HELIX Environmental Planning

2019-2020 Annual Monitoring Report

±600-Acre Rocklin Open Space Preserve
City of Rocklin, California

December 2020 | CYR-03

Prepared for:

U.S. Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

Prepared by:

HELIX Environmental Planning, Inc.
1677 Eureka Road, Suite 100
Roseville, CA 95661

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1.0 SUMMARY

This report presents the results of the annual monitoring of the Rocklin Open Space Preserve (Preserve) for the 2019-2020 survey season. This is the fifth year of monitoring for Claremont (C), Orchard Creek (OC), Stanford Ranch (SR), Sunset West (SW), and Whitney Ranch (WR) Preserves. This is the third year of monitoring for the Brighton (B) Preserve, and the second year of monitoring for the Garnet Creek (GC), Parklands North (PN), and Placer Creek Corporate Center (PCCC) Preserves.

The monitoring requirements for each Preserve unit are specified in the May 2015, *City of Rocklin General Open Space Management Plan* (GOSMP). Under the GOSMP, the primary goal is to conserve and protect the functions and values of existing habitats, including vernal pool grasslands, seasonal wetlands, riparian areas, and oak woodlands within the Preserve. The GOSMP requires the preparation of an annual monitoring report to identify whether special-status species occur within the Preserve, to compare the vegetative and hydrologic condition of the Preserve to the recorded baseline conditions, and to make recommendations for active management to address potential problems including vandalism, dumping, invasive species infestations, excessive fuel buildup, and fencing issues. The purpose of the 2019-2020 annual monitoring was to continue to monitor conditions within the Preserve, identify and compare baseline conditions, and conduct special-status species surveys to document whether performance standards are being met within the Preserve.

The ±600-acre Rocklin Open Space Preserve is located in the City of Rocklin, Placer County, California. It is bound by Highway 65 to the west and Interstate 80 to the Southeast and is located within portions of Sections 1, 2, 3, 10, 11, 12, 13, 14, 15, and 17 of Township 11 North, Range 7 East, within the U.S. Geological Survey (USGS) *Roseville* and *Rocklin,* California 7.5-minute topographic quadrangles (38° 48' 57.282" North, Longitude 121° 15' 13.541" West, NAD 83) (Figure 1).

Several known populations of special-status species occur within the Preserve including the following:

- Western pond turtle (*Actinemys marmorata*), a Species of Special Concern (SSC) under the California Department of Fish and Wildlife;
- Swainson's hawk (*Buteo swainsoni*), a state-listed threatened species in California that was listed in 1983 by the California Fish and Game Commission;
- Tricolored blackbird (*Agelaius tricolor*), a threatened species under the California Endangered Species Act;
- Vernal pool fairy shrimp (*Branchinecta lynchi*), a federally-threatened species under the federal Endangered Species Act; and
- Hispid bird's-beak (*Chloropyron molle* ssp. *hispidum*), a California Rare Plant Rank 1B.1.

1.1 PROJECT BACKGROUND

The City adopted the GOSMP in 2015 to facilitate the management of all of the City's open space holdings. The GOSMP was adopted following approval by the U.S. Army Corps of Engineers (USACE). The GOSMP allows combined management of over ±600 acres of open space within nine separate preserves.

The GOSMP replaces the previous project-specific management plans for five of the nine Preserve space areas, including the following:

- *Orchard Creek Open Space Preserve Operations and Management Plan*;
- *Whitney Ranch (Sunset Ranchos Phase 1) Open Space Conservation Easement Operations and Management Plan*;
- *Use Plan Addendum to the Operations and Management Plan/Conservation Easement for the Stanford Ranch Open Space Preserve;*
- *Operations and Management Plan for the Claremont (Parcel Sub-sections K) Open Space Preserve*; and
- *General Open Space Management Plan, New Open Space Preserve Package Submittal, Brighton Subdivision*.

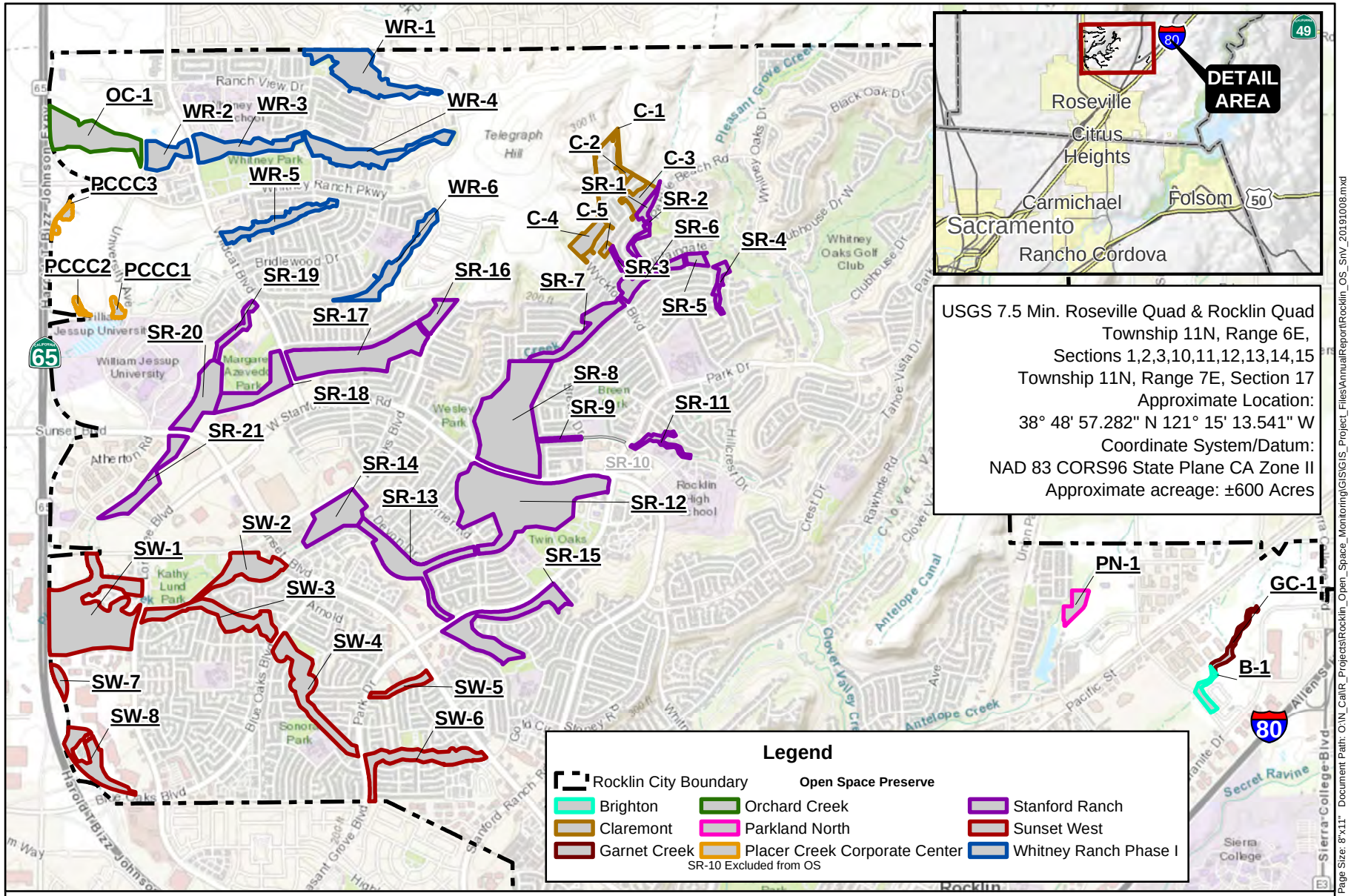
Garnet Creek, Parklands North, and Placer Creek Corporate Center did not have their own Open Space Management Plans prior to being incorporated into the 2015 GOSMP. Table 1 indicates the survey season Preserve subsections were appended to the 2015 GOSMP and Table 2 identifies the Preserve area by acreage and habitat types. Figure 2 indicates biological communities within the subsections of the Preserve and Figure 3 indicates aquatic resources within the subsections of the Preserve.

Table 1
SURVEY SEASON PRESERVE SUBSECTION WAS APPENDED TO THE 2015 GOSMP

2015-2016	2017-2018	2018-2019
Claremont	Brighton	Garnet Creek
Orchard Creek		Parklands North
Stanford Ranch		Placer Creek
Sunset West		
Whitney Ranch		

Table 2
PRESERVE AREA BY ACREAGE AND HABITAT TYPES

Preserve Area	Acreage	Habitat Types and Exiting Conditions
Brighton	±3 acres	Riparian woodland, annual grassland, and perennial marsh.
Claremont	±14.8 acres	Detention basin, pond, seasonal wetlands, open grassland, native and planted oaks, and preserved rock formation.
Garnet Creek	±3.6 acres	Annual grassland, oak woodland, riparian, disturbed/ developed.
Parklands North	±4.6 acres	Riparian and mixed oak woodlands.



SITE AND VICINITY

HELIX Environmental Planning

N

0 0.6 1.2

Miles

1 : 36,000

Drawn By: JCD

Date: 10/08/2019

FIGURE 1

ROCKLIN OPEN SPACE PRESERVE

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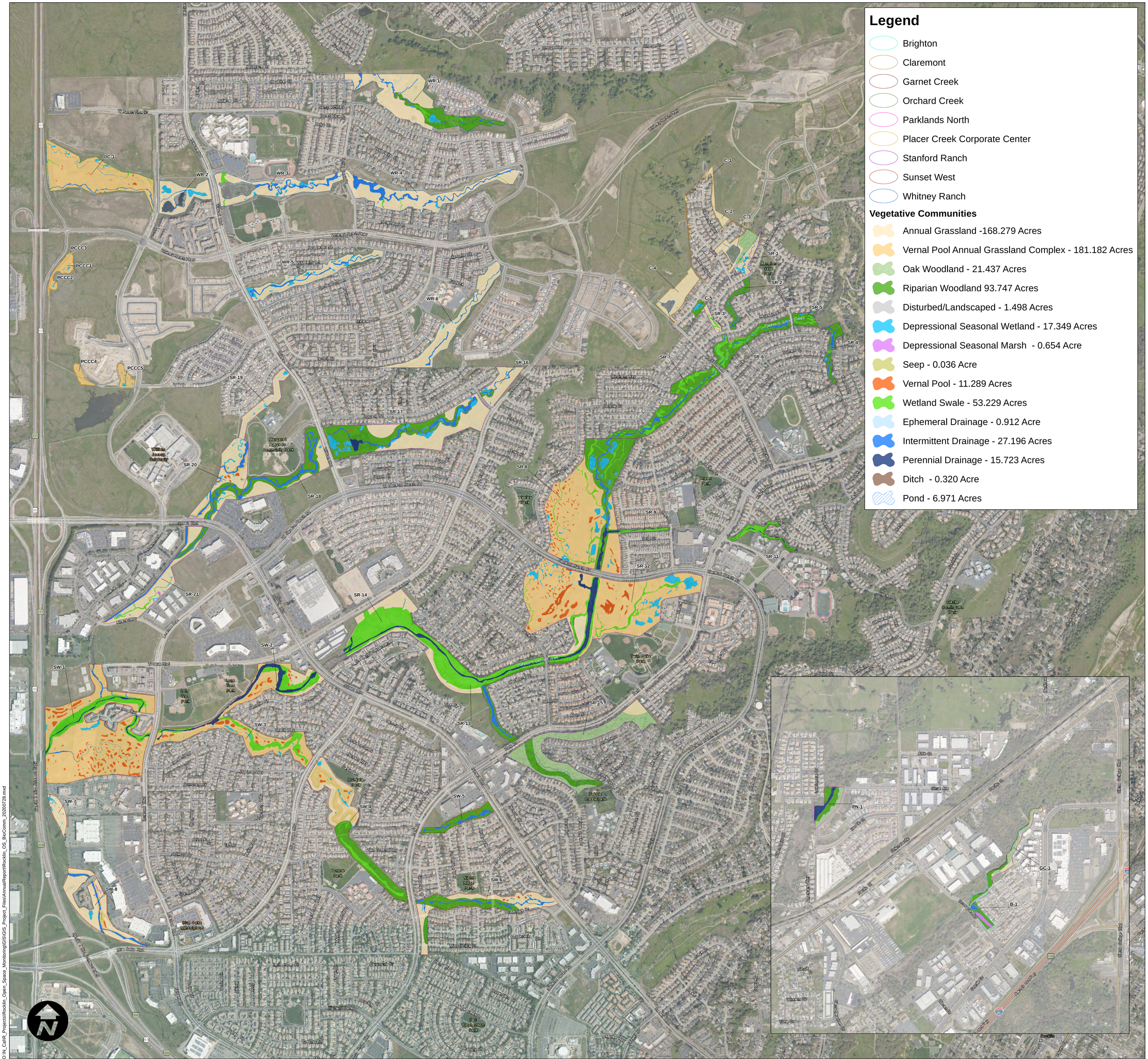

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HELIX Environmental Planning

Rocklin Open Space Preserve Biological Communities

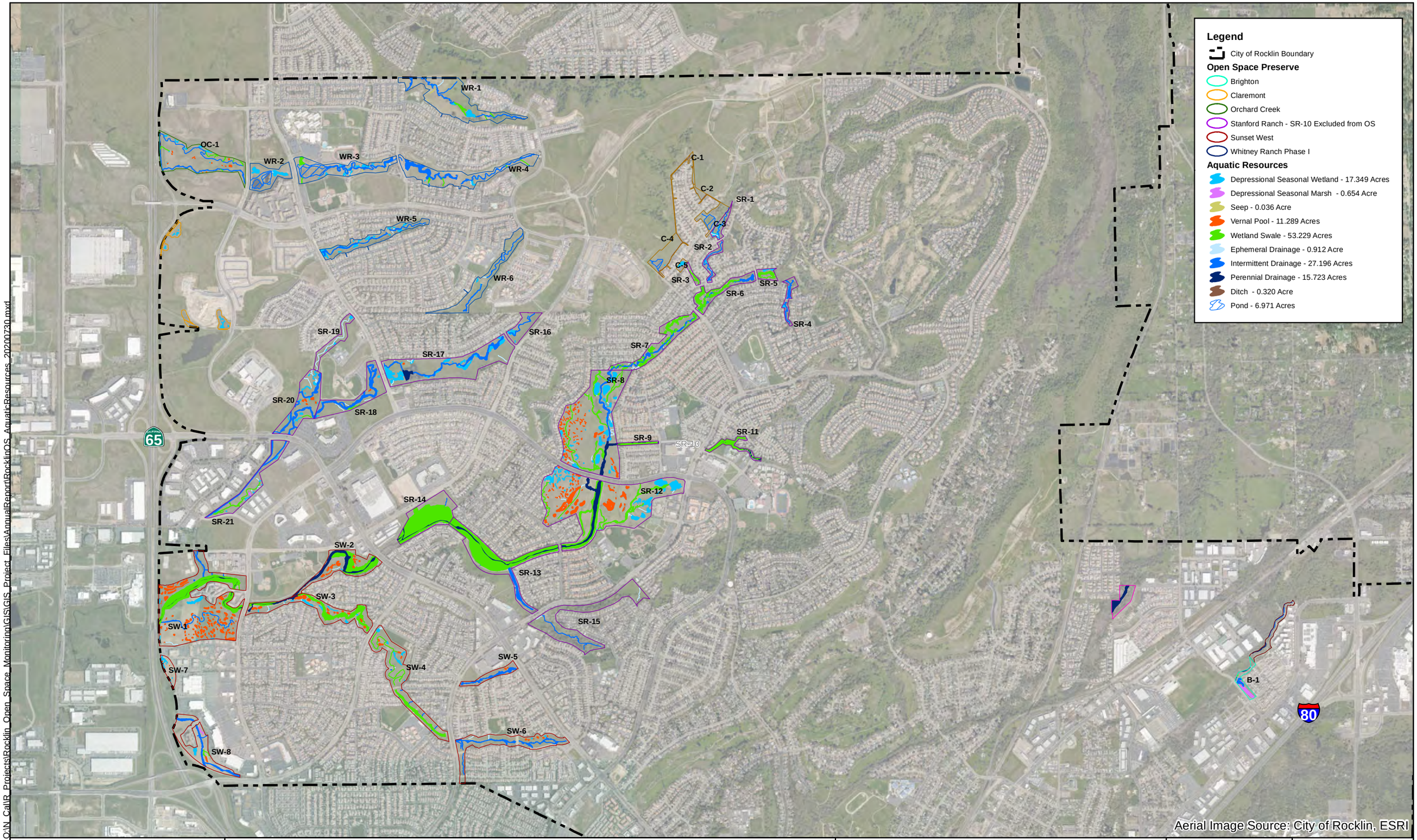
0 600 1,200 2,400

Feet

1 inch = 600 feet

Drawn By: JCD
Date: 08/13/2020

Figure 2



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HELIX Environmental Planning © 2020

ROCKLIN OPEN SPACE PRESERVE AQUATIC RESOURCES

N

0 0.4 0.8
Miles
1 : 24,000

Drawn By: JCD
Date: 08/13/2020

FIGURE 3

Table 2 (cont.)
PRESERVE AREA BY ACREAGE AND HABITAT TYPES

Preserve Area	Acreage	Habitat Types and Exiting Conditions
Placer Creek Corporate Center	±5 acres	Annual grassland and vernal pool complex.
Orchard Creek	±23.6 acres	Wetland swale, vernal pool, intermittent drainage swale, and annual grassland dominated by invasive species.
Stanford Ranch	±308.2 acres	Annual grassland, riparian, oak woodland, vernal pool, seasonal wetland, and Pleasant Grove Creek.
Sunset West	±146 acres	Annual grassland, riparian, Pleasant Grove Creek, intermittent drainage, drainage swale, historic and created seasonal wetland, wetland swale, and vernal pool.
Whitney Ranch	±91 acres	Annual grassland, drainages, and riparian.

2.0 MONITORING REQUIREMENTS AND METHODOLOGY

Overall Preserve conditions, including invasive plant monitoring, thatch monitoring, vernal pool invertebrate and hydrology monitoring, wetland and riparian monitoring, vernal pool floristic monitoring, oak inventory and mapping and special-status plant and animal surveys are evaluated annually as specified by the 2015 GOSMP.

2.1 INVASIVE PLANT MONITORING

As part of the ongoing annual monitoring, invasive plant species surveys were conducted throughout the Preserve areas during the 2019-2020 survey season. Baseline data was collected in the fall of 2018 and summer of 2019 for the Garnet Creek, Parklands North, and Placer Creek Corporate Center Open Space Preserve, in the fall of 2017 for the Brighton Preserve, and in the fall of 2015 for Claremont, Orchard Creek, Stanford Ranch, Sunset West, and Whitney Ranch preserves.

HELIX's biologists conducted invasive plant monitoring between June 4 and July 30, 2020. Random transects spaced approximately 50 feet apart were walked throughout the Preserves to ensure total visual coverage. Locations of invasive species were recorded or updated using the ArcGIS Collector app for Android and iPhones. Due to limitations on the accuracy of the app and collection devices, revisiting and correctly identifying point data collected in 2015 was extremely difficult in high-density riparian areas. Therefore, these areas were re-mapped as polygons encompassing small groups of invasive species. Single occurrences or populations of plants less than approximately 2-feet by 2-feet in size were mapped as points, and larger populations of plants were mapped as polygons. Additionally, representative site photographs were taken throughout the Preserves (Figures 4-A through 4-I and Appendix A), respectively.

2.2 THATCH MONITORING

To evaluate the effectiveness of the grazing program and to maintain the target residual dry matter (RDM) level, the GOSMP identified the target RDM for the Preserve as no more than 1,200 lbs./acre but

did not set a minimum RDM target. The typical RDM objective for California annual grassland is an RDM between 800-1,200 lbs./acre. The typical minimum RDM objective for hardwoods with 50-75 percent cover is 400 lbs./acre for a 20-40 percent slope and can be as low as 200 lbs./acre on flatter areas, per the University of California Division of Agriculture and Natural Resources 2006 *Guidelines for Residual Dry Matter on Coastal and Foothill Rangelands* (Bartolome et al. 2006). Since many of the creek corridors are heavily sloped, the target RDM range for oak woodland areas is established as 400-1,200 lbs./acre. Areas with RDM exceeding 1,200 lbs./acre are considered to have excess vegetation growth and increased grazing or mowing practices should be implemented, while areas with RDM below the target range are considered overgrazed and stocking rates should be reduced.

A total of 55 RDM sampling points was analyzed by HELIX biologists on October 23, 24, 29, and 30, 2019. Figure 5-A through 5-I, identifies RDM locations as well as recommended grazing pressure for the 2020 grazing season based on the 2019 survey results. HELIX biologists clipped 1-foot square plots of vegetation as outlined in the Guidelines. The location of the previously established RDM location test plots were located and monitored using the Collector Application on a GPS-enabled phone. Vegetation samples were clipped and weighed in the field. Damp samples were dried and re-weighed prior to determining the estimated RDM. Care was taken during the sampling to collect only dried grass and avoid new growth. Pictures were taken from 10 and 20 feet from the RDM sampling point prior to clipping the vegetation to show vegetation quantity and height (Appendix B).

2.3 VERNAL POOL INVERTEBRATE AND HYDROLOGY MONITORING

The GOSMP requires 20 percent of the vernal pools within the Preserve be sampled twice per year for the presence of listed vernal pool branchiopods. A total of 64 pools (20%) were monitored in 2019 and 2020. Figure 6 identifies surveyed vernal pools as well as listed branchiopod occurrences for 2015-2020.

Wet season surveys for listed vernal pool branchiopods were conducted December 13 and 16, 2019, and January 15, 17, February 5, 6, and 20, 2020. The surveys were conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) 2015 *Survey Guidelines for the Listed Large Branchiopods*, with the exception that only wet season sampling was completed, and each pool was sampled twice, as required by the GOSMP. The vernal pools were sampled by pulling a D-frame, 150-micron aquatic dip net through the water column. The dip net was undulated up and down through the water column to ensure a representative sample was obtained from each of the pools. A minimum of three, five-foot passes were made with the dip net in each sampled pool. No voucher specimens were collected.

The estimated number (e.g., 10s, 100s, 1,000s, etc.) of listed branchiopods along with the presence of common invertebrates, insects, and other wildlife species within each vernal pool was indicated on the data sheets (Appendix C)**.** Other data collected included the vernal pool number, water depth, estimated maximum depth, percent of inundation, water temperature, and general habitat and weather conditions. Representative site photographs were taken with a digital camera and are shown in Appendix A.

2.4 WETLAND AND RIPARIAN MONITORING

Evaluation of the condition of jurisdictional waters including any erosion, sedimentation build-up or hydrologic changes were noted. Surveys also provided an assessment of vegetative form and function related to composition, and if invasive species control within waterways is required.

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HELIX Environmental Planning

N

0 840 1,680 Feet

1 : 6,000

Rocklin Open Space
Brighton/Garnet Creek
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-A

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HELIX Environmental Planning

N

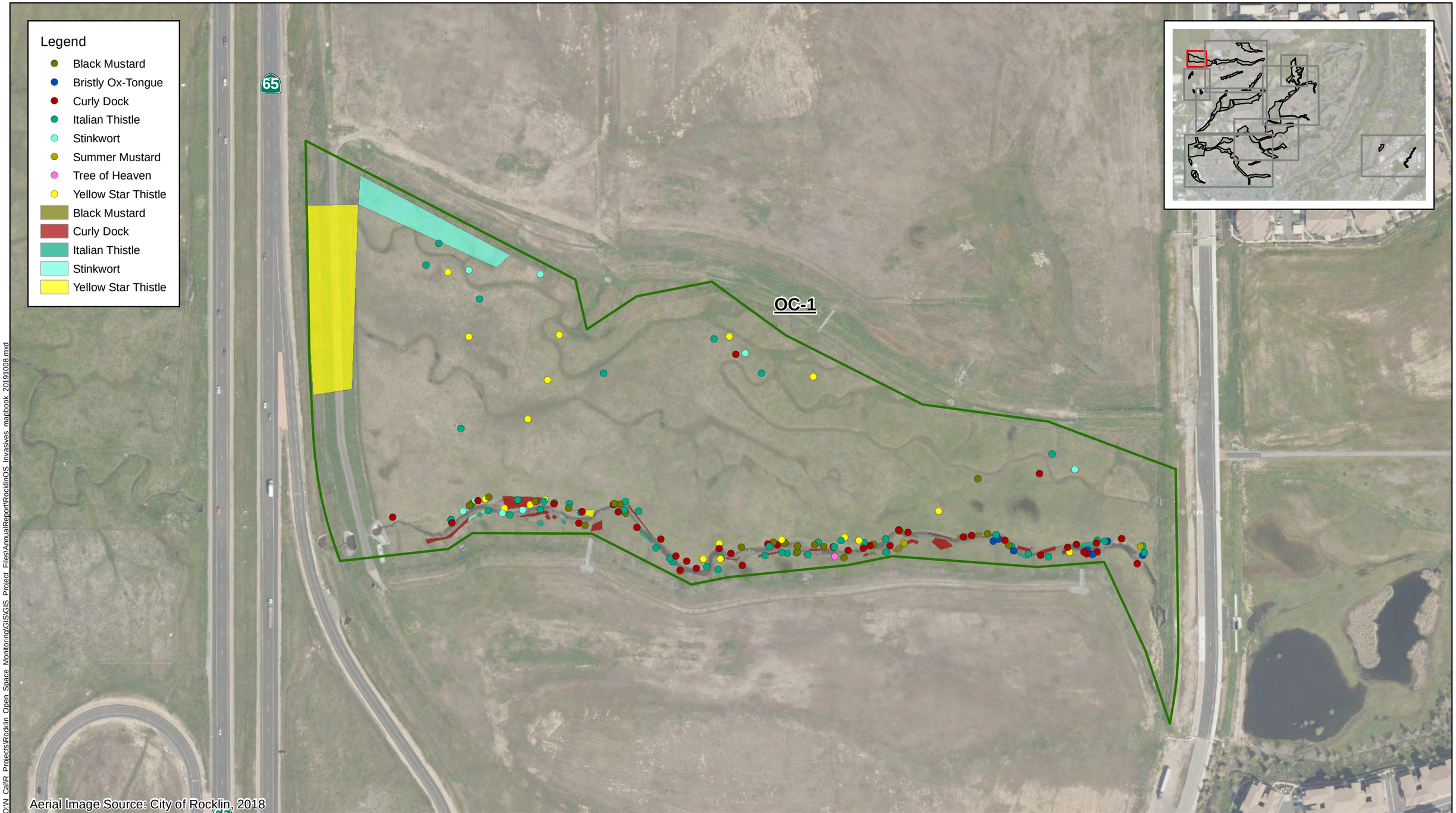
0 590 1,180 Feet

1 : 4,200

Rocklin Open Space
Claremont
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-B



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HELIX Environmental Planning

N

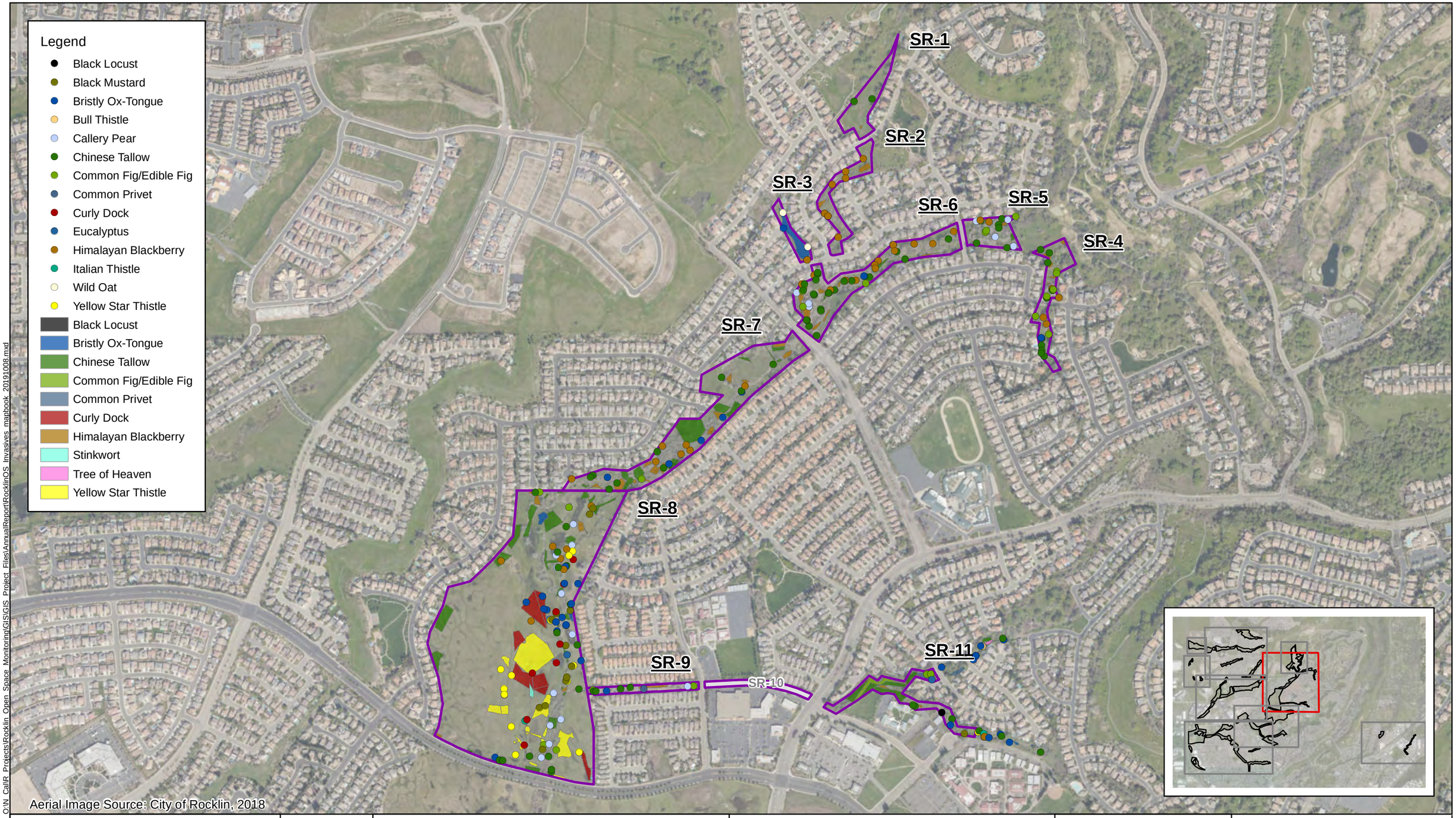
0 330 660 Feet

1 : 2,400

Rocklin Open Space
Orchard Creek
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-C



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HELIX Environmental Planning

N

0 1,250 2,500 Feet

1 : 9,000

Rocklin Open Space
Stanford Ranch 1
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-D

SR-14

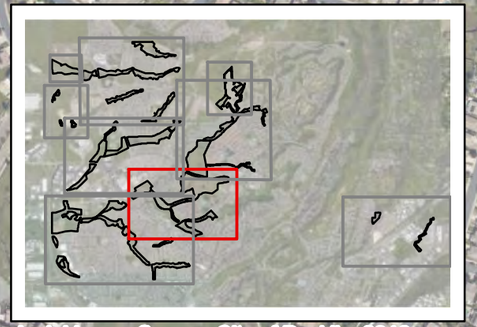
SR-13

SR-12

SR-15

Legend

- Black Mustard
- Bristly Ox-Tongue
- Callery Pear
- Chinese Tallow
- Common Fig/Edible Fig
- Common Privet
- Curly Dock
- Eucalyptus
- Himalayan Blackberry
- Italian Thistle
- Pampas Grass
- Tree of Heaven
- Yellow Star Thistle
- Black Locust
- Bristly Ox-Tongue
- Bull Thistle
- Callery Pear
- Chinese Tallow
- Common Fig/Edible Fig
- Curly Dock
- Himalayan Blackberry
- Italian Thistle
- Pampas Grass
- Rush Skeletonweed
- Summer Mustard
- Yellow Star Thistle



Aerial Image Source: City of Rocklin, 2018

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HELIX Environmental Planning

N

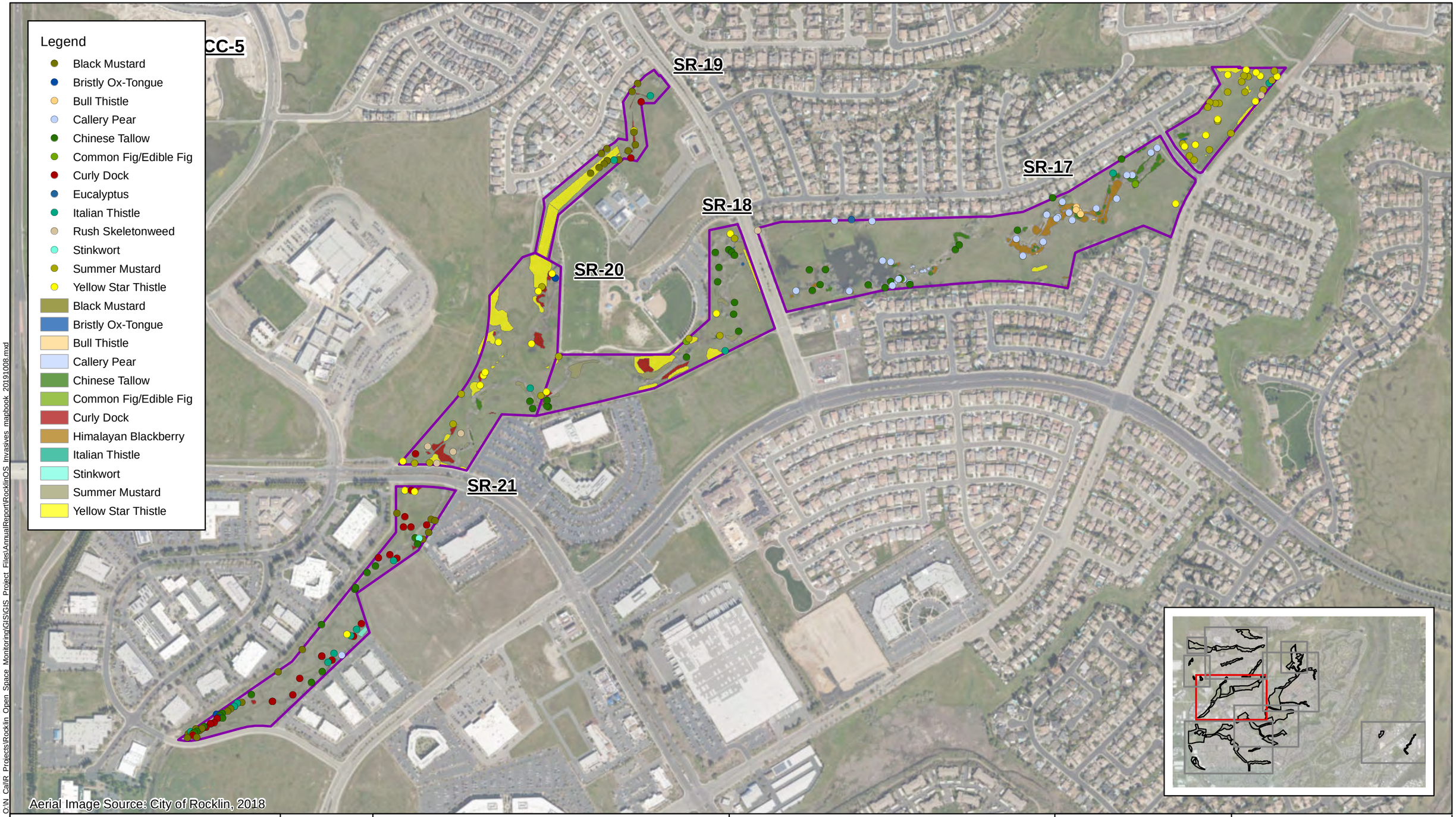
0 840 1,680 Feet

1 : 6,000

Rocklin Open Space
Stanford Ranch 2
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-E



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HELIX Environmental Planning

N

0 1,000 2,000 Feet

1 : 7,400

Rocklin Open Space
Stanford Ranch 3
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-F

SW-1

SW-2

SW-3

SW-4

SW-5

SW-6

SW-7

SW-8

65

Legend

- Black Mustard
- Bristly Ox-Tongue
- Callery Pear
- Chinese Tallow
- Common Fig/Edible Fig
- Curly Dock
- Eucalyptus
- Himalayan Blackberry
- Italian Thistle
- Milk Thistle
- Rush Skeletonweed
- Stinkwort
- Summer Mustard
- Tree of Heaven
- Yellow Star Thistle
- Black Locust
- Black Mustard
- Bristly Ox-Tongue
- Bull Thistle
- Callery Pear
- Chinese Tallow
- Common Fig/Edible Fig
- Curly Dock
- Himalayan Blackberry
- Italian Thistle
- Milk Thistle
- Rush Skeletonweed
- Stinkwort
- Summer Mustard
- Water Hyacinth
- Yellow Star Thistle

Aerial Image Source: City of Rocklin, 2018

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HELIX Environmental Planning

N

0 1,000 2,000 Feet

1 : 7,200

Rocklin Open Space
Sunset West
Invasive Species

Drawn By: JCD
Date: 10/04/2019

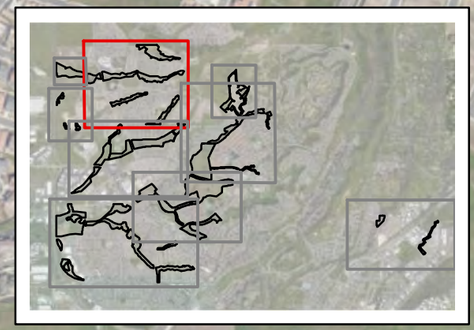
Figure 4-G

Legend

- Black Mustard
- Bristly Ox-Tongue
- Callery Pear
- Chinese Tallow
- Curly Dock
- Himalayan Blackberry
- Italian Thistle
- Milk Thistle
- Rush Skeletonweed
- Stinkwort
- Yellow Star Thistle

- Black Mustard
- Bristly Ox-Tongue
- Bull Thistle
- Curly Dock
- Himalayan Blackberry
- Italian Thistle
- Rush Skeletonweed
- Stinkwort
- Summer Mustard
- Yellow Star Thistle

WR-1
WR-2
WR-3
WR-4
WR-5
WR-6
PCCC-1
C-2
-4
PCCC-5



Aerial Image Source: City of Rocklin, 2018

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HELIX Environmental Planning

