stage to look for in the study area. A reference population for woolly balsamroot (*Balsamorhiza lanata*) was visited on May 31, 2023. This species had also been observed in the Shasta Valley in a similar habitat to the study area. There were several plants in the reference population site located at an elevation of 2,922 feet, approximately 22 miles south of the study area. The plants had just passed full bloom, so we proceeded with the surveys, looking for these two species in their respective growth forms.

During the field surveys attention was given to identifying areas on the site with the potential for supporting special-status species and sensitive habitats. Concurrently, suitable nesting sites for raptors and special-status wildlife were surveyed. Field personnel recorded incidental observations of plant and animal species and characterized biological communities occurring on-site. Plants observed within the study area are

identified in **Appendix B**.

5.0 Environmental Background

5.1 Environmental Setting

The study area is located within the Cascade Ranges Region of the California Floristic Province (Baldwin 2012). The site is characterized by upland forb and grasslands composed of both native and non-native plant species with a sparse juniper forest, four ponds that held standing water at the time of the surveys, and scattered, seasonally wet depressions. The topography is composed of gentle terrain that slopes downward to the northeast at an elevation above mean sea level of approximately 2575 feet in the northwest parcel and 2585 feet in the southeast parcel. Project elevation ranges from 2,570 to 2,600 feet above sea level. The site is in a rural setting surrounded by residential, agricultural, and industrial land uses in Siskiyou County.

5.2 Soil Types

According to the U.S. Department of Agriculture, Natural Resources Conservation Service, two soil units have been mapped in the study area: Salisbury gravelly clay loam 0-5% slopes (219) and Salisbury gravelly clay loam 5-9% slopes (220). These soil series are not considered hydric soils, are well drained, and are not typically associated with flooding or ponding.

The soil types are described in detail below.

219—Salisbury gravelly clay loam, 0 to 5 percent slopes

This soil is found on summits and shoulders of terraces with parent material from alluvium derived from igneous, metamorphic, and sedimentary rock. Depth to water table is more than 80 inches. Depth to restrictive feature is 20 to 40 inches to duripan. The soil type is well drained with a high runoff class and a very low capacity of the most limiting layer to transmit water. The soil profile is typically gravelly clay loam from 0 to 4 inches, gravelly clay from 4 to 24 inches, indurated from 24 to 32 inches and stratified sand to stony sand 32 to 60 inches. This is not a hydric soil. (NRCS, 2023)

220—Salisbury gravelly clay loam, 5 to 9 percent slopes

This soil is found on summits and shoulders of terraces with parent material from alluvium derived from igneous, metamorphic, and sedimentary rock. Depth to water table is more than 80 inches. Depth to restrictive feature is 20 to 40 inches to duripan. The soil type is well drained with a very high runoff class and a very low capacity of the most limiting layer to transmit water. The soil profile is typically gravelly clay loam from 0 to 4 inches, gravelly clay from 4 to 24 inches, indurated from 24 to 32 inches and stratified sand to stony sand 32 to 60 inches. This is not a hydric soil. (NRCS, 2023)

6.0 Results

6.1 Habitat Characterization

The study area and surrounding lands are dominated by a mix of native and non-native plant species in an open grassland with sparse patches of western juniper (*Juniperus occidentalis*) trees; land use is residential and agricultural. Quercus biologists surveyed the extent of all habitat types in the study area and observed open grassland, partially interspersed with seasonal wetlands, and ponds as the vegetation types that occur and are described below. Descriptions and names of plant communities are based on field observations and on descriptions in the California Wildlife Habitat Relationships (CWHR) classification system of Mayer and Laudenslayer (1988).

Upland: Annual Grassland (AGS) (CWHR)

This open grassland habitat is the dominant habitat in the study area and consists of annual grasses, perennial grasses, and forbs, with sparse populations of shrub species, including rubber rabbitbrush (*Ericameria nauseosa*), naked buckwheat (*Eriogonum nudum*), and buckbrush (*Ceanothus cuneatus*). The most abundant forbs are tumble mustard, (*Sisymbrium altissimum*) vinegar weed, (*Trichostema lanceolatum*) star thistle, (*Centaurea solstitialis*), chicory (*Cichorium intybus*), and common madia (*Madia elegans*). The most abundant grasses are seaside barley (*Hordeum marinum*) and squirreltail (*Elymus elymoides*), a perennial bunchgrass. This habitat comprises the greatest proportion of the study area where large swaths of seaside barley are found in the southeast parcel where there is more moisture, while the remaining drier areas are dominated by naked buckwheat, tumble mustard, star thistle, and squirreltail. This is not considered a sensitive habitat.

The open grassland is interspersed with small, seasonally wet depressions which are found in both parcels of the study area as described in the associated Preliminary Aquatic Resources Delineation Report. The dominant species are narrow leaved onion (*Allium amplexans*), annual hairgrass (*Deschampsia danthanooides*), Cascade downingia (*Downingia yina*), and needle leaved navarretia (*Navarretia intertexa*).

Pond: Fresh Emergent Wetland (FEW) (CWHR)

This habitat is found in four locations in the study area. Three are in the southeast parcel and one is in the northwest parcel. Two of the ponds are encircled by riparian and emergent species including willows (*Salix* sp.), sedges (*Carex* sp.), and common cattail (*Typha latifolia*); the other two ponds are surrounded solely by the upland habitat type.

6.2 Special-status Plants

The criteria for inclusion as a special-status plant were provided in Section 4.1. A list of special-status plant species with the potential to occur on the site was developed through interpretation of the CNDDB, CNPS, and USFWS query results, and knowledge of the special-status plant species in the vicinity of the project (**Appendix A**). Two special-

status plants, woolly balsamroot and Peck's lomatium, were observed during the field surveys. Occurrence locations in the study area are found in **Figure 2** and photographs of each species are found in **Appendix C**.

Woolly balsamroot is found in cismontane woodland and grassy slopes in rocky, volcanic soils at elevations between 2,600 and 3,500 feet (800-1050meters). Its flowering period is April to June. One large population was observed near the main house in the southeast parcel with approximately fifty plants covering an area of 15 by 20 feet (4.5 by 6 meters), a second population was observed near the main house's driveway with approximately twenty plants covering an area of 3 by 4 feet (0.9 by 1.2 meters), four smaller populations of two to ten plants were observed in the north half of the southeast parcel, and four populations of two to ten plants were observed along the east side of the northwest parcel.

Peck's lomatium is found in chaparral, cismontane woodland, lower montane coniferous forest, and in pinyon and juniper woodland in volcanic soils at elevations from 2,300-5,900 feet (700-1800 meters). Its flowering period is in May. It was observed in six locations in the northeast corner of the southeast parcel and in four locations along the east side of the northwest parcel.

There are eight special-status plants with a moderate possibility to occur in the study area that were not observed; they are Greene's mariposa lily, single flowered mariposa lily, Ashland thistle, alkali hymenoxys, brittle prickly pear, Shasta orthocarpus, pendulous bullrush, and Siskiyou clover. Six of these plants, alkali hymenoxys, Shasta orthocarpus, pendulous bulrush, Siskiyou clover, single flowered mariposa lily, and Greene's mariposa lily, occur where there are meadows and seeps or flowing freshwater; there were no seeps nor flowing fresh water in the study area. The ponds in the study area are man-made and there was no flowing surface water observed in the study area. There is no suitable habitat in the study area for these six plants.

