

BIOLOGICAL RESOURCES ASSESSMENT REPORT

NORTH RYAN ROAD CANNABIS OPERATIONS PROJECT SAN LUIS OBISPO COUNTY, CALIFORNIA

Project No. 1902-1381

Prepared for:

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JULY 2019



Authenticity and Signature Page



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Padre Associates, Inc. hereby certifies that all statements furnished in the following Biological Resources Assessment Report and all supporting information acquired for this biological evaluation are true and correct to the best of our knowledge and belief. Further, we certify that the field survey associated with this report was performed by Padre and that the report accurately represents all information retained from the field visit to the North Ryan Road Cannabis Operations project site at 4150 North Ryan Road, Creston, San Luis Obispo County, California.

A handwritten signature in black ink, appearing to read "Lloyd Wimer", written over a horizontal line.

Kenny Wimer
Staff Biologist

A handwritten signature in black ink, appearing to read "Christina Santala", written over a horizontal line.

Christina Santala
Project Biologist

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1.0 INTRODUCTION

Padre Associates, Inc. (Padre) has prepared this Biological Resources Assessment Report (Report) on behalf of Mr. Tyler Mitchell (Client), to document the results of a desktop review and field survey for a proposed cannabis operations project (Project), located at 4150 North Ryan Road, Creston, San Luis Obispo County (County), California, Assessor Parcel Number (APN) 042-211-014 (Project Site). This Report was prepared in support of permit acquisition for the proposed installation of a greenhouse, outdoor cannabis cultivation facilities, and associated buildings for storage and supportive operations, as well as improvements to an access road leading to the parcel.

This Report documents the results of the field survey and desktop review, including a discussion of existing biological resources and the potential Project impacts to these resources, as well as impact avoidance recommendations.

2.0 METHODS

Methods to collect biological resources information included a desktop review and field survey of the Biological Survey Area (BSA), which encompassed the proposed disturbance footprints and surrounding landscape within the Project Site.

2.1 DESKTOP REVIEW

Prior to conducting the field survey, a query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDDB) was conducted to identify documented occurrences of special-status plant and wildlife species, and sensitive habitats within the vicinity of the Project site. The CNDDDB is a continually refined and updated computerized inventory of location information on the rare animals, plants, and natural communities in California, including species that are listed as federally and/or state endangered/threatened. All wildlife taxa listed with the CNDDDB are considered “special animals” in which the CDFW is interested in tracking, regardless of their legal protection status.

The Project Site is located within the Shedd Canyon 7.5-minute United States Geological Survey (USGS) quadrangle, and the CNDDDB search was focused on this and three other adjacent quadrangles that are located within five miles of the Project Site, including Creston, Wilson Corner, and Santa Margarita (CNDDDB, 2019). The United States Fish and Wildlife Service (USFWS) Critical Habitat database was also investigated to identify critical habitat for federally listed species within the Project Site or surrounding region (USFWS, 2019a). In addition, the USFWS National Wetlands Inventory was checked to identify any wetlands within the Project Site or surrounding area. (USFWS, 2019b)

2.2 FIELD SURVEY

On May 3, 2019, Padre Biologists, Christina Santala and Kenny Wimer, completed a field survey focused on the presence/absence of special-status plant and wildlife species, including nesting birds, as well as the suitability of habitat to support these species within the BSA. In addition, an evaluation of potential oak tree impacts was conducted.

Field survey methods consisted of walking paths of opportunity and driving (i.e., access road) throughout the BSA and recording wildlife species observed by visual observation using binoculars, indirect signs (e.g., tracks, scat, skeletal remains, and burrows), and/or auditory cues (i.e., calls and songs). Field notes on botanical resources and plant communities/habitats were also recorded. Vegetation within the BSA was divided and classified into vegetation types based on *A Manual of California Vegetation, Second Edition* (MCV2) (Sawyer, et. al., 2009).

3.0 FINDINGS

The following discussion of biological resources includes those that were observed within the BSA, those identified in the desktop review, and resources that have the potential to occur based on the presence of suitable habitat (Figure 1 – Biological Resources Assessment Map, and Appendix A – Site Photographs).

