

**RARE AND SENSITIVE PLANTS OF
THE CANYONS FIRE
(CANYON FIRE AND CANYON FIRE 2) BURN
2018 INTERIM REPORT**

October 2018



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The interim report is dedicated to David Edward Bramlet (September 15, 1954-August 3, 2018), whom we lost this summer. Dave was an excellent and detail-oriented field botanist who dedicated his life to the better understanding and conservation of southern California plants. Dave contributed four days to the Canyons Fire project in April and June, 2018.

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Cover Photos: *Top center:* The central east fork of Weir Canyon, 17 April 2018, this area had more vegetation than most regions of the burn; *Lower upper left of four plants:* many-stemmed dudleya (*Dudleya multicaulis*), BLind Canyon; *Top right:* intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), Weir Canyon; *Below left:* California copper-leaf (*Acalypha californica*), Weir Canyon; *Below right:* Coulter’s matilija poppy (*Romneya coulteri*), Coal Canyon.

1.0 INTRODUCTION

On September 25, 2017, the Canyon Fire broke out near Green River Road along State Route 91 in Santa Ana Canyon. The fire spread westward and eastward, ultimately burning over 2,600 acres in the northern Santa Ana Mountains of Orange and western Riverside County. The Orange County portion included about 530 acres, almost perfectly matching the boundary of Chino Hills State Park south of the freeway.

The Canyon Fire was generally considered put out about a week later, on October 4, 2017. However, on October 9, 2017, strong Santa Ana winds re-ignited embers from a smoldering oak within the older Canyon Fire along SR 91 near Gypsum Canyon (ABC News 2017). The fire, soon known as Canyon Fire 2, rapidly spread south and west, leaping over SR 241 and burned into the eastern edge of the Anaheim Hills community and as far south as Peter Canyon and Irvine Regional Parks. In all about 9,200 acres were burnt by the time it was declared out on October 17, 2017.

While wildfires are destructive to property and cause short-term havoc to natural habitats, the natural habitats of southern California are adapted to periodic fire and fire is a critical element of natural vegetation succession. In their aftermath, the blackened hills also offer access opportunities in areas often covered with thick coastal sage scrub and chaparral. Not only are these areas significantly easier to reach, certain species of plants are adapted to fire and often only appear in large numbers following a fire, or only appear in the years immediately following a fire.

Recognizing the opportunity the Canyon and Canyon Fire 2 burns represented to better understand the abundance and distribution of rare plants within the Orange County portions of the burns in support of the Natural Communities Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) long term rare plant monitoring and management program, the Natural Communities Coalition sought to conduct rare plant surveys over the extent of the burn in 2018 and 2019.

The survey area includes Santiago Oaks, Peters Canyon, and Irvine Regional Parks, Chino Hills State Park south of SR 91, and the Nature Reserve of Orange County (NROC) lands of Gypsum, Weir, Blind, and Fremont Canyons within the burn footprint, a total of about 8,600 acres (See Figure 1).

This interim report details the findings of surveys conducted in 2018, the first year of the project. Overall, the goal of the project is to provide detailed information on the location, abundance, and habitat of rare and sensitive plants known or anticipated within the burn area, provide a partially vouchered list of plant species within the Study Area, and an assessment on how fire management has impacted rare plants within the Study Area. Another goal of the study is to examine existing NROC rare plant data for the area, currently being managed by the Center for Environmental Biology at the University of California, Irvine.

The interim report focuses on presentation of data collected during the 2018 field season. Detailed analysis and discussion will be provided in the final report.

2.0 PHYSICAL SETTING

The Canyons Fire Study Area (Study Area) is situated in the rugged foothills at the northern end of the Santa Ana Mountains east of the Anaheim Hills Community, south of SR 91, and include Santiago Oaks, Peter's Canyon, and Irvine Regional Parks, Chino Hills State Park south of SR 91 (See Figure 2), and the Weir and Gypsum Canyon units of NROC, in addition to the western portion of the Fremont Canyon unit, namely within Blind and northwestern Fremont Canyon (See Figure 3). State Route 241 cuts through the eastern portion of the Study Area, running north to south by southwest along Gypsum and Blind Canyons.

The prominent natural features of the Study Area include lower Coal Canyon (Chino Hills State Park), Weir Canyon (Santiago Oaks Regional Park and NROC lands), Santiago Canyon (Irvine Regional Park and NROC lands), Blind and Gypsum Canyons, and portions of central Fremont Canyon. A prominent, un-named drainage between Weir

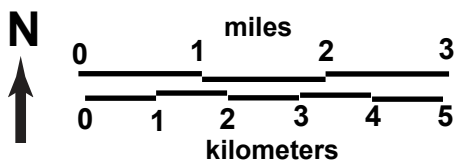
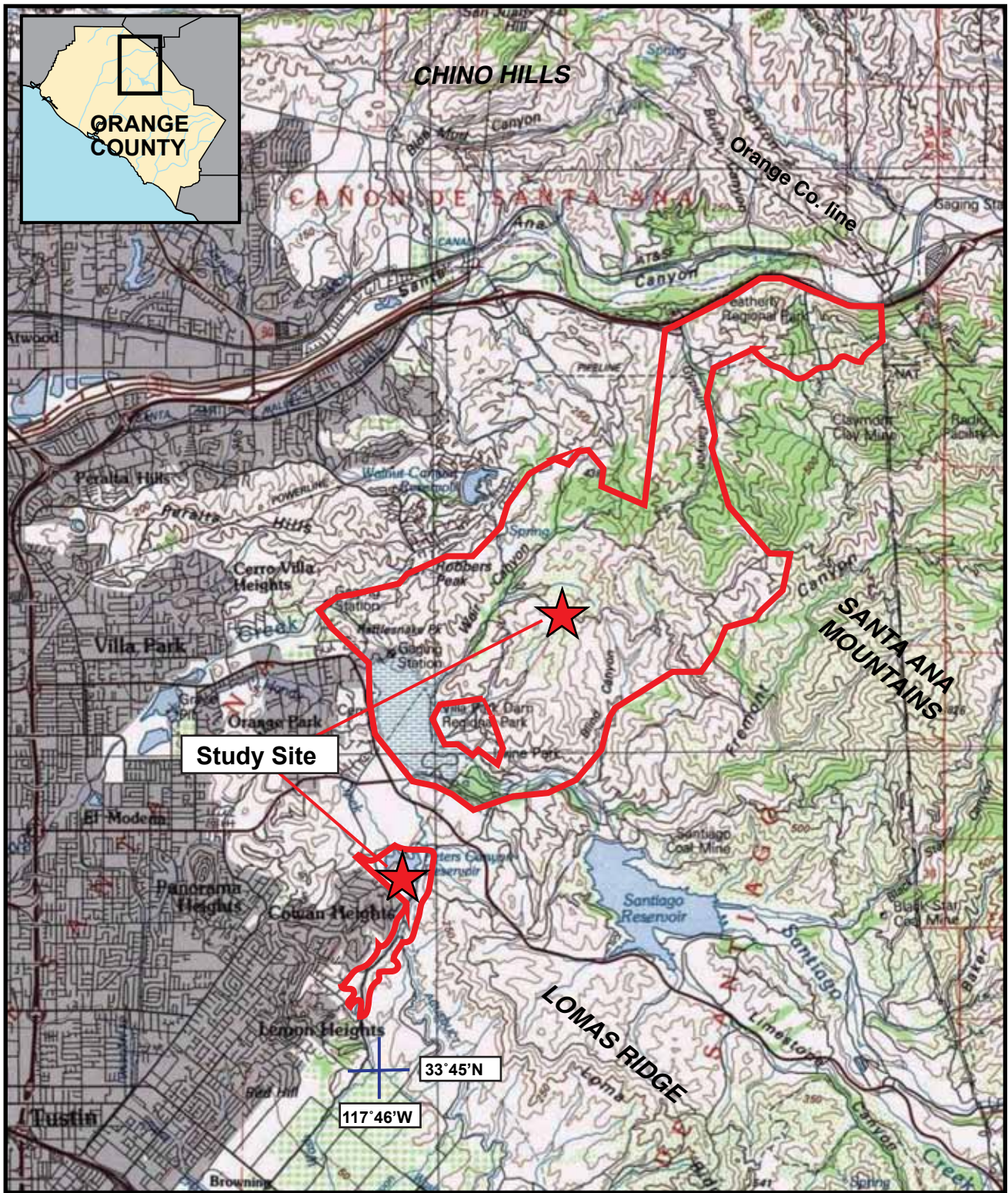


Figure 1
Regional Location
Canyons Fire Burn Study Area

and Blind Canyons for purpose of this report we have called the BSA drainage, for the Boy Scouts of America facility near its mouth. Peters Canyon forms an isolated unit to the southwest in association with Peters Canyon Reservoir and Peters Canyon Wash. Overall, the elevation varies in the main survey area from about 150 meters (480 feet) elevation at the mouth of Coal Canyon, to 564 meters (1,840 feet) at an unnamed peak south of Windy Ridge Road in the easternmost section of Fremont Canyon unit.

Prior to the burn, the area was a mosaic of habitats that included both annual and native grasslands, coastal sage scrub, mixed, chamise, ceanothus, and scrub oak chaparrals, nolina scrub, and coast live oak woodlands. Sandstone outcrops are plentiful and important locations to look for some rare plants. The majority of these habitats are rendered difficult to recognize and sometimes differentiate in the year following a fire, though there are often enough resprouting shrubs to recognize chaparrals, and recovering coast live oak trees mark the woodlands.

With the exception of SR 241 and the roads crisscrossing Irvine Regional Park, the Study Area is undeveloped with only dirt roads and trails. The primary dirt roads used during this study include Coal Canyon Trail and Pipeline Trail at Coal Canyon (see Figure 2A & 2B), Lower Weir Canyon, Upper Weir Canyon, Rifle Range, Upper Blind Canyon, Windy Ridge, and MWD Roads (NROC). Santiago Oaks possesses an extensive trail system open to the public. We used these trails when working within the regional park. The trails used included Northern Hills, Weir Canyon, Anaheim Hills, Coachwhip, Barham Ridge, and Yucca Ridge Trails. These features are shown on Figures 3.

3.0 METHODS

The survey will be conducted over two years. The original proposal was to conduct the bulk of the surveys in 2018 with touch-up surveys to be conducted in the spring of 2019. However, the winter rainy season of 2017/2018 was exceedingly dry, suggesting we should conduct fewer surveys the first year hoping that the rainfall situation would improve the second year. Despite the dry conditions, rare plants were found in significant numbers during the spring of 2018 and as a result, with the current budget constraints, we anticipate that about one half to three-fifths of the surveys were conducted in 2018.

Prior or concurrent with early surveys, a literature review was conducted to identify locations of rare and sensitive plants previously known from the vicinity of the study area. This included a review of the Black Star Canyon and Orange 7.5 minute USGS quadrangles in the California Department of Fish and Wildlife's California Natural Diversity Database (CDFW 2018), the California Native Plant Society's online Inventory of Rare and Endangered Plants (CNPS 2018), which included use of their USGS 7.5 minute search tool, the NROC data base, and various reports for the region. The California Consortium of Herbaria (Consortium 2018) was accessed, and used in conjunction with an inventory of Orange County herbarium specimens assembled by the lead botanist, Fred M. Roberts, in association with a development of a Flora of Orange County, to determine species that have been previously documented in the area by herbarium specimen. The two most useful reports were *Sensitive Botanical Resources and Vegetation in the North Ranch Policy Plan Area* (Harmsworth 2001), and *A Botanical Assessment of the Windy Ridge and Santiago Canyon Burns, Irvine Ranch Conservancy, Survey of Sensitive, Rare, and Endangered Plants and Floristic Inventory* (Roberts 2009).

As part of the project, it was anticipated that a review would be made of previously archived locality data for the NROC rare plant database, which is currently managed by The Center for Biological Resources at the University of California, Irvine. However, upon acquiring the data, we found that required significant interpretation and generally unable to apply it to the 2018 survey season. There were exceptions for some data sets. The data for Brewer's calandrinia (*Calandrinia breweri*) appeared largely to originate from Roberts (2009) and we were able to field check some of the sites. We will be looking at the NROC data base again this winter without the pressure of a busy field season.

Springs surveys commenced on March 20, 2018 and continued through July 12, 2018, by three primary surveyors, Fred M. Roberts, Sandra J. Leatherman, and David E. Bramlet. Surveys were conducted on 33 calendar days during

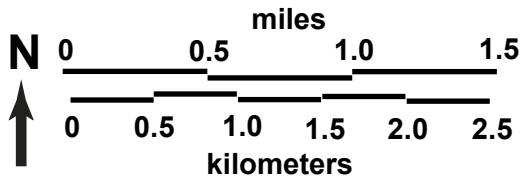


Figure 2A
Northern Study Area Features
Canyons Fire Burn Study Area

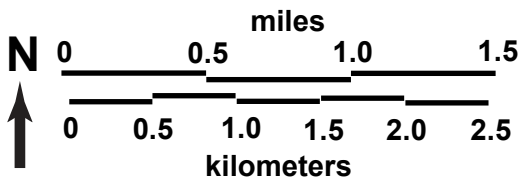
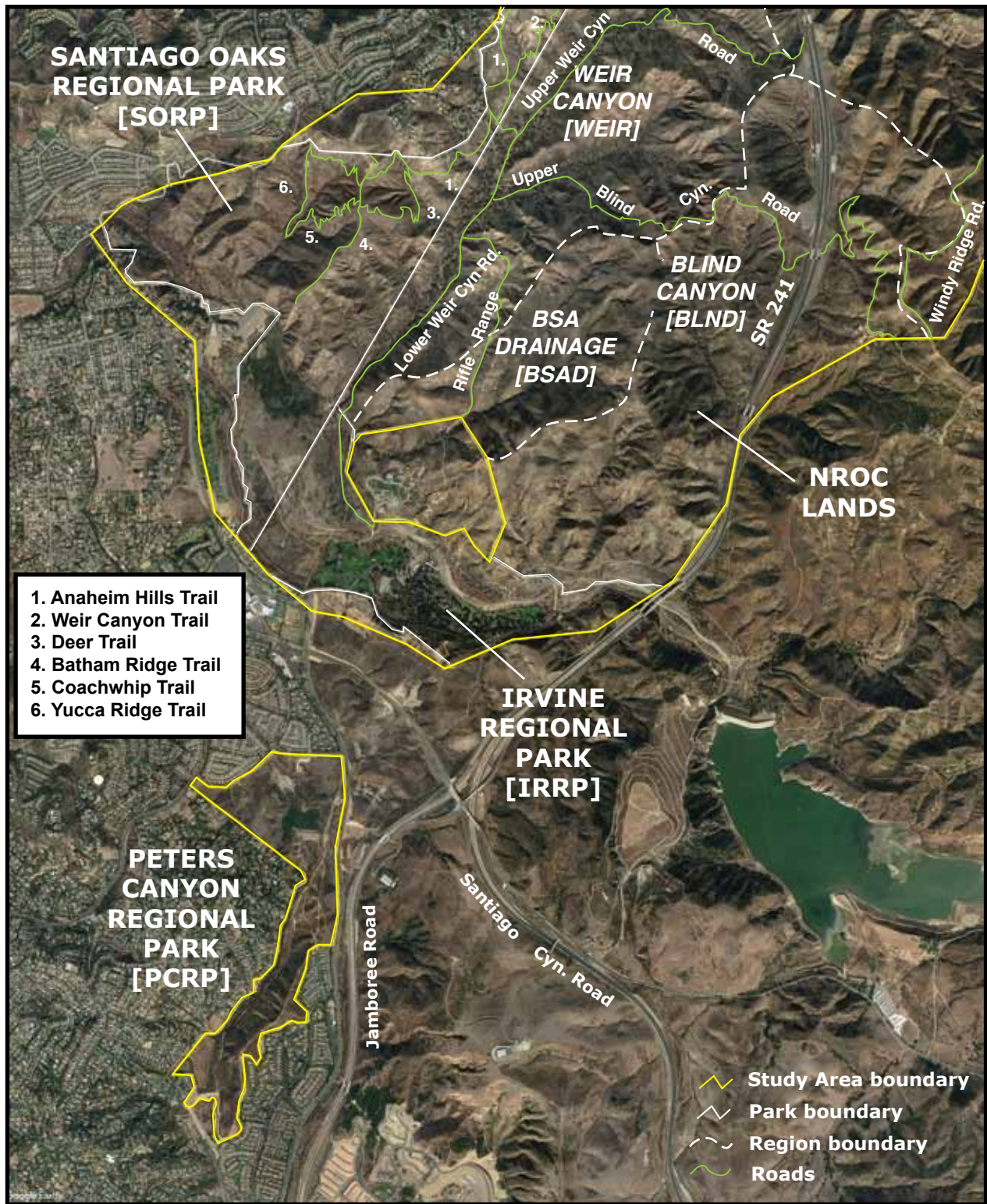


Figure 2B
Southern Study Area Features
Canyons Fire Burn Study Area

the 2018 season, with a total 59 surveyor days taking in account days where multiple surveys were out the same day. The dates, general location, and personnel on each survey are shown in Appendix A.

Surveys conducted between March 20th and April 12th focused on Coal Canyon, Chino Hills State Park, in part because of access restrictions. After mid-April, surveys were conducted widely on the NROC lands, with some follow-up surveys at Coal Canyon, and several days at Santiago Canyon Regional Park. Surveys between April 16 and June 1, 2018 focused on Weir and Blind Canyons, and the BSA Drainage. After June 1, 2018, the survey focus changed from spring to late spring surveys, which primarily focused on the distribution of intermediate mariposa lily (*Calochortus weedii* var. *intermedius*), though other species continued to be found.

The 2018 surveys focused primarily on Chino Hills State Park, Weir and Blind Canyons, and the BSA Drainage. Limited surveys were conducted within Gypsum and Fremont Canyons. We anticipate surveying Peters Canyon and Irvine Regional Parks in 2019.

The botanists systematically surveyed the study area on foot using meandering transects, and with the use of binoculars on steep cliffs or difficult to access terrain. Typically, special attention was paid to habitats that look favorable for rare plants, however, after a fire, this technique is less useful. On the other hand, plants are usually more visible as they are not hidden behind shrubs and dense grasses. Typically, rare and sensitive plants were readily identified within eight meters (25-feet) of survey tracks and for more prominent species, identifications could be made at greater distances. Small annuals are typically reliably identified within about three-meters (10 feet) of the transect path.

Survey tracks were recorded Garmin Map64 SX hand held GPS units running continuous tracks while within the Study Area. The tracking allows land stewards to see exactly where the surveys were conducted and identify areas that were not directly examined.

Plant species observed in the Study Area were recorded and compiled into a comprehensive list (See Appendix B). Vouchers were obtained to document rare and sensitive plants, generally by drainage, and for more widespread species to document regionally significant plants or if material was obtained for later identification. Vouchers obtained will be deposited either at the Santa Ana Botanic Gardens at Claremont (RSA) or the University of California, Riverside (UCR) herbarium, or both institutions when duplicates were obtained.

For rare and sensitive plant species encountered, the location was recorded on a Garman Map64 ST hand held GPS units. Generally a single GPS point was adequate to document the location, however, a few polygons were recorded using the Garman unit's trackline feature if the distribution of the plants at the site were significantly extended and there was more than 30 meters between the most distant points. Generally, separation between individual sites was about 15 meters (50 feet) or more but sometimes less if clearly demarcated. All GPS recordings were taken in Universal Transverse Mercator (UTM) units with a WGS 84 Datum.

In cases where a polygon was unreasonable to generate, either for reasons of safety or if the polygon occupied by the plant was especially large or cumbersome to gather, a sketch of the approximate distribution was made on field map and later transferred to Google Earth for a digital representation. All digital data will be transferred to the Natural Reserve Communities group and relevant Orange County partners the first week of October 2018.

Notes for rare and sensitive plant species were recorded on standardized data forms. Each record was assigned a GPS code based on the first letter of the genus, species, or subtaxon rank, followed by a number representing the month, day, and consecutive number of sites located during the survey day. On the form, it was noted whether it was photographed, the number of individual plants observed, the percentage of plants that were vegetative, in bud, flower, or fruit. As back-up information, the GPS point easting and northing was also recorded. These data are summarized in section 5.2 and Appendices C, D, and E.

Very little rain fell during the rainy season beginning October 2017 with most rain falling in just two events. Overall, the survey area was quite dry but there were pockets, mostly in Weir and Blind Canyons, where localized higher rainfall did occur as these areas were considerably greener and had higher diversities of plants than most of the study area. The pattern of wet and dry areas often directed our survey locations. Overall, even in these wetter areas, the typical post wild fire explosion of wildflowers was altogether absent.

According to the National Weather Service, Fremont Canyon, a weather station located within the study area, received 125 mm (4.91 inches) of rainfall from October 2017 to July 2018 (Western Regional Data Center 2018), which is far below the historical average of 366 mm (14.40 inches) for nearby Yorba Linda based on 1912-2016 averages or the Santa Ana Fire Stations historical average of 348 mm (13.69 inches) (Western Regional Climatic Center 2018). Because of its higher elevation and orographic lift, it would be expected that the average rainfall at the Fremont Canyon station would be significantly higher than that of Yorba Linda or Santa Ana. The main impacts for this exceptionally dry winter was a reduction in perennial herb and especially herbaceous annual diversity and abundance. While rare and sensitive annuals are known or anticipated in the study area, only two were seen in 2018. By comparison, at least seven species of rare and sensitive annuals were observed in the nearby and partly overlapping Windy Ridge and Santiago Canyon burns in 2008 (Roberts 2009).

4.0 PREVIOUS STUDIES

Several previous studies were identified and used in the course of the first seasons surveys, including Harmsworth (2001), Roberts (2009), the Consortium (2018), and the NROC data base (2018). An analysis of these sources will be provided in the final report.

5.0 SURVEY RESULTS

5.1 PLANT SPECIES SUMMARY

A total of 330 species of vascular plants were observed at the Study Area representing 68 families. One additional subtaxon was identified. The preliminary herbarium search also found six additional species that were not located in 2018 bringing the total taxa to 337. Of these plant taxa, 266 (about 80 percent) are of native origin and 71 (20 percent) are of non-native origin. The largest representative families within the Study Area are the sunflower family (Asteraceae) with 70 species, grasses (Poaceae) with 30 species, peas (Fabaceae) with 25 species, and mustards (Brassicaceae) with 14 species. A comprehensive list of plant taxa encountered is included in Appendix B. The list is broken down by drainage or land manager. The final report will also include an overall species list addressing abundance and habitat preference within the study area.

With fairly comprehensive lists presented for Chino Hills State Park, Santiago Oaks Regional Park, Weir and Blind Canyons, and the BSA Drainage, some comparisons can be made in these areas. Weir Canyon included 229 species observed, Chino Hills State Park (Coal and lower Gypsum Cyns.), 216 species, Blind Canyon included 183 species observed, the BSA Drainage, 148 species, and Santiago Oaks Regional Park included 94 species based on three survey days in June.

5.2 RARE AND SENSITIVE PLANTS OBSERVED 2018

A total of 10 rare and sensitive plant species were observed within the study area in 2018. Nine of these are included in the CNPS Rare Plant Inventory (2018) while one additional Locally Rare plant for Orange County (Roberts 2008) was encountered. A total of 562 rare and sensitive plant sites were recorded with Catalina mariposa lily (*Calochortus catalinae*) and intermediate mariposa lily (*Calochortus weedii* var. *intermedius*). Intermediate mariposa lily had the highest estimated number, over 100,000 individuals but the authors are still developing methods to estimate numbers over large polygons and the number may change for the final report. One-hundred thousand plants is an exceptionally large number for this species, for example, surveys of the Santiago Canyon burn (Roberts 2009), over

a larger area, reported about 19,000 plants. While the count is less reliable in the current study, the number is almost certainly between 80,000 and 120,000 individuals. Unlike the survey in 2008 where typical polygons were under 1,500 square meters, a number of the polygons encountered in this study were over 40,000 square meters in area. Likely, the 100,000 estimate is actually an under estimate. Based on previous field experience with this plant, the number of individuals seen this year were far in excess as seen in other years so we anticipated large numbers. A summary of the family, rank, and number of sites/individuals is provided on Table 1 below.

TABLE 1: RARE AND SENSITIVE PLANTS OBSERVED

Scientific Name	Common Name	Family	Rank	Total	
				Sites	Individuals
<i>Acalypha californica</i>	California coppereaf	Euphorbiaceae	LR	2	525
<i>Astragalus brauntonii</i>	Braunton’s milk-vetch	Fabaceae	FR, CRPR 1B.1	9	2,260
<i>Calandrinia breweri</i>	Brewer’s calandrinia	Montiaceae	CRPR 4.2	3	311
<i>Calochortus catalinae</i>	Catalina mariposa lily	Liliaceae	CRPR 4.2	143	12,155
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	Liliaceae	CRPR 1B.1	141	100,704
<i>Dudleya multicaulis</i>	many-stemmed dudleya	Crassulaceae	CRPR 1B.1	55	2,597
<i>Horkelia cuneata</i> subsp. <i>puberula</i>	mesa horkelia	Rosaceae	CRPR 1B.1	3	4
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robbinson’s peppergrass	Brassicaceae	CRPR 4.3	40	1,010
<i>Nolina cismontana</i>	chaparral nolina	Rustaceae	CRPR 1B.2	96	15,769

Romneya coulteri Coulter’s matilija poppy Papaveraceae CRPR 4.2 70 3,970

RARE AND SENSITIVE PLANT RANK DESIGNATIONS

For additional information regarding California Native Plant Society ranks, see CNPS (2017).

CRPR List 1B: California Rare Plant Rank 1B - Species that are rare throughout their range and occur primarily within California.

CRPR List 4: California Rare Plant Rank 4 - Species that have restricted distribution within California; a watch list.

FE: Endangered under the Federal Endangered Species Act.

LR: Local Rare in Orange County, generally fewer than 8 populations and/or significantly threatened within the County (Roberts 2008). CNPS is currently working on an official Locally Rare designation.

California Native Plant Rank Threat Code Extensions

None Plants lacking any threat information.

0.1 Seriously Endangered in California (over 80% of occurrences threatened; high degree and immediacy of threat).

0.2 Fairly endangered in California (20-80% of occurrences threatened)

0.3 Not Very Threatened in California (low degree/immediacy of threat or no current threats known).

The distribution of rare plants is summarized on Figures 3-I and in Appendix C (Chino Hills State Park), D (Santiago Regional Park), and E (Nature Reserve of Orange County lands). A discussion of individual species found will be included in the final report. These discussions will include an overall description of the range of the rare plant, its distribution in Orange County, previously known occurrences within the Study Area, and a written discussion of combined survey results for 2018 and 2019. The three primary regions surveyed in 2018 are briefly discussed below.

5.21 CHINO HILLS STATE PARK

Five species of rare and sensitive plants were encountered during 2018 at Chino Hills State Park within the Study Area. These included Braunton’s milk-vetch, Catalina mariposa lily, many-stemmed dudleya, chaparral nolina, and Coulter’s matilija poppy. A summary for these species is provided in Table 2. The distribution of these plants within Chino Hills State Park is provided on Figure 3. Although not recorded in 2018, intermediate mariposa lily was almost certainly observed in leaf. While it was not observed on either day Coal Canyon was visited in late May, no surveys were conducted in the month of June when this species is most easily detected. We fully anticipate intermediate mariposa lily will be reported at Coal Canyon in 2019.

TABLE 2: RARE AND SENSITIVE PLANTS OBSERVED AT CHINO HILLS STATE PARK

Scientific Name	Common Name	Family	Rank	Sites	Total Individuals
<i>Astragalus brauntonii</i>	Braunton’s milk-vetch	Fabaceae	FR, CRPR 1B.1	9	2,260
<i>Calochortus catalinae</i>	Catalina mariposa lily	Liliaceae	CRPR 4.2	15	636
<i>Dudleya multicaulis</i>	many-stemmed dudleya	Crassulaceae	CRPR 1B.1	4	647
<i>Nolina cismontana</i>	chaparral nolina	Rustaceae	CRPR 1B.2	39	6,223
<i>Romneya coulteri</i>	Coulter’s matilija poppy	Papaveraceae	CRPR 4.2	68	3,627

5.22 SANTIAGO OAKS REGIONAL PARK

Four species of rare and sensitive plants were encountered during 2018 at Santiago Oaks Regional Park. These included Catalina mariposa lily, intermediate mariposa lily, Robinson’s peppergrass, and chaparral nolina. A summary for these species is provided in Table 3. The distribution of these plants within the Park is provided on Figure 4. Although not recorded in 2018, intermediate mariposa lily was almost certainly observed in leaf. Other species are anticipated. Only late spring surveys were conducted at Santiago Oaks Regional Park, commencing June 6, 2018. Considering the apparent dry condition of the park at that time, we found a fair number of rare and sensitive plant locations.