N

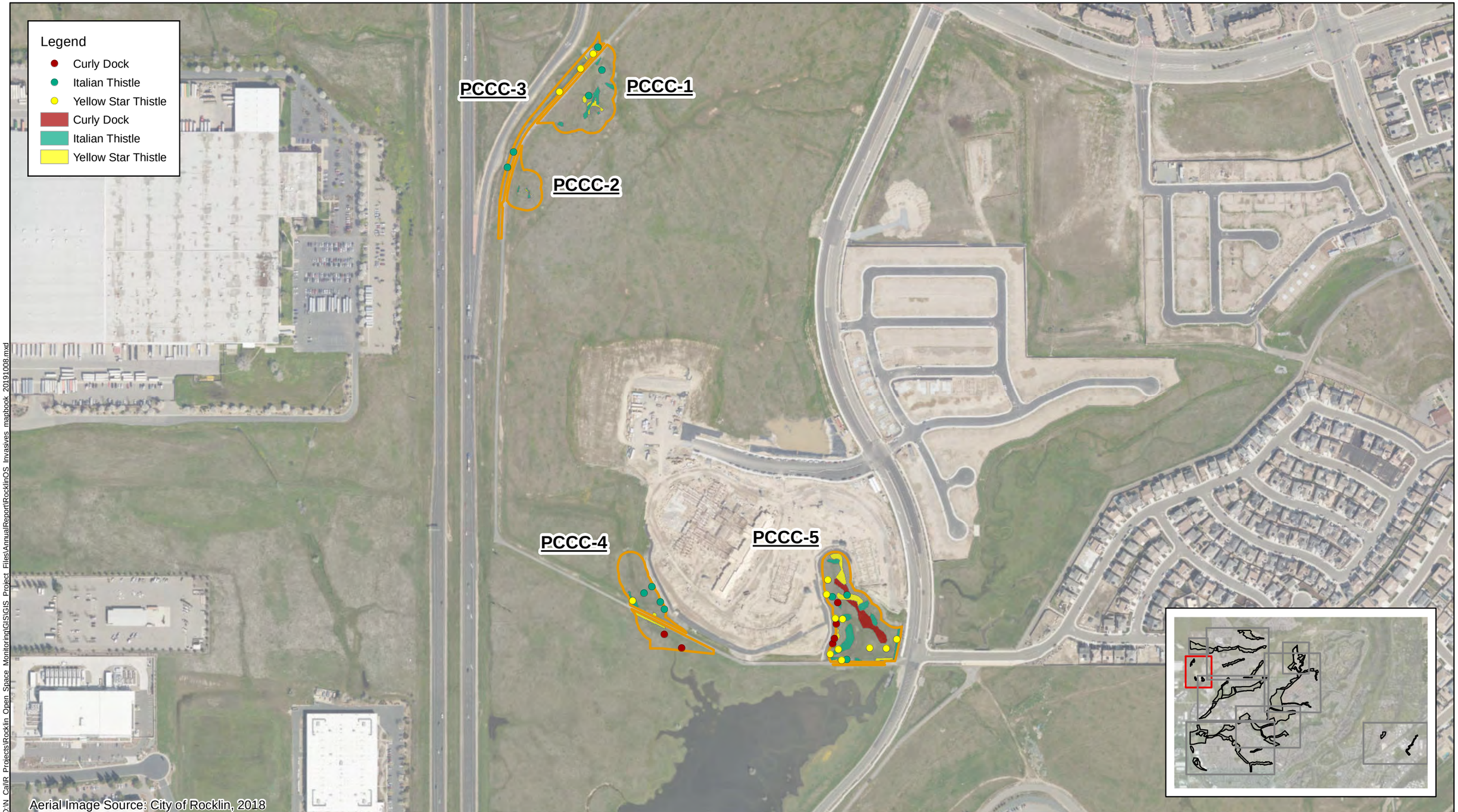
0 1,000 2,000 Feet

1 : 7,200

Rocklin Open Space
Whitney Ranch Phase I
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-H



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HELIX Environmental Planning

N

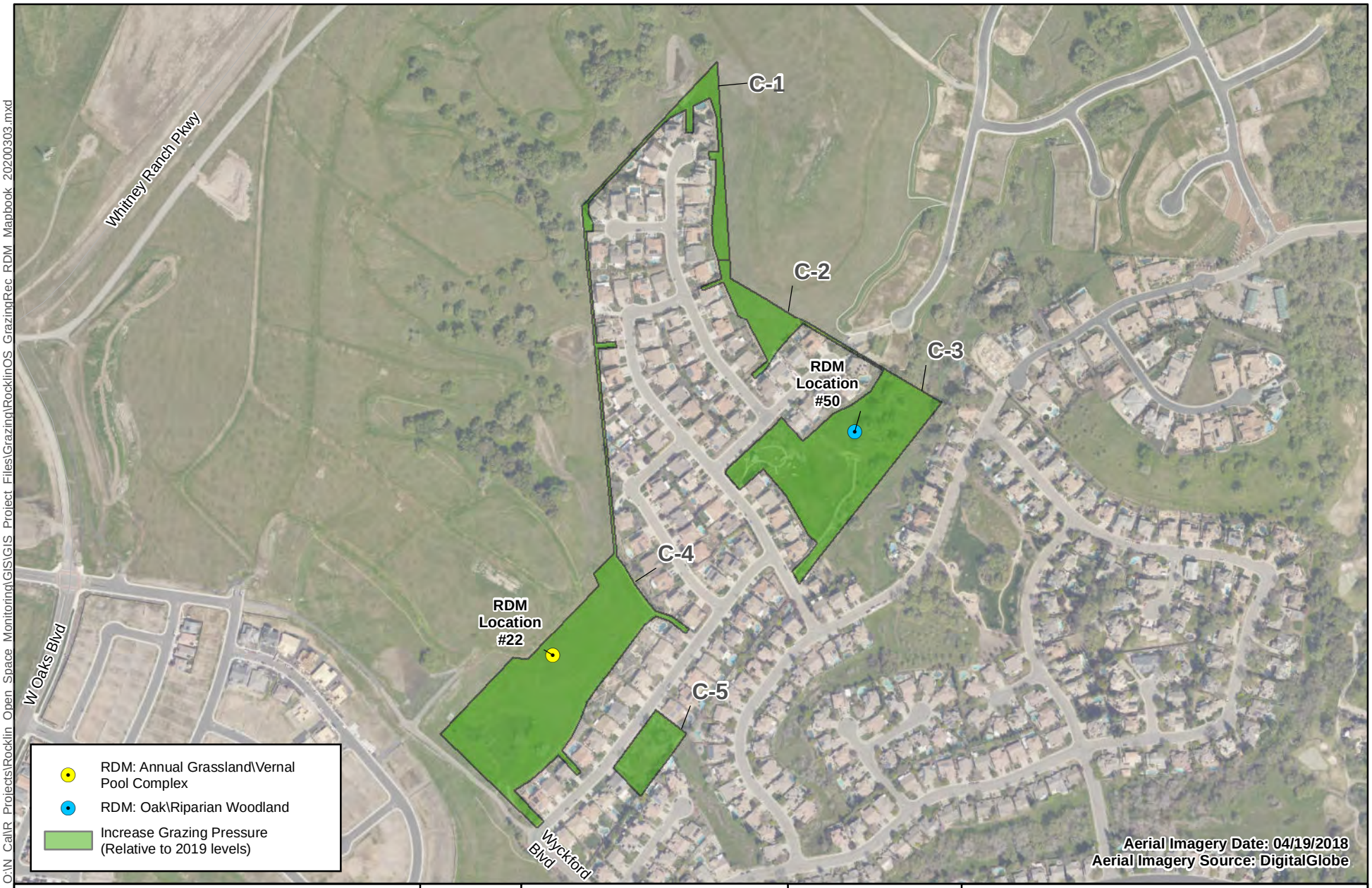
0 590 1,180 Feet

1 : 4,200

Rocklin Open Space
Placer Creek
Invasive Species

Drawn By: JCD
Date: 10/04/2019

Figure 4-I



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HELIX Environmental Planning

N

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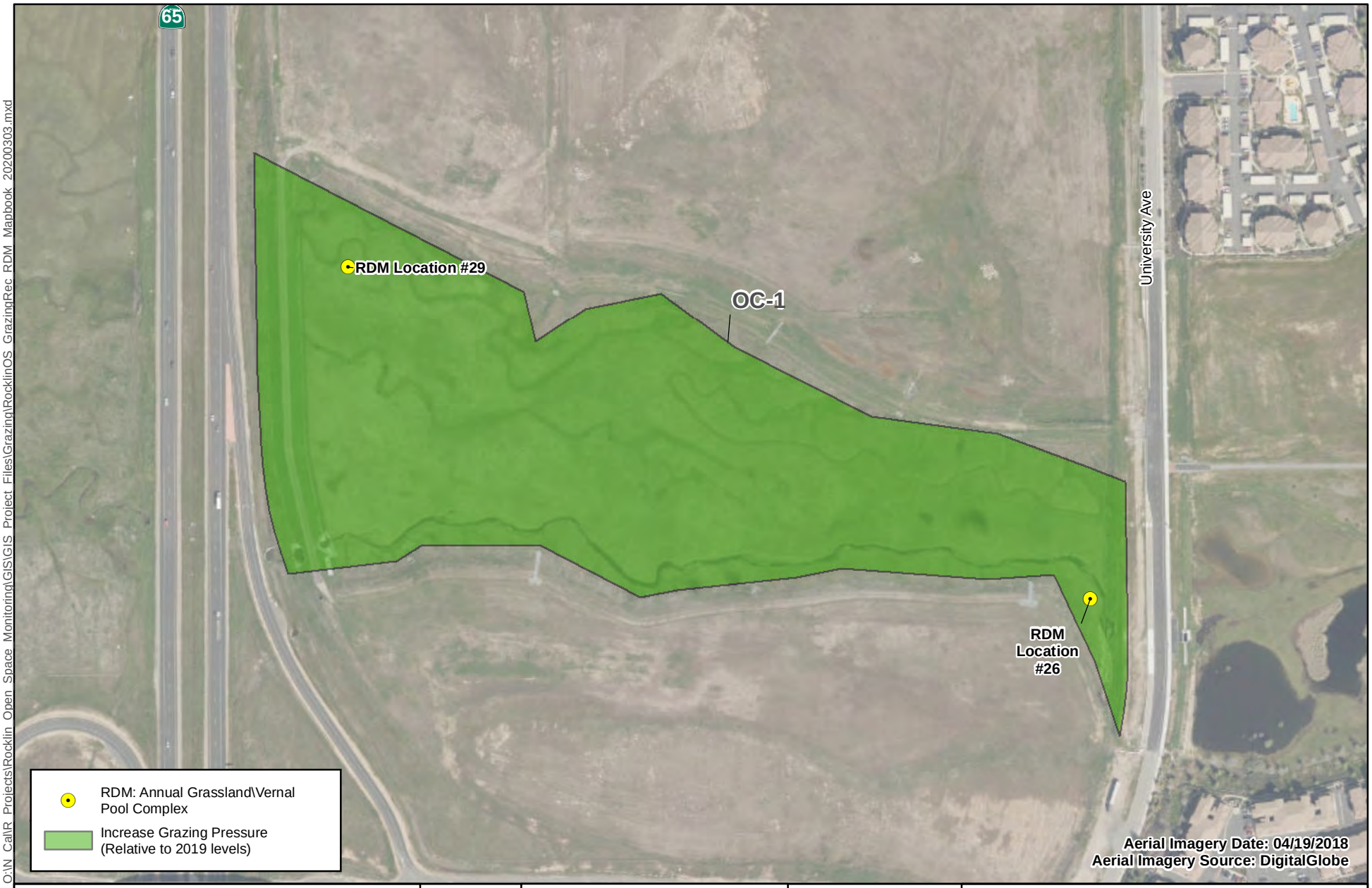
Feet

1 : 6,000

Drawn By: JCD
Date: 12/16/2020

Figure 5-A
Claremont
Grazing Pressure
Recommendations



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HELIX Environmental Planning

N

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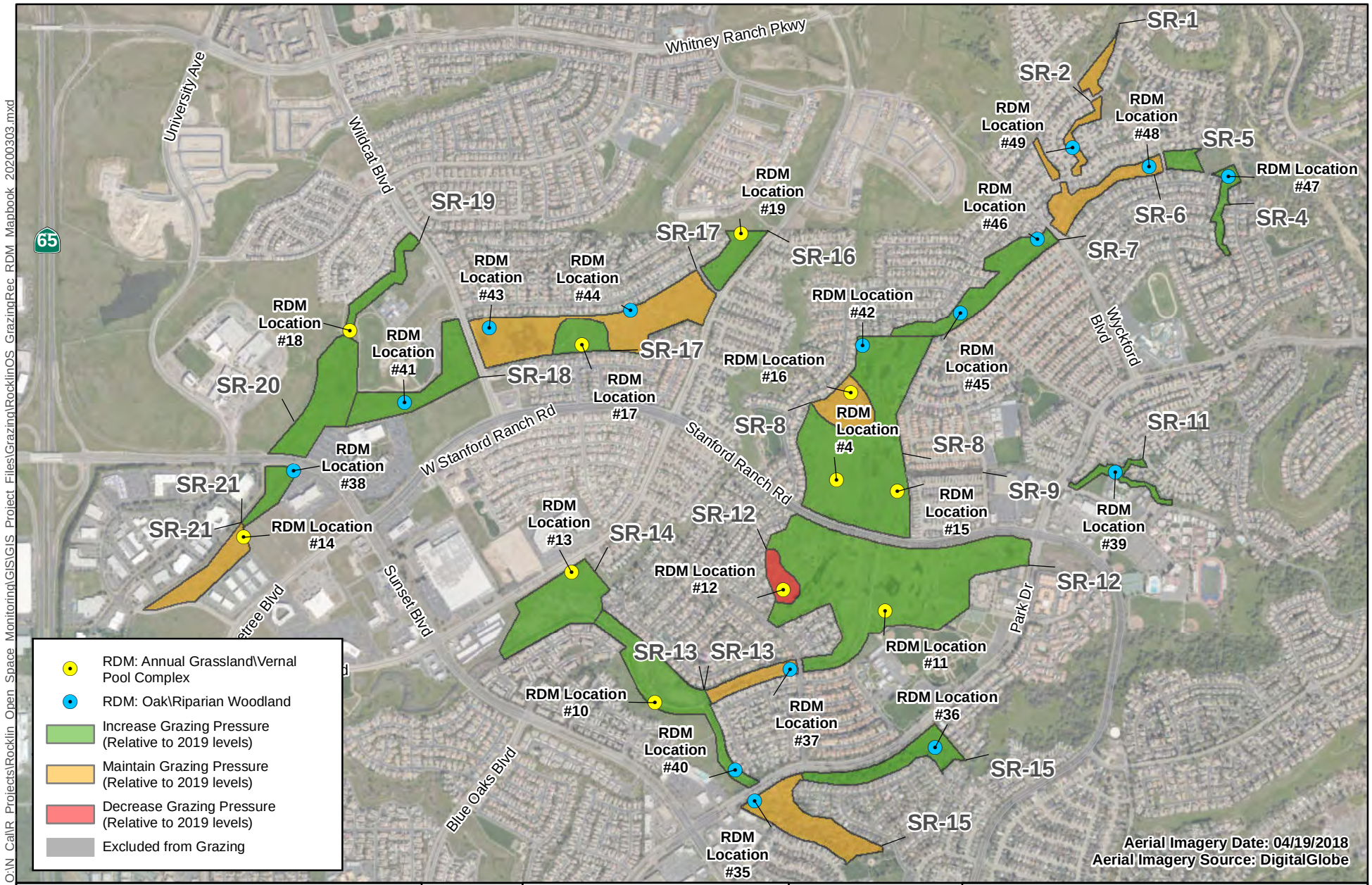
Feet

1 : 3,600

Drawn By: JCD
Date: 12/16/2020

Figure 5-B
Orchard Creek
Grazing Pressure
Recommendations



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HELIX Environmental Planning

N

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Feet

1 : 19,680

Drawn By: JCD
Date: 12/16/2020

Figure 5-C
Stanford Ranch
Grazing Pressure
Recommendations

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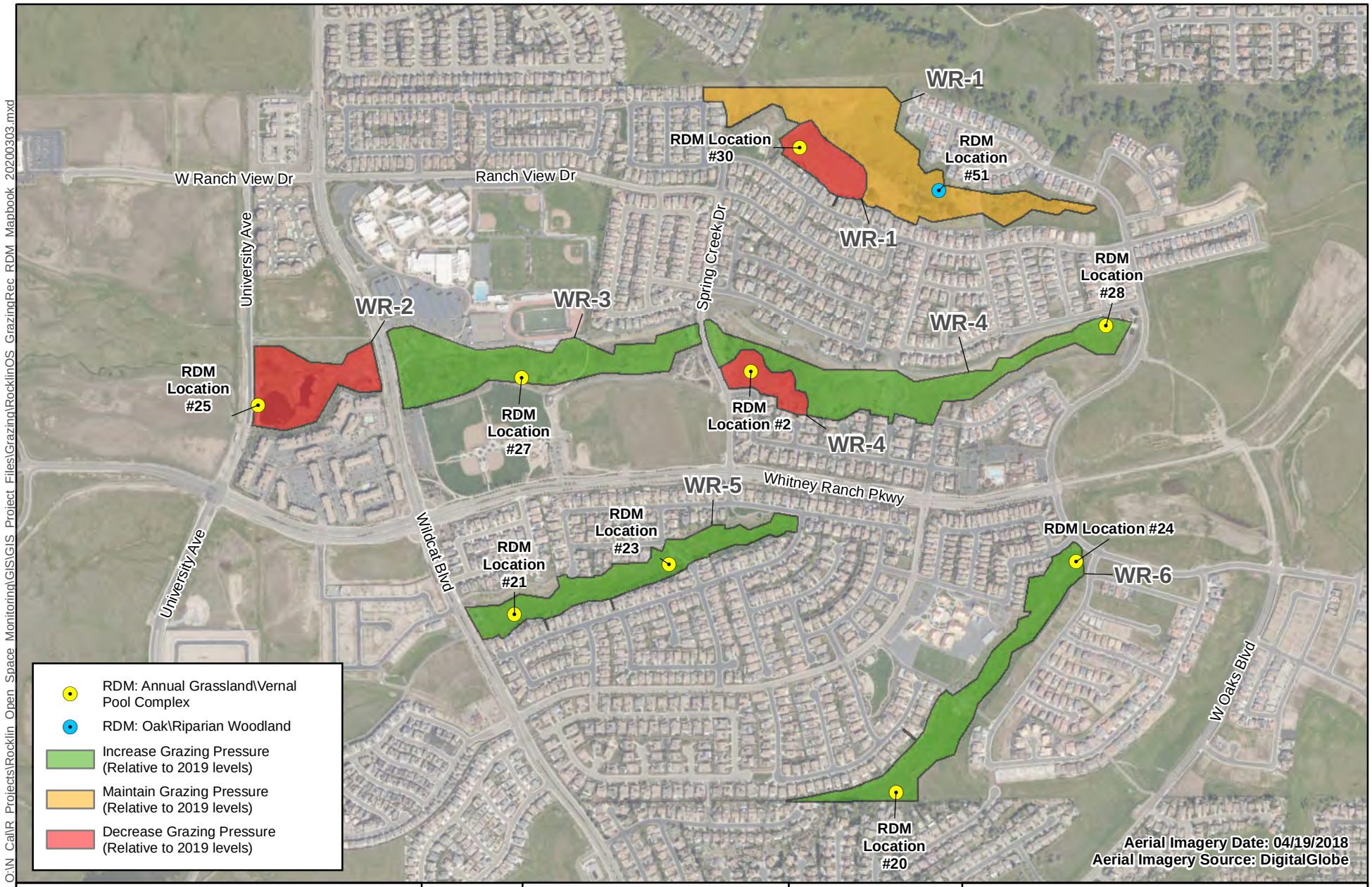
HELIX Environmental Planning

N

0 500 1,000
Feet
1 : 12,000

Drawn By: JCD
Date: 12/16/2020

Figure 5-D
Sunset West
Grazing Pressure
Recommendations



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HELIX Environmental Planning

N

0 500 1,000

Feet

1 : 12,000

Drawn By: JCD
Date: 12/16/2020

Figure 5-E
Whitney Ranch
Grazing Pressure
Recommendations

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HELIX Environmental Planning

N

0 100 200

Feet

1 : 2,400

Drawn By: JCD
Date: 12/16/2020

Figure 5-F
Brighton
Grazing Pressure
Recommendations

O:\N_Cal\R_Projects\Rocklin_Open_Space_Monitoring\GIS\GIS_Project_Files\Grazing\RocklinOS_GrazingRec_RDM_Mapbook_20200303.mxd

HELIX Environmental Planning

N

0 120 240

Feet

1 : 2,880

Drawn By: JCD
Date: 12/16/2020

Figure 5-G
Garnet Creek
Grazing Pressure
Recommendations

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HELIX Environmental Planning

N

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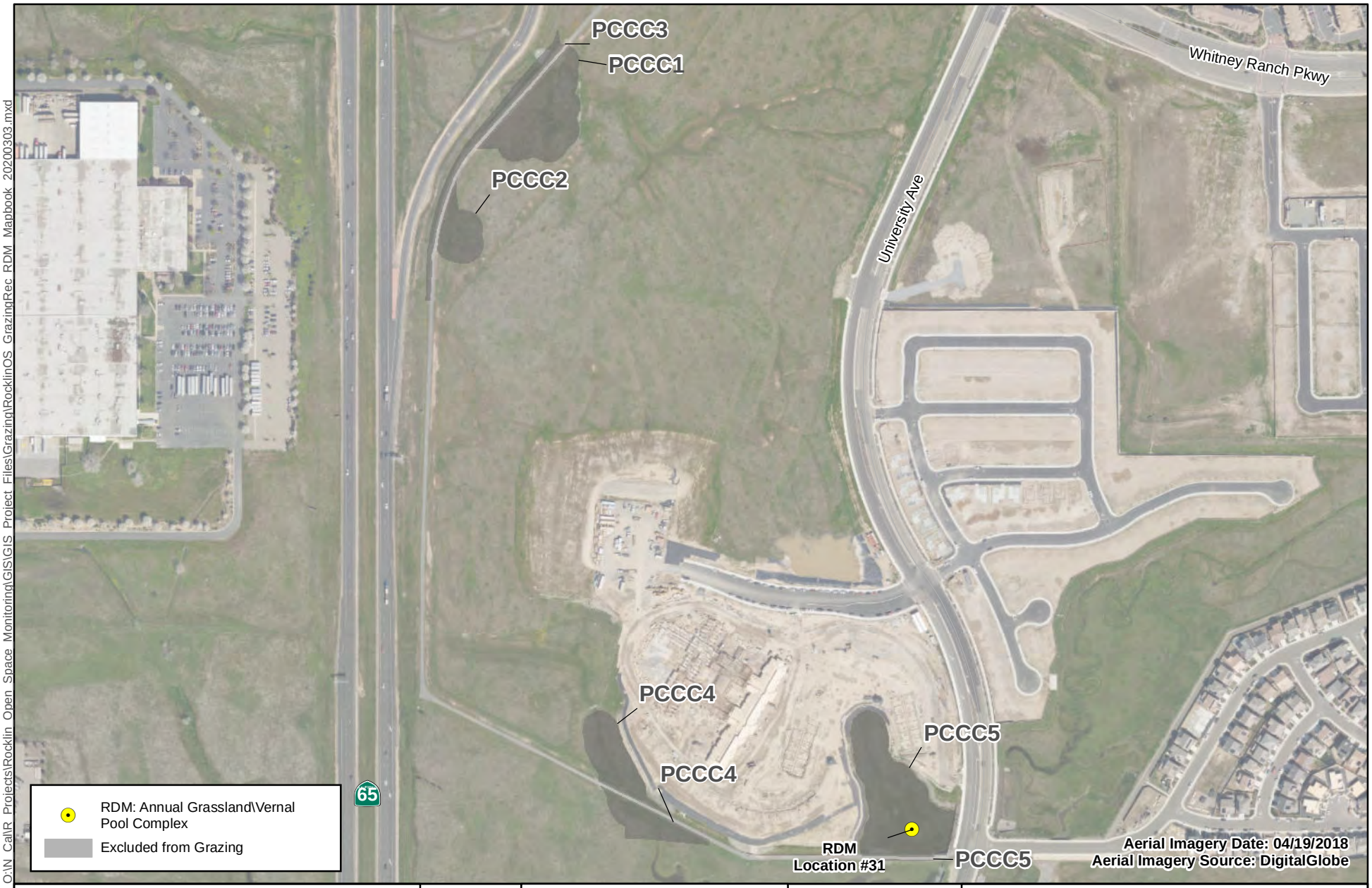
Feet

1 : 1,680

Drawn By: JCD
Date: 12/16/2020

Figure 5-H
Parklands North
Grazing Pressure
Recommendations



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HELIX Environmental Planning

N

0 200 400

Feet

1 : 4,800

Drawn By: JCD
Date: 12/16/2020

Figure 5-I
Placer Creek Corporate Center
Grazing Pressure Recommendations

2015-2020 Monitoring Results

- California Linderiella
- Vernal Pool Fairy Shrimp
- Vernal Pool Fairy Shrimp and California Linderiella
- Claremont
- Orchard Creek
- Placer Creek
- Stanford Ranch
- Sunset West
- Whitney Ranch Phase I
- Natural Vernal Pool
- Constructed Pool

Year	Pool Number	SubArea	Species
2015-2016	14	SR-20	Vernal Pool Fairy Shrimp
2015-2016	54	SW-2	Vernal Pool Fairy Shrimp
2016-2017	14	SR-20	Vernal Pool Fairy Shrimp
2017-2018	55	SW-2	Vernal Pool Fairy Shrimp
2017-2018	102	SW-1	Vernal Pool Fairy Shrimp
2018-2019	102	SW-1	Vernal Pool Fairy Shrimp
2018-2019	138	SR-12	California Linderiella/Vernal Pool Fairy Shrimp
2018-2019	190	SR-12	California Linderiella
2018-2019	193	SR-12	Vernal Pool Fairy Shrimp
2019-2020	55	SW-2	Vernal Pool Fairy Shrimp
2019-2020	190	SR-12	California Linderiella/Vernal Pool Fairy Shrimp
2019-2020	193	SR-12	California Linderiella

OC-1
PCCC1
PCCC5
SR-20
SR-8
SR-12
SW-1
SW-2
SW-3
SW-4
SW-5
SW-6

0 1,500 Feet

Source: Aerial Imagery (DigitalGlobe, 2020)

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HELIX Environmental Planning

Rocklin Open Space Surveyed Vernal Pools and Listed Branchiopod Occurrences (2015-2020)

Figure 6

Wetland and riparian monitoring took place in the fall of 2019, after the onset of the first rains, and in the spring of 2020 between March 18 and 20, 2020. Wetlands and riparian habitat monitored is shown on Figure 3.

2.5 VERNAL POOL FLORISTIC MONITORING

As outlined in the GOSMP, 20 percent of the vernal pools within the Preserve are to be surveyed. The same group of vernal pools monitored during the invertebrate survey (Figure 7) were monitored during the floristic survey. Plant species with greater than 25 percent vegetative cover are considered dominant plant species. If no plant species comprise greater than 25 percent relative cover in a vernal pool, then the plant species with at least 10 percent relative cover are considered dominant plant species. Vernal pools meet the criteria of being dominated by vernal pool species by having a Prevalence Index of 3 or less.

Monitoring was conducted on March 16, 19 ,23, 27, and 30 and April 1 and 2, 2020. Surveys were conducted over a range of dates in an attempt to best capture the peak floristic conditions of pools that were no longer inundated. Meandering transects were walked through the entire area of each pool and all observed species were recorded (Appendix D). Each species observed within the pool was assigned a relative cover score using the Braun-Blanquet scale from 0-5 (Table 3).

Table 3
BRAUN BLANQUET SCALE

Scale	Relative Cover Range
0	<1%
1	1-5%
2	6-25%
3	26-50%
4	50%-75%
5	>75%

2.6 SPECIAL-STATUS PLANT SURVEY

Although the GOSMP identifies six (6) special-status plant species with potential to occur in the Preserve, five (5) are not known from the Rocklin area and include: Stebbin's morning-glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), El Dorado bedstraw (*Galium californicum* ssp*. sierrae*), Tahoe yellow-cress (*Rorippa subumbellata*) and Layne's butterweed (=ragwort) (*Packera layneae*). The sixth species referenced in the GOSMP, Sacramento Orcutt grass (*Orcuttia viscidia*), has the potential to occur within the Preserve. Prior to the start of the survey season, queries for special-status plants with the potential to occur in the region were conducted. All references reviewed for this assessment are listed in the References section including the California Natural Diversity Database (CNDDB). The CNDDB is an inventory of the status and location of rare plants and animals in California. Additionally, the California Native Plant Society (CNPS) ranking system was referenced. CNPS maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and

Endangered Vascular Plants of California. Potential impacts to populations of CNPS-ranked plants receive consideration under the California Environmental Quality Act (CEQA) review. The CNPS ranks are defined below:

- Rank 1A: Plants presumed Extinct in California
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- Rank 2: Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere
- Rank 3: Plants about which we need more information – A Review List
- Rank 4: Plants of limited distribution – A Watch List

Upon review of the above-referenced databases, numerous special-status plant species have the potential to occur within the region (Appendix E**)**. These species include Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii),* big-scale balsamroot (*Balsamorhiza macrolepis*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*), dwarf downingia (*Downingia pusilla*), legenere (*Legenere limosa*), pincushion navarretia *(Navarretia myersii* ssp. *myersii)*, Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*), Sacramento Orcutt grass (*Orcuttia viscida*), Sanford's arrowhead *(Sagittaria sanfordii*), stinkbells (*Fritillaria agrestis*), valley brodiaea (*Brodiaea rosea* ssp. *vallicola*) and hispid bird's-beak (*Chloropyron molle* ssp. *hispidum*). Known populations of hispid bird's-beak occur within the Preserve and were verified during 2020 survey season (Figure 8).

2.7 BIOLOGICAL SURVEY

The annual biological survey evaluates the form and function of habitats within the Preserve. Surveys include but are not limited to marking the locations of beaver (*Castor canadensis*) dams, compiling and updating observed plant and wildlife lists, noting areas of trash, trespass, and condition of fencing and signage within the Preserve. Observations were made by HELIX biologists throughout the year and in tandem with other annual surveys.

2.8 BURROWING OWL, SWAINSON'S HAWK, AND VALLEY ELBERBEERY LONGHORN BEETLE SURVEY

As outlined in the GOSMP, surveys should be conducted every five years within potential habitat for burrowing owls (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*) and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

Swainson's hawk surveys were conducted within appropriate habitat types. Trees taller than 30 feet, which provide suitable Swainson's hawk nesting habitat were examined during the breeding season. Burrowing owl surveys were conducted for presence or absence within the appropriate habitat types between dawn and 10:00 AM or in the evening between 5:30 PM and sunset. Previously mapped elderberry shrubs were examined for evidence of VELB occupation (potential exit holes).

Surveys for these species were conducted within the Claremont, Orchard Creek, Stanford Ranch, Sunset West, and Whitney Ranch Preserve subsections. Surveys were conducted on May 25, 2020 within Claremont and Orchard Creek Preserve subsections on May 28, 2020 within Stanford Ranch Preserve subsection, and June 4, 2020 within Sunset West Preserve subsection. In addition, observations were made by HELIX biologists between March and June 2020 in tandem with other annual surveys. Survey notes are located within the results and conclusion section of this report.

2019-2020 Monitoring Results

- California Linderiella
- Vernal Pool Fairy Shrimp
- Vernal Pool Fairy Shrimp and California Linderiella
- No Listed Species

OC-1: 63, 1, 2, 68

PCCC1: 315

PCCC5: 318

SR-20: 15, 256

SR-8: 19, 27, 20, 31, 281, 165, 305, 30, 153, 33, 21, 280, 18, 292, 146, 291, 196, 12, 10, 5, 190, 141, 138, 11, 193

SR-12

SW-1: 34, 49, 80, 37, 216, 212, 47, 35, 105, 107, 48, 229, 46, 242, 38, 102, 42, 41

SW-2: 131, 55

SW-3: 118, 119, 57, 58

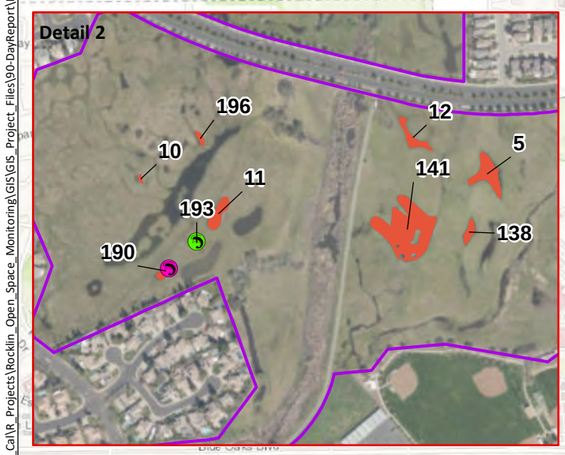
SW-4: 75, 76, 60

SW-5: 248, 249

SW-6: 62, 262

Detail 1

Detail 2



Source: Aerial (City of Rocklin, 4/19/2018).

0 1,800 Feet

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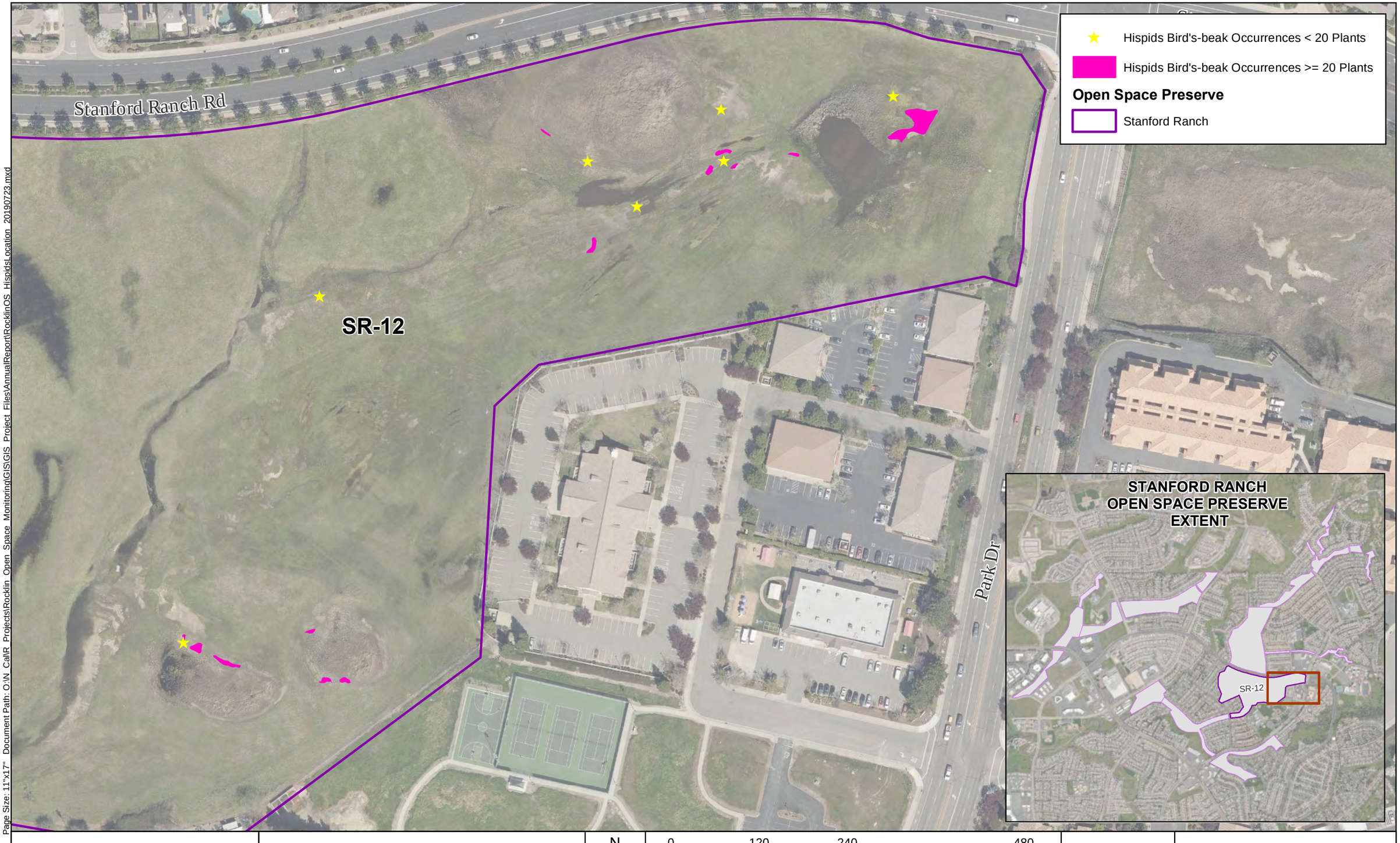
HELIX Environmental Planning

Sampled Vernal Pools and Listed Branchiopod Occurrences

Figure 7



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HELIX Environmental Planning

Rocklin Open Space Preserve Hispid Bird's-Beak

N

0 120 240 480

SCALE IN FEET
1 : 1,440

Drawn By: JCD
Date: 09/10/2020

FIGURE 8

2.9 OAK CANOPY ASSESSMENT WITHIN CLAREMONT AND STANFORD RANCH

Oak canopy assessments within the Claremont and Stanford Ranch Preserve subsections were surveyed on foot by ISA-Certified arborist Charlotte Marks (WE-10519A) on July 24, 28, 29, 30, 31, and August 4, 6, and 7, 2020. All existing oak trees were examined to determine their species type and canopies were compared against aerial photography and digitized in order to produce up-to-date, representative maps displaying existing oak canopy within the Preserve subsections (Figure 9 and Figures 10-A through 10-D) respectively.

3.0 ANNUAL MONITORING RESULTS

3.1 INVASIVE PLANT SURVEY

In total, approximately 73.16 acres within the Preserve were mapped with some degree of invasive species occurrence in 2019 -2020, an approximate 71-acre reduction from the 2018-2019 survey. The most notable reductions in invasive species were observed with a reduction of callery Pear (*Pyrus calleryana*), Chinese tallow (*Triadica sebifera*) and common fig (*Ficus carica*). This is due to the City's invasive tree removal efforts.

The most widespread invasive species mapped within the Preserve is yellow star-thistle (*Centaurea solstitialis*), which was present in over 28 acres of Preserve and is found mostly in annual grassland areas. Himalayan blackberry (*Rubus armeniacus*) was present in over 12 acres of the Preserve, curly dock (*Rumex crispus*) which was present in over 6 acres and summer mustard (*Hirschfeldia incana*) was present in over 5 acres (Table 4).

Similar to the 2018-2019 surveys, emphasis was placed on monitoring invasive species considered as high priority and invasive woody plants in the riparian corridors. High priority plants are those that are the most likely to quickly develop into monocultures, and/or which provide poor wildlife habitat. Invasive woody plants in the Preserve are most often found along the edges of riparian areas.

3.2 THATCH MONITORING

Approximately 60 percent of the vegetation communities in the Preserve footprint are composed of annual grassland, which is dominated by non-native annual grasses such as wild oat (*Avena fatua*), Italian ryegrass (*Festuca perennis*), barley (*Hordeum marinum*), brome (*Bromus* sp.), wild rye (*Elymus* sp.) and medusa head (*Elymus caput-medusae*). Other annual grassland plants within the Preserve included croton (*Croton* sp.), vetch (*Vicia* sp.), yellow star-thistle, and tarweed (*Holocarpha* sp.). Oak and riparian woodlands make up approximately 30 percent of the remaining vegetation communities in the Preserve and are dominated by a variety of native species including: blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizeni*), with willows (*Salix* sp.) and Fremont cottonwoods (*Populus fremontii*) in riparian areas. The Claremont, Orchard Creek, Whitney Ranch, and Placer Creek Corporate Center Preserves consist primarily of annual grassland habitats. The Stanford Ranch and Sunset West Preserves contain both annual grassland and woodland habitats. The Parklands North, Garnet Creek, and Brighton Subdivision contain primarily oak woodland and riparian habitats.