3.1 ENVIRONMENTAL SETTING

The Project Site is located approximately 11.5 miles northeast of Santa Margarita, San Luis Obispo County, California. Topography within the Project Site and surrounding region generally consists of moderate to steeply rolling hills supporting grassland, shrub, and woodland vegetation. Land uses in surrounding areas can generally be classified as agriculture and low density residential, with interspersed parcels that are either undeveloped or used for livestock grazing. The nearest documented wetland features include one unnamed ephemeral drainage immediately west of the Project Site, and two man-made stock ponds to the south (0.36 miles) and southwest (0.6 miles) (USFWS, 2019b). No direct connectivity exists between these features and the Project Site; however, it is likely that the Project Site directs water to the unnamed ephemeral drainage to the west.

3.2 EXISTING BIOLOGICAL RESOURCES

3.2.1 Botanical

A list of plant species identified in the BSA during the May 3, 2019 field survey is provided in Appendix B – Vascular Plant List. All scientific nomenclature is based on *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin, et. al., 2012). Based on species composition and life form, the vegetation within the BSA was divided and classified into vegetation types based on *A Manual of California Vegetation, Second Edition* (MCV2) (Sawyer, et. al., 2009) including Annual Grassland, Coyote brush scrub, California buckwheat scrub, Valley oak woodland, and areas of disturbance.

Annual Grassland. The grasslands observed within the BSA consisted of an assemblage of non-native grasses and native and non-native forbs that transitioned in dominance throughout the BSA. Based on grass species composition, the annual grassland vegetation was classified as Mediterranean California naturalized annual and perennial grassland. This is a general classification (i.e., Group level) described in the MCV2 that includes several herbaceous alliances including Annual brome grasslands and Wild oats grasslands. A general description and summary of observed species composition for annual grassland alliances is provided below.

Bromus (diandrus, hordeaceus) – Brachypodium distachyon, Semi-Natural Herbaceous Stands (Annual brome grasslands). Annual brome grasslands are found in all topographic settings in foothills, waste places, rangelands, and openings in woodlands. This alliance is characterized by ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), or false brome (*Brachypodium distachyon*) as dominant or co-dominant with non-natives in the herbaceous layer and cover is intermittent to continuous (Sawyer et al., 2009). As observed within the BSA, there were areas of Annual brome grasslands dominated by soft chess with component plant species including purple vetch (*Vicia benghalensis*), Foxtail barley (*Hordeum murinum*), storksbill

(*Erodium cicutarium*), owl's clover (*Castilleja exserta*), black mustard (*Brassica nigra*), red brome (*Bromus madritensis* ssp. *madritensis*), and sweetclover (*Melilotus indicus*).

Avena (barbata and fatua) Semi-Natural Herbaceous Stands (Wild oats grasslands). Wild oats grasslands are found in open spaces, rangelands, and openings in woodlands. This alliance is characterized by slender wild oat or common wild oat as dominant or co-dominant in the herbaceous layer and cover is open to continuous (Sawyer et al., 2009). As observed within the BSA, there were areas of wild oats grasslands dominated by wild oats with component plant species including storksbill, black mustard, foxtail barley, rattail grass (*Festuca myuros*), sweetclover, owl's clover, and fiddleneck (*Amsinckia menziesii*).

Eriogonum fasciculatum Shrubland Alliance (California buckwheat scrub). California buckwheat scrub is found in upland slopes, intermittently flooded arroyos, channels and washes; rarely flooded low-gradient deposits. This alliance is characterized by California buckwheat as dominant or co-dominant in the shrub canopy and cover is continuous or intermittent within the shrub layer. Herbaceous layer is variable and may be grassy (Sawyer, et. al., 2009). As observed within the BSA, there were distinct patches (primarily on hilltops) of California buckwheat scrub dominated by intermittent to sparse canopy of California buckwheat, with component plant species including owl's clover, rattail fescue, sweetclover, soft chess, and purple vetch.