TABLE 3: RARE AND SENSITIVE PLANTS OBSERVED AT SANTIAGO OAKS RP

Scientific Name	Common Name	Family	Rank	Sites	Total Individuals
<i>Calochortus catalinae</i>	Catalina mariposa lily	Liliaceae	CRPR 4.2	12	678
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	Liliaceae	CRPR 1B.1	42	1,358
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robbinson’s peppergrass	Brassicaceae	CRPR 4.3	3	120
<i>Nolina cismontana</i>	chaparral nolina	Rustaceae	CRPR 1B.2	8	294

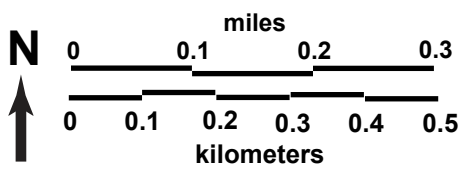
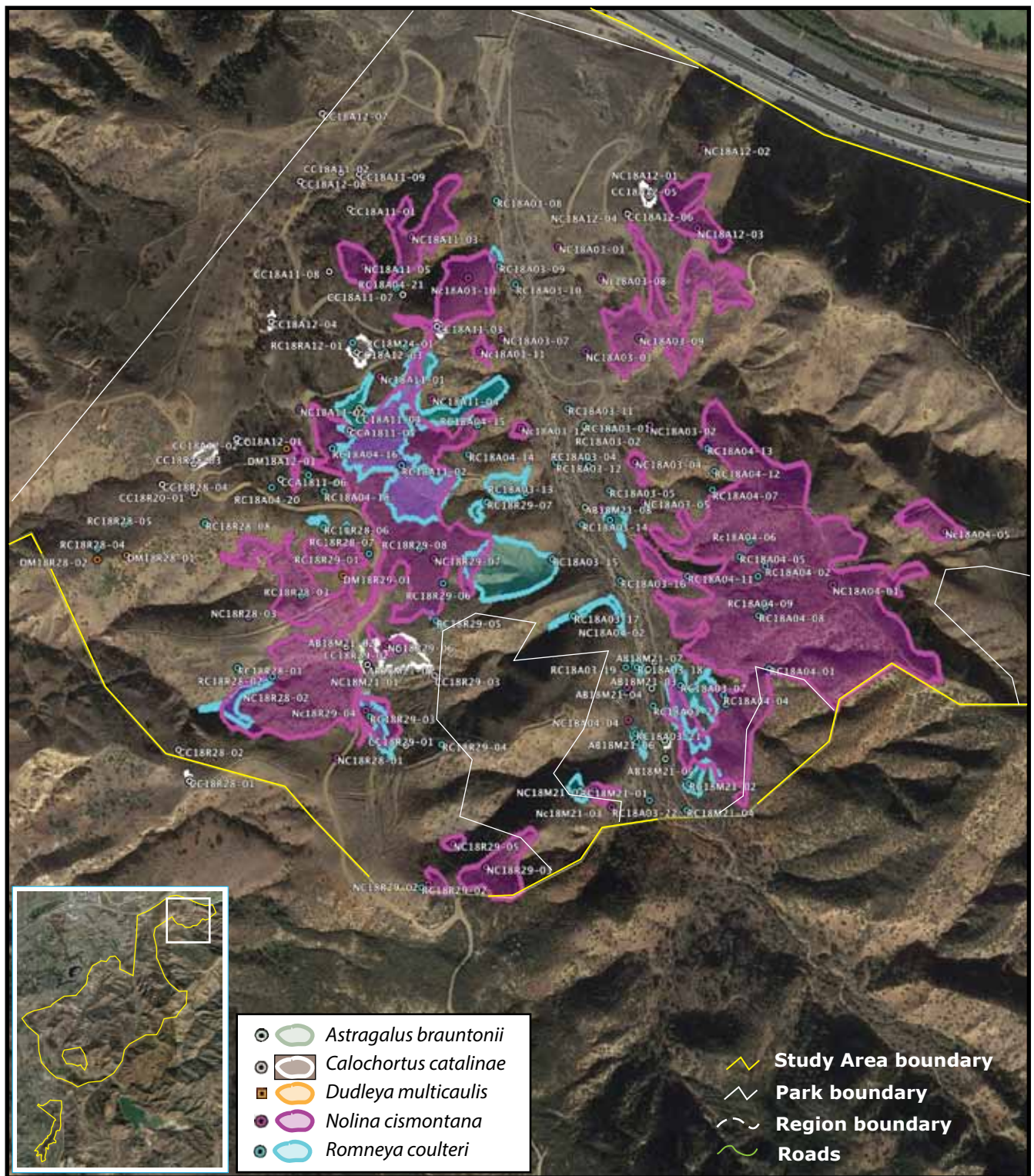


Figure 3
Chino Hills State Park Rare & Sensitive Plants
Canyons Fire Burn Study Area

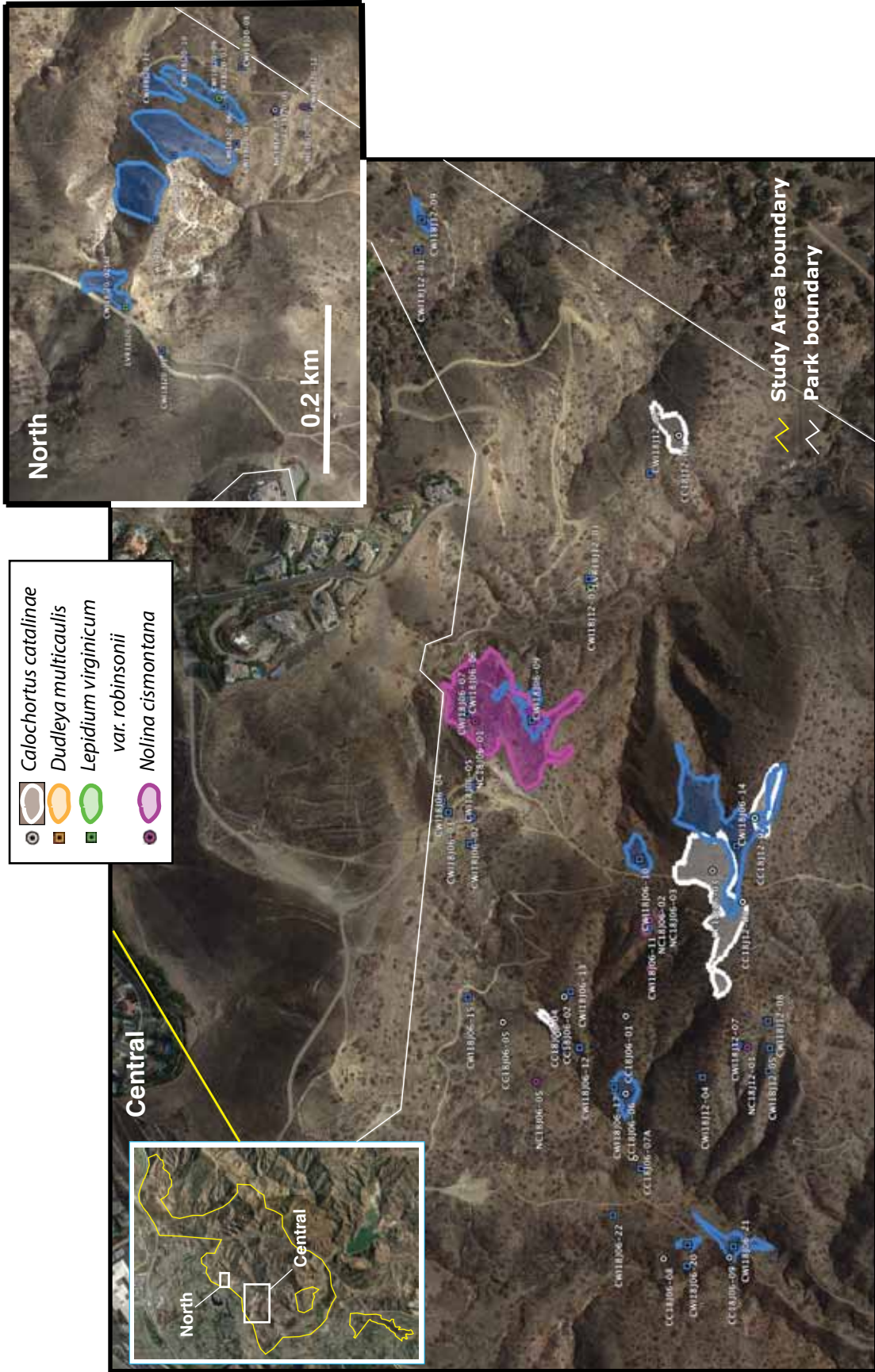


Figure 4
Santiago Oaks Regional Park Rare & Sensitive Plants
Canyons Fire Burn Study Area

N
 0 0.1 0.2 0.3
 miles
 0 0.1 0.2 0.3 0.4 0.5
 kilometers

5.23 NROC LANDS

Within the NROC lands of the Study Area, principally Gypsum, Weir, Blind, and Fremont Canyons, we encountered nine rare and sensitive plant species including eight plants with formal rank in the CNPS Inventory, Brewer’s calandrinia, Catalina mariposa lily, intermediate mariposa lily, many-stemmed dudleya, mesa horkelia, Robinson’s peppergrass, chaparral nolina, and Coulter’s matilija poppy, and a single Locally Rare plant, California copperleaf. A summary for these species is provided in Table 4. The distribution of these plants within the Park is provided on Figure 5-6. While it is likely other rare and sensitive species, especially rare annuals, were absent in 2018 due to dry conditions, two of the species, would be readily detectable regardless of rainfall. Both Coulter’s matilija poppy and chaparral nolina are large, showy, and fire adapted and would be readily detectable regardless of rainfall condition. The mariposa lilies were in surprisingly good condition in 2018 and likely were at least in part benefiting from the much more favorable rainfall pattern of the 2016/2017 season. Intermediate mariposa lily was often in seen in large numbers on the burn area, exceeding the expectations of the surveyors in a less than favorable year.

TABLE 4: RARE AND SENSITIVE PLANTS OBSERVED

Scientific Name	Common Name	Family	Rank	Sites	Total Individuals
<i>Acalypha californica</i>	California copperleaf	Euphorbiaceae	LR	2	525
<i>Calandrinia breweri</i>	Brewer’s calandrinia	Montiaceae	CRPR 4.2	3	311
<i>Calochortus catalinae</i>	Catalina mariposa lily	Liliaceae	CRPR 4.2	116	10,841
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	Liliaceae	CRPR 1B.1	99	99,346
<i>Dudleya multicaulis</i>	many-stemmed dudleya	Crassulaceae	CRPR 1B.1	51	1950
<i>Horkelia cuneata</i> subsp. <i>puberula</i>	mesa horkelia	Rosaceae	CRPR 1B.1	3	4
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robbinson’s peppergrass	Brassicaceae	CRPR 4.3	37	890
<i>Nolina cismontana</i>	chaparral nolina	Rustaceae	CRPR 1B.2	49	9252
<i>Romneya coulteri</i>	Coulter’s matilija poppy	Papaveraceae	CRPR 4.2	2	343

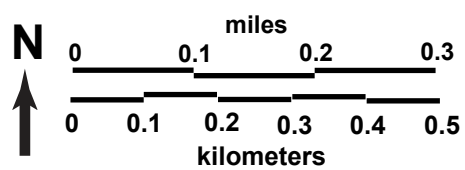
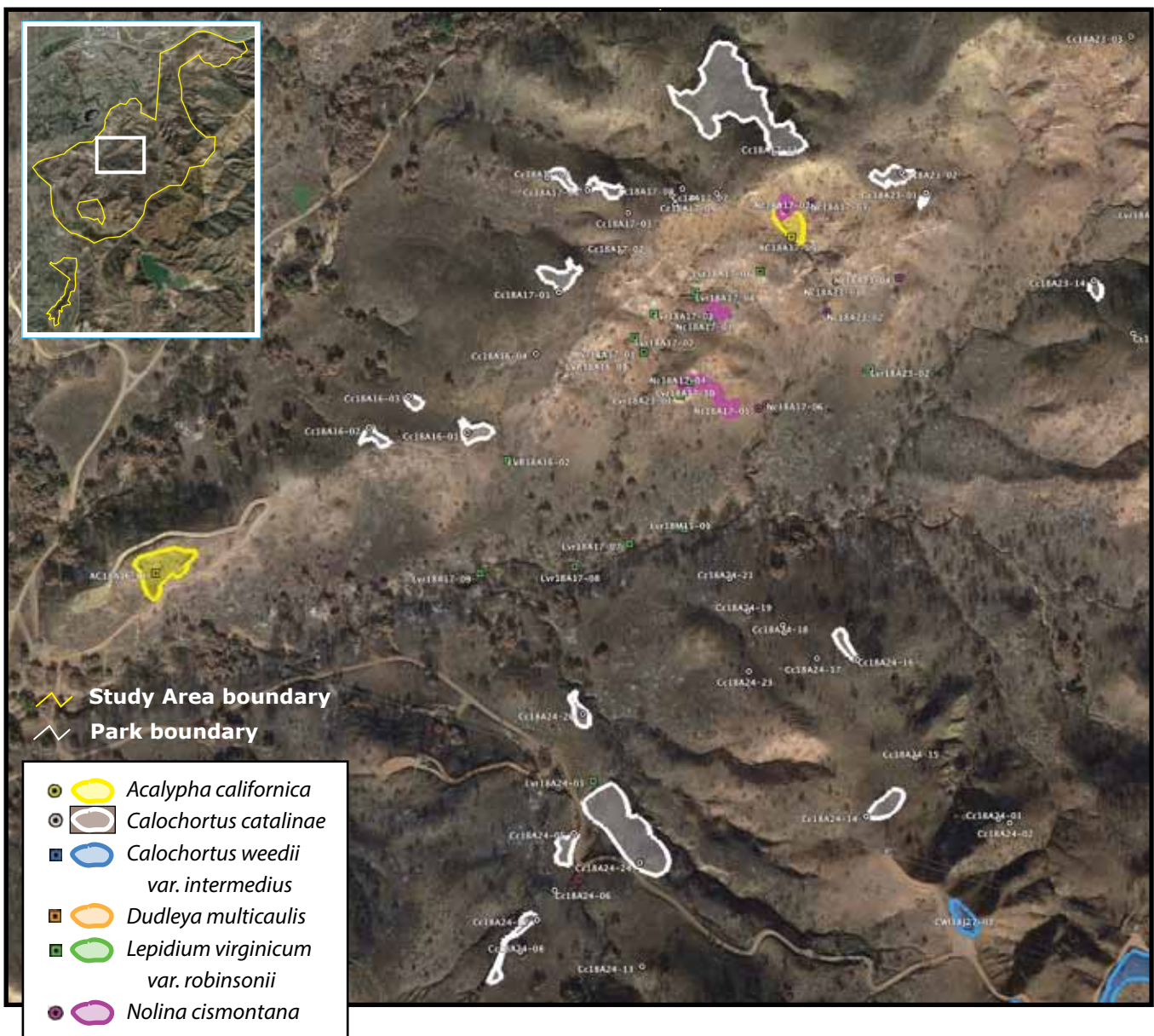
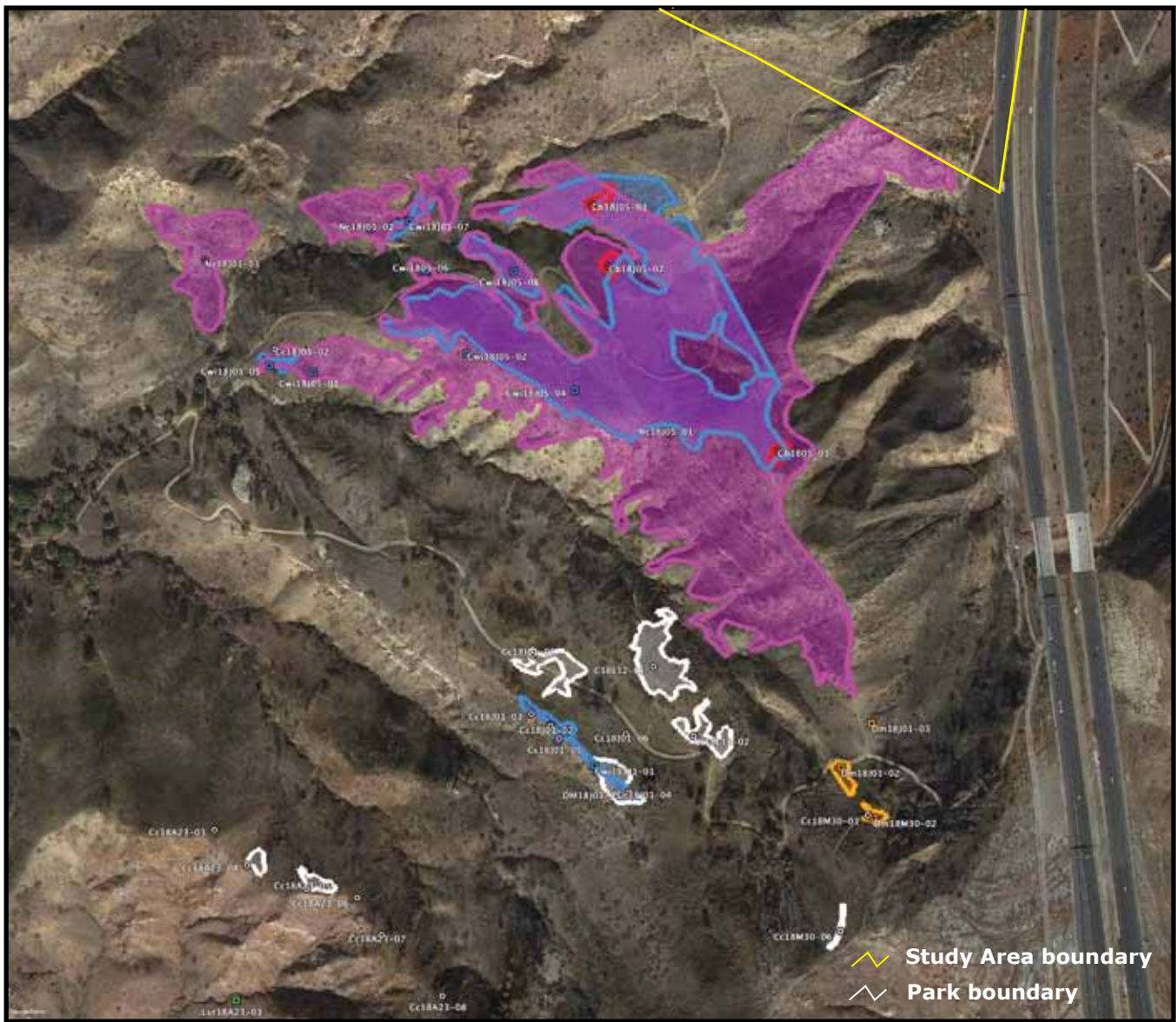


Figure 5
NROC Lands
E Fork Weir Canyon
Rare & Sensitive Plants
Canyons Fire Burn Study Area



- *Calandrinia breweri*
- *Calochortus catalinae*
- *Calochortus weedii*
var. intermedius
- *Dudleya multicaulis*
- *Lepidium virginicum*
var. robinsonii
- *Nolina cismontana*

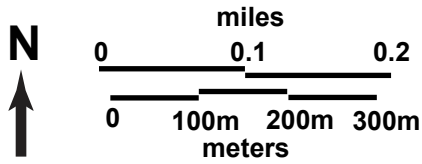


Figure 6
NROC Lands North Weir Canyon
Rare & Sensitive Plants
Canyons Fire Burn Study Area

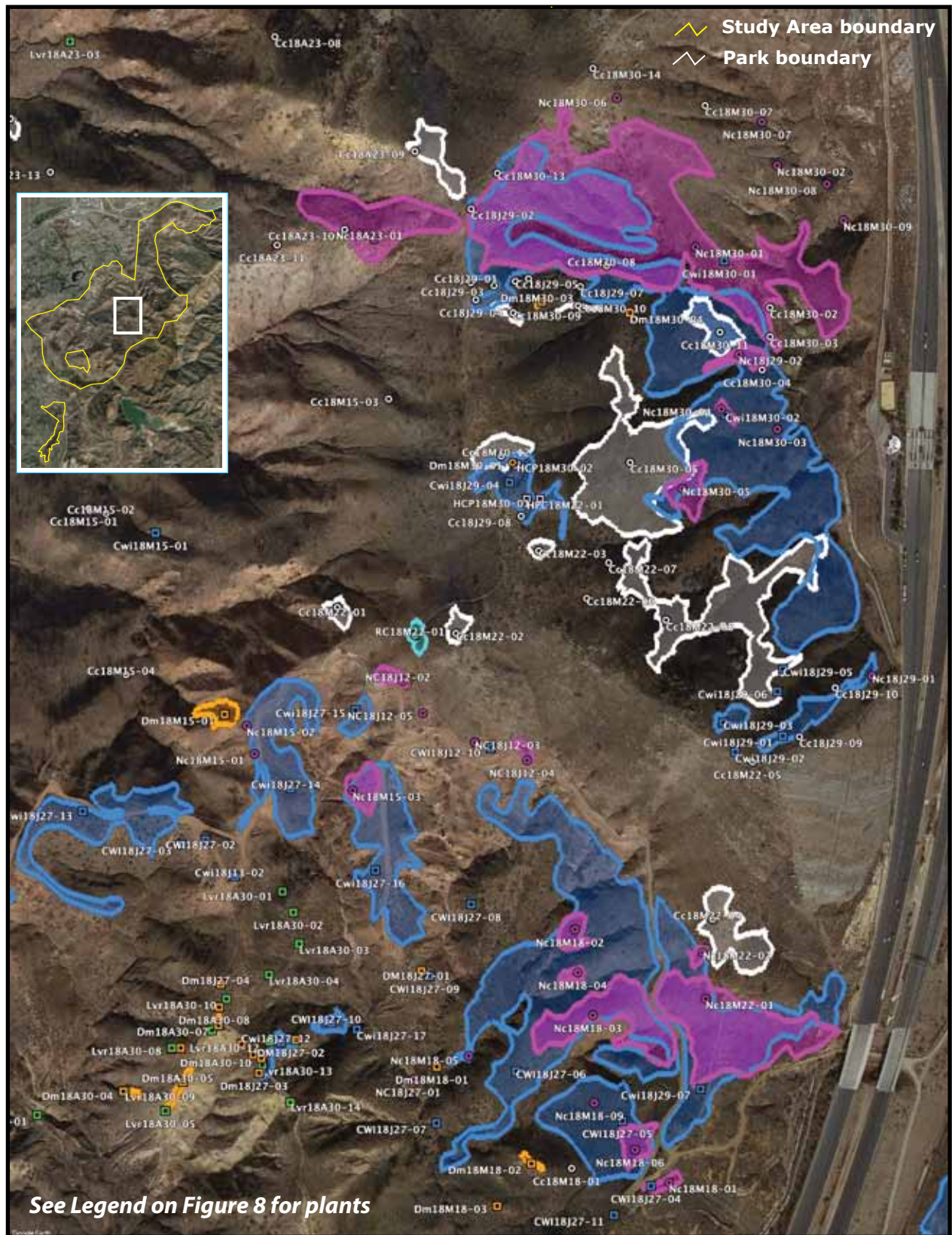


Figure 7
NROC Lands North Blind Canyon
Rare & Sensitive Plants
Canyons Fire Burn Study Area

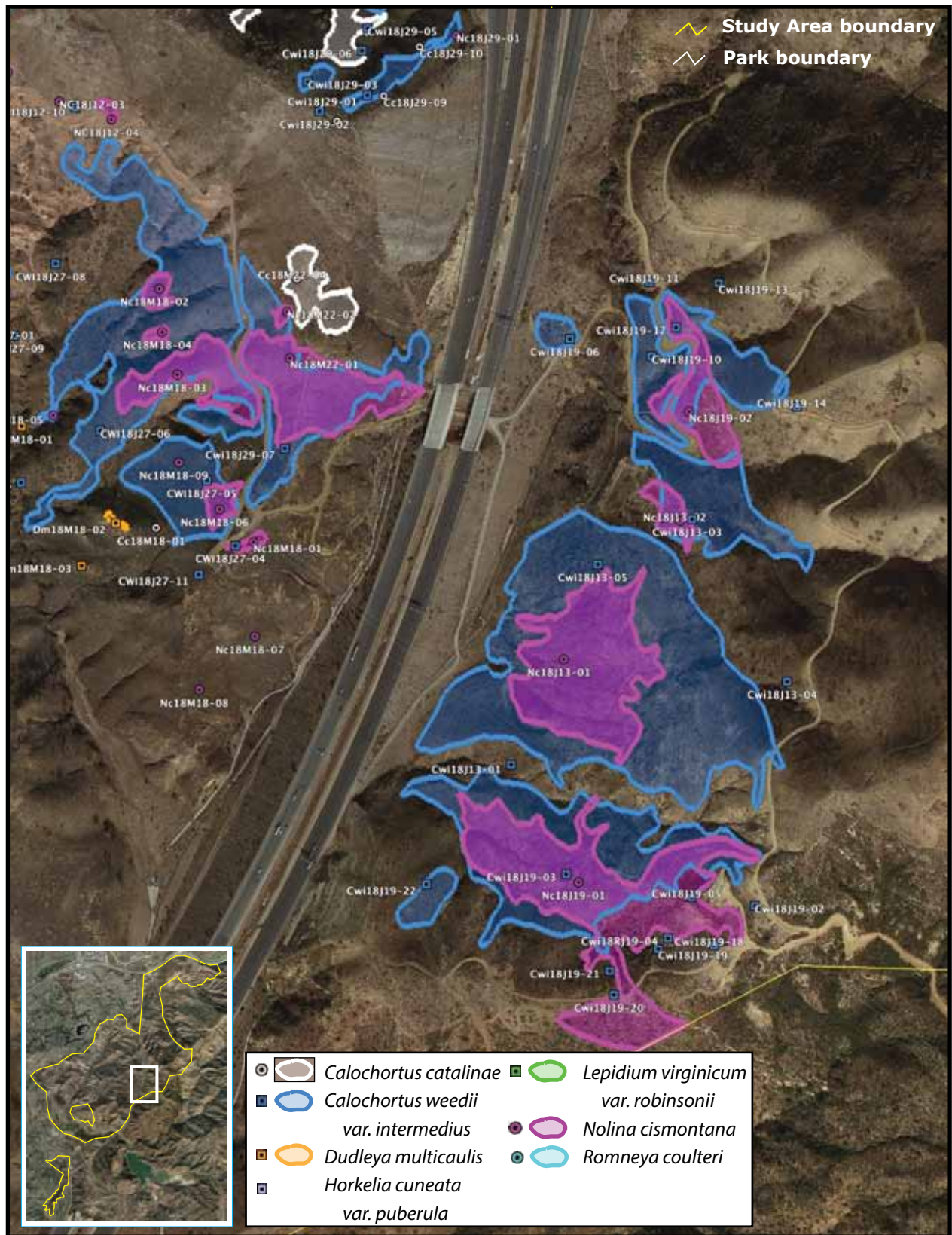
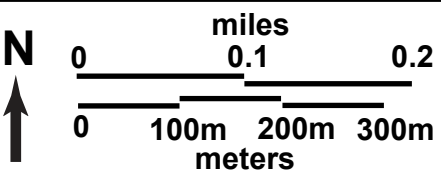


Figure 8
NROC Lands East Blind Canyon
Rare & Sensitive Plants
Canyons Fire Burn Study Area



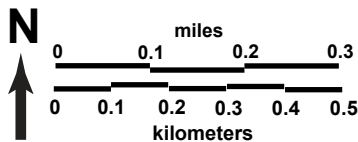
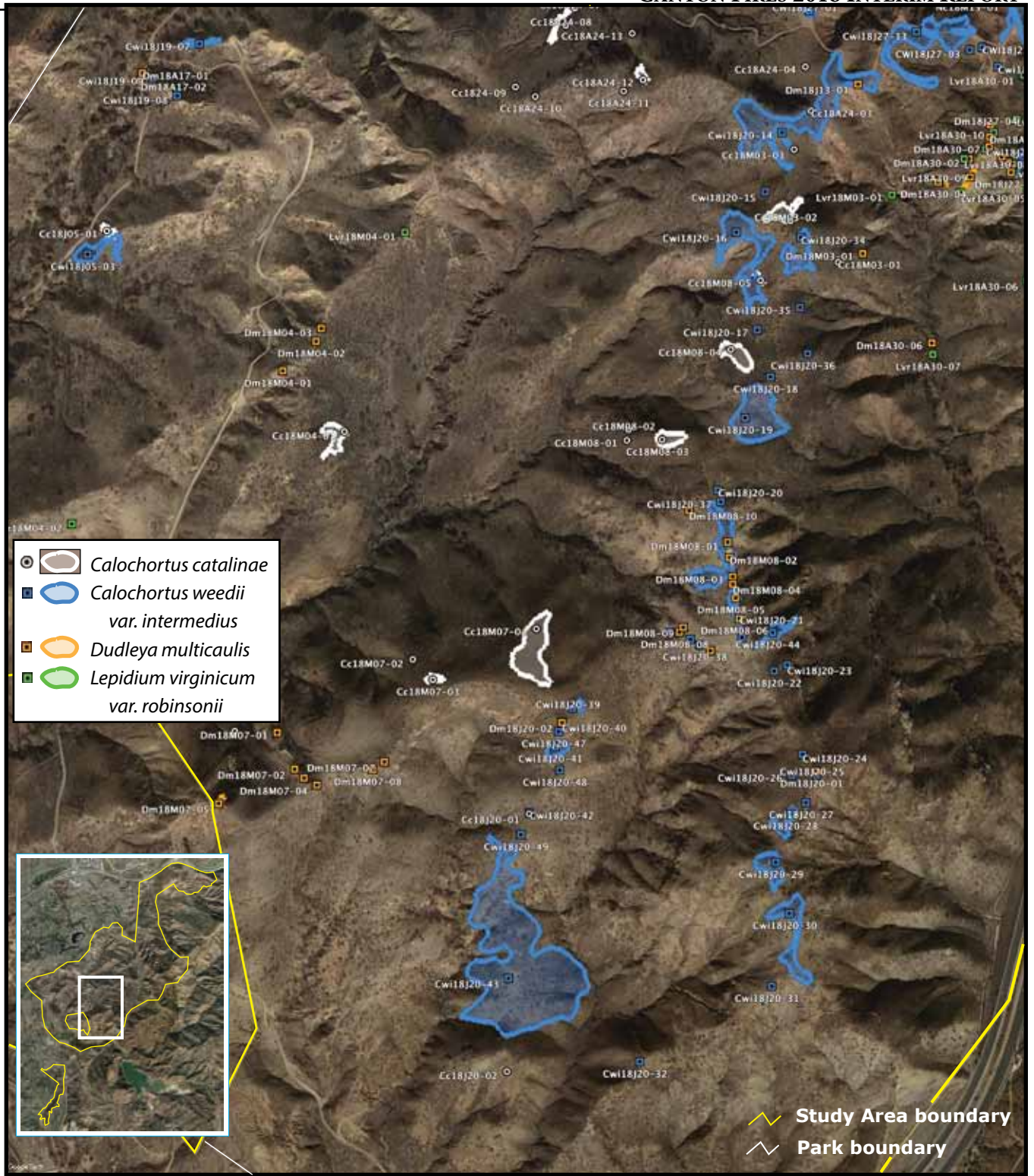


Figure 9
NROC Lands South Blind Cyn./BSA Drainage
Rare & Sensitive Plants
Canyons Fire Burn Study Area

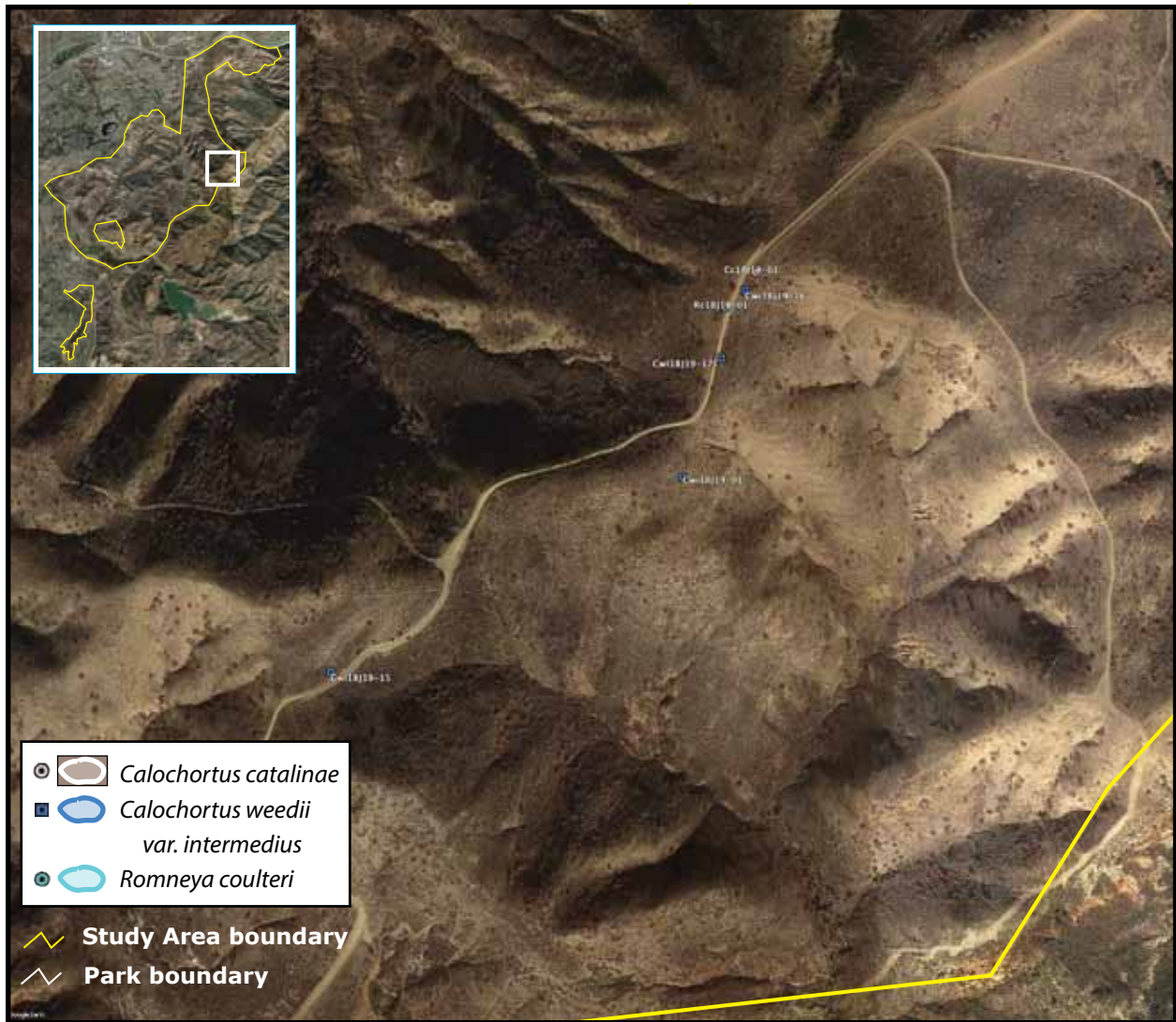
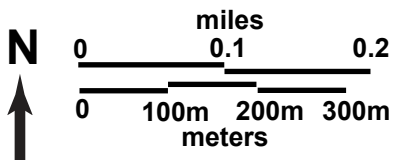


Figure 10
NROC Lands Fremont & Gypsum Canyons
Rare & Sensitive Plants
Canyons Fire Burn Study Area



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APPENDIX A: 2018 SURVEY LOG

Date	Surveyor(s)	General Location
20 Mar 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
28 Mar 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park, Coal & Gypsum Cyns.
29 Mar 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
3 Apr 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
4 Apr 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
11 Apr 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
12 Apr 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
16 Apr 2018	Fred M. Roberts, Sandra J. Leatherman, David E. Bramlet	NROC: Weir Cyn.
17 Apr 2018	Fred M. Roberts, Sandra J. Leatherman, David E. Bramlet	NROC: Weir Cyn.
23 Apr 2018	Sandra J. Leatherman, David E. Bramlet	NROC: Weir Cyn.
24 Apr 2018	Sandra J. Leatherman, David E. Bramlet	NROC: Weir & Blind Cyns.
30 Apr 2018	Sandra J. Leatherman	NROC: BSA Drainage
3 May 2018	Sandra J. Leatherman	NROC: Blind Cyn.
4 May 2018	Sandra J. Leatherman	NROC: BSA Drainage
7 May 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: BSA Drainage
8 May 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: BSA Drainage, Blind Cyn.
15 May 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Weir Cyn.
18 May 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Blind Cyn.
21 May 2018	Fred M. Roberts, Sandra J. Leatherman	Chino Hills State Park: Coal Cyn.
22 May 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Blind Cyn.
24 May 2018	Fred M. Roberts	Chino Hills State Park: Coal Cyn.
30 May 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Weir & Blind Cyns.
1 Jun 2018	Fred M. Roberts	NROC: Weir Cyn.
5 Jun 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Weir Cyn.