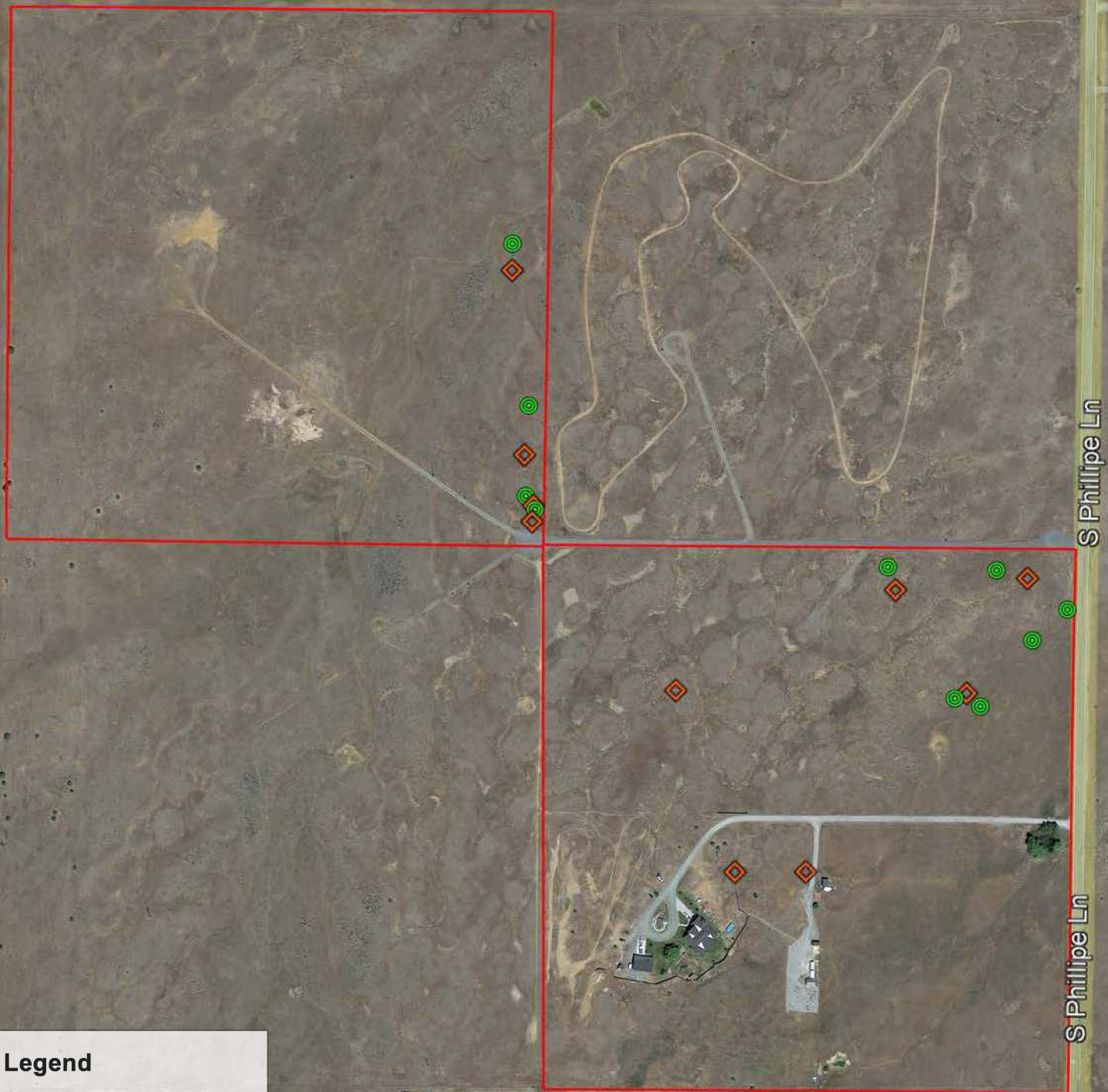
The remaining two species have separate habitat needs than those above. Brittle prickly pear is found in juniper woodland. There are only a few scattered western juniper trees in the study area; the study area consists of annual grassland and does not support sufficient juniper trees to be considered a juniper woodland so is unlikely to support brittle prickly pear. Ashland thistle is found in grassy areas and open woodland. No open woodland occurs in the study area, and while it is a grassland, some of the grasses in the study area are non-native which could have out-competed native grasses and forbs including the Ashland thistle.

6.3 Special-status Wildlife




A list of special-status wildlife species considered during the analysis was compiled by performing a search of the CNDDDB and the USFWS database and reviewing biological literature concerning the region. Based upon a review of the CNDDDB search results for Montague and the eight surrounding USGS quadrangles, USFWS's list of species provided by the IPaC query, and review of available literature, there were twenty-two federal and state special-status wildlife species considered for analysis in this report (**Appendix A**).

Figure 2. Special-Status Plant Species Occurrences

Marble Mountain Kennels Zone Change and Use Permit Project



Legend

-  Pecks Lomatium
-  Project Boundary
-  Woolly Balsamroot

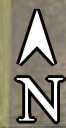
Rd

Google Earth

Attachment B: Biological Resource Assessment

E Oberlin Rd

1000 ft



Of the twenty-two special-status wildlife species identified in **Appendix A**, the following threatened, endangered, candidate, and fully protected species have moderate potential to occur:

- Greater sandhill crane
- Golden eagle
- Swainson's hawk
- Monarch butterfly
- Vernal pool fairy shrimp

Suitable nesting or roosting habitat for two of the special-status bird species does not occur within the study area. Greater sandhill cranes require wet meadows and marshes with emergent vegetation for breeding. Golden eagles require cliff ledges or tall trees for nests. None of those conditions occur within the study area. There is potential foraging habitat for greater sandhill cranes and golden eagles. Sandhill cranes are omnivorous and opportunistic feeders consuming a variety of plant materials, small mammals and reptiles, and invertebrates; cultivated grains are a major food source when available. These prey species occur within the study area. Golden eagles' major prey items are small to medium sized mammals and ground squirrels and rabbits – primary prey species - occur within the study area. Swainson's hawks, however, are known to use solitary juniper trees or bushes for nesting and open grassland and agricultural areas for foraging; prey includes both invertebrates – especially grasshoppers, dragonflies and lepidoptera larvae – and vertebrates including mammals, birds, and reptiles. Nesting habitat and prey species for foraging occur within the study area.

Monarch butterflies depend on milkweed to lay their eggs, to drink nectar, and for larvae to feed. Two species of milkweed, narrow-leaved milk weed (*Asclepias fascicularis*) and showy milkweed (*Asclepias speciosa*) were observed within the study area during field surveys and along roadside ditches on S. Phillippe Land adjacent to the study area. Native flowering forbs for adult foraging also occur within the study area. While there is potential for monarch butterflies to occur within the study area as they utilize milkweed and native flowering plants, only a few individual milkweed plants were observed in the southeast parcel south of the main house and along the ditch.

The vernal pool fairy shrimp is a small, freshwater crustacean found in temporary cool-water pools – vernal pools or similar, ephemeral pools – in California and Oregon. As per the accompanying Aquatic Resources Delineation Report, while the study area receives relatively little precipitation, depressions with shallow hardpan soil structures appear to hold water near or at the surface for durations long enough to establish aquatic habitats that could support fairy shrimp.

Project-level impacts to endangered or threatened species are generally considered significant. Alternately, impact significance to Species of Special Concern is analyzed by factors such as population-level impacts, the proportion of the species' range which would be affected, any regional effects, and any impacts to habitat features. The following Species of Special Concern has moderate potential to occur within the study area:

- American badger (*Taxidea taxus*)

American badgers are carnivores who prey on burrowing rodents such as ground squirrels and other non-burrowing mammals, reptiles, and insects. They are typically found in drier, open shrub, forest, and herbaceous habitats with friable soils for digging dens and for cover. Ground squirrel burrows in friable soils were observed in the study area and the habitat is open annual grassland, therefore suitable for badgers.