Baccharis pilularis Shrubland Alliance (Coyote brush scrub). Coyote brush scrub is found in occurs in river mouths, stream sides, terraces, stabilized dunes of coastal bars, spits along the coastline, coastal bluffs, open slopes, and ridges. This alliance is characterized by coyote brush as dominant to co-dominant in the shrub canopy; canopy is variable (Sawyer et al., 2009). As observed within the BSA, there were distinct patches of Coyote brush scrub (primarily on slopes) dominated by dense to intermittent canopy of coyote brush with component species including tocalote (*Centaurea melitensis*), storksbill, rattail fescue, soft chess, and occurrences of miniature lupine (*Lupinus bicolor*).

Quercus lobata Woodland Alliance (Valley oak woodland). Valley oak woodland is found in valley bottoms, seasonally saturated soils that may intermittently flood lower slopes and summit valleys. This alliance is characterized by valley oak woodland as dominant or co-dominant in the tree canopy and canopy is open to continuous ((Sawyer, et. al., 2009). As observed, there was a stand of Valley oak woodland in the northwest portion of the BSA, and several individual valley oaks were scattered throughout the remaining portion of the parcel. All oaks were healthy, mature and estimated to be larger than 12 inches in diameter at breast height. Herbaceous understory consisted of Annual grassland vegetation.

Disturbed. Within this report, Disturbed is a term used to describe any area within the BSA that had been recently or historically graded and /or disked and did not support vegetation. As observed, the disturbed areas included several firebreaks transecting the parcel, an access road and a residential structure.



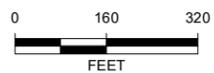
LEGEND:

- Potential Badger Burrow
- Project Footprint
- Project Site

Vegetation Types:

- Annual Grassland
- Buckwheat scrub
- Coyote Brush scrub
- Disturbed
- Valley Oak Trees

MAP EXTENT:



Source: NAIP Imagery 2018, Roberts Engineering 2018
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
 Note: CNDDB = California Natural Diversity Database
 This map was created for informational and display purposes only.



PROJECT NAME: NORTH RYAN ROAD CANNABIS CULTIVATION PROJECT SAN LUIS OBISPO COUNTY, CA	
PROJECT NUMBER: 1902-1381	DATE: July 2019

**BIOLOGICAL RESOURCES
ASSESSMENT MAP**

**FIGURE
1**

Z:\GIS\Projects\GIS Maps\Map - Project\North Ryan Road\Biological Resources Assessment Map.mxd 7/17/2019

3.2.2 Wildlife

Wildlife observed during the survey included mule deer (*Odocoileus hemionus*), indirect signs of fossorial mammals such as California ground squirrel and American badger (*Taxidea taxus*), side-blotch lizard (*Uta stansburiana*), and several resident bird species, including California towhee (*Melospiza crissalis*), black phoebe (*Sayornis nigricans*), and western meadowlark (*Sturnella neglecta*). A complete list of observed wildlife species can be found in Appendix C – Wildlife Observed List.

3.3 SENSITIVE BIOLOGICAL RESOURCES

Results of the CNDDDB query for occurrences of special-status plant and wildlife species within the CNDDDB quadrangle search can be found in Appendix D. Figure 2 - CNDDDB Occurrences depicts the CNDDDB occurrences within five miles of the Project Site.