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Legend
- Oak Tree Canopy
- Claremont
- Stanford Ranch

C-1
C-2
C-3
C-4
C-5

Kalif Pl
Glasbanfield Way
Harvey Pl
Kalif Pl
Baker Hill Way
Wyckland Blvd
Pebble Beach Rd
Pebble Beach Rd
Jean Wheat Ct
Mountaingate Dr
Mansion Oaks Park
Mountaingate Dr
St Andrews Dr
Mountaingate Dr
Pleasant Grove Creek
Shady Trail Ln
Whitney Oaks Golf Club

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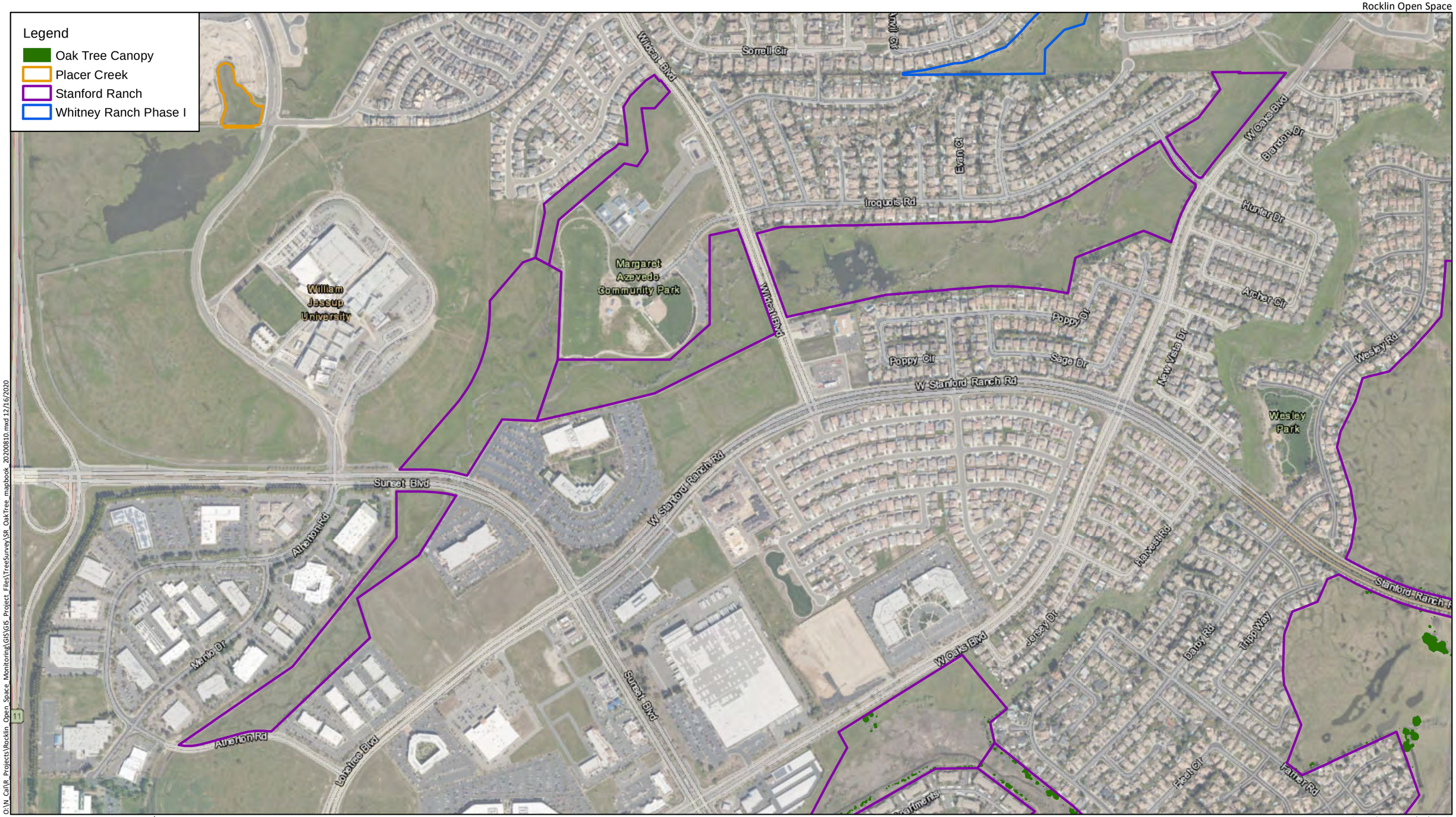
0 350 Feet

Source: Aerial (City of Rocklin, 4/19/2018).

HELIX Environmental Planning

Claremont Oak Tree Canopy Map

Figure 9



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Source: Aerial (City of Rocklin, 4/19/2018).

HELIX Environmental Planning

Stanford Ranch Oak Tree Canopy Map

Figure 10-A

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Source: Aerial (City of Rocklin, 4/19/2018).

HELIX Environmental Planning

Stanford Ranch Oak Tree Canopy Map

Figure 10-B

Source: Aerial (City of Rocklin, 4/19/2018).

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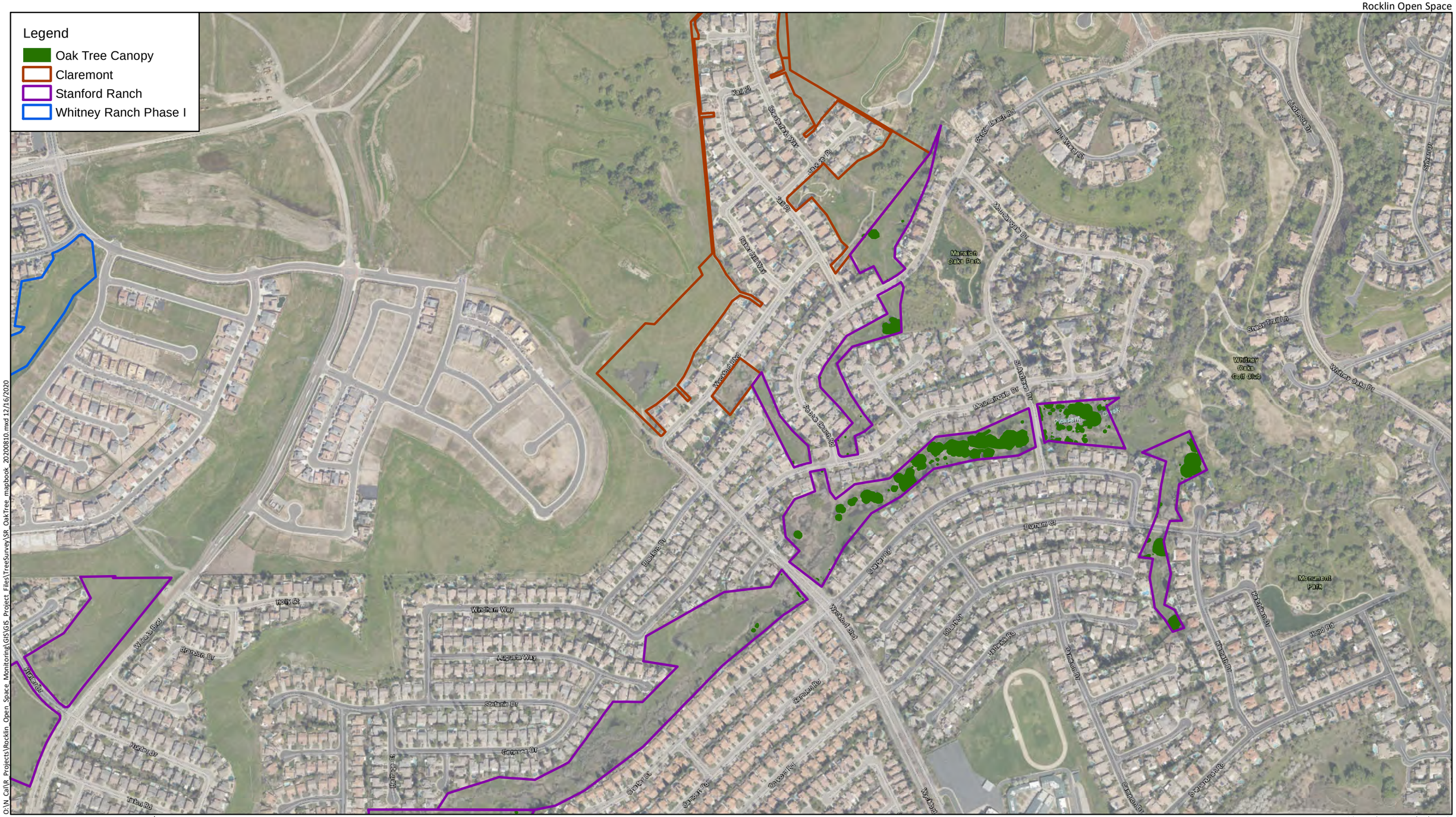
HELIX Environmental Planning

Stanford Ranch Oak Tree Canopy Map

Figure 10-C



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0 530 Feet

Source: Aerial (City of Rocklin, 4/19/2018).

HELIX Environmental Planning

Stanford Ranch Oak Tree Canopy Map

Figure 10-D

Table 4
INVASIVE SPECIES OCCURRENCES

Species	Scientific Name	Cal-IPC Ranking	Approximate Acreage 2019-2020	Approximate Acreage 2018-2019	Approximate Acreage 2017 -2018	Approximate Acreage 2016-2017	Approximate Acreage 2015-2016	No. of Occurrences - 2018-2019	No. of Occurrences 2017-2018	No. of Occurrences 2016-2017	No. of Occurrences 2015-2016
	High Priority Species										
Black Mustard	*Brassica nigra*	Moderate	1.11	1.15	<0.1	<0.1	0.3	20	9	2	27
Bull Thistle	*Cirsium vulgare*	Moderate	0.08	1	0.3	0.3	0.3	42	13	8	22
Italian Thistle	*Carduus pycnocephalus*	Moderate	1.45	3.5	1.1	0.5	0.6	188	39	12	51
Milk Thistle	*Silybum marianum*	Limited	1.5	1.2	0.3	0.5	0.9	36	13	7	31
Pampas Grass	*Cortaderia selloana* or *C. jubata*	High	0.12	0.2	<0.1	<0.1	<0.1	15	3	8	13
Water Hyacinth	*Eichhornia crassipes*	High	<0.1	3.0	<0.1	0.2	<0.1	10	1	3	1
Yellow Star-Thistle	*Centaurea solstitialis*	High	28.56	30.0	25.9	20.1	23.3	391	248	140	396
	Woody/ Shrub Species										
Black Locust	*Robinia pseudoacacia*	Limited	<0.1	1.1	<0.1	<0.1	<0.1	11	2	4	4
Callery Pear	*Pyrus calleryana*	Watchlist	0.41	2.5	0.95	1.2	0.1	157	68	104	124
Chinese Tallow	*Triadica sebifera*	Moderate	9.02	26.5	19.1	23.8	2.1	663	200	401	1,084
Common Fig/Edible Fig	*Ficus carica*	Moderate	1.20	3.2	2.6	2.9	0.1	52	35	49	99
Common Privet	*Ligustrum lucidum*	Limited	0.22	0.2	N/A	N/A	N/A	3	N/A	N/A	N/A
Eucalyptus	*Eucalyptus* sp.	Limited	N/A	0.11	<0.1	<0.1	<0.1	9	5	6	1
Himalayan Blackberry	*Rubus armeniacus*	High	12.55	10.01	4.9	6.9	2.7	203	98	122	86
Tree of Heaven	*Ailanthus altissima*	Moderate	0.08	0.26	<0.1	0.1	0.1	21	6	23	69
	Other Grass/ Herb Species										
*Bermuda Grass	*Cynodon dactylon*	Moderate	N/A	<0.1	N/A	N/A	N/A	4	N/A	N/A	N/A
Bristly Ox-tongue	*Helminthotheca echioides*	Limited	2.25	4.9	0.23	<0.1	<0.1	80	4	1	1
Curly Dock	*Rumex crispus*	Limited	6.20	0.9	0.2	0.2	0.2	41	10	11	29
*Italian Rye Grass	*Festuca perennis*	Moderate	N/A	0.01	N/A	N/A	N/A	4	N/A	N/A	N/A
Medusa Head Grass	*Elymus caput-medusae*	High	N/A	1.8	<0.1	<0.1	N/A	3	N/A	1	N/A
Rip Gut Brome	*Bromus diandrus*	Moderate	N/A	0.1	N/A	N/A	N/A	7	N/A	N/A	N/A
Rose Clover	*Trifolium hirtum*	Limited	0.34	0.1	<0.1	<0.1	N/A	5	N/A	1	N/A
Rush Skeletonweed	*Chondrilla juncea*	Moderate	0.69	0.7	N/A	N/A	N/A	56	N/A	N/A	N/A
*Soft Brome	*Bromus hordeaceus*	Limited	N/A	<0.1	N/A	N/A	N/A	6	N/A	N/A	N/A
Stinkwort	*Dittrichia graveolens*	Moderate	2.21	20.00	4.2	3.7	2.0	367	47	50	70
Summer Mustard	*Hirschfeldia incana*	Moderate	5.58	1.2	N/A	N/A	N/A	94	N/A	N/A	N/A

*Indicates dense populations of the grass species. Mapping of theses grasses typical does not take place as the population is distributed through the majority of the annual grasslands and is known to occur throughout the Preserve.

RDM levels fell within the target range at 22 percent of the sampled locations, an 8 percent increase from the previous year's survey. RDM exceeded the target range at 65 percent of the sampled locations, a decrease of 22 percent from the previous year's survey. RDM was below the target range at 13 percent of the sample locations. The number of Preserves that need to be more intensely grazed decreased as compared to previous years**.** The number of Preserves that need to be less intensely grazed increased as compared to the previous year. Tables 5 and 6, below, summarize the RDM data for each of the nine Preserve areas and detailed data is enclosed in Appendix B. Representative photographs are enclosed in Attachment A**.**

Table 5
SUMMARY OF RDM DATA IN ANNUAL GRASSLANDS

Preserve	Total RDM Points	RDM Range (lbs./acre)	Exceeds Objective >1,200lbs. acre	Meets Objective 800-1,200 lbs./acre	Below Objective <800 lbs./acre
Claremont	1	3,264	100% (1)	—	—
Orchard Creek	2	1,248-1,344	100% (2)	—	—
Stanford Ranch	12	480-2,304	75% (9)	17% (2)	8% (1)
Sunset West	7	960-2,688	86% (6)	14% (1)	—
Whitney Ranch	9	96-2,688	67% (6)	—	33% (3)
Placer Creek	1	1,728	100% (1)	—	—
TOTAL	**32**	**-**	**25**	**3**	**4**

Table 6
SUMMARY OF RDM DATA IN OAK WOODLAND

Preserve	Total RDM Points	RDM Range (lbs./acre)	Exceeds Objective >1,200lbs. acre	Meets Objective 400-1,200 lbs./acre	Below Objective <400 lbs./acre
Claremont	1	1,344	100% (1)	—	—
Stanford Ranch	14	768 -2,784	43% (6)	50% (7)	7% (1)
Sunset West	3	192 — 2,400	67% (2)	—	33% (1)
Whitney Ranch	1	800	100% (1)	—	—
Brighton	1	384	—	—	100% (1)
Garnet Creek	2	768-980	—	100% (2)	—
Parklands North	1	1,344	100% (1)	—	—
TOTAL	**23**	**—**	**11**	**9**	**3**

3.3 VERNAL POOL INVERTEBRATES

The individual Preserve subsections were surveyed for vernal pool invertebrates on December 13 and 16, 2019, and January 15, 17, February 5, 6, and 20, 2020. A total of 64 pools were surveyed twice in each of the following Preserve subsections, Stanford Ranch, Orchard Creek, Sunset West, and Placer Creek Corporate Center. Both the federally-listed vernal pool fairy shrimp and the non-listed California linderiella (*Linderiella occidentalis*) were found in pools within the Stanford Ranch and Sunset West Preserve subsections. A summary of the 2019-2020 sampled vernal pools within the Preserves subsections areas are detailed in Table 7. Figure 6 includes all vernal pool invertebrate occurrences from 2015-2020.

Table 7
SUMMARY OF SAMPLED VERNAL POOLS

Preserve Sub-Section	Number of Sampled Vernal Pools	Number of Inundated Vernal Pools - 1st Round	Number of Inundated Vernal Pool - 2nd Round
OC-1	4	1	0
SR-8	16	16	4
SR-12	9	8	3
SR-20	2	2	0
SW-1	20	12	5
SW-2	2	2	0
SW-3	4	4	0
SW-4	1	0	0
SW-5	2	2	0
SW-6	2	2	0
PCCC-1	1	1	0
PCCC-5	1	0	0
TOTAL	**64**	**50**	**12**

A total of 64 vernal pools were sampled twice within the Preserves during the 2019-2020 season. During the first round of surveys, fifty of the sixty-four vernal pools were inundated (Table 8), a reduction of inundation by five pools from the 2018-2019 survey. On average Rocklin receives 3.39 inches of rain in December, 4.46 inches in January, and 4.50 inches in February. In 2020 Rocklin received 3.51 inches of precipitation in December, 0.48 inch in January, and 0 inches in February (The Weather Channel 2020). This below average rain fall explains the reduction in inundation from last year. Vernal pool fairy shrimp were found in a total of two pools located in the Stanford Ranch (SR-12 vernal pool 190) and the Sunset West Preserves (SW-2 vernal pool 55). California linderiella were not found within any Preserve areas during the first round of surveys (Table 8 and Figure 6) respectively.

Table 8
VERNAL POOL SAMPLE RESULTS

Preserve Sub-Section	Vernal Pool Fairy Shrimp *B. lynchi* Vernal Pool ID Number	California Linderiella Vernal Pool ID Number
Stanford Ranch (SR-12)	*190	*190
Stanford Rach (SR-12)	-	193
Sunset West (SW-2)	55	-
TOTAL	**2**	**2**

During the second round of surveys, the same 64 pools were surveyed. Twelve of the 64 pools were inundated at the time of the second survey, a reduction of three vernal pools from the 2018-2019 surveys. No vernal pool fairy shrimp were found in the second round of surveys. California linderiella were observed in two pools within the Stanford Ranch Preserve (SR-12 vernal pools 190 and 193) (Table 8 and Figure 6), respectively during the second round of surveys.

Other non-listed aquatic invertebrates observed during surveys included: water fleas (Cladocera), copepods (Copepoda), seed shrimp (Ostracoda), flatworms (Turbellaria), diving water beetles

(Dytiscidae), midges (Chironomidae) and crawling water beetles (Haliplidae). Invertebrate sampling data sheets and representative site photographs are included in Appendices A and C**,** respectively.

3.4 WETLAND AND RIPARIAN MONITORING

Riparian monitoring was conducted throughout the monitoring period. The riparian areas were examined on foot to evaluate creek conditions and determine areas with restoration potential. Overall, the wetlands and riparian areas are in good condition throughout the Preserve.

Beaver dams were observed in four separate locations within the Preserve areas. Beaver activity was observed in Stanford Ranch (SR-8) within the box culvert on the north side of West Stanford Ranch Road, Stanford Ranch (SR-11), backing up drainages, Stanford Ranch (SR-12) along the south end adjacent to Stanford Ranch (SR-8), and Stanford Ranch (SR-13). Monitoring of the dams will continue, if debris continues to build up in the drainage in Stanford Ranch (SR -11), flooding may occur causing negative impacts which may require consideration of dam removal.

The greatest threat to the riparian habitat is invasive species. Figures 2-A through 2-I shows the extent of invasive species within the Preserve, which represents potential restoration and rehabilitation sites. The primary invasive species that are impacting culverts and waterways include Himalayan blackberry and Chinese tallow trees.

3.4.1 Brighton

Riparian and wetland habitat within the Brighton Preserve subsection was assessed on March 18, 2020 and in tandem with other annual surveys. Drainages within the Preserve subsection flow in a northeast to southwest direction and all culverts were clear of vegetation and debris. The riparian community was relatively overgrown and harbors large patches of Himalayan blackberry. No beaver activity was observed. Patches of mild to moderate erosion along the drainage was observed on March 18, 2020. HELIX biologists surveying later in the year noted that problem erosion areas had been managed and grazing had commenced to help manage invasive species and thatch levels.

Wildlife observed include California scrub-jay (*Aphelocoma californica*), house sparrow (*Passer domesticus*), black-tailed jackrabbit and American crow. Additional species observed are listed in (Appendix G).

3.4.2 Claremont

Riparian and wetland habitat within the Claremont Preserve subsection was assessed on March 19, 2020 and in tandem with other annual surveys. The pond within C-1 was fully inundated at the time of the March 19, 2020 inspection. The basin within C-4 contained shallow inundation at the time of inspection. All culverts, wetland swales, and ditches were clear of problematic vegetation and debris. No beaver activity, erosion, or sedimentation was observed.

Wildlife observed include black-tailed jackrabbit and red-tailed hawk (*Buteo jamaicensis*). Additional specie observed are listed in Appendix G.

3.4.3 Garnet Creek

Riparian and wetland habitat within the Garnet Creek Preserve subsection was assessed on March 18, 2020 and in tandem with other annual surveys. Drainages within the Preserve subsection flow east to west and all culvert were clear of vegetation and debris at the time of assessment. The riparian community was relatively overgrown and harbors large populations of Himalayan blackberry. No beaver activity was observed.

Wildlife observed include ring-necked pheasant (*Phasianus colchicus*), black-tailed jackrabbit and American crow. Additional species observed are listed in Appendix G.

3.4.4 Orchard Creek

Wetland habitat within the Orchard Creek Preserve subsection was assessed on January 28, 2020 and in tandem with other annual surveys. Standing water was observed in the western portion of stream with low flows during the site assessment. The eastern portion of stream was mostly dry with few standing pools. Some erosion from top of the paved trail to the stream channel has formed on the southern side of paved trail. Culverts were clear of debris but have high densities of invasive weeds in/near the rip rap.

Wildlife observed include ring-necked pheasant, black-tailed jackrabbit, Sierran treefrog (*Pseudacris sierra*), red-shouldered hawk (*Buteo lineatus*), white-crowned sparrow (*Buteo lineatus*) and American robin (*Turdus migratorius*). Additional species observed are listed in Appendix G.

3.4.5 Parklands North

Riparian and wetland habitat within the Parklands North Preserve subsection was assessed on March 18, 2020 and in tandem with other annual surveys. The perennial stream (Antelope Creek) flows in a northeast to southwest direction. Some sediment has accumulated near the lower end of creek and along portions of the bank. No action is required as this level of sedimentation is typical of stream systems in the region. Culverts were clear of debris but have high densities of Himalayan blackberries.

Wildlife observed include domestic cat (*Felis catus*), Sierran treefrog, turkey vulture (*Cathartes aura*) and American robin. Additional species observed are listed in Appendix G.

3.4.6 Placer Creek Corporate Center

Wetland habitat within the Placer Creek Preserve subsection was assessed on March 18, 2020 and in tandem with other annual surveys. Vernal pools were inundated at the time of the survey. Culverts were clear of debris.

Wildlife observed include red-winged blackbird (*Agelaius phoeniceus*), black-tailed jackrabbit and red-tailed hawk (*Buteo jamaicensis*). Additional species observed are listed in Appendix G.

3.4.7 Stanford Ranch

Riparian and wetland habitat within the Stanford Ranch Preserve subsection was assessed on March 18, 19 and 20, 2020, and in tandem with other annual surveys. Culverts were clear of debris, but subsections SR 1-3 have high densities of invasive Himalayan blackberries. Sheen (organic) was observed on the water in a few areas within SR-5. The sheen observed was easily distinguished as a nonpetroleum

sheen as bio sheens typically break into small platelets in contrast to a petroleum sheen that will quickly reform after disturbance.

Beaver activity was observed in the central portion of SR-8 within the box culvert on the north side of West Stanford Ranch Road. Additional beaver activity was noted in SR -8, SR-11, and SR-13.

Wildlife observed include red-winged blackbird (*Agelaius phoeniceus*), acorn woodpecker (*Melanerpes formicivorus*), American bullfrog (*Lithobates cateeianus*), American coot (*Fulica americana*), American crow, belted kingfisher (*Megaceryle alcyon*), black-tailed mule deer (*Odocoileus hemionus*), Canada goose (*Branta canadensis*), common raven, great blue heron (*Ardea herodias*) and red-tailed hawk. Additional species observed are listed in Appendix G.

3.4.8 Sunset West

Riparian and wetland habitat within the Sunset West Preserve subsection was assessed on March 20, 23, and 24, 2020, and in tandem with other annual surveys. A high density of invasive water hyacinth is present within the creek of SW-1 creating vegetation matting. However, culverts remain clear from debris. A large accumulation of Himalayan blackberry is present on the northwest side of SW-4 and are causing moderate debris buildup. Construction occurring on the east side of SW-5 includes PVC pipe running into the creek and going to the east side of the site. Various metal pieces were found within the creek.

Wildlife observed include northern pintail (*Anas acuta*), red-winged blackbird, American crow, belted kingfisher, black-tailed mule deer, Canada goose and great blue heron. Additional species observed are listed in Appendix G.

3.4.9 Whitney Ranch

Riparian and wetland habitat within the Whitney Ranch Preserve subsection was assessed on January 28, 2020 and in tandem with other annual surveys. High avian usage was observed within the intermittent stream and perennial pond within WR-1. Minor debris is located in the lower eastern culvert by the middle trail was observed in WR-1.

Wildlife observed include bufflehead (*Bucephala albeola*), common gallinule (*Gallinula galeata*) American wigeon (*Anas americana*), northern pintail, red-winged blackbird, tricolored blackbird (*Agelaius tricolor)*, killdeer (*Charadrius vociferus*), belted kingfisher, Canada goose, great blue heron, black-tailed jackrabbit, Anna's hummingbird (*Calypte anna*), California towhee and red-shouldered hawk. Additional species observed are listed in Appendix G.

3.5 VERNAL POOL FLORISTIC MONITORING

Floristic monitoring was conducted on March 16, 19, 23, 27, and 30 and April 1 and 2, 2020. Of the 64 pools surveyed within the Preserves, 63 pools have a Prevalence Index of 3 or less. Therefore, 98 percent of the pools meet the performance standards, an increase of 98 percent from the previous year. Overall, the species composition within the vernal pools contain hydrophytic plant species typical of vernal pools within the Central Valley. Vernal pool floristic data sheets are included in Appendix D.

3.5.1 Orchard Creek

Dominant plant species observed in the sampled vernal pools within Orchard Creek Preserve include Fremont's goldfields (*Lasthenia fremontii*), stalked popcornflower (*Plagiobothrys stipitatus*) and Italian ryegrass. Three of the four pools surveyed on Orchard Creek meet the floristics performance standard (75%) a reduction of 25 percent from last year due to one vernal pool (VP-#001) being dominated by Italian ryegrass.

3.5.2 Placer Creek Corporate Center

Dominant plant species observed in the sampled vernal pools within Placer Creek Corporate Center include common spikerush (*Eleocharis macrostachya*) and stalked popcornflower. Both pools surveyed on Placer Creek Corporate Center meet the floristics performance standard (100%).

3.5.3 Stanford Ranch

Dominant plant species observed in the sampled pools within Stanford Ranch include common spike rush, white headed navarretia (*Navarretia leucocephala*), smooth goldfields (*Lasthenia glaberrima*) and woolly marbles (*Psilocarphus brevissimus*). All 26 pools surveyed on Stanford Ranch meet the floristics performance standard (100%), an increase of 8 percent from the previous year.

3.5.4 Sunset West

Dominant plant species observed in the sampled pools within Sunset West include common spike rush, white headed navarretia, stalked popcornflower, and Fremont's goldfields. All 31 pools surveyed on Sunset West meet the floristics performance standard (100%), an increase of 94 percent from the previous year.

3.6 SPECIAL-STATUS PLANT SURVEY

During the 2017-2018 survey season, Hispid bird's-beak, a California rare plant with a CNPS rank of 1B.1 was observed and mapped in Stanford Ranch Preserve (SR-12) within the alkali sink habitat. Verification of the hispid bird's-beak populations during the 2019-2020 survey season took place on May 27 and June 5, 2020 (Figure 8) in Stanford Ranch (SR-12). Populations are consistent with the 2019 survey with the exception of new growth in areas where grazing equipment was placed in 2019 on a small population in the northeast portion of the Preserve.

The following special-status plant species have the potential to occur within the Preserve: Ahart's dwarf rush, big-scale balsamroot, Boggs Lake hedge-hyssop, Brandegee's clarkia, dwarf downingia, legenere, pincushion navarretia, Red Bluff dwarf rush, Sacramento Orcutt grass, Sanford's arrowhead, stinkbells and valley brodiaea (Appendix E). Surveys for these species were conducted concurrently with floristic, biological, and wetland monitoring to ensure surveys were conducted in appropriate habitat types for these species and during the appropriate bloom time period to best identify the species (Table 9).

Table 9
KNOWN AND POTENTIAL HABITAT FOR SPECIAL-STATUS PLANT SPECIES

Habitat Type	Common Name	Scientific Name	Bloom Period	Status		
				Federal	State	CNPS
Alkali Sink	⧗ Hispid salty bird's-beak	*Cordylanthus mollis ssp. hispidus*	June - September	~	~	1B
Annual Grassland	*Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	March - May	~	~	1B
	*Big-scale balsamroot	*Balsamorhiza macrolepis*	March - June	~	~	1B.2
	*Brandegee's clarkia	*Clarkia biloba* ssp. *brandegeeae*	May - June	~	~	4.2
	*Red Bluff dwarf rush	*Juncus leiospermus*	March - May	~	~	1B
	*Stinkbells	*Fritillaria agrestis*	March - June	~	~	4.2
	*Valley brodiaea	*Brodiaea rosea* ssp. *vallicola*	April - May (June)	~	~	4.2
Oak Woodland	*Big-scale balsamroot	*Balsamorhiza macrolepis*	March - June	~	~	1B.2
	*Brandegee's clarkia	*Clarkia biloba* ssp. *brandegeeae*	May - June	~	~	4.2
	*Stinkbells	*Fritillaria agrestis*	March - June	~	~	4.2
Riparian Woodland	*Big-scale balsamroot	*Balsamorhiza macrolepis*	March - June	~	~	1B.2
Seasonal Wetland	*Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	March - May	~	~	1B
	*Legenere	*Legenere limosa*	April - June	~	~	1B
	Sanford's arrowhead	*Sagittaria sanfordii*	May - October	~	~	1B.1
Vernal Pool	*Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	March - May	~	~	1B
	*Boggs Lake hedge-hyssop	*Gratiola heterosepala*	April - July	~	E	1B
	*Legenere	*Legenere limosa*	April - June	~	~	1B
	*Red Bluff dwarf rush	*Juncus leiospermus*	March - May	~	~	1B
	*Valley brodiaea	*Brodiaea rosea* ssp. *vallicola*	April - May (June)	~	~	4.2
	dwarf downingia	*Downingia pusilla*	March - May	~	~	2B
	pincushion navarretia	*Navarretia myersii* ssp. *myersii*	April - May	~	~	1B
	Sacramento Orcutt grass	*Orcuttia viscida*	April - June	E	E	1B.1

(⧗) Species present within the Preserve
(*) Species has the potential to occur in multiple habitats.
(E) Endangered
(1B.#) Plant is rare throughout their range with the majority of them endemic to California.
(2B) Plant meets the definitions of the CESA of the California Fish and Game Code and are eligible for state listing. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA.
(4.2) Plant has limited distribution or infrequent throughout a broader area in California.

Ahart's Dwarf Rush

Ahart's dwarf rush, a CNPS ranked 1B.2 species (rare, threatened, or endangered in CA and elsewhere), is an annual grasslike herb in the rush family (Juncaceae). This species occurs in wetlands including vernal pools and valley and foothill grassland habitats. This species typically blooms from March through May (CNPS 2020). This species is threatened primarily by development. The Preserve may provide suitable habitat for this species within the vernal pool habitat within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR-8 and 12) and Sunset West (SW 1-6 and 8) Preserve subsections. Surveys to date have been conducted for this species between 2015-2020, and the species has not been observed within the Preserve. However, future Preserve subsections may contain potential habitat for this species.

There are no CNDDB records (Figure 11) and (Appendix E) for this species within five miles of the Preserve (CDFW 2020).

Special-status Species

Wildlife

- An andrenid bee
- California black rail
- California linderiella
- Burrowing owl
- Grasshopper sparrow
- Osprey
- Purple martin
- Steelhead - Central Valley DPS
- Ricksecker's water scavenger beetle
- Swainson's hawk
- Tricolored blackbird
- Valley elderberry longhorn beetle
- Vernal pool fairy shrimp
- Vernal pool tadpole shrimp
- Western pond turtle
- Western spadefoot
- White-tailed kite

Plants

- Boggs Lake hedge-hyssop
- Red Bluff dwarf rush
- Biig-scale balsamroot
- Dwarf downingia
- Hispid salty bird's-beak
- Legenere
- Pincushion navarretia

Sensitive Community

- Northern Hardpan Vernal Pool
- Northern Volcanic Mud Flow Vernal Pool
- Alkali Seep
- Alkali Meadow

5-mile Buffer

Other Features

- Preserve Boundaries
- City Limits

0 1.5 Miles

Source: ESRI Basemaps, 2020

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HELIX Environmental Planning

Rocklin Open Space Preserve CNDDB

Figure 11

Big-Scale Balsamroot

Big-scale balsamroot, a CNPS ranked 1B.2 species, is a perennial herb in the sunflower family (Asteraceae) that grows from a fleshy taproot and is found in cismontane woodland and valley and foothill grassland, sometimes on serpentine soils. The yellow disk flowers bloom from March through June (CNPS 2020). This species is threatened by grazing, residential or recreational development, and non-native plants. The Preserve contains suitable grassland and woodland habitat for this species throughout many subsections of the Preserve. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, future appended Preserve subsections may contain potential habitat for this species.

There are two CNDDB records (Figure 11) and (Appendix E) for this species within five miles of the Preserve (CDFW 2020).

Boggs Lake Hedge-Hyssop

Boggs Lake hedge-hyssop is listed as endangered by CDFW and is a CNPS rank 1B.2 species. Boggs Lake hedge-hyssop is a semi-aquatic annual herb of the figwort family (Scrophulariaceae). This species grows in marshes, swamps, lake margins, and vernal pools with clay soils. This species blooms from April to June (CNPS 2020). This species produces small, white, and pale-yellow flowers. Potential habitat for this species exists within the vernal pool habitat within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12) and Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

There are three CNDDB records (Figure 11) and (Appendix E) for this species within five miles of the Preserve (CDFW 2020).

Brandegee's Clarkia

Brandegee's clarkia, a CNPS ranked 4.2 species, (Limited distribution in California), is an annual herb in the evening primrose family (Onagraceae). Brandegee's clarkia is typically found in chaparral and cismontane woodlands, frequently associated with roadcuts and other clearings. This species usually flowers from May through July (CNPS 2020). Suitable habitat is present within the oak woodland of Brighton, Claremont, Garnet Creek, Stanford Ranch, Sunset West and Whitney Ranch Preserve subsections. Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

There are no CNDDB records (Figure 11) and (Appendix E) for this species within five miles of the Preserve (CDFW 2020).

Dwarf Downingia

Dwarf downingia, a CNPS ranked 2B.2 species, is an annual herb in the bellflower family (Campanulaceae). Dwarf downingia is restricted to vernal pools and similar seasonal wetlands, including mesic grassland and the margins of small lakes or stock ponds. Seeds germinate in the standing water of

the vernal pools. The plants grow to near full size while the pools are still inundated and bloom from March to May (CNPS 2020). The vernal pools located throughout the Preserve within Orchard Creek, Placer Creek Corporate Center, Stanford Ranch and Sunset West Preserve subsections may provide suitable habitat for this species. Additionally, there are sixteen CNDDB records (Figure 11) and (Appendix E) documented within five miles of the Preserve (CDFW 2020). Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Legenere

Legenere, a CNPS ranked 1B.1 species, is an annual herb in the bellflower family (Campanulaceae). This species blooms from April to June (CNPS 2020). It is found in vernal pools and swales, seasonal marshes, artificial ponds, floodplains of intermittent streams, and other seasonally inundated habitats. Wetlands that support legenere are typically inundated for long periods and range in size from slightly more than 3.7 square meters (40 square feet) to 40 hectares (100 acres) (Calflora 2020). The vernal pools and swales, seasonal marshes, artificial ponds, floodplains of intermittent streams, and other seasonally inundated habitats located throughout the Preserve may provide suitable habitat for this species. Additionally, there are four CNDDB records (Figure 11) and (Appendix E) documented within five miles of the Preserve (CDFW 2020). Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Pincushion Navarretia

Pincushion navarretia, a CNPS ranked 1B.1 species, is an annual herb in the phlox family (Polemoniaceae). It is endemic to vernal pools along California's Central Valley, especially the east side. This species has tiny whitish flowers usually in single heads. This species blooms from April to May (CNPS 2020). Suitable habitat may be present within the Preserve within the vernal pools and swales located throughout the Preserve. Additionally, there is one CNDDB record (Figure 11) and (Appendix E) occurrence documented within five miles of the Preserve (CDFW 2020). Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Red Bluff Dwarf Rush

Red Bluff dwarf rush, a CNPS ranked 1B.1 species, is an annual herb in the rush family (Juncaceae). The typical bloom period is from March to May. Red Bluff dwarf rush is endemic to northern California, where it occurs in Butte, Placer, Shasta, and Tehama counties. It is found in in vernally moist chaparral, cismontane woodlands, meadows and seeps, valley and foothill grasslands, and vernal pools. Only one population of Red Bluff dwarf rush, located near Roseville, is known to occur in Placer County. The population was last seen in 1982; however, a habitat survey conducted in 1997 indicates that the habitat for this species is still present (CNPS 2020). Because of extensive recent development that has occurred in and around Roseville, this population may have been eliminated from Placer County (Calflora 2020). Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Sacramento Orcutt Grass

Sacramento Orcutt grass is listed as federally and state endangered and is a CNPS ranked 1B.1 species. Sacramento Orcutt grass is a small annual plant of the grass family (Poaceae). This species blooms from April to July (CNPS 2020). Although there are no CNDDB records of this species within 5 miles of the Preserve, some of the deeper vernal pools located throughout the Preserve may provide suitable habitat for this species. Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Sanford's Arrowhead

Sanford's arrowhead, a CNPS ranked 1B.2 species, is an emergent perennial rhizomatous herb in the water plantain family (Alismataceae). This species is found in assorted shallow freshwater marshes and swamps, artificial ponds, and lakes. This species is extirpated from Southern California and mostly from the Central Valley. This species blooms from May to October, sometimes November (CNPS 2020). Although there are no CNDDB records of this species within five miles of the Preserve, wetlands within portions of Brighton, Claremont, Garnet Creek, Orchard Creek, Parklands North, Stanford Ranch, Sunset West and Whitney Ranch Preserve subsections may provide habitat for this species. Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Stinkbells

Stinkbells, a CNPS ranked 4.2 species, is a perennial bulbiferous herb in the lily family (Liliaceae). This species is found in clay soils, sometimes in serpentinite soil in moist annual grasslands. Flowers are white with greenish to pinkish markings on the outer surface and purple-brown on the inner surface. The flowers have an unpleasant odor, hence its name. The typical bloom period is March through June (CNPS 2020). Although there are no CNDDB records of this species within 5 miles of the Preserve, a collection was made on February 25, 2010 (CHSC105853) from Johnson Springview Park, 1/4 mile from the park entrance and just north of the Farron Street Bridge, close to Antelope Creek. The annual grassland located throughout the Preserve provides suitable habitat for this species, and the noted record confirms it occurs in the vicinity of the Preserve. Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

Valley Brodiaea

Valley broadiaea, a CNPS ranked 4.2 species, is a perennial bulbiferous herb in the brodiaea (Themidaceae) family that grows from a corm producing upright purple flowers. It is typically found in old alluvial terraces; with silty, sand, and gravelly loam soils. Valley broadiaea usually blooms from April to May or June (CNPS 2020). Although there are no CNDDB occurrences within five miles of the Preserve, there is one record of this species in the UC Davis Consortium of California Herbaria (ID # UCD147856). The location of the sample collected on April 15, 2013, is between Roseville and Lincoln, 200 feet east of interstate 65 and 0.7 mile north of Sunset Blvd. The annual grassland and vernal pool margins located throughout the Preserve may provide suitable habitat for this species. Surveys have been conducted for this species between 2015-2020 and, to date, the species has not been observed. However, future Preserve subsections may contain potential habitat for this species.