Date	Surveyor(s)	General Location
6 Jun 2018	Fred M. Roberts, Sandra J. Leatherman	Santiago Oaks Regional Park
12 Jun 2018	Fred M. Roberts	Santiago Oaks Regional Park; NROC: Blind & Weir Cyns.
13 Jun 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Blind Cyn., east of 241
19 Jun 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Blind , Gypsum, Fremont, Weir Cyns.
20 Jun 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Blind Cyn. & BSA Drainage
20 Jun 2018	David E. Bramlet	Santiago Oaks Regional Park
27 Jun 2018	Fred M. Roberts, Sandra J. Leatherman	NROC: Blind & Weir Cyns.
29 Jun 2018	Fred M. Roberts	NROC: Blind Cyn.
12 Jul 2018	Fred M. Roberts	NROC: Weir Cyn.

APPENDIX B: VASCULAR PLANT LIST BY AREA UNIT

The following list includes all vascular plant species observed or documented by voucher specimens within the Fires Canyon study area between March and July, 2018. The list is arranged alphabetically by major group (ferns, eudicots, monocots), family, genus, species, and subtaxon. For each plant, the land area unit where the plant was observed is indicated by an “x”.

The unit codes are:

BLND: Blind Canyon (NROC)
 BSAD: BSA Drainage (NROC)
 CHSP: Chino Hills State Park south of SR 91
 FREM: Fremont Canyon (NROC)
 GYPS: Gypsum Canyon (NROC)
 IRRP: Irvine Regional Park
 PCRP: Peters Canyon Regional Park
 SORP: Santiago Canyon Regional Park
 WEIR: Weir Canyon (NROC)

* indicates a species is of non-native origin

† indicates a species was documented within the study area prior to 2018

Voucher collections:

Citations: collector, institution where housed (processed specimens) in (parenthesis), area unit in [brackets]. Collector written out in previous collections, with date of collection included.

DEB: David E. Bramlet
 SJL: Sandra J. Leatherman
 FMR: Fred M. Roberts

RSA: Rancho Santa Ana Botanic Garden
 IRVC: University of California, Irvine
 UCR: University of California, Riverside

BSAD WEIR CHSP BLND SORP GYPS FREN IRRP PCRFP Notes

Common Name

SPECIES
LYCOPHYTES
SELAGINELLACEAE - SPIKE-MOSS FAMILY

<i>Selaginella bigelovii</i>	Bigelow's or bushy spike-moss	x	x	x					
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LEPTOSPORANGIATE FERNS
DRYOPTERIDACEAE - WOOD FERN FAMILY

<i>Dryopteris arguta</i>	coastal wood fern			x					FMR & SJL 8606 [BLND]
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POLYPODIACEAE - POLYPODY FAMILY

<i>Polypodium californicum</i>	California polypody	x		x					
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PTERIDACEAE - BRAKE FAMILY

<i>Adiantum jordanii</i>	California maidenhair	x		x					
<i>Pellaea andromedifolia</i> var. <i>andromedifolia</i>	coffee fern		x	x					FMR, SJL, & DEB 8545 [WEIR]
<i>Pellaea mucronata</i>	bird's foot fern			x	x				FMR 8587 [BLND]
<i>Pentagramma triangularis</i>	goldenback fern		x	x					

ANGIOSPERMS - FLOWERING PLANTS

MAGNOLIOIDS
SAURURACEAE - LIZARD'S-TAIL FAMILY

<i>Anemopsis californica</i>	yerba mansa		x						
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EUDICOTS
ADOXACEAE - MUSKROOT FAMILY

<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	x	x	x					
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ANACARDIACEAE - SUMAC FAMILY

<i>Malosma laurina</i>	laurel sumac	x	x	x	x	x			
<i>Rhus integrifolia</i>	lemonade berry	x	x	x	x				
<i>Rhus ovata</i>	sugar bush		x	x	x				
<i>Rhus aromatica</i>	skunkbush		x						
<i>Toxicodendron diversilobum</i>	poison oak	x	x	x	x				

APIACEAE - CARROT FAMILY		BSAD	WEIR	CHSP	BLND	SORP	GYPS	FREN	IRRP	PCR	Notes
<i>*Anthriscus caucalis</i>	bur chervil				x						FMR 8564 [BLND]
<i>Apiastrum angustifolium</i>	mock parsley		x		x						FMR 8579 [WEIR]
<i>Bowlesia incana</i>	American bowlesia	x									
<i>Daucus pusillus</i>	rattlesnake weed	x									
<i>*Foeniculum vulgare</i>	sweet fennel					x					
<i>Lomatium lucidum</i>	shiny lomatium	x		x	x						
<i>Sanicula arguta</i>	sharp-tooth sanicle	x	x	x	x						FMR & SJL 8553 [WEIR]
<i>Sanicula bipinnatifida</i>	purple sanicle		x	x	x						FMR & SJL 8517 [CHSP]
APOCYNACEAE - DOGBANE FAMILY											
<i>Asclepias eriocarpa</i>	Indian milkweed	x	x		x						
<i>Asclepias fascicularis</i>	narrow-leaved milkweed		x	x							
<i>Funastrum cynanchoides</i> var. <i>hartwegii</i>	Hartweg's milkvine		x	x							FMR & SJL 8555 [WEIR]
ASTERACEAE - SUNFLOWER FAMILY											
<i>Acourtia microcephala</i>	sacapellote	x	x	x	x	x					FMR & SJL 8607 [BLND]
<i>Agoseris heterophylla</i>	woodland agoseris			x							FMR 8532 [CHSP]
<i>Agoseris retrorsa</i>	spear-leaved agoseris		x								
<i>Ambrosia acanthicarpa</i>	sand-bur	x		x							
<i>Ambrosia psilostachya</i>	western ragweed			x							
<i>Artemisia californica</i>	coastal sagebrush	x	x	x	x	x					
<i>Artemisia douglasiana</i>	Douglas' or California mugwort	x	x	x	x						
<i>Artemisia dracunculus</i>	dragon sagewort or tarragon		x	x							
† <i>Artemisia tridentata</i> ssp. <i>tridentata</i>	great basin sagebrush			x							G.A. Marsh & K.G. Marsh sn 13 May 1978 (IRVC) [CHSP]
<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	coyote brush or chaparral broom			x							G.A. Marsh & K.G. Marsh sn 13 May 1978 (IRVC) [CHSP]
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	mule fat	x		x	x						
<i>Bebbia juncea</i> var. <i>aspera</i>	scabrid sweetbush	x	x	x	x	x					
<i>Brickellia californica</i>	California brickellbush	x		x	x	x					
<i>*Carduus pycnocephalus</i> var. <i>pycnocephalus</i>	Italian thistle	x		x	x						
<i>*Centaurea melitensis</i>	toçalote	x	x	x	x	x					
<i>*Centaurea solstitialis</i>	yellow star-thistle			x	x						FMR & SJL 8577 [CHSP]; FMR 8611 [BLND]
<i>Chaenactis artemisitifolia</i>	artemesia-leaved pincushion	x	x	x	x	x					FMR & SJL 8608 [BLND]
<i>Chaenactis glabriuscula</i> var. <i>glabriuscula</i>	yellow pincushion		x		x						
<i>Cirsium occidentale</i> var. <i>occidentale</i>	cobweb thistle	x	x	x							
<i>*Cirsium vulgare</i>	bull thistle					x					
<i>Corethrogyne filaginifolia</i>	sand aster	x	x	x	x						
<i>Cynara cardunculus</i> ssp. <i>flavescens</i>	cardoan / globe artichoke	x	x	x	x	x					

ASTERACEAE - SUNFLOWER FAMILY	BSAD	WEIR	CHSP	BLND	SORP	GYP	FREM	IRRP	PCRP	Notes
<i>Deinandra fasciculata</i>	x	x	x	x	x					
<i>Encelia californica</i>	x	x	x	x	x					
<i>Encelia farinosa</i>			x							
† <i>Ericameria nauseosa</i> var. <i>oreophila</i>			x							K.G. Marsh sn 27 Jul 1982 (IRVC) [CHSP]
<i>Ericameria palmeri</i> var. <i>pachylepis</i>	x	x	x							
* <i>Erigeron bonariensis</i>			x							
<i>Erigeron foliosus</i>	x	x	x	x	x					G.A. Marsh & K.G. Marsh sn 20 May 1978 (IRVC) [CHSP]
<i>Eriophyllum confertiflorum</i>		x	x	x						
<i>Euthamia occidentalis</i>	x	x								
* <i>Gazania linearis</i>	x			x	x					FMR & SJL 8588 [BLND]
* <i>Glebionis coronaria</i>										
<i>Grindelia camporum</i>	x	x	x							
<i>Gutierrezia californica</i>		x	x	x	x					
<i>Hazardia squarrosa</i> var. <i>grindelioides</i>	x	x	x	x	x					
* <i>Hedypnois rhagadioloides</i>		x	x	x						
<i>Helianthus annuus</i>		x	x							
<i>Helianthus gracilentus</i>		x	x	x	x					
* <i>Helminthotheca echioides</i>	x									
<i>Heterotheca grandiflora</i>										
<i>Heterotheca sessiliflora</i>	x	x	x	x	x					
* <i>Hedypnois rhagadioloides</i> [<i>H. cretica</i>]		x								
* <i>Hypochoeris glabra</i>	x	x	x	x						
<i>Isocoma menziesii</i> var. <i>vernonioides</i>		x	x	x	x					
* <i>Lactuca serriola</i>	x									
<i>Lasthenia gracilis</i>			x	x						
<i>Lepidospartum squamatum</i>			x							
<i>Logfia filaginoides</i>			x	x						
* <i>Logfia gallica</i>			x	x						
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>		x	x	x						
* <i>Matricaria discoidea</i>		x								
<i>Microseris heterocarpa</i> [<i>Stebbinsosensis</i> h.]	x	x								FMR & SJL 8532 [CHSP]
<i>Osmadenia tenella</i>	x									
<i>Porophyllum gracile</i>		x								
<i>Pseudognaphalium biolettii</i>										
<i>Pseudognaphalium californicum</i>		x								
<i>Pseudognaphalium canescens</i>		x	x							

ASTERACEAE - SUNFLOWER FAMILY	BSAD	WEIR	CHSP	BLND	SORP	GYP	FREM	IRRP	PCRP	Notes
<i>Pseudognaphalium microcephalum</i>			x							
* <i>Pulicaria paludosa</i>	x		x							
<i>Rafinesquia californica</i>	x	x	x							
<i>Senecio californicus</i>		x								
<i>Senecio vulgaris</i>	x	x	x							
* <i>Silybum marianum</i>	x	x	x							
<i>Solidago velutina</i> ssp. <i>californica</i>		x								FMR 8610 [BLND]
<i>Sonchus asper</i> ssp. <i>asper</i>		x	x							
* <i>Sonchus oleraceus</i>	x	x	x							
<i>Stephanomeria diegensis</i>	x									
<i>Stephanomeria virgata</i> ssp. <i>virgata</i>		x								
<i>Tetradymia comosa</i>	x	x	x							
<i>Uropappus lindleyi</i>	x	x	x							
<i>Xanthium strumarium</i>										x
BORAGINACEAE - BORAGE FAMILY										
<i>Amsinckia intermedia</i>	x	x	x							FMR & SJL 8521 [CHSP]
<i>Cryptantha intermedia</i>	x	x	x							FMR & SJL 8526 [CHSP]
<i>Cryptantha microstachys</i>		x								
<i>Cryptantha muricata</i> ssp. <i>jonesii</i>		x								FMR, SJL, & DEB 8542 [WEIR]; FMR 8561 [BLND]; FMR & SJL 8589 [BLND]; FMR & SJL 8604 [BLND]
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>			x							
BRASSICACEAE - MUSTARD FAMILY										
* <i>Brassica geniculata</i> [<i>Hirschfeldia incana</i>]	x	x	x							x
* <i>Brassica nigra</i>	x	x	x							
* <i>Brassica tournefortii</i>	x		x							FMR & SJL 8516 (CHSP)
* <i>Capsella bursa-pastoris</i>		x	x							
<i>Caulanthus heterophyllus</i>		x	x							
<i>Caulanthus lasiophyllus</i>		x								FMR 8566 [BLND], DEB 5299 (UCR) [WEIR]
<i>Lepidium lasiocarpum</i> ssp. <i>lasiocarpum</i>			x							
<i>Lepidium nitidum</i>		x	x							DEB 5302 (UCR) [BLND]
<i>Lepidium virginicum</i> var. <i>robinsonii</i> [<i>L. virginicum</i> ssp. <i>menseisii</i> in part]		x								FMR, SJL, & DEB 8541 [WEIR]; DEB 5293 (UCR) [WEIR]
* <i>Raphanus sativus</i>										
* <i>Sisymbrium irio</i>			x							
* <i>Sisymbrium officinale</i>		x								
* <i>Sisymbrium orientale</i>		x								
<i>Thysanocarpus laciniatus</i>	x	x	x							FMR & SJL 8515 [CHSP]; DEB 5306B (UCR) [BLND]

CACTACEAE - CACTUS FAMILY	BSAD	WEIR	CHSP	BLND	SORP	GYP	FREM	IRRP	PCRP	Notes
<i>Opuntia littoralis</i>	x	x	x	x	x					
<i>Opuntia oricola</i>			x							
<i>Opuntia x occidentalis</i>			x							
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY										
<i>Lonicera subspicata</i> var. <i>denudata</i>			x	x						FMR 8612 [BLND]
<i>Symphoricarpos mollis</i>		x		x						
CARYOPHYLLACEAE - PINK FAMILY										
<i>Achyroxychia cooperi</i>			x							
* <i>Cerastium glomeratum</i>			x							
<i>Silene antirrhina</i>				x						FMR & SJL 8580 [BLND]
* <i>Silene gallica</i>	x	x	x							
<i>Silene laciniata</i> ssp. <i>laciniata</i>	x	x	x	x	x					FMR 8613 [BLND]
* <i>Spergula arvensis</i>				x						
* <i>Stellaria media</i>	x	x	x							
CHENOPODIACEAE - GOOSEFOOT FAMILY										
* <i>Atriplex semibaccata</i>				x						
<i>Chenopodium berlandieri</i>	x	x				x				
<i>Chenopodium californicum</i>			x			x				
* <i>Chenopodium murale</i>	x		x							
* <i>Salsola australis</i>	x	x	x	x	x					
CISTACEAE - ROCK-ROSE FAMILY										
<i>Crocanthemum scoparium</i>				x						x
CONVOLVULACEAE - MORNING-GLORY FAMILY										
<i>Calystegia macrostegia</i> ssp. <i>intermedia</i>	x	x	x	x	x	x	x			DEB 5306A (UCR) [BLND]
<i>Cuscuta subinclusa</i>		x		x						FMR & SJL 8581 [BLND]
<i>Cuscuta</i> sp.	x	x	x	x	x					
CRASSULACEAE - STONECROP FAMILY										
<i>Crassula connata</i>			x	x						
<i>Dudleya lanceolata</i>	x	x	x							
<i>Dudleya multicaulis</i>	x	x	x	x						FMR & SJL 8556 [WEIR]; FMR & SJL 8563 [BLND]
<i>Dudleya pulverulenta</i>		x		x						
CUCURBITACEAE - GOURD FAMILY										
<i>Cucurbita foetidissima</i>		x	x	x	x					
<i>Marah macrocarpa</i>	x	x	x	x						

FABACEAE - LEGUME FAMILY		BSAD	WEIR	CHSP	BLND	SORP	GYP	FREN	IRRP	PCRP	Notes
* <i>Melilotus albus</i>	white sweet-clover									x	
* <i>Melilotus indicus</i>	yellow sweet-clover	x	x	x						x	
<i>Trifolium ciliolatum</i>	tree clover	x	x								
<i>Trifolium gracilentum</i>	pin-point clover		x							x	FMR & SJL 8550 [WEIR]; FMR 8570 [BLND]
<i>Trifolium willdenovii</i>	valley clover	x								x	FMR 8569 [BLND]
FAGACEAE - BEECH FAMILY		x	x	x						x	
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak	x	x	x						x	
<i>Quercus berberidifolia</i>	California scrub oak		x	x						x	
GERANIACEAE - GERANIUM FAMILY											
* <i>Erodium botrys</i>	long-beaked filaree		x	x						x	
* <i>Erodium cicutarium</i>	red-stemmed filaree	x	x	x						x	
* <i>Erodium moschatum</i>	white-stemmed filaree		x	x						x	
<i>Geranium carolinianum</i>	Carolina geranium	x	x								
GROSSULARIACEAE - GOOSEBERRY FAMILY											
<i>Ribes malvaceum</i> var. <i>viridifolium</i>	southern California currant		x	x						x	
<i>Ribes speciosum</i>	fuchsia-flowered gooseberry			x							
HYDROPHYLLACEAE - WATERLEAF FAMILY											
<i>Emmenanthe penduliflora</i>	whispering bells		x	x						x	
<i>Eucryphia chrysanthemifolia</i>	common eucryphia		x	x							
<i>Phacelia cicutaria</i> ssp. <i>hispidia</i>	caterpillar phacelia	c	x	x						x	
<i>Phacelia distans</i>	common phacelia			x							FMR 8522 [CHSP]
<i>Phacelia minor</i>	wild canterbury-bell			x							G. A. Marsh & K. G. Marsh M sn 20 May 1978 (IRVC) [CHSP]; FMR 8535 [CHSP]
<i>Phacelia parryi</i>	Parry's phacelia	x	x	x						x	FMR 8614 [BLND]
<i>Phacelia ramosissima</i> var. <i>ramosissima</i>	branching phacelia			x							
<i>Pholistoma auritum</i> var. <i>auritum</i>	blue fiesta flower			x							
LAMIACEAE - MINT FAMILY											
<i>Lamium amplexicaule</i>	common henbit		x								
* <i>Marrubium vulgare</i>	common horehound	x	x	x							
<i>Salvia apiana</i>	white sage	x	x	x						x	
<i>Salvia columbariae</i>	chia		x	x							
<i>Salvia leucophylla</i>	purple sage	x		x						x	
<i>Salvia mellifera</i>	black sage	x	x	x						x	
<i>Stachys rigida</i> var. <i>quercetorum</i>	hillside hedge-nettle		x								

LAMIACEAE - MINT FAMILY	BSAD	WEIR	CHSP	BLND	SORP	GYPS	FREN	IRRP	PCRP	Notes
<i>Trichostema lanatum</i>			x		x					G.A. Marsh & K.G. Marsh sn 6 Oct 1978 (RSA) [CHSP]; FMR & SJL 8602 [BLND]
LOASACEAE - LOASA FAMILY										
<i>Mentzelia dispersa</i>			x							
MALVACEAE - MALLOW FAMILY										
<i>Malacothammus fasciculatus</i> ssp. <i>laxiflorus</i>			x		x	x	x	x		
* <i>Malva parviflora</i>			x							
MONTIACEAE - MONTIA FAMILY										
<i>Calandrinia breweri</i>			x					x		FMR & SJL 8595 [WEIR]; FMR 8597 [GYPS]
<i>Calandrinia menziesii</i>			x						x	DEB 5303B (UCR) [BLND]
<i>Calyptridium monandrum</i>			x						x	FMR & SJL 8591 [BLND]
<i>Claytonia parviflora</i> ssp. <i>parviflora</i>								x		
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>			x							
<i>Claytonia perfoliata</i> ssp. <i>mexicana</i>			x							
MORACEAE - FIG FAMILY										
* <i>Ficus carica</i>								x		FMR 8549 [BLND]
MYRSINACEAE - MYRSINE FAMILY										
* <i>Lysimachia arvensis</i>			x					x		
NEMACEAE - NAMA FAMILY										
<i>Eriodictyon crassifolium</i> var. <i>crassifolium</i>			x					x		
NYCTAGINACEAE - FOUR-O'CLOCK FAMILY										
<i>Mirabilis laevis</i> var. <i>crassifolia</i>			x					x		
ONAGRACEAE - EVENING PRIMROSE FAMILY										
<i>Camissoniopsis bistoria</i>			x							
<i>Camissoniopsis intermedia</i>								x		
<i>Camissoniopsis micrantha</i>										
<i>Camissoniopsis robusta</i>								x		FMR & SJL 8524 [CHSP]; FMR, SJL, & DEB 8547 [WEIR]
<i>Clarkia botatae</i>										
<i>Epilobium canum</i>								x		
<i>Eulobus californicus</i>								x	x	
OROBANCHACEAE - BROOMRAPE FAMILY										
<i>Castilleja affinis</i> ssp. <i>affinis</i>			x							FMR & SJL 8559 & 8560 [BLND]
<i>Cordylanthus rigidus</i> ssp. <i>setiger</i>			x						x	
<i>Orobanche parishii</i> ssp. <i>parishii</i>								x		FMR & SJL 8605 [WEIR]

OXALIDACEAE - WOOD-SORREL FAMILY		BSAD	WEIR	CHSP	BLND	SORP	GYP	FREN	IRRP	PCRP	Notes
<i>Oxalis californica</i>	California wood sorrel	x									
* <i>Oxalis pes-caprae</i>	bermuda-buttercup /sourgrass			x							
PAEONIACEAE - PEONY FAMILY											
<i>Paeonia californica</i>	California peony		x								FMR 8578 [WEIR]
PAPAVERACEAE - POPPY FAMILY											
<i>Eschscholzia californica</i>	California poppy	x	x	x							
<i>Papaver californicum</i>	fire poppy		x								FMR & SJL 8593 [WEIR]
<i>Romneya coulteri</i>	Coulter's matilija poppy		x	x			x				FMR & SJL 8576 [CHSP]
PHYRMACEAE - LOPSEED FAMILY											
<i>Diplacus x australis</i>	bush monkeyflower	x	x	x							
<i>Diplacus brevipes</i>	slope semaphore						x				FMR & SJL 8590 [BLND]
PLANTAGINACEAE - PLANTAIN FAMILY											
<i>Antirrhinum coulterianum</i>	Coulter's snapdragon	x	x								
<i>Antirrhinum kelloggii</i>	Kellogg's / climbing snapdragon		x	x							FMR & SJL 8557 [WEIR]
<i>Antirrhinum nuttallianum</i> ssp. <i>nuttallianum</i>	Nuttall's snapdragon	x	x	x							FMR 8573 [BLND]
<i>Antirrhinum nuttallianum</i> ssp. <i>subsessile</i>	big-gland Nuttall's snapdragon						x				FMR & SJL 8609 [BLND]
<i>Collinsia heterophylla</i>	purple Chinese houses	x					x				FMR 8568 [BLND]
<i>Keckiella antirrhinoides</i> var. <i>antirrhinoides</i>	yellow bush-penstemon		x	x				x			
<i>Keckiella cordifolia</i>	heart-leaved bush-penstemon	x	x	x							
<i>Nuttallanthus texanus</i>	larger blue toad-flax							x			
<i>Plantago erecta</i>	California plantain						x	x			
PLATANACEAE - SYCAMORE FAMILY											
* <i>Platanus x hispanica</i>	London plane tree								x		
<i>Platanus racemosa</i>	California sycamore		x	x							
POLEMONIACEAE - PHLOX FAMILY											
<i>Eriastrum saphirinum</i>	sapphire woolly-star		x						x		
<i>Gilia achilleifolia</i> ssp. <i>multicaulis</i>	many-stemmed California gilia	x									FMR 8572 [BLND]
<i>Gilia angelensis</i>	Los Angeles gilia		x	x							
<i>Gilia capitata</i> ssp. <i>abrontifolia</i>	ball gilia								x		FMR 8565 [BLND]
<i>Linanthus dianthiflorus</i>	ground pink										
POLYGONACEAE - BUCKWHEAT FAMILY											
<i>Chorizanthe staticoides</i> ssp. <i>staticoides</i>	Turkish rugging		x						x		FMR & SJL 8601 [BLND]
<i>Eriogonum elongatum</i> var. <i>elongatum</i>	long-stemmed / tall buckwheat	x	x								
<i>Eriogonum fasciculatum</i>	California buckwheat	x	x	x							
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	interior flat-topped buckwheat								x		
<i>Pterostegia drymarioides</i>	granny's hairmet	x	x	x							

RANUNCULACEAE - CROWFOOT FAMILY		BSAD	WEIR	CHSP	BLND	SORP	GYP	FREN	IRRP	PCRP	Notes
<i>Clematis</i> sp.	pipestem										
<i>Delphinium cardinale</i>	scarlet larkspur		x								
<i>Delphinium parryi</i> ssp. <i>maritimum</i>	maritime larkspur		x								FMR & SJL 8552 [WEIR]
<i>Delphinium parryi</i> ssp. <i>parryi</i>	Parry's larkspur	x		x							
RHAMNACEAE - BUCKTHORN FAMILY											
<i>Ceanothus crassifolius</i>	thick-leaved lilac				x						
<i>Ceanothus megacarpus</i> var. <i>megacarpus</i>	bigpod lilac			x							
<i>Ceanothus tomentosus</i> ssp. <i>olivaceus</i>	Ramona lilac			x							
<i>Rhamnus crocea</i>	spiny redberry			x							
<i>Rhamnus ilicifolia</i>	holly-leaved redberry	x	x	x		x					
ROSACEAE - ROSE FAMILY											
<i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i>	chamise	x	x	x		x		x			
<i>Cercocarpus betuloides</i> var. <i>betuloides</i>	California mountain-mahogany		x	x		x		x			
<i>Heteromeles arbutifolia</i>	toyon / christmas berry	x	x	x		x		x			
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia					x					FMR 8584 [BLND]
RUBIACEAE - MADDER FAMILY											
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	narrow-leaved bedstraw	x	x	x		x		x			G.A. Marsh & K.G. Marsh 20 May 1978 [CHSP]
<i>Galium aparine</i>	common bedstraw		x	x		x					
<i>Galium nuttallii</i> ssp. <i>nuttallii</i>	San Diego bedstraw		x								FMR & SJL 8552 [WEIR]
SALICACEAE - WILLOW FAMILY											
<i>Salix gooddingii</i>	Goodding's willow / black willow					x					
<i>Salix lasiolepis</i>	arroyo willow							x			
SAXIFRAGACEAE - SAXIFRAGE FAMILY											
<i>Jepsonia parryi</i>	coast jepsonia			x							
<i>Lithophragma affine</i>	woodland star			x							
SCROPHULARIACEAE - FIGWORT FAMILY											
<i>Scrophularia californica</i>	California figwort	x	x	x		x					FMR 8615 [BLND]
SOLANACEAE - NIGHTSHADE FAMILY											
<i>Datura wrightii</i>	jimsonweed	x	x	x		x		x			
* <i>Nicotiana glauca</i>	tree tobacco		x	x		x					
<i>Nicotiana quadrivalvis</i>	Wallace's tobacco	x									
<i>Solanum americanum</i>	white nightshade							x			
<i>Solanum douglasii</i>	Douglas' nightshade		x	x							
<i>Solanum umbelliferum</i>	blue witch	x	x	x		x					
TAMARICACEAE - TAMARISK FAMILY											
* <i>Tamarix ramosissima</i>	Mediterranean tamarisk			x		x					
URTICACEAE - NETTLE FAMILY											
<i>Parietaria hespera</i> var. <i>hespera</i>	western pellitory	x									
* <i>Urtica urens</i>	dwarf nettle		x	x							

VIOLACEAE - VIOLET FAMILY		BSAD WEIR CHSP BLND SORP GYPS FREN IRRP PCRP Notes										
<i>Viola pedunculata</i>	johnny jump-ups										FMR 8518 [CHSP]	
MONOCOTS												
AGAVACEAE - CENTURY PLANT FAMILY												
<i>*Agave americana</i>	American agave											
<i>Chlorogalum parviflorum</i>	small-flowered soap plant											FMR 8599 [BLND]
<i>Chlorogalum pomeridianum</i>	wavy-leaved soap plant	x	x	x	x	x	x	x	x	x	x	
<i>Hesperoyucca whipplei</i>	chapparal yucca / our Lord's candle	x	x	x	x	x	x	x	x	x		
AMARYLLIDACEAE - AMARYLLIS FAMILY												
† <i>Allium haematochiton</i>	red-skinned onion											FMR & DEB 6952, 13 May, 2008 (RSA) [WEIR]
<i>Allium praecox</i>	early onion											FMR 8519 [CHSP]
ARECACEAE - PALM FAMILY												
<i>*Phoenix canariensis</i>	Canary Island date palm											
<i>*Washingtonia robusta</i>	Mexican fan palm											
CYPERACEAE - SEDGE FAMILY												
<i>Carex triquetra</i>	triangular-fruited sedge											FMR 8586 [BLND]
<i>*Cyperus involucratus</i>	African umbrella-sedge											
<i>Eleocharis montevidensis</i>	slender creeping spike-rush											
IRIDACEAE - IRIS FAMILY												
<i>Sisyrinchium bellum</i>	California blue-eyed grass											
JUNCACEAE - RUSH FAMILY												
<i>Juncus balticus</i> ssp. <i>ater</i>	baltic rush											
<i>Juncus textilis</i>	basket rush											
<i>Juncus xiphioides</i>	iris-leaved rush											
LILIACEAE - LILY FAMILY												
<i>Calochortus catalinae</i>	Catalina mariposa lily											FMR 8519 [CHSP]; FMR & SJL 8548 [BSAD]; FMR & SJL 8583 [BLND]
<i>Calochortus splendens</i>	splendid mariposa lily											
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily											FMR & SJL 8596 [WEIR]; FMR 8598 [BLND]
<i>Fritillaria biflora</i>	California chocolate lily											
MELIANTHACEAE - MELLIANTHUS FAMILY												
<i>Toxicoscordion fremontii</i>	Fremont's death camas											FMR 8585 [BLND]
POACEAE - GRASS FAMILY												
<i>Agrostis pallens</i>	seashore bent grass											FMR & SJL 8603 [BLND]
<i>Aristida adscensionis</i>	six-weeks / annual three-awned grass											FMR, SJL & DEB 8543 [WEIR]
<i>Aristida purpurea</i> var. <i>purpurea</i>	purple three-awned grass											

POACEAE - GRASS FAMILY	BSAD	WEIR	CHSP	BLND	SORP	GYPS	FREV	IRRP	PCR	Notes
<i>*Avena barbata</i>	x	x	x	x	x					
<i>*Avena fatua</i>		x	x	x		x				
<i>Bothriochloa barbinodis</i>	x	x								
<i>*Brachypodium distachyon</i>		x								
<i>*Bromus diandrus</i>	x	x	x	x	x					
<i>*Bromus hordeaceus</i>	x									
<i>*Bromus madritensis</i>	x	x								
<i>*Bromus rubens</i>	x	x	x	x	x					FMR 8567 [BLND]
<i>*Cenchrus setaceus [Pennisetum s.]</i>	x	x	x	x	x					
<i>*Cortaderia selloana</i>	x	x								
<i>*Cynodon dactylon</i>	x									
<i>Elymus condensatus</i>	x	x	x	x	x					
<i>*Festuca myuros</i>	x	x	x	x	x					
<i>*Festuca perennis</i>	x	x	x	x	x					
<i>*Gastridium phleoides</i>		x								
<i>*Hordeum murinum var. leporinum</i>		x	x							
<i>Koeleria macrantha</i>		x								
<i>*Lamarekia aurea</i>	x	x	x							
<i>Melica imperfecta</i>	x	x			x					
<i>Muhlenbergia microsperma</i>		x	x	x	x					FMR, SJL & DEB 8544 [WEIR]; FMR 8562 [BLND]
<i>*Polypogon monspeliensis</i>					x					
<i>*Polypogon viridis</i>					x					
<i>*Schismus barbatus</i>	x	x	x	x						
† <i>Stipa cernua</i>		x								F.M. Roberts & M. Lulow 6577, 6 Aug 2007 (RSA) [WEIR]; A.C. Sanders & F.M. Roberts 35507 (UCR) [WEIR]
<i>Stipa coronata</i>	x				x					
<i>Stipa lepida</i>	x	x	x	x	x					
<i>*Stipa miliacea var. miliacea</i>										
<i>Stipa pulchra</i>	x	x	x							
RUSCACEAE										
<i>Nolina cismontana</i>		x	x	x	x	x				P.A. & I. M. Johnston 3026 (RSA) [CHSP]; O.F. Clarke sn 6 May 2006 (UCR) [CHSP]; FMR 8536 [CHSP]

THEMIDACEAE - BRODIAEA FAMILY		BSAD	WEIR	CHSP	BLND	SORP	GYPS	FREM	IRRP	PCRP	Notes
<i>Bloomeria crocea</i> var. <i>crocea</i>	common goldenstar	x	x	x	x	x					
<i>Dichelostemma capitatum</i>	wild hyacinth / school bells	x	x	x	x	x					
TYPHACEAE - CATTAIL FAMILY											x
<i>Typha domingensis</i>	southern cat-tail		x								
<i>Typha latifolia</i>	broad-leaf cattail										x

APPENDIX C-E: RARE PLANT SITE SPECIFIC DATA

The following appendices offer a summary of rare plant data collected. The label is the unique designation assigned to a specific location. The label identifies the rare plant species (see below), the year collected (2018 = 18), the month (R = March, A = April, M = May, J = June, & L = July), the day of the collection, and the sequential number of the population. The Type indicates the type of data collected, "Pt" represents a GPS waypoint, "Pol" represents a GPS polygon, "Skt" represents the outline of a polygon was digitized from a sketch on a field map. A "SktP" represents a polygon modified using a sketch on a field map. All GPS data in UTM's (Zone 11), WGS 84, unless otherwise specified. All sites marked by sketches (hand-drawn) or polygons (GPS features), are anchored by GPS points.