Bird species observed within the study area include European starling, western meadowlark, western kingbird, common raven, turkey vulture, killdeer, Brewer's blackbird, red-winged blackbird, Eurasian collared-dove, horned lark, mourning dove, lark sparrow, mallard, great blue heron, and common nighthawk (nesting behavior observed). Amphibian species observed were boreal toad, and American bullfrog. One reptile was observed, a northwestern fence lizard, and one mammal, a black-tailed jackrabbit. No raptor nests were observed during the survey.

7.0 Potential Impacts and Mitigation

7.1 Special-status Plants

Two special-status plants were observed during surveys. There were ten separate populations observed of woolly balsam root (CNPS ranking of 1B.2) and ten separate populations of Peck's lomatium plants (CNPS ranking of 2B.2) scattered throughout portions of the study area. Vegetation removal during construction of new facilities could affect these plants. The CNDDDB query showed 12 occurrences of woolly balsamroot and three occurrences of Peck's lomatium within a 5-mile radius of the study area, therefore the populations observed in the study area are not isolated occurrences and may occur elsewhere nearby. To prevent impacts to special-status plants occurring in the study area, avoid construction of facilities in known locations of occurrences as much as practicable. The more robust populations of woolly balsamroot near the main house and driveway should be preserved with a buffer of fifty feet retained around each population; this would ensure that at least fifty percent of the plants within the study are preserved. The remaining occurrences of both woolly balsamroot and Peck's lomatium along the east boundary of the northwest parcel and in the north half of the southeast parcel should be avoided; avoidance of aquatic resources with a fifty-foot buffer as described in the Preliminary Aquatic Resources Delineation Report will accomplish much of the avoidance needed to prevent impacts to Peck's lomatium.

There are two invasive weed species in the study area, star thistle and dyers woad; these two species spread quickly and outcompete native plants for habitat. If these plants are removed during construction, it is important to not spread the seeds. These plants should be put in a special waste container to later be burned or taken to the dump to be disposed of with household and kennel operations waste. They can also be put in a black trash bag and set in the sun for one month, after which they should no longer be viable.

7.2 Special-status Wildlife

Project construction activities have the potential to adversely affect nesting birds in the breeding season. Most such birds are protected under the MBTA. Raptors in the orders Falconiformes (hawks, eagles, and falcons) and Strigiforms (owls) are protected in varying degrees under California Fish and Game Code, Section 3503.5, the Migratory Bird Treaty Act (MBTA), and CEQA. The study area currently provides suitable foraging and nesting habitat for numerous bird species. Direct take of active nests, eggs, or birds is prohibited by the MBTA and CDFW and measures must be taken to minimize disturbance. Therefore, a qualified wildlife biologist should conduct a pre-construction raptor and nesting bird survey no more than seven days prior to tree or vegetation removal to determine the presence/absence of nesting birds in the study area within the nesting season from February 1 through August 31. Should nesting birds be observed, appropriate spatial and temporal buffers will be required by CDFW. In addition, larger tree (i.e., greater than 12-inch diameter) removal should occur between September 1 and March 1 to ensure that active nests are not removed as a result of construction related activities.

If all vegetation removal associated with construction activities is completed between September 1 and February 1, no pre-construction surveys or additional mitigation is required. To protect the nesting habitat of songbirds and raptors, the removal of trees should be minimized or avoided to the greatest extent practicable. Dead trees and snags provide nesting and foraging habitat for numerous passerines and raptors. Whenever possible and when not in conflict with fire hazard policies and public safety, dead trees and snags should be left standing.

Because no nesting habitat occurs within the study area for greater sandhill cranes and golden eagles, project impacts are not likely to impact these species as they would simply cease foraging during disturbances caused by construction and during kennel operations. Impacts to Swainson's hawks can be avoided by limiting construction activities to September 1 to March 1 or by conducting preconstruction surveys as described above. Kennel operations are unlikely to impact Swainson's hawks as no nests were observed during field surveys and these hawks are generally tolerant of regular, ongoing human activities around nest sites in and around agricultural and urban settings.

Monarch butterfly habitat exists within the study area and two species of milkweed were observed during field surveys. Project construction activities and kennel operations are unlikely to have significant impacts to monarch butterflies since so few milkweed plants were observed within the study area. Impacts to monarch butterflies can be minimized by including native plants in landscaping, limiting pesticide use, and planting native milkweed to replace any that are removed during project construction or kennel operations.

Seasonal wetland depressions occurring in the study area can potentially provide habitat for vernal pool fairy shrimp. Impacts to this species can be avoided by ensuring no permanent facilities are constructed within or adjacent to seasonal wetlands using a 50-

foot buffer. Kennel operations, such as using these areas for dog exercise, should be limited to the dry season. Contamination of wetlands by dog feces should be avoided.

While no evidence of badger occupation was observed during field surveys, suitable habitat occurs within the study area for American badgers. As a species of special concern, they are not afforded the level of protection, nor require mitigation measures afforded threatened and endangered species; however, broader impacts to the species must be considered. The study area has friable soils suitable for excavating dens and could be used for foraging as numerous ground squirrel burrows were observed; badgers are carnivorous, and they prey on – and can help control - burrowing rodents, especially ground squirrels and pocket gophers. American badgers are somewhat tolerant of human disturbance; therefore, may be tolerant of kennel operations. Potential project impacts to badgers from construction activities and kennel operations would be disruption or destruction of natal dens, habitat fragmentation, and disease transmission from domestic dogs. Destruction of dens is unlikely as no dens were observed during surveys, habitat fragmentation is minor as the project footprint is relatively small in relation to surrounding developed land, and disease transmission can be mitigated by controlling animal waste. Because no evidence of badger occupation was observed and any project impacts would affect only local populations, regional and population-wide impacts would be minor and no significant impacts to badger populations are expected.

To protect aquatic resources and prevent disease transmission from dog waste, immediately bag all waste then either regularly dispose of it at the county’s Oberlin Road Transfer Station located nearby or compost dog waste on-site. The USDA Natural Resources Conservation Service provides instructions for dog waste composting in their Composting Dog Waste Booklet.¹

7.3 Mule Deer Critical Ranges

The California State Geoportal “Mule Deer Range - Region 1 [ds277]” dataset, maintained by the California Department of Fish and Wildlife, shows that mule deer (*Odocoileus hemionus*) critical summer range, critical winter range, fall holding areas, and fawning grounds exist outside the study area in the foothills and higher elevation areas surrounding the Shasta Valley. (CDFW 2022). The nearest critical range is approximately 2.5 miles west of the project area on the western side of the city of Yreka. Because the project area is well outside of the typical geographic and elevation range, the project would have no impact on the migration of deer in the region.

¹ “Composting Dog Waste Booklet – Alaska” available at <https://www.epa.gov/system/files/documents/2022-11/Composting-Dog-Waste-Booklet-Alaska.pdf>