3.7 BIOLOGICAL SURVEY

Biological surveys were conducted within the Preserve concurrently with other annual monitoring tasks. Biological surveys evaluated the overall condition of the Preserve with special attention to the following factors: erosion and sedimentation, fire hazards, fencing integrity, condition of signage, condition of fencing and gates, trash accumulation, and unauthorized use. Biological surveys focused on overall habitat function, thatch accumulation, and plant and wildlife species.

HELIX biologists surveyed the Preserve several times during the monitoring season, and Preserve conditions were noted in tandem with the invasive plant, RDM, invertebrate, and floristic site surveys. The Preserve was surveyed on foot to ensure total search coverage. Particular attention was paid to entry points, including gates, fences, open access areas, wetlands and waterways, trash accumulation, unauthorized use, and presence of invasive species. Additionally, biologist updated plant lists (Appendix F) and wildlife lists (Appendix G). A summary of findings by Preserve unit is provided below.

3.7.1 Brighton

3.7.1.1 Preserve Function

Brighton Preserve is located west of Granite Drive, south of Pacific Street, and north and east of Dominguez Road. This Preserve is located southwest of the Rocklin Open Space Garnet Creek Preserve, along the same waterway. This Preserve is comprised of dense riparian woodland along Secret Ravine, oak woodland, seasonal wetlands, and surrounded by developed and landscaped areas. The Preserve is functioning well in supporting wildlife species, including black-tailed jackrabbit and western meadowlark (*Sturnella neglecta*) (Appendix G). Grazing commenced in 2020 within the Preserve subsection reducing the invasive plant species that were observed throughout the preserve during the 2018 -2019 survey season.

3.7.1.2 Erosion and Sedimentation

Erosion and sedimentation were not observed during the 2019-2020 site surveys.

3.7.1.3 Fencing, Signage, and Gates

Fencing and signs occur along the eastern perimeter of the Preserve and fencing occurs along the southwestern perimeter. Fencing types consists of post and cable, wooden fencing, and wrought iron. Fencing is in good condition. There is no fencing along the western perimeter as the Preserve boundary is located within the centerline of the creek and land on the other side of the creek is privately owned which precludes the placement of fencing in this area.

3.7.1.4 Trash Accumulation

Minor trash was observed within the Preserve during the 2019-2020 site surveys. When observed, trash was within the drainage along Sweeney Circle.

3.7.2 Claremont

3.7.2.1 Preserve Function

Claremont Preserve, comprised of sub-sections C-1, C-2, C-3, C-4, and C-5, are located along the perimeter of residences along Wykford Boulevard, Kali Place, and Chesterfield Way. This Preserve is comprised of a detention basin, one seasonal pond, several drainages, a seasonal wetland, annual grassland, native and planted oaks, fire access roads, a cement-lined ditch, and public park area with a preserved rock formation.

The Preserve is functioning well and supporting wildlife species, including acorn woodpecker, black phoebe (*Sayornis nigricans*), California towhee (*Melozone crissalis*), red-shouldered hawk and wild turkey (*Meleagris gallopavo*) (Appendix G).

3.7.2.2 Erosion and Sedimentation

Erosion and sedimentation were not observed during the 2019-2020 site surveys.

3.7.3 Fencing, Signage, and Gates

Fencing occurs along the perimeter where the Preserve abuts the backyards of the residential developments. Types of fencing materials include wrought iron and rebar post and wire cable. There are several fire access gates located throughout the Preserve. Fencing along the C-1 Preserve boundary needs repair in some areas.

3.7.4 Trash Accumulation

Trash was noted during the 2019-2020 site surveys. Trash accumulation was observed within C-1, C-2, C-3, and C-5. A large wooden spool was observed in C-4. Trash occurred primarily along areas immediately abutting residence backyards, and in areas with human disturbance. The primary areas noted included areas adjacent to roadways, within and adjacent to paved or dirt paths with active vehicular or pedestrian traffic, and areas abutting residential developments.

3.7.5 Garnet Creek

3.7.5.1 Preserve Function

Garnet Creek Preserve is located west of Granite Drive, south and east of Pacific Street, and north of Dominguez Road. This Preserve is located northeast of the Rocklin Open Space Brighton Preserve, where the Garnet Creek Preserve extends along the same waterway. This Preserve is comprised of dense riparian woodland along Secret Ravine, oak woodland and annual grassland. The Preserve is functioning well in supporting wildlife species including, American robin, western bluebird (*Sialia mexicana*), yellow warbler (*Setophaga petechia*) and dark-eyed junco (*Junco hyemalis*) (Appendix G).

3.7.5.2 Erosion and Sedimentation

Erosion and sedimentation were not observed during the 2019-2020 site surveys.

3.7.5.3 Fencing, Signage, and Gates

Fencing occurs along the eastern perimeter adjacent to the paved pedestrian path of the Preserve. Fencing types consist of wooden post and wire cable. The fencing is in good condition. Several Preserve signs were observed along the paved pedestrian path and were in good condition. No gates were observed within the Preserve subsection.

3.7.5.4 Trash Accumulation

No trash was observed within the Preserve during the 2019-2020 site surveys.

3.7.5.5 Unauthorized Use

No unauthorized use was observed within the Preserve during the 2019-2020 site surveys.

3.7.6 Orchard Creek

3.7.6.1 Preserve Function

Orchard Creek Preserve is located to the south of West Ranch View Drive, west of University Avenue, east of Highway 65, and north of Whitney Ranch Parkway. This Preserve is comprised of multiple drainages, seasonal wetlands, annual grassland and vernal pools. The Preserve is functioning well in supporting wildlife species, including foraging tricolored blackbird. Additionally, black-tailed jackrabbit, western meadowlark and crawfish were observed along the southern drainage (Appendix G).

3.7.6.2 Erosion and Sedimentation

Some erosion from the top of the paved trail to the stream channel was observed forming on southern side of the paved trail. No remediation is required.

3.7.6.3 Fencing, Signage, and Gates

Fencing occurs along the northern and southern perimeters of the Preserve. Fencing types consist of metal T-post and wire cable fencing. Portions of fencing have yet to be installed, these portions will be installed with the completion of development of the adjacent parcel.

3.7.6.4 Trash Accumulation

Trash was observed within the Preserve during the 2019-2020 site surveys. Trash occurred primarily along the southern drainage and consisted of plastic litter and old metal pipes.

3.7.6.5 Unauthorized Use

No unauthorized use was observed within the Preserve during the 2019-2020 site surveys.

3.7.7 Parklands North

3.7.7.1 Preserve Function

Parklands North Preserve is located east of Aitkin Dairy Road, south of Fenway Circle, west of Delmar Avenue, and north of Pacific Street. This Preserve is comprised of dense riparian woodland along Antelope Creek and oak woodland. The Preserve is functioning well in supporting wildlife species including acorn woodpecker, black phoebe, bullfrog, and California scrub jay (Appendix G).

A clump of elderberry (*Sambucus* sp.) shrubs are fenced with signage in the central eastern portion of the Preserve.

3.7.7.2 Erosion and Sedimentation

Erosion and sedimentation were not observed within the Preserve during the 2019-2020 site surveys. However, a beaver dam was noted in the central portion of the Preserve subsection.

3.7.7.3 Fencing, Signage, and Gates

New residential gates block access to portions of the Preserve subsection.

3.7.7.4 Trash Accumulation

Trash was observed along the pedestrian path that transects the Preserve subsection.

3.7.7.5 Unauthorized Use

No unauthorized use was observed within the Preserve subsection during the 2019-2020 site surveys.

3.7.8 Placer Creek Corporate Center

3.7.8.1 Preserve Function

Placer Creek Corporate Center Preserve, comprised of five subsections, is located east of Highway 65, south of Whitney Ranch Parkway, west of University Avenue, and north of Sunset Boulevard. This Preserve is comprised of seasonal wetlands, annual grassland and vernal pools. The Preserve is functioning well in supporting wildlife species, including mourning dove (*Zenaida macroura*), turkey vulture and Brewer's blackbird (*Euphagus cyanocephalus*).

3.7.8.2 Erosion and Sedimentation

Erosion and sedimentation were not observed during the 2019-2020 site surveys.

3.7.8.3 Fencing, Signage, and Gates

Fencing occurs along the perimeter of the Preserve. Fencing types consist of chain-link, concrete retaining walls, post and cable and wrought iron. Fencing is in new condition. Preserve signs are present.

3.7.8.4 Trash Accumulation

Trash was not observed within the Preserve during the 2019-2020 site surveys.

3.7.8.5 Unauthorized Use

Unauthorized use was not observed within the Preserve during the 2019-2020 site surveys.

3.7.9 Stanford Ranch

3.7.9.1 Preserve Function

Stanford Ranch Preserve is comprised of 21 subsections (e.g., SR-1, SR-2, SR-3, etc.), and is located east of Highway 65, south of Whitney Ranch Parkway, west of Whitney Oaks Drive, and portions north of Sunset Boulevard and West Oaks Boulevard. This Preserve contains seasonal wetlands, vernal pools, Pleasant Grove Creek, annual grassland and oak woodlands. The Preserve is functioning well in supporting wildlife species including, acorn woodpecker, black phoebe, bullfrog, California scrub jay, turkey vulture and wild turkey. Additionally, western pond turtles were observed in SR-12. (Appendix G).

3.7.9.2 Erosion and Sedimentation

Trash racks are absent from culverts in SR-7, and SR-17 causing debris to pile up and impede water flow. Minor erosion was noted along the access road in SR-9, and along the creek in SR-7 as a result of livestock grazing. Beaver activity (i.e., dam) was observed in SR-8, and SR-17.

3.7.9.3 Fencing, Signage, and Gates

Fencing occurs along borders of most of the Preserve subsections. Fencing types consist of guard rails, chain-link, wrought iron, concrete retaining walls, wood plank, and wooden post and wire cable fencing. The wrought iron and wood fencing occur primarily where the Preserve abuts the backyards of the adjacent residences. Several Preserve subsections including SR-5, SR-11, SR-17, SR-18 and SR-19, require replacement and some areas have not had fencing installed yet. Preserve signs were observed in SR-2, SR-6 and SR-7. Fire access roads and gates occur in SR-8 and SR-9.

3.7.9.4 Trash Accumulation

Trash was observed within the Preserve primarily along areas adjacent to human activity, and within wetlands or waterways during the 2019-2020 site surveys (Figures 6-D through 6-F).

Trash was not observed in SR-2. Trash was noted in SR-1, SR-3, SR-4, SR-5, SR-9, SR-14, SR-15, SR-16, SR-17, SR-18, SR-19, SR-20 and SR-21. Trash including golf balls, plastic bottles and wire mesh was observed in SR-6.

3.7.9.5 Unauthorized Use

Several areas of unauthorized use were observed within the Preserve during the 2019-2020 site surveys. Minor dirt paths were observed within most of the Preserve sub-sections. Man-made bridges crossing waterways were observed in SR-11, SR-18 and SR-20. Graffiti was noted on the guard rail in SR-7 along Wyckford Boulevard.

3.7.10 Sunset West

3.7.10.1 Preserve Function

Sunset West Preserve, comprised of sub-sections SW-1, SW-2, SW-3, SW-4, SW-5, SW-6, SW-7 and SW-8, is located east of Highway 65, south of West Oaks Boulevard, west of Sunset Boulevard, and north of Fairway Drive. This Preserve contains several drainages, seasonal wetlands, wetland swales, vernal pools, Pleasant Grove Creek, annual grassland and oak woodlands. The Preserve is functioning well and supporting wildlife species including great blue heron, red-winged blackbird and Canada goose (Appendix G).

3.7.10.2 Erosion and Sedimentation

Unauthorized use was not observed within the Preserve during the 2019-2020 site surveys.

3.7.10.3 Fencing, Signage, and Gates

Fencing occurs along the perimeters of the Preserve's subsections. Fencing types consist of metal post and wire cable, chain-link fencing, wrought iron, concrete retaining wall, wood plank and wooden post and wire cable fencing. Overall, the fencing is in good condition; however, there are large portions across the Preserve that lack perimeter fencing, and portions in SW-5 need repair. A few locked gates were observed within the Preserve that are in good condition and functioning properly. No Preserve signage was observed during the inspection.

3.7.10.4 Trash Accumulation

Trash was observed within the Preserve, primarily along perimeters, areas adjacent to human activity, and within wetlands or waterways, during the 2019-2020 site surveys. Trash was observed within SW-1, SW-3, SW-6 and SW-7.

3.7.10.5 Unauthorized Use

Several areas of unauthorized use were observed within the Preserve during the 2019-2020 site surveys. Several minor dirt paths were observed within all Preserve sub-sections. Human disturbance including, loitering, trash, folding chairs and a tire swing, were observed along the riparian corridor within the central and eastern portions of SW-3. Additionally, three creek crossings that consisted of strategically positioned rocks, and two wooden plank crossings, were observed along the central and eastern portions of SW-3. A stick bridge was observed across the drainage in the southern portion of SW-6. A pile of vegetation clippings was observed along the eastern border of SW-7.

3.7.10.6 Whitney Ranch

3.7.10.7 Preserve Function

Whitney Ranch Preserve, comprised of sub-sections WR-1, WR-2, WR-3, WR-4, WR-5 and WR-6, is located east of Highway 65, south of Twelve Bridges Drive, west of Old Ranch House Road, and north of West Stanford Ranch Road. This Preserve contains several drainages, seasonal wetlands, vernal pools, annual grassland, marsh, riparian corridors, and oak woodland.

The Preserve is functioning well in supporting wildlife species including a nesting tricolored blackbird colony. HELIX biologists observed this species nesting in cattails within Whitney Ranch (WR-2) and foraging in Whitney Ranch (WR-3) during annual surveys. Additionally, California quail (*Callipepla californica*), house finch (*Haemorphus mexicanus*), Anna's hummingbird (*Calypte anna*) and green heron (*Butorides virescens*) were observed in the Preserve.

3.7.10.8 Erosion and Sedimentation

Erosion and sedimentation were observed in eastern portion of WR-2 from the top of the hill along University Avenue to the bottom of stream (visible on aerials). Sediment and debris were flowing into stream as a result. This City was informed and remediation actions were taken, no further actions are required.

3.7.10.9 Fencing, Signage, and Gates

Fencing occurs along the majority of the perimeters of the Preserve's sub-sections. Fencing types consist of metal post and wire cable, wrought iron, T-post and wire mesh and wooden post and wire cable fencing (Figure 6-H). Overall, the fencing is in good condition; except along the northern border of WR-1, where portions of the T-post and wire mesh fencing is dilapidated, and a large section of fencing is missing. However, this section of fence is a relic from the old ranching communities and is not intended to act as a perimeter fence. The land adjacent to the Preserve (in Lincoln) is also a preserve so the border is intentionally left unfenced to allow for wildlife movement. No gates were observed within the Preserve. No Preserve signage was observed during the inspection.

3.7.10.10 Trash Accumulation

Trash was not observed within WR-2 and WR-3. Trash including plastic litter, metal car parts, toy balls, and windblown trash was observed within WR-1, WR-4 and WR-5.

3.7.10.11 Unauthorized Use

Several areas of unauthorized use were observed within the Preserve during the 2019-2020 site surveys. Several minor dirt paths were observed within all Preserve sub-sections. Additionally, in WR-1, human disturbance including, a tree swing, gardening tools, a wood pile and severe trash, was observed under a large oak tree in the southern portion of the Preserve. In WR-5, human disturbance including, trash, clothing and a metal fire pit, was observed within the riparian area in the western portion of the Preserve.

3.8 SURVEY FOR BURROWING, SWAINSON'S HAWK AND VALLEY ELDERBERRY LONGHORN BEETLE

Special-status species identified in the 2015 GOSMP as potentially occurring within the Preserve include burrowing owl, Swainson's hawk and valley elderberry longhorn beetle. Surveys for these species were conducted within the Claremont, Orchard Creek, Stanford Ranch, Sunset West, and Whitney Ranch Preserves subsections. Surveys were conducted on May 25, 2020 within Claremont and Orchard Creek Preserve subsections on May 28,2020 within Stanford Ranch Preserve subsection, and June 4, 2020 within Sunset West Preserve subsection. In addition, observations were made by HELIX biologists between March and June 2020 in tandem with other annual surveys.

Burrowing Owl

Burrowing owls are a small ground-dwelling owl that occurs in western North America from Canada to Mexico and east to Texas and Louisiana. Although in certain areas of their range, burrowing owls are migratory, these owls are predominantly non-migratory in California. Burrowing owls generally inhabit gently sloping areas, characterized by low, sparse vegetation (Poulin et al. 2011). The breeding season for burrowing owls is from March to August, peaking in April and May (Zeiner et al. 1990). Burrowing owls nest in burrows in the ground, often in old ground squirrel burrows, and can also utilize artificial burrows including pipes, stockpiles, culverts, and nest boxes.

Swainson's Hawk

Swainson's hawks nest in the Central Valley and winters primarily in Mexico, while the population that nests in the interior portions of North America winters in South America (Bradbury et al., in prep.). Swainson's hawks arrive in the Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to late August, peaking in late May through July (Zeiner et al., 1990). In the Central Valley, Swainson's hawks' nest in isolated trees, small groves, or large woodlands next to open grasslands or agricultural fields. This species typically nests near riparian areas; however, it has been known to nest in urban areas as well. In the Central Valley, the most commonly used trees include Fremont cottonwood, willows, sycamores (*Platanus* sp.), valley oaks, and walnut (*Juglans* sp.), and occasionally gum trees (*Eucalyptus* sp.), pines and redwoods (Woodbridge 1998). Nest locations are usually in close proximity (up to a 10-mile radius) to suitable foraging habitats, which include fallow fields, all types of grasslands, irrigated pastures, alfalfa and other hay crops, and low-growing row crops. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom and De Water 1994).

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle (VELB) is listed as federally threated species by USFWS. VELB depend on elderberry (*Sambucus* sp.) shrubs for its entire lifecycle. Adults are typically active from March through May during the flowering period of the elderberry shrub. The female lays its eggs on the leaves and stems of the elderberry shrub. The larvae emerge within a few days and burrow into the elderberry stem. The larvae feed on the stem pith until they pupate. When the host shrub begins flowering, the pupa emerges from the stem as an adult. VELB require elderberry stems with at least one-inch diameter at ground level (dgl) in order for the larvae to utilize the stems (USFWS 1999). VELB are usually found on elderberry shrubs within riparian plant communities, which include California sycamore (*Platanus racemosa*), willow, blackberry (*Rubus* sp.) and western poison oak (*Toxicodendron diversilobum*) (USFWS 1984). Multiple elderberry shrubs clumped together provide superior habitat for VELB, while isolated elderberry shrubs are less likely to support VELB populations (USFWS 2017).

3.8.1 Claremont

The Claremont Preserve subsection had the following determinations regarding habitat for burrowing owls, Swainson's hawk, and VELB:

- Marginal habitat for burrowing owl
- Suitable nesting habitat for Swainson's hawk
- Suitable foraging habitat for Swainson's hawk
- No suitable habitat for VELB

The onsite culverts provide marginal nesting habitat and the annual grassland provides foraging habitat for burrowing owls. Ground squirrels and small mammal burrows provide suitable nesting sites. However, no burrowing owls were observed during the field survey.

There is suitable nesting and foraging habitat for Swainson's hawk within the Preserve subsection. The tall trees within the preserve provide suitable nesting habitat for this species. The annual grassland habitat and presence of small mammals provides suitable foraging habitat for this species within the Preserve. Swainson's hawks were not observed onsite during the site survey.

There are no elderberries within the Claremont Preserve subsection, therefore the Preserve subsection lacks habitat for VELB.

3.8.2 Orchard Creek

The Orchard Creek Preserve subsection had the following determinations regarding habitat for burrowing owls, Swainson's hawk, and VELB:

- Suitable habitat for burrowing owl
- No nesting habitat for Swainson's hawk
- Suitable (species observed) foraging habitat for Swainson's hawk
- No suitable habitat for VELB

The onsite culverts provide marginal nesting habitat and the annual grassland provides foraging habitat for burrowing owls. Ground squirrels and small mammal burrows were observed providing suitable nesting sites. However, no burrowing owls were observed during the field survey.

There is no suitable nesting habitat for Swainson's hawk within the Preserve due to the lack of suitable trees. However, there are known nesting sites for Swainson's hawk within the normal foraging distance for this species from the Preserve. The annual grassland habitat and presence of small mammals provides suitable foraging habitat for this species within the Preserve. Swainson's hawk were observed foraging within the Preserve throughout portions of the survey season.

There are no elderberries within the Orchard Creek Preserve subsection, therefore the Preserve subsection lacks habitat for VELB.

3.8.3 Stanford Ranch

The Stanford Ranch Preserve subsection had the following determinations regarding habitat for burrowing owls, Swainson's hawk, and VELB:

- Suitable habitat for burrowing owl
- Suitable nesting habitat for Swainson's hawk
- Suitable foraging habitat for Swainson's hawk
- Suitable habitat for VELB

The onsite culverts provide marginal nesting habitat and the annual grassland provides foraging habitat for burrowing owls. Ground squirrels and small mammal burrows were observed providing suitable nesting sites. However, no burrowing owls were observed during the field survey.

There is suitable nesting and foraging habitat for Swainson's hawk within the Preserve subsection. The tall trees within the preserve provide suitable nesting habitat for this species. The annual grassland habitat and presence of small mammals provides suitable foraging habitat for this species within the Preserve. Swainson's hawks were not observed onsite during the site survey.

Elderberry shrubs located in riparian areas within the preserve provide potential habitat for the VELB. No VELB were observed during the surveys; however, four elderberry shrubs in Stanford Ranch (SR-15) contain potential exit holes created by VELB.

3.8.4 Sunset West

The Sunset West Preserve subsection had the following determinations regarding habitat for burrowing owls, Swainson's hawk, and VELB:

- Suitable habitat for burrowing owl
- Suitable nesting habitat for Swainson's hawk
- Suitable foraging habitat for Swainson's hawk
- Suitable habitat for VELB

The onsite culverts provide marginal nesting habitat and the annual grassland provides foraging habitat for burrowing owls. Ground squirrels and small mammal burrows were observed providing suitable nesting sites. However, no burrowing owls were observed during the field survey.

There is suitable nesting and foraging habitat for Swainson's hawk within the Preserve subsection. The tall trees within the preserve provide suitable nesting habitat for this species. The annual grassland habitat and presence of small mammals provides suitable foraging habitat for this species within the Preserve. Swainson's hawks were not observed onsite during the site survey.

There are no elderberries within the Sunset West Preserve subsection, therefore the Preserve subsection lacks habitat for VELB.

3.8.5 Whitney Ranch

The Whitney Ranch Preserve subsection had the following determinations regarding habitat for burrowing owls, Swainson's hawk, and VELB:

- Suitable habitat for burrowing owl
- Suitable nesting habitat for Swainson's hawk
- Suitable foraging habitat for Swainson's hawk
- No suitable habitat for VELB

The onsite culverts provide marginal nesting habitat and the annual grassland provides foraging habitat for burrowing owls. Ground squirrels and small mammal burrows are present providing suitable nesting sites. However, no burrowing owls were observed during the field survey.

There is suitable nesting and foraging habitat for Swainson's hawk within the Preserve subsection. The tall trees within the preserve provide suitable nesting habitat for this species. The annual grassland habitat and presence of small mammals provides suitable foraging habitat for this species within the Preserve. Swainson's hawks were not observed onsite during the site survey.

There are no elderberries within the Whitney Ranch Preserve subsection, therefore the Preserve subsection lacks habitat for VELB.

3.9 OAK CANOPY INVENTORY

Oak trees and oak woodland habitat within the Claremont and Stanford Ranch Preserve subsections were surveyed on foot by ISA-Certified Arborist Charlotte Marks (WE-10519A) on July 24, 28, 29, 30, 31, and August 4, 6, and 7, 2020.

3.9.1 Claremont

A total of 0.84 acre (Table 10) of oak canopy was mapped throughout the Claremont Preserve subsection (Figure 9). Oak species identified within the preserves include blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*) and interior live oak (*Quercus wislizeni*).

Table 10
OAK CANOPY MAPPED WITHIN CLAREMONT

Preserve Area	Acres
C-3	0.78
C-4	0.04
C-5	0.02
TOTAL	**0.84**

3.9.2 Stanford Ranch

A total of 18.35 acres (Table 11) of oak canopy was mapped throughout the Stanford Ranch Preserve (Figures 10-A through 10-D). Oak species identified within the preserves include blue oak, valley oak interior live oak, pin oak (*Quercus palustris*), oracle oak (*Quercus* x *morehus*) and unidentified hybrid oaks (*Quercus* sp.). Preserve areas SR-1, SR-6 and SR-15 contained oak trees that had loss of large limbs and therefore a significant loss of canopy. Within SR-15, several oak trees were noted to have lost one or more large limbs, be dead, dying, or have been completely uprooted from the ground. However, while loss of large oak tree canopy has been noted in SR-15, new oak saplings greater than three feet tall, and oak trees with greater than six inches in DBH, appear to have a healthy canopy throughout the understory of the larger, more mature oaks. Therefore, oak recruitment appears to be normal in this subsection.

Table 11
OAK CANOPY MAPPED WITHIN STANFORD RANCH PRESERVE

Preserve Area	Acres
SR-1	0.08
SR-2	0.21
SR-3	0.01
SR-4	0.66
SR-5	0.80
SR-6	2.01
SR-7	0.04
SR-8	0.07
SR-9	0.01
SR-12	1.18
SR-13	1.68
SR-14	0.25
SR-15	11.35
TOTAL	**18.35**

4.0 CONCLUSIONS AND RECOMMENDATIONS

Overall, the ±600-acre Preserve was in good condition during the 2019-2020 monitoring year. Vernal pool fairy shrimp were observed in two pools. A total of three vernal pool fairy shrimp individuals were observed within these two pools. Other non-listed aquatic invertebrates were found to inhabit the majority of the other sampled pools. The extent of fairy shrimp observations has decreased from the 2018-2019 surveys by one pool and in the number of individuals observed. This is likely due to the lower than normal amount of precipitation that occurred from December to February of 2020, which in turn caused pools to become dry between rain events. If pools do not fill or do not stay inundated for long enough, fairy shrimp cysts do not hatch. Of the sixty-four pools surveyed within the Preserves, sixty-three pools have a Prevalence Index of 3 or less. Therefore, 98 percent of the pools meet the performance standards, an increase of 9 percent present from the previous year. Overall, the species composition within the vernal pools contain hydrophytic plant species typical of vernal pools within the Central Valley. Furthermore, known populations of special-status species including Swainson's hawk, tricolored blackbird and hispid bird's beak were observed within the Preserve.

Invasive species occur in approximately 14 percent of the total Preserve. In total, approximately 73.16 acres were mapped with some degree of invasive species occurrence in 2019 -2020, an approximate 71-acre reduction from the 2018-2019 survey. The most notable reductions in invasive species were observed within tree population of callery pear, Chinese tallow, and common fig. This is due to the City's invasive tree removal efforts.

The most widespread invasive species mapped within the Preserve is yellow star-thistle, which was present in over 28 acres of Preserve and is found mostly in annual grassland areas, Himalayan blackberry which was present in over 12 acres of the Preserve, curly dock which was present in over 6 acres, and

summer mustard which was present in over 5 acres. Some recommended invasive species control techniques to be implemented within the Preserve include:

- *Yellow Star-Thistle*
    - Often requires management over several years to eliminate.
    - Yellow star-thistle seedlings are sensitive to shading, therefore establishing a new cover of desired plants, such as perennial bunchgrasses and forbs is helpful for long-term management.
    - Focus treatment on small populations or where re-infestation risk is low: Claremont, Whitney Ranch, Stanford Ranch, and western Sunset West.
    - Graze or mow in late May and June during the spiny and early flower stage to reduce seed heads. Sheep are effective earlier in the spring during the bolting phase, but goats are more effective later in the season when the plant has entered the spiny stage.
    - Apply targeted pre- and post-emergent herbicides (aminopyralid or clopyralid) between January and March for season-long control.

- *Chinese Tallow Tree*
    - Seeds are spread by birds and water, so treatment should begin at the upper ends of drainages, if possible, to minimize the recolonization in downstream areas.
    - Chinese tallow trees re-sprout easily, so treatment over multiple years may be required.
    - Cut trees and treat stumps with herbicide; optimally cutting should be done in July to early August during seed formation.
    - Hand pulling of small saplings and girdling of large trees.

- *Stinkwort*
    - Stinkwort has a relatively shallow root system, so it can be hand-pulled. Wear protective clothing as the oils can be irritating to the skin.
    - Mowing can provide partial control, but this plant is low branching so it will likely regrow. Mowing a second time, especially in mid-to-late summer after the soil has dried out may provide improved control.

- *Himalayan Blackberry*
    - Often re-sprouts from vegetative fragments left behind.
    - Sensitive to shade, so planting treated areas with fast-growing native shrubs may reduce re-establishment.
    - Mechanical removal by repeated mowing or cutting often followed by digging out the rootstock.
    - Goats browse on Himalayan blackberry and can be effective at reducing and controlling this plant.

In 2020-2021, monitoring will continue in accordance with the City's GOSMP. The following recommendations for the Preserve include:

- Continue regular trash pick-up within the individual Preserve areas as necessary.
- Biologists will work in coordination with City staff and contractors in the following areas.
    - Help City staff identify invasive plants that can be targeted for removal during routine maintenance activities.
    - Provide contracted grazers with maps showing locations of sensitive habitat to be avoided as staging sites for their herds.
- Target invasive species to maintain current extent and approximate number of invasive species within Preserve. Conduct focused control of invasive species where appropriate.
    - Implement high-intensity short duration grazing by sheep, goats, or cattle for yellow star-thistle. Grazing should take place prior to the formation of spines, ideally late spring to early summer (May through June). Consider treating these areas with targeted herbicides between January and March. Potentially seed with native plants next winter to help establish a cover crop to compete with yellow star-thistle. Monitor and adjust control techniques in future years depending on their success in reducing the yellow star-thistle populations. Select areas such as OC-1, WR-2, WR-3, WR-5, SR-12 to SR-16, SW-4, SW-6, and SW-8 for targeted yellow star-thistle control. Once a successful eradication protocol has been determined, it can be used on other areas of the Preserve that are more prone to re-infestation from adjacent open space areas.
    - To avoid impacts to nesting birds, trees should be removed outside of the nesting season (February 1 to August 30), if possible. This work would be done under the existing Memorandum of Understanding (MOU) with the California Department of Fish and Wildlife (CDFW) for stream channel maintenance. The City should work to develop a replanting program to replace removed trees with native trees. Native tree planting is a good project for volunteers.
- Hand-pull, graze or mow stinkwork. If mowing, two mowing sessions are recommended, especially in mid-to late summer after soil has dried out as this may provide improved control.
- Develop a master restoration plan with standard procedures and typical plans for addressing invasive species removal, bank stabilization, or other similar restoration goals to facilitate the implementation of restoration activities within the Preserve in the future.
- Update the current City of Rocklin Operation and Management (O&M) Plan to include updated recommendations and practices for management of the City of Rocklin Open Spaces. Updates to the O&M Plan may include:
    - Updated special-status species table for plants and wildlife with a potential to occur within City of Rocklin open space areas using the CNDDB, CNPS, and U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC), as well as, the survey data from open space monitoring to date.

- Revised graphics that more accurately represent current existing conditions, including updated wetland mapping, boundaries of newly acquired Preserves since the preparation of the 2015 O&M Plan, and updated special-status species occurrences.
- Streamlined procedures for conducting biological resources surveys and inventories, and revised goals, and actions to more evenly distribute required survey tasks over all monitoring years.
- Update reporting due date for the annual report to the Corps from June 30 to December 30 to better accommodate the required schedule for annual data collection and processing of floristic data.

5.0 REFERENCES

Bartolome, J.W., W.E. Frost, and N.K. McDougald. 2006. *Guidelines for Residual Dry Matter (RDM) Management on Coastal and Foothill Annual Rangelands in California*. University of California, Division of Agriculture and Natural Resources. Rangeland Monitoring Series. Publication 8092.

Bloom, P. and D. Van De Water. 1994. Swainson's Hawk in Life on the Edge: A Guide to California's Endangered Natural Resources: Wildlife. BioSystems Books, Santa Cruz, CA.

Bradbury, M., Estep, J.A., and D. Anderson. In Preparation. Migratory Patterns and Wintering Range of the Central Valley Swainson's Hawk.

California Department of Fish and Game (CDFW). 2000. San Joaquin Valley giant garter snake project 2000. California Department of Fish and Game unpublished report. 7 pp.

California Native Plant Society (CNPS). 2020. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Available at: https://www.rareplants.cnps.org. (Accessed 6/8/20).

The Weather Channel. 2020: Rocklin, CA Monthly Weather Forecast. Available at: https://weather.com/weather/monthly/l/0e939f13e27f69fcf0a1a5f817385074c422a1ee7106409a7f4dc8a69637cbe5. (Accessed May 5, 2020).

U.S. Fish and Wildlife Service (USFWS). 1984. Recovery plan for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Portland, Oregon. 73 USFWS. 1999. Conservation guidelines for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Sacramento, CA. 12 pp.

2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). U.S. Fish and Wildlife Service; Sacramento, California. 28 pp.

Woodbridge, B. 1998. Swainson's Hawk (Buteo swainsoni). The Riparian Bird Conservation Plan: A Strategy for Reversing the Decline of Riparian-associated Birds in California. California Partners in Flight. Available at: www.prbo.org/calpif/htmldocs/species/riparian/swainsons_hawk.htm.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990. California's Wildlife: California Wildlife Habitat Relationships. Wildlife and Habitat Data Analysis Branch, California Department of Fish and Game. Available online at: http://www.dfg.ca.gov/whdab/html/cawildlife.html.

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Appendix A

Representative Site Photos

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Himalayan blackberry within the Brighton Preserve subsection- during invasive species mapping.

Yellow star thistle within Claremont (C-1) Preserve subsection- during invasive species mapping.

Italian thistle within Garnet Creek Preserve subsection – during invasive species mapping.

Overview of Orchard Creek (OC) – during invasive species mapping.

Stanford Ranch (SR-12)-RDM sampling at 20 feet.

Sunset West (SW-6)-RDM sampling at 10 feet.

Garnet Creek – RDM sampling at 10 feet.

Parklands North – RDM sampling at 10 feet.

Sunset West (SW-2) Preserve subsection, vernal pool 55. One male and one female vernal pool fairy shrimp (*Branchinecta lynchi*) were observed during invertebrate surveys.

Stanford Ranch (SR-12) Preserve subsection, vernal pool 190. One vernal pool fairy shrimp (*Branchinecta lynchi*) was observed during invertebrate surveys.

Description: Sunset West (SW-6) Preserve, vernal pool 262 during invertebrate surveys.

Description: Placer Creek Corporate Center (PCCC-1) Preserve, vernal pool 315 during invertebrate surveys.

Garnet Creek- wetland and riparian monitoring.

Claremont (C-1)- wetland and riparian monitoring.

Stanford Ranch (SR-13)- wetland and riparian monitoring.

Placer Creek Corporate Center (PCCC-5)-wetland and riparian monitoring.

Orchard Creek during special-status plant survey.

Overview of Sunset West during special-status plant and floristic survey.

Stanford Ranch (SR-15)- VELB survey.

Stanford Ranch (SR-1)-oak canopy mapping.

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Appendix B

RDM Sampling Datasheets

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Rocklin Open Space Preserves

Biologist(s): Zachary Neider

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
BR-1	51	**10 ft**	80%	75%	95%	21	4	384	1	2	10/23/2019	OW	*Rubus armeniacus; Avena fatua*
		20 ft	70%	70%	90%								
GC-1	52	**10 ft**	95%	95%	100%	4	8	768	3	4	10/23/2019	OW	*Quercus lobata; Avena fatua*
		20 ft	95%	95%	100%								
GC-1	53	**10 ft**	95%	95%	100%	4	10	960	5	6	10/23/2019	OW	*Quercus lobata; Avena fatua*
		20 ft	95%	95%	100%								
PN-1	55	**10 ft**	95%	95%	100%	1	14	1,344	7	8	10/23/2019	OW	*Avena fatua; [**RDM point moved ~50 ft south]*
		20 ft	90%	90%	95%								
SW-6	3	**10 ft**	95%	95%	100%	2	23	2,208	9	10	10/23/2019	AG	*Avena fatua*
		20 ft	90%	95%	100%								
SW-6	31	**10 ft**	100%	100%	100%	4	2	192	11	12	10/23/2019	OW	*Bromus hordeaceus*
		20 ft	100%	100%	100%								

RDM Objective for Annual Grassland (AG):	**800-1,200 lbs/acre**
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

RDM = (Dry Weight of Sample in grams) X (96 lbs/acre) OR
RDM = (X grams/1 sqft) X (43560 sf/1 acre) X (1 lb/454 grams)

Degree of Vegetation Utilization:

1 - None 0-15%; Little or no use of surveyed vegetation
2 - Light 16-35%; Less than 1/3 of surveyed vegetation shows evidence of being grazed. Trampling damage is minimal.
3 - Moderate 36-65%; Grazing is spotty, but evident. Trampling damage may be evident.
4 - Heavy 66-80%; Surveyed vegetation is closely cropped. Trampling damage should be evident.
5 - Severe > 80%; Surveyed vegetation grubbed. Trampling damage evident.

California Guildelines for RDM Management on Coastal and Foothill Annual Rangelands. 2002. Publication 8092. University of California, Division of Agriculture and Natural Resources.

Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Zachary Neider

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
PCCC	54	**10 ft**	40%	65%	80%	1	18	1,728	3698	3699	10/24/2019	AG	*Elymus caput-medusae; Croton setiger; Avena* spp.
		20 ft	35%	40%	80%								
OC-1	26	**10 ft**	20%	30%	95%	1	13	1,248	3708	3709	10/24/2019	AG	*Elymus caput-medusae; Avena spp.*
		20 ft	0%	0%	95%								
OC-1	29	**10 ft**	5%	50%	90%	1	14	1,344	3704	3705	10/24/2019	AG	*Elymus caput-medusae*
		20 ft	1%	40%	90%								
SR-19	18	**10 ft**	98%	100%	100%	4	19	1,824	3711	3712	10/24/2019	AG	*Elymus caput-medusae; Avena spp.*
		20 ft	90%	95%	98%								
SR-18	40	**10 ft**	95%	90%	100%	4	18	1,728	3714	3715	10/24/2019	AG	*Elymus caput-medusae; Avena spp.*
		20 ft	90%	85%	95%								
C-3	49	**10 ft**	98%	90%	100%	4	14	1,344	3717	3718	10/24/2019	OW	*Elymus caput-medusae; Avena spp.*
		20 ft	98%	85%	98%								
C-4	22	**10 ft**	98%	100%	100%	4	34	3,264	3722	3723	10/24/2019	AG	*Elymus caput-medusae; Avena spp.*
		20 ft	80%	95%	98%								
WR-2	25	**10 ft**	100%	100%	85%	5	1	96	3731	3732	10/24/2019	AG	*Elymus caput-medusae; Zeltnera muehlenbergii*
		20 ft	98%	98%	80%								
WR-3	27	**10 ft**	5%	80%	90%	1	14	1,344	3738	3739	10/24/2019	AG	*Festuca perennis; Elymus caput-medusae; Avena spp.*
		20 ft	0%	60%	85%								
WR-1	30	**10 ft**	98%	98%	100%	4	6	576	3741	3742	10/24/2019	AG	*Elymus caput-medusae; Avena spp.*
		20 ft	70%	90%	100%								

RDM Objective for Annual Grassland (AG):	**800-1,200 lbs/acre**
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

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Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Zachary Neider

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
WR-1	50	**10 ft**	98%	90%	100%	5	8	768	3745	3746	10/24/2019	OW	*Elymus caput-medusae; Avena spp.*
		20 ft	90%	85%	100%								
WR-4	28	**10 ft**	98%	98%	98%	4	17	1,632	3748	3749	10/24/2019	AG	*Elymus caput-medusae; Zeltnera muehlenbergii*
		20 ft	90%	95%	98%								
WR-6	24	**10 ft**	90%	100%	100%	4	20	1,920	3752	3753	10/24/2019	AG	*Festuca perennis; Elymus caput-medusae; Avena spp.*
		20 ft	50%	100%	100%								
WR-5	23	**10 ft**	98%	98%	98%	3	15	1,440	3758	3757	10/24/2019	AG	*Elymus caput-medusae; Avena spp.*
		20 ft	90%	98%	98%								

RDM Objective for Annual Grassland (AG):	**800-1,200 lbs/acre**
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

RDM = (Dry Weight of Sample in grams) X (96 lbs/acre) OR
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5 - Severe **> 80%; Surveyed vegetation grubbed. Trampling damage evident.**

California Guildelines for RDM Management on Coastal and Foothill Annual Rangelands. 2002. Publication 8092. University of California, Division of Agriculture and Natural Resources.

Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Marisa Brilts

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
WR-4	2	**10 ft**	0%	40%	90%	2	7	672	3774	3775	10/29/2019	AG	*Hordeum murinum, Elymus caput-medusae*
		20 ft	0%	10%	75%								
WR-5	21	**10 ft**	35%	100%	60%	2 to 3	28	2,688	3777	3778	10/29/2019	AG	*Avena sp., Elymus caput-medusae*
		20 ft	5%	100%	40%								
WR-6	20	**10 ft**	100%	100%	98%	4	13	1,248	3785	3787	10/29/2019	AG	*Elymus caput-medusa,* severe trash
		20 ft	90%	98%	95%								
SW-4	32	**10 ft**	98%	100%	100%	2	20	1,920	3791	3792	10/29/2019	OW	*Elymus caput-medusa, Aegilops triuncialis*
		20 ft	90%	100%	100%								
SW-4	6	**10 ft**	90%	100%	100%	2	25	2,400	3795	3796	10/29/2019	AG	*Elymus caput-medusae, Avena sp., Aegilops triuncialis*
		20 ft	80%	98%	100%								
SW-5	33	**10 ft**	98%	100%	98%	2	25	2,400	3800	3801	10/29/2019	OW	*Elymus caput-medusae*
		20 ft	98%	100%	98%								
SW-3	8	**10 ft**	100%	100%	100%	1	15	1,440	3808	3807	10/29/2019	AG	*Elymus caput-medusae,* severe human disturbance = dirt road
		20 ft	100%	100%	100%								
SW-8	1	**10 ft**	5%	15%	95%	4	28	2,688	3813	3812	10/29/2019	AG	*Elymus caput-medusa, Vicia sp., Trifolium hirtum*
		20 ft	10%	60%	90%								
SW-7	5	**10 ft**	10%	90%	95%	4	19	1,824	3816	3815	10/29/2019	AG	*Elymus caput-medusa, Acmispon americanus*
		20 ft	5%	90%	90%								
SW-1	7	**10 ft**	85%	98%	98%	3	24	2,304	3822	3821	10/29/2019	AG	*Elymus caput-medusa, Hordeum murinum, Leontodon saxatilis*
		20 ft	70%	90%	95%								

RDM Objective for Annual Grassland (AG):	**800-1,200 lbs/acre**
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

RDM = (Dry Weight of Sample in grams) X (96 lbs/acre) OR
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California Guildelines for RDM Management on Coastal and Foothill Annual Rangelands. 2002. Publication 8092. University of California, Division of Agriculture and Natural Resources.

Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Marisa Brilts

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
SW-1	9	**10 ft**	90%	98%	98%	2	10	960	3827	3826	10/29/2019	AG	*Elymus caput-medusae*
		20 ft	85%	98%	98%								

RDM Objective for Annual Grassland (AG):800-1,200 lbs/acre	
RDM Objective for Oak Woodland (OW):	400-1,200 lbs/acre

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Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Zachary Neider

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
SR-20	37	**10 ft**	100%	90%	100%	3	27	2,592	3831	3830	10/30/2019	OW	*Elymus caput-medusae*
		20 ft	100%	85%	98%								
SR-20	14	**10 ft**	100%	100%	100%	3	11	1,056	3836	3835	10/30/2019	AG	*Avena sp., Elymus caput-medusae, Croton setiger*
		20 ft	100%	98%	98%								
SR-17	42	**10 ft**	100%	100%	100%	2	9	864	3841	3840	10/30/2019	OW	*Elymus caput-medusa, Avena* sp.
		20 ft	95%	100%	100%								
SR-17	17	**10 ft**	100%	100%	100%	1	14	1,344	3849	3848	10/30/2019	AG	*Elymus caput-medusae, Avena* sp.
		20 ft	100%	100%	100%								
SR-17	43	**10 ft**	100%	100%	100%	1	10	960	3852	3853	10/30/2019	OW	*Elymus caput-medusae, Avena* sp.
		20 ft	98%	100%	100%								
SR-16	19	**10 ft**	85%	100%	100%	2	18	1,728	3857	3856	10/30/2019	AG	*Elymus caput-medusae, Bromus hordeaceus*
		20 ft	60%	98%	95%								
SR-13	36	**10 ft**	100%	100%	100%	4	8	768	3859	3860	10/30/2019	OW	*Avena* sp.
		20 ft	90%	100%	98%								
SR-13	10	**10 ft**	90%	100%	98%	1	22	2,112	3863	3862	10/30/2019	AG	*Elymus caput-medusae, Avena* sp.
		20 ft	75%	98%	98%								
SR-13	39	**10 ft**	80%	98%	100%	1	17	1,632	3866	3865	10/30/2019	OW	*Avena* sp.
		20 ft	45%	98%	98%								
SR-15	34	**10 ft**	100%	100%	100%	1	10	960	3872	3871	10/30/2019	OW	*Elymus caput-medusa, Aegilops triuncialis*
		20 ft	98%	100%	100%								

RDM Objective for Annual Grassland (AG):	**800-1,200 lbs/acre**
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

RDM = (Dry Weight of Sample in grams) X (96 lbs/acre) OR
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Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Zachary Neider

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
SR-15	35	**10 ft**	98%	100%	100%	1	19	1,824	3875	3876	10/30/2019	OW	*Avena* sp.
		20 ft	85%	98%	100%								
SR-14	13	**10 ft**	100%	100%	100%	3	24	2,304	3878	3879	10/30/2019	AG	*Elymus caput-medusae, Avena* sp.
		20 ft	100%	100%	100%								

RDM Objective for Annual Grassland (AG):800-1,200 lbs/acre	
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

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Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Marisa Brilts

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
SR-11	38	**10 ft**	98%	100%	100%	4	29	2,784	3951	3952	11/1/2019	OW	*Aegilops triuncialis, Convolvulus arvensis,* point moved
		20 ft	95%	100%	100%								
SR-8	15	**10 ft**	10%	90%	100%	3	14	1,344	3957	3956	11/1/2019	AG	*Elymus caput-medusae, Avena* sp.
		20 ft	5%	90%	98%								
SR-4	46	**10 ft**	100%	100%	100%	5	13	1,248	3962	3963	11/1/2019	OW	*Hordeum murinum, Avena* sp., *Aegilops triuncialis,* severe veg. removal
		20 ft	100%	100%	100%								
SR-6	47	**10 ft**	98%	100%	100%	4	9	864	3967	3968	11/1/2019	OW	*Avena* sp., point moved
		20 ft	80%	100%	100%								
SR-3	48	**10 ft**	98%	98%	95%	2	8	768	3974	3973	11/1/2019	OW	*Hordeum murinum, Avena sp.,* new veg.
		20 ft	40%	98%	90%								
SR-7	44	**10 ft**	100%	100%	100%	4	15	1,440	3979	3980	11/1/2019	OW	*Avena* sp, *Cynodon dactylon*
		20 ft	98%	100%	100%								
SR-8	4	**10 ft**	98%	100%	100%	5	13	1,248	3994	3995	11/1/2019	AG	*Avena* sp.
		20 ft	95%	100%	100%								
SR-8	16	**10 ft**	100%	100%	100%	5	12	1,152	4001	4000	11/1/2019	AG	*Avena* sp.
		20 ft	100%	100%	100%								
SR-8	41	**10 ft**	98%	100%	100%	3	25	2,400	4004/5	4006	11/1/2019	OW	*Avena* sp., *Bromus hordeaceus*
		20 ft	90%	100%	100%								
SR-7	45	**10 ft**	-	-	-	3	-	-	-	-	11/1/2019	OW	Green vegetation, no RDM sample taken
		20 ft	-	-	-								

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Rocklin Open Space Preserves

Biologist(s): Charlotte Marks and Marisa Brilts

Preserve Area	RDM Sampling Point	Vegetation Utilization (visual percentage)				Degree of Veg Utilization	Dried Weight (grams/ sq.ft)	RDM Calc (Dried weight) X (96 lbs/acre)	Photo Number		Date Sampled	Habitat Type	Dominant Vegetation Observed
		Distance	Golf ball	Baseball	Basketball				10 ft Distance	20 ft Distance			
SR-12	12	**10 ft**	95%	98%	98%	2	5	480	4022	4021	11/1/2019	AG	*Avena* sp, *Bromus hordeaceus*
		20 ft	85%	95%	98%								
SR-12	11	**10 ft**	85%	98%	100%	2	20	1,920	4030	4029	11/1/2019	AG	*Hordeum murinum, Cynodon dactylon*
		20 ft	75%	95%	98%								

RDM Objective for Annual Grassland (AG):800-1,200 lbs/acre	
RDM Objective for Oak Woodland (OW):	**400-1,200 lbs/acre**

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Appendix C

Vernal Pool Invertebrate Survey Datasheets

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Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Space
County: Placer
Collectors: Charlotte Marks
Permit #: TE-778195-14

Date: December 13, 2019
Time: 9:30 AM to 3:30 PM
Temp: 56 ° Fahrenheit
Weather: Rain

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3,11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Linderiella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Sunset West (SW-1)																			
49	10	8	13	12x6	98%	4646													
34	11	10	15	52x8	85%	4647													spider; sierra treefrog (eggs)
212	10	18	25	122x15	90%	4651-4652				X		X					X		
35	DRY				0%														
242	10	20	25	76x15	95%	4653						X	X				X		crayfish; aquatic snail
38	DRY				0%														
76	12	3	5	11x6	85%	4659						X							
75	11	8	13	8x6	45%	4660						X							
216	DRY				0%														
37	DRY				0%														
80	12	3	5	8x6	15%	4661						X							trash
102	11	8	15	8x6	98%	4662-4663						X							
47	DRY				0%														

Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Sapce
County: Placer
Collectors: Charlotte Marks
Permit #: TE-778195-14

Date: December 16, 2019
Time: 9:25 AM to 3:45 PM
Temp: 42 to 55 ° Fahrenheit
Weather: Sunny; 1-3 mph winds

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3,11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Lindenella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Stanford Ranch (SR-12)																			
10	11	8	10	8x4	95%	4684											X		
196	11	8	13	21x6	98%	4685													
193	9	20	28	11x9	100%	4686													
190	9	15	25	24x11	100%	4687	1										X		(gravid female)
11	10	15	25	41x14	100%	4688											X		
12	14	5	8	30x12	70%	4689-4690													
5	13	5	8	11x3	10%	4691						X					X		
138	DRY				0%														
141	13	8	15	24x3	10%	4692				X		X							
Stanford Ranch (SR- 8)																			
291	6	10	15	6x3	70%	4668													
292	7	8	10	17x6	95%	4669													

Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Space
County: Placer
Collectors: Marisa Brilts
Permit #: TE-778195-14

Date: January 15, 2020
Time: 8:30 AM -2:30 PM
Temp: 32 to 48 ° Fahrenheit
Weather: Mistily Sunny

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3,11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Lindenella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Orchard Creek (OC-1)																			
65	DRY				0%	1													
63	4	13	18	5x5	50%	2						x	x				x		algal boom
1	DRY				0%	3													
2	DRY				0%	4													
Placer Creek Corporate Center (PCCC 1-5)																			
314	4	15	23	3x2	98%	5				x		x	x	x				x	
315	DRY				0%	6													
Sunset West (SW-5)																			
249	8	5	10	3x3	75%	7						x		x					trash
248	7	10	18	5x3	75%	8						x	x	x	x		x	x	trash, tire tracks
Sunset West (SW-4)																			
60	DRY				0%	9													

Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Space
County: Placer
Collectors: Marisa Brilts
Permit #: TE-778195-14

Date: January 17, 2020
Time: 7:30 AM - 2:30 PM
Temp: 37 to 48 ° Fahrenheit
Weather: Mostly Sunny

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3,11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Linderiella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Sunset West (SW-2)																			
55	8	10	15	9x8	98%	1	1 F, 1M			x		x	x	x			x		slight algal bloom. Pseudacris sierra eggs and tadpoloes
131	6	20	30	21x9	100%	2				x		x	x	x					trash. Pseudacris sierra eggs and tadpoloes
Sunset West (SW-3)																			
118	9	18	25	21x21	100%	3				x		x	x	x	x		x		Pseudacris sierra eggs and tadpoloes
119	9	8	15	8x8	50%	4				x		x	x	x	x	x	x	x	trash. Pseudacris sierra eggs and tadpoloes
58	9	8	15	9x6	80%	5				x		x	x	x	x		x		Pseudacris sierra eggs and tadpoloes
57	9	20	30	15x18	100%	6						x		x	x				Pseudacris sierra eggs and tadpoloes
Sunset West (SW-6)																			
262	9	10	20	122x8	100%	7				x		x	x	x			x	x	Pseudacris sierra eggs and tadpoloes
62	9	15	20	21x9	98%	8						x	x	x					organic bio film
Stanford Ranch (SR-20)																			
256	9	15	20	21x9	98%	9				x		x	x	x			x		trash. Pseudacris sierra eggs and tadpoloes

Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Space
County: Placer
Collectors: Charlotte Marks
Permit #: TE-778195-14

Date: February 05, 2020
Time: 8:45 AM
Temp: 47 to 62 ° Fahrenheit
Weather: Sunny; 1-3 mph wind

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3,11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Linderiella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Stanford Ranch (SR-12)																			
196	DRY				0%														
10	DRY				0%														
190	6	15	20	23x12	100%	5114		100's*		X			X	X					*Copulating pairs and gravid females observed; Sieran treefrog (tadpoles and eggs)
193	8	15	25	8x8	90%	5115		100's*		X				X					Sieran treefrog (eggs)
11	7	13	20	40x12	98%	5116				X		X	X	X					Sieran treefrog (tadpoles and eggs)
12	DRY				0%														
5	DRY				0%														
138	DRY				0%														
141	DRY				0%														
Sunset West (SW-1)																			
49	DRY				0%														
34	13	10	15	23x12	60%	5117				X		X	X	X					Sieran treefrog (tadpoles)

Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Space
County: Placer
Collectors: Charlotte Marks
Permit #: TE-778195-14

Date: February 06, 2020
Time: 8:45 AM
Temp: 50 ° Fahrenheit
Weather: Sunny; 1-3 mph wind

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3,11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Linderiella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Stanford Ranch (SR-8)																			
291	DRY				0%														
292	DRY				0%														
280	DRY				0%														
146	DRY				0%														
18	DRY				0%														
305	10	8	13	24x5	40%	5126				X		X	X	X					Sierran treefrog (tadpoles and eggs)
33	DRY				0%														
281	DRY				0%														
20	9	8	10	18x5	85%	5129				X		X	X	X			X		Sierran treefrog (eggs)
27	DRY				0%														
19	DRY				0%														
153	DRY				0%														

Appendix C
Invertebrate Sampling Data

Project Site: Rocklin Open Space
County: Placer
Collectors: Marisa Brilts
Permit #: TE-778195-14

Date: February 20, 2020
Time: 9:30 AM - 1:30 PM
Temp: 59 to 65 ° Fahrenheit
Weather: Sunny

Quad: Rocklin
Township: 11 North
Range: 6 East
Section: 3, 11, and 15

Vernal Pool #	Water Temp. (°C)	Water Depth (cm)	Estimated Maximum Depth (cm)	Present Surface Area (mxm)	Inundation (%)	Photo #	Crustacea							Turbellaria	Insecta				Notes
							Anostraca		Notostraca	Cladocera	Conchostraca	Copepoda	Ostracoda		Coleoptera		Hemiptera	Diptera	
							Vernal Pool Fairy Shrimp (B. lynchi)	California Linderiella	Vernal Pool Tadpole Shrimp	Water Fleas	Clam Shrimps	Copepods	Seed Shrimp	Flatworms	Dytiscidae (Diving Water Beetles)	Haliplidae (Crawling Water Beetles)	Notonectidae (Backswimmers)	Chironomidae (Midge)	
Stanford Ranch (SR-20)																			
15	DRY				0%	7													Peregrine falcon
256	DRY	0	2		1%	7													
Sunset West (SW-2)																			
55	DRY				0%	6													Western pond turtle ~8 in creek
131	DRY				0%														
Sunset West (SW-3)																			
118	DRY	0	2		5%														
119	DRY	0	2		2%														
57	DRY				0%														
58	DRY				0%														
Sunset West (SW-4)																			
60	DRY				0%	1													
Placer Creek Corporate Center (PCCC 1-5)																			
314	DRY				0%														
315	DRY				0%														

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Appendix D

Vernal Pool Floristic Datasheets

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2020 Plant Species Frequency for Rocklin - Orchard Creek

Species	Frequency
Blennosperma nanum	25.00%
Centaurea solstitialis	25.00%
Downingia bicornuta	25.00%
Eleocharis macrostachya	50.00%
Eryngium vaseyi	50.00%
Festuca perennis	100.00%
Geranium dissectum	25.00%
Lasthenia fremontii	25.00%
Leontodon saxatilis	50.00%
Lupinus bicolor	25.00%
Plagiobothrys stipitatus	75.00%
Ranunculus bonariensis	25.00%
Trifolium depauperatum	50.00%
Vicia sp.	25.00%

2020 Monitoring Summary for Rocklin - Orchard Creek

Wetland	Cover	PI	CVVP Species		CVVP Cover	Species Richness	Native Species	Non-Native Species	Non-Native Cover
VP-001	100%	3.39	0	0.00%	0.00%	4	1	3	97.25%
VP-002	98%	1.13	4	66.67%	93.41%	6	5	1	3.30%
VP-063	97%	2.20	2	40.00%	61.14%	5	2	3	38.86%
VP-065	95%	1.56	5	62.50%	80.28%	8	6	2	16.97%

Wetland: VP-001

Species	Cover Class
Festuca perennis	5
Geranium dissectum	1
Lupinus bicolor	1
Vicia sp.	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	3.39
CRAM RIchness:	0
CRAM Cover:	0.00%
% CVVP Species:	0.00%
CVVP Cover:	0.00%
Species Richness:	4
Native Species:	1
Non-Native Species:	3
Non-Native Cover:	97.25%

Wetland: VP-002

Species	Cover Class
Blennosperma nanum	1
Eleocharis macrostachya	1
Festuca perennis	1
Lasthenia fremontii	4
Plagiobothrys stipitatus	2
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	98%
Prevalence Index:	1.13
CRAM RIchness:	4
CRAM Cover:	93.41%
% CVVP Species:	66.67%
CVVP Cover:	93.41%
Species Richness:	6
Native Species:	5
Non-Native Species:	1
Non-Native Cover:	3.30%

Wetland: VP-063

Species	Cover Class
Centaurea solstitialis	1
Eryngium vaseyi	2
Festuca perennis	2
Leontodon saxatilis	2
Plagiobothrys stipitatus	3

Statistics	
Vegetative Cover:	97%
Prevalence Index:	2.20
CRAM RIchness:	2
CRAM Cover:	61.14%
% CVVP Species:	40.00%
CVVP Cover:	61.14%
Species Richness:	5
Native Species:	2
Non-Native Species:	3
Non-Native Cover:	38.86%

Wetland: VP-065

Species	Cover Class
Downingia bicornuta	1
Eleocharis macrostachya	2
Eryngium vaseyi	2
Festuca perennis	2
Leontodon saxatilis	1
Plagiobothrys stipitatus	3
Ranunculus bonariensis	2
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.56
CRAM RIchness:	5
CRAM Cover:	80.28%
% CVVP Species:	62.50%
CVVP Cover:	80.28%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	16.97%

2020 Plant Species Frequency for Rocklin - Placer Creek Corporate Center

Species	Frequency
Blennosperma nanum	50.00%
Cerastium fontanum	50.00%
Eleocharis macrostachya	50.00%
Elymus caput-medusae	50.00%
Erodium botrys	50.00%
Eryngium vaseyi	50.00%
Festuca perennis	50.00%
Lasthenia fremontii	50.00%
Lasthenia glaberrima	50.00%
Lythrum hyssopifolia	50.00%
Plagiobothrys stipitatus	100.00%
Pogogyne zizyphoroides	50.00%
Ranunculus bonariensis	50.00%
Trifolium depauperatum	50.00%

2020 Monitoring Summary for Rocklin - Placer Creek Corporate Center

Wetland	Cover	PI	CVVP Species		CVVP Cover	Species Richness	Native Species	Non-Native Species	Non-Native Cover
VP-312	20%	1.59	5	62.50%	84.01%	8	6	2	13.75%
VP-315	100%	1.11	4	57.14%	93.75%	7	4	3	6.25%

Wetland: VP-312

Species	Cover Class
Blennosperma nanum	2
Cerastium fontanum	1
Eleocharis macrostachya	4
Elymus caput-medusae	2
Eryngium vaseyi	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	20%
Prevalence Index:	1.59
CRAM RIchness:	5
CRAM Cover:	84.01%
% CVVP Species:	62.50%
CVVP Cover:	84.01%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	13.75%

Wetland: VP-315

Species	Cover Class
Erodium botrys	0
Festuca perennis	1
Lasthenia fremontii	2
Lasthenia glaberrima	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	4
Pogogyne zizyphoroides	1

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.11
CRAM RIchness:	4
CRAM Cover:	93.75%
% CVVP Species:	57.14%
CVVP Cover:	93.75%
Species Richness:	7
Native Species:	4
Non-Native Species:	3
Non-Native Cover:	6.25%

2020 Plant Species Frequency for Rocklin - Stanford Ranch

Species	Frequency
Alopecurus saccatus	3.85%
Blennosperma nanum	3.85%
Castilleja attenuata	7.69%
Castilleja campestris	7.69%
Cerastium fontanum	3.85%
Cicendia quadrangularis	3.85%
Cotula coronopifolia	7.69%
Crypsis sp.	3.85%
Downingia bicornuta	3.85%
Eleocharis macrostachya	88.46%
Elymus caput-medusae	3.85%
Erodium botrys	34.62%
Eryngium vaseyi	50.00%
Festuca myuros	7.69%
Geranium dissectum	3.85%
Gratiola ebracteata	11.54%
Holocarpha virgata	7.69%
Hordeum marinum	26.92%
Juncus bufonius	19.23%
Lasthenia fremontii	61.54%
Lasthenia glaberrima	69.23%
Leontodon saxatilis	53.85%
Lupinus bicolor	3.85%
Lythrum hyssopifolia	57.69%
Mentha pulegium	3.85%
Mentha sp.	3.85%
Navarretia leucocephala	15.38%
Plagiobothrys stipitatus	92.31%
Psilocarphus brevissimus	46.15%
Ranunculus bonariensis	23.08%
Rumex crispus	11.54%
Trifolium depauperatum	26.92%
Trifolium sp.	3.85%
Triphysaria eriantha	7.69%
Typha sp.	7.69%

2020 Monitoring Summary for Rocklin - Stanford Ranch

Wetland	Cover	PI	CVVP Species		CVVP Cover	Species Richness	Native Species	Non-Native Species	Non-Native Cover
VP-005	100%	1.35	7	58.33%	86.49%	12	9	3	8.11%
VP-010	95%	1.55	8	80.00%	84.26%	10	8	2	15.74%
VP-011	95%	1.28	6	75.00%	93.78%	8	8	0	0.00%
VP-012	100%	2.13	4	33.33%	55.86%	12	7	5	36.04%
VP-015	95%	1.52	6	66.67%	84.36%	9	7	2	13.45%
VP-018	25%	1.64	5	55.56%	61.48%	9	7	2	25.41%
VP-019	20%	1.76	5	62.50%	62.50%	8	6	2	19.05%
VP-020	20%	1.63	4	66.67%	76.28%	6	4	2	23.72%
VP-021	30%	1.67	2	40.00%	78.61%	5	3	2	18.41%
VP-027	50%	1.91	5	50.00%	50.00%	10	7	3	32.38%
VP-031	30%	1.10	3	60.00%	95.76%	5	4	1	0.61%
VP-033	98%	1.37	5	62.50%	79.79%	8	5	3	20.21%
VP-138	100%	1.17	6	66.67%	92.62%	9	6	3	7.38%
VP-141	70%	1.81	3	27.27%	48.67%	11	4	7	43.09%
VP-146	45%	1.48	4	66.67%	82.13%	6	5	1	14.98%
VP-153	45%	1.46	7	70.00%	84.65%	10	7	3	15.35%
VP-165	65%	1.47	5	83.33%	84.26%	6	5	1	15.74%
VP-190	65%	1.51	4	57.14%	87.32%	7	5	2	8.45%
VP-193	90%	1.18	5	83.33%	97.09%	6	5	1	2.91%
VP-196	95%	1.25	6	75.00%	95.06%	8	7	1	2.47%
VP-256	95%	1.22	5	83.33%	97.61%	6	6	0	0.00%
VP-280	20%	1.19	5	100.00%	100.00%	5	5	0	0.00%
VP-281	25%	2.36	3	33.33%	33.33%	9	5	4	36.27%
VP-291	90%	1.67	4	50.00%	65.63%	8	4	4	34.38%
VP-292	15%	1.31	5	62.50%	94.94%	8	6	2	4.43%
VP-305	85%	1.00	2	50.00%	76.60%	4	4	0	0.00%

Wetland: VP-005

Species	Cover Class
Cicendia quadrangularis	1
Eleocharis macrostachya	2
Erodium botrys	1
Eryngium vaseyi	1
Festuca myuros	1
Hordeum marinum	1
Lasthenia fremontii	2
Lasthenia glaberrima	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.35
CRAM RIchness:	7
CRAM Cover:	86.49%
% CVVP Species:	58.33%
CVVP Cover:	86.49%
Species Richness:	12
Native Species:	9
Non-Native Species:	3
Non-Native Cover:	8.11%

Wetland: VP-010

Species	Cover Class
Downingia bicornuta	1
Eryngium vaseyi	2
Gratiola ebracteata	1
Lasthenia fremontii	2
Lasthenia glaberrima	2
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Navarretia leucocephala	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.55
CRAM RIchness:	8
CRAM Cover:	84.26%
% CVVP Species:	80.00%
CVVP Cover:	84.26%
Species Richness:	10
Native Species:	8
Non-Native Species:	2
Non-Native Cover:	15.74%

Wetland: VP-011

Species	Cover Class
Eleocharis macrostachya	2
Eryngium vaseyi	1
Holocarpha virgata	1
Lasthenia fremontii	1
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	2
Ranunculus bonariensis	2
Triphysaria eriantha	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.28
CRAM RIchness:	6
CRAM Cover:	93.78%
% CVVP Species:	75.00%
CVVP Cover:	93.78%
Species Richness:	8
Native Species:	8
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-012

Species	Cover Class
Castilleja attenuata	1
Eleocharis macrostachya	2
Geranium dissectum	1
Hordeum marinum	2
Lasthenia fremontii	2
Lasthenia glaberrima	2
Leontodon saxatilis	2
Lupinus bicolor	1
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Rumex crispus	1
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	100%
Prevalence Index:	2.13
CRAM RIchness:	4
CRAM Cover:	55.86%
% CVVP Species:	33.33%
CVVP Cover:	55.86%
Species Richness:	12
Native Species:	7
Non-Native Species:	5
Non-Native Cover:	36.04%

Wetland: VP-015

Species	Cover Class
Blennosperma nanum	1
Cotula coronopifolia	1
Eleocharis macrostachya	4
Eryngium vaseyi	2
Lasthenia fremontii	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.52
CRAM RIchness:	6
CRAM Cover:	84.36%
% CVVP Species:	66.67%
CVVP Cover:	84.36%
Species Richness:	9
Native Species:	7
Non-Native Species:	2
Non-Native Cover:	13.45%

Wetland: VP-018

Species	Cover Class
Eleocharis macrostachya	2
Juncus bufonius	2
Lasthenia fremontii	1
Lasthenia glaberrima	1
Leontodon saxatilis	2
Lythrum hyssopifolia	2
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	2
Trifolium depauperatum	0

Statistics	
Vegetative Cover:	25%
Prevalence Index:	1.64
CRAM RIchness:	5
CRAM Cover:	61.48%
% CVVP Species:	55.56%
CVVP Cover:	61.48%
Species Richness:	9
Native Species:	7
Non-Native Species:	2
Non-Native Cover:	25.41%

Wetland: VP-019

Species	Cover Class
Eleocharis macrostachya	2
Erodium botrys	0
Juncus bufonius	2
Lasthenia fremontii	1
Lasthenia glaberrima	2
Lasthenia glaberrima	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	2

Statistics	
Vegetative Cover:	20%
Prevalence Index:	1.76
CRAM RIchness:	5
CRAM Cover:	62.50%
% CVVP Species:	62.50%
CVVP Cover:	62.50%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	19.05%

Wetland: VP-020

Species	Cover Class
Eleocharis macrostachya	2
Lasthenia fremontii	1
Lasthenia glaberrima	1
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	3

Statistics	
Vegetative Cover:	20%
Prevalence Index:	1.63
CRAM RIchness:	4
CRAM Cover:	76.28%
% CVVP Species:	66.67%
CVVP Cover:	76.28%
Species Richness:	6
Native Species:	4
Non-Native Species:	2
Non-Native Cover:	23.72%

Wetland: VP-021

Species	Cover Class
Eleocharis macrostachya	4
Erodium botrys	1
Festuca myuros	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	2

Statistics	
Vegetative Cover:	30%
Prevalence Index:	1.67
CRAM RIchness:	2
CRAM Cover:	78.61%
% CVVP Species:	40.00%
CVVP Cover:	78.61%
Species Richness:	5
Native Species:	3
Non-Native Species:	2
Non-Native Cover:	18.41%

Wetland: VP-027

Species	Cover Class
Eleocharis macrostachya	1
Erodium botrys	1
Juncus bufonius	2
Lasthenia fremontii	2
Lasthenia glaberrima	1
Leontodon saxatilis	2
Lythrum hyssopifolia	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	50%
Prevalence Index:	1.91
CRAM RIchness:	5
CRAM Cover:	50.00%
% CVVP Species:	50.00%
CVVP Cover:	50.00%
Species Richness:	10
Native Species:	7
Non-Native Species:	3
Non-Native Cover:	32.38%

Wetland: VP-031

Species	Cover Class
Eleocharis macrostachya	1
Erodium botrys	0
Plagiobothrys stipitatus	3
Ranunculus bonariensis	3
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	30%
Prevalence Index:	1.10
CRAM RIchness:	3
CRAM Cover:	95.76%
% CVVP Species:	60.00%
CVVP Cover:	95.76%
Species Richness:	5
Native Species:	4
Non-Native Species:	1
Non-Native Cover:	0.61%

Wetland: VP-033

Species	Cover Class
Eleocharis macrostachya	3
Eryngium vaseyi	1
Hordeum marinum	2
Lasthenia fremontii	1
Lasthenia glaberrima	2
Mentha sp.	1
Plagiobothrys stipitatus	2
Rumex crispus	0

Statistics	
Vegetative Cover:	98%
Prevalence Index:	1.37
CRAM RIchness:	5
CRAM Cover:	79.79%
% CVVP Species:	62.50%
CVVP Cover:	79.79%
Species Richness:	8
Native Species:	5
Non-Native Species:	3
Non-Native Cover:	20.21%

Wetland: VP-138

Species	Cover Class
Alopecurus saccatus	1
Erodium botrys	1
Eryngium vaseyi	1
Lasthenia fremontii	2
Lasthenia glaberrima	3
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	3
Ranunculus bonariensis	2
Rumex crispus	1

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.17
CRAM RIchness:	6
CRAM Cover:	92.62%
% CVVP Species:	66.67%
CVVP Cover:	92.62%
Species Richness:	9
Native Species:	6
Non-Native Species:	3
Non-Native Cover:	7.38%

Wetland: VP-141

Species	Cover Class
Cerastium fontanum	1
Cotula coronopifolia	3
Crypsis sp.	1
Eleocharis macrostachya	2
Elymus caput-medusae	2
Hordeum marinum	2
Lasthenia glaberrima	3
Leontodon saxatilis	1
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	3
Typha sp.	2

Statistics	
Vegetative Cover:	70%
Prevalence Index:	1.81
CRAM RIchness:	3
CRAM Cover:	48.67%
% CVVP Species:	27.27%
CVVP Cover:	48.67%
Species Richness:	11
Native Species:	4
Non-Native Species:	7
Non-Native Cover:	43.09%

Wetland: VP-146

Species	Cover Class
Eleocharis macrostachya	4
Juncus bufonius	1
Lasthenia glaberrima	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	1

Statistics	
Vegetative Cover:	45%
Prevalence Index:	1.48
CRAM RIchness:	4
CRAM Cover:	82.13%
% CVVP Species:	66.67%
CVVP Cover:	82.13%
Species Richness:	6
Native Species:	5
Non-Native Species:	1
Non-Native Cover:	14.98%

Wetland: VP-153

Species	Cover Class
Castilleja campestris	0
Eleocharis macrostachya	2
Erodium botrys	0
Gratiola ebracteata	2
Lasthenia fremontii	1
Lasthenia glaberrima	1
Leontodon saxatilis	2
Lythrum hyssopifolia	0
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	2

Statistics	
Vegetative Cover:	45%
Prevalence Index:	1.46
CRAM RIchness:	7
CRAM Cover:	84.65%
% CVVP Species:	70.00%
CVVP Cover:	84.65%
Species Richness:	10
Native Species:	7
Non-Native Species:	3
Non-Native Cover:	15.35%

Wetland: VP-165

Species	Cover Class
Eleocharis macrostachya	1
Lasthenia fremontii	0
Lasthenia glaberrima	0
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	4

Statistics	
Vegetative Cover:	65%
Prevalence Index:	1.47
CRAM RIchness:	5
CRAM Cover:	84.26%
% CVVP Species:	83.33%
CVVP Cover:	84.26%
Species Richness:	6
Native Species:	5
Non-Native Species:	1
Non-Native Cover:	15.74%

Wetland: VP-190

Species	Cover Class
Castilleja attenuata	1
Eleocharis macrostachya	2
Eryngium vaseyi	2
Gratiola ebracteata	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Trifolium sp.	1

Statistics	
Vegetative Cover:	65%
Prevalence Index:	1.51
CRAM RIchness:	4
CRAM Cover:	87.32%
% CVVP Species:	57.14%
CVVP Cover:	87.32%
Species Richness:	7
Native Species:	5
Non-Native Species:	2
Non-Native Cover:	8.45%

Wetland: VP-193

Species	Cover Class
Eleocharis macrostachya	3
Eryngium vaseyi	2
Lasthenia glaberrima	2
Lythrum hyssopifolia	1
Navarretia leucocephala	2
Psilocarphus brevissimus	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.18
CRAM RIchness:	5
CRAM Cover:	97.09%
% CVVP Species:	83.33%
CVVP Cover:	97.09%
Species Richness:	6
Native Species:	5
Non-Native Species:	1
Non-Native Cover:	2.91%

Wetland: VP-196

Species	Cover Class
Eleocharis macrostachya	2
Eryngium vaseyi	2
Holocarpha virgata	1
Lasthenia fremontii	2
Lasthenia glaberrima	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.25
CRAM RIchness:	6
CRAM Cover:	95.06%
% CVVP Species:	75.00%
CVVP Cover:	95.06%
Species Richness:	8
Native Species:	7
Non-Native Species:	1
Non-Native Cover:	2.47%

Wetland: VP-256

Species	Cover Class
Eleocharis macrostachya	3
Eryngium vaseyi	2
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	2
Ranunculus bonariensis	2
Triphysaria eriantha	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.22
CRAM RIchness:	5
CRAM Cover:	97.61%
% CVVP Species:	83.33%
CVVP Cover:	97.61%
Species Richness:	6
Native Species:	6
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-280

Species	Cover Class
Eryngium vaseyi	1
Eryngium vaseyi	2
Lasthenia fremontii	1
Navarretia leucocephala	3
Psilocarphus brevissimus	3

Statistics	
Vegetative Cover:	20%
Prevalence Index:	1.19
CRAM RIchness:	5
CRAM Cover:	100.00%
% CVVP Species:	100.00%
CVVP Cover:	100.00%
Species Richness:	5
Native Species:	5
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-281

Species	Cover Class
Eleocharis macrostachya	2
Erodium botrys	1
Hordeum marinum	2
Juncus bufonius	2
Lasthenia glaberrima	1
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Trifolium depauperatum	2

Statistics	
Vegetative Cover:	25%
Prevalence Index:	2.36
CRAM RIchness:	3
CRAM Cover:	33.33%
% CVVP Species:	33.33%
CVVP Cover:	33.33%
Species Richness:	9
Native Species:	5
Non-Native Species:	4
Non-Native Cover:	36.27%

Wetland: VP-291

Species	Cover Class
Eleocharis macrostachya	2
Hordeum marinum	2
Lasthenia fremontii	1
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Lythrum hyssopifolia	2
Navarretia leucocephala	3
Plagiobothrys stipitatus	3

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.67
CRAM RIchness:	4
CRAM Cover:	65.63%
% CVVP Species:	50.00%
CVVP Cover:	65.63%
Species Richness:	8
Native Species:	4
Non-Native Species:	4
Non-Native Cover:	34.38%

Wetland: VP-292

Species	Cover Class
Castilleja campestris	1
Eleocharis macrostachya	2
Erodium botrys	0
Eryngium vaseyi	2
Hordeum marinum	1
Lasthenia glaberrima	1
Plagiobothrys stipitatus	3
Trifolium depauperatum	0

Statistics	
Vegetative Cover:	15%
Prevalence Index:	1.31
CRAM RIchness:	5
CRAM Cover:	94.94%
% CVVP Species:	62.50%
CVVP Cover:	94.94%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	4.43%

Wetland: VP-305

Species	Cover Class
Eleocharis macrostachya	3
Mentha pulegium	2
Plagiobothrys stipitatus	4
Typha sp.	2

Statistics	
Vegetative Cover:	85%
Prevalence Index:	1.00
CRAM RIchness:	2
CRAM Cover:	76.60%
% CVVP Species:	50.00%
CVVP Cover:	76.60%
Species Richness:	4
Native Species:	4
Non-Native Species:	0
Non-Native Cover:	0.00%