Species Codes:

Ac: *Acalypha californica*, California copper-leaf
 Ab: *Astragalus brauntonii*, Braunton's milkvetch
 Cb: *Calandrinia breweri*, Brewer's calandrinia
 Cc: *Calochortus catalinae*, Catalina mariposa lily
 Cwi: *Calochortus weedii* var. *intermedius*, intermediate mariposa lily
 Dm: *Dudleya multicaulis*, many-stemmed dudleya
 Hcp: *Horkelia cuneata* subsp. *puberula*, mesa horkelia
 Lvr: *Lepidium virginicum* var. *robinsonii*, Robinson's peppergrass
 Nc: *Nolina cismontana*, chaparral nolina
 Rc: *Romneya coulteri*, Coulter's matilija poppy

Vegetation Codes:

AFS: Alluvial Fan Scrub
 AGL: Annual Grassland
 CH: Chaparral
 CSS: Coastal Sage Scrub
 OW: Oak Woodland
 NS: Nolina Scrub

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Astragalus brauntonii -BRAUNTON'S MILKVEITCHY; FE,CRPR1B.1

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
AB18M21-01	POL	2144	436162	3747011	332		ridge top		rocky, calcareous soil		<i>Malosma laurina</i> , <i>Nolina cismontana</i> , <i>Bromus rubens</i> , <i>Malacothammus fascicularis</i>	scattered patches. All seedlings. About 1385 sq. m
AB18M21-02	Pt	42	436127	3747040	332		gentle	W	clay with calcareous outcrop	CSS	<i>Erodium cicutarium</i> , <i>Acmispon glaber</i> , <i>Brassica geniculata</i> , <i>Artemisia californica</i> , <i>Malosma laurina</i>	scattered. All seedlings
AB18M21-03	Pt	1	436629	3747000	211		flat		sandy	sandy wash, AFS	<i>Lepidospartum squamatum</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Malacothammus fascicularis</i> , <i>Cheanactis artemisiifolia</i>	single. Seedling
AB18M21-04	Pt	3	436635	3746967	216		flat		rocky clay	bench above wash	<i>Malacothammus fascicularis</i> , <i>Acmispon strigosus</i> , <i>Bromus rubens</i> , <i>Brassica geniculata</i> , <i>Emmenanthe pendulifera</i> , <i>Erodium cicutarium</i>	
AB18M21-05	Pt	1	436657	3746851	214		flat		sandy loam	AFS	<i>Acmispon glaber</i> , <i>Bromus rubens</i> , <i>Encelia californica</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i> , <i>Eriodictyon crassifolium</i> , <i>Melilotus indicus</i>	Single. Seedling
AB18M21-06	POL	53	436656	3746881	211		flat		sandy loam	AFS	<i>Eriodictyon crassifolium</i> , <i>Bromus rubens</i> , <i>Malacothammus fascicularis</i> , <i>Encelia californica</i> , <i>Melilotus indicus</i> , <i>Emmenanthe pendulifera</i>	Scattered, All seedlings
AB18M21-07	Pt	8	436639	3747011	207		flat		rocky	AFS	<i>Malacothammus fascicularis</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i> , <i>Melilotus indicus</i> , <i>Erodium cicutarium</i>	Isolated, along bench margin adj. to road. All seedlings
AB18M21-08	Pt	1	436526	3747268	192		flat		rocky loam	AFS	<i>Lepidospartum squamatum</i> , <i>Cenmel</i> , <i>Bromus rubens</i> , <i>Melilotus indicus</i> , <i>Malacothammus fascicularis</i>	Single. Seedling
AB18M24-01	Pt	7	436151	3747435	280.7		gentle	N	clay	CH	<i>Heteromeles arbutifolia</i> , <i>Calystegia macrostegia</i> , <i>Romneya coulteri</i> , <i>Malacothammus fascicularis</i> , <i>Malosma laurina</i>	

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
CC18R20-01	PT	15	435877	3747296	304		gentle	WNW	clay loam	CSS/AGL	<i>Avena barbata</i> , <i>Festuca perennis</i> , <i>Brassica nigra</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i>	Scattered. Nearby herbicide treatment about 20 meters from plants.
CC18R28-01	POL	36	435865	3746819	286		gentle	NW	rocky clay	AGL, CH	<i>Avena sp.</i> , <i>Festuca perennis</i> , <i>Brodiaea</i> , <i>Escall.</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Malacothammus fascicularis</i>	Scattered. Many more Calochortus in area, not in bloom. Numbers maybe higher, possibly 500.

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS				Notes	
						Slope	Aspect	Soils	Pre burn Habitat		Associated Species
CC18R28-02	Pt	8	435847	3746871	272	moderate	NW	rocky clay	CH	<i>Malacothamnus fascicularis</i> , <i>Avena sp.</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i> , <i>Stipa sp.</i>	Possibly more plants not yet in flower.
CC18R28-03	POL	26	435875	3747346	300	flat	N	clay	AGL	<i>Avena sp.</i> , <i>Amsinckia intermedia</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i>	along edge of fire break
CC18R28-04	Pt	1	435823	3747312	282	mod	NW	clay	AGL	<i>Avena sp.</i> , <i>Bromus sp.</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i> , <i>Brassica nigra</i>	
CC18R29-01	Pt	3	436225	3746876	340	ridge top, gentle	N	clay loam	AGL/Chamise CH	<i>Oxalis pres-capre</i> , <i>Dichelostemma capitatum</i> , <i>Cercocarpus betuloides</i>	
CC18R29-02	POL	200	436215	3747036	315	moderate	NNE	clay loam	mixed AGL/CH	<i>Brassica nigra</i> , <i>Calochortus splendens</i> , <i>Lupinus succulentus</i> , <i>Dichelostemma capitatum</i> , grasses	scattered
CC18R29-03	Pt	13	436275	3746991	290	moderate	E	clay	AGL	<i>Sti sp.</i> , <i>Brassica nigra</i> , <i>Centaurea melitensis</i> , <i>Festuca perennis</i> , <i>Erodium cicutarium</i> , <i>Deinandra fascicularis</i> , <i>Dichelostemma capitatum</i>	
CC18A11-01	Pt	2	436138	3747767	211	ridge, gentle	E	clay loam	AGL/CH	<i>Rhus integrifolia</i> , <i>Heteromeles arbutifolia</i> , <i>Bromus rubens</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i>	Isolated. 2nd plant 8 m to E of point.
CC18A11-02	Pt	5	436124	3747826	205	gentle		clay loam	GL, disturbed road margin	<i>Calochortus splendens</i> , <i>Bromus rubens</i> , <i>Avena barbata</i> , <i>Brassica tournefortii</i> , <i>Festuca perennis</i>	Scattered.
CC18A11-03	POL	150	436282	3747571	255		E	clay	CH	<i>Calochortus splendens</i> , <i>Dichelostemma capitatum</i> , <i>Brassica geniculata</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Centaurea melitensis</i> , <i>Bromus diandrus</i>	scattered patches. Probably missed plants.
CC18A11-04	Pt	4	436145	3747427	276	moderate	N	clay	CH	<i>Malacothamnus fascicularis</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Acemisson glaber</i> , <i>Heterb.</i> , <i>Erodium cicutarium</i>	
CC18A11-05	Pt	1	436135	3747399	285		N	clay-rocky	CH	<i>Bromus rubens</i> , <i>Ceanothus sp.</i> , <i>Acemisson glaber</i> , <i>Eucrypta chrysanthemifolia</i> , <i>Centaurea melitensis</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i>	
CC18A11-06	Pt	2	436020	3747318	253		NE	clay	AFS, CH	<i>Calci.</i> , <i>Stipa pulchra</i> , <i>Avena sp.</i> , <i>Dichelostemma capitatum</i> , <i>Brassica geniculata</i> , <i>Calochortus splendens!</i>	Isolated.
CC18A11-07	Pt	7	436225	3747623	239		N	clay, loam	CH	<i>Dichelostemma capitatum</i> , <i>Kecant</i> , <i>Eucrypta chrysanthemifolia</i> , <i>Bromus rubens</i> , <i>Hazardia squarrosa</i> , <i>Brassica</i>	Isolated

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
CC18A11-08	Pt	12	436103	3747663	234		gentle	N	clay	CH	<i>Dicuil</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i> , <i>Adenostemma fasciculatum</i> , <i>Ceanothus sp.</i> , <i>Festuca perennis</i> , <i>Bromus rubens</i> , <i>Plantago sp.</i> , <i>Stipa pulchra</i> , <i>Calochortus splendens</i> , <i>Brassica geniculata</i>	Scattered Scattered; impacted by fuel break.
CC18A11-09	Pt	15	436155	3747823	202		gentle	NE	clay	AGL		
CC18A12-01	Pt	8	435947	3747387	284		moderate	WNW	clay loam	AGL + OW, CH	<i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Calochortus splendens</i> , <i>Brassica tournefortii</i> , <i>Acmispon glaber</i> , <i>Quercus agrifolia</i> , <i>Heteromeles arbutifolia</i>	scattered
CC18A12-02	Pt	1	435966	3747379	287		moderate	NW	loamy clay	CH	<i>Heteromeles arbutifolia</i> , <i>Calochortus splendens</i> , <i>Acmispon glaber</i> , <i>Erigeron foliosus</i> , <i>Quercus agrifolia</i>	Single
CC18A12-03	POL	80	436149	3747529	260		gentle		clay loam	AGL/NGL	<i>Bromus diandrus</i> , <i>Dichelostemma capitatum</i> , <i>Calochortus splendens</i> , <i>Stipa pulchra</i> , <i>Brassica geniculata</i>	Scattered, roughly 1120 sq m
CC18A12-04	POL	5	436007	3747580	245		gentle, ridge	NW	clay loam	AGL+CH	<i>Bromus rubens</i> , <i>Festuca perennis</i> , <i>Malacothammus fascicularis</i> , <i>Brassica tournefortii</i> , <i>Calochortus splendens</i>	Scattered
CC18A12-05	POL	25	436636	3747786	222		moderate	WNW	rocky clay loam	CSS	<i>Salvia mellifera</i> , <i>Hazardia squarrosa</i> , <i>Lupinus succulentus</i> , <i>Galium angustifolium</i> , <i>Acmispon glaber</i> , <i>Bromus rubens</i>	
CC18A12-06	Pt	1	436600	3747755	216		moderate	W	rocky clay loam	CSS	<i>Lupinus succulentus</i> , <i>Centaurea melitensis</i> , <i>Bromus rubens</i> , <i>Salvia apiana</i> , <i>Nolina cismontana</i> , <i>Hesperoyucca whipplei</i>	Single
CC18A12-07	Pt	6	436094	3747925	227		gentle	NE	clay	AGL	<i>Erigeron foliosus</i> , <i>Bromus rubens</i> , <i>Bromus diandrus</i> , <i>Corfli</i> , <i>Brassica nigra</i> , <i>Lupbic</i> , <i>Dichelostemma capitatum</i>	Impacted by old fuel break. Found on either side of it.
CC18A12-08	Pt	10	436057	3747813	225		moderate	N	clay	AGL	<i>Calochortus splendens</i> , <i>Blocco</i> , <i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Caystegia macrostegia</i> , <i>Centaurea melitensis</i> , <i>Erodium cicutarium</i>	Scattered patches

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Dudleya multicaulis - many-stemmed dudleya; CRPR 1B.2

LABEL	Type	Count	GPS		Phenology	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes	
			UTME	UTMN								
DM18R28-01	Pt	197	435763	3747195	284	100% veg	ridge top, gentle	W	rocky loamy clay	CSS/SCS	<i>Hesperoyucca whipplei</i> , <i>Opuntia occidentalis</i> , <i>O. oricola</i> , <i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Calochortus splendens</i>	scattered patches. Individuals 7 m to W and to E.
DM18R28-02	Pt	190	435714	3747188	283	100% veg	flat, ridge top		cobbly rocky loamy clay	CSS	<i>Ericameria palmeri</i> , <i>Dichelostemma capitatum</i> , <i>Artemisia californica</i> , <i>Calystegia macrostegia</i> , <i>Sanicula bipinnatifida</i> , <i>Viola pedunculata</i>	scattered patches.
DM18R29-01	Pt	148	436124	3747158	351	100% veg	ridge top		cobbly rocky clay	Chamise CH	<i>Adenostemma fasciculatum</i> , <i>Dichelostemma capitatum</i> , <i>Nolina cismontana</i>	Scattered.
DM18A12-01	Pt	112	436030	3747370	289	80% veg, 20% flw	gentle	NNW	loamy clay	Sandstone outcrop	<i>Festuca myuros</i> , <i>Hesperoyucca whipplei</i> , <i>Deinandra fasciculata</i> , <i>Artemisia californica</i> , <i>Bromus rubens</i>	Scattered patches

Nolina cismontana - chaparral nolina; CRPR 1B.2

LABEL	Type	Count	GPS		Phenology	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes	
			UTME	UTMN								
NC18R28-01	Pt	1	436112	3746857	343	100% veg	steep	NW	silty loamy clay	AGL/CSS	<i>Brassica nigra</i> , <i>Malacothrix saxatilis</i> , European grasses	Patch.
NC18R28-02	Skt	500	436018	3746950	308	97% veg, 3% bud	moderate to steep	W+N W	calcareous, loamy clay	rock outcrop, CH, NS	<i>Adenostemma fasciculatum</i> , <i>Calochortus sp.</i> , <i>Helianthus gracilis</i> , <i>Toxicocordion fremontii</i>	scattered clumps.
NC18R28-03	Pt	2	435966	3747091	291	100% bud	moderately steep		silty loamy clay	AGL-CH transition	<i>Brassica nigra</i> , <i>Eschscholzia californica</i> , <i>Dichelostemma capitatum</i> , <i>Malosma laurina</i>	scattered patches.
NC18R29-01	Pt	8	436164	3747234	326	100% bud	steep	NE	clay	ceanothus CH	<i>Ceanothus megacarpus</i> , <i>Adenostemma fasciculatum</i> , <i>Salvia mellifera</i>	Patch
NC18R29-02	Skt	30	436262	3746645	364	100% veg	gentle to moderate	NNE	calcareous + clay	CH	<i>Adenostemma fasciculatum</i> , <i>Ceanothus megacarpus</i> , <i>Hesperoyucca whipplei</i> , <i>Malosma laurina</i>	scattered patches.
NC18R29-03	Skt	59	436359	3746674	332	100% veg	gentle	NNE	clay with shells	CH	<i>Malacothammis fascicularis</i> , <i>Eucrypta chrysanthemifolia</i> , <i>Sernul</i> , <i>Marmac</i> , <i>Phapar</i> , <i>Avena sp.</i> , <i>Bromus sp</i>	Scattered. Original count for point + 50 plants to east (now in polygon).
NC18R29-04	Skt	40	436160	3746934		100% veg	moderate to steep	NE+W	clay	Chamise CH	<i>Adefac</i> , <i>Romcou</i> , <i>Dipaus</i> , <i>Heswhi</i>	scattered patches
NC18R29-05	Skt	6	436304	3746712		100% veg	steep	N				
NC18R29-06	Skt	30	436197	3747042		100%	moderate	NNE				Estimate rough. Also need to expand this polygon or add new one (2019 project).

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Nolina cismontana - chaparral noлина; CRPR 1B.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
NC18R29-07	Skt	1293	436276	3747186			moderate to steep	E		Chamise CH		Polygon about 56,200 sq. meters. Count estimate based on density of Nc18A03-09 (0.023 plants per m sq.), a polygon with similar densities. Probably a conservative estimate. Maybe refined in final data release.
NC18A03-01	Pt	3	436485	3747701	175	100%	steep	SW	clay loam	CSS/AGL	<i>Avena fatua</i> , <i>Artemisia californica</i> , <i>Malosma laurina</i>	Scattered patches
NC18A03-02	Pt	3	436636	3747405	196	100%	steep	N	silty clay	sandstone outcrop, OW	<i>Quercus berberidifolia</i> , <i>Eucryphia chrysanthemifolia</i> , <i>Keckiella anthirrhinoides</i> , <i>Phacelia cicutaria</i>	Scattered
NC18A03-03	Pt	1	436529	3747527	187	100%	gentle	NW	rocky clay	CSS	<i>Malosma laurina</i> , <i>Lepidospartum squamatum</i> , <i>Malacothamnus fasciculatus</i>	Single
NC18A03-04	POL	17	436610	3747344	201		moderate to steep	W	rocky clay	CSS?/ OW	<i>Quercus agrifolia</i> , <i>Mirabilis laevis</i> , <i>Rhamnus ilicifolia</i> , <i>Hesperoyucca whipplei</i> , <i>Eriodictyon crassifolium</i> , <i>Brassica geniculata</i>	Scattered patches
NC18A03-05	Pt	1	436623	3747278	201	100%	steep	W		CSS, OW, CH	<i>Quercus agrifolia</i> , <i>Malosma laurina</i> , <i>Keckiella anthirrhinoides</i>	Single. Lightly burned.
NC18A03-06	Pt	2	436554	3747269	196	100%	flat		sand over clay	Alluvial bench	<i>Malosma laurina</i> , <i>Encelia californica</i> , <i>Malacothamnus fasciculatus</i> , <i>Lepidospartum squamatum</i> , <i>Brassica tournefortii</i>	Isolated. Second plant ca 25m to NE
NC18A03-07	Pt	1	436391	3747550	175	100% veg	steep	E	clay loam	CH	<i>Quercus agrifolia</i> , <i>Ceanothus megacarpus</i> , <i>Eucryphia chrysanthemifolia</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i> , <i>Bromus diandrus</i>	Single
NC18A03-08	Pt	7	436556	3747648			moderate	SW				
NC18A03-09	Skt	445	436618	3747549			moderate	SE+S+ W	clay			Polygon about 19,000 sq. meters.
NC18A03-10	Skt	150	436334	3747650				E				
NC18A03-11	Skt	24	436354	3747528			moderately steep	E				
NC18A03-12	Skt	15	436422	3747401			moderate	N				

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Nolina cismontana - chaparral noлина; CRPR IB.2 (continued)

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
NC18A04-01	Skt	3100	436937	3747137	321	ridge	var	clayish	Chamise CH	<i>Adenostemma fasciculatum, Hesperoyucca whipplei, Ceanothus megacarpus</i>	Patches. Count estimate based on density of Nc18A03-0 (0.024 plants per m sq.), a polygon with similar densities. Probably a very conservative estimate. Maybe refined in final data release.
NC18A04-02	Pt	20	436578	3747082	204	gentle	E	clay rocky	CH	<i>Avena sp, Erodium cicutarium, Bromus rubens, Romneya coulteri, Centaurea melitensis, Eucrypta chrysanthemifolia, Sonchus oleraceus</i>	
NC18A04-03	Pt	1	436595	3746969	213	flat		clay loam	CH	<i>Malacothammus fascicularis, Encelia californica, Brassica geniculata, Calystegia macrostegia, Bromus rubens, Centaurea melitensis, Erodium cicutarium, Melilotus indicus</i>	Single
NC18A04-04	Pt	1	436597	3746916	217	flat	N	clay loam	CH	<i>Malosma laurina, Brassica geniculata, Sonchus oleraceus, Senecio vulgaris, Eucrypta chrysanthemifolia, Erodium cicutarium, Malacothammus fascicularis</i>	Single
NC18A04-05	Skt	60	437125	3747225		steep	S+SS W				count very rough. Try to refine in 2019.
NC18A11-01	Pt	1	436187	3747487	264	gentle	N	clay	CH/OW	<i>Malosma laurina, Quercus agrifolia, Malacothammus fascicularis, Dichelostemma capitatum, Calystegia macrostegia, Heteromeles arbutifolia</i>	Isolated
NC18A11-02	Pt	2	436053	3747435	271	steep	W	silty clay loam	Grassland	<i>Brassica tournefortii, Erodium cicutarium, Malosma laurina, Bromus rubens</i>	Isolated
NC18A11-03	Skt	90	436242	3747719	229	ridge top+ steep	N, E, & W	clay	Chamise CH	<i>Adenostemma fasciculatum, Malosma laurina</i>	Scattered patches
NC18A11-04	Pt	4	436274	3747451	255	moderate to steep	E	clay loam	CH	<i>Calystegia macrostegia, Romneya coulteri, Dichelostemma capitatum, Heteromeles arbutifolia, Brassica geniculata, Malosma laurina</i>	
NC18A11-05	Skt	160	436162	3747670		moderate	NNE	clay			
NC18A12-01	Pt	1	436638	3747813	205	moderate	NNW	rocky loamy clay	CSS	<i>Hesperoyucca whipplei, Lupinus succulentus, Hazardia squarrosa, Bromus rubens</i>	Single
NC18A12-02	Pt	1	436728	3747862	220	steep	WNW	clay loam	AGL	<i>Bromus rubens, Festuca perennis, Quercus agrifolia, Bromus diandrus, Dichelostemma capitatum, Tetradymia comosa</i>	Single

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Nolina cismontana - chaparral nolina; CRPR 1B.2 (continued)

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes		
			UTME	UTMN								
NC18A12-03	Skt	110	436716	3747730	254	93% veg, 5% bud, 2% flw	ridge + steep	NW+N	rocky clay loam/sandstone outcrops	AGL, CH	<i>Hesperoyucca whipplei</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Bromus diandrus</i> , <i>Rhus ovata</i> , <i>Rhamnus ilicifolia</i>	Scattered patches
NC18A12-04	Pt	2	436600	3747758	217	100% veg	moderate	W	rocky clay loam	CSS	<i>Lupinus succulentus</i> , <i>Centaurea melitensis</i> , <i>Bromus rubens</i> , <i>Salvia apiana</i> , <i>Nolina cismontana</i> , <i>Hesperoyucca whipplei</i>	Isolated. One individual ca 20 meters down slope.
NC18M21-01	Pt	4	436166	3747002	333	100% veg	ridge top, gentle	NE+E	rocky calcareous clay		<i>Malosma laurina</i> , <i>Astragalus brauntonii</i> , <i>Bromus rubens</i> , <i>Malacothamnus fascicularis</i>	Isolated
NC18M21-02	Skt	23	436539	3746800	253	100% veg	steep	N	rocky clay	CH	<i>Acaortia microcephala</i> , <i>Brassica geniculata</i> , <i>Acmispon maritimus</i>	
NC18M21-03	Pt	5	436568	3746771	230.8	100% veg		S	clay	CH	<i>Brassica geniculata</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i> , <i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i>	point at bottom of site

Romneya coulteri - COULTER'S MATILAJA POPPY; CRPR 4.2

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes		
			UTME	UTMN								
RC18R28-01	Pt	40	435947	3747007	277	100% veg	moderate & steep	S	rocky soil	Chamise chaparral	<i>Opuntia occidentalis</i>	scattered to patchy
RC18R28-02	Skt	200	436005	3746992	282	100% veg	moderate & steep	S	rocky soil	Chamise chaparral	<i>Eriodicyon crassifolium</i> , <i>Malacothamnus fascicularis</i> , <i>Adenostemma fasciculata</i> , <i>Malosma laurina</i> , <i>Helianthus gracilis</i>	scattered patches
RC18R28-03	Pt	15	436054	3747126	322	100% veg	steep	W	gravelly clay loam	NS	<i>Nolina cismontana</i> , <i>Solanum umbelliferum</i> , <i>Cabstegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Brassica nigra</i> , <i>Adenostemma fasciculatum</i>	
RC18R28-04	Pt	8	435714	3747207	276	80% veg, 20% spent	moderate	NNW	rocky loam	CH	<i>Malacothamnus fascicularis</i> , <i>Artemisia californica</i> , <i>Salvia apiana</i> , <i>Solanum umbelliferum</i>	scattered.
RC18R28-05	Pt	17	435760	3747245	274	100% veg	gentle	W	clay loam	CSS	<i>Malacothamnus fascicularis</i> , <i>Brassica nigra</i> , <i>Dichelostemma capitatum</i> , grasses.	Patch
RC18R28-06	POL	12	436092	3747239	325	100% veg	gentle	NW	clay	CH	<i>Dichelostemma capitatum</i> , <i>Erodium cicutarium</i> , <i>Iriola pu.</i> <i>Malacothamnus fascicularis</i> , <i>Cryptantha sp.</i> <i>Deinandra fascicularis</i>	Scattered.
RC18R28-07	POL	8	436130	3747235	327	100% flw	gentle	N/NW	clay	CH	<i>Malosma laurina</i> , <i>Dichelostemma capitatum</i> , <i>Brassica geniculata</i> , <i>Bromus sp.</i> <i>Solanum umbelliferum</i> , <i>Erodium cicutarium</i> , <i>Sisbel</i>	
RC18R28-08	Pt	8	435895	3747247		100% veg		SE	clay	CH	<i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Avena sp</i>	

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Romneya coulteri - COULTER'S MATILIJIA POPPY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils		Pre burn Habitat	Associated Species	Notes
									rocky sandy clay	sandy clay			
RC18A03-03	Pt	1	436532	3747338	193	100%	flat		rocky sandy clay	alluvial bench	<i>Malosma laurina</i> , <i>Eucryptia chrysanthemifolia</i> , <i>Bromus rubens</i>	Single	
RC18A03-04	Pt	37	436532	3747347	192	100%	flat to gentle	W	sandy clay	AFS	<i>Lepidium squamatum</i> , <i>Malosma laurina</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Brassica tournefortii</i>		
RC18A03-05	Pt	6	436568	3747296	195	100%	flat to gentle	N	sand over clay	alluvial bench, AFS	<i>Malosma laurina</i> , <i>Quercus agrifolia</i> , <i>Lepidospartum squamatum</i> , <i>Encelia californica</i> , <i>Eriodictyon crassifolium</i>	scattered patches	
RC18A03-06	POL	190	436568	3747247	196	100%	flat to gentle	N	sand over clay	alluvial bench, AFS	<i>Malocothammus fascicularis</i> , <i>Malosma laurina</i> , <i>Nolina cismontana</i> , <i>Dichelostemma capitatum</i> , <i>Hesperoyucca whipplei</i>	Scattered patches	
RC18A03-07	POL	210	436683	3746972		100%	gentle	NW	sand over clay	alluvial bench, AFS	<i>Malosma laurina</i> , <i>Eriodictyon crassifolium</i> , <i>Lepidospartum squamatum</i> , <i>Terradymia comosa</i> , <i>Marah macrocarpus</i> , <i>Quercus agrifolia</i> , <i>Rhamnus ilicifolia</i>	Scattered patches.	
RC18A03-08	Pt	1	436383	3747778	163	100% veg	flat	N	sandy loam	AFS / wash	<i>Artemisia californica</i> , <i>Eriogonum fasciculatum</i> , <i>Lepidospartum squamatum</i> , <i>Hesperoyucca whipplei</i> , <i>Erodium cicutarium</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i>	Single	
RC18A03-09	Skt	116	436386	3747669	170	100% veg	steep	SW	clay	CH	<i>Malosma laurina</i> , <i>Brassica geniculata</i> , <i>Eucryptia chrysanthemifolia</i> , <i>Bromus diandrus</i> , <i>Gilia</i> sp, <i>Ceanothus megacarpus</i>	Patches	
RC18A03-10	Pt	1	436413	3747639	169	100% veg	flat	N	Sandy rocky	AFS / wash	<i>Bromus diandrus</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i> , <i>Hypochaeris glabra</i> , <i>Lepidospartum squamatum</i> , <i>Eriogonum fasciculatum</i>		
RC18A03-11	Pt	13	436500	3747433	177	100% veg	moderate	N	clay loam	CSS / wash	<i>Brassica tournefortii</i> , <i>Hordeum murinum</i> , <i>Bromus rubens</i> , <i>Phacelia parryi</i> , <i>Brassica geniculata</i> , <i>Eucryptia chrysanthemifolia</i>	Patch	
RC18A03-12	Pt	1	436478	3747343	182	100% veg	flat	E	rocky sand	AFS / wash	<i>Artemisia californica</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i> , <i>Erodium cicutarium</i> , <i>Hesperoyucca whipplei</i> , <i>Lepidospartum squamatum</i>	Single	
RC18A03-13	Skt	70	436428	3747293	195	100% veg	steep	E	clay loam, eroded soils	CH	<i>Scrophularia californica</i> , <i>Eucryptia chrysanthemifolia</i> , <i>Marah macrocarpa</i> , <i>Phacelia parryi</i> , <i>Brassica geniculata</i> , <i>Brassica tournefortii</i> , <i>Malosma laurina</i>	Patches	
RC18A03-14	Pt	1	436521	3747240	190	100% veg	flat	N	sandy rocky	AFS / wash	<i>Lepidospartum squamatum</i> , <i>Bromus rubens</i> , <i>Brassica geniculata</i> , <i>Centaurea melitensis</i> , <i>Baccharis salicifolia</i> , <i>Hesperoyucca whipplei</i> , <i>Vulmya</i>	Single	