3.3.1 Special-Status Plants and Communities

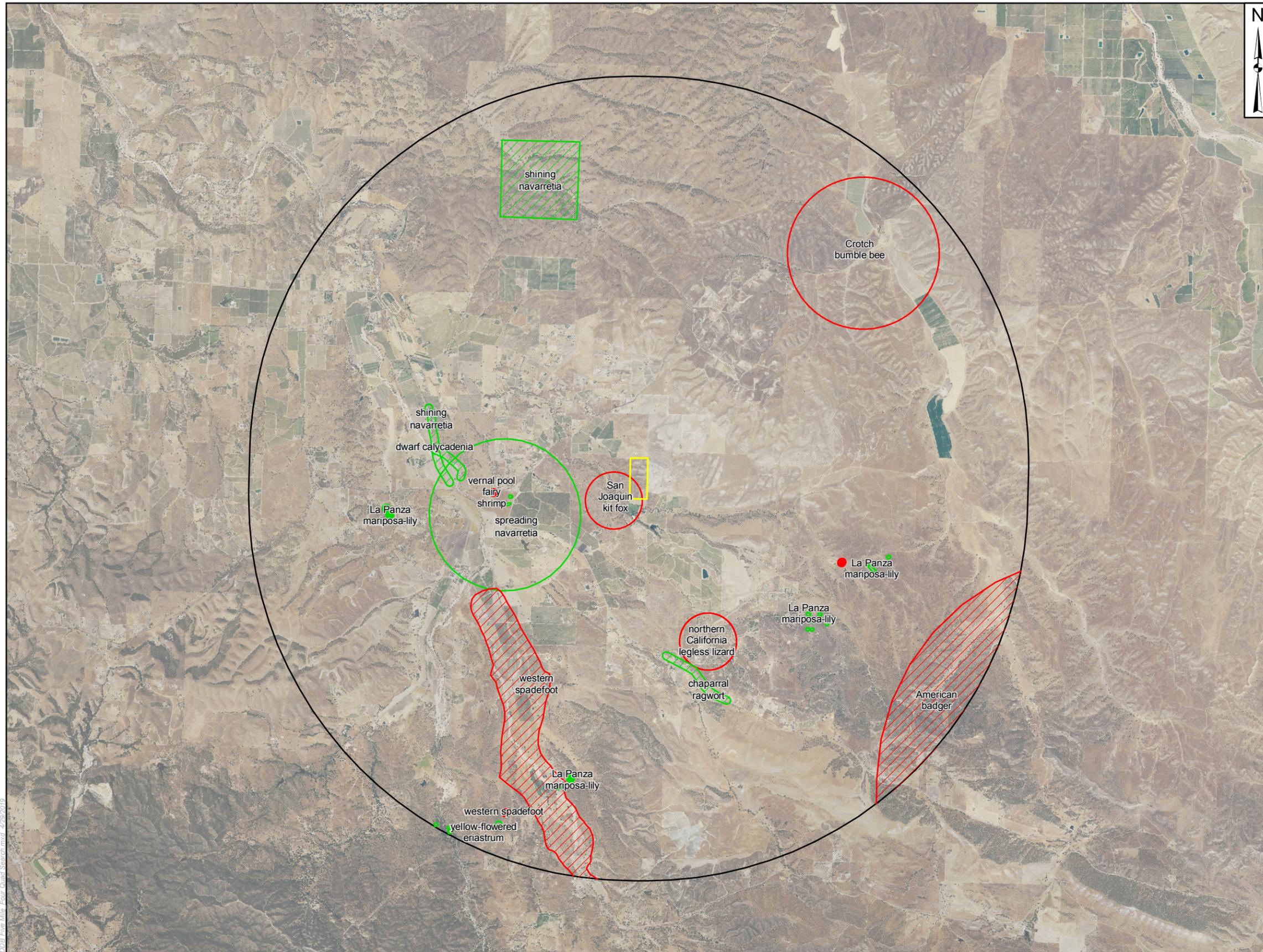
The desktop review identified three special-status plant species, no special-status plant communities and no USFWS-designated critical habitat within or in the vicinity of the Project. Special-status plant species for which there was suitable habitat observed within the Project Site include La Panza Mariposa lily (*Calochortus simulans*), Lemmon's jewelflower (*Caulanthus lemmonii*), and pale yellow layia (*Layia heterotrichia*).

The field survey took place on May 3, which overlaps the blooming period of these special-status species. Padre biologists did not observe special-status plants during the field survey. Given that field surveys were conducted within the appropriate blooming period and potentially occurring special-status plant species were identified at reference sites this year, it is not likely that special-status plants are present within the Project Site. However, if environmental conditions change or the Project is not implemented within five years, recommended mitigation measures for special-status plants are provided in Section 5.0.

3.3.2 Special-Status Wildlife

Padre Biologists did not observe special-status wildlife species directly during the field survey on May 3, 2019. American badger (*Taxidea taxus*) have been documented within five miles of the Project Site and several potentially active American badger burrows were observed within grassland habitat adjacent to the Project footprint as shown on the Preliminary Grading Plan, refer to Figure 1 (CNDDDB, 2019).