2020 Plant Species Frequency for Rocklin - Sunset West

Species	Frequency
Alopecurus saccatus	12.90%
Briza minor	3.23%
Bromus hordeaceus	3.23%
Cerastium fontanum	9.68%
Deschampsia danthonioides	19.35%
Dittrichia graveloens	6.45%
Downingia bicornuta	6.45%
Eleocharis macrostachya	90.32%
Elymus caput-medusae	3.23%
Epilobium sp.	6.45%
Erodium botrys	19.35%
Eryngium vaseyi	87.10%
Festuca myuros	16.13%
Festuca sp.	3.23%
Geranium dissectum	3.23%
Holocarpha virgata	3.23%
Hordeum marinum	12.90%
Juncus bufonius	6.45%
Lasthenia fremontii	67.74%
Lasthenia glaberrima	41.94%
Leontodon saxatilis	51.61%
Lythrum hyssopifolia	29.03%
Mentha sp.	6.45%
Paspalum dilatatum	6.45%
Plagiobothrys stipitatus	87.10%
Polypogon maritimus	3.23%
Psilocarphus brevissimus	38.71%
Ranunculus bonariensis	77.42%
Rumex crispus	12.90%
Trifolium depauperatum	9.68%
Trifolium hirtum	9.68%
Trifolium sp.	3.23%

2020 Monitoring Summary for Rocklin - Sunset West

Wetland	Cover	PI	CVVP Species		CVVP Cover	Species Richness	Native Species	Non-Native Species	Non-Native Cover
VP-034	95%	1.66	6	75.00%	74.49%	8	6	2	25.51%
VP-035	95%	2.18	4	33.33%	62.94%	12	7	5	27.92%
VP-037	70%	1.86	6	60.00%	73.51%	10	7	3	23.24%
VP-038	97%	1.47	6	60.00%	88.29%	10	9	1	2.93%
VP-041	95%	1.59	6	66.67%	82.73%	9	7	2	14.86%
VP-042	90%	1.41	7	87.50%	87.24%	8	8	0	0.00%
VP-046	90%	2.33	6	75.00%	62.39%	8	6	2	37.61%
VP-047	90%	1.43	8	88.89%	88.73%	9	8	1	11.27%
VP-048	90%	1.63	5	62.50%	82.30%	8	5	3	17.70%
VP-049	95%	1.70	6	66.67%	66.67%	9	7	2	30.39%
VP-055	100%	1.14	4	100.00%	100.00%	4	4	0	0.00%
VP-057	85%	1.20	4	80.00%	97.81%	5	5	0	0.00%
VP-058	95%	1.31	7	87.50%	90.28%	8	7	1	9.72%
VP-060	98%	1.45	3	60.00%	93.85%	5	3	2	6.15%
VP-062	65%	1.40	4	80.00%	80.00%	5	4	1	20.00%
VP-075	90%	1.29	8	80.00%	94.29%	10	8	2	5.71%
VP-076	95%	1.20	6	85.71%	98.05%	7	6	1	1.95%
VP-080	85%	1.51	7	70.00%	83.14%	10	8	2	14.51%
VP-102	90%	1.50	6	75.00%	81.31%	8	6	2	18.69%
VP-105	90%	1.53	6	75.00%	84.77%	8	6	2	15.23%
VP-107	100%	1.12	5	83.33%	97.10%	6	5	1	2.90%
VP-118	100%	1.00	2	100.00%	100.00%	2	2	0	0.00%
VP-119	95%	1.12	7	100.00%	100.00%	7	7	0	0.00%
VP-131	95%	1.17	4	57.14%	91.55%	7	5	2	5.63%
VP-212	90%	1.75	6	60.00%	73.57%	10	7	3	24.29%
VP-216	100%	1.81	6	42.86%	64.87%	14	7	7	32.97%
VP-229	100%	1.45	1	50.00%	84.95%	2	1	1	15.05%
VP-242	100%	1.47	2	40.00%	82.73%	5	3	2	4.82%
VP-248	97%	1.22	7	77.78%	96.73%	9	7	2	3.27%
VP-249	80%	1.05	3	60.00%	95.12%	5	3	2	4.88%
VP-262	85%	1.13	6	85.71%	97.92%	7	6	1	2.08%

Wetland: VP-034

Species	Cover Class
Downingia bicornuta	1
Eleocharis macrostachya	3
Eryngium vaseyi	1
Hordeum marinum	2
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.66
CRAM RIchness:	6
CRAM Cover:	74.49%
% CVVP Species:	75.00%
CVVP Cover:	74.49%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	25.51%

Wetland: VP-035

Species	Cover Class
Cerastium fontanum	1
Eleocharis macrostachya	2
Elymus caput-medusae	1
Epilobium sp.	1
Eryngium vaseyi	2
Festuca myuros	1
Hordeum marinum	1
Lasthenia fremontii	2
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Trifolium depauperatum	1
Trifolium hirtum	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	2.18
CRAM RIchness:	4
CRAM Cover:	62.94%
% CVVP Species:	33.33%
CVVP Cover:	62.94%
Species Richness:	12
Native Species:	7
Non-Native Species:	5
Non-Native Cover:	27.92%

Wetland: VP-037

Species	Cover Class
Bromus hordeaceus	1
Deschampsia danthonioides	1
Eleocharis macrostachya	2
Erodium botrys	1
Eryngium vaseyi	1
Lasthenia fremontii	2
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Trifolium depauperatum	1

Statistics	
Vegetative Cover:	70%
Prevalence Index:	1.86
CRAM RIchness:	6
CRAM Cover:	73.51%
% CVVP Species:	60.00%
CVVP Cover:	73.51%
Species Richness:	10
Native Species:	7
Non-Native Species:	3
Non-Native Cover:	23.24%

Wetland: VP-038

Species	Cover Class
Alopecurus saccatus	1
Cerastium fontanum	1
Dittrichia graveloens	1
Eleocharis macrostachya	2
Eryngium vaseyi	2
Festuca myuros	1
Juncus bufonius	1
Lasthenia fremontii	1
Plagiobothrys stipitatus	3
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	97%
Prevalence Index:	1.47
CRAM RIchness:	6
CRAM Cover:	88.29%
% CVVP Species:	60.00%
CVVP Cover:	88.29%
Species Richness:	10
Native Species:	9
Non-Native Species:	1
Non-Native Cover:	2.93%

Wetland: VP-041

Species	Cover Class
Eryngium vaseyi	2
Festuca myuros	1
Lasthenia fremontii	3
Lasthenia glaberrima	2
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	1
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.59
CRAM RIchness:	6
CRAM Cover:	82.73%
% CVVP Species:	66.67%
CVVP Cover:	82.73%
Species Richness:	9
Native Species:	7
Non-Native Species:	2
Non-Native Cover:	14.86%

Wetland: VP-042

Species	Cover Class
Alopecurus saccatus	1
Eleocharis macrostachya	2
Eryngium vaseyi	1
Festuca myuros	2
Lasthenia fremontii	2
Lasthenia glaberrima	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	3

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.41
CRAM RIchness:	7
CRAM Cover:	87.24%
% CVVP Species:	87.50%
CVVP Cover:	87.24%
Species Richness:	8
Native Species:	8
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-046

Species	Cover Class
Deschampsia danthonioides	1
Eleocharis macrostachya	1
Erodium botrys	1
Eryngium vaseyi	2
Lasthenia fremontii	2
Leontodon saxatilis	3
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	2.33
CRAM RIchness:	6
CRAM Cover:	62.39%
% CVVP Species:	75.00%
CVVP Cover:	62.39%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	37.61%

Wetland: VP-047

Species	Cover Class
Alopecurus saccatus	1
Eleocharis macrostachya	2
Eryngium vaseyi	2
Lasthenia fremontii	1
Lasthenia glaberrima	1
Lasthenia glaberrima	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	4
Psilocarphus brevissimus	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.43
CRAM RIchness:	8
CRAM Cover:	88.73%
% CVVP Species:	88.89%
CVVP Cover:	88.73%
Species Richness:	9
Native Species:	8
Non-Native Species:	1
Non-Native Cover:	11.27%

Wetland: VP-048

Species	Cover Class
Eleocharis macrostachya	3
Erodium botrys	1
Eryngium vaseyi	2
Lasthenia fremontii	2
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.63
CRAM RIchness:	5
CRAM Cover:	82.30%
% CVVP Species:	62.50%
CVVP Cover:	82.30%
Species Richness:	8
Native Species:	5
Non-Native Species:	3
Non-Native Cover:	17.70%

Wetland: VP-049

Species	Cover Class
Deschampsia danthonioides	1
Eryngium vaseyi	1
Juncus bufonius	1
Lasthenia fremontii	2
Lasthenia glaberrima	2
Leontodon saxatilis	2
Lythrum hyssopifolia	2
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.70
CRAM RIchness:	6
CRAM Cover:	66.67%
% CVVP Species:	66.67%
CVVP Cover:	66.67%
Species Richness:	9
Native Species:	7
Non-Native Species:	2
Non-Native Cover:	30.39%

Wetland: VP-055

Species	Cover Class
Eleocharis macrostachya	2
Eryngium vaseyi	2
Plagiobothrys stipitatus	4
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.14
CRAM RIchness:	4
CRAM Cover:	100.00%
% CVVP Species:	100.00%
CVVP Cover:	100.00%
Species Richness:	4
Native Species:	4
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-057

Species	Cover Class
Eleocharis macrostachya	5
Eryngium vaseyi	2
Holocarpha virgata	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	85%
Prevalence Index:	1.20
CRAM RIchness:	4
CRAM Cover:	97.81%
% CVVP Species:	80.00%
CVVP Cover:	97.81%
Species Richness:	5
Native Species:	5
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-058

Species	Cover Class
Eleocharis macrostachya	4
Eryngium vaseyi	1
Lasthenia fremontii	2
Lasthenia glaberrima	2
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.31
CRAM RIchness:	7
CRAM Cover:	90.28%
% CVVP Species:	87.50%
CVVP Cover:	90.28%
Species Richness:	8
Native Species:	7
Non-Native Species:	1
Non-Native Cover:	9.72%

Wetland: VP-060

Species	Cover Class
Eleocharis macrostachya	3
Eryngium vaseyi	3
Mentha sp.	1
Paspalum dilatatum	1
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	98%
Prevalence Index:	1.45
CRAM RIchness:	3
CRAM Cover:	93.85%
% CVVP Species:	60.00%
CVVP Cover:	93.85%
Species Richness:	5
Native Species:	3
Non-Native Species:	2
Non-Native Cover:	6.15%

Wetland: VP-062

Species	Cover Class
Eryngium vaseyi	2
Lasthenia fremontii	2
Lythrum hyssopifolia	2
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	65%
Prevalence Index:	1.40
CRAM RIchness:	4
CRAM Cover:	80.00%
% CVVP Species:	80.00%
CVVP Cover:	80.00%
Species Richness:	5
Native Species:	4
Non-Native Species:	1
Non-Native Cover:	20.00%

Wetland: VP-075

Species	Cover Class
Alopecurus saccatus	1
Deschampsia danthonioides	1
Eleocharis macrostachya	2
Eryngium vaseyi	2
Lasthenia fremontii	2
Leontodon saxatilis	1
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.29
CRAM RIchness:	8
CRAM Cover:	94.29%
% CVVP Species:	80.00%
CVVP Cover:	94.29%
Species Richness:	10
Native Species:	8
Non-Native Species:	2
Non-Native Cover:	5.71%

Wetland: VP-076

Species	Cover Class
Deschampsia danthonioides	2
Eleocharis macrostachya	3
Eryngium vaseyi	1
Lasthenia fremontii	4
Lasthenia glaberrima	2
Plagiobothrys stipitatus	2
Trifolium hirtum	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.20
CRAM RIchness:	6
CRAM Cover:	98.05%
% CVVP Species:	85.71%
CVVP Cover:	98.05%
Species Richness:	7
Native Species:	6
Non-Native Species:	1
Non-Native Cover:	1.95%

Wetland: VP-080

Species	Cover Class
Deschampsia danthonioides	1
Eleocharis macrostachya	2
Epilobium sp.	1
Erodium botrys	1
Eryngium vaseyi	1
Lasthenia fremontii	2
Leontodon saxatilis	2
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	85%
Prevalence Index:	1.51
CRAM RIchness:	7
CRAM Cover:	83.14%
% CVVP Species:	70.00%
CVVP Cover:	83.14%
Species Richness:	10
Native Species:	8
Non-Native Species:	2
Non-Native Cover:	14.51%

Wetland: VP-102

Species	Cover Class
Eleocharis macrostachya	2
Eryngium vaseyi	2
Lasthenia fremontii	2
Lasthenia glaberrima	1
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Trifolium sp.	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.50
CRAM RIchness:	6
CRAM Cover:	81.31%
% CVVP Species:	75.00%
CVVP Cover:	81.31%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	18.69%

Wetland: VP-105

Species	Cover Class
Eleocharis macrostachya	2
Eryngium vaseyi	2
Lasthenia fremontii	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	2
Ranunculus bonariensis	3
Rumex crispus	1

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.53
CRAM RIchness:	6
CRAM Cover:	84.77%
% CVVP Species:	75.00%
CVVP Cover:	84.77%
Species Richness:	8
Native Species:	6
Non-Native Species:	2
Non-Native Cover:	15.23%

Wetland: VP-107

Species	Cover Class
Eleocharis macrostachya	4
Eryngium vaseyi	1
Lasthenia fremontii	1
Leontodon saxatilis	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.12
CRAM RIchness:	5
CRAM Cover:	97.10%
% CVVP Species:	83.33%
CVVP Cover:	97.10%
Species Richness:	6
Native Species:	5
Non-Native Species:	1
Non-Native Cover:	2.90%

Wetland: VP-118

Species	Cover Class
Eleocharis macrostachya	5
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.00
CRAM RIchness:	2
CRAM Cover:	100.00%
% CVVP Species:	100.00%
CVVP Cover:	100.00%
Species Richness:	2
Native Species:	2
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-119

Species	Cover Class
Downingia bicornuta	1
Eleocharis macrostachya	2
Eryngium vaseyi	2
Lasthenia glaberrima	1
Plagiobothrys stipitatus	2
Psilocarphus brevissimus	4
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.12
CRAM RIchness:	7
CRAM Cover:	100.00%
% CVVP Species:	100.00%
CVVP Cover:	100.00%
Species Richness:	7
Native Species:	7
Non-Native Species:	0
Non-Native Cover:	0.00%

Wetland: VP-131

Species	Cover Class
Dittrichia graveloens	1
Eleocharis macrostachya	4
Eryngium vaseyi	1
Mentha sp.	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2
Rumex crispus	1

Statistics	
Vegetative Cover:	95%
Prevalence Index:	1.17
CRAM RIchness:	4
CRAM Cover:	91.55%
% CVVP Species:	57.14%
CVVP Cover:	91.55%
Species Richness:	7
Native Species:	5
Non-Native Species:	2
Non-Native Cover:	5.63%

Wetland: VP-212

Species	Cover Class
Eleocharis macrostachya	3
Eryngium vaseyi	2
Festuca myuros	1
Hordeum marinum	2
Lasthenia fremontii	2
Lasthenia glaberrima	1
Leontodon saxatilis	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	90%
Prevalence Index:	1.75
CRAM RIchness:	6
CRAM Cover:	73.57%
% CVVP Species:	60.00%
CVVP Cover:	73.57%
Species Richness:	10
Native Species:	7
Non-Native Species:	3
Non-Native Cover:	24.29%

Wetland: VP-216

Species	Cover Class
Briza minor	1
Cerastium fontanum	1
Eleocharis macrostachya	2
Erodium botrys	1
Eryngium vaseyi	1
Hordeum marinum	1
Lasthenia fremontii	3
Lasthenia glaberrima	1
Leontodon saxatilis	2
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2
Rumex crispus	2
Trifolium depauperatum	1
Trifolium hirtum	1

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.81
CRAM RIchness:	6
CRAM Cover:	64.87%
% CVVP Species:	42.86%
CVVP Cover:	64.87%
Species Richness:	14
Native Species:	7
Non-Native Species:	7
Non-Native Cover:	32.97%

Wetland: VP-229

Species	Cover Class
Eleocharis macrostachya	5
Leontodon saxatilis	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.45
CRAM RIchness:	1
CRAM Cover:	84.95%
% CVVP Species:	50.00%
CVVP Cover:	84.95%
Species Richness:	2
Native Species:	1
Non-Native Species:	1
Non-Native Cover:	15.05%

Wetland: VP-242

Species	Cover Class
Eleocharis macrostachya	5
Festuca sp.	2
Geranium dissectum	1
Polypogon maritimus	1
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	100%
Prevalence Index:	1.47
CRAM RIchness:	2
CRAM Cover:	82.73%
% CVVP Species:	40.00%
CVVP Cover:	82.73%
Species Richness:	5
Native Species:	3
Non-Native Species:	2
Non-Native Cover:	4.82%

Wetland: VP-248

Species	Cover Class
Eleocharis macrostachya	1
Erodium botrys	0
Eryngium vaseyi	2
Lasthenia fremontii	3
Lasthenia glaberrima	1
Paspalum dilatatum	1
Plagiobothrys stipitatus	3
Psilocarphus brevissimus	1
Ranunculus bonariensis	1

Statistics	
Vegetative Cover:	97%
Prevalence Index:	1.22
CRAM RIchness:	7
CRAM Cover:	96.73%
% CVVP Species:	77.78%
CVVP Cover:	96.73%
Species Richness:	9
Native Species:	7
Non-Native Species:	2
Non-Native Cover:	3.27%

Wetland: VP-249

Species	Cover Class
Eleocharis macrostachya	4
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	3
Ranunculus bonariensis	2
Rumex crispus	1

Statistics	
Vegetative Cover:	80%
Prevalence Index:	1.05
CRAM RIchness:	3
CRAM Cover:	95.12%
% CVVP Species:	60.00%
CVVP Cover:	95.12%
Species Richness:	5
Native Species:	3
Non-Native Species:	2
Non-Native Cover:	4.88%

Wetland: VP-262

Species	Cover Class
Eleocharis macrostachya	2
Eryngium vaseyi	2
Lasthenia fremontii	4
Lasthenia glaberrima	2
Lythrum hyssopifolia	1
Plagiobothrys stipitatus	2
Ranunculus bonariensis	2

Statistics	
Vegetative Cover:	85%
Prevalence Index:	1.13
CRAM RIchness:	6
CRAM Cover:	97.92%
% CVVP Species:	85.71%
CVVP Cover:	97.92%
Species Richness:	7
Native Species:	6
Non-Native Species:	1
Non-Native Cover:	2.08%

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Appendix E

Regionally Occurring Listed and Special-Status Species

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Appendix E (cont.)
Regionally Occurring Listed and Special-Status Species

Table 1 — Legally Protected Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Boggs Lake hedge-hyssop *Gratiola heterosepala*	--; CE; --; 1B	Annual herb found on clay soils in vernal pools and swamps, occasionally along lake margins, from 10 to 2,375 meters.	Blooming period: April – August	**Potential.** The Preserve provides suitable habitat for this species within the vernal pool habitat within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), and Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020.To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There are three CNDDB records for this species within five miles of the Preserve (CDFW 2020).
Sacramento Orcutt grass *Orcuttia viscida*	FE; CE; --; 1B.1	Annual herb found in vernal pools from 30 - 100 meters.	Blooming period: April – July (Sept.)	**Potential.** This species grows in deep vernal pools that remain flooded for relatively long periods of time. It is associated with ancient alluvial soils, such as prehistoric floodplains. (Natomas Basin Habitat Conservation Plan 2020). Although the Preserve contains numerous vernal pools within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections, few provide the depth and soils this species requires. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species.
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT; --; --; --	Associated with elderberry shrubs (*Sambucus* sp.) often within riparian habitats. Presence can be indicated by bore-holes in stems of elderberries.	March – June (Adults) Year – round (Larvae)	**Potential.** Elderberry shrubs are located throughout the Preserves within Brighton (B -1), Garnet Creek (GR-1) and Stanford Ranch (SR -1, 12, 13, and 15) subsections, providing habitat for this species. Evidence, in the form of potential exit holes, have been observed on shrubs within Stanford Ranch (SR-15) subsection. Exit holes were seen on May 28, 2020, by HELIX biologists while conducting annual surveys. There are nine CNDDB records for this species within five miles of the Preserve (CDFW 2020).
Vernal pool fairy shrimp *Branchinecta lynchi*	FT; --; --; --	Inhabits vernal pools, swales, and ephemeral freshwater habitat. Known from Alameda, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Kings, Madera, Merced, Monterey, Napa, Placer, Riverside, Sacramento, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Ventura, Yolo, and Yuba counties.	USFWS protocol-level wet-season sampling and/or dry season cyst identification	**Present.** The Preserve provides suitable habitat for this species within the vernal pool habitat located in Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR-8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Most recent occurrences were noted within Stanford Ranch and Sunset West subsections (HELIX 2020).
Conservancy fairy shrimp *Branchinecta conservatio*	FE; --; --; --	Inhabits vernal pools, swales, and ephemeral freshwater habitat. Known from Butte, Tehama, Glenn, Yolo, Solano, Stanislaus, Merced, and Ventura counties.	USFWS protocol-level wet-season sampling and/or dry season cyst identification	**None.** Although the Preserve contains vernal pool habitat, the Preserve is outside of the known geographical range of this species. Currently known from eight disjunct localities in California, including Butte and Tehama counties, in one large playa pool at the Sacramento National Wildlife Refuge in Glenn County, in one vernal pool in western Placer County at the Mariner Conservation Bank, in one playa pool at the Glide Tule Elk Reserve in Yolo County, at Jepson prairie and surrounding areas in Solano County,

Appendix E (cont.)
Regionally Occurring Listed and Special-Status Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
				and in Eastern and Western Merced County (Helm 1998).
Vernal pool tadpole shrimp *Lepidurus packardi*	FE; --; --; --	Inhabits vernal pools, swales, and ephemeral freshwater habitat. Known from Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Kings, Merced, Placer, Fresno, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba counties.	USFWS protocol-level wet-season sampling and/or dry season cyst identification.	**Potential.** The Preserve contains suitable vernal pool and ephemeral freshwater habitat for this species within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There are two CNDDB record for this species within five miles of the Preserve (CDFW 2020).
Fish				
Delta smelt *Hypomesus transpacificus*	FT; CE; --; --	Found in open waters of bays, tidal rivers, channels, and sloughs.	Year – Round	**None.** The Preserve does not contain suitable habitat to support this species (i.e., open waters of bays, tidal rivers, channels, and sloughs).
Steelhead - Central Valley DPS *Oncorhynchus mykiss irideus*	FT; --; --; --	Found in the ocean, rivers, creeks, and large inland lakes. This distinct population only occurs in the Sacramento and San Joaquin Rivers and their tributaries.	Year – Round	**Potential.** Secret Ravine and its tributaries provide suitable spawning habitat for this species. There are two CNDDB record for this species within five miles of Preserve (CDFW 2020).
Amphibians/Reptiles				
California red-legged frog *Rana draytonii*	FT; CSC; --; --	Found near quiet, permanent pools of streams, marshes, and ponds with extensive vegetation below 1200 meters. Typically occurs in humid forests, woodlands, grassland, and foothill habitats. Adults may disperse considerable distances between pools during rain events. Breeds in permanent pools from January through July.	Year – Round	**None.** This species is generally considered extirpated from the Central Valley.
Giant garter snake *Thamnophis gigas*	FT; CT--; --	Found in agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes, ponds, sloughs, small lakes, and their associated uplands in Sacramento, Sutter, Butte, Colusa, and Glenn counties.	Active outside of dormancy period November-mid March	**None.** The Preserve is outside of the current known range of the species.
Birds				
Bald eagle *Haliaeetus leucocephalus*	FD; CE; --; --	Breeding habitat most commonly includes areas within 2.5 miles (4.0 kilometers) of coastal areas, bays, rivers, lakes, and reservoirs. Nests usually are in tall trees or on pinnacles or cliffs near water.	Year - round	**Potential.** Although the Preserve does not contain suitable breeding habitat for this species (i.e., within 4.0 kilometers (2.5 miles) of coastal areas, bays, rivers, lakes, and reservoirs). The species has the potential to be observed flying over or perching in trees within the Preserve.
Bank swallow *Riparia riparia*	--; CT; --; -- Nesting	Colonial breeder found in open and partly open situations, frequently near flowing water. Nests on steep sand, dirt, or gravel banks, in burrows dug near the top of the bank, along the edge of inland water, or along the coast, or in gravel pits or road embankments.	February – October	**Potential.** Some Preserve subsections within Whitney Ranch WR-1), and Stanford Ranch (SR- 8 and 13) contain steep banks along creeks and drainages that may provide habitat for this species.
California black rail *Laterallus jamaicensis coturniculus*	--; CT; --; --	Saltwater, brackish, and freshwater marshes. Does not occur in wetland areas with annual fluctuations in water level and need a permanent water source of at least 1 inch in depth.	Year – round	**Potential.** Wetlands located throughout the Preserve subsections within Claremont, Garnet Creek, Sandford Ranch, Sunset West, and Whitney Ranch contain suitable habitat for this species. There is one CNDDB record for this species within five miles of Preserve (CDFW 2020).

Appendix E (cont.)
Regionally Occurring Listed and Special-Status Species

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Golden eagle *Aquila chrysaetos*	--; CFP; --; --	Open and semi-open areas in the mountains up to 12,000 feet in elevation. They are also found in canyon lands, rimrock, terrain, and riverside cliffs and bluffs. Nest are built on cliffs and steep escarpments in grassland, in trees, chaparral, shrubland, forests and man-made structures within vegetated areas.	Year - round	**Potential.** Although the Preserve does not contain suitable nesting habitat (i.e. canyon lands, rimrock, terrain, and riverside cliffs and bluffs). The Preserve provides suitable forging habitat. The species has the potential to be observed flying over or perching in trees within the Preserve.
Swainson's hawk *Buteo swainsoni*	--; CT; --; --	Nest peripherally in valley riparian systems, lone trees or groves of trees in agricultural fields. Valley oak, Fremont cottonwood, walnut, and large willow trees, ranging in height from 41 to 82 feet, are the most commonly used nest trees in the Central Valley.	Breeding: March – October	**Present.** This species has been observed foraging in Orchard Creek and Placer Creek Corporate Center subsections of the Preserve (PCCC 1-5) (HELIX 2019). There are five CNDDB record for this species within five miles of the Preserve (CDFW 2020).
Tricolored blackbird *Agelaius tricolor*	--; CCE; CSA; --	Nests in colonies near fresh water, usually within emergent wetland habitat with tall, dense cattails, tule, willow, blackberry, wild rose, and other marshy vegetation. Forages in open grassland, wetland, and agricultural habitats.	Year – Round	**Present.** This species has been observed nesting in Whitney Ranch (WR-1) and foraging in Orchard Creek and Whitney Ranch (WR-2) (HELIX 2019). There are ten CNDDB record for this species within five miles of the Preserve (CDFW 2020).
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT; CE; --; --	Found in woodlands, thickets, orchards, and streamside groves. Breeds mostly in dense deciduous stands, including forest edges, tall thickets, dense second growth, overgrown orchards, and scrubby oak woodlands. Often found in willow groves around marshes. In the west, mostly in streamside trees, including cottonwood-willow groves in arid country.	Breeding: Late Spring – Early Fall	**None.** Although the Preserve contains some riparian habitat, this species requires large blocks for nesting. Along the Sacramento River, nesting yellow-billed cuckoos occupied home ranges which included 25 acres (10 hectares) or more of riparian habitat. Another study on the same river found riparian patches with yellow-billed cuckoo pairs to average 99 acres (40 hectares). Home ranges in the South Fork of the Kern River averaged about 42 acres (17 hectares) (CDFW 2017).

Table 1 includes federal threatened or endangered species and eagles, and State threatened, endangered, or fully protected species.

Table 2 — Species Subject to CEQA Review

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*	--; --; --; 1B	Annual herb found in mesic areas in valley and foothill grasslands from 30 to 229 meters.	Blooming period: March – May	**Potential.** The Preserve provides suitable habitat for this species within the vernal pool habitat within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), and Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species.
Big-scale balsamroot *Balsamorhiza macrolepis*	--; --; --; 1B.2	Perennial herb found in chaparral, cismontane woodland, valley and foothill grasses, and sometimes in serpentinite soils.	Blooming period: March - June	**Potential.** The Preserve contains suitable grassland and woodland habitat for this species throughout the Preserves within Brighton, Clermont, Garnet Creek, Orchard Creek, Parklands North, Placer Creek Corporate Center, Stanford Ranch, Sunset West, and Whitney Ranch. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There are two CNDDB records for this species within five miles of the Study Area (CDFW 2020).
Dwarf downingia *Downingia pusilla*	--; --; --; 2B	An annual herb found in mesic areas within valley and foothill grassland and vernal pool habitats from 1 to 445 meters.	Blooming period: March – May	**Potential.** The Preserve contains suitable vernal pool and grassland habitat for this species within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There are sixteen CNDDB records for this species within five miles of the Study Area (CDFW 2020).
Hispid salty bird's-beak *Chloropyron mole* ssp. *hispidum*	--; --; --; 1B	Annual hemiparasite herb found on alkaline soil in meadows and seeps, playas, valley and foothill grasslands, from 1-155 meters.	Blooming period: June – September	**Present.** This species has been found within Stanford Ranch (SR-12) subsection within the alkali sink (Foothill Associates 2018). Verification of the hispid bird' s-beak populations took place during the 2018-2019 survey season (HELIX 2019).
Legenere *Legenere limosa*	--; --; --; 1B	Annual herb found in vernal pools from 1 to 880 meters.	Blooming period: April – June.	**Potential.** The Preserve contains suitable vernal pool habitat for this species within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species.

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
				There are four CNDDB records for this species within five miles of the Study Area (CDFW 2020).
Pincushion navarretia *Navarretia myersii* ssp. *myersii*	--; --; --; 1B	Annual herb often found in acidic soils within vernal pools from 20 to 330 meters.	Blooming period: April – May	**Potential.** The Preserve contains suitable vernal pool habitat for this species within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There is one CNDDB records for this species within five miles of the Study Area (CDFW 2020).
Red Bluff dwarf rush *Juncus leiospermus*	--; --; --; 1B	Annual herb in vernally moist chaparral, cismontane woodlands, meadows and seeps, valley and foothill grasslands, and vernal pools from 35-1,250 meters.	Blooming period: March – June	**Potential.** The Preserve contains suitable vernal pool and annual grassland habitat for this species within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There is one CNDDB record for this species within five miles of the Study Area (CDFW 2020).
Sanford's arrowhead *Sagittaria sanfordii*	--; --; --; 1B	Perennial rhizomatous herb found in assorted shallow freshwater wetlands, marshes, and swamps from 0 to 650 meters.	Blooming period: May – October	**Potential**. The seasonal wetlands located throughout the Preserve provide suitable habitat for this species. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appendices Preserve subsections may contain potential habitat for this species.
Invertebrates				
California linderiella *Linderiella occidentalis*	--; CSA; --; --	Found in most landforms, geologic formations and soil types supporting vernal pools in California. They are typically found in deeper vernal pools throughout elevations ranging from 10 to 1,159 meters.	USFWS protocol-level wet-season sampling and/or dry season cyst identification.	**Present.** The Preserve provides suitable habitat for this species within the vernal pool habitat located within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Most recent occurrences were noted within Stanford Ranch and Sunset West subsections (HELIX 2020).
Amphibians/Reptiles				
Western pond turtle *Emys marmorata*	--; CSA; --; --	Occurs in a variety of aquatic habitats such as ponds, creeks, ditches, lakes, and marshes. Prefers areas with abundant vegetation and rocky or muddy substrate. Exposed banks or other basking areas such as logs or cattail mats are required. Upland habitat typically occurs within woodlands, forests, or grasslands, within the vicinity of aquatic habitat.	Year – Round	**Present.** The Preserve provides suitable aquatic and upland habitat for this species. This species was observed in numerous subsections within Stanford Ranch and Sunset West (HELIX 2019).
Western spadefoot *Spea hammondii*	--; CSC; --; --	Found in a variety of upland habitats, including lowlands, foothills, grasslands, open chaparral, and pine-oak woodlands. Habitat preferences include shortgrass plains, and sandy or gravelly soils for burrowing (e.g., alkali flats, washes, alluvial fans).	Breeding: January – May	**Potential**. The annual grassland and vernal pools located within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
		Hibernates/aestivates for most of the year underground. During the breeding season are found in temporary rain pools, and slow-moving streams (e.g., areas flooded by intermittent streams).		subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. There are ten CNDDB record for this species within five miles of the Study Area (CDFW 2020).
Birds				
Burrowing owl *Athene cunicularia*	--; CSC; --; -- (burrowing sites and some wintering sites)	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat. The burrows are found in dry, level, open terrain, including prairie, plains, desert, and grassland with low height vegetation for foraging and available perches, such as fences, utility poles, posts, or raised rodent mounds.	Year – round	**Potential.** The annual grassland and ground squirrel burrows located throughout the Preserve provides suitable habitat for this species. Surveys have been conducted for this species between 2015-2020. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appendices Preserve subsections may contain potential habitat for this species. There are two CNDDB record for this species within five miles of the Study Area (CDFW 2020).
Cooper's hawk *Accipiter cooperii*	--; --; --; WL	Nests in woodlands and urban trees. Preys on medium-sized birds and small mammals. Forages in open woodland and habitat edges.	Year – Round	**Present.** The oak woodland within the Preserve subsections within Brighton (B -1), Clermont (C-1 – 5), Garnet Creek (GC -1), Parklands North (PN -1), Stanford Ranch (SR 1-3, 5, 8, 9, and 11), Sunset West (SW – 5 and 6), and Whitney Ranch (WR- 1 and 3-8) provide nesting habitat for this species and surrounds annual grassland provide foraging habitat. This species was observed in Claremont (C-4) in 2017 (Foothill Associates 2017).
Double-crested cormorant *Phalacrocorax auritus*	--; --; --; WL	Coasts, bays, lakes, rivers. Very adaptable, may be found in almost any aquatic habitat, from rocky northern coasts to mangrove swamps to large reservoirs to small inland ponds. Nests in trees near or over water, on sea cliffs, or on ground on islands.	Year - round	**Potential.** The Preserve provides suitable nesting and foraging habits for this species within portions Clermont, Garnet Creek, Parklands North, Stanford Ranch, Sunset West, and Whitney Ranch Preserve subsections.
Grasshopper sparrow *Ammodramus savannarum*	--; CSC; --; --	Frequents dense, dry, or well drained grassland, especially native grassland. Nests at base of overhanging clump of grass. This species is known from Los Angeles, Mendocino, Orange, Placer, Sacramento, San Diego, San Luis Obispo, Solano, and Yuba counties, in California.	Breeding: April – July	**Potential.** The Preserve provides suitable nesting habits for this species within the annual grasslands located throughout the Preserves.
Great blue heron *Ardea herodias*	--; CSA; --; --	Inhabits both freshwater and saltwater habitats and forages in grassland and agricultural field. Breeding colonies are located within 2 to 4 miles of feeding areas, often in isolated swamps or on islands, and near lakes and ponds bordered by forests.	Year – round	**Present.** The Preserve provides suitable nesting and foraging habitat for this species. This species has been observed forging within Stanford Ranch, Sunset West, and Whitney Ranch subsections (HELIX 2019). To date, no rookery sites have been observed.
Great egret *Ardea alba*	--; CSA; --; --	Found in marshes, swampy woods, tidal estuaries, lagoons, mangroves, streams, lakes, ponds, fields and meadows. Nests primarily in tall trees, or in woods or thickets near water.	Year – round	**Present.** The Preserve provides suitable nesting and foraging habitat for this species. This species has been observed forging within Claremont, Orchard Creek, Stanford Ranch, Sunset West, and Whitney Ranch subsections (HELIX 2019). To date, no rookery sites have been observed.
Lawrence's goldfinch *Spinus lawrencei*	BCC; --; --; --	Typical habitats include valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats.	Breeding: March – September	**Potential.** The oak woodland and riparian habitat located throughout Preserve provide suitable foraging and nesting habitat for this species.

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
		Winters erratically in southern coastal lowlands and Colorado River Valley.		
Lewis' woodpecker *Melanerpes lewis*	BCC; --; --; --	Found in open forest and woodland, often logged or burned, including oak, coniferous forest (primarily ponderosa pine), riparian woodland (dominated by cottonwood), orchards, and less commonly in pinyon-juniper habitat. In winter uses oak woodlands, nut and fruit orchards. Nests in natural tree cavities, abandoned northern flicker holes or previously used cavities.	Year - round	**None.** This species inhabits transitional habitats between oak and coniferous forests at higher elevations than the Preserve.
Long-billed curlew *Numenius americanus*	BCC; --; --; --	Nests in low-growing vegetation (4-8" high), including shortgrass and mixed grass prairies and agricultural fields. In the winter, they migrate to the coast where they inhabit wetlands, tidal estuaries, mudflats, flooded fields, and occasionally beaches.	Breeding: Summer	**None.** The Preserve is outside of known range of this species. Summer breeding populations occur in the Siskiyou and Lassen Counties in northeastern California. Winter transients occur in the Central and Imperial Valleys (Zeiner et al 1990).
Marbled godwit *Limosa fedoa*	BCC; --; --; --	Large shorebird that breeds in the prairie pothole region of the northern United States and southern Canada. It winters in North, Central, and South America, mainly in coastal areas. During the breeding season, marbled godwits prefer native grasslands with short vegetation adjacent to a variety of ephemeral and semi-permanent wetlands (Ryan et al. 1984; Gratto-Trevor 2000) On the wintering grounds, Marbled Godwits forage and rest along coastal mudflats, estuaries, and sandy beaches.	Winter	**None.** The Preserve is outside of known range of this species.
Merlin *Falco columbarius*	--; --; --; WL	An uncommon winter migrant in California; breeds in Alaska and Canada. Uses a variety of habitats but requires trees close to water for cover and is usually found near coastlines, lakeshores, and wetlands.	Winter	**Potential.** The annual grassland located throughout the Preserve provides suitable winter foraging habitat.
Nuttall's woodpecker *Picoides nuttallii*	BCC; --; --; --	Found primarily in oak woodlands and in riparian woods; rarely in conifer.	Year- round	**Potential**. The oak woodland and riparian habitat located within Brighton (B-1), Clermont (C-1-5), Garnet Creek (GC-1), Parklands North (PN-1), Stanford Ranch (SR 1-21), Sunset West (SW 1-6 and 8), and Whitney Ranch (WR-1, 3-6) Preserve subsections provide suitable foraging and nesting habitat for this species.
Oak titmouse *Baeolophus inornatus*	BCC; --; --; --	Found in oak and pine-oak woodland, arborescent chaparral, and oak-riparian associations. Nests are constructed in natural tree cavities, in woodpecker holes or bird boxes approximately 1 to 11 meters above ground.	Year - round	**Present.** The oak woodland and riparian habitat located throughout the Preserve provide suitable foraging and nesting habitat for this species. This species has been observed within the oak woodlands within Stanford Ranch, Sunset West, and Whitney Ranch subsections (HELIX 2019).
Osprey *Pandion haliaetus*	--; --; --; WL	Rivers, lakes, coast. Found near water, either fresh or salt, where large numbers of fish are present. May be most common around major coastal estuaries and salt marshes, but also regular around large lakes, reservoirs, rivers. Migrating Ospreys are sometimes seen far from water, even over the desert.	Breeding: Spring	**Potential.** The Preserve provides nesting and marginal foraging habitat for this species within the annual grassland, riparian and oak woodland habitat located throughout the Preserve. The Preserve lacks areas where the species can hunt for large numbers of fish (i.e. coastal estuaries, large lakes, and rives). There is one CNDDB occurrence documented within five miles of the Preserve (CDFW 2020).
Purple martin *Progne subis*	--; CSC; --; --	Nests in wide variety of open and partly open habitats that are often near water or around towns. Nests in tree cavities, abandoned woodpecker holes, crevices in rocks, and sometimes in bird houses or gourds put up by humans.	Breeding: Summer	**Potential.** The Preserve provides suitable nesting and foraging habitat for this species within the annual grassland, riparian and oak woodland habitat throughout the entirety of the Preserve.