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Romneya coulteri - COULTER'S MATILLOJA POPPY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
RC18A03-15	Skt	100	436471	3747183	197	100% veg	steep	E	clay loam	CH	<i>Brassica geniculata</i> , <i>Marah macrocarpa</i> , <i>Rhus integrifolia</i> , <i>Festuca perennis</i> , <i>Erodium cicutarium</i> , <i>Crynet</i> , <i>Eucrypta chrysanthemifolia</i>	scattered patches
RC18A03-16	Pt	10	436584	3747146	197	100% veg	moderate	NW	clay rocky	AFS/CH	<i>Lepidospartum squamatum</i> , <i>Malacothamnus fascicularis</i> , <i>Eriodictyon crassifolium</i> , <i>Phacelia parryi</i> , <i>Brassica geniculata</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i>	scattered
RC18A03-17	POL	350	436506	3747088	203	100% veg	gentle to steep	W	clay loam	CH	<i>Heteromels arbutifolia</i> , <i>Quercus agrifolia</i> , <i>Marah macrocarpa</i> , <i>Aconit</i> , <i>Eucrypta chrysanthemifolia</i> , <i>Bromus rubens</i> , <i>Elymus condensatus</i> , <i>Brassica geniculata</i>	Scattered patches
RC18A03-18	POL	12	436611	3747003	203	100% veg	flat	N	Sandy rocky	ASF / wash	<i>Lepidospartum squamatum</i> , <i>Eriogonum fasciculatum</i> , <i>Brassica geniculata</i> , <i>Malacothamnus fascicularis</i> , <i>Malosma laurina</i> , <i>Baccharis salicifolia</i>	
RC18A03-19	Pt	30	436592	3747003	205	100% veg	gentle	N	clay rocky	ASF/CH	<i>Lepidospartum squamatum</i> , <i>Eriogonum fasciculatum</i> , <i>Brassica geniculata</i> , <i>Malacothamnus fascicularis</i> , <i>Malosma laurina</i> , <i>Baccharis salicifolia</i>	Scattered
RC18A03-20	Pt	10	436586	3746962	208	100% veg	gentle	N	clay rocky	ASF/CH	<i>Lepidospartum squamatum</i> , <i>Eriogonum fasciculatum</i> , <i>Brassica geniculata</i> , <i>Malacothamnus fascicularis</i> , <i>Malosma laurina</i> , <i>Baccharis salicifolia</i>	scattered
RC18A03-21	Pt	17	436608	3746893	217	100% veg	gentle	N	clay rocky	ASF/CH	<i>Lepidospartum squamatum</i> , <i>Eriogonum fasciculatum</i> , <i>Brassica geniculata</i> , <i>Malacothamnus fascicularis</i> , <i>Malosma laurina</i> , <i>Baccharis salicifolia</i>	
RC18A03-22	Pt	26	436630	3746782	223	100% veg	flat	NNE	clay	ASF/CH	<i>Cerbet</i> , <i>Lepidospartum squamatum</i> , <i>Bromus rubens</i> , <i>Melilotus indicus</i> , <i>Erodium cicutarium</i> , <i>Malacothamnus fascicularis</i> , <i>Brassica geniculata</i>	Scattered patches
RC18A03-23	Pt	35	436638	3746940	211	100% veg	steep	N	Rocky	ASF	<i>Malosma laurina</i> , <i>Yucwhi</i> , <i>Lepidospartum squamatum</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i>	
RC18A04-01	Pt	15	436834	3746996	259	100%	steep	N+W	gravelly	rocky canyon, NS	<i>Quercus agrifolia</i> , <i>Nolina cismontana</i>	scattered patches
RC18A04-02	Pt	2	436825	3747169	272	100%		W	thin, loamy	rock outcrop	<i>Nolina cismontana</i> , <i>Malosma laurina</i> , <i>Phacelia parryi</i>	isolated
RC18A04-03	PT	3	436759	3746941	234	100%	moderate	NE				
RC18A04-04	PT	3	436755	3746956	231	100%	moderate	NE				
RC18A04-05	PT	3	436783	3747186	254	100%	steep	SE			<i>Phacelia parryi</i> , <i>Antirrhinum nuttallianum</i> , <i>Marah macrocarpus</i>	Steep
RC18A04-06	PT	5	436799	3747212	263	100%	gentle to moderate	S				

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Romneya coulteri - COULTER'S MATILAJA POPPY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes
RC18A04-07	PT	10	436738	3747297	251	100%		N				
RC18A04-08	PT	3	436815	3747088	266	100% veg	Ridge, Moderate	W	clay	CH		Along old fuel break
RC18A04-09	PT	3	436825	3747102	267	100% veg	Moderate	N	clay	CH		
RC18A04-10	PT	3	436814	3747152	258	100% veg	Steep	N	clay	CH		
RC18A04-11	PT	3	436697	3747153	231	100% veg	Ridge	N	clay	CH		
RC18A04-12	PT	3	436743	3747327	246	100% veg	Ridge, Moderate	S	clay	CH		
RC18A04-13	PT	3	436731	3747365	238	100% veg	Steep	N	clay	CH		
RC18A04-14	PT	3	436334	3747357	266	100% veg	Moderately steep	N				
RC18A04-15	PT	3	436348	3747406	251	100% veg	Steep	S	clay	CH		
RC18A04-17	PT	3	436112	3747311	306	100% veg	Moderate	NW	clay	CH		
RC18A04-18	PT	3	436093	3747298	309	100% veg	Gentle	N	clay	CH		
RC18A04-19	PT	3	436066	3747325	298	100% veg	Ridge, gentle	N		CH		
RC18A04-20	PT	6	436005	3747306	305	100% veg	Moderate	N	clay			
RC18A04-21	PT	3	436214	3747635	237	100% veg		N				
RC18A04-22	PT	3	436222	3747665	230	100% veg						
RC18A11-02	SKT	1080	436221	3747340	308		moderate	mostly N to NE	clay loam	CH		Combined w/SLR29-07 & RC18M24-01 POL from both merged & expanded. About 2,800 additional seedlings estimated on May 24. Also includes RC18A11-01, RC18A04-16.
RC18A12-01	Pt	3	436142	3747544	260	loamy clay	gentle	NW	loamy clay	agl, css		Pt added from field map.
RC18M21-01	SKT	55	436516	3746799	255	50% veg, 20% bud, 30% flw	steep	NNW	clay	chaparral	<i>Keckiella cordifolia</i> , <i>Heteromeles arbutifolia</i> , <i>Malosma laurina</i> , <i>Acourtia microcephala</i> , <i>Rhus integrifolia</i>	
RC18M21-02	POL	90	436696	3746809	220	40% veg, 30% flw, 30% fr	flat	N	gravelly mix of sand & clay	alluvial fan scrub	<i>Malosma laurina</i> , <i>Rhus integrifolia</i> , <i>Rhus ovata</i> , <i>Lepidospartum squamatum</i> , <i>Eriodictyon crassifolium</i>	Scattered patches.
RC18M21-03	POL	53	436609	3746878	214.5	20% veg, 60% bud, 20% flw	flat		rocky sandy	AFS	<i>Lepidospartum squamatum</i> , <i>Malacothammus fascicularis</i> , <i>Bebyun</i> , <i>Bromus rubens</i> , <i>Centauria melitensis</i> , <i>Erechtia californica</i>	Isolated
RC18M21-04	Pt	2	436692	3746766	220.4	50% veg, 50% flw	flat		sandy	AFS	<i>Rhali</i> , <i>Bromus rubens</i> , <i>Malosma laurina</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i> , <i>Yucca</i>	

APPENDIX C: RARE PLANT SITE SPECIFIC DATA CHINO HILLS STATE PARK

Romneya coulteri - COULTER'S MATILILJA POPPY; CRPR 4.2 (continued)

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Pre burn Habitat	Associated Species	Notes		
			UTME	UTMN							Alt. (m)	Phenology
RC18M24-01	Pt	19	436228	3747536	263	84% veg, 5% flw, 11% fr	gentle	NW	loamy clay	dist. Chaparral	<i>Malosma, Brassica geniculata, Bromus rubens, Eriodictyon, Ceanothus megacarpus</i>	Patch.
RC18M24-02	Pt	35	436196	3747529	262.1	94% veg; 6% fr	gentle	NINW	loamy clay	burnt agl. ch, ow	<i>Rhus integrifolia, Heteromeles arbutifolia, Quercus agrifolia, Brassica geniculata, Bromus diandrus</i>	

APPENDIX D: RARE PLANT SITE SPECIFIC DATA SANTIAGO OAKS REGIONAL PARK

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2

GPS

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
CC18J06-01	Pt	7	429958	3742903	259	100% fr	moderate	NW	clay	NGL+sumac CH	<i>Rhuini, Malvas, Brorub, Calmac, Stipul, Acomis</i>	scattered
CC18J06-02	Pt	37	429984	3742983	245.1	100% fr	ridge, moderate	NNW	loamy clay	AGL+CSS	<i>Mallau, Rhuini, Salmel, Malvas, Deifas</i>	scattered. Extends up to 10 meters from point.
CC18J06-03	PoI	420	430148	3742789	327.1	100% fr	ridge top, gentle to moderate	W	clay, somewhat rocky	CSS	<i>Salmel, Malvas, Heswhi, Deifas, Brorub</i>	scattered
CC18J06-04	Skt	37	429961	3743016	236	60% fr, 40% spent	Gentle	SW	clay	CSS	<i>Malacothamnus fascicularis, Sabvia mellifera, Helianthus gracilentus, Calystegia macrostegia, Bromadrub, Stipa lepidia</i>	
CC18J06-05	Pt	2	429951	3743064	240	100% flw	Gentle	S	clay	CH	<i>Malacothamnus fascicularis, Elymus condensatus, Toxicodendron diversilobum, Malacothrix saxatilis, Calystegia macrostegia, Bromus rubens</i>	isolated
CC18J06-06	Pt	20	429856	3742904	237	100% fr	Gentle	SW	clay	CH	<i>Malacothamnus fascicularis, Malosma laurina, Rhus integrifolia, Opuntia littoralis, Calochortus weedii var. intermedium, Calochortus splendens</i>	More plants expected.
CC18J06-07	Pt	11	429773	3742892	219	100% fr	moderate	SE	clay	CH	<i>Malacothamnus fascicularis, Rhus mellifera, Rhus integrifolia, Bromus rubens, Calystegia macrostegia, Deinandra fascicularis, Stipa lepidia</i>	scattered
CC18J06-08	Pt	1	429639	3742856	212	100% fr	moderate	SW	clay	CH	<i>Malacothamnus fascicularis, Rhus integrifolia, Malosma laurina, Bromus rubens, Calystegia macrostegia, Bromus diandrus, Dichelostemma capitatum</i>	Single. Unrecorded plant near CW118J06-19 mentioned in field notes. Investigate in 2019?
CC18J06-09	Pt	5	429641	3742770	214	100% fr	moderate	NW		CH	<i>Malosma laurina, Malacothamnus fascicularis, Sabvia mellifera, Calochortus splendens, Bromus rubens</i>	isolated
CC18J12-01	PoI	82	430719	3742829	266	100% fr	moderate	NNE	loamy clay	NGL + CSS	<i>Malvas, Rhuini, Brorub, Stiple, Deifas</i>	scattered
CC18J12-02	Skt	40	430217	3742733	323.6	100% fr	ridge top, gentle	NNE	loamy clay	AGL + CSS	<i>Avefat, Calmac, Diccac, Rhuini, Malvas, Hazzqu, Cwi</i>	
CC118J20-01	Pt	16	431792	3744260	315	100% fr	steep	SE	rocky	chamise CH	<i>Adefas, Nolcis, Rhuova, Malvas, Brorub, Calcat, Blocro</i>	single

APPENDIX D: RARE PLANT SITE SPECIFIC DATA SANTIAGO OAKS REGIONAL PARK

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPR IB.1

LABEL	Type	Count	UTME	UTM N	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
CW118106-01	Pt	5	430186	3743105	333	100% flw	gentle, ridge top	SW	clay adj to sandstone	CH	<i>Mirabilis laevis</i> , <i>Rhus integrifolia</i> , <i>Adenostoma fasciculatum</i> , <i>Artemisia californica</i> , <i>Gutierrezia californica</i> , <i>Stipa coronata</i>	
CW118106-02	Pt	20	430221	3743102	338.3	35% bud, 65% flw	level ridge top		clay	chamise CH	<i>Adenostemma fasciculatum</i> , <i>Salvia mellifera</i> , <i>Gutierrezia californica</i> , <i>Galang</i> , <i>Calspl</i> , <i>Deifas</i>	
CW118106-03	Pt	3	430228	3743134	339.7	34% bud, 66% flw	gentle, ridge top	E	clay	chamise CH	<i>Adeifas</i> , <i>Hesyuc</i> , <i>Galang</i> , <i>Deifas</i>	
CW118106-04	Pt	3	430242	3743142	336.7	34% bud, 66% flw	gentle	NNE	pebbly clay	chamise CH	<i>Adeifas</i> , <i>Salmel</i> , <i>Bragen</i> , <i>Sitor</i> , <i>Heswhi</i> , <i>Toxfre</i>	
CW118106-05	Pt	3	430262	3743102	338	100% flw	gentle	NNE	rocky clay	chamise CH	<i>Adeifas</i> , <i>Salmel</i> , <i>Bragen</i> , <i>Sitor</i> , <i>Heswhi</i> , <i>Toxfre</i>	
CW118106-06	Pt	1	430357	3743109	300	100% flw	moderate	ESE	clay, white gravel	NS	<i>Adeifas</i> , <i>Nolcis</i> , <i>Salmel</i> , <i>Sitor</i> , <i>Heswhi</i>	Much eaten Calochortus here, uncertain if it is C. splendens or C. weedii
CW118106-07	Pt	1	430376	3743110	294.7	100% flw	moderate	ESE	clay, white gravel	NS	<i>Acomis</i> , <i>Hetarb</i> , <i>Rhuint</i> , <i>Nolcis</i>	
CW118106-09	POL	174	430348	3743024	292.8	65% flw, 35% fr	moderate	SE+N E	rocky clay and sandstone	chamise CH, NS	<i>Nolcis</i> , <i>Adeifas</i> , <i>Heswhi</i> , <i>Salmel</i> , <i>Kecant</i> , <i>Rhuint</i>	
CW118106-10	POL	37	430165	3742885	309.4	50% bud, 50% flw	gentle to moderate	NNE	loamy clay	CSS, sumac CH	<i>Rhuint</i> , <i>Malfas</i> , <i>Hazsqu</i> , <i>Salmel</i> , <i>Deifas</i>	
CW118106-11	Pt	3	430074	3742872	292.6	100% flw	steep	W	loamy clay	CSS	<i>Rhuint</i> , <i>Brorub</i> , <i>Artcal</i> , <i>Malltau</i>	
CW118106-12	Pt	2	429918	3742965	231.3	50% bud, 50% flw	ridge, moderate	NNW	clay	CSS	<i>Rhuint</i> , <i>Malltau</i> , <i>Malfas</i> , <i>Deifas</i> , <i>Brorub</i> , <i>Calspl</i>	isolated
CW118106-13	Pt	7	429992	3742975	247.2	40% bud, 60% flw	gentle ridge top	W	clay, sandstone, rocky	CSS	<i>Salmel</i> , <i>Malfas</i> , <i>Heswhi</i> , <i>Deifas</i> , <i>Brorub</i>	scattered
CW118106-14	SKT	159	430180	3742758	331.7	35% flw, 65% fr	ridgetop, gentle+steep	var.	clay	CSS + CH	<i>Salmel</i> , <i>Hazsqu</i> , <i>Rhuint</i> , <i>Heswhi</i> , <i>Brorub</i> , <i>Sitlep</i> , <i>Calspl</i>	scattered
CW118106-15	Pt	7	429984	3743110	259	10% veg, 70% bud, 20% flw	mod.	S	Loamy	CSS / CH	<i>Salvia mellifera</i> , <i>Malacothamnus fascicularis</i> , <i>Eriogonum fasciculatum</i> , <i>Hesperoyucca whipplei</i> , <i>Lupinus bicolor</i> , <i>Bebjun</i>	Isolated
CW118106-16	Pt	7	429920	3742983	231	71% bud, 29% flw	Gentle	N	clay	CH	<i>Hetarb</i> , <i>Malacothamnus fascicularis</i> , <i>Salvia mellifera</i> , <i>Stipa lepida</i> , <i>Dichelostemma capitatum</i>	scattered

APPENDIX D: RARE PLANT SITE SPECIFIC DATA SANTIAGO OAKS REGIONAL PARK

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPR 1B.1 (continued)

LABEL	Type	Count	UTME	UTM N	GPS Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
CW118106-17	Pol	17	429866	3742920	238	71% bud, 29% flw	gentle	SW	clay	CH	<i>Malacothamnus fascicularis</i> , <i>Malosma laurina</i> , <i>Opuntia littoralis</i> , <i>Rhus integrifolia</i> , <i>Calochortus splendens</i> , <i>Calochortus catalinae</i>	scattered
CW118106-18	Pt	12	429758	3742886	225	17% veg, 42% bud, 42% flw		SE	clay	CH	<i>Malacothamnus fascicularis</i> , <i>Salvia mellifera</i> , <i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Helianthus gracilentus</i>	scattered
CW118106-19	Pt	3	429631	3742826	209	100% flw	gentle	SW	clay	CH	<i>Rhus integrifolia</i> , <i>Malacothamnus fascicularis</i> , <i>Heiatab</i> , <i>Stipa lepida</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i>	Isolated
CW118106-20	Pol	12	429658	3742825	220	90% flw, 10% fr	moderate	SW	clay	GL / CH	<i>Salvia mellifera</i> , <i>Malacothamnus fascicularis</i> , <i>Rhus integrifolia</i> , <i>Hesperoyucca whipplei</i> , <i>Calochortus splendens</i> , <i>Dichelostemma capitatum</i> , <i>Hesperoyucca whipplei</i>	scattered
CW118106-21	POL	63	429655	3742765	218	40% bud, 60%flw	moderate	SE/NW	clay	CH	<i>Rhus integrifolia</i> , <i>Malosma laurina</i> , <i>Malacothamnus fascicularis</i> , <i>Salvia mellifera</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i>	both sides of ridge
CW118106-22	Pt	1	429697	3742923	239	100% flw	moderate	NW	clay	CH	<i>Malacothamnus fascicularis</i> , <i>Heteromeles arbutifolia</i> , <i>Rhus integrifolia</i> , <i>Salvia mellifera</i> , <i>Encelia californica</i> , <i>Bromus rubens</i>	isolate, both sides of trail
CW118112-01	Pt	4	430965	3743167	277.4	100% flw	gentle	SE	clay over exposed sandstone	CSS	<i>Calmac</i> , <i>Arical</i> , <i>Acngla</i> , <i>Brorub</i> , <i>Mallau</i> , <i>Opulit</i>	scattered
CW118112-02	Pt	4	430671	3742868	272.9	75% flw, 25% fr	ridge top, gentle	S	course sand over clay	CSS	<i>Salmel</i> , <i>Malfas</i> , <i>Mirlae</i> , <i>Gutcal</i> , <i>Mallau</i>	scattered
CW118112-03	Pt	3	430532	3742948	263.6	100% flw	moderate	SSW	clay, sandstone exposure	CSS	<i>Erfjas</i> , <i>Gutcal</i> , <i>Acngla</i> , <i>Boibar</i> , <i>Mirlae</i> , <i>Arical</i>	scattered
CW118112-04	Pt	5	429877	3742804	256.3	20% flw, 60% fr, 20% spent	moderate	NW	clay	CSS	<i>Malfas</i> , <i>Salmel</i> , <i>Rhuint</i> , <i>Sitlep</i> , <i>Brorub</i>	scattered
CW118112-05	Pt	8	429916	3742716	272.5	100% flw	gentle to moderate	S	clay	CSS	<i>Rhuint</i>	scattered patches
CW118112-06	Pt	1	429886	3742719	260.9	100% flw	ridge, moderate	W	clay	CSS	<i>Salmel</i> , <i>Arical</i> , <i>Mallau</i> , <i>Malfas</i> , <i>Rhuint</i> , <i>Mirlae</i> , <i>Brorub</i>	single isolated. One plant about 10 m to ENE counted here.
CW118112-07	Pt	4	429919	3742757	273.2	100% flw	gentle	W	clay	CSS	<i>Salmel</i> , <i>Rhuint</i> , <i>Encecal</i> , <i>Brorub</i> , <i>Malfas</i>	

APPENDIX D: RARE PLANT SITE SPECIFIC DATA SANTIAGO OAKS REGIONAL PARK

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPR 1B.1 (continued)

LABEL	Type	Count	UTM E	UTM N	Alt. (m)	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
						UTM E	UTM N	Alt. (m)						
CW11812-08	Pt	1	429951	3742719	279.8		100% flw	gentle	S	clay	sumac CH	<i>Rhuin</i> , <i>Malfas</i> , <i>Hetarb</i> , <i>Deifas</i> , <i>Salmel</i> , <i>Acmgla</i>	single	
CW11812-09	Pol	30	431005	3743162	269.2		10% bud, 80% flw, 10% fr	gentle to moderate	E	sandy clay	CSS	<i>Salmel</i> , <i>Rhuin</i> , <i>Mallau</i> , <i>Calmac</i> , <i>Galang</i> , <i>Brorub</i>	scattered	
CW118120-01	Pt	75	431550	3744375	371		60% flw, 40% fr	steep + ridge top	S + NE	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Salmel</i> , <i>Galang</i> , <i>Erijfas</i> , <i>Hazsqu</i> , <i>Mallau</i> , <i>Malfas</i>	scattered patches	
CW118120-02	Skt	120	431618	3744426	367		60% flw, 40% fr	steep	E	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Cerbet</i> , <i>Salmel</i> , <i>Rhuin</i> , <i>Helgra</i>	scattered to scattered patches	
CW118120-03	Skt	200	431681	3744380	352		70% flw, 30% fr	steep	NE	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Salmel</i> , <i>Sitlep</i> , <i>Galang</i> , <i>Hazsqu</i> , <i>Heswhi</i> , <i>Malfas</i>	scattered to scattered patches	
CW118120-04	Skt	150	431747	3744361	340		70% flw, 30% fr	moderate	NE	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Heswhi</i> , <i>salmel</i> , <i>Hetarb</i> , <i>Avebar</i>	scattered to scattered patches	
CW118120-05	Pt	30	431758	3744299	330		70% flw, 30% fr	steep	SE	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Heswhi</i> , <i>Sitor</i> , <i>Salmel</i> , <i>Mirlae</i> , <i>Chaaart</i>	scattered to scattered patches	
CW118120-06	Skt	75	431796	3744310	320		70% flw, 30% fr	steep	E	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Salmel</i> , <i>Deifas</i> , <i>Sitlep</i> , <i>Brorub</i>	scattered to scattered patches	
CW118120-08	Pt	30	431836	3744293	301		60% fl, 40% fr	steep	E	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Rhuova</i> , <i>Heswhi</i> , <i>Deifas</i> , <i>Salmel</i> , <i>Chaaart</i>	scattered	
CW118120-09	Pt	3	431839	3744317	298		70% flw, 30% fr	moderate	E	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Rhuova</i> , <i>Gutcal</i> , <i>Brogen</i> , <i>Acmgla</i>	isolated	
CW118120-10	Pt	20	431844	3744347	293		60% fl, 40% fr	steep	E	rocky gravelly loam	chamisse CH	<i>Rhaili</i> , <i>Malfas</i> , <i>Salmel</i> , <i>Adeifas</i>	scattered	
CW118120-11	Skt	24	431828	3744386	295		70% flw, 30% fr	steep	E	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Cerbet</i> , <i>Hetarb</i> , <i>Mallau</i> , <i>Malfas</i>	scattered	
CW118120-12	Pt	15	431794	3744225	303		70% flw, 30% fr	steep	SE	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Nolcis</i> , <i>Salmel</i> , <i>Hazsqu</i> , <i>Malfas</i>	isolated	
CW118120-13	Pt	16	431790	3744258	315		70% flw, 30% fr	steep	SE	rocky	chamisse CH	<i>Adeifas</i> , <i>Nolcis</i> , <i>Rhuova</i> , <i>Malfas</i> , <i>Brorub</i> , <i>Calcat</i> , <i>Bloero</i>	isolated	

Lepidium virginicum var. *robinsonii* - Robinson's peppergrass; CRPR 4.3

LABEL	Type	Count	UTM E	UTM N	Alt. (m)	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
						UTM E	UTM N	Alt. (m)						
LVR1812-01	Pt	50	430521	3742945	261.2		100% fr	moderate	SSW	clay over sandstone exposure	CSS	<i>Erijfas</i> , <i>Gutcal</i> , <i>Acmgla</i> , <i>Boibar</i> , <i>Mirlae</i> , <i>Artcal</i>	scattered	
LVR18120-01	Pt	50	431593	3744410	370		100% fr	steep	NE	rocky gravelly loam	chamisse CH	<i>Adeifas</i> , <i>Erijfol</i> , <i>Salmel</i> , <i>Galang</i> , <i>Acmgla</i> , <i>Chaaart</i>	patch	
LVR18120-02	Pt	20	431803	3744315	319		100% fr	steep	E		chamisse CH	<i>Adeifas</i> , <i>Salmel</i> , <i>Calmac</i> , <i>Brorub</i>	isolated	

APPENDIX D: RARE PLANT SITE SPECIFIC DATA SANTIAGO OAKS REGIONAL PARK

Nolina cismontana - chaparral nolina; CRPR 1B.2

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
NC18106-01	Skt	250	430346	3743096	304.1	98% veg, 2% spent	steep	NNE	rocky clay	NS	<i>Adefas, Rhuova, Salmel, Heswhi</i>	
NC18106-02	Skt	18	430084	3742871	293.7	95% veg, 5% fr	moderate	W	loamy clay	CSS	<i>Rhuint, Brorub, Artcal, Mallau</i>	
NC18106-03	Pt	1	430092	3742856	295.4	100% veg.	steep	WNW	loamy	AGL+sumac CH	<i>Rhuint, Brodia, Queagr</i>	single
NC18106-04	Pt	16	430020	3742872	272.9	100% veg	ridge, steep	WNW	clay	AGL+sumac CH	<i>Rhuint, Acomit, Hetarb, Keccor, Heswhi</i>	scattered patches
NC18106-05	Pt	1	429873	3743021	241.1	100% veg	gentle	S	clay	CSS	<i>Malacothamnus fascicularis, Encelia californica, Brassica geniculata, Bromus rubens, Malosma laurina</i>	single
NC18112-01	Pt	1	429916	3742745	271.1	100% veg	steep	S	loamy clay	CSS	<i>Mallau, Rhuint, Mirilae, Eneccal</i>	single
NC18120-01	Pt	5	431794	3744231	304	95% veg, 5% flw	steep	SE	rocky gravelly loam	chamise CH	<i>Adefas, Rhuova, Malfas</i>	isolated
NC18120-02	Pt	2	431790	3744260	315	50% veg, 50% flw	steep	SE	rocky sandy loam	chamise CH	<i>Adefas, Rhuova, Malfas, Brorub</i>	isolated

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Acalypha californica -CALIFORNIA COPPER-LEAF; LC

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
AC18A16-01	Skt	225	431371	3743016	263	steep	SE	sandy loam	sandstone outcrop	<i>Mirabilis laevis</i> , <i>Chaenactis artemisiifolia</i> , <i>Calystegia macrostegia</i> , <i>Phacelia parryi</i> , <i>Eulobus californicus</i> , <i>Acmispon maritimus</i>	WEIR, scattered
AC18A17-01	Skt	300	432158	3743423	292	steep	S	thin sandy clay	rock cliff	<i>Malosma laurina</i> , <i>Nolina cismontana</i> , <i>Cenchrus setacea</i>	WEIR, scattered patches

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Calandrinia breweri -BREWER'S CALANDRINIA; CRPR 4.2

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
CB18J05-01	Pol	200	433262	3744119	420.7	moderate	NE	sand over clay	chamise CH	<i>Calystegia macrostegia</i> , <i>Adenostemma fasciculata</i> , <i>Nolina cismontana</i> , <i>Cercocarpus betuloides</i> , <i>Hesperoyucca whipplei</i> , <i>Calandrinia menziesii</i>	WEIR, scattered. Voucher FMR 8597
CB18J05-02	Pol	74	433059	3744342	347.7	moderate	N	clay	chamise CH	<i>Nolina cismontana</i> , <i>Rhamnus ilicifolia</i> , <i>Eriodictyon crassifolium</i> , <i>Calystegia macrostegia</i> , <i>Chlorogalum parviflorum</i> , <i>Adenostemma fasciculata</i>	WEIR, scattered patches
CB18J05-03	Pol	37	433038	3744417	344.8	Gentle	W	clay, loam	chamise CH	<i>Nolina cismontana</i> , <i>Malosma laurina</i> , <i>Adenostemma fasciculata</i> , <i>Rhus ovata</i> , <i>Hesperoyucca whipplei</i> , <i>Calochortus weedii</i>	WEIR, scattered

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Calochortus catarinae - CATALINA MARIPOSA LILY; CRPR 4.2

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
Cc18A16-01	Pol	61	431756	3743187	278.5	gentle to moderate	SW	loamy clay		<i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Lupinus succulentus</i> , <i>Centaurea melitensis</i> , <i>Festuca perennis</i> , <i>Calystegia macrostegia</i>	WEIR, scattered
CC18A16-02	Pol	44	431635	3743194	263	moderate	NW	clay	AGL	<i>Calochortus splendens</i> , <i>Brassica nigra</i> , <i>Bromus diandrus</i> , <i>Lupinus succulentus</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Medicago polymorpha</i>	WEIR, scattered patches
CC18A16-03	Pol	14	431684	3743231	262	moderate	NW	clay	NGL	<i>Stipa pulchra</i> , <i>Dichelostemma capitatum</i> , <i>Bloomeria crocea</i> , <i>Erodium botrys</i> , <i>Brassica nigra</i> , <i>Bromus diandrus</i> , <i>Cynaria cardunculus</i>	WEIR, scattered patches
CC18A16-04	Pt	32	431841	3743282	279	Gentle	NW	clay	AGL	<i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i>	WEIR, 1 plant 15m downslope.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Cc18A17-01	Pol	126	431871	3743358	299	80% flw, 20% fr	Gentle	NW	clay	AGL NGL	<i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Acmispon glaber</i> , <i>Lupinus bicolor</i> , <i>Emmenanthe pendulifera</i>	WEIR, scattered patches
Cc18A17-02	Pt	2	431947	3743406	315	100% flw	moderate	NW	clay	AGL NGL	<i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Centauarea melitenis</i> , <i>Calystegia macrostegia</i> , <i>Calochortus splendens</i> , <i>Erodium cicutarium</i>	WEIR, isolated
Cc18A17-03	Pt	1	431956	3743454	316	100% flw	Gentle	NW	clay	AGL NGL	<i>Lupinus bicolor</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Calochortus splendens</i> , <i>Phacelia cicutaria</i>	WEIR
Cc18A17-04	Pol	61	431907	3743482	294	80% flw, 20% fr	moderate	NW	clay	AGL NGL	<i>Dichelostemma capitatum</i> , <i>Brassica nigra</i> , <i>Lupinus succulentus</i> , <i>Emmenanthe</i> , <i>Acmispon glaber</i> , <i>Calochortus splendens</i>	WEIR, scattered patches
Cc18A17-05	Pol	80	431857	3743499	283	80% flw, 20% fr	Gentle	NW	clay	AGL NGL	<i>Avebar</i> , <i>Stipa pulchra</i> , <i>Bromus diandrus</i> , <i>Lupinus bicolor</i> , <i>Brassica nigra</i> , <i>Stipa lepida</i> , <i>Dichelostemma capitatum</i>	WEIR, scattered patches
Cc18A17-06	Pt	3	432014	3743464	327	66% bud, 33% flw	Steep	NW	clay	AGL	<i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Bromus diandrus</i> , <i>Avena sp.</i> , <i>Brassica geniculata</i> , <i>Apiastrum angustifolium</i> , <i>Trifolium sp.</i>	WEIR, isolated
Cc18A17-07	Pt	6	432010	3743475	323	100% flw	Steep	NW	clay	AGL	<i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Bromus diandrus</i> , <i>Avena sp.</i> , <i>Brassica geniculata</i> , <i>Apiastrum angustifolium</i> , <i>Trifolium sp.</i>	WEIR, scattered
Cc18A17-08	Pt	21	432023	3743484	323	80% flw, 20% fr	Steep	NEE	clay	AGL	<i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Bromus diandrus</i> , <i>Avena sp.</i> , <i>Brassica geniculata</i> , <i>Apiastrum angustifolium</i> , <i>Trifolium sp.</i>	WEIR, scattered
Cc18A17-09	Pt	35	432036	3743472	328.8	95% flw, 5% fr	Steep	NW	clay	AGL	<i>Dichelostemma capitatum</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Microseris lindleyi</i> , <i>Erodium cicutarium</i> , <i>Deinandra fasciculata</i> , <i>Acmispon maritimus</i>	WEIR, scattered patches
Cc18A17-10	Pt	5	432066	3743477	336.4	80% flw, 20% fr	Steep	NW	clay	AGL	<i>Dichelostemma capitatum</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Microseris lindleyi</i> , <i>Erodium cicutarium</i> , <i>Deinandra fasciculata</i> , <i>Acmispon maritimus</i>	WEIR, 1 plant 15m downslope
Cc18A17-11	Pol	1000	432136	3743526	342.2	80% flw, 20% fr	Gentle	NW	clay	AGL	<i>Avena sp.</i> , <i>Dichelostemma capitatum</i> , <i>Stipa pulchra</i> , <i>Lupinus bicolor</i> , <i>Bloomeria crocea</i> , <i>Brassica geniculata</i> , <i>Microseris lindleyi</i>	WEIR, scattered patches
Cc18A23-01	Pol	9	432323	3743477	321.9	90% flw, 10% fr	Gentle	NE	clay, loam	CH	<i>Calystegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Acourtia microcephala</i> , <i>Bromus rubens</i> , <i>Stipa pulchra</i> , <i>Avena sp.</i>	WEIR