In addition, the upland habitat within and around the Project Site provide suitable habitat for other potentially occurring special status species including northern California legless lizard (*Anniella pulchra*), California glossy snake (*Arizona elegans occidentalis*), San Joaquin kit fox (*Vulpes macrotis mutica*) (SJKF), and San Joaquin pocket mouse (*Perognathus inornatus*); of which, SJKF and California legless lizard have been documented within five miles of the Project Site (CNDDDB, 2019). Man-made ponds and small ephemeral drainages in the vicinity of the Project Site may also provide suitable habitat for aquatic and semi-aquatic special-status species such as California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), western pond turtle (*Emys marmorata*), and western spadefoot (*Spea hammondi*).



LEGEND:

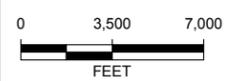
- Project Area
- 5-mile Buffer of Project Area
- CNDDDB Sensitive Occurrences within 5 miles**
- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (non-specific)
- Animal (circular)

**FOR INTERNAL USE ONLY;
NOT FOR PUBLIC RELEASE**

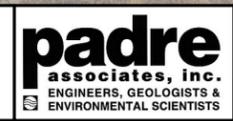
MAP EXTENT:



North Ryan Road Bra CNDDDB Five Mile Four Quarter Search.mxd 4/29/2019



Source: NAIP Imagery 2018, CNDDDB 4/2019
 Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
 Notes: CNDDDB = California Natural Diversity Database
 This map was created for informational and display purposes only.



PROJECT NAME: NORTH RYAN ROAD BRA SAN LUIS OBISPO COUNTY, CA	
PROJECT NUMBER: 1902-1381	DATE: April 2019

CNDDDB Occurrences

**FIGURE
2**

If present nearby, these species have the potential to utilize upland habitat within the Project Site for migration and/or refugia, however, only western spadefoot toad has been documented within five miles of the Project Site (CNDDDB, 2019).

Although no nesting bird activity was observed within the BSA during the field survey, vegetation and other substrates (e.g., bare soil areas) present within the site provide suitable nesting habitat for a variety of bird species. Nesting birds and their nests/eggs are protected under the federal Migratory Bird Treaty Act of 1918 and California Fish and Game Code. Refer to Section 5.0 for recommended mitigation measures for protection of potentially occurring special-status wildlife and nesting birds during Project activities.

3.4 OAK TREES

Valley oak trees (*Quercus lobata*) were present throughout the BSA in small scattered stands and as individuals, as well as along North Ryan Road leading to the site. Oak trees are protected under Chapters 22.56 and 22.58 of the County Land Use Ordinance and require impact mitigation should they be impacted by construction and/or right of way improvements (County, 2019a; 2019b).

4.0 POTENTIAL IMPACTS

The proposed Project activities include installation of a greenhouse, outdoor cannabis cultivation facilities, and associated buildings for storage and supportive operations, as well as improvements to an access road. These activities have the potential to impact special-status wildlife and plant species that could occur within the Project Site. Impacts to oak trees would include any removal or trimming (including damage to roots) that would occur as a result of Project activities.

Potential impacts to special-status wildlife are construction-related and include animal mortality or injury from equipment operations, vehicle traffic, accidental entombment from collapse of burrows, and loss of habitat. Project-related noise also has the potential to negatively affect nesting bird activity. In addition, grading and access road widening activities have the potential to disturb and impact special-status plant species that could be present within the Project Site. Indirect impacts to special-status species may occur during Project operation if pesticides or rodenticides are used or non-native invasive species are introduced at the Project Site. Special-status wildlife that have the potential to occur within or adjacent to the Project Site based on the presence of suitable habitat and nearby documented occurrences include: American badger, SJKF, San Joaquin pocket mouse, northern California legless lizard, California glossy snake, western pond turtle, California red-legged frog, foothill yellow-legged frog, western spadefoot toad, and nesting birds. Of these species, specific mitigation requirements have been established for SJKF by the County. Please refer to Section 5.0 below for a summary of these requirements and other mitigation recommendations.