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Appendix A

Special-Status Species Tables

Appendix A. Special-Status Species and Potential to Occur within Study Area

Scientific Name Common Name FAMILY	Status Federal/State /CNPS	Habitat Description	Flowering Period	Potential to Occur and Rationale
<i>Balsamorhiza lanata</i> woolly balsamroot ASTERACEAE	/--/1B.2	Cismontane woodland, rocky, volcanic. 800-1895m	May	High. Suitable habitat present in study area. Species found in the study area.
<i>Calochortus greenei</i> Green's mariposa-lily LILIACEAE	/--/1B.2	Cismontane woodland, meadows and seeps, pinyon and juniper woodland, upper montane coniferous forest, volcanic. 1035-1890m	Jun - Aug	Moderate. There are seasonally wet areas as well as sparse juniper woodland in the study area.
<i>Calochortus monanthus</i> single-flowered mariposa-lily LILIACEAE	/--/1A	Meadows and seeps. 745-800m.	Jun	Moderate. There are seasonally wet areas in the study area.
<i>Calochortus persistens</i> Siskiyou mariposa-lily LILIACEAE	/--/1B.2	Lower montane coniferous forest, north coast coniferous forest. 1000-1860m	Jun - July	None. No suitable habitat present in the study area. The elevation in the study area is too low for this species to occur.
<i>Chaenactis suffrutescens</i> Shasta chaenactis ASTERACEAE	/--/1B.3	Lower montane coniferous forest, upper montane coniferous forest, sandy, serpentine. 750-2000m	May - Sep	None. No suitable habitat present in the study area.
<i>Cirsium ciliolatum</i> Ashland thistle ASTERACEAE	--/E/2B.1	Cismontane woodland, valley foothill grassland. 800-1400m	Jun - Aug	Low to moderate. Grassland is present in the study area and the elevation at the study area is within 10m of the low end of the range for this species.
<i>Cryptantha dissita</i> serpentine cryptantha BORAGINACEAE	--/1B.2	Chaparral (serpentinite) 395-580m	Apr - Jun	None. No suitable habitat present in the study area. No serpentine soils present in the study area.
<i>Eriogonum ursinum</i> var. <i>erubescens</i> blushing wild buckwheat POLYGONACEAE	--/1B.3	Chaparral (montane), lower montane coniferous forest, rocky, scree, talus. 750-1900m	Jun - Sep	None. No suitable habitat present in the study area. No rocky, scree, or talus areas in the study area.

Scientific Name Common Name FAMILY	Status Federal/State /CNPS	Habitat Description	Flowering Period	Potential to Occur and Rationale
<i>Galium serpenticum</i> ssp. <i>scotticum</i> Scott Mountain bedstraw RUBIACEAE	--/1B.2	Lower montane coniferous forest (serpentine). 1000-2075m	May - Aug	None. No suitable habitat present in the study area. The elevation in the study area is too low for this species to occur and there are not any serpentine soils in the study area.
<i>Hymenoxys lemmonii</i> alkali hymenoxys ASTERACEAE	--/2B.2	Great Basin scrub, Lower montane coniferous forest, meadows and seeps (subalkaline). 240-3390m	(May) Jun- Aug (Sep)	Moderate. There are seasonally wet areas in the study area.
<i>Lomatium Peckianum</i> Peck's lomatium APIACEAE	--/2B.2	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland, volcanic. 700-1800m	Apr - May (Jun)	High. Suitable habitat present in study area. Species found in the study area.
<i>Opuntia fragilis</i> brittle prickly pear CACTACEAE	--/2B.1	Pinyon and juniper woodland (volcanic). 820-880m	Apr - July	Moderate. Juniper woodland is present in the study area.
<i>Orthocarpus pachystachyus</i> Shasta orthocarpus OROBANCHACEAE	--/1B.1	Great Basin scrub, meadows and seeps, valley and foothill grassland. 840-850m	May	Moderate. There are seasonally wet areas in the study area.
<i>Phacelia greenei</i> Scott Valley phacelia HYDROPHYLLACEAE	--/1B.2	Closed-cone coniferous forest, lower montane coniferous forest, subalpine coniferous forest, serpentine. 800-2440m	Apr - Jun	None. No coniferous forest or serpentine soils in the study area.
<i>Phlox hirsuta</i> Yreka phlox POLEMONIACEAE	E/E/1B.2	Lower montane coniferous forest, upper montane coniferous forest, serpentine, talus. 820-1500m	Apr - Jun	None. No coniferous forest or serpentine soils in the study area.
<i>Polemonium carneum</i> Oregon polemonium POLEMONIACEAE	--/2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. 0-11830m	Apr - Sep	None. No coastal habitat or coniferous forest occurs in the study area.
<i>Scirpus pendulus</i> pendulous bulrush CYPERACEAE	--/2B.2	Marshes and swamps (freshwater), meadows and seeps (mesic). 800-1000m	Jun - Aug	Moderate. There are a few ponds and seasonally wet areas in the study area.

Scientific Name Common Name FAMILY	Status Federal/State /CNPS	Habitat Description	Flowering Period	Potential to Occur and Rationale
<i>Stachys pilosa</i> hairy marsh hedge-nettle LAMIACEAE	--/--/2B.3	Great Basin Scrub(mesic), meadows and seeps. 1200-1770m	Jun - Aug	None. No suitable habitat present in the study area. The elevation in the study area is too low for this species to occur.
<i>Trifolium siskiyouense</i> Siskiyou clover FABACEAE	--/--/1B.1	Meadows and seeps, streambanks (sometimes). 880-1500m	Jun - July	Moderate. There are seasonally wet areas in the study area.

Federal status

E = Federally listed as Endangered under the federal Endangered Species Act

T = Federally listed as Threatened under the federal Endangered Species Act

State status

E = State listed as Endangered under the California Endangered Species Act

T = State listed as Threatened under the California Endangered Species Act

CNPS designations

Rank 1B Plants rare, threatened, or endangered in California and elsewhere

Rank 2 Plants rare, threatened, or endangered in California, but more common elsewhere

Special-status Wildlife Species and Potential to Occur within the Marble Mountain Kennels Study Area - Siskiyou County, CA

Species	Federal/ State Status	Habitat	Potential to Occur and Rational
Fish			
<i>Cotus klamathensis polyporus</i> Lower Klamath marbled sculpin	--/SSC	Marbled Sculpin are usually found in cold (<20°C) spring-fed streams that have a low gradient and adequate aquatic vegetation. They tend to occupy pools or runs with cover, where optimal temperatures might be 11-15°C. It's distribution is in North America: Klamath River drainage in Oregon and California, USA; Pit River system from Fall River to Hat Creek in California.	None. No suitable habitat occurs in the study area.
Amphibians			
<i>Rana boylei</i> Foothill yellow-legged frog, N. Coast DPS	--/SSC	Occurs in partly shaded, rocky perennial shallow streams with riffles.	None. No suitable habitat occurs in the study area.
Reptiles			
<i>Emys marmorata</i> Western pond turtle	--/SSC	Associated with permanent or nearly permanent water habitats such as wetlands, ponds, marshes, lakes, streams, and irrigation ditches. Requires perennial bodies of water with deep pools, locations for haul out, and locations for oviposition.	Low. Four small, shallow ponds occur in the study area. None were observed.
Birds			
<i>Accipiter gentilis</i> Northern goshawk	--/SSC	Prefers habitat in a mature coniferous forest with an open understory, nesting in the densest part of the stand.	None. No suitable habitat occurs in the study area.

Species	Federal/ State Status	Habitat	Potential to Occur and Rational
<i>Antigone canadensis</i> Greater sandhill crane	--/ST	Breeding habitat includes open grasslands, marshes, marshy edges of lakes and ponds, and river banks. Nests are on the ground or in shallow water on open tundra, large marshes, bogs, fens, or wet forest meadows. Individuals exhibit high fidelity to breeding territories. During the nonbreeding season, sandhill cranes roost at night in shallow water along river channels, on alluvial islands of braided rivers, or in natural basin wetlands. A communal roost site consisting of an open expanse of shallow water is a key feature of wintering habitat.	Moderate. No suitable nesting habitat occurs in the study area but foraging habitat is present.
<i>Aquila chrysaetos</i> Golden eagle	--/SFP	Needs open terrain for hunting, nests on cliffs and in large trees in open areas.	Moderate. No suitable nesting habitat occurs in the study area but foraging habitat is present.
<i>Buteo swainsoni</i> Swainson's hawk	--/ST	Uncommon breeding resident and migrant in the Klamath Basin and praries and farmland. Nests in isolated trees. Hunts from the air, or a perch, or while walking on the ground.	Moderate. No suitable nesting habitat occurs in the study area but foraging habitat is present.
<i>Coccyzus americanus</i> Yellow-billed cuckoo	FT/SE	Requires mature riparian habitat with a multi-layered canopy.	None. No suitable habitat occurs in the study area.
<i>Haliaeetus leucocephalus</i> Bald eagle	V/SE	Nests and forages in proximity to large water bodies and large rivers.	None. No suitable nesting or foraging habitat occurs in the study area.
<i>Larus californicus</i> California gull	BCC/--	Common on ponds, lakes, and coastlines. Nests in colonies on islands within inland lakes and in marshes.	Low. Only four small ponds without islands occur in the study area. No suitable habitat for nesting occurs in the study area and only minor foraging for insects would be likely to occur.