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	GPS Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Cc18A23-02	Pol	247	432294	3743502	332.2	90% flw, 10% fr	Steep	NE	clay, loam	AFS, CH	<i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Dichelostemma capitatum</i> , <i>Acmispon strigosus</i> , <i>Bloomeria crocea</i> , <i>Acmispon glaber</i>	WEIR, scattered patches
Cc18A23-03	Pt	20	432577	3743666	345.3	90% flw, 10% fr	moderate	N	clay	AGL, NGL	<i>Avena sp.</i> , <i>Dichelostemma capitatum</i> , <i>Bloomeria crocea</i> , <i>Bromus diandrus</i> , <i>Eromos</i> , <i>Stipa lepida</i>	WEIR, scattered patches
Cc18A23-04	Pol	87	432616	3743623	337.5	90% flw, 10% fr	moderate	NNE	clay	AGL, NGL	<i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Calystegia macrostegia</i> , <i>Brassica geniculata</i> , <i>Bromus diandrus</i> , <i>Deinandra fasciculata</i>	WEIR, possibly better as a polygon.
Cc18A23-05	Pol	175	432688	3743594	357.6	90% flw, 10% fr	Gentle	NNW	clay	AGL, CH	<i>Calochortus splendens</i> , <i>Dichelostemma capitatum</i> , <i>Esscholzia californica</i> , <i>Acmispon glaber</i> , <i>Calystegia macrostegia</i> , <i>Artemisia californica</i> , <i>Lupinus hirsutissimus</i> , <i>Malosma laurina</i>	WEIR, scattered patches
Cc18A23-06	Pt	16	432749	3743583	361.2	75% flw, 25% fr	moderate	NE	clay	AGL, NGL	<i>Festuca perennis</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Brassica nigra</i> , <i>Galium angustifolium</i> , <i>Avena sp.</i>	WEIR, scattered patches. Some plants out to 30 meters to the east.
Cc18A23-07	Pt	30	432779	3743538	371.1	90% flw, 10% fr	Steep	N	clay	AGL, NGL	<i>Festuca perennis</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Brassica nigra</i> , <i>Galium angustifolium</i> , <i>Avena sp.</i>	WEIR, plants included from 30m up the ridge.
Cc18A23-08	Pt	81	432851	3743464	394.6	90% flw, 10% fr	Steep	N	clay	AGL, CH	<i>Avena sp.</i> , <i>Deinandra fasciculata</i> , <i>Brassica nigra</i> , <i>Festuca perennis</i> , <i>Erodium cicutarium</i>	WEIR, includes 2 plants from 30m up slope. Better as a polygon?
Cc18A23-09	Pol	350	433021	3743324	454	80% flw, 20% fr	Steep	N	clay	NGL, CH	<i>Lolper</i> , <i>Erodium cicutarium</i> , <i>Malocoilhammus fascicularis</i> , <i>Bromus rubens</i> , <i>Nolina cismontana</i> , <i>Stipa pulchra</i>	WEIR
Cc18A23-10	Pt	1	432935	3743231	418	90% flw, 10% fr	Steep	NNW	clay	AGL, NGL	<i>Lupinus hirsutissimus</i> , <i>Acmispon maritimus</i> , <i>Dichelostemma capitatum</i> , <i>Chaenactis artemisifolia</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i>	WEIR, single
Cc18A23-11	Pt	14	432853	3743213	404	90% flw, 10% fr	Steep	NNW	clay	AGL, NGL	<i>Lupinus hirsutissimus</i> , <i>Acmispon maritimus</i> , <i>Dichelostemma capitatum</i> , <i>Chaenactis artemisifolia</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i>	WEIR
Cc18A23-12	Pt	15	432775	3743229	384	100% flw	Steep	NNW	clay	AGL, NGL	<i>Phacelia cicutaria</i> , <i>Lupinus truncatus</i> , <i>Elymus condensatus</i> , <i>Deinandra fasciculata</i> , <i>Emmenanthe pendulifera</i> , <i>Dichelostemma capitatum</i> , <i>Eucrypta chrysanthemifolia</i>	WEIR

APPENDIX C: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Cc18A23-13	Pt	70	432577	3743303	332	90% flw, 10% fr	Steep	NNW	clay	AGL, NGL	<i>Phacelia cicutaria</i> , <i>Lupinus truncatus</i> , <i>Elymus condensatus</i> , <i>Deinandra fasciculata</i> , <i>Emmenanthe pendulifera</i> , <i>Dichelostemma capitatum</i> , <i>Eucrypta chrysanthemifolia</i>	WEIR, possibly better as a polygon.
Cc18A23-14	Skt	200	432529	3743367		40% flw, 60% fr	moderate	N	sandy loam	CH	<i>Quercus berberidifolia</i> , <i>Cercocarpus betuloides</i> , <i>Adenostemma fasciculata</i> , <i>Stipa lepida</i> , <i>Dichelostemma capitatum</i> , <i>Bloomeria crocea</i>	WEIR, patch
Cc18A24-01	Pt	1	432408	3742709	332.5	100% flw	moderate	N	rocky clay	CH, OW	<i>Bloomeria crocea</i> , <i>Dichelostemma capitatum</i> , <i>Phacelia cicutaria</i> , <i>Calystegia macrostegia</i> , <i>Melica imperfecta</i> , <i>Lupinus hirsutissimus</i> , <i>Quercus agrifolia</i>	WEIR
Cc18A24-02	Pt	7	432421	3742704	329.1	75% flw, 25% fr	moderate	NNE	rocky clay	OW	<i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i> , <i>Eucrypta chrysanthemifolia</i> , <i>Amispon glaber</i> , <i>Quercus agrifolia</i> , <i>Caulanthus heterophyllus</i>	WEIR, scattered
Cc18A24-03	Pt	14	432372	3742353	391.8	100% flw	Gentle	S	rocky clay	CSS	<i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Amispon glaber</i> , <i>Calochortus splendens</i> , <i>Erodium cicutarium</i>	WEIR
Cc18A24-04	Pt	100	432359	3742452	371.6	75% flw, 25% fr	Gentle	N	clay	AGL NGL	<i>Avena fatua</i> , <i>Erodium botrys</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i> , <i>Brassica nigra</i> , <i>Bloomeria crocea</i>	WEIR
Cc18A24-05	Pol	250	431884	3742695	272.9	75% flw, 25% fr	Gentle	N	clay	AGL NGL	<i>Erodium botrys</i> , <i>Stipa pulchra</i> , <i>Bloomeria crocea</i> , <i>Calochortus splendens</i> , <i>Avena barbata</i> , <i>Heteromeles arbutifolia</i>	WEIR; apparently impacted by fuel mod and exposed clay nearly solid Erodium.
Cc18A24-06	Pt	4	431860	3742625	289.9	50% flw, 50% fr	Gentle	N	clay	NGL	<i>Stipa pulchra</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Erodium botrys</i> , <i>Avena fatua</i> , <i>Festuca perennis</i>	WEIR; apparently impacted by fuel mod and exposed clay nearly solid Erodium.
Cc18A24-07	Pol	250	431838	3742589	295.1	75% flw, 25% fr	moderate	N	clay	NGL	<i>Stipa pulchra</i> , <i>Avena fatua</i> , <i>Bloomeria crocea</i> , <i>Brassica nigra</i> , <i>Erodium botrys</i> , <i>Calochortus splendens</i>	WEIR, scattered patches
Cc18A24-08	Pt	5	431818	3742550	306	100% flw	Gentle	N	clay	OW	<i>Quercus agrifolia</i> , <i>Dichelostemma capitatum</i> , <i>Bromus diandrus</i> , <i>Avena fatua</i> , <i>Festuca perennis</i> , <i>Calochortus splendens</i> , <i>Brassica nigra</i>	WEIR
Cc18A24-09	Pt	19	431702	3742411	336	80% flw, 20% fr	Gentle	N	clay	NGL	<i>Bloomeria crocea</i> , <i>Stipa pulchra</i> , <i>Festuca perennis</i> , <i>Erodium botrys</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Bromus diandrus</i>	WEIR, scattered patches

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTM		GPS Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN								
Cc18A24-10	Pt	1	431747	3742389	337	100% flw	Ridge Top	flat	clay	CSS AGL	<i>Dichelostemma capitatum</i> , <i>Acmispon glaber</i> , <i>Rhus integrifolia</i> , <i>Lupinus succulentus</i> , <i>Bromus rubens</i> , <i>Festuca perennis</i> , <i>Acmispon strigosus</i>	WEIR, single
Cc18A24-11	Pt	3	431947	3742400	337.3	100% flw	Ridge Top	flat	clay	CSS AGL	<i>Erodium cicutarium</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i> , <i>Astragalus didymocarpus</i> , <i>Dichelostemma capitatum</i> , <i>Guisar</i> , <i>Acmispon strigosus</i>	WEIR
Cc18A24-12	Pol	72	431991	3742425	337.6	80% flw, 20% fr	moderate	NW	clay	CH	<i>Rhus integrifolia</i> , <i>Dichelostemma capitatum</i> , <i>Calochortus splendens</i> , <i>Stipa pulchra</i> , <i>Calystegia macrostegia</i> , <i>Lupinus succulentus</i>	WEIR
Cc18A24-13	Pt	21	431968	3742531	313.5	80% flw, 20% fr	steep	N	clay	NGL	<i>Melicope imperfecta</i> , <i>Calochortus splendens</i> , <i>Brassica geniculata</i> , <i>Erodium cicutarium</i> , <i>Lupinus succulentus</i> , <i>Bromus rubens</i>	WEIR, scattered patches
Cc18A24-14	SkIP	120	432227	3742713		20% flw, 80% frw	steep	N	clayey loam	CSS	<i>Calystegia macrostegia</i> , <i>Bloomeria crocea</i> , <i>Stipa leptida</i> , <i>Dichelostemma capitatum</i> , <i>Salvia apiana</i> , <i>Calochortus splendens</i>	WEIR, scattered
Cc18A24-15	Pt	1	432305	3742784	328	100% flw	steep	E	clayey loam	CSS	<i>Rhus integrifolia</i> , <i>Acauria microcephala</i> , <i>Bloomeria crocea</i> , <i>Calystegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Acmispon glaber</i>	WEIR, single
Cc18A24-16	Pol	60	432235	3742904	320	30% flw, 70% frw	moderate	N	clayey loam	CSS	<i>Rhus integrifolia</i> , <i>Erodium botrys</i> , <i>Bloomeria crocea</i> , <i>Eucrypta chrysanthemifoliata</i> , <i>Calystegia macrostegia</i> , <i>Festuca perennis</i> , <i>Bromus rubens</i>	WEIR, scattered
Cc18A24-17	Pt	1	432186	3742906	301	100% flw	moderate	W	clayey loam	CSS	<i>Salvia apiana</i> , <i>Bromus diandrus</i> , <i>Bloomeria crocea</i> , <i>Calochortus splendens</i>	WEIR, single
Cc18A24-18	Pt	3	432145	3742938	285	20% flw, 80% flow		W	clayey loam	CSS	<i>Bloomeria crocea</i> , <i>Erodium botrys</i> , <i>Festuca perennis</i> , <i>Bromus diandrus</i> , <i>Calochortus splendens</i> , <i>Aemgra</i>	WEIR, isolated
Cc18A24-19	Pt	15	432101	3742965	275	80% flw, 20% fr	moderate	W	clayey loam	CSS	<i>Avena fatua</i> , <i>Bloomeria crocea</i> , <i>Brassica nigra</i> , <i>Festuca perennis</i> , <i>Dichelostemma capitatum</i>	WEIR
Cc18A24-20	Pol	350	431897	3742841		70% flw, 30% fr	moderate	N	clayey loam	CSS	<i>Quercus agrifolia</i> , <i>Bloomeria crocea</i> , <i>Brassica nigra</i> , <i>Artemisia californica</i> , <i>Hazardia squarrosa</i> , <i>Castilleja affinis</i>	WEIR, patch
Cc18A24-21	Pt	10	431908	3742758	273	5% bud, 95% flw	moderate	W	clayey loam	CSS	<i>Salvia apiana</i> , <i>Bloomeria crocea</i> , <i>Malacothammus fascicularis</i> , <i>Hazardia squarrosa</i> , <i>Malosma laurina</i> , <i>Dichelostemma capitatum</i>	WEIR, isolated

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Habitat	Associated Species	Notes		
			UTM E	UTM N								
			Alt. (m)	Phenology								
Cc18A24-22	Pt	4	432144	3742948	286	15% flw, 85% fr	moderate	N	clayey loam	CSS	<i>Malosma laurina</i> , <i>Bloomeria crocea</i> , <i>Erodium botrys</i> , <i>Stipa lepida</i> , <i>Bromus diandrus</i>	WEIR, isolated
Cc18A24-23	Pt	2	432102	3742891	288	15% flw, 85% fr	moderate	N	clayey loam	CSS	<i>Sanbip</i> , <i>Bloomeria crocea</i> , <i>Hazardia squarrosa</i> , <i>Bromus diandrus</i> , <i>Deinandra fasciculata</i>	WEIR, single
Cc18A24-24	Skt	20	431965	3742658			gentle	N			<i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Acmispon glaber</i> , <i>Dichelostemma capitatum</i> , <i>Centaurea melitensis</i>	WEIR. Count reconstructed, very rough.
Cc18M03-01	Pt	1	432431	3742012	361	100% fr	moderate	ESE	rocky clay	CSS	<i>Calochortus splendens</i> , <i>Phacelia cicutaria</i> , <i>Bloomeria crocea</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Melica imperfecta</i> , <i>Bromus rubens</i>	BLND, single
Cc18M03-02	Pol	198	432324	3742106	383	90% flw, 10% fr	moderate	NNE	rocky clay	CH	<i>Toxicodendron diversilobum</i> , <i>Phacelia cicutaria</i> , <i>Bloomeria crocea</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i> , <i>Melica imperfecta</i> , <i>Bromus rubens</i>	BLND/BSAD, scattered patches
Cc18M03-03	Pt	1	432332	3742266	382	100% flw	Steep	SE	rocky clay	CH	<i>Calystegia macrostegia</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i> , <i>Chaenactis glabriuscula</i> , <i>Mirabilis laevis</i>	BLND, single
Cc18M04-01	Pol	178	431310	3741637	270	95% flw, 5% fr	moderate	NE	rocky clay	CSS	<i>Avena barbata</i> , <i>Bromus rubens</i> , <i>Bloomeria crocea</i> , <i>Calochortus splendens</i> , <i>Opuntia littoralis</i> , <i>Erodium cicutarium</i>	BSAD, scattered patches
Cc18M07-01	Pt	2	431057	3740965	255.8	50% flw, 50% fr	gentle	W	clay loam		<i>Brassica nigra</i> , <i>Erodium cicutarium</i> , <i>Malacothammus fascicularis</i> , <i>Bloomeria crocea</i> , <i>Malosma laurina</i>	BSAD, isolated
Cc18M07-02	Pt	13	431461	3741124	333.7	50% flw, 50% fr	gentle	NW	clay	CSS	<i>Bloomeria crocea</i> , <i>Dichelostemma capitatum</i> , <i>Erodium cicutarium</i> , <i>Avena barbata</i> , <i>Malacothammus fascicularis</i>	BSAD, scattered
Cc18M07-03	Pol	17	431506	3741077	350.2	60% flw, 40% fr	gentle	N	loamy clay	AGL, CSS	<i>Erodium cicutarium</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Sahvia apiana</i> , <i>Heteromeles arbutifolia</i> , <i>Dichelostemma capitatum</i>	BSAD, scattered
Cc18M07-04	Pol	116	431742	3741191	336.8	80% flw, 20% fr	gentle	N	loamy clay	AGL, CSS	<i>Calochortus splendens</i> , <i>Bromus rubens</i> , <i>Malacothammus fascicularis</i> , <i>Erodium cicutarium</i> , <i>Malosma laurina</i> , <i>Centaurea melitensis</i>	BSAD, scattered
Cc18M08-01	Pt	3	431949	3741613	318.7	35% flw, 65% fr	moderate	NW	rocky clay	CSS	<i>Calochortus splendens</i> , <i>Stipa lepida</i> , <i>Hesperoyucca whipplei</i> , <i>Calystegia macrostegia</i> , <i>Brassica nigra</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i>	BSAD, scattered

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTM E	UTM N	Alt. (m)						
Cc18M08-02	Pt	13	431954	3741638	322.3	Steep	NW	rocky clay	CSS	<i>Hazardia squarrosa</i> , <i>Calystegia macrostegia</i> , <i>Bloomeria crocea</i> , <i>Bromus madriensis</i> , <i>Calochortus splendens</i> , <i>Malosma laurina</i> , <i>Eriophyllum confertiflorum</i>	BSAD, scattered
Cc18M08-03	Skt	67	432030	3741615	349	moderate	NW	rocky clay	CSS	<i>Calystegia macrostegia</i> , <i>Calochortus splendens</i> , <i>Acmispon glaber</i> , <i>Bromus rubens</i> , <i>Centaurea melitensis</i> , <i>Brassica geniculata</i>	BSAD, scattered
Cc18M08-04	Pol	225	432186	3741816	350.5	Gentle to moderate	NW	clay	AGL, CSS	<i>Avena fatua</i> , <i>Bloomeria crocea</i> , <i>Erodium botrys</i> , <i>Festuca perennis</i> , <i>Isocoma menziesii</i> , <i>Brassica geniculata</i> , <i>Erodium cicutarium</i>	BSAD, scattered
Cc18M08-05	Pol	32	432254	3741972	364	moderate	NNW	clay	AGL, NGL	<i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Stipa lepida</i> , <i>Dichelostemma capitatum</i> , <i>Acmispon glaber</i> , <i>Erodium cicutarium</i> , <i>Malocothammus fascicularis</i>	BSAD, scattered
Cc18M15-01	Pt	1	432621	3742896	302.2	gentle	NNW	clay loam	AGL, NGL	<i>Avena fatua</i> , <i>Bloomeria crocea</i> , <i>Festuca perennis</i> , <i>Erodium cicutarium</i> , <i>Calochortus splendens</i>	WEIR, single
Cc18M15-02	Pt	4	432642	3742889	303.9	gentle	N	clay loam	AGL, NGL, CH	<i>Bloomeria crocea</i> , <i>Festuca perennis</i> , <i>Delphinium parryi</i> , <i>Phacelia cicutaria</i> , <i>Lonsb.</i> , <i>Quercus berberidifolia</i> , <i>Heteromeles arbutifolia</i>	WEIR, scattered
Cc18M15-03	Pt	2	432986	3743026	421	Steep	NNW	rocky clay	NGL, CSS	<i>Dichelostemma capitatum</i> , <i>Calochortus splendens</i> , <i>Phacelia cicutaria</i> , <i>Acmispon strigosus</i> , <i>Lupinus truncatus</i> , <i>Stipa pulchra</i> , <i>Hesperoyucca whipplei</i>	WEIR, isolated
Cc18M15-04	Pt	20	432665	3742694	315	moderate	NE	rocky clay	NGL, CSS	<i>Bloomeria crocea</i> , <i>Calystegia macrostegia</i> , <i>Hazardia squarrosa</i> , <i>Erodium cicutarium</i> , <i>Rhamnus ilicifolia</i> , <i>Rhus integrifolia</i> , <i>Malosma laurina</i>	WEIR, scattered
Cc18M18-01	Pt	1	433202	3742094	347.2	moderate	N	clay	NGL	<i>Stipa lepida</i> , <i>Bloomeria crocea</i> , <i>Salvia mellifera</i> , <i>Calystegia macrostegia</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i>	BLND, scattered patches
Cc18M22-01	Pol	36	432923	3742774	396.3	steep	WNW	clay		<i>Acmispon glaber</i> , <i>Bloomeria crocea</i> , <i>Calystegia macrostegia</i> , <i>Stipa lepida</i> , <i>Heteromeles arbutifolia</i> , <i>Rhus integrifolia</i> , <i>Malocothammus fascicularis</i> , <i>Elymus condensatus</i> , <i>Keckelia antirrhinoides</i>	WEIR, scattered
Cc18M22-02	Pol	106	433067	3742741	457.7	near ridge top, gentle & moderate	WNW	rocky clay	CSS	<i>Avena fatua</i> , <i>Bromus rubens</i> , <i>Calystegia macrostegia</i> , <i>Festuca perennis</i> , <i>Salvia apiana</i> , <i>Bloomeria crocea</i>	WEIR, scattered, about 750m sq.
Cc18M22-03	Pol	100	433168	3742840	466.8	moderate	NE	clay	CSS	<i>Calystegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Centaurea melitensis</i> , <i>Salvia apiana</i> , <i>Lupinus succulentus</i> , <i>Acmispon glaber</i> , <i>Bromus rubens</i>	BLND, scattered, about 440m sq.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
					Phenology						
Ce18M22-04	Skt	346	433376	3742393	406.1	Flat	fat	clay	AGL Southern Cactus Scrub	<i>Avena fatua</i> , <i>Bromus rubens</i> , <i>Leppuc</i> , <i>Dichelostemma capitatum</i> , <i>Deinandra fasciculata</i> , <i>Calystegia macrostegia</i> , <i>Erodium cicutarium</i>	BLND, originally 59 plants noted by SJL on May 22; FMR recounted site on Jun 29, used WP to create sketch and made count used here.
Ce18M22-05	Pt	1	433425	3742583	463.6	Flat	flat	rocky clay	Burnt rocky	<i>Calochortus splendens</i> , <i>Calochortus weedii</i> , <i>Avena barbata</i> , <i>Stipa sp.</i> , <i>Dichelostemma capitatum</i> , <i>Centaurea melitensis</i>	BLND
Ce18M22-06	Pt	20	433226	3742782	451.4	Gentle	NE	clay	AGL, NGL	<i>Avena fatua</i> , <i>Stipa pulchra</i> , <i>Brassica geniculata</i> , <i>Bloomeria crocea</i> , <i>Festuca perennis</i> , <i>Calochortus splendens</i> , <i>Acmispon glaber</i>, <i>Triacena tetanaria</i>	BLND, scattered
Ce18M22-07	Pt	4	433252	3742826	442.3	Gentle	NE	clay	AGL	<i>Bloomeria crocea</i> , <i>Dichelostemma capitatum</i> , <i>Erodium cicutarium</i> , <i>Calystegia macrostegia</i> , <i>Lysimachia</i>	BLND, isolated
Ce18M22-08	SktP	2500	433321	3742755	433.6	moderate	Varies	clay	AGL, NGL, CSS	<i>Bloomeria crocea</i> , <i>Calochortus splendens</i> , <i>Salvia apiana</i> , <i>Calystegia macrostegia</i> , <i>Avena fatua</i> , <i>Dichelostemma capitatum</i>	BLND, scattered. Original polygon modified based on Jun 29 visit
Ce18M30-01	Pt	5	433367	3743679	428.8	moderate	NNE	gravelly clay	CSS	<i>Salvia apiana</i> , <i>Salvia mellifera</i> , <i>Artemisia californica</i> , <i>Avena barbata</i> , <i>Festuca perennis</i> , <i>Bloomeria crocea</i> , <i>Galium</i>	WEIR, scattered. Along old Overview Trail
Ce18M30-02	Pt	4	433450	3743132	403.8	ridge, gentle	SE	clay	chamise CH	<i>anastatifolium</i> <i>Bloomeria crocea</i> , <i>Hesperoyucca whipplei</i> , <i>Adenostemma fasciculata</i> , <i>Calochortus splendens</i> , <i>Eriogonum fasciculatum</i> , <i>Opuntia x occidentalis</i>	BLND, scattered
Ce18M30-03	Pt	5	433450	3743098	397.7	ridge top, gentle	SE	loamy clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Stipa lepida</i> , <i>Bloomeria crocea</i> , <i>Calochortus weedii</i>	BLND, scattered
Ce18M30-04	Pt	9	433440	3743058	394.7	moderately steep	E	loamy clay	chamise CH	<i>Cercocarpus betuloides</i> , <i>Keckelia antirrhinoides</i> , <i>Adenostemma fasciculata</i> , <i>Bloomeria crocea</i> , <i>Dichelostemma capitatum</i>	BLND, scattered
Ce18M30-05	Pol	682	433280	3742947	444.7	gentle	NE + E	loamy clay	chamise CH	<i>Avena fatua</i> , <i>Bloomeria crocea</i> , <i>Festuca perennis</i> , <i>Acmispon glaber</i> , <i>Adenostemma fasciculata</i>	BLND, scattered, about 16,200 meters sq.
Ce18M30-06	Skt	14	433333	3743540	454	Gentle	N	clay	Road Cut	<i>Avena barbata</i> , <i>Bromus diandrus</i> , <i>Stipa pulchra</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i>	WEIR, isolated
Ce18M30-07	Pt	4	433374	3743378	432.6	Gentle	E/SE	red clay	CH	<i>Cercocarpus betuloides</i> , <i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Salvia mellifera</i> , <i>Quercus berberidifolia</i> , <i>Brassica geniculata</i>	BLND, isolated

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus cattaianae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Cc18M30-08	Pt	28	433252	3743184	422.3		moderate	NNE	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Calochortus splendens</i> , <i>Erodium cicutarium</i> , <i>Bloomeria crocea</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i>	BLND, isolated
Cc18M30-09	Pol	178	433138	3743128	460.2		moderate	E	clay	AGL	<i>Festuca perennis</i> , <i>Calystegia macrostegia</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Avena fatua</i>	BLND
Cc18M30-10	Skt	100	433189	3743130	446.2		moderate	ENE	clay	AGL	<i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Calystegia macrostegia</i> , <i>Festuca perennis</i> , <i>Avena fatua</i> , <i>Erodium cicutarium</i>	BLND
Cc18M30-11	Pol	500	433389	3743103	409.8		moderate	NE	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Avena fatua</i> , <i>Bloomeria crocea</i> , <i>Calochortus splendens</i> , <i>Calochortus weedi</i> , <i>Bromus rubens</i>	BLND, scattered patches. Count rough
Cc18M30-12	Pol	95	433123	3742955	471.8		moderate	NE	clay	AGL CH	<i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Lupinus succulentus</i> , <i>Cercocarpus betuloides</i> , <i>Acmispon glaber</i> , <i>Acmispon strigosus</i>	BLND, scattered patches
Cc18M30-13	Pt	25	433121	3743297	462.7		Ridge Top	NE	red clay	chamise CH	<i>Nolina cismontana</i> , <i>Adenostemma fasciculata</i> , <i>Opuntia littoralis</i> , <i>Hesperoyucca whipplei</i> , <i>Dichelostemma capitatum</i>	BLND, isolated
Cc18M30-14	Pt	17	433237	3743424	470.1		Ridge Top	NE	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Calochortus splendens</i> , <i>Deinandra fasciculata</i> , <i>Bromus diandrus</i>	BLND, isolated
Cc18J01-01	Pol	154	432964	3743874	364.2		gentle	NNW	loamy clay	AGL, NGL	<i>Avena fatua</i> , <i>Bromus diandrus</i> , <i>Darwi</i> , <i>Luplon</i> , <i>Isocoma menziesii</i> , <i>Calystegia macrostegia</i> , <i>Galium angustifolium</i>	WEIR, scattered. Split by Upper Weir Canyon Road, about 1,700m sq.
Cc18J01-02	Pt	4	432984	3743788	385.1		ridge, gentle	W	loamy clay	AGL, CSS	<i>Avena barbata</i> , <i>Rhus integrifolia</i> , <i>Bromus rubens</i> , <i>Hesperoyucca whipplei</i> , <i>Nolina cismontana</i>	WEIR, scattered
Cc18J01-03	Pt	3	432961	3743803	376		ridge, gentle	W	loamy clay	AGL, CH	<i>Rhus integrifolia</i> , <i>Avena barbata</i> , <i>Centaurea melitensis</i> , <i>Deinandra fascicularis</i> , <i>Artemisia californica</i>	WEIR, isolated
Cc18J01-04	Pol	130	433064	3743709	406		ridge, gentle to moderate	NW	loamy clay	AGL, CSS, OW	<i>Avena barbata</i> , <i>Bromus diandrus</i> , <i>Rhus integrifolia</i> , <i>Salvia apiana</i> , <i>Calochortus weedi</i>	WEIR, scattered
Cc18J01-05	Pt	2	432995	3743773	392.3		ridge, gentle	W	clay	AGL, CSS	<i>Hesperoyucca whipplei</i> , <i>Bromus rubens</i> , <i>Rhus integrifolia</i> , <i>Deinandra fasciculata</i> , <i>Centaurea melitensis</i>	WEIR, isolated
Cc18J01-06	Pt	88	433076	3743778	382		moderate	NE	clay	NGL	<i>Avena barbata</i> , <i>Bloomeria crocea</i> , <i>Artemisia californica</i> , <i>Toxicodendron diversilobum</i> , <i>Grindelia camporum</i>	WEIR, scattered. Probably a polygon, extends 25m up slope
Cc18J05-01	Pol	18	430775	3742092	225.1		gentle to moderate	W	loamy clay	AGL	<i>Calystegia macrostegia</i> , <i>Avena barbata</i> , <i>Deinandra fasciculata</i> , <i>Artemisia californica</i> , <i>Bromus rubens</i>	WEIR, scattered

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus catalinae - CATALINA MARIPOSA LILY; CRPR 4.2 (continued)