Although several oak tree canopies overlap the proposed Project footprint along North Ryan Road, the client has stated that these tree canopies can be avoided during right of way improvements. Contingency measures for oak tree impacts are provided in Section 5.0, however, should the scope of these improvements ultimately require impacting any part of the trees.

5.0 RECOMMENDED MITIGATION MEASURES

Padre recommends that the following measures be implemented prior to and/or during proposed Project activities to avoid and or minimize impacts to biological resources:

1. Work Timing. All work activities shall be completed during daylight hours (between sunrise and sunset) and outside of rain events;
2. Work Limits. The Project impact area shall be clearly marked or delineated with stakes, flagging, tape, or signage prior to work. Areas outside of work limits shall be considered environmentally sensitive and shall not be disturbed;
3. Vehicles and Equipment. All equipment and vehicles shall be checked and maintained daily to prevent spills of fuel, oil, and other hazardous materials. A designated staging area shall be established for vehicle/equipment parking and storage of fuel, lubricants, and solvents. All fueling and maintenance activities shall take place in the staging area;
4. Biological Monitoring. Biological monitoring shall be completed by a qualified biologist for all initial ground disturbance (e.g., grading/excavation activities). For this task, the biologist shall survey/clear undisturbed work areas prior to start of work and then monitor the area while initial grading activities are completed. Any wildlife observed during monitoring shall be allowed to move out of work limits of their own volition or shall be captured and relocated to nearby suitable habitat by the biologist, as necessary and in compliance with state and federal Endangered Species Act regulations.
5. San Joaquin Kit Fox. The Project Site is within the County 1:1 mitigation area for SJKF, and per County guidelines, requires either: establishment of an on- or offsite conservation easement equaling the area of disturbance (812,995 square feet) as well as a non-wasting endowment fund, *or* payment of an in-lieu fee to an approved fund, *or* purchase of credits in an approved conservation bank. In addition, the following mitigations shall be implemented:
 - Retain a qualified biologist to conduct pre-construction survey of the Project Site and conduct a pre-construction SJKF briefing for construction workers to minimize SJKF impacts;
 - Include SJKF protection measures on Project plans;
 - Require a maximum 25 mile per hour speed limit at the Project Site during construction;
 - Stop all construction activities at dusk;
 - Cover excavations deeper than two feet at the end of each working day or provide escape ramps for SJKF;
 - Inspect pipes, culverts, or similar structures for SJKF before burying, capping, or moving;
 - Remove food-related trash from Project Site;

- If pesticides or herbicides are used, they must be used according to local, state, and federal regulations to prevent secondary poisoning of SJKF;
 - If a SJKF is discovered at any time in the Project Site, all construction must stop and the CDFW and USFWS contacted immediately. The appropriate federal and state permits must be obtained before the Project can proceed; and
 - Permanent fencing installed as part of the Project must allow passage of dispersing SJKF (County, n.d.).
6. Burrow Assessment. Prior to disturbance of burrows that may support special-status species, such as, American Badger and SJKF, the occupancy shall be determined with non-invasive methods. Motion sensor cameras and/or tracking medium may be deployed to determine the active status of the burrow. If SJKF are identified, the USFWS should be notified immediately and all Project activities halted to determine avoidance measures;
7. Special-Status Plants. If a special-status plant species is observed during biological monitoring, the County and other appropriate agencies will be notified, and measures to avoid and/or minimize impacts will be determined, which could include plant avoidance, seed collection, or transplanting;
8. Nesting Bird Surveys. In the event vegetation removal (i.e., tree trimming/removal activities) are scheduled between February 1 and August 31 (general nesting bird season), nesting bird surveys shall be completed by a qualified biologist within 48 hours prior to start of work. If any active nests are discovered within or adjacent to work limits, an appropriate buffer (i.e., 500 feet for raptors and 250 feet for other birds, or at the discretion of a qualified biologist based on biological or ecological reasons) shall be established to protect the nest until a qualified biologist has determined that the nest is no longer active and/or the young have fledged; and
9. Oak Tree Mitigation. Several oak tree canopies overlap the disturbance footprint along North Ryan Road, however, the client intends to avoid impacts to these trees during right of way improvement activities. If impact to oak trees becomes necessary at any point during the Project, including for right of way improvements, the following measures shall be implemented:
- No oak tree shall be removed without prior County approval;
 - Trees within 20 feet of grading or trenching shall be protected by placement of protective fencing at least one foot outside the dripline;
 - Trenching and excavation within the tree driplines shall be hand-dug or bored to minimize root disturbance. Any root encountered on inch diameter or greater, shall be hand cut and appropriately treated;
 - Pruning of lower limbs in the construction area shall occur prior to construction activities to minimize damage; and