Species	Federal/ State Status	Habitat	Potential to Occur and Rational
<i>Riparia riparia</i> Bank swallow	--/ST	Nest in sand banks and bluffs along rivers and lakes, where they can occur in colonies of up to 2,000 nests. These birds stick to open, wet areas and steer clear of forested habitats.	None. No suitable nesting or foraging habitat occurs in the study area.
<i>Strix occidentalis caurina</i> Northern spotted owl	FT/ST	Prefers multi-storied canopy in mature forest dominated by large trees.	None. No suitable nesting or foraging habitat occurs in the study area.
Mammals			
<i>Canis lupus</i> Gray wolf	FE/SE	Prefers forested and open landscapes with minimal human disturbance.	None. Human disturbance such as the existing kennel, and ranching and industrial activities adjacent to the study area makes it unsuitable security habitat for denning.
<i>Gulo gulo luscus</i> North American wolverine	FT/ST	Inhabits a wide variety of high-elevation habitats, preferring old-growth forests or mixed stands of old growth and mature trees. May use riparian corridors for movement.	None. No suitable habitat occurs in the study area.
<i>Pekania pennanti</i> Fisher	--/SSC	Forages in old-growth forests or mixed stands of old growth and mature trees. Natal dens are typically located in large diameter trees and snags.	None. No suitable habitat occurs in the study area.
<i>Taxidea taxus</i> American badger	--/SSC	Lives in open areas like plains and prairies, farmland, and the edges of woods. A badger usually has lots of different dens and burrows. It uses them for sleeping, hunting, storing food and giving birth.	Moderate. Suitable denning habitat is present with friable soils available for digging burrows as well as populations of ground squirrels, gophers and mice as a food source in the study area.

Species	Federal/ State Status	Habitat	Potential to Occur and Rational
Insects			
<i>Bombus crotchii</i> Crotch bumble bee	--/SCE	Found in open grassland and scrub. This bee is able to persist in semi-natural habitats surrounded by intensely modified landscapes. Nests underground. A short-tongued species; food plants include <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> . The historic range of <i>B. crotchii</i> extends from central California south to Baja California del Norte, Mexico, and includes coastal areas east to the edges of the deserts and the Central Valley, but largely excluding mountainous areas of California. Observations made in the last decade (2008-2017) indicate a retraction from northern and perhaps also southern extremes of the historical range.	Low. <i>Asclepias</i> and <i>lupinus</i> were observed in the study area but the study area is at the northern extreme of its range which has been declining. Last documented occurrence was in 1964 near Montague.
<i>Bombus franklini</i> Franklin's bumble bee	FE/SCE	Only found across northern California and southern Oregon between the Coast and Sierra-Cascade mountain ranges. Relies upon floral plants, such as <i>Lupinus</i> , <i>Eschscholzia</i> , <i>Agastache</i> , <i>Monardella</i> , and <i>Vicia</i> , and abandoned rodent burrows for its nesting habitat.	Low. Native floral plants were observed in the study area, but there has not been a reported observance since 1912.
<i>Danaus plexippus</i> Monarch butterfly	FC/--	Adult monarchs west of the Rocky Mountains leave overwintering sites along the California coast in February and March and head inland in search of flowering plants for nectar and milkweed for nectar and to deposit their eggs for caterpillars who require milkweed to feed. Once first-generation monarch eggs reach adulthood, they disperse east across the Central Valley and north across most of the western states.	Moderate, there is potential foraging and reproductive habitat (milkweed) in the study area.

Species	Federal/ State Status	Habitat	Potential to Occur and Rational
Crustaceans			
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	FE/--	Vernal pools in California	None. CNDDDB lists 10 known populations of which none are in Siskiyou County.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/--	Vernal pools in California and Oregon.	Moderate. The mapped aquatic features (seasonal wetland depressions and swales) have a hardpan restrictive clay layer conducive to holding seasonal surface water that may be considered habitat for this species.
<i>Lepidurus packardi</i> Vernal pool tadpole shrimp	FE/--	Seasonal wetlands in the California Central Valley.	None. Study area is outside the known range of this species.

Federal status

- FE – Listed as endangered under the Federal Endangered Species Act
- FT – Listed as threatened under the Federal Endangered Species Act
- PE – Proposed for listing as endangered under the Federal Endangered Species Act
- PT – Proposed for listing as threatened under the Federal Endangered Species Act
- FC – Candidate species for listing under the Federal Endangered Species Act
- BCC – Identified as Bird of Conservation Concern by the U.S. Fish and Wildlife Service
- FSC – Species of concern as identified by the U.S. Fish and Wildlife Service
- V – Vulnerable and protected under the Bald and Golden Eagle Protection Act

State Status

- SE – Listed as endangered under the California Endangered Species Act
- ST – Listed as threatened under the California Endangered Species Act
- SFP - Fully protected under California Fish and Game Code
- SCE - Candidate species for listing as endangered under the California Endangered Species Act
- SCT - Candidate species for listing as threatened under the California Endangered Species Act
- CSC – Species of concern as identified by the California Department of Fish and Wildlife

Appendix B

Plants Observed During Surveys

Appendix B: Plant Species Observed

Scientific Name	Common Name	Family
Trees		
<i>Juniperus occidentalis</i>	western juniper	Cupressaceae
<i>Pinus</i> sp.	pine	Pinaceae
<i>Salix matsudana</i>	corkscrew willow	Saliaceae
<i>Salix</i> sp.	willow	Saliaceae
Shrubs and Vines		
<i>Ceanothus cuneatus</i>	buck brush	Rhamnaceae
<i>Ericameria nauseosa</i>	rubber rabbitbrush	Asteraceae
<i>Eriogonum nudum</i>	naked buckwheat	Polygonaceae
<i>Rubus armeniacus</i>	Himalaya blackberry	Rubiaceae
<i>Salix</i> sp.	willow	Saliaceae
Forbs		
<i>Achillea millefolium</i>	yarrow	Asteraceae
<i>Achyrachaena mollis</i>	blow wives	Asteraceae
<i>Acmispon americanus</i>	American bird's foot trefoil	Fabaceae
<i>Acmispon decumbens</i>	Sierra lotus	Fabaceae
<i>Allium amplexans</i>	narrow leaved onion	Alliaceae
<i>Amsinkia mezesii</i>	fiddleneck	Boraginaceae
<i>Asclepias fascicularis</i>	narrow-leaved milk weed	Apocynaceae
<i>Asclepias speciosa</i>	showy milkweed	Apocynaceae
<i>Balsamorhiza lanata</i>	woolly balsamroot	Asteraceae
<i>Brassica</i> sp.	mustard	Brassicaceae
<i>Brodiaea elegans</i>	harvest brodiaea	Themidaceae
<i>Capsella bursa-pastoris</i>	shepherd's purse	Brassicaceae
<i>Carex</i> sp.	sedge	Cyperaceae
<i>Castilleja lacera</i>	foothill owl's clover	Orobanchaceae
<i>Centaurea solstitialis</i>	yellow star thistle	Asteraceae
<i>Centromadia fitchii</i>	spikeweed	Asteraceae
<i>Chenopodium album</i>	lamb's quarters	Chenopodiaceae
<i>Chenopodium rubrum</i>	red goosefoot	Chenopodiaceae
<i>Cichorium intybus</i>	chicory	Asteraceae
<i>Cirsium cymosum</i>	peregrine thistle	Asteraceae
<i>Clarkia purpurea</i>	purple clarkia	Onagraceae
<i>Convolvulus arvensis</i>	field bindweed	Convolvulaceae
<i>Crepis occidentalis</i>	western hawksbeard	Asteraceae