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
				There is one CNDDB occurrence documented within five miles of the Preserve (CDFW 2020).
Rufous hummingbird *Selasphorus rufus*	BCC; --; --; --	Long-distance migrant traveling nearly 4,000 miles from breeding grounds in Alaska and northwest Canada to wintering sites in Mexico. They travel north up the Pacific Coast in spring and return by the Rocky Mountains in late summer and fall. Feed primarily on nectar from colorful, tubular flowers including columbine, scarlet gilia, penstemon, Indian paintbrush, mints, lilies, fireweeds, larkspurs, currants, and heaths. Also get protein and fat from eating insects, particularly gnats, midges, and flies taken from the air, and aphids taken from plants.	Migration: Spring	**Potential.** The Preserve provides situatable forging habitat throughout the Preserve.
Short-billed dowitcher *Limnodromus griseus*	BCC; --; --; --	Found in small lakes, and in manmade environments such as impoundments, sewage ponds, and flooded farm fields as well as in muddy margins of rivers, lakes, and bays. Migrants also rest on rocky and sandy shorelines and occasionally feed in such places, but they forage mostly where there is a fine muddy bottom covered by a few inches of water.	Year- round	**None.** The Preserve does not provide habitat for this species.
Song sparrow ("Modesto" population) *Melospiza melodia*	--; CSC; --; --	Found in thickets, brush, marshes, roadsides, gardens. Habitat varies over its wide range. In most areas, found in brushy fields, stream sides, shrubby marsh edges, woodland edges, hedgerows, well-vegetated gardens. Some coastal populations live in salt marshes. Nests in dense streamside brush in southwestern deserts, and in any kind of dense low cover on Aleutian Islands, Alaska.	Year - round	**Potential**. The Preserve provides suitable nesting and foraging habitat for this species within the annual grassland, riparian and oak woodland habitat throughout the entirety of the Preserve.
Spotted towhee *Pipilo maculatus*	BCC; --; --; --	Found in thickets, forest edges, old fields, shrubby backyards, chaparral, coulees, and canyon bottoms, places with dense shrub cover and plenty of leaf litter for the towhees to scratch around in. Nests either on the ground or near it (though occasionally up to 12 feet high). They often choose fairly exposed areas over sites deep inside a thicket, but within these areas they find a clump of grass, a log, or the base of a shrub to conceal their nests against.	Year - round	**Present**. The Preserve provides suitable nesting and foraging habitat for this species within the annual grassland, riparian and oak woodland habitat throughout Preserve. This species has been observed within the riparian woodland within Sandford Ranch (SR-15) and Whitney Ranch (WR-1) while conducting annual surveys (Foothill Associates 2016) and (Helix 2019).
Whimbrel *Numenius phaeopus*	BCC; --; --; --	Found in saltmarshes, lagoons, estuaries, and on reefs and rocky shorelines where small crabs are available. Nests are built on raised sites such as a hummock or small ridge, usually near a shrub to offer shelter from wind; such sites are drier than surrounding areas and usually have better visibility.	Winter	**None.** The Preserve does not provide habitat for this species.
Willet *Tringa semipalmata*	BCC; --; --; --	Found in open beaches, bayshores, marshes, mudflats, and rocky coastal zones. Nest on the ground along pond edges and other seasonal wetlands, or on raised sites near water.	Winter	**None.** The Preserve does not provide habitat for this species.
White-tailed kite *Elanus leucurus*	--; CFP; --; -- (nesting)	Inhabits savanna, open woodlands, marshes, desert grassland, partially cleared lands and cultivated fields. Nests in trees, often near a marsh in savanna, open woodland, partially cleared lands, and cultivated fields. Foraging occurs within ungrazed or lightly grazed fields and pastures.	Year - round	**Present.** This species has been observed foraging in the Placer Creek Corporate Center subsection (PCCC 1-5) (HELIX 2019). There is one CNDDB occurrence documented within five miles of the Preserve (CDFW 2020).
Wrentit *Chamaea fasciata*	BCC; --; --; --	Found in coastally scrub and chaparral including suburban yards and parks with shrubs. Away from the coast they live in thickets along creeks, oak woodlands, mixed-evergreen forests, and dense shrublands with coyotebush, manzanita, California lilac, or	Year-round	**Potential**. The Preserve provides suitable nesting and foraging habitat for this species within the annual grassland, riparian and oak woodland habitat throughout the entirety of the Preserve.

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
		blackberry. Wrentits build nests in many plants including California sage, coyotebush, blackberry, poison oak, coffeeberry, Douglas-fir, bush lupine, wild rose, valley oak, and wild grape. Nests are well hidden in dense vegetation anywhere from less than 1 foot to 9 feet above the ground.		
Yellow-billed magpie *Pica nuttalli*	BCC; --; --; --	Found in open oak woodland and oak savannas. Forages and nests in agricultural areas and pastures that feature tall trees (average 47 feet) in large tress often in clumps of mistletoe.	Year - round	**Present.** The Preserve provides suitable foraging and nesting habitat for this species within the annual grassland, oak woodland, and riparian habitats. The species was observed within Stanford Ranch (SR-15) on May 28, 2020, by HELIX biologists while conducting annual surveys.
Mammals				
American badger *Taxidea taxus*	--; CSC; --; --	Inhabits drier open stages of most shrub, forest, and herbaceous habitats with loose, friable soils. Preys on a wide variety of mammals, reptiles, birds, and carrion, and hunts mostly by digging out fossorial prey. Occasionally takes prey on the surface. Not tolerant of cultivation. No longer occur in the Central Valley except in the extreme western edge.	Year - round	**Potential.** The annual grassland, oak woodland, and riparian habitats located throughout the Preserve provide habit for this species.
Pallid bat *Antrozous pallidus*	--; CSC; --; --	Found in grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forest habitats. Roosts in colonies usually in rock crevices, caves, mines, hollow trees, and buildings.	March – October	**Potential.** The Preserve provides suitable roosting habitat for this species within the oak woodland and portions of wooded riparian habitats located in Brighton (B - 1), Clermont (C-1-5), Garnet Creek (GC-1), Parklands North (PN-1), Stanford Ranch (SR- 1-9 and 11-21), Sunset West (SW 1-6), and Whitney Ranch (WR- 1 -6) Preserve subsections. However, the Preserve lacks caves or mines that this species often utilizes.
Silver-haired bat *Lasionycteris noctivagans*	--; --; --; WL	Widely distributed throughout the United States. This species is insectivorous and catches their prey in mid-air. Maternity roosts are in tree cavities or small hollow. This species is typically found in forested areas.	Year - round	**Potential.** The Preserve provides suitable roosting habitat for this species within the oak woodland and portions of wooded riparian habitats located in Brighton (B - 1), Clermont (C-1-5), Garnet Creek (GC-1), Parklands North (PN-1), Stanford Ranch (SR- 1-9 and 11-21), Sunset West (SW 1-6), and Whitney Ranch (WR- 1 -6) Preserve subsections. However, the Preserve lacks caves or mines that this species often utilizes.
Townsend's big-eared bat *Corynorhinus townsendii*	--; CSC; --; --	Widely distributed throughout California except alpine and subalpine habitats. This species eats moths, beetle and other insects which it catches on the wing or by gleaning from vegetation. Typically found near water since it is poor at concentrating its urine. This species uses caves, mines, tunnels, buildings and human made structures for roosting. Maternity roosts are typically in warm sites. Hibernation sites are typically cold, but not freezing. This species is very sensitive to disturbance and may abandon its roost after one visit.	Year - round	**Potential.** The Preserve provides suitable roosting habitat for this species within the oak woodland and portions of wooded riparian habitats located in Brighton (B - 1), Clermont (C-1-5), Garnet Creek (GC-1), Parklands North (PN-1), Stanford Ranch (SR- 1-9 and 11-21), Sunset West (SW 1-6), and Whitney Ranch (WR- 1 -6) Preserve subsections. However, the Preserve lacks caves or mines that this species often utilizes.

Table 2 includes state and federal species of concern and Rank 1 and 2 CNPS species.

Table 3 — Other Species of Interest

Special-Status Species	Regulatory Status	Habitat Requirements	Identification/ Survey Period	Potential for Occurrence
Plants				
Adobe navarretia *Navarretia nigelliformis*	--; --; --; 4.2	Annual herb found on clay and sometimes serpentinite soils in foothill grasslands and sometimes in vernal pools from 100 to 1,000 meters.	Blooming period: April-June	**None.** Although the Preserve contains vernal pools, the Preserve is outside the known elevational range of this species.
Brandegee's clarkia *Clarkia biloba* ssp. *brandegeeae*	--; --; --; 4.2	Annual herb found in chaparral, cismontane woodland, and lower montane coniferous forest. Occurs often in roadcuts from 75 - 915 meters.	Blooming period: May – July	**Potential.** Although this Preserve contains suitable habitat within the oak woodland, much of the Preserve is outside of the known elevational range for this species. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species.
Stinkbells *Fritillaria agrestis*	--; --; --; 4.2	Perennial bulbiferous herb found in clay soils, sometimes in serpentinite, chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland from 10 to 1,555 meters.	Blooming period: March – June	**Potential.** The Preserve provides suitable habitat for this species within the annual grasslands and oak woodlands throughout the Preserve. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species.
Valley brodiaea *Brodiaea rosea* ssp. *vallicola*	--; --; --; 4.2	Perennial bulbiferous herb found in old alluvial terraces on silty, sandy, or gravelly loam soils within swales of valley and foothill grassland and vernal pools.	Blooming period: April – May (June)	**Potential.** The Preserve provides suitable habitat for this species within the annual grassland and vernal pool habitats located within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. Surveys have been conducted for this species between 2015-2020. To date, the species has not been observed. However, the existing or future appended Preserve subsections may contain potential habitat for this species. Although there are no CNDDB records within 5 miles of the Preserve an occurrence (UCD147856) (Calflora 2020) between Roseville and Lincoln, 200 ft east of interstate 65 was noted in 2013.
Invertebrates				
An andrenid bee *Andrena subapasta*	--; CSA; --; --	Found in grassland habitats within El Dorado, Placer, Sacramento, and San Joaquin counties. Ground nesters that will be underground from summer, fall and winter and emerge in early spring to forage and pollinate early bloomers, such as willows, maples, violets and other early blooming wildflowers.	Spring – Fall	**Potential**. The Preserve provides suitable habitat for this species throughout its entirety. There is one CNDDB record for this species within five miles of the Study Area (CDFW 2020).
Ricksecker's water scavenger beetle *Hydrochara rickseckeri*	--; CSA; --; --	An endemic aquatic beetle known to occur in vernal pools that are inundated in winter and spring and dry during the summer months. Ideal habitat includes, neutral to slightly alkaline, clear, low dissolved salts, dominated with vernal pool plant species, and complex of vernal pool crustacean species. Known to occur in the Central Valley below 300 meters in elevation.	Year – round	**Potential.** The Preserve provides suitable habitat for this species within the vernal pool habitats within Orchard Creek (OC-1), Placer Creek Corporate Center (PCCC 1-5), portions of Stanford Ranch (SR 8 and 12), as well as Sunset West (SW 1-6 and 8) Preserve subsections. There is one CNDDB record for this species within five miles of the Study Area (CDFW 2020).

Table 3 includes Rank 3 and 4 CNPS species and non-listed invertebrates, which may not be subject to CEQA review.

REFERENCES

Natomas Basin Habitat Conservation Plan & the Metro Air Park Habitat Conservation Plan. 2020. Available online at: https://www.natomasbasin.org/terms-of-use/

California Natural Diversity Database. (CNDDB): 2020 *Clarksville* 7.5-minute series quadrangle), Sacramento, CA.

Californiaherps. 2019. A Guide to the Amphibians and Reptiles of California. Available online at: http://californiaherps.com. (Accessed 6/8/20).

Dimmitt, M.A. and R. Ruibal. 1980. Environmental Correlates of Emergence in Spadefoot Toads (Scaphiopus). Journal of Herpetology 14:21–29.

Poulin, R. G., L. D. Todd, E. A. Haug, B. A. Millsap, and M. S. Martell (2011). Burrowing Owl (*Athene cunicularia*), In The Birds of North America (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA.

Rana Resources. 2013. Mark Jennings. Personal Communication. September 18, 2013.

Rosenberg Daniel, Gervais, Jennifer, and Vesely, David. 2009. Conservation Assessment of the Western Pond Turtle in Oregon (Actinemys marmorata).

Stebbins, R. C. 2003. Western Amphibians and Reptiles. 3rd edition. Boston: Houghton Mifflin Co.

U.S. Fish and Wildlife Service (USFWS). 1993. Endangered and threatened wildlife and plants; determination of threatened status for the giant garter snake. Federal Register 58:54053-54066.

1980. Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. Federal Register 45:52803–52807.

1984. Recovery plan for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Portland, Oregon. 73 USFWS. 1999. Conservation guidelines for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Sacramento, CA. 12 pp.

2002. Recovery Plan for the California Red-legged Frog (Rana aurora draytonii). U.S. Fish and Wildlife Service, Portland, Oregon. Viii. 173 pages.

2006. Species Account Giant Garter Snake (Thamnophis gigas). Sacramento Fish &Wildlife Office.

2006a. Giant Garter Snake (Thamnophis gigas) 5-Year 10 Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, 11 CA. September.

2006b. Species Account: Giant Garter Snake 13 (Thamnophis gigas). Sacramento Fish and Wildlife Office. 14 Available: http://www.fws.gov/sacramento/es/animal_spp_acct/giant_garter_snake.htm.

2011. California Red-legged Frog (Rana draytonii). U.S. Fish and Wildlife Service: Arcata Fish and Wildlife Office, Pacific Southwest Region. Last updated on April 11, 2011

Appendix F

Plant Species Observed

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Appendix F
Plant Species Observed-Brighton

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Dicots			
Amaranthaceae	*Amaranthus californicus*	California amaranth	N
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	N
Apiaceae	*Torilis arvensis*	field hedge parsley	NN, I
Araceae	*Lemna* sp.	duckweed	N
Asteraceae	*Artemisia douglasiana*	California mugwort	N
Asteraceae	*Artemisia dracunculus*	tarragon	N
Asteraceae	*Baccharis pilularis ssp. consanguinea*	coyote brush	N
Asteraceae	*Carduus pycnocephalus ssp. pycnocephalus*	Italian thistle	NN, I
Asteraceae	*Erigeron canadensis*	Canada horseweed	N
Asteraceae	*Euthamia occidentalis*	Western goldenrod	N
Asteraceae	*Heterotheca grandiflora*	telegraph weed	N
Asteraceae	*Hypochaeris glabra*	smooth cat's 'ear	NN, I
Asteraceae	*Lactuca serriola*	prickly lettuce	NN
Brassicaceae	*Brassica nigra*	black mustard	NN, I
Brassicaceae	*Hirschfeldia incana*	short podded mustard	NN, I
Brassicaceae	*Raphanus sativus*	cultivated radish	NN, I
Fabaceae	*Acmispon americanus var. americanus*	Spanish lotus	N
Fabaceae	*Trifolium hirtum*	rose clover	I
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus lobata*	valley oak	N
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	N
Haloragaceae	*Myriophyllum aquaticum*	parrot's feather	NN
Hydrocharitaceae	*Hydrilla verticillata*	hydrilla	NN, I
Juglandaceae	*Juglans hindsii*	Northern California black walnut	N
Onagraceae	*Epilobium brachycarpum*	autumn willowweed	N
Onagraceae	*Epilobium ciliatum* cf. ssp. *ciliatum*	fringed willowherb	N
Polygonaceae	*Persicaria* cf. *hydropiper*	waterpepper	NN
Polygonaceae	*Polygonum aviculare* ssp. *depressum*	prostrate knotweed	NN
Polygonaceae	*Rumex crispus*	curly dock	NN, I
Portulacaceae	*Portulaca oleracea*	common purslane	NN
Rosaceae	*Heteromeles arbutifolia*	toyon	N
Rosaceae	*Pyrus calleryana*	callery pear	NN, I
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	NN, I
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	N
Salicaceae	*Salix exigua* var. *hindsiana*	sandbar willow	N
Salicaceae	*Salix laevigata*	red willow	N
Salicaceae	*Salix lasiandra*	Pacific willow	N
Salicaceae	*Salix lasiolepis*	Arroyo willow	N
Scrophulariaceae	*Verbascum blattaria*	moth mullein	NN

Appendix F
Plant Species Observed-Brighton (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Monocots			
Cyperaceae	*Schoenoplectus acutus* var. *occidentalis*	tule	N
Juncacea	*Juncus effusus* ssp. *pacificus*	Pacific rush	N
Poaceae	Bromus hordeaceus	soft chess	NN, I
Poaceae	*Festuca perennis*	rye grass	NN, I
Poaceae	*Avena barbata*	slender oat	NN, I
Typhaceae	*Typha* sp.	cattail	N

Appendix F
Plant Species Observed-Claremont

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Dicots			
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	N
Amaranthaceae	*Amaranthus californicus*	California amaranth	N
Anacardiaceae	*Pistacia chinensis*	Chinese pistachio	NN
Apiaceae	*Eryingium* sp.	button celery	N
Apiaceae	*Torilis arvensis*	field hedge parsley	NN, I
Apocynaceae	*Nerium oleander*	oleander	NN
Araceae	*Lemna* sp.	duckweed	N
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	N
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	NN
Asteraceae	*Centaurea solstitialis*	yellow star thistle	NN, I
Asteraceae	*Centromadia fitchii*	spikeweed	N
Asteraceae	*Chondrilla juncea*	skeleton weed	NN, I
Asteraceae	*Cichorium intybus*	chicory	NN
Asteraceae	*Ditttrichia graveolens*	stinkwort	NN, I
Asteraceae	*Erigeron canadensis*	Canada horseweed	N
Asteraceae	*Euthamia occidentalis*	Western goldenrod	N
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	NN, I
Asteraceae	*Heterotheca grandiflora*	telegraph weed	N
Asteraceae	*Holocarpha virgata* ssp. *virgata*	narrow tarplant	N
Asteraceae	*Hypochaeris radicata*	hairy cat's ear	NN, I
Asteraceae	*Lactuca serriola*	prickly lettuce	NN
Asteraceae	*Lessingia virgata* var. *glomerata*	wand lessingia	N
Asteraceae	*Silybum marianum*	milk thistle	NN, I
Asteraceae	*Sonchus* sp.	sowthistle	NN
Boraginaceae	*Amsinckia intermedia*	common fiddleneck	N
Boraginaceae	*Plagiobothrys fulvus* var. *campestris*	field popcornflower	N
Brassicaceae	*Brassica nigra*	black mustard	NN, I
Brassicaceae	*Raphanus sativus*	jointed charlock	NN, I
Convolvulaceae	*Cuscuta howelliana*	boggs lake dodder	N
Euphorbiaceae	*Croton setiger*	turkey-mullein	N
Euphorbiaceae	*Euphorbia ocellata* ssp. *ocellata*	valley spurge	N
Euphorbiaceae	*Triadica sebifera*	Chinese tallowtree	NN, I
Fabaceae	*Acmispon americanus* var. *americanus*	American bird's foot trefoil	N
Fabaceae	*Cercis occidentalis*	Western redbud	N
Fabaceae	*Lupinus bicolor*	miniature lupine	N
Fabaceae	*Medicago polymorpha*	bur clover	NN, I
Fabaceae	*Trifolium depauperatum*var. *Depauperatum*	dwarf sack clover	N
Fabaceae	*Trifolium fragiferum*	strawberry clover	NN
Fabaceae	*Trifolium hirtum*	rose clover	NN, I
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	N
Geraniaceae	*Erodium botrys*	big heron bill	NN
Geraniaceae	*Geranium dissectum*	cut leaved geranium	NN, I
Geraniaceae	*Geranium molle*	crane's bill geranium	NN
Hypericaceae	*Hypericum perforatum* ssp. *perforatum*	common st. johnswort	NN, I

Appendix F
Plant Species Observed-Claremont (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Lamiaceae	*Mentha pulegium*	pennyroyal	NN, I
Lamiaceae	*Trichostema lanceolatam*	vinegarweed	N
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	NN, I
Molluginaceae	*Glinus lotoides*	lotus sweetjuice	NN
Montiaceae	*Claytonia parviflora* var. *parviflora*	miner's lettuce	N
Onagraceae	*Epilobium brachycarpum*	autumn willowweed	N
Onagraceae	*Epilobium ciliatum* cf. ssp. *ciliatum*	fringed willowherb	N
Orobanchaceae	*Triphysaria eriantha*	butter 'n' eggs	N
Plantaginaceae	*Kickxia* sp.	fluellin	NN
Plantaginaceae	*Plantago lanceolata*	English plantain	NN, I
Platanaceae	*Platanus racemosa*	California sycamore	N
Polygonaceae	*Rumex crispus*	curly dock	NN, I
Polygonaceae	*Rumex pulcher*	fiddle dock	NN
Ranunculaceae	*Ranunculus boneriensis*var. *trisepalus*	vernal pool buttercup	N
Rosaceae	*Heteromeles arbutifolia*	toyon	N
Rosaceae	*Pyrus calleryana*	Callery pear	NN, I
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	NN, I
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	N
Salicaceae	*Salix exigua* var. *hindsiana*	sandbar willow	N
Salicaceae	*Salix googingii*	Gooding's willow	N
Salicaceae	*Salix laevigata*	red willow	N
Salicaceae	*Salix lasiolepis*	Arroyo willow	N
Themidaceae	*Dichelostemma capitatum* ssp. *capitatum*	bluedicks	N
Monocots			
Cyperaceae	*Cyperus eragrostis*	tall cyperus	N
Cyperaceae	*Eleocharis macrostachya*	common spikerush	N
Juncaceae	*Juncus* cf. *balticus* ssp. *ater*	Baltic rush	N
Juncaceae	*Juncus effusus* ssp. *pacificus*	Pacific rush	N
Poaceae	*Avena barbata*	slender oat	NN, I
Poaceae	*Bromus diandrus*	ripgut grass	NN, I
Poaceae	*Cynodon dactylon*	Bermuda grass	NN, I
Poaceae	*Deschampsia danthonioides*	annual hairgrass	N
Poaceae	*Elymus* cf. *ponticus*	tall wheat grass	NN
Poaceae	*Festuca bromoides*	brome fescue	NN
Poaceae	*Festuca perennis*	rye grass	NN, I
Poaceae	*Gastridium phleoides*	nit grass	NN
Poaceae	*Hordeum murinum*	foxtail barley	NN, I
Poaceae	*Muhlenbergia rigens*	deergrass	N
Poaceae	*Polypogon monspeliensis*	rabbitsfoot grass	NN, I
Poaceae	*Stipa* sp.	needlegrass	N
Poaceae	*Briza minor*	little quaking grass	NN
Poaceae	*Elymus caput-medusae*	Medusahead	NN, I
Poaceae	*Paspalum dilatatum*	Dallis grass	NN
Themadaceae	*Triteleia laxa*	ithuriel's spear	N
Typhaceae	*Typha* sp.	cattail	N

Appendix F
Plant Species Observed-Garnet Creek

Family	Scientific Name	Common Name	Native(N), Non - native (NN), Invasive (I)
Dicots			
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	NN
Apiaceae	*Anthriscus caucalis*	bur-chervil	NN
Apiaceae	*Foeniculum vulgare*	sweet fennel	NN
Apiaceae	*Torilis arvensis*	field hedge-parsley	NN
Apocynaceae	*Vinca major*	periwinkle	NN, I
Asteraceae	*Artemisia douglasiana*	California mugwort	N
Asteraceae	*Baccharis pilularis*	coyote brush	N
Asteraceae	*Carduus pycnocephalus*	Italian thistle	NN, I
Asteraceae	*Centaurea solstitialis*	yellow starthistle	NN, I
Asteraceae	*Chondrilla juncea*	skeleton weed	NN, I
Asteraceae	*Cichorium intybus*	chicory	NN
Asteraceae	*Lactuca serriola*	prickly lettuce	NN, I
Asteraceae	*Xanthium strumarium*	cocklebur	N
Boraginaceae	*Amsinckia menziesii*	common fiddlneck	N
Brassicaceae	*Cardamine oligosperma*	few-seed bitter cress	N
Brassicaceae	*Hirschfeldia incana*	short-podded mustard	NN. I
Caprifoliaceae	*Lonicera interrupta*	chaparral honeysuckle	N
Convolvulaceae	*Convolvulus arvensis*	bindweed	N
Euphorbiaceae	*Croton setigerus*	turkey mullein	N
Fabaceae	*Lotus purshianus var. purshianus*	Spanish-clover	N
Fabaceae	*Lupinus bicolor*	lupin	N
Fabaceae	*Trifolium hirtum*	rose clover	NN
Fabaceae	*Vicia villosa*	winter vetch	NN, I
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus lobata*	valley oak	N
Fagaceae	*Quercus wislizeni var. wislizeni*	interior live oak	N
Geraniaceae	*Erodium botrys*	broad-leaf filaree	NN
Geraniaceae	*Erodium cicutarium*	red-stem filaree	NN
Geraniaceae	*Geranium dissectum*	cut-leaf geranium	NN
Geraniaceae	*Geranium molle*	dove's-foot geranium	NN
Juglandaceae	*Juglans hindsii*	Northern California black walnut	N
Lamiaceae	*Lamium amplexicaule*	deadnettle	NN
Lamiaceae	*Mentha pulegium*	pennyroyal	NN
Myrsinaceae	*Anagalis arvensis*	scarlet pimpernel	NN
Orobanchaceae	*Triphysaria eriantha*	butter-and-eggs	N
Papaveraceae	*Eschscholzia californica*	California poppy	N
Plantaginaceae	*Plantago lanceolata*	English plantain	NN
Polemoniaceae	*Navarretia tagetina.*	navarretia	N
Polygonaceae	*Polygonum aviculare*	common knotweed	NN
Polygonaceae	*Rumex acetosella*	sheep sorrel	NN
Polygonaceae	*Rumex crispus*	curly dock	NN
Polygonaceae	*Rumex pulcher*	fiddle dock	NN
Salicaceae	*Populus fremontii*	Fremont cottonwood	N
Salicaceae	*Salix exigua*	narrow-leaved willow	N
Salicaceae	*Salix gooddingii*	Goodding's black willow	N
Salicaceae	*Salix laevigata*	red willow	N

Appendix F
Plant Species Observed-Garnet Creek (cont.)

Family	Scientific Name	Common Name	Native(N), Non - native (NN), Invasive (I)
Salicaceae	*Salix lasiolepis*	Arroyo willow	N
Scrophulariaceae	*Verbascum blattaria*	moth mullein	NN
Vitaceae	*Vitis californica*	California grape	N
Monocots			
Agavaceae	*Agave* sp.	agave	N
Cyperaceae	*Cyperus eragrostis*	tall flatsedge	N
Cyperaceae	*Eleocharis macrostachya*	creeping spikerush	N
Juncaceae	*Juncus bufonius*	toad rush	N
Juncaceae	*Juncus xiphioides*	iris-leaf rush	N
Poaceae	Avana fatua	wild oat	NN
Poaceae	*Bromus diandrus*	ripgut brom	NN, I
Poaceae	*Bromus hordeaceus*	soft chess	NN
Poaceae	*Festuca perennis*	Italian ryegrass	NN
Poaceae	*Elmus caput-medusae*	Medusahead	NN, I

Appendix F
Plant Species Observed-Orchard Creek

Family	Scientific Name	Common Name	Native(N), Non-native (NN), Invasive (I)
Dicots			
Adoxaceae	*Alopecurus saccatus*	Pacific foxtail	N
Apiaceae	*Eryingium* sp.	button celery	N
Apiaceae	Eryngium vaseyi	coyote thistle	N
Asteraceae	*Lasthenia californica*	California goldfields	N
Asteraceae	*Lasthenia fremontii*	Fremont's goldfields	N
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	NN
Asteraceae	*Centaurea solstitialis*	yellow star thistle	NN, I
Asteraceae	*Centromadia fitchii*	spikeweed	N
Asteraceae	*Cichorium intybus*	chicory	NN
Asteraceae	*Ditttrichia graveolens*	stinkwort	NN, I
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	NN, I
Asteraceae	*Lactuca serriola*	prickly lettuce	NN
Asteraceae	Lasthenia fremontii	Fremont's goldfields	N
Asteraceae	Lasthenia glaberrima	smooth goldfields	N
Asteraceae	Leontodon saxatilis	hawkbit	NN
Asteraceae	Psilocarphus brevissimus	short woollyheads	N
Asteraceae	*Silybum marianum*	milk thistle	NN, I
Asteraceae	*Sonchus* sp.	sowthistle	NN
Boraginaceae	*Plagiobothrys fulvus* var. *campestris*	field popcornflower	N
Boraginaceae	Plagiobothrys stipitatus	stalked popcornflowe	N
Brassicaceae	*Brassica nigra*	black mustard	NN, I
Campanulaceae	*Downingia bicornuta*	bristled downingia	N
Campanulaceae	*Downingia ornatissima*	horned downingia	N
Crassulaceae	*Crassula aquatica*	aquatic pygmy weed	N
Euphorbaceae	*Euphorbia ocellata* ssp. *ocellata*	valley spurge	N
Euphorbiaceae	*Croton setiger*	turkey-mullein	N
Fabaceae	*Medicago polymorpha*	bur clover	NN, I
Fabaceae	*Trifolium depauperatum*var. *Depauperatum*	dwarf sack clover	N
Fabaceae	*Trifolium fragiferum*	strawberry clover	NN
Fabaceae	*Trifolium hirtum*	rose clover	NN, I
Fabaceae	*Vicia villosa*	hairy vetch	NN
Geraniaceae	*Erodium botrys*	big heron bill	NN
Geraniaceae	*Geranium dissectum*	cut leaved geranium	NN, I
Geraniaceae	*Geranium molle*	crane's bill geranium	NN
Hypericaceae	*Hypericum perforatum* ssp. *perforatum*	common st. johnswort	NN, I
Lytheraceae	*Lythrum hyssopifolia*	hyssop loosestrife	N
Marsileace	*Pilularia americana*	American pillwort	N
Molluginaceae	*Glinus lotoides*	lotus sweetjuice	NN
Orobanchaceae	*Triphysaria eriantha*	butter 'n' eggs	N
Plantaginaceae	*Plantago lanceolata*	English plantain	NN, I
Plantaginaceae	*Gratiola ebracteata*	common hedge hyssop	N
Plantaginaceae	*Polypogon monspeliensis*	rabbitsfoot grass	NN, I

Appendix F
Plant Species Observed-Orchard Creek (cont.)

Family	Scientific Name	Common Name	Native(N), Non-native (NN), Invasive (I)
Ranunculaceae	*Ranunculus bonariensis*	Carter's buttercup	N
Renunculaceae	Ranunculus aquatilis	whitewater crowfoot	N
Renunculaceae	*Ranunculus boneriensis*var. *trisepalus*	vernal pool buttercup	N
Monocots			
Cyperaceae	Eleocharis macrostachya	common spikerush	N
Juncaceae	Juncus bufonius	common toad rush	N
Juncaceae	Juncus sp.	rush	N
Lamiaceae	*Mentha pulegium*	pennyroyal	NN, I
Limiaceae	*Trichostema lanceolatam*	vinegarweed	N
Poaceae	*Avena barbata*	slender oat	NN, I
Poaceae	*Briza minor*	little quaking grass	NN
Poaceae	*Bromus diandrus*	ripgut grass	NN, I
Poaceae	*Bromus hordeaceus*	soft chess	NN, I
Poaceae	*Deschampsia danthonioides*	annual hairgrass	N
Poaceae	*Elymus caput-medusae*	Medusahead	NN, I
Poaceae	*Festuca bromoides*	brome fescue	NN
Poaceae	*Festuca perennis*	rye grass	NN, I
Poaceae	*Hordeum murinum*	foxtail barley	NN, I
Poaceae	*Muhlenbergia rigens*	deergrass	N
Poaceae	*Paspalum dilatatum*	Dallis grass	NN
Themidaceae	*Dichelostemma capitatum* ssp. *capitatum*	bluedicks	N
Themidaceae	Triteleia hyacinthina	white brodiaea	N

Appendix F
Plant Species Observed–Parklands North

Family	Scientific Name	Common Name	Native (N), Non - Native (NN), Invasive (I)
Dicots			
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	N
Asteraceae	*Carduus pycnocephalus*	Italian thistle	NN, I
Asteraceae	*Centaurea solstitialis*	yellow star thistle	NN, I
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	N
Phytolaccaceae	*Phytolacca americana var. americana*	American pokeweed	NN, I
Pinaceae	*Pinus* sp.	pine	~
Polygonaceae	*Persicaria* sp.	smartweed	(N)
Roasaceae	*Rubus armeniacus*	Himalayan blackberry	NN, I
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	N
Salicaceae	*Salix* sp.	willow	~
Sapindaceae	*Aesculus californica*	California buckeye	N
Vitaceae	*Vitis californica*	wild grape	N
Monocots			
Poaceae	*Avena* sp.	oat	~
Poaceae	*Cynodon dactylon*	Bermuda grass	NN, I
Poaceae	*Hordeum murinum*	wall barley	NN, I
Typhaceae	*Typha* sp.	cattail	N

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Appendix F
Plant Species Observed-Placer Creek Corporate Center

Family	Scientific Name	Common Name	Native (N), Non-Native (NN), Invasive (I)
Dicots			
Asteraceae	*Baccharis pilularis*	coyote brush	N
Asteraceae	*Blennosperma nanum*	yellow carpet	N
Asteraceae	*Ditttrichia graveolens*	stinkwort	NN, I
Asteraceae	*Holocarpha virgata ssp. virgata*	narrow tarplant	NN
Asteraceae	*Hypochaeris glabra*	smooth cat's ear	NN, I
Asteraceae	*Lasthenia californica*	California goldfields	N
Asteraceae	*Leontodon saxatilis*	hawkbit	NN
Asteraceae	*Senecio vulgaris*	common groundsel	NN
Asteraceae	*Eryngium vaseyi*	coyote thistle	N
Asteraceae	*Lasthenia fremontii*	Fremont's goldfields	N
Asteraceae	*Psilocarphus brevissimus*	woolly marbles	N
Boraginaceae	*Amsinckia* sp.	fiddleneck	~
Boraginaceae	*Plagiobothrys stipitatus*	stalked popcornflower	N
Euphorbaceae	*Croton setiger*	turkey-mullein	N
Fabaceae	*Lupinus* sp.	lupine	~
Fabaceae	*Vicia* sp.	vetch	~
Geraniaceae	*Erodium botrys*	big heron bill	NN
Geraniaceae	*Geranium dissectum*	cut leaved geranium	NN, I
Lamiaceae	*Pogogyne zizyphoroides*	Sacramento mesamint	N
Orobancaceae	*Triphysaria eriantha*	butter 'n' eggs	N
Polygonaceae	*Rumex crispus*	curly dock	NN, I
Ranunculaceae	*Ranunculus bonariensis*	Carter's buttercup	N
Monocots			
Cyperaceae	*Eleocharis macrostachya*	common spikerush	N
Poacea	*Festuca* sp.	fescue	~
Poaceae	*Avena* sp.	oat	~
Poaceae	*Elymus caput-medusae*	Medusahead	NN, I
Poaceae	*Alopecurus saccatus*	Pacific foxtail	N
Poaceae	*Briza minor*	little quaking grass	NN
Poaceae	*Festuca perennis*	Italian rye grass	N
Themedaceae	*Brodiaea elegans*	harvest brodiaea	N

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Appendix F
Plant Species Observed-Stanford Ranch

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Dicots			
Adoxaceae	*Sambucus nigra ssp. caerule*	blue elderberry	N
Alismataceae	*Alisma lanceolatum*	Lanceleaf water plantain	NN
Amaranthaceae	*Amaranthus californicus*	California amaranth	N
Anacardaceae	*Toxicodendron diversilobum*	poison oak	N
Apiaceae	*Sanicula bipinnatifida*	purple sanicle	N
Apocynaceae	*Asclepias fascicularis*	narrow leaf milkweed	N
Araceae	*Lemna sp.*	duckweed	N
Asteraceae	*Silybum marianum*	blessed milkthistle	NN, I
Asteraceae	*Carduus pycnocephalus ssp. pycnocephalus*	Italian thistle	NN, I
Asteraceae	*Centaurea solstitialis*	yellow star thistle	NN, I
Asteraceae	*Chondrilla juncea*	skeleton weed	NN, I
Asteraceae	*Cichorium intybus*	chicory	NN
Asteraceae	*Cirsium vulgare*	bull thistle	NN, I
Asteraceae	*Dittrichia graveolens*	stinkwort	NN, I
Asteraceae	*Erigeron canadensis*	Canada horseweed	N
Asteraceae	*Eryngium vaseyi*	coyote thistle	N
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	NN, I
Asteraceae	*Holocarpha virgata ssp. virgata*	narrow tarplant	NN
Asteraceae	*Hypochaeris glabra*	smooth cat's ear	NN, I
Asteraceae	*Lactuca serriola*	prickly lettuce	NN
Asteraceae	*Lasthenia californica*	California goldfields	N
Asteraceae	*Lasthenia fremontii*	Fremont's goldfields	N
Asteraceae	*Lasthenia glaberrima*	smooth goldfields	N
Asteraceae	*Layia fremontii*	Fremont layia	N
Asteraceae	*Leontodon saxatilis ssp. longirostris*	hawkbit	NN
Asteraceae	*Psilocarphus brevissimus*	sdhort woollyheads	N
Asteraceae	*Sonchus oleraceus*	sow thistle	NN
Asteraceae	*Xanthium strumarium*	rough cockleburr	N
Betulaceae	*Alnus rhombifolia*	white alder	N
Bignoniaceae	*Catalpa speciosa*	Northern catalpa	NN
Boragenaceae	*Plagiobothrys fulvus*	fulvous popcorn flower	N
Boragenaceae	*Plagiobothrys greenei*	greene's allocarya	N
Boragenaceae	*Plagiobothrys stipitatus*	stalked popcornflower	N
Boraginaceae	*Amsincki intermdia*	comman fiddleneck	N
Brassicaceae	*Brassica nigra*	black mustard	NN, I
Brassicaceae	*Hirschfeldia incana*	short podded mustard	NN, I
Campanulaceae	*Downingia cuspidata*	toothed downingia	N
Campanulaceae	*Downingia bicornuta*	bristled downingia	N
Campanulaceae	*Downingia ornatissima*	horned downingia	N

Appendix F
Plant Species Observed-Stanford Ranch (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Convolvulaceae	*Convolvulus arvensis*	field bindweed	NN
Crassulaceae	*Crassula aquatica*	aquatic pygmy weed	N
Euphorbiaceae	*Croton setiger*	turkey-mullein	N
Euphorbiaceae	*Euphorbia ocellata ssp. ocellata*	valley spurge	N
Euphorbiaceae	*Triadica sebifera*	Chinese tallowtree	NN, I
Fabaceae	*Acmispon americanus var. americanus*	American bird's foot trefoil	N
Fabaceae	*Medicago polymorpha*	California burclover	NN, I
Fabaceae	*Robinia pseudoacacia*	black locust	NN, I
Fabaceae	*Trifolium depauperatum*	cowbag clover	N
Fabaceae	*Trifolium dubium*	shamrock clover	NN
Fabaceae	*Trifolium hirtum*	rose clover	NN, I
Fabaceae	*Trifolium sp.*	clover	~
Fabaceae	*Vicia sp.*	vetch	~
Fabaceae	*Vicia villosa*	hairy vetch	NN
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus lobata*	valley oak	N
Fagaceae	*Quercus wislizeni var. wislizeni*	interior live oak	N
Gentianaceae	*Zeltnera muehlenbergii*	muehlenberg's centaury	N
Geraniaceae	*Erodium botrys*	big heron bill	NN
Geraniaceae	*Geranium dissectum*	wild geranium	NN, I
Geraniaceae	*Geranium molle*	crane's bill geranium	NN
Juncaginaceae	*Triglochin scilloides*	flowering-quillwort	N
Lamiaceae	*Marrubium vulgare*	white horehound	NN, I
Lamiaceae	*Mentha pulegium*	pennyroyal	NN, I
Lamiaceae	*Mentha spicata*	spearmint	NN
Lamiaceae	*Pogogyne zizyphoroides*	Sacramento mint	N
Lamiaceae	*Rosmarinus officinalis*	rosemary	NN
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	NN, I
Lythraceae	*Punica granatum*	pomegranate	NN
Marsileaceae	*Pilularia americana*	American pillwort	N
Myrsinaceae	*Lysmachia arvensis*	scarlet pimpernel	NN
Myrtaceae	*Eucalyptus sp.*	eucalyptus	NN
Oleaceae	*Olea europaea*	olive	NN, I
Onagraceae	*Epilobium brachycarpum*	autumn willowweed	N
Onagraceae	*Epilobium ciliatum*	willowherb	NN
Orobanchaceae	*Castilleja attenuata*	narrow leaved owl's clover	N
Orobanchaceae	*Castilleja campestris*	vernal pool indian paintbrush,	N
Orobanchaceae	*Cordylanthus mollis ssp. hispidus*	Hispid bird's-beak	N RARE
Papaveraceae	*Eschscholzia californica*	California poppy	N
Phytolaccaceeae	*Phytolacca americana var. americana*	American pokeweed	NN, I