LABEL	Type	Count	UTME	UTMN	GPS		Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
					Alt. (m)								
Cc18J05-02	Pt	15	432655	3744245	303.5		100% fr	moderate	S	clay	CH	<i>Malosma laurina, Malacothamnus fascicularis, Calochortus weedii, Stipa lepida, Mirabilis laevis, Dichelostemma Bromus diandrus, Bromus rubens, Avena sp., Deinandra fasciculata, Calochortus splendens, Dichelostemma capitatum</i>	WEIR
Cc18J19-01	Pt	1	435203	3743183	536		100% fr	Ridge Top	flat	rocky	NGL	<i>Malosma laurina, Malacothamnus fascicularis, Calochortus weedii, Stipa lepida, Mirabilis laevis, Dichelostemma Bromus diandrus, Bromus rubens, Avena sp., Deinandra fasciculata, Calochortus splendens, Dichelostemma capitatum</i>	GYPS, single
Cc18J20-01	Pt	1	431722	3740774	341		100% fr	Ridge Top	S	rocky	CSS	<i>Calochortus weedii, Dichelostemma capitatum, Rhus integrifolia, Encelia californica, Opuntia littoralis</i>	BLND, single
Cc18J20-02	Pt	1	431668	3740194	262		100% fr	Ridge Top	S	clay	AGL, NGL	<i>Artemisia californica, Stipa lepida, Deinandra fasciculata, Malacothamnus fascicularis, Mirabilis laevis, Salvia Centaurea melitensis, Deinandra fasciculata, Bromus rubens, Acnison glaber</i>	BLND, single
Cc18J29-01	Pt	10	433088	3743166	472.1		100% fr	gentle	NE	loamy clay	AGL	<i>Malosma laurina, Malacothamnus fascicularis, Calochortus weedii, Stipa lepida, Mirabilis laevis, Dichelostemma Bromus diandrus, Bromus rubens, Avena sp., Deinandra fasciculata, Calochortus splendens, Dichelostemma capitatum</i>	BLND, scattered
Cc18J29-02	Pt	5	433089	3743255			100% fr	ridge top	E				BLND
Cc18J29-03	Pt	11	433116	3743161			100% fr	ridge line	E				BLND, scattered
Cc18J29-04	Pt	4	433093	3743144			100% fr		E				BLND
Cc18J29-05	Pt	22	433142	3743166			100% fr		E				BLND
Cc18J29-06	Pt	6	433157	3743169			100% fr	ridge line	E		chamise CH		BLND
Cc18J29-07	Pt	6	433221	3743159			100% fr		E		chamise CH		BLND
Cc18J29-08	Pt	1	433146	3742883			100% fr		E		chamise CH		BLND
Cc18J29-09	Pt	5	433482	3742613			100% fr	moderate to steep	N	clay	CSS, OW	<i>Quercus agrifolia, Salvia apiana, Acnison glaber, Calystegia macrostegia, Helianthus gracilentus</i>	BLND, isolated
Cc18J29-10	Pt	5	433526	3742672			100% fr	moderate	NE				BLND
CC18L12-01	Pol	440	433110	3743859	366.6		100% fr	gentle	NNW	loamy clay	AGL, scat. CSS	<i>Bromus diandrus, Malacothamnus fascicularis, Calystegia macrostegia, Rhus integrifolia, Avena barbata</i>	WEIR, about 3890m sq.
CC18L12-02	Pol	97	433158	3743776	384.1		100% fr	gentle to steep	N	loamy clay	AGL	<i>Bromus diandrus, Malacothamnus fascicularis, Rhus integrifolia, Avena barbata</i>	WEIR

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APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPR1B.2

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Habitat	Associated Species	Notes	
			UTME	UTMN							Alt. (m)
Cwi18M15-01	Pt	12	432703	3742866	320.5	ridge, steep	S	sandy loam	CSS	<i>Mirabilis laevis</i> , <i>Calystegia macrostegia</i> , <i>Acourtia microcephala</i> , <i>Lupinus hirsutissimus</i> , <i>Malosma laurina</i> , <i>Phacelia cicutaria</i>	WEIR, scattered
Cwi18M30-01	Pt	2	433396	3743190	416	ridge, gentle	ESE	clay	chamise CH	<i>Quercus berberidifolia</i> , <i>Rhus ovata</i> , <i>Rhamnus ilicifolia</i> , <i>Bloomeria crocea</i> , <i>Adenostemma fasciculata</i>	BLND, Only a few confirmed individuals but many plants in leaf, most likely thousands of plants. Not re-examined later in season, check in 2019.
Cwi18M30-02	Skt	25000	433395	3743004	409	gentle to moderate	E	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Nolina cismontana</i> , <i>Acmispion glaber</i> , <i>Heteromeles arbutifolia</i> , <i>Calochortus splendens</i> , <i>Lomatium lucidum</i>	BLND, only 3 plants in bloom May 30th. June 29th density estimates: 10% none, 25% low, 50% medium, 15% high. Polygon about 75,300 sq. meters
Cwi18J01-01	Pol	320	433037	3743741	402.6	gentle to moderate	N	clay	along sandstone ridge	<i>Calochortus catalinae</i> , <i>Avena barbata</i> , <i>Stipa lepida</i> , <i>Salvia apiana</i> , <i>Rhus integrifolia</i> , <i>Carexhogyne filaginifolia</i> , <i>Nolina cismontana</i> , <i>Heteromeles</i>	WEIR, scattered, about 1,400m sq.
Cwi18J05-01	Pt	1	432701	3744217	297.5	moderate	S	rocky, light-colored clay	CH, NS	<i>Opuntia arbutifolia</i> , <i>Malosma laurina</i> , <i>Opuntia littoralis</i>	WEIR, single
Cwi18J05-02	Pt	3	432878	3744278	297.5	steep	S	sand over clay	chamise CH, sandstone outcrops abundant	<i>Nolina cismontana</i> , <i>Malosma laurina</i> , <i>Rhus ovata</i> , <i>Ceanothus sp.</i> , <i>Adenostemma fasciculata</i> , <i>Chlorogalum parviflorum</i>	WEIR
Cwi18J05-03	Skt	260	430731	3742041	216.5	ridge, gentle to moderate	SW + W	clay & rocky clay	AGL, OW	<i>Quercus agrifolia</i> , <i>Bromus diandrus</i> , <i>Isocoma menziesii</i> , <i>Hesperoyucca whipplei</i> , <i>Calochortus splendens</i>	WEIR, scattered to scattered patches
Cwi18J05-04	Skt	20000	433017	3744193		gentle to moderate	NE	sand over clay & clay	chamise CH, much sandstone outcrops and exposures	<i>Nolina cismontana</i> , <i>Malosma laurina</i> , <i>Adenostemma fasciculata</i> , <i>Rhus ovata</i> , <i>Ceanothus sp.</i> , <i>Chlorogalum pomeridianum</i>	BLND, polygon about 63,100 sq. meters. Count based on average densities.
Cwi18J05-05	Pol	67	432648	3744224	291.4	moderate	S	clay	CH	<i>Malosma laurina</i> , <i>Malocothamnus fascicularis</i> , <i>Calochortus catalinae</i> , <i>Stipa lepida</i> , <i>Mirabilis laevis</i> , <i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i>	WEIR, scattered, about 450 sq. m
Cwi18J05-06	Pt	23	432836	3744338	324.9	moderate	NNW	clay loam	CH	<i>Nolina cismontana</i> , <i>Quercus berberidifolia</i> , <i>Acmispion glaber</i> , <i>Ceanothus sp.</i> , <i>Bloomeria crocea</i> , <i>Chlorogalum parviflorum</i>	WEIR, scattered
Cwi18J05-07	Pol	75	432818	3744397	321.1	moderate	SW	clay	chamise CH	<i>Hesperoyucca whipplei</i> , <i>Nolina cismontana</i> , <i>Adenostemma fasciculata</i> , <i>Hazardia squarrosa</i> , <i>Stipa lepida</i> , <i>Calystegia macrostegia</i>	WEIR, scattered patches

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPRIB.2

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Cw18105-08	PoI	420	432943	3744336	340.7	80% bud, 20% flw	moderate	SSW	clay	chamise CH	<i>Nolina cismontana</i> , <i>Calystegia macrostegia</i> , <i>Adenostemma fasciculata</i> , <i>Heteromeles arbutifolia</i> , <i>Bloomeria crocea</i> , <i>Salvia mellifera</i>	WEIR, scattered
Cw18113-01	Pt	13	433631	3741804	347	30% bud, 70% flw	moderate	SW	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hazardia squarrosa</i> , <i>Calystegia macrostegia</i> , <i>Hesperoyucca whipplei</i>	BLND, scattered
Cw18113-02	Pt	21	432795	3742449	383.5	100% flw	ridge top, gentle	N	rocky clay	CSS	<i>Calystegia macrostegia</i> , <i>Calochortus splendens</i> , <i>Stipa coronata</i> , <i>Helianthus gracilentus</i>	BLND, scattered
Cw18113-03	Skt	2300	433854	3742099		30% bud, 70% fr	ridge, gentle to steep	mostly NNW, + S	rocky clay	chamise CH		BLND. Polygon about 14,390 sq. meters. Count based on average densities
Cw18113-04	Pt	1	433967	3741902	418	100% flw	Steep	SW	clay	CH	<i>Malcolhammus fascicularis</i> , <i>Salvia mellifera</i> , <i>Rhus integrifolia</i> , <i>Quercus agrifolia</i> , <i>Bromus rubens</i> , <i>Calystegia macrostegia</i> , <i>Deinandra fasciculata</i>	BLND, single
Cw18113-05	Skt	12000	433739	3742046	358	20% bud, 75%flw, 5% fr	moderate	S/SW	rocky clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Quercus agrifolia</i> , <i>Salvia mellifera</i> , <i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Chaenactis artemisiifolia</i>	BLND, scattered. Polygon about 85,620 sq. meters. Count based on average densities
Cw18119-01	Pt	4	434013	3741853	449.8	25% bud, 75% flw	steep	W	rocky clay	AGL, CSS, sandstone	<i>Bromus rubens</i> , <i>Avena barbata</i> , <i>Mirabilis laevis</i> , <i>Artemisia californica</i> , <i>Malosma laurina</i>	FREM, isolated
Cw18119-02	Pt	5	433927	3741652	439.7	20% bud, 80% flw	gentle	SW	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Bromus rubens</i> , <i>Chaenactis artemisiifolia</i> , <i>Mirabilis laevis</i>	BLND, scattered
Cw18119-03	Skt	6000	433697	3741671	373.1	10% bud, 90% flw	gentle to steep	W	loamy clay	chamise CH, NS	<i>Adenostemma fasciculata</i> , <i>Chaenactis artemisiifolia</i> , <i>Quercus berberidifolia</i> , <i>Hesperoyucca whipplei</i> , <i>Nolina cismontana</i>	BLND, scattered. Polygon about 41,000 square meters. Count based on average
Cw18119-04	Pt	2	433821	3741594	408.3	50% bud, 50% flw	gentle	W	rocky, thin clay	chamise CH, sandstone exposure	<i>Adenostemma fasciculata</i> , <i>Salvia mellifera</i> , <i>Hazardia squarrosa</i> , <i>Nolina cismontana</i> , <i>Calystegia macrostegia</i>	BLND, isolated
Cw18119-05	Pt	2	433849	3741642	417.6	100% flw	steep	NW	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Salvia mellifera</i> , <i>Galium angustifolium</i> , <i>Chaenactis artemisiifolia</i> , <i>Brassica geniculata</i>	BLND
Cw18119-06	Skt	49	433706	3742318	359.8	20% bud, 80% flw	moderate	E	clay with fine sand	chamise CH	<i>Adenostemma fasciculata</i> , <i>Calystegia macrostegia</i> , <i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i> , <i>Opuntia littoralis</i>	BLND
Cw18119-07	Skt	33	430987	3742513	243.6	6% bud, 88% flw, 6% fr	moderate	W & N	rocky clay		<i>Quercus agrifolia</i> , <i>Malosma laurina</i> , <i>Opuntia littoralis</i> , <i>Calystegia macrostegia</i> , <i>Avena barbata</i> , <i>Bebbia juncea</i>	WEIR, scattered

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPRIB.2

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Cwi18J19-08	Pt	1	430937	3742396	251	100% fr	ridge top, moderate	W	rocky clay	AGL, CSS	<i>Avena barbata</i> , <i>Opuntia littoralis</i> , <i>Malosma laurina</i> , <i>Bromus rubens</i> , <i>Calyptegia macrostegia</i>	WEIR, single
Cwi18J19-09	Pt	10	430882	3742436	227.6	7% bud, 93% flw	steep	N	rocky loamy clay	AGL	<i>Avena barbata</i> , <i>Galium angustifolium</i> , <i>Bloomeria crocea</i> , <i>Acmispon glaber</i> , <i>Quercus agrifolia</i> , <i>Stephanomeria diegoensis</i>	WEIR, scattered
Cwi18J19-10	Skt	2200	433805	3742296			moderate to steep	W	clay	chamise CH		BLND, polygon about 6,760 sq. meters. Count based on average densities.
Cwi18J19-11	Pt	12	433804	3742387		20% bud, 80% flw	moderately steep	SW	clay	chamise CH		BLND
Cwi18J19-12	Skt	500	433836	3742331			gentle to steep	N + W	clay	chamise CH		BLND
Cwi18J19-13	Pt	30	433887	3742385			steep	NW	clay			BLND
Cwi18J19-14	Pt	5	433982	3742234		100% flw	steep	S	clay	CSS		BLND
Cwi18J19-15	Pt	1	434687	3742706	512	100% flw	moderate	E	rocky	CSS	<i>Salvia mellifera</i> , <i>Opuntia littoralis</i> , <i>Calyptegia macrostegia</i> , <i>Eriogonum fasciculatum</i> , <i>Deinandra fasciculata</i> .	FREM, single
Cwi18J19-16	Pt	40	435190	3743161	537	10% bud, 90% flw	Ridge Top	E	rocky	CSS CH	<i>Malosma laurina</i> , <i>Malocothamnus fasciculatus</i> , <i>Bromus rubens</i> , <i>Calochortus splendens</i> , <i>Acmispon glaber</i>	FREM
Cwi18J19-17	Pt	12	435161	3743080	531	10% veg, 90% flw	Ridge Top, Steep	W	rocky	AGL	<i>Avena sp.</i> , <i>Bromus diandrus</i> , <i>Bromus rubens</i> , <i>Brassica geniculata</i> , <i>Deinandra fasciculata</i>	FREM, isolated
Cwi18J19-18	Pt	10	433876	3741584	402	100% flw	moderate	SW	clay	CH	<i>Adenostemma fasciculata</i> , <i>Salvia mellifera</i> , <i>Hesperoyucca whipplei</i> , <i>Calyptegia macrostegia</i> , <i>Brassica</i>	BLND, isolated
Cwi18J19-19	Pt	12	433808	3741580	402	40% veg, 20% bud, 40% flw	Gentle	N/NW	clay	CH	<i>Adenostemma fasciculata</i> , <i>Malocothamnus fasciculatus</i> , <i>Rhus ovata</i> , <i>Heteromeles arbutifolia</i> , <i>Calyptegia</i>	BLND, isolated, tops eaten
Cwi18J19-20	Pt	1	433755	3741526	399	100% bud	Ridge Top	flat	clay	CH	<i>Salvia mellifera</i> , <i>Adenostemma fasciculata</i> , <i>Hazardia squarrosa</i> , <i>Hesperoyucca whipplei</i> , <i>Deinandra</i>	BLND, isolated, possibly impacted by adj. fire break
Cwi18J19-21	Pt	2	433750	3741554	391	100% flw	moderate	N/NE	clay	CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Quercus berberidifolia</i> , <i>Cercocarpus betuloides</i> , <i>Brassica</i>	BLND, isolated
Cwi18J19-22	Skt	60	433528	3741661	358	100% flw	moderate	N	rocky clay	CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Salvia mellifera</i> , <i>Hazardia squarrosa</i> , <i>Bromus rubens</i> , <i>Calyptegia macrostegia</i>	BLND, scattered. Possibly only 20 plants.
Cwi18J20-14	Skt	1500	432306	3742304	402.9	25% bud, 65% flw, 10% fr	ridge	S	clay	CSS, sandstone outcrop	<i>Galium angustifolium</i> , <i>Rhus integrifolia</i> , <i>Helianthus gracilentus</i> , <i>Mirabilis laevis</i>	BSAD, scattered. Polygon about 18,860 sq. meters. Count based on very low density

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPRIB.2

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS				Notes		
						Slope	Aspect	Soils	Habitat		Associated Species	
						Phenology						
Cwi18J20-15	Pt	1	432267	3742171	383.4	100% flw	ridge, moderate	WNW	rocky clay	CSS, sandstone	<i>Acmispon glaber</i> , <i>Rhus integrifolia</i> , <i>Emmenanthe pendulifera</i> , <i>Malacothamnus fasciculatus</i>	BSAD, single
Cwi18J20-16	Skt	118	432200	3742081	373.4	15% bud, 80% flw, 5% fr	gentle to moderate	W, SW	clay & rocky clay	CSS, CH, sandstone	<i>Rhus integrifolia</i> , <i>Acaortia microcephala</i> , <i>Hazardia squarrosa</i> , <i>Mirabilis laevis</i> , <i>Acmispon glaber</i> , <i>Chaenactis artemisiifolia</i>	BSAD
Cwi18J20-17	Pt	18	432247	3741860	368.8	5% bud, 85% flw, 10% fr	moderate	WNW	thin clay over sandstone	CSS	<i>Galium angustifolium</i> , <i>Hesperoyucca whipplei</i> , <i>Calystegia macrostegia</i> , <i>Encelia californica</i> , <i>Avena barbata</i>	BSAD
Cwi18J20-18	Pt	4	432276	3741755	375.6	100% flw	ridge, gentle to moderate	SW + W	clay	CSS, AGL	<i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Malacothamnus fasciculatus</i> , <i>Centaurea melitensis</i>	BSAD, scattered
Cwi18J20-19	Skt	200	432218	3741662	360.4		moderate	E	whitish clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Helianthus gracilentus</i> , <i>Mirabilis laevis</i> , <i>Malosma laurina</i> , <i>Malacothamnus fasciculatus</i>	BLND, scattered
Cwi18J20-20	Pt	20	432155	3741499	379.2	5% bud, 75% flw, 20% fr	ridge top, gentle	E	rocky clay	CSS	<i>Malosma laurina</i> , <i>Rhus integrifolia</i> , <i>Isocoma menziesii</i> , <i>Salvia apiana</i>	BLND
Cwi18J20-21	Skt	300	432202	3741216	411.3	10% bud, 75% flw, 15% fr	ridge, gentle to moderate	various	rocky clay	CSS	<i>Rhus integrifolia</i> , <i>Malosma laurina</i> , <i>Mirabilis laevis</i> , <i>Malacothamnus fasciculatus</i>	BSAD, scattered
Cwi18J20-22	Pt	28	432279	3741092	421.1	10% bud, 90% flw	ridge top, gentle	E	rocky clay	CSS	<i>Galium angustifolium</i> , <i>Malosma laurina</i> , <i>Acaortia microcephala</i>	BLND, patch
Cwi18J20-23	Pt	5	432310	3741105	411.7	100% flw	moderate	E	sandy loam over clay	CH	<i>Quercus berberidifolia</i> , <i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Galium angustifolium</i> , <i>Elymus condensatus</i>	BLND, patch
Cwi18J20-24	Pt	10	432343	3740904	444.7	70% flw, 30% fr	ridge top, gentle to moderate	E	rocky clay		<i>Calystegia macrostegia</i> , <i>Deinandra fasciculata</i> , <i>Acmispon glaber</i>	BLND, scattered
Cwi18J20-25	Pt	8	432374	3740856	443.4	80% flw, 20% fr	ridge top, gentle	E	rocky clay	CSS	<i>Artemisia californica</i> , <i>Mirabilis laevis</i> , <i>Opuntia littoralis</i> , <i>Isocoma menziesii</i>	BLND, scattered
Cwi18J20-26	Pt	5	432318	3740857	430.8	100% flw	gentle to moderate	W	rocky clay	CSS	<i>Mirabilis laevis</i> , <i>Malosma laurina</i> , <i>Calystegia macrostegia</i>	BLND, scattered
Cwi18J20-27	Pt	1	432350	3740795	423.7	100% flw	steep	E	rocky clay	rock outcrop	<i>Malosma laurina</i> , <i>Opuntia littoralis</i> , <i>Helianthus gracilentus</i> , <i>Acmispon glaber</i>	BLND, single
Cwi18J20-28	Skt	71	432314	3740769	422.9	20% bud, 60% flw, 20% fr	gentle to moderate	W	rocky clay	CSS	<i>Heteromeles arbutifolia</i> , <i>Calystegia macrostegia</i> , <i>Mirabilis laevis</i> , <i>Malosma laurina</i> , <i>Helianthus gracilentus</i>	BLND, scattered
Cwi18J20-29	Skt	67	432280	3740660	416.2	10% bud, 75% flw, 15% fr	ridge top	NW + W	rocky clay, rock outcrops		<i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Hesperoyucca whipplei</i> , <i>Galium angustifolium</i> , <i>Isocoma menziesii</i> , <i>Deinandra fasciculata</i>	BLND,

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPRIB.2

LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS		Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
						UTME	UTMN							
Cwi18120-30	Skt	54	432310	3740545	411.8		10% bud, 80% flw, 10% fr	ridge top, gentle to moderate	SW	rocky clay			<i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Salvia apiana</i> , <i>Hazardia squarrosa</i> , <i>Artemisia californica</i>	BLND, scattered
Cwi18120-31	Pt	9	432269	3740382	363.2		20% bud, 80% flw	moderate to steep	W	rocky clay			<i>Helianthus gracilentus</i> , <i>Galand. Stipa lepida</i> , <i>Acmispon glaber</i>	BLND, scattered
Cwi18120-32	Pt	3	431970	3740213	286.8		35% bud, 65% flw	ridge, steep	W		edge of sandstone outcrop		<i>Calystegia macrostegia</i> , <i>Mirabilis laevis</i> , <i>Cryptantha intermedia</i>	BLND
Cwi18120-33	Pt	2	432207	3741167			100% flw	ridge	N	rocky clay				BLND
Cwi18120-34	Skt	400	432347	3742068	394		20% bud, 80% flw	Gentle	E & S	rocky clay	CSS CH		<i>Rhus integrifolia</i> , <i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i> , <i>Acmispon glaber</i> , <i>Mirabilis laevis</i> , <i>Rhus ovata</i>	BLND, scattered patches, Polygon about 2,500 sq meters. Count based on typical low densities.
Cwi18120-35	Pt	1	432344	3741911	366		100% flw	moderate	E	rocky outcrop	AFS		<i>Empen</i> , <i>Calystegia macrostegia</i> , <i>Rhus integrifolia</i> , <i>Diplacus brevipes</i> , <i>Phacelia cicutaria</i> , <i>Malcothamnus fasciculatis</i>	BLND, single
Cwi18120-36	Pt	6	432360	3741807	368		100% flw	moderate	E	rocky outcrop	CH		<i>Rhamnus ilicifolia</i> , <i>Calystegia macrostegia</i> , <i>Deinandra fasciculata</i> , <i>Salvia apiana</i> , <i>Toxicodendron diversilobum</i> , <i>Acmispon glaber</i>	BLND, isolated
Cwi18120-37	Pt	6	432162	3741474	378		20% flw, 80% fr	Gentle	E	rocky	CH		<i>Rhus integrifolia</i> , <i>Cuscuta</i> sp., <i>Heterometes arbutifolia</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Acmispon glaber</i>	BLND, scattered
Cwi18120-38	Pt	1	432112	3741151	378		100% bud	Gentle	W	rocky	CH		<i>Rhamnus ilicifolia</i> , <i>Rhus integrifolia</i> , <i>Malosma laurina</i> , <i>Erodium botrys</i> , <i>Isocoma menziesii</i> , <i>Eriogonum fasciculatum</i>	BLND, single
Cwi18120-39	Skt	40	431823	3741011	363		30% veg, 30% bud, 40% flw	Gentle	E	rocky	NGL		<i>Avena fatua</i> , <i>Bromus rubens</i> , <i>Bromus diandrus</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i>	BLND
Cwi18120-40	Pt	100	431798	3740979	369		20% veg, 40% bud, 40% flw	Gentle	E	rocky	CSS		<i>Opuntia littoralis</i> , <i>Salvia apiana</i> , <i>Deinandra fasciculata</i> , <i>Avena</i> sp., <i>Calystegia macrostegia</i> , <i>Dudleya multicaulis</i>	BLND
Cwi18120-41	Skt	50	431783	3740925	354		30% veg, 30% bud, 40% flw	Gentle	E	rocky	CSS		<i>Salvia apiana</i> , <i>Eriogonum fasciculatum</i> , <i>Calochortus splendens</i> , <i>Eriofol</i> , <i>Rhus integrifolia</i> , <i>Erodium botrys</i>	BLND
Cwi18120-42	Pt	6	431724	3740776	342		100% flw	Ridge Top	S	rocky	CSS		<i>Calochortus catalinae</i> , <i>Dichelostemma capitatum</i> , <i>Rhus integrifolia</i> , <i>Encelia californica</i> , <i>Opuntia littoralis</i>	BLND

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPRIB.2

LABEL	Type	Count	UTME	UTMN	GPS		Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
					Alt. (m)								
Cwi18J20-43	Skt	4300	431683	3740703	327		20% veg, 20% bud, 60% flw	Ridge Top	W	rocky	CSS	<i>Acmispon glaber</i> , <i>Rhus integrifolia</i> , <i>Mirabilis laevis</i> , <i>Mallae</i> , <i>Centaurea melitensis</i>	BLND, scattered, polygon about 53,300 m sq. Count based on about half area occupied with average of 0.16 plants per sq. meter
Cwi18J20-44	Skt	60	432276	3741178				ridge	NE				BLND, Count based on 3 plants per WP marked
Cwi18J20-45	Pt	1	432090	3741164				moderate	SW				BLND
Cwi18J20-46	Pt	1	432044	3741180				moderately steep	SW				BLND
Cwi18J20-47	Pt	1	431790	3740958				steep	S				BLND
Cwi18J20-48	Pt	1	431792	3740872				steep	SW				BLND
Cwi18J20-49	Pt	2	431703	3740726				moderate	SSW				BLND
CW118J27-01	Pol	64	432369	3742578	370.2		5% bud, 50% flw, 45% fr	ridge top, gentle to steep	NE	clay	CSS, chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Heteromeles arbutifolia</i> , <i>Acmispon glaber</i> , <i>Deinandra fasciculata</i> , <i>Centaurea melitensis</i>	WEIR, scattered, about 810 sq. meters
CW118J27-02	Pt	10	432761	3742493	368.3		60% flw, 40% fr	gentle	W	rocky clay	CSS	<i>Calystegia macrostegia</i> , <i>Gutecal</i> , <i>Stipa lepida</i> , <i>Acmispon glaber</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i>	BLND, scattered
CW118J27-03	Pt	4	432731	3742488	360.1		50% flw, 50% fr	moderate	W	rocky clay	CSS	<i>Calochortus splendens</i> , <i>Brassica geniculata</i> , <i>Calystegia macrostegia</i> , <i>Helianthus gracilentus</i> , <i>Galium angustifolium</i> , <i>Acmispon glaber</i>	BLND
CW118J27-04	Pt	3	433298	3742071	372.1		100% fr	ridgetop, flat		clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Calystegia macrostegia</i> , <i>Chlorogalum parviflorum</i> , <i>Acmispon glaber</i>	BLND, patch
CW118J27-05	Skt	2800	433264	3742150	365.7		40% flw, 60% fr	gentle to moderate	SSW	rocky clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Chlorogalum parviflorum</i> , <i>Acmispon glaber</i> , <i>Hesperoyucca whipplei</i> , <i>Chaenactis artemisiifolia</i> , <i>Calystegia macrostegia</i>	BLND, ca 10% none, 20% very low density, 60% low density, 20% medium density. Polygon about 10600 sq meters
CW118J27-06	Skt	8200	433136	3742212	340.9		40% flw, 60% fr	ridges, gentle to steep	mostly SW	rocky clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Chlorogalum parviflorum</i> , <i>Deinandra fasciculata</i> , <i>Acmispon glaber</i>	BLND, Count estimated by using average densities.
CW118J27-07	Pt	1	433038	3742150	321.3		100% flw	steep	S	clay		<i>Quercus agrifolia</i> , <i>Calystegia macrostegia</i> , <i>Diplacus x australis</i> , <i>Hesperoyucca whipplei</i> , <i>Rhus integrifolia</i> , <i>Solidago velutina</i>	BLND, single

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

<i>Calochortus weedii</i> var. <i>intermedius</i> - INTERMEDIATE MARIPOSA LILY; CRPRIB.2													
LABEL	Type	Count	UTME	UTMN	Alt. (m)	GPS	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
CW118127-08	Pt	2	433083	3742413	339.8		100% flw	moderate	W	clay	chamise CH	<i>Rhus integrifolia</i> , <i>Cabystegia macrostegia</i> , <i>Adenostemma fasciculata</i> , <i>Stipa lepida</i> , <i>Salvia melifera</i>	BLND, isolated
CW118127-09	Pt	2	433032	3742328	341.9		100% flw	moderate	E	rocky clay		<i>Cabystegia macrostegia</i> , <i>Hesperoyucca whipplei</i> , <i>Malosma laurina</i> , <i>Helianthus gracilentus</i>	BLND, isolated
CW118127-10	Skt	50	432912	3742271	346.5		40% flw, 60% fr	moderately steep	NE	rocky clay	CH	<i>Quercus berberidifolia</i> , <i>Adenostemma fasciculata</i> , <i>Cabystegia macrostegia</i> , <i>Chlorogalum parviflorum</i> , <i>Silene laciniata</i>	BLND
CW118127-11	Pt	2	433253	3742036			100% flw	ridge, gentle	W		chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Chlorogalum parviflorum</i> , <i>Acmispon glaber</i>	BLND. Probably more plants here and likely a polygon. Point noted on map but then moved west.
CW118127-12	Skt	80	432850	3742248				ridge, steep	NE	rocky clay	CH		BLND
CW118127-13	Skt	300	432611	3742529				ridge, moderate	various				BLND/WEIR
CW118127-14	Skt	2400	432864	3742556	357		5% flw, 95% fr	moderate	SE	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Nolina cismontana</i> , <i>Salvia melifera</i> , <i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i>	BLND, polygon about 9,700 sq. meters. Count estimated by using average densities.
CW118127-15	Skt	40	432943	3742650	387		25% flw, 75% fr	moderate	SW	rocky	CH	<i>Hesperoyucca whipplei</i> , <i>Adenostemma fasciculata</i> , <i>Rhus ovata</i> , <i>Malosma laurina</i> , <i>Mirabilis laevis</i>	BLND, scattered
CW118127-16	Skt	1800	432966	3742456	341				SE + S + SW	rocky	CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Malosma laurina</i> , <i>Rhus ovata</i> , <i>Opuntia littoralis</i>	BLND, 11,026 sq. meters. Count based on typical densities
CW118127-17	Pt	30	432943	3742263	338		10% flw, 90% fr	moderate	N	rocky	CH	<i>Adenostemma fasciculata</i> , <i>Avena sp</i> , <i>Cabystegia macrostegia</i> , <i>Phacelia cicutaria</i>	BLND
CW118129-01	Skt	234	433463	3742614	452.2		2% bud, 50% flw, 48% fr	moderate to steep	N	clay	CSS, OW	<i>Quercus agrifolia</i> , <i>Salvia apiana</i> , <i>Acmispon glaber</i> , <i>Cabystegia macrostegia</i> , <i>Helianthus gracilentus</i>	BLND, scattered, polygon about 1600 m sq
CW118129-02	Pt	21	433404	3742595	470.5		5% bud, 35% flw, 60% fr	ridge top, gentle & moderate	NE	rocky clay	CSS, sandstone	<i>Eriogonum fasciculatum</i> , <i>Galium angustifolium</i> , <i>Stipa coronata</i> , <i>Deinandra fasciculata</i> , <i>Silene laciniata</i> , <i>Salvia apiana</i> , <i>Mirabilis laevis</i>	BLND, scattered
CW118129-03	Skt	67	433390	3742632	467.3			moderate	NE	clay	CSS, sandstone exposures	<i>Cabystegia macrostegia</i> , <i>Deinandra fasciculata</i> , <i>Acmispon glaber</i> , <i>Diplacis x australis</i> , <i>Artemisia californica</i> , <i>Phacelia cicutaria</i> , <i>Malosma laurina</i>	BLND, scattered, polygon about 115m sq.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Calochortus weedii var. *intermedius* - INTERMEDIATE MARIPOSA LILY; CRPR1B.2

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
CW118129-04	Skt	300	433132	3742923	472.9	<1% bud, 20% flw, 80% fr	E	clay	chamise CH, sandstone	<i>Hesperoyucca whipplei</i> , <i>Salvia apiana</i> , <i>Rhus integrifolia</i> , <i>Adenostemma fasciculata</i> , <i>Chlorogalum pomeridianum</i> , <i>Galium angustifolium</i> , <i>Silene laciniata</i>	BLND, scattered patches
CW118129-05	Pt	3	433463	3742695	425.9	30% bud, 70% flw	NE	clay	CH, OW	<i>Aemisson glaber</i> , <i>Alptra</i> , <i>Stipa leptida</i> , <i>Poaec</i> , <i>Quercus agrifolia</i> , <i>Adenostemma fasciculata</i>	BLND, scattered
Cw118129-06	Pt	24	433456	3742668	434.9	50% flw, 40% fr	NE	clay			BLND
Cw118129-07	Skt	6,000	433359	3742188			SW + SSE		chamise CH		BLND, scattered. Polygon 20,864 sq. meters. Count based on typical densities.