<i>Croton setiger</i>	turkey mullein	Euphorbiaceae
<i>Dichelostemma multiflorum</i>	many flowered brodiaea	Themidaceae
<i>Downingia yina</i>	Cascade downingia	Campanulaceae
<i>Erodium botrys</i>	big heron's bill	Geraniaceae
<i>Eschscholiza californica</i>	California poppy	Papaveraceae
<i>Galium tricornutum</i>	rough bedstraw	Rubiaceae
<i>Isastis tinctoria</i>	dyer's woad	Brassicaceae
<i>Juncus bufonius</i>	common toad rush	Juncaceae
<i>Lagophyla ramosissima</i>	common hair leaf	Asteraceae
<i>Latuca seriola</i>	prickly lettuce	Asteraceae
<i>Lomatium macrocarpum</i>	large fruited lomatium	Apiaceae
<i>Lomatium nudicaule</i>	pestle lomatium	Apiaceae
<i>Lomatium peckianum</i>	Peck's lomatium	Apiaceae
<i>Lotus corniculatus</i>	bird's foot trefoil	Fabaceae
<i>Lythrum hyssopifolia</i>	hyssop loosestrife	Lythraceae
<i>Madia elegans</i>	common madia	Asteraceae
<i>Medicago satvia</i>	alfalfa	Fabaceae
<i>Navarretia intertexta</i>	Needle leaved navarretia	Polemoniaceae
<i>Plagiobothrys tenellus</i>	Slender popcorn flower	Boraginaceae
<i>Plantago lanceolata</i>	ribwort	Plantaginaceae
<i>Rumex crispus</i>	curly doc	Polygonaceae
<i>Salsola tragus</i>	Russian thistle	Chenopodiaceae
<i>Sisymbrium altissimum</i>	tumble mustard	Brassicaceae
<i>Thysanocarpus curvipes</i>	common fringe pod	Brassicaceae
<i>Tragopogon dubius</i>	goat's beard	Asteraceae
<i>Trichostema lanceolatum</i>	vinegarweed	Lamiaceae
<i>Triteleia hyacinthina</i>	wild hyacinth	Themidaceae
<i>Typha latifolia</i>	broadleaf cattail	Typhaceae
<i>Verbascum blattaria</i>	moth mullein	Scrophulariaceae
Grasses		
<i>Bromus sp.</i>	brome	Poaceae
<i>Bromus tectorum</i>	cheatgrass	Poaceae
<i>Deschampsia danthanooides</i>	annual hairgrass	Poaceae
<i>Elymus elymoides</i>	squirrel tail	Poaceae
<i>Hordeum marinum</i>	seaside barley	Poaceae
<i>Poa bulbosa</i>	bulbous blue grass	Poaceae
<i>Secale cereale</i>	rye	Poaceae

Appendix C

Representative Photographs

Photo 1: Southeast parcel, facing east.



Photo 2: Southeast parcel facing northwest from the southeast corner.

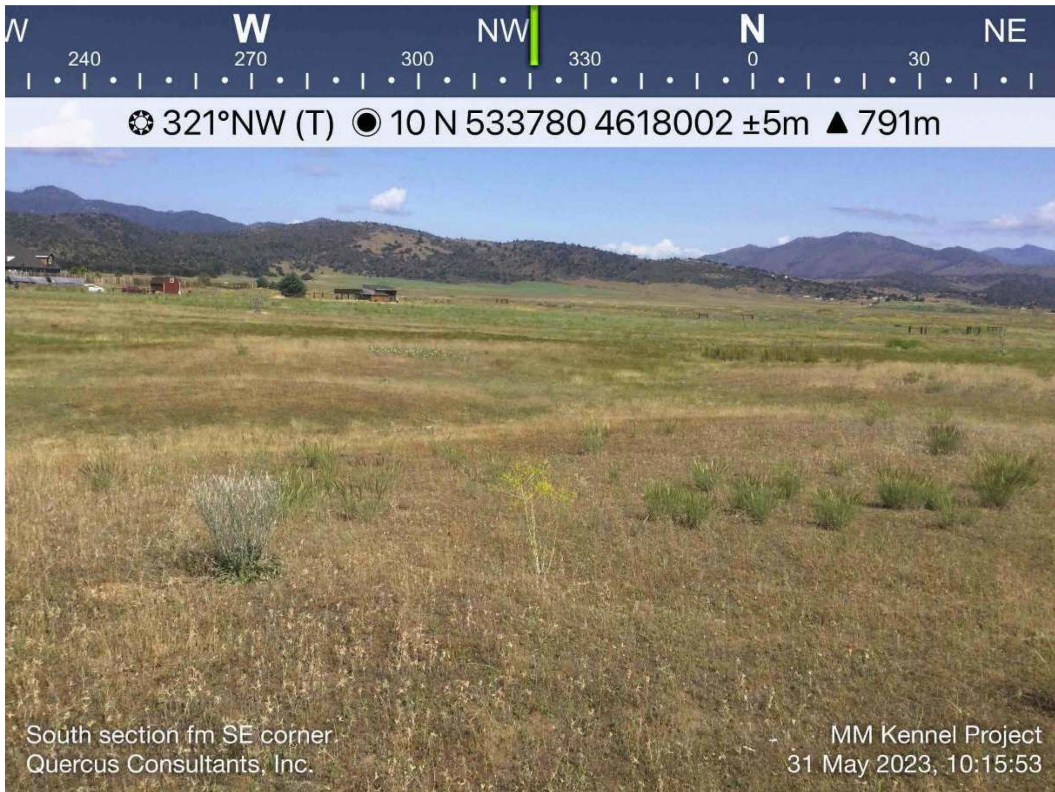


Photo 3: Pond next to S. Phillippe Lane.