- An oak tree replacement plan will be prepared and submitted to the County for approval, and a certified arborist shall be contracted to provide guidance on trimming and/or removal of oak trees in the field.

6.0 REFERENCES

- Baldwin, Bruce G., Goldman, Douglas H., Keil, David J., Rosatti, Thomas J. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press. Berkeley, California.
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- 2019b. National Wetlands Inventory (NWI). Wetlands Mapper. Retrieved from <https://www.fws.gov/wetlands/data/Mapper.html>.

APPENDIX A

SITE PHOTOGRAPHS



Photograph 1. Representative view of Project Site with annual grassland shown in foreground and scattered valley oaks and coyote brush in the background (aspect: east). Date: 5/3/19.



Photograph 2. Representative view of topography within Project Site and adjacent property (aspect: northeast). Date: 5/3/19.



Photograph 3. Annual Grassland shown in foreground with valley oak woodland on adjacent property in background (aspect: west). Date: 5/3/19.



Photograph 4. Potential badger burrow (without signs of recent activity) located outside of proposed disturbance footprint. Date: 5/3/19.

APPENDIX B

VASCULAR PLANT LIST

**Vascular Plant List of Species Observed
North Ryan Road Project, Creston, San Luis Obispo County, CA**

Scientific Name	Common Name	Habit	Indicator Status	Family
<i>Acmispon brachycarpus</i>	Short podded lotus	AH	.	Fabaceae
<i>Acmispon glaber</i>	Deerweed	PH	.	Fabaceae
<i>Amsinckia menziesii</i>	Fiddleneck	AH	.	Boraginaceae
<i>Asclepias eriocarpa</i>	Indian milkweed	PH	.	Apocynaceae
<i>Asclepias fascicularis</i>	Slender milkweed	PH	.	Apocynaceae
<i>Avena barbata</i> *	Slim oat	AH	.	Poaceae
<i>Baccharis pilularis</i>	Coyote brush	S	.	Asteraceae
<i>Brassica nigra</i> *	Black mustard	PH	.	Brassicaceae
<i>Bromus diandrus</i> *	Ripgut brome	AG	.	Poaceae
<i>Bromus hordaceus</i> *	Soft chess	AG	.	Poaceae
<i>Bromus madritensis</i> *	Red brome	AG	.	Poaceae
<i>Castilleja exserta</i>	Owl's clover	AH	.	Orobanchaceae
<i>Centaurea melitensis</i> *	Tocalote	AH	.	Asteraceae
<i>Chlorogalum pomeridianum</i>	Soap plant	PH	.	Agavaceae
<i>Clarkia purpurea</i>	Purple clarkia	AH	.	Onagraceae
<i>Eriogonum fasciculatum</i>	California buckwheat	S	.	Polygonaceae
<i>Erodium cicutarium</i> *	Storksbill	AH	FACU	Geraniaceae
<i>Festuca myuros</i> *	Rattail fescue	AG	.	Poaceae
<i>Hordeum murinum</i> *	Foxtail barley	AG	FACU	Poaceae
<i>Hypochoeris glabra</i>	Smooth cat's ear	AH	.	Asteraceae
<i>Lupinus bicolor</i>	Lupine	A/PH	.	Fabaceae
<i>Lupinus succulentus</i>	Arroyo lupine	AH	.	Fabaceae
<i>Marrubium vulgare</i> *	Horehound	PH	FAC	Lamiaceae
<i>Mellilotus indicus</i> *	Sweetclover	AH	FACU	Fabaceae
<i>Quercus lobata</i>	Valley oak	T	.	Fagaceae
<i>Uropappus lindleyi</i>	Silverpuffs	AH	.	Asteraceae
<i>Vicia benghalensis</i> *	Purple vetch	AH	.	Fabaceae

Notes:

Scientific nomenclature follows Baldwin et. al. (2012).