Appendix F
Plant Species Observed-Stanford Ranch (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Plantaginaceae	*Plantago elongata*	annual coast plantago	N
Plantaginaceae	*Plantago lanceolata*	English plantain	NN, I
Plantaginaceae	*Veronica peregrina*	hairy purslane speedwell	N
Polemoniaceae	*Navarretia intertexta*	interwoven navarretia	N
Polemoniaceae	*Navarretia leucocephala*	white headed navarretia	N
Polygonaceae	*Persicaria sp.*	smartweed	(N)
Polygonaceae	*Polygonum aviculare ssp. depressum*	prostrate knotweed	NN
Polygonaceae	*Polygonum sp.*	smartweed	N
Polygonaceae	*Polypogon monspeliensis*	rabbitsfoot grass	NN, I
Polygonaceae	*Rumex crispus*	curly dock	NN, I
Polygonaceae	*Rumex pulcher*	fiddle dock	NN
Ranunculaceae	*Ranunculus bonariensis*	vernal pool indian paintbrush	N
Rosaaceae	*Rubus armeniacus*	Himalayan blackberry	NN, I
Rosaceae	*Pyracantha sp.*	firethorn	NN
Rosaceae	*Pyrus calleryana*	callery pear	NN, I
Rosaceae	*Rosa sp.*	rose	NN
Rubiaceae	*Cephalanthus occidentalis*	common buttonbush	N
Rubiaceae	*Galium aparine*	cleavers	N
Salicaceae	*Populus fremontii ssp. fremontii*	Fremont cottonwood	N
Salicaceae	*Salix babylonica*	weeping willow	NN
Salicaceae	*Salix cf. lasiandra var. lasiandra*	Pacific willow	N
Salicaceae	*Salix exigua var. hindsiana*	sandbar willow	N
Salicaceae	*Salix goodingii*	Gooding's willow	N
Salicaceae	*Salix lasiolepis*	Arroyo willow	N
Sapindaceae	*Acer macrophyllum*	bigleaf maple	N
Sapindaceae	*Aesculus californica*	California buckeye	N
Typhaceae	*Typha sp.*	cattail	N
Verbenaceae	*Phyla nodiflora*	lippia	N
Viscaceae	*Phoradendron leucarpum ssp. macrophyllum*	mistletoe	N
Vitaceae	*Vitis californica*	California grape	N
Monocots			
Arecaceae	*Washingtonia cf. robusta*	Mexican fan palm	NN, I
Cyperaceae	*Schoenoplectus acutus var. occidentalis*	tule	N
Cyperaceae	*Cyperus eragrostis*	tall cyperus	N
Cyperaceae	*Eleocharis acicularis*	needle spike rush	N

Appendix F
Plant Species Observed-Stanford Ranch (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Cyperaceae	*Eleocharis macrostachya*	spikerush	N
Juncaceae	*Juncus bufonius*	common toad rush	N
Juncaceae	*Juncus cf. balticas ssp. ater*	Baltic rush	N
Juncaceae	*Juncus effusus ssp. pacificus*	Pacific rush	N
Juncaceae	*Juncus sp.*	rush	N
Poacea	*Andropogon virginicus var. virginicus*	broomsedge bluestem	NN
Poaceae	*Alopecurus saccatus*	Pacific foxtail	N
Poaceae	*Avena barbata*	slender oat	NN, I
Poaceae	*Brachypodium distachyon*	false brome	NN, I
Poaceae	*Briza minor*	little quaking grass	N
Poaceae	*Bromus diandrus*	ripgut grass	NN, I
Poaceae	*Bromus hordeaceus*	soft chess	NN, I
Poaceae	*Cortaderia sp.*	pampas grass	NN, I
Poaceae	*Cynodon dactylon*	Bermuda grass	NN, I
Poaceae	*Cynosurus echinatus*	annual dogtail	NN, I
Poaceae	*Deschampsia danthonioides*	annual hairgrass	N
Poaceae	*Digitaria sanguinalis*	hairy crabgrass	NN
Poaceae	*Echinochloa cf. crus -galli*	barnyard grass	NN
Poaceae	*Elymus caput-medusae*	medusa head	NN, I
Poaceae	*Elymus cf. ponticus*	tall wheat grass	NN
Poaceae	*Elymus glaucus*	blue wild rye	N
Poaceae	*Aira caryophyllea*	shiver grass	NN
Poaceae	*Festuca bromoides*	brome fescue	NN
Poaceae	*Festuca perennis*	rye grass	NN, I
Poaceae	*Ficus carica*	edible fig	NN, I
Poaceae	*Glyceria sp.*	mannagrass	(NN)
Poaceae	*Hordeum marinum*	seaside barley	NN
Poaceae	*Hordeum murinum*	foxtail barley	NN, I
Poaceae	*Muhlenbergia rigens*	deergrass	N
Poaceae	*Panicum cf. capillare*	witchgrass	N
Poaceae	*Paspalum dilatatum*	dallis grass	NN
Poaceae	*Phalaris cf. minor*	little seed canarygrass	NN
Poaceae	*Phyllostachys sp.*	bamboo	NN
Poaceae	*Sorghum halepense*	johnsongrass	NN
Poaceae	*Stipa sp.*	needlegrass	N
Themidaceae	*Brodiaea elegans*	harvest brodiaea	N
Themidaceae	*Brodiaea minor*	dwarf brodiaea	N
Themidaceae	*Dichelostema capitatum*	blue dicks	N
Themidaceae	*Triteleia hyacinthina*	white brodiaea	N

Appendix F
Plant Species Observed-Sunset West

Family	Scientific Name	Common Name	Native (N), Non-Native (NN), Invasive (I)
Dicots			
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	N
Alismataceae	*Alisma lanceolatum*	lanceleaf water plantain	NN
Amaranthaceae	*Amaranthus californicus*	California amaranth	N
Anacardaceae	*Toxicodendron diversilobum*	poison oak	N
Apaceae	*Torilis arvensis*	field hedge parsley	NN, I
Apiaceae	*Sanicula bipinnatifida*	purple sanicle	N
Apocynaceae	*Asclepias fascicularis*	narrow leaf milkweed	N
Araceae	*Lemna sp.*	duckweed	N
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	N
Asteraceae	*Centromadia fitchii*	Spikeweed	N
Asteraceae	*Eryngium sp.*	button celery	~
Asteraceae	*Euthamia occidentalis*	Western goldenrod	N
Asteraceae	*Heterotheca grandiflora*	Telegraph weed	N
Asteraceae	*Silybum marianum*	blessed milkthistle	NN, I
Asteraceae	*Carduus pycnocephalus ssp. pycnocephalus*	Italian thistle	NN, I
Asteraceae	*Centaurea solstitialis*	yellow star thistle	NN, I
Asteraceae	*Chondrilla juncea*	skeleton weed	NN, I
Asteraceae	*Cichorium intybus*	chicory	NN
Asteraceae	*Cirsium vulgare*	bull thistle	NN, I
Asteraceae	*Dittrichia graveolens*	stinkwort	NN, I
Asteraceae	*Erigeron canadensis*	Canada horseweed	N
Asteraceae	*Eryngium vaseyi*	coyote thistle	N
Asteraceae	*Helminthotheca echioides*	bristly ox-tongue	NN, I
Asteraceae	*Holocarpha virgata ssp. virgata*	narrow tarplant	NN
Asteraceae	*Hypochaeris glabra*	smooth cat's ear	NN, I
Asteraceae	*Lactuca serriola*	prickly lettuce	NN
Asteraceae	*Lasthenia californica*	California goldfields	N
Asteraceae	*Lasthenia fremontii*	Fremont's goldfields	N
Asteraceae	*Lasthenia glaberrima*	smooth goldfields	N
Asteraceae	*Layia fremontii*	Fremont layia	N
Asteraceae	*Leontodon saxatilis ssp. longirostris*	hawkbit	NN
Asteraceae	*Psilocarphus brevissimus*	sdhort woollyheads	N
Asteraceae	*Sonchus oleraceus*	sow thistle	NN
Asteraceae	*Xanthium strumarium*	rough cockleburr	N
Betulaceae	*Alnus rhombifolia*	white alder	N
Bignoniaceae	*Catalpa speciosa*	northern catalpa	NN
Boragenaceae	*Plagiobothrys fulvus*	fulvous popcorn flower	N
Boragenaceae	*Plagiobothrys greenei*	greene's allocarya	N
Boragenaceae	*Plagiobothrys stipitatus*	stalked popcornflower	N
Boraginaceae	*Amsincki intermdia*	comman fiddleneck	N
Brassicaceae	*Brassica nigra*	black mustard	NN, I
Brassicaceae	*Hirschfeldia incana*	short podded mustard	NN, I
Campanulaceae	*Downingia sp.*	downingia	N
Campanulaceae	*Downingia cuspidata*	toothed downingia	N
Campanulaceae	*Downingia bicornuta*	bristled downingia	N

Appendix F
Plant Species Observed-Sunset West (cont.)

Family	Scientific Name	Common Name	Native (N), Non-Native (NN), Invasive (I)
Campanulaceae	*Downingia ornatissima*	horned downingia	N
Caryopyllaceae	*Spergularia rubra*	Purple sand spurry	NN
Chenopodiaceae	*Salsola tragus*	Prickly russian thistle	NN
Convolvulaceae	*Cuscuta sp.*	California dodder	N
Convolvulaceae	*Convolvulus arvensis*	field bindweed	NN
Crassulaceae	*Crassula aquatica*	aquatic pygmy weed	N
Cyperaceae	*Cyperus difformis*	variable flatsedge	NN
Euphorbiaceae	*Croton setiger*	turkey-mullein	N
Euphorbiaceae	*Euphorbia ocellata ssp. ocellata*	valley spurge	N
Euphorbiaceae	*Triadica sebifera*	Chinese tallowtree	NN, I
Fabaceae	*Lathyrus angulatus*	angled pea vine	NN
Fabaceae	*Acmispon americanus var. americanus*	American bird's foot trefoil	N
Fabaceae	*Medicago polymorpha*	California burclover	NN, I
Fabaceae	*Robinia pseudoacacia*	black locust	NN, I
Fabaceae	*Trifolium depauperatum*	cowbag clover	N
Fabaceae	*Trifolium dubium*	shamrock clover	NN
Fabaceae	*Trifolium hirtum*	rose clover	NN, I
Fabaceae	*Trifolium sp.*	clover	~
Fabaceae	*Vicia sp.*	vetch	~
Fabaceae	*Vicia villosa*	hairy vetch	NN
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus lobata*	valley oak	N
Fagaceae	*Quercus wislizeni var. wislizeni*	interior live oak	N
Gentianaceae	*Cicendia quadrangularis*	cicendia	N
Gentianaceae	*Zeltnera muehlenbergii*	muehlenberg's centaury	N
Geraniaceae	*Erodium cicutarium*	Coastal heron's bill	NN, I
Geraniaceae	*Erodium botrys*	big heron bill	NN
Geraniaceae	*Geranium dissectum*	wild geranium	NN, I
Geraniaceae	*Geranium molle*	crane's bill geranium	NN
Juncaceae	*Juncus cf. balticus ssp. ater*	Baltic rush	N
Juncaceae	*Juncus oxymeris*	pointed rush	N
Juncaginaceae	*Triglochin scilloides*	flowering-quillwort	N
Lamiaceae	*Marrubium vulgare*	white horehound	NN, I
Lamiaceae	*Mentha pulegium*	pennyroyal	NN, I
Lamiaceae	*Mentha spicata*	spearmint	NN
Lamiaceae	*Pogogyne zizyphoroides*	Sacramento mint	N
Lamiaceae	*Rosmarinus officinalis*	rosemary	NN
Lythraceae	*Ammania robusta*	grand ammania	N
Lythraceae	*Lythrum hyssopifolia*	hyssop loosestrife	NN, I
Lythraceae	*Punica granatum*	pomegranate	NN
Marsileaceae	*Pilularia americana*	American pillwort	N
Myrsinaceae	*Lysmachia arvensis*	scarlet pimpernel	NN
Myrtaceae	*Eucalyptus sp.*	eucalyptus	NN
Oleaceae	*Olea europaea*	olive	NN, I
Onagraceae	*Oenothera sp.*	desert lantern	N
Onagraceae	*Epilobium brachycarpum*	autumn willowweed	N
Onagraceae	*Epilobium ciliatum*	willowherb	NN

Appendix F
Plant Species Observed-Sunset West (cont.)

Family	Scientific Name	Common Name	Native (N), Non-Native (NN), Invasive (I)
Oragraceae	*Epilobium densiflorum*	dense boisduvalia	N
Orobanchaceae	*Castilleja attenuata*	narrow leaved owl's clover	N
Orobanchaceae	*Castilleja campestris*	vernal pool indian paintbrush,	N
Orobanchaceae	*Cordylanthus mollis ssp. hispidus*	Hispid bird's-beak	N RARE
Papaveraceae	*Eschscholzia californica*	California poppy	N
Phrymaceae	*Mimulus guttatus*	yellow monkey flower	N
Phytolaccaceeae	*Phytolacca americana var. americana*	American pokeweed	NN, I
Plantaginaceae	*Gratiola ebracteata*	bractless hedge hyssop	N
Plantaginaceae	*Plantago elongata*	annual coast plantago	N
Plantaginaceae	*Plantago lanceolata*	English plantain	NN, I
Plantaginaceae	*Veronica peregrina*	hairy purslane speedwell	N
Polemoniaceae	*Navarretia intertexta*	interwoven navarretia	N
Polemoniaceae	*Navarretia leucocephala*	white headed navarretia	N
Polygonaceae	*Persicaria sp.*	smartweed	(N)
Polygonaceae	*Polygonum aviculare ssp. depressum*	prostrate knotweed	NN
Polygonaceae	*Polygonum sp.*	smartweed	N
Polygonaceae	*Polypogon monspeliensis*	rabbitsfoot grass	NN, I
Polygonaceae	*Rumex crispus*	curly dock	NN, I
Polygonaceae	*Rumex pulcher*	fiddle dock	NN
Pontederiaceae	*Eichhornia crassipes*	water hyacinth	NN, I
Ranunculaceae	*Agoseris sp.*	water Buttercup	N
Ranunculaceae	*Ranunculus aquatilis*	water-crowfoot	N
Ranunculaceae	*Ranunculus bonariensis*	vernal pool indian paintbrush	N
Rosaaceae	*Rubus armeniacus*	Himalayan blackberry	NN, I
Rosaceae	*Pyracantha sp.*	firethorn	NN
Rosaceae	*Pyrus calleryana*	callery pear	NN, I
Rosaceae	*Rosa sp.*	rose	NN
Rubiaceae	*Cephalanthus occidentalis*	common buttonbush	N
Rubiaceae	*Galium aparine*	cleavers	N
Salicaceae	*Salix exigua*	narrow leaved willow	N
Salicaceae	*Salix laevigata*	red willow	N
Salicaceae	*Salix lasiandra* var. *lasiandra*	Pacific willow	N
Salicaceae	*Salix* sp.	willow	(N)
Salicaceae	*Populus fremontii ssp. fremontii*	Fremont cottonwood	N
Salicaceae	*Salix babylonica*	weeping willow	NN
Salicaceae	*Salix cf. lasiandra var. lasiandra*	Pacific willow	N
Salicaceae	*Salix exigua var. hindsiana*	sandbar willow	N
Salicaceae	*Salix goodingii*	Gooding's willow	N
Salicaceae	*Salix lasiolepis*	Arroyo willow	N
Sapindaceae	*Acer macrophyllum*	bigleaf maple	N
Sapindaceae	*Aesculus californica*	California buckeye	N
Tamaricaceae	*Tamarix* sp.	saltcedar	NN
Typhaceae	*Typha sp.*	cattail	N
Verbenaceae	*Phyla nodiflora*	lippia	N
Viscaceae	*Phoradendron leucarpum ssp. macrophyllum*	mistletoe	N

Appendix F
Plant Species Observed-Sunset West (cont.)

Family	Scientific Name	Common Name	Native (N), Non-Native (NN), Invasive (I)
Vitaceae	*Vitis californica*	California grape	N
Moncot			
Arecaceae	*Washingtonia cf. robusta*	Mexican fan palm	NN, I
Cyperaceae	*Schoenoplectus acutus var. occidentalis*	tule	N
Cyperaceae	*Cyperus eragrostis*	tall cyperus	N
Cyperaceae	*Eleocharis acicularis*	needle spike rush	N
Cyperaceae	*Eleocharis macrostachya*	spikerush	N
Juncaceae	*Juncus bufonius*	common toad rush	N
Juncaceae	*Juncus cf. balticas ssp. ater*	Baltic rush	N
Juncaceae	*Juncus effusus ssp. pacificus*	Pacific rush	N
Juncaceae	*Juncus sp.*	rush	N
Poacea	*Andropogon virginicus var. virginicus*	broomsedge bluestem	NN
Poaceae	*Alopecurus saccatus*	Pacific foxtail	N
Poaceae	*Avena barbata*	slender oat	NN, I
Poaceae	*Brachypodium distachyon*	false brome	NN, I
Poaceae	*Briza minor*	little quaking grass	N
Poaceae	*Bromus diandrus*	ripgut grass	NN, I
Poaceae	*Bromus hordeaceus*	soft chess	NN, I
Poaceae	*Cortaderia sp.*	pampas grass	NN, I
Poaceae	*Cynodon dactylon*	Bermuda grass	NN, I
Poaceae	*Cynosurus echinatus*	annual dogtail	NN, I
Poaceae	*Deschampsia danthonioides*	annual hairgrass	N
Poaceae	*Digitaria sanguinalis*	hairy crabgrass	NN
Poaceae	*Echinochloa cf. crus -galli*	barnyard grass	NN
Poaceae	*Elymus caput-medusae*	medusa head	NN, I
Poaceae	*Elymus cf. ponticus*	tall wheat grass	NN
Poaceae	*Elymus glaucus*	blue wild rye	N
Poaceae	*Festuca bromoides*	brome fescue	NN
Poaceae	*Festuca perennis*	rye grass	NN, I
Poaceae	*Ficus carica*	edible fig	NN, I
Poaceae	*Glyceria sp.*	mannagrass	(NN)
Poaceae	*Hordeum marinum*	seaside barley	NN
Poaceae	*Hordeum murinum*	foxtail barley	NN, I
Poaceae	*Muhlenbergia rigens*	deergrass	N
Poaceae	*Panicum cf. capillare*	witchgrass	N
Poaceae	*Paspalum dilatatum*	dallis grass	NN
Poaceae	*Phalaris cf. minor*	little seed canarygrass	NN
Poaceae	*Phyllostachys sp.*	bamboo	NN
Poaceae	*Sorghum halepense*	johnsongrass	NN
Poaceae	*Stipa sp.*	needlegrass	N
Themidaceae	*Brodiaea elegans*	harvest brodiaea	N
Themidaceae	*Brodiaea minor*	dwarf brodiaea	N
Themidaceae	*Dichelostema capitatum*	blue dicks	N
Themidaceae	*Triteleia hyacinthina*	white brodiaea	N

Appendix F
Plant Species Observed-Sunset West (cont.)

Family	Scientific Name	Common Name	Native (N), Non-Native (NN), Invasive (I)
Pteridophyte			
Azollaceae	*Azolla filiculoides*	American water fern	N
Perridaceae	*Adiantum jordanii*	California maidenhair fern	N

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Appendix F
Plant Species Observed–Whitney Ranch

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Dicots			
Amaranthaceae	*Amaranthus californicus*	California amaranth	N
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	N
Apiaceae	*Torilis arvensis*	field hedge parsley	NN, I
Araceae	*Lemna* sp.	duckweed	N
Asteraceae	*Artemisia douglasiana*	California mugwort	N
Asteraceae	*Artemisia dracunculus*	tarragon	N
Asteraceae	*Baccharis pilularis ssp. consanguinea*	coyote brush	N
Asteraceae	*Carduus pycnocephalus ssp. pycnocephalus*	Italian thistle	NN, I
Asteraceae	*Erigeron canadensis*	Canada horseweed	N
Asteraceae	*Euthamia occidentalis*	Western goldenrod	N
Asteraceae	*Heterotheca grandiflora*	telegraph weed	N
Asteraceae	*Hypochaeris glabra*	smooth cat's 'ear	NN, I
Asteraceae	*Lactuca serriola*	prickly lettuce	NN
Brassicaceae	*Brassica nigra*	black mustard	NN, I
Brassicaceae	*Hirschfeldia incana*	short podded mustard	NN, I
Brassicaceae	*Raphanus sativus*	cultivated radish	NN, I
Fabaceae	*Acmispon americanus var. americanus*	Spanish lotus	N
Fabaceae	*Trifolium hirtum*	rose clover	I
Fagaceae	*Quercus douglasii*	blue oak	N
Fagaceae	*Quercus lobata*	valley oak	N
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	N
Haloragaceae	*Myriophyllum aquaticum*	parrot's feather	NN
Hydrocharitaceae	*Hydrilla verticillata*	hydrilla	NN, I
Juglandaceae	*Juglans hindsii*	Northern California black walnut	N
Onagraceae	*Epilobium brachycarpum*	autumn willowweed	N
Onagraceae	*Epilobium ciliatum* cf. ssp. *ciliatum*	fringed willowherb	N
Polygonaceae	*Persicaria* cf. *hydropiper*	waterpepper	NN
Polygonaceae	*Polygonum aviculare* ssp. *depressum*	prostrate knotweed	NN
Polygonaceae	*Rumex crispus*	curly dock	NN, I
Portulacaceae	*Portulaca oleracea*	common purslane	NN
Rosaceae	*Heteromeles arbutifolia*	toyon	N
Rosaceae	*Pyrus calleryana*	callery pear	NN, I
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	NN, I
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	N
Salicaceae	*Salix exigua* var. *hindsiana*	sandbar willow	N
Salicaceae	*Salix laevigata*	red willow	N
Salicaceae	*Salix lasiandra*	Pacific willow	N
Salicaceae	*Salix lasiolepis*	Arroyo willow	N
Scrophulariaceae	*Verbascum blattaria*	moth mullein	NN

Appendix F
Plant Species Observed–Whitney Ranch (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Monocots			
Arecaceae	*Washingtonia cf. robusta*	Mexican fan palm	NN, I
Cyperaceae	*Schoenoplectus acutus var. occidentalis*	tule	N
Cyperaceae	*Cyperus eragrostis*	tall cyperus	N
Cyperaceae	*Eleocharis acicularis*	needle spike rush	N
Cyperaceae	*Eleocharis macrostachya*	spikerush	N
Juncaceae	*Juncus bufonius*	common toad rush	N
Juncaceae	*Juncus cf. balticas ssp. ater*	Baltic rush	N
Juncaceae	*Juncus effusus ssp. pacificus*	Pacific rush	N
Juncaceae	*Juncus sp.*	rush	N
Poacea	*Andropogon virginicus var. virginicus*	broomsedge bluestem	NN
Poaceae	*Alopecurus saccatus*	Pacific foxtail	N
Poaceae	*Avena barbata*	slender oat	NN, I
Poaceae	*Brachypodium distachyon*	false brome	NN, I
Poaceae	*Briza minor*	little quaking grass	N
Poaceae	*Bromus diandrus*	ripgut grass	NN, I
Poaceae	*Bromus hordeaceus*	soft chess	NN, I
Poaceae	*Cortaderia sp.*	pampas grass	NN, I
Poaceae	*Cynodon dactylon*	Bermuda grass	NN, I
Poaceae	*Cynosurus echinatus*	annual dogtail	NN, I
Poaceae	*Deschampsia danthonioides*	annual hairgrass	N
Poaceae	*Digitaria sanguinalis*	hairy crabgrass	NN
Poaceae	*Echinochloa cf. crus -galli*	barnyard grass	NN
Poaceae	*Elymus caput-medusae*	medusa head	NN, I
Poaceae	*Elymus cf. ponticus*	tall wheat grass	NN
Poaceae	*Elymus glaucus*	blue wild rye	N
Poaceae	*Festuca bromoides*	brome fescue	NN
Poaceae	*Festuca perennis*	rye grass	NN, I
Poaceae	*Ficus carica*	edible fig	NN, I
Poaceae	*Glyceria sp.*	mannagrass	(NN)
Poaceae	*Hordeum marinum*	seaside barley	NN
Poaceae	*Hordeum murinum*	foxtail barley	NN, I
Poaceae	*Muhlenbergia rigens*	deergrass	N
Poaceae	*Panicum cf. capillare*	witchgrass	N
Poaceae	*Paspalum dilatatum*	dallis grass	NN
Poaceae	*Phalaris cf. minor*	little seed canarygrass	NN
Poaceae	*Phyllostachys sp.*	bamboo	NN
Poaceae	*Sorghum halepense*	johnsongrass	NN
Poaceae	*Stipa sp.*	needlegrass	N
Themidaceae	*Brodiaea elegans*	harvest brodiaea	N
Themidaceae	*Brodiaea minor*	dwarf brodiaea	N
Themidaceae	*Dichelostema capitatum*	blue dicks	N
Themidaceae	*Triteleia hyacinthina*	white brodiaea	N

Appendix F
Plant Species Observed–Whitney Ranch (cont.)

Family	Scientific Name	Common Name	Native (N), Non-native (NN), Invasive (I)
Pteridophyte			
Azollaceae	*Azolla filiculoides*	American water fern	N
Perridaceae	*Adiantum jordanii*	California maidenhair fern	N

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Appendix G

Animal Species Observed or Detected

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Appendix G
Animal Species Observed or Detected-Brighton

Taxon		Scientific Name†	Common Name
Order	**Family**		
VERTEBRATES			
Amphibians and Reptiles			
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	Western fence lizard
VERTEBRATES			
Birds			
Accipititriformes	Accipitridae	*Buteo lineatus*	Red-shouldered hawk
Accipititriformes	Cathartidae	*Cathartes aura*	Turkey vulture
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
Columbiformes	Columbidae	*Columba livia*	Rock pigeon
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Galliformes	Phasianidae	*Meleagris gallopavo*	Wild turkey
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Fringillidae	*Haemorhous mexicanus*	House finch
Passeriformes	Passerellidae	*Melozone crissalis*	California towhee
Passeriformes	Mimidae	*Mimus polyglottos*	Northern mockingbird
Passeriformes	Aegithalidae	*Psaltriparus minimus*	Bushtit
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Mammals			
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed jackrabbit
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

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Appendix G
Animal Species Observed or Detected-Claremont

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Hymenoptera	Apidae	*Apis* sp.	Honey bee
VERTEBRATES			
Amphibians and Reptiles			
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	Western fence lizard
Birds			
Accipititriformes	Accipitridae	*Buteo lineatus*	Red-shouldered hawk
Accipititriformes	Cathartidae	*Cathartes aura*	Turkey vulture
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Columbiformes	Columbidae	*Columba livia*	Rock pigeon
Galliformes	Phasianidae	*Meleagris gallopavo*	Wild turkey
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Passeriformes	Aegithalidae	*Psaltriparus minimus*	Bushtit
Passeriformes	Passerellidae	*Melozone crissalis*	California towhee
Passeriformes	Fringillidae	*Haemorhous mexicanus*	House finch
Passeriformes	Mimidae	*Mimus polyglottos*	Northern mockingbird
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Mammals			
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed jackrabbit
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

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Appendix G
Animal Species Observed or Detected–Garnet Creek

Taxon		Scientific Name†	Common Name
Order	**Family**		
VERTEBRATES			
Birds			
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Fringillidae	*Haemorhous mexicanus*	House finch
Passeriformes	Passerellidae	*Junco hyemalis*	Dark-eyed Junco
Passeriformes	Passerellidae	*Melozone crissalis*	California towhee
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Passeriformes	Parulidae	*Setophaga petechia*	Yellow warbler
Passeriformes	Turdidae	*Sialia mexicana*	Western bluebird
Passeriformes	Sturnidae	*Sturnella vulgaris*	European starling
Passeriformes	Turdidae	*Turdus migratorius*	American robin
Passeriformes	Passerellidae	*Zonotrichia leucophrys*	White-crowned sparrow
Pelecaniformes	Ardeidae	*Ardea alba*	Great egret
Piciformes	Picidae`	*Colaptes auratus*	Northern flicker
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Mammals			
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed jackrabbit
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

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Appendix G
Animal Species Observed or Detected–Orchard Creek

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Hymenoptera	Apidae	*Apis* sp.	Honey bee
VERTEBRATES			
Birds			
Accipitriformes	Accipitridae	*Buteo jamaicensis*	Red-tailed hawk
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Fringillidae	*Haemorhous mexicanus*	House finch
Passeriformes	Passerellidae	*Junco hyemalis*	Dark-eyed Junco
Passeriformes	Passerellidae	*Melozone crissalis*	California towhee
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Passeriformes	Parulidae	*Setophaga petechia*	Yellow warbler
Passeriformes	Turdidae	*Sialia mexicana*	Western bluebird
Passeriformes	Sturnidae	*Sturnella vulgaris*	European starling
Passeriformes	Turdidae	*Turdus migratorius*	American robin
Passeriformes	Passerellidae	*Zonotrichia leucophrys*	White-crowned sparrow
Pelecaniformes	Ardeidae	*Ardea alba*	Great egret
Piciformes	Picidae	*Colaptes auratus*	Northern flicker
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Passeriformes	Icteridae	†*Agelaius tricolor*	Tricolored blackbird
Mammals			
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed jackrabbit

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Appendix G
Animal Species Observed or Detected–Parklands North

Taxon		Scientific Name†	Common Name
Order	**Family**		
VERTEBRATES			
Birds			
Accipitriformes	Accipitridae	*Buteo jamaicensis*	Red-tailed hawk
Anseriformes	Anatidae	*Anas platrhynchos*	Mallard
Anseriformes	Anatidae	*Branta canadensis*	Canada goose
Galliformes	Phasianidae	*Meleagris gallopavo*	Wild turkey
Passeriformes	Icteridae	*Agelaius phoeniceus*	Red-winged blackbird
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Passerellidae	*Junco hyemalis*	Dark-eyed Junco
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Passeriformes	Passerellidae	*Zonotrichia leucophrys*	White-crowned sparrow
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Mammals			
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel
Rodentia	Castoridae	*Castror canadensis*	Beaver

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Appendix B
Animal Species Observed or Detected–Placer Creek Corporate Center

Taxon		Scientific Name†	Common Name
Order	**Family**		
VERTEBRATES			
Birds			
Accipititriformes	Cathartidae	*Cathartes aura*	Turkey vulture
Anseriformes	Anatidae	*Anas acuta*	Northern pintail
Anseriformes	Anatidae	*Anas platrhynchos*	Mallard
Charadriiformes	Charadriidae	*Charadrius vociferus*	Killdeer
Charadriiformes	Recurvirostridae	*Himantopus mexicanus*	Black-necked stilt
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Gruiformes	Rallidae	*Fulica americana*	American coot
Passeriformes	Icteridae	*Agelaius phoeniceus*	Red-winged blackbird
Passeriformes	Corvidae	*Corvus brachyrhynchos*	American crow
Passeriformes	Corvidae	*Corvus corax*	Common raven
Passeriformes	Icteridae	*Euphagus cyanocephalus*	Brewer's blackbird
Passeriformes	Passerellidae	*Passerculus sandwichensis*	Savannah sparrow
Mammals			
Carnivora	Canidae	*Canis lupus familiaris*	Domestic dog

† Sensitive

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Appendix B
Animal Species Observed or Detected–Stanford Ranch

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Hymenoptera	Apidae	*Apis* sp.	Honey bee
Lepidoptera	Nymphalidae	*Danaus plexippus*	Monarch butterfly
VERTEBRATES			
Amphibians and Reptiles			
Anura	Hylidae	*Hyliola sierra* (formerly *Pseudacris sierra*)	Sierran tree frog
Anura	Ranidae	*Lithobates catesbeianus*	American bullfrog
Testudines	Emydidae	†*Actinemys marmorata*	Western pond turtle
Testudines	Emydidae	*Trachemys scripta elegans*	Red-eared slide
Birds			
Accipititriformes	Accipitridae	*Buteo jamaicensis*	Red-tailed hawk
Accipititriformes	Accipitridae	*Buteo lineatus*	Red-shouldered hawk
Accipititriformes	Cathartidae	*Cathartes aura*	Turkey vulture
Anseriformes	Anatidae	*Anas platrhynchos*	Mallard
Anseriformes	Anatidae	*Branta canadensis*	Canada goose
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
Columbiformes	Columbidae	*Columba livia*	Rock pigeon
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Galliformes	Odontophoridae	*Callipepla californica*	California quail
Galliformes	Phasianidae	*Meleagris gallopavo*	Wild turkey
Galliformes	Phasianidae	*Phasianus colchicus*	Ring-necked pheasant
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Corvidae	*Corvus brachyrhynchos*	American crow
Passeriformes	Icteridae	*Euphagus cyanocephalus*	Brewer's blackbird
Passeriformes	Passerellidae	*Melozone crissalis*	California towhee
Passeriformes	Icteridae	*Agelaius phoeniceus*	Red-winged blackbird
Passeriformes	Mimidae	*Mimus polyglottos*	Northern mockingbird
Passeriformes	Passeridae	*Passer domesticus*	House sparrow
Passeriformes	Regulidae	*Regulus calendula*	Ruby-crowned kinglet
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Passeriformes	Tyrannidae	*Sayornis saya*	Say's phoebe
Passeriformes	Icteridae	*Sturnella neglecta*	Western meadowlark
Passeriformes	Troglodytidae	*Thryomanes bewickii*	Bewick's wren
Passeriformes	Turdidae	*Turdus migratorius*	American robin
Passeriformes	Passerellidae	*Zonotrichia leucophrys*	white-crowned sparrow
Pelecaniformes	Ardeidae	*Ardea herodias*	Great blue heron
Piciformes	Picidae	*Colaptes auratus*	Northern flicker
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Strigiformes	Tytonidae	*Tyto alba*	Barn owl

Appendix B (cont.)
Animal Species Observed or Detected–Stanford Ranch

Taxon		Scientific Name[†]	Common Name
Order	**Family**		
Mammals			
Carnivora	Canidae	*Canis latrans*	Coyote
Carnivora	Canidae	*Canis lupus familiaris*	Domestic dog
Carnivora	Felidae	*Felis catus*	Domestic cat
Lagomorpha	Leporidae	*Lepus californicus*	black-tailed jackrabbit
Carnivora	Mustelidae	*Lontra canadensis*	North American river otter
Artiodactyla	Cervidae	*Odocoileus hemionus*	Black-tailed mule deer
Rodentia	Sciuridae	*Sciurus griseus*	Western gray squirrel
Rodentia	Castoridae	*Castror canadensis*	Beaver

[†] Sensitive

Appendix G
Animal Species Observed or Detected–Sunset West

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Hymenoptera	Apidae	*Apis* sp.	Honey bee
VERTEBRATES			
Amphibians and Reptiles			
Anura	Hylidae	*Hyliola sierra* (formerly *Pseudacris sierra*)	Sierran tree frog
Anura	Ranidae	*Lithobates catesbeianus*	American bullfrog
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	Western fence lizard
Testudines	Emydidae	†*Actinemys marmorata*	Western pond turtle
Birds			
Accipititriformes	Accipitridae	*Buteo lineatus*	Red-shouldered hawk
Accipititriformes	Accipitridae	*Buteo jamaicensis*	Red-tailed hawk
Accipititriformes	Cathartidae	*Cathartes aura*	Turkey vulture
Anseriformes	Anatidae	*Branta canadensis*	Canada goose
Charadriiformes	Charadriidae	*Charadrius vociferus*	Killdeer
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Galliformes	Phasianidae	*Phasianus colchicus*	Ring-necked pheasant
Passeriformes	Icteridae	*Agelaius phoeniceus*	Red-winged blackbird
Passeriformes	Corvidae	*Corvus brachyrhynchos*	American crow
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Passeriformes	Icteridae	*Euphagus cyanocephalus*	Brewer's blackbird
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Passerellidae	*Junco hyemalis*	Dark-eyed Junco
Passeriformes	Mimidae	*Mimus polyglottos*	Northern mockingbird
Passeriformes	Icteridae	*Sturnella neglecta*	Western meadowlark
Passeriformes	Parulidae	Setophaga coronata	Yellow-rumped warbler
Pelecaniformes	Ardeidae	*Ardea herodias*	Great blue heron
Pelecaniformes	Ardeidae	*Ardea alba*	Great egret
Piciformes	Picidae	*Colaptes auratus*	Northern flicker
Mammals			
Carnivora	Felidae	*Felis catus*	Domestic cat
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed jackrabbit

† Sensitive

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Appendix G
Animal Species Observed or Detected–Whitney Ranch

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Lepidoptera	Nymphalidae	*Danaus plexippus*	Monarch butterfly
VERTEBRATES			
Amphibians and Reptiles			
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	Western fence lizard
Birds			
Accipititriformes	Accipitridae	*Buteo jamaicensis*	Red-tailed hawk
Accipititriformes	Cathartidae	*Cathartes aura*	Turkey vulture
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
Charadriiformes	Charadriidae	*Charadrius vociferus*	Killdeer
Columbiformes	Columbidae	*Columba livia*	Rock pigeon
Columbiformes	Columbidae	*Zenaida macroura*	Mourning dove
Galliformes	Odontophoridae	*Callipepla californica*	California quail
Galliformes	Phasianidae	*Phasianus colchicus*	Ring-necked pheasant
Passeriformes	Corvidae	*Aphelocoma californica*	California scrub-jay
Passeriformes	Corvidae	*Corvus brachyrhynchos*	American crow
Passeriformes	Fringillidae	*Haemorhous mexicanus*	House finch
Passeriformes	Passerellidae	*Melozone crissalis*	California towhee
Passeriformes	Mimidae	*Mimus polyglottos*	Northern mockingbird
Passeriformes	Tyrannidae	*Sayornis nigricans*	Black phoebe
Pelecaniformes	Ardeidae	*Ardea alba*	Great egret
Pelecaniformes	Ardeidae	*Butorides virescens*	Green Heron
Piciformes	Picidae	*Melanerpes formicivorus*	Acorn woodpecker
Passeriformes	Icteridae	*Agelaius tricolor*	Tricolored blackbird
Mammals			
Artiodactyla	Bovidae	*Ovis aries*	Domestic sheep
Lagomorpha	Leporidae	*Lepus californicus*	Black-tailed jackrabbit

† Sensitive

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