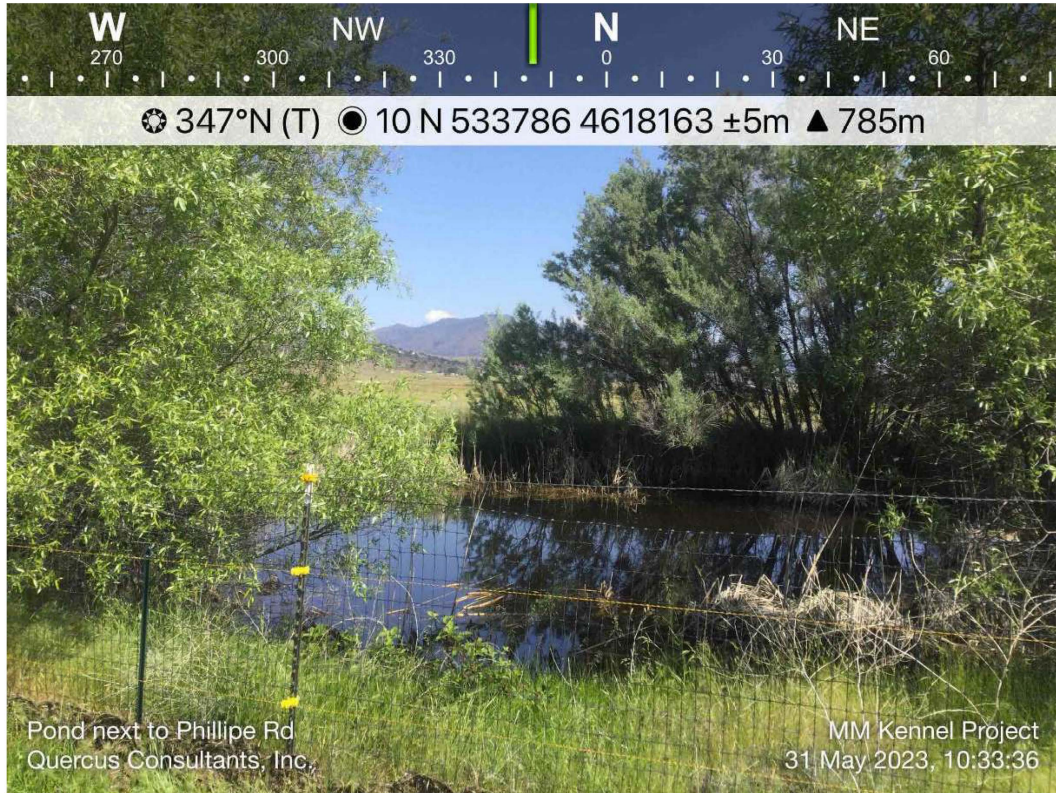


Photo 4: Southeast parcel facing northeast from the southwest corner.

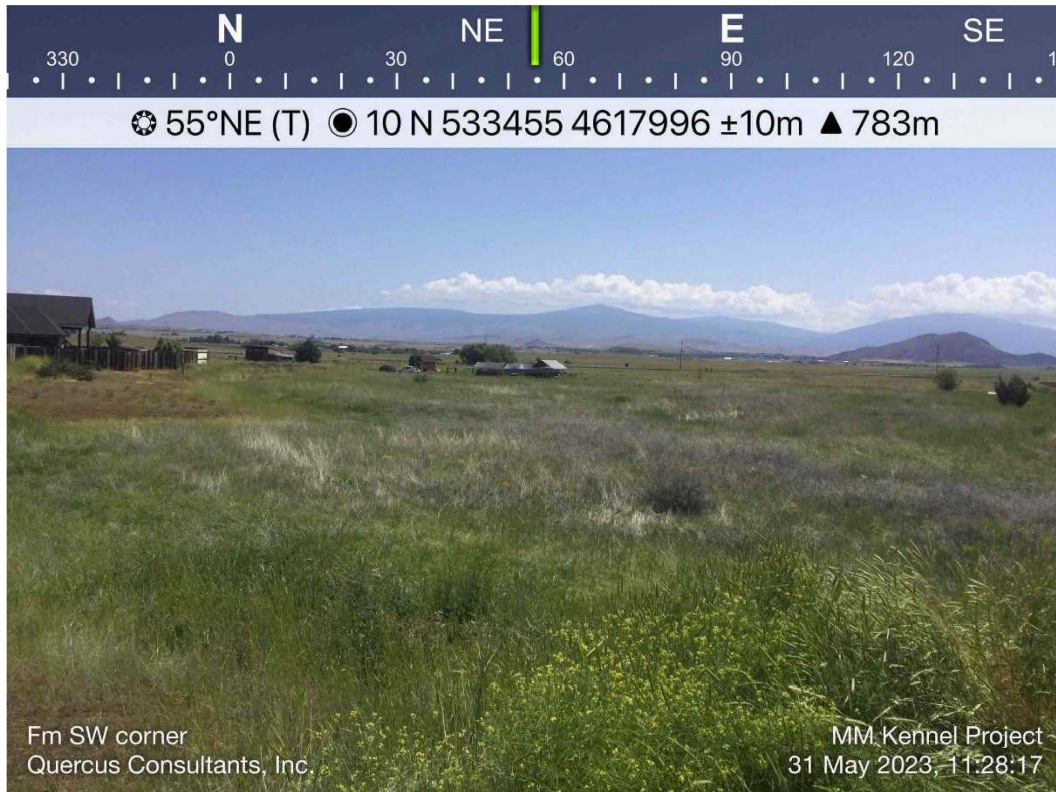


Photo 5: Southeast parcel facing southeast from the northwest corner.

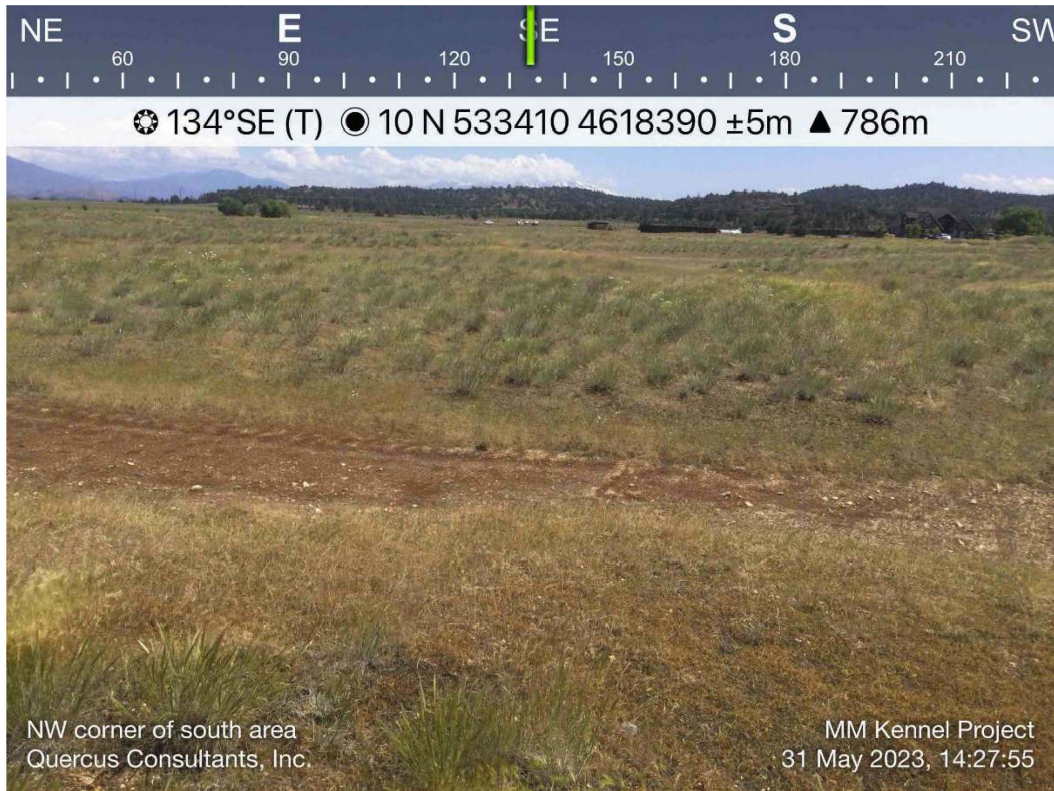


Photo 6: Northwest parcel facing north from the southeast corner.