"*" indicates non-native species which have become naturalized or persist without cultivation.

Habit definitions:

- AF = annual fern or fern ally.
- AG = annual grass.
- AH = annual herb.
- BH = biennial herb.
- PF = perennial fern or fern ally.
- PG = perennial grass.
- PH = perennial herb.
- PV = perennial vine.
- S = shrub.
- T = tree.

Wetland indicator status (Lichvar et. al., 2012):

- OBL (Obligate Wetland Plants) - Almost always occur in wetlands.
- FACW (Facultative Wetland Plants) - Usually occur in wetland, 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 always occur in non-wetlands.

APPENDIX C

WILDLIFE LIST

Wildlife Observed
North Ryan Road Project, San Luis Obispo County, CA

Scientific Name	Common Name
Birds	
<i>Aphelocoma californica</i>	California scrub-jay
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Common raven
<i>Melospiza crissalis</i>	California towhee
<i>Sayornis nigricans</i>	Black phoebe
<i>Sturnella neglecta</i>	Western meadowlark
Mammals	
<i>Lepus californicus</i>	Black-tailed jackrabbit
<i>Odocoileus hemionus</i>	Mule deer
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Taxidea taxus</i>	American badger

APPENDIX D

CNDDDB Results



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Shedd Canyon (3512054) OR Creston (3512055) OR Wilson Corner (3512044) OR Santa Margarita (3512045)) AND Taxonomic Group (Dune OR Scrub OR Herbaceous OR Marsh OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Anniella pulchra</i> northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Arizona elegans occidentalis</i> California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
<i>Astragalus didymocarpus var. milesianus</i> Miles' milk-vetch	PDFAB0F2X3	None	None	G5T2	S2	1B.2
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Buteo regalis</i> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<i>Calochortus simulans</i> La Panza mariposa-lily	PMLIL0D170	None	None	G2	S2	1B.3
<i>Calycadenia villosa</i> dwarf calycadenia	PDAST1P0B0	None	None	G3	S3	1B.1
<i>Camissoniopsis hardhamiae</i> Hardham's evening-primrose	PDONA030N0	None	None	G2	S2	1B.2
<i>Castilleja densiflora var. obispoensis</i> San Luis Obispo owl's-clover	PDSCR0D453	None	None	G5T2	S2	1B.2
<i>Caulanthus lemmonii</i> Lemmon's jewelflower	PDBRA0M0E0	None	None	G3	S3	1B.2
<i>Chorizanthe breweri</i> Brewer's spineflower	PDPGN04050	None	None	G3	S3	1B.3
<i>Chorizanthe rectispina</i> straight-awned spineflower	PDPGN040N0	None	None	G2	S2	1B.3



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eriastrum luteum</i> yellow-flowered eriastrum	PDPLM03080	None	None	G2	S2	1B.2
<i>Horkelia cuneata var. sericea</i> Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
<i>Juncus luciensis</i> Santa Lucia dwarf rush	PMJUN013J0	None	None	G3	S3	1B.2
<i>Layia heterotricha</i> pale-yellow layia	PDAST5N070	None	None	G2	S2	1B.1
<i>Linderiella occidentalis</i> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<i>Navarretia fossalis</i> spreading navarretia	PDPLM0C080	Threatened	None	G2	S2	1B.1
<i>Navarretia nigelliformis ssp. radians</i> shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
<i>Perognathus inornatus</i> San Joaquin Pocket Mouse	AMAFD01060	None	None	G2G3	S2S3	
<i>Plagiobothrys uncinatus</i> hooked popcornflower	PDBOR0V170	None	None	G2	S2	1B.2
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Senecio aphanactis</i> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<i>Spea hammondii</i> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 34