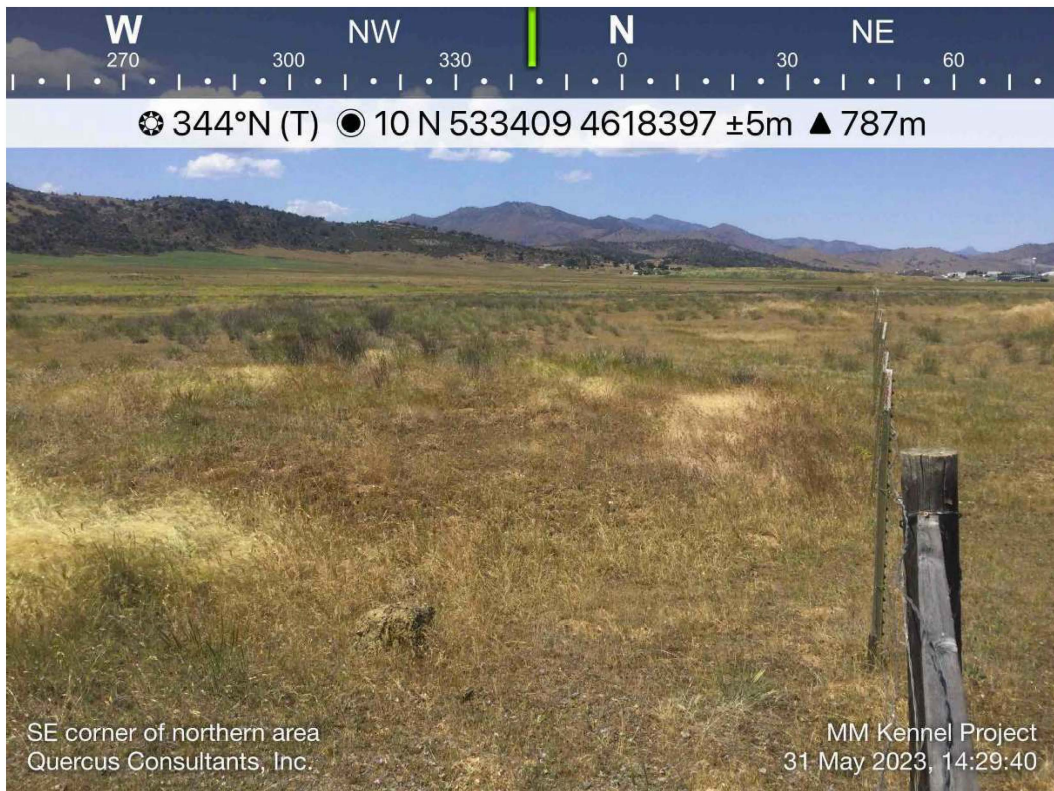


Photo 7: Northwest parcel facing southwest from the center.

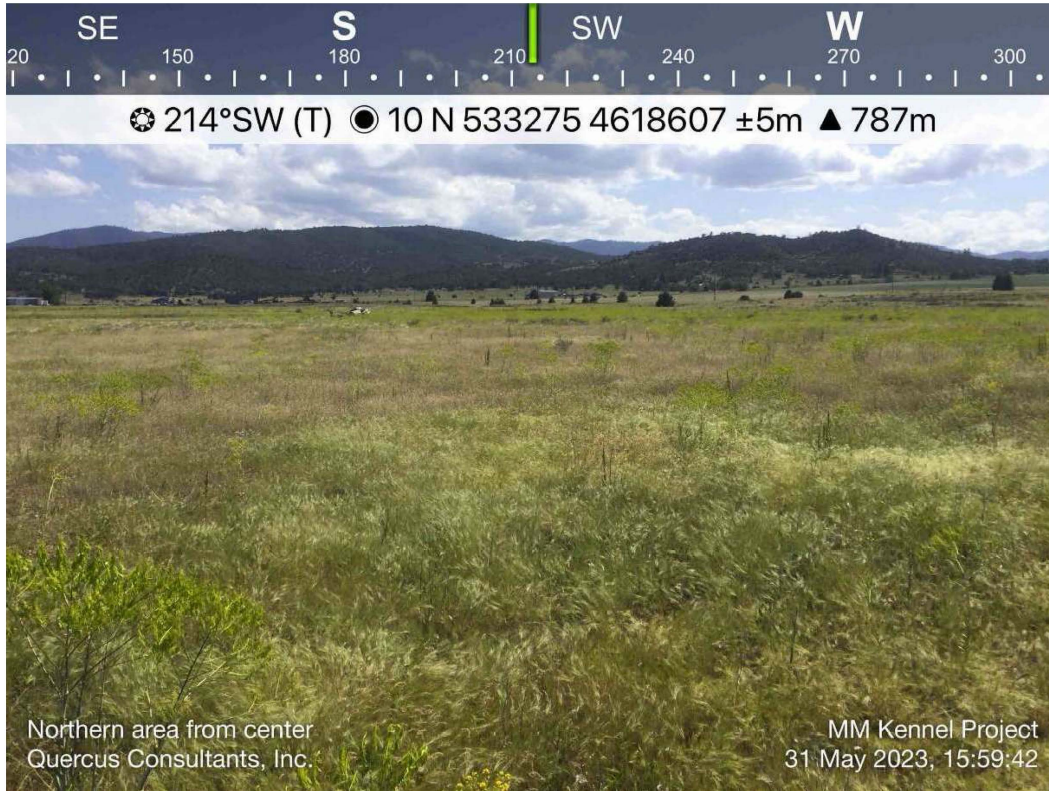


Photo 8: Northwest parcel facing northeast from the center.

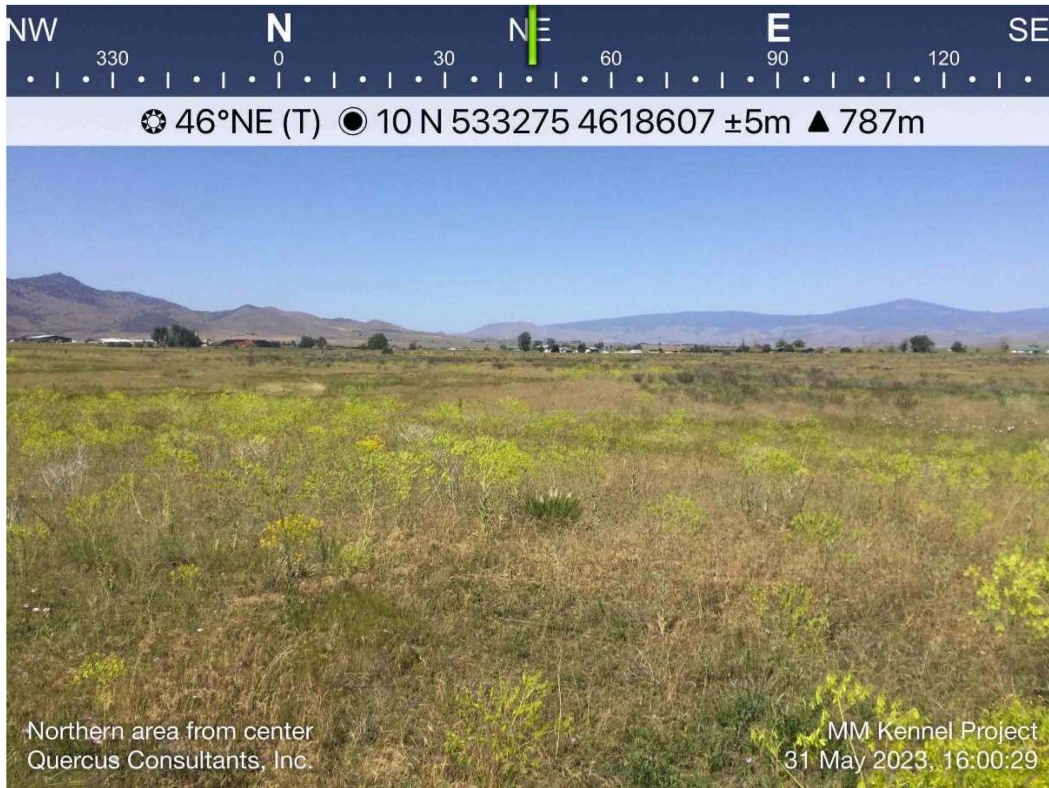


Photo 9: Woolly balsamroot (*Balsamorhiza lanata*) occurrence closest to main house.



Photo 10: Peck's lomatium (*Lomatium peckianum*) occurrence closest to S. Phillippe Lane.