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Dudleya multicaulis - MANY-STEMMED DUDLEYA; CRPR 1B.2

LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTME	UTMN	Alt. (m)						
Dm18A17-01	Pt	32	430858	3742449	218.1	70% veg, 30% bud	W	rocky clay	road cut	<i>Artemisia californica</i> , <i>Bromus rubens</i> , <i>Thysanocarpus laciniatus</i> , <i>Erodium cicutarium</i> , <i>Galium angustifolium</i>	WEIR, Scattered.
Dm18A17-02	Pt	10	430853	3742430	212.9	40% veg, 60% bud	W	rocky clay	rocky bank at base	<i>Leptochloa</i> , <i>Crang</i> , <i>Bromus diandrus</i> , <i>Eromos</i> , <i>Chasua</i> , <i>Bromus rubens</i>	WEIR, scatterd
Dm18A30-01	Pt	4	432803	3742247	382	100% bud	flat	rocky clay	CH	<i>Schismus barbatus</i> , <i>Adenostemma fasciculata</i> , <i>Mirabilis laevis</i> , <i>Erodium botrys</i> , <i>Lupinus bicolor</i> , <i>Erodium cicutarium</i> , <i>Dichelostemma capitatum</i>	BLND, scattered patches
Dm18A30-02	Pt	9	432728	3742243	371	100% bud	NW	rocky clay	Rocky opening	<i>Avena barbata</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Helianthus gracilentus</i> , <i>Erodium cicutarium</i>	BLND, scattered
Dm18A30-03	Pt	2	432717	3742241	367	100% bud	W	clay	Rocky opening	<i>Avena barbata</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Helianthus gracilentus</i> , <i>Erodium cicutarium</i>	BLND
Dm18A30-04	Skt	78	432659	3742191	331	100% bud	NNE	rocky clay	Cliff below cactus scrub	<i>Calochortus splendens</i> , <i>Avena barbata</i> , <i>Calysyegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Eriogonum fasciculatum</i> , <i>Erodium cicutarium</i> , <i>Bromus rubens</i>	BLND, scattered. Original point expanded into sketch based on field comments.
Dm18A30-05	Skt	171	432731	3742202	364	100% bud	SW	rocky clay	Old fire break	<i>Lepidium virginicum</i> , <i>Lupinus sparsiflorum</i> , <i>Chaenactis glabriuscula</i> , <i>Avena barbata</i> , <i>Muhlenbergia eriogonum fasciculatum</i> , <i>Hesperoyucca whipplei</i> , <i>Opuntia littoralis</i> , <i>Bohrichloa</i>	BLND, scattered patches

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Dudleya multicaulis - MANY-STEMMED DUDLEYA; CRPR 1B.2

GPS

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Dm18A30-06	Pt	3	432641	3741828	291	100% bud	Gentle	SW	rocky clay	CH, OW	<i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Acmispon glaber</i> , <i>Dichelostemma capitatum</i> , <i>Hesperoyucca whipplei</i> , <i>Malosma laurina</i>	BLND, scattered
Dm18A30-07	Skt	123	432774	3742269	386	100% veg	ridge top to steep	W to N	clayey loam & rocky sandy loam	CSS, CH	<i>Erodium botrys</i> , <i>Bromus rubens</i> , <i>Isooma menziesii</i> , <i>Lepidium nitidum</i> , <i>Acmilham</i> , <i>Stipa lepida</i> , <i>Hesperoyucca whipplei</i> , <i>Adenostemma fasciculata</i>	BLND, scattered. Combined 4 proximate points.
Dm18A30-08	Pt	15	432776	3742292	384	94% veg, 07% bud	ridge top	N	clayey loam	CSS	<i>Erodium botrys</i> , <i>Stipa lepida</i> , <i>Bromus rubens</i> , <i>Calochortus splendens</i> , <i>Calystegia macrostegia</i>	BLND
Dm18A30-09	Pt	35	432816	3742234	381	100% veg	ridge top	SW	clayey loam	CH	<i>Adenostemma fasciculata</i> , <i>Stipa lepida</i> , <i>Erodium botrys</i> , <i>Acmispon strigosus</i> , <i>A. glaber</i> , <i>Calochortus splendens</i>	BLND, scattered
Dm18A30-10	Pt	6	432827	3742230	380	85% veg, 15% flw	steep	SE	clayey loam	CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i>	BLND, isolated
Dm18M03-01	Pt	15	432487	3742030	344	10% veg, 90% bud	Steep	NNE	rocky	CSS	<i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Acmispon glaber</i> , <i>Dichelostemma capitatum</i> , <i>Centaurea melitensis</i>	BLND
Dm18M04-01	Pt	12	431171	3741776	283	10% veg, 90% bud	ridge top	SW	rocky soil	CSS	<i>Acmispon glaber</i> , <i>Calochortus splendens</i> , <i>Calystegia macrostegia</i> , <i>Cryptantha intermedia</i> , <i>Erodium cicutarium</i> , <i>Hesperoyucca whipplei</i> , <i>Heteromeles arbutifolia</i>	BSAD, scattered patches
Dm18M04-02	Pt	30	431248	3741842	293	19% veg, 80% bud, 1% flw	ridge top, flat		rocky clay	CSS	<i>Calochortus splendens</i> , <i>Erodium cicutarium</i> , <i>Bromus rubens</i> , <i>Acmispon glaber</i> , <i>Calystegia macrostegia</i> , <i>Hesperoyucca whipplei</i>	BSAD, scattered
Dm18M04-03	Pt	4	431260	3741870	290	75% veg, 25% flw	ridge top, flat		rocky clay	CSS	<i>Calochortus splendens</i> , <i>Lomatium</i> , <i>Deinandra fasciculata</i> , <i>Stipa pulchra</i> , <i>Acmispon glaber</i> , <i>Malosma laurina</i> , <i>Opuntia littoralis</i>	WEIR, scattered
Dm18M07-01	Pt	60	431154	3740960	288.7	40% bud, 60% flw	ridge, gentle to moderate	W	clay	sandstone, edge of OW	<i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Calochortus splendens</i> , <i>Galium angustifolium</i> , <i>Quercus agrifolia</i> , <i>Avena barbata</i>	BSAD, scattered
Dm18M07-02	Pt	26	431192	3740878	315.5	40% flw, 60% fr	ridge	W	rocky clay	CSS	<i>Erodium botrys</i> , <i>Calochortus splendens</i> , <i>Galium angustifolium</i> , <i>Artemisia californica</i> , <i>Festuca perennis</i> , <i>Sabia apiana</i> , <i>Silene laciniata</i>	BSAD, scattered
Dm18M07-03	Pt	55	431243	3740842	336.1	30% bud, 70% flw	ridge, gentle to moderate	N	rocky clay	CSS	<i>Avena barbata</i> , <i>Artemisia californica</i> , <i>Cenchrus setacea</i> , <i>Solanum umbelliferum</i>	BSAD, scattered patches along old fire break

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

<i>Dudleya multicaulis</i> - MANY-STEMMED DUDLEYA; CRPR IB.2 (continued)													
LABEL	Type	Count	UTME	UTMN	GPS		Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
					Alt. (m)								
Dm18M07-05	Pol	82	431020	3740802	312.6		10% veg, 80% bud, 10% flw	Steep	N	rocky clay	CSS	<i>Salvia mellifera</i> , <i>Erodium botrys</i> , <i>Eriogonum fasciculatum</i> , <i>Avena barbata</i> , <i>Stipa pulchra</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i>	BSAD, scattered patches
Dm18M07-06	Pt	16	431214	3740857	325		20% veg, 70% bud, 10% flw	moderate	NNW	rocky clay	CSS	<i>Erodium botrys</i> , <i>Bromus rubens</i> , <i>Eriofol</i> , <i>Stipa pulchra</i> , <i>Galium nuttallii</i> , <i>Calochortus splendens</i> , <i>Festuca perennis</i>	BSAD, scattered patches, below fuel break
Dm18M07-07	Pt	15	431396	3740892	348.5		10% veg, 50% bud, 40% flw	Ridge Top, moderate	NNE	rocky soils	CSS	<i>Erodium botrys</i> , <i>Bromus rubens</i> , <i>Calochortus splendens</i> , <i>Stipa pulchra</i> , <i>Artemisia californica</i> , <i>Isocoma menziesii</i> , <i>Malosma laurina</i>	BSAD, scattered
Dm18M07-08	Pt	7	431368	3740876	348.7		10% veg, 45% bud, 45% flw	Ridge Top, flat		rocky clay	CSS	<i>Artemisia californica</i> , <i>Avena barbata</i> , <i>Calochortus splendens</i> , <i>Erodium botrys</i> , <i>Salvia apiana</i> , <i>Opuntia littoralis</i>	BSAD, scattered, at edge of old fuel break
Dm18M08-01	Pt	8	432177	3741383	385.4		30% veg, 38% flw, 12% fr	ridge top, gentle	E	sandy clay	CSS	<i>Erodium botrys</i> , <i>Aristida adscensionis</i> , <i>Hesperoyucca whipplei</i> , <i>Cenchrus setacea</i> , <i>Salvia apiana</i> , <i>Calochortus splendens</i>	BLND, scattered
Dm18M08-02	Pol	10	432181	3741347	386.2		100% bud	ridge top, gentle	NE	rocky clay	CSS	<i>Erodium botrys</i> , <i>Calochortus splendens</i> , <i>Aristida adscensionis</i> , <i>Galium angustifolium</i> , <i>Hesperoyucca whipplei</i> , <i>Cenchrus setacea</i>	BLND, scattered
Dm18M08-03	Pt	29	432188	3741305	388		10% veg, 78% flw, 12% fr	ridge top, gentle to moderate	NE	rocky clay	CSS	<i>Stipa lepida</i> , <i>Erodium botrys</i> , <i>Calochortus splendens</i> , <i>Acemison glaber</i>	BLND, scattered patches
Dm18M08-04	Pt	5	432187	3741288	390.5		100% bud	ridge top, gentle	N	rocky clay	CSS	<i>Erodium botrys</i> , <i>Galium angustifolium</i> , <i>Acemison glaber</i> , <i>Stipa coronata</i> , <i>Calochortus splendens</i> , <i>Rhamnus ilicifolia</i>	BLND, isolated
Dm18M08-05	Pt	16	432194	3741257	398.8		40% veg, 60% bud	ridge top, gentle	N	rocky clay	CSS, OW border	<i>Erodium botrys</i> , <i>Acemison glaber</i> , <i>Galium angustifolium</i> , <i>Calochortus splendens</i> , <i>Stipa coronata</i> , <i>Quercus agrifolia</i>	BLND, scattered
Dm18M08-06	Pt	19	432201	3741211	408.2		40% veg, 60% bud	ridge top, gentle	NE	rocky clay	CSS, OW border	<i>Erodium botrys</i> , <i>Calochortus splendens</i> , <i>Acemison glaber</i> , <i>Quercus agrifolia</i> , <i>Rhus integrifolia</i>	BLND, scattered to scattered patches. Extends about 7 m on either side of GPS point along ridge
Dm18M08-07	Pt	2	432136	3741139	381.9		100% bud	gentle	S	rocky clay	CSS, top of sandstone outcrop	<i>Stipa lepida</i> , <i>Cenchrus setacea</i> , <i>Calystegia macrostegia</i> , <i>Acemison glaber</i> , <i>Erodium cicutarium</i> , <i>Eriogonum fasciculatum</i>	BLND, isolated
Dm18M08-08	Pt	2	432066	3741180	360.5		50% veg, 50% bud	gentle	W	cobbly clay	CSS	<i>Erodium botrys</i> , <i>Calochortus splendens</i> , <i>Acemison glaber</i> , <i>Salvia apiana</i> , <i>Calystegia macrostegia</i>	BSAD
Dm18M08-09	Pt	2	432074	3741191	361.2		50% bud, 50% flw	moderate	NW	rocky, cobbly sandy clay	CSS	<i>Erodium botrys</i> , <i>Isocoma menziesii</i> , <i>Calochortus splendens</i> , <i>Helianthus gracilentus</i> , <i>Galium angustifolium</i> , <i>Opuntia littoralis</i> , <i>Calystegia macrostegia</i>	BSAD, isolated

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Dudleya multicaulis - MANY-STEMMED DUDLEYA; CRPR 1B.2 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Dm18M08-10	Pt	3	432089	3741455	354.6	65 % bud, 35% flw	gentle	SW	rocky clay	CSS	<i>Erodium botrys</i> , <i>Hesperoyucca whipplei</i> , <i>Isocoma menziesii</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i> , <i>Artemisia californica</i> , <i>Galium nuttallii</i>	BSAD, isolated, some possibly missed, hard to spot amongst the red-leaved <i>Erodium</i>
Dm18M15-01	Pol	280	432784	3742645	354.2	10% bud, 90% flw	steep	W	clay	AGL, sandstone exposure	<i>Bromus rubens</i> , <i>B. diandrus</i> , <i>Chaenactis glabriuscula</i> , <i>Erodium botrys</i>	WEIR, scattered patches. FMR & SJL 8556
Dm18M18-01	Pt	1	433040	3742217	314.4	100% flw	ridge, gentle to steep	W	rocky clay		<i>Calystegia macrostegia</i> , <i>Calochortus splendens</i> , <i>Dichelostemma capitatum</i> , <i>Hesperoyucca whipplei</i> , <i>Bloomeria crocea</i>	BLND, single
Dm18M18-02	Pol	59	433153	3742099	348.1	1% veg, 99% flw	Gentle	NW	rocky clay	NGL	<i>Stipa pulchra</i> , <i>Calochortus splendens</i> , <i>Bromus rubens</i> , <i>Bloomeria crocea</i> , <i>Dichelostemma capitatum</i> , <i>Calystegia macrostegia</i> , <i>Oxalis californica</i>	BLND, scattered patches
Dm18M18-03	Pt	2	433112	3742049	324.2	100% flw	moderate	NNW	rocky clay	NGL, CSS	<i>Stipa leptota</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Acmispon glaber</i> , <i>Calystegia macrostegia</i> , <i>Erodium cicutarium</i>	BLND, isolated
Dm18M30-01	Pt	26	433137	3742948	468.3	100% flw	moderate	NE	clay	CSS	<i>Galium angustifolium</i> , <i>Calochortus weedii</i> , <i>Toxicocodon fremontii</i> , <i>Carex triquetra</i> , <i>Stipa coronata</i>	BLND, scattered, 2 plants about 11 meters to north of point included.
Dm18M30-03	Pol	73	433374	3743676	429.6	100% flw	moderate	NNE	clay	CSS	<i>Hazardia squarrosa</i> , <i>Bloomeria crocea</i> , <i>Salvia apiana</i> , <i>Eriofol</i> , <i>Deinandra fasciculata</i> , <i>Calystegia macrostegia</i> , <i>Dipaur</i>	WEIR, scattered patches, population split by old dirt road
Dm18M30-04	Pol	13	433174	3743141	450.3	100% flw	Gentle	NE to E	clay	AGL	<i>Calochortus catalinae</i> , <i>Avena fatua</i> , <i>Festuca perennis</i> , <i>Bloomeria crocea</i> , <i>Grindelia camporum</i> , <i>Opuntia littoralis</i>	BLND, isolated
Dm18M30-05	Pt	3	433280	3743127	424	67% bud, 33% flw	moderate	NE to E	rocky outcrop	Outcrop	<i>Calystegia macrostegia</i> , <i>Bloomeria crocea</i> , <i>Eriogonum fasciculatum</i> , <i>Dichelostemma capitatum</i> , <i>Avena fatua</i>	BLND, isolated
Dm18J01-01	Pt	88	433079	3743707	406.8	95% flw, 5% fr	gentle to moderate	N	clay	edge of sandstone outcrop	<i>Salvia apiana</i> , <i>Galium angustifolium</i> , <i>Bromus rubens</i> , <i>B. diandrus</i> , <i>Deinandra fasciculata</i> , <i>Calochortus catalinae</i>	GYPS, scattered patch. Extends about 16m to west of point.
Dm18J01-02	Pol	446	433336	3743736	407.4	90% flw, 10% fr	moderate + steep	WNW	clay	CSS, partly on old road cut	<i>Bromus rubens</i> , <i>Deinandra fasciculata</i> , <i>Galium angustifolium</i> , <i>Stipa leptota</i> , <i>Artemisia californica</i> , <i>Eriodictyon crassifolium</i> , <i>Eriogonum fasciculatum</i>	WEIR, scattered over about 560m sq
Dm18J01-03	Pt	11	433373	3743789	403	100% flw	gentle to moderate	NE	gravel over clay	CSS	<i>Salvia apiana</i> , <i>Hesperoyucca whipplei</i> , <i>Stipa leptota</i> , <i>Calochortus splendens</i> , <i>C. catalinae</i> , <i>Bloomeria crocea</i>	WEIR, includes 5 plants about 7 meters from point.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Dudleya multicaulis - MANY-STEMMED DUDLEYA; CRPR 1B.2 (continued)

LABEL	Type	Count	UTME	UTM N	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Dm18J13-01	Pt	14	432478	3742413	378	100% fr	Ridge top	flat	rocky clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Calochortus weedii</i> , <i>Stipa lepida</i> , <i>Avena barbata</i> , <i>Brassica ganiculata</i>	BLND
Dm18J20-01	Pt	7	432373	3740864	444	100% fr	ridge top, gentle	E	rocky clay		<i>Artemisia californica</i> , <i>Mirabilis laevis</i> , <i>Opuntia littoralis</i> , <i>Isocoma menziesii</i>	BLND
Dm18J20-02	Pt	3	431798	3740978	369.6	100% Spent	Flat	flat	rocky outcrop	CSS	<i>Calochortus weedii</i> , <i>Opuntia littoralis</i> , <i>Salvia apiana</i> , <i>Deinandra fasciculata</i> , <i>Avena sp.</i> , <i>Cahystegia macrostegia</i>	BLND, scattered
Dm18J27-01	Pt	1	433022	3742334	347	100% fr	moderate	E	rocky clay		<i>Cahystegia macrostegia</i> , <i>Hesperoyucca whipplei</i> , <i>Eriogonum fasciculatum</i> , <i>Opuntia littoralis</i> , <i>Stipa lepida</i> , <i>Helianthus gracilentus</i>	BLND; single. Late, probably others at this site earlier in season. Recheck.
Dm18J27-02	Pt	1	432868	3742251	364.7	100% fr	steep	NE	rocky clay	chamise CH	<i>Avena barbata</i> , <i>Cahystegia macrostegia</i> , <i>Adenostemma fasciculata</i> , <i>Calochortus weedii</i>	BLND; single. Late, probably others at this site earlier in season. Recheck.
Dm18J27-03	Pt	5	432824	3742211	383.3	100% fr	ridge top	SW	rocky clay		<i>Deinandra fasciculata</i> , <i>Stipa lepida</i> , <i>Acmispon glaber</i> , <i>Adenostemma fasciculata</i>	BLND; single. Late, probably others at this site earlier in season. Recheck.
Dm18J27-04	Pt	20	432778	3742319	381.1	100% fr	ridge top	N	rocky clay			BLND

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Horkelia cuneata var. *puberuloi* - Mesa horkelia; CRPR1B.1

CODE	Type	Count	UTME	UTM N	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Hep18M22-01	Pt	1	433153	3742903	476	100% flw	gentle, ridge top	NE	gravelly loam	CSS	<i>Calochortus weedii</i> , <i>Calochortus splendens</i> , <i>Toxicocordon fremontii</i> , <i>Hesperoyucca whipplei</i> , <i>Helianthus gracilentus</i> , <i>Silene laciniata</i> , <i>Chlorogalum pomeridianum</i>	BLND, single
Hep18M30-01	Pt	1	433169	3742903	473	100% flw	moderate	E	gravelly sand	CSS	<i>Galium angustifolium</i> , <i>Hesperoyucca whipplei</i> , <i>Mirabilis laevis</i> , <i>Rhus integrifolia</i> , <i>Toxicocordon fremontii</i> , <i>Carex triquetra</i> , <i>Calochortus weedii</i>	BLND, single
Hep18M30-02	Pt	2	433142	3742944	464.2	50% veg, 50% flw	moderate	E	sand over clay	sandstone rock outcrop	<i>Corethrogyne filaginifolia</i> , <i>Helianthus gracilentus</i> , <i>Calochortus weedii</i> , <i>Cahystegia macrostegia</i> , <i>Salvia apiana</i> , <i>Epican</i> , <i>Adenostemma fasciculata</i>	BLND, patch

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APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Lepidium virginicum var. *robinsonii* - ROBINSON'S PEPPERGRASS; CRPR 4.3

GPS

LABEL	Type	Count	UTME	UTM N	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
LVR18A16-01	Pt	80	431921	3743280	285.1	80% fr, 20% spent	moderately steep	SE	sandy loam	CSS	<i>Schismus barbatus</i> , <i>Mirabilis laevis</i> , <i>Lupinus sparsiflorum</i> , <i>Chaenactis glabriuscula</i> , <i>Bebbia juncea</i>	WEIR; Patch; FMR 8541.
LVR18A16-02	Pt	2	431807	3743153	261	10% flw, 90% fr	flat		fine sandy soil	CSS	<i>Cabstegia macrostegia</i> , <i>Muhlenbergia microsperma</i> , <i>Malosma laurina</i> , <i>Bromus diandrus</i> , <i>Brassica genticulata</i>	WEIR, single, in draw.
LVR18A17-01	Pt	1	431974	3743283	280.2	100% fr	gentle	SE	rocky sandy clay	CH	<i>Rhus ovata</i> , <i>Acmispon strigosus</i> , <i>Phacelia parryi</i> , <i>Lupinus hirsutissimus</i>	WEIR, single
LVR18A17-02	Pt	2	431963	3743301	283.7	100% fr	gentle	SE	rocky sand over clay	CH	<i>Rhus ovata</i> , <i>Centaurea melitensis</i> , <i>Cabstegia macrostegia</i> , <i>Chaenactis glabriuscula</i> , <i>Dichelostemma capitatum</i> , <i>Mirabilis laevis</i> , <i>Aristida adscensionis</i>	WEIR, isolated. Second plant about 10m NNE GPS point.
LVR18A17-03	Pt	18	431988	3743331	287.4	100% fr	moderate to steep	SE	rocky sandy loam over clay	CSS	<i>Mirabilis laevis</i> , <i>Chaenactis glabriuscula</i> , <i>Lupinus sparsiflorum</i> , <i>Acmispon strigosus</i> , <i>Aristida adscensionis</i> , <i>Muhlenbergia microsperma</i>	WEIR, scattered. Up to 10 meters downslope of GPS point
LVR18A17-04	Pt	2	432038	3743356	290.6	50% veg, 50% fr	moderately steep	SW	sandy gravel derived from sandstone	CSS + CH, xeric slope	<i>Keckantia</i> , <i>Malosma laurina</i> , <i>Malacolhammus fascicularis</i> , <i>Chaenactis artemisiifolia</i> , <i>Cryptantha intermedia</i> , <i>Eulobus californicus</i> , <i>Phacelia parryi</i>	WEIR, one individual downslope in drainage about 20 m distant
LVR18A17-05	Pt	1	432058	3743318	296.6	100% flw	steep	W	clay	NS, CSS	<i>Nolina cismontana</i> , <i>Acmispon maritimus</i> , <i>Bromus rubens</i> , <i>Mirabilis laevis</i> , <i>Centaurea melitensis</i> , <i>Lupinus hirsutissimus</i>	WEIR, single
Lvr18A17-06	Pt	4	432118	3743381	313.1	100% fr	moderate		clay	ridge top	<i>Bromus rubens</i> , <i>Erodium cicutarium</i> , <i>Aristida adscensionis</i> , <i>Dichelostemma capitatum</i> , <i>Acmispon maritimus</i>	WEIR, isolated
Lvr18A17-07	Pt	1	431955	3743049	249.9	100% fr	flat		sand	wash, OW	<i>Bromus rubens</i> , <i>Schismus barbatus</i> , <i>Brassica genticulata</i> , <i>Malosma laurina</i> , <i>Lupinus truncatus</i>	WEIR, single
Lvr18A17-08	Pt	11	431887	3743021	248.2	100% fr	gentle		sand	OW	<i>Bromus rubens</i> , <i>Bromus diandrus</i> , <i>Festuca perennis</i> , <i>Senecio vulgaris</i> , <i>Quercus agrifolia</i>	WEIR, patch
Lvr18A17-09	Pt	1	431771	3743013	245.6	100% fr	flat		sandy soil	OW	<i>Bromus rubens</i> , <i>Bromus diandrus</i> , <i>Festuca perennis</i> , <i>Senecio vulgaris</i> , <i>Quercus agrifolia</i>	WEIR, single
Lvr18A17-10	Pt	1	432030	3743247	295	100% fr	steep	S	sandy loam	CSS	<i>Malosma laurina</i> , <i>Dichelostemma capitatum</i> , <i>Acmispon maritimus</i> , <i>Acmispon glaber</i> , <i>Calochortus</i> sp.	WEIR, single.
Lvr18A23-01	Pt	100	432020	3743230	288	100% fr	moderately steep	S	rocky sandy loam	CSS	<i>Bromus rubens</i> , <i>Muhlenbergia microsperma</i> , <i>Acmispon glaber</i> , <i>Cryptantha intermedia</i> , <i>Avena barbata</i> , <i>Brassica genticulata</i> , <i>Mirabilis laevis</i>	WEIR, scattered

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Lepidium virginicum var. *robinsonii* - ROBINSON'S PEPPERGRASS; CRPR 4.3 (continued)

LABEL	Type	Count	UTME	UTMN	Alt. (m)	Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
Lvr18A23-02	Pt	3	432254	3743260	282	100% fr	gentle	S	sandy loam	CSS	<i>Bromus diandrus</i> , <i>Acmispon maritimus</i> , <i>Centaurea melitensis</i> , <i>Calystegia macrostegia</i> , <i>Erodium cicutarium</i> , <i>Brassica nigra</i>	WEIR
Lvr18A23-03	Pt	1	432602	3743460	297	100% fr	gentle	W	rocky sandy loam	CH	<i>Cercocarpus betuloides</i> , <i>Acaourtia microcephala</i> , <i>Malocothamnus fascicularis</i> , <i>Lupinus hirsutissimus</i> , <i>Rhus ovata</i> , <i>Eucryptia chrysanthemifoliachr</i>	WEIR, single
Lvr18A24-01	Pt	10	431908	3742758	273	100% fr	gentle	NW	clayey loam	CSS	<i>Bloomeria crocea</i> , <i>Calochortus splendens</i> , <i>Eripal</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i>	WEIR, isolated
Lvr18A30-01	Pt	25	432854	3742430	360	100% fr	moderate	NE	clay loam	OW	<i>Microseris lindleyi</i> , <i>Brassica geniculata</i> , <i>Dichelostemma capitatum</i> , <i>Hazardia squarrosa</i> , <i>Bloomeria crocea</i> , <i>Phacelia cicutaria</i> , <i>Quercus agrifolia</i>	BLND, scattered patches.
Lvr18A30-02	Pt	50	432866	3742406	365	100% fr	moderate	NE	rocky clay	AGL w/ cactus	<i>Avena barbata</i> , <i>Stipa pulchra</i> , <i>Bromus rubens</i> , <i>Calystegia macrostegia</i> , <i>Calochortus splendens</i> , <i>Deinandra fasciculata</i> , <i>Opuntia littoralis</i>	BLND, scattered patches
Lvr18A30-03	Pt	30	432874	3742368	358	100% fr	moderate	NE	rocky clay	AGL	<i>Avena barbata</i> , <i>Dichelostemma capitatum</i> , <i>Hesperoyucca whipplei</i> , <i>Calystegia macrostegia</i> , <i>Bloomeria crocea</i> , <i>Calochortus splendens</i>	BLND
Lvr18A30-04	Pt	40	432836	3742331	370	100% fr	moderate	E	rocky clay	CSS	<i>Opuntia littoralis</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Calystegia macrostegia</i> , <i>Michet</i>	BLND, scattered patches
Lvr18A30-05	Pt	70	432709	3742167	351	75% fr, 25% spent	moderately steep	SSE	rocky	Old fire break	<i>Dudleya multicaulis</i> , <i>Avena barbata</i> , <i>Mulinic</i> , <i>Deinandra fasciculata</i> , <i>Chaenactis glabriuscula</i>	BLND, scattered patches
Lvr18A30-06	Pt	3	432859	3741966	356	100% fr	moderate	SW	rocky clay	CSS	<i>Calystegia macrostegia</i> , <i>Cryptantha intermedia</i> , <i>Centaurea melitensis</i> , <i>Erodium cicutarium</i> , <i>Brassica geniculata</i> , <i>Avena barbata</i> , <i>Senecio californicus</i>	BLND, scattered
Lvr18A30-07	Pt	3	432643	3741803	288	100% fr	Flat	flat	sandy loam	OW	<i>Bromus rubens</i> , <i>Malocothamnus fascicularis</i> , <i>Acmispon glaber</i> , <i>Centaurea melitensis</i> , <i>Calystegia macrostegia</i> , <i>Bloomeria crocea</i> , <i>Rhmannus californica</i>	BLND
Lvr18A30-08	Pt	10	432728	3742243	371	100% fr	steep	NW	rocky clay	Rocky opening	<i>Avena barbata</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Helianthus gracilentus</i> , <i>Erodium cicutarium</i>	BLND. Added based on field comments provided for Dm18A30-03.
Lvr18A30-09	Pt	15	432660	3742191	331	100% fr	Steep	NNE	rocky clay	Cliff below cactus scrub	<i>Calochortus splendens</i> , <i>Avena barbata</i> , <i>Calystegia macrostegia</i> , <i>Dichelostemma capitatum</i> , <i>Eriogonum fasciculatum</i> , <i>Erodium cicutarium</i> , <i>Bromus rubens</i>	BLND. Added based on field comments provided for Dm18A30-04.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Lepidium virginicum var. *robinsonii* - ROBINSON'S PEPPERGRASS; CRPR 4.3 (continued)

LABEL	Type	Count	UTM E	UTM N	GPS		Phenology	Slope	Aspect	Soils	Habitat	Associated Species	Notes
					Alt. (m)								
Lvr18A30-10	Pt	15	432785	3742302	380		100% fr	steep	NNE	rocky clay		<i>Avena barbata</i> , <i>Calochortus splendens</i> , <i>Bloomeria crocea</i> , <i>Bromus rubens</i> , <i>Helianthus gracilentus</i> , <i>Erodium cicutarium</i>	BLND
Lvr18A30-11	Pt	50	432766	3742264	383		100% fr	steep	W	clayey loam	CSS	<i>Avena barbata</i> , <i>Sipa lepida</i> , <i>Erodium botrys</i> , <i>Calystegia macrostegia</i> , <i>Opuntia littoralis</i> , <i>Bloomeria crocea</i>	BLND, scattered
Lvr18A30-12	Pt	30	432836	3742250	373		100% fr	moderate	SW	rocky sandy loam	CH	<i>Hesperoyucca whipplei</i> , <i>Bromus rubens</i> , <i>Brassica geniculata</i> , <i>Escscholzia californica</i> , <i>Erodium botrys</i> , <i>Calystegia macrostegia</i>	BLND, scattered.
Lvr18A30-13	Pt	40	432827	3742222	380		100% flw	steep	N	clayey	chamisse CH	<i>Adenostemma fasciculata</i> , <i>Bromus rubens</i> , <i>Hesperoyucca whipplei</i> , <i>Bloomeria crocea</i> , <i>Calystegia macrostegia</i>	BLND
Lvr18A30-14	Pt	75	432861	3742175	385		90% veg, 10% flw	steep	SW	clayey loam	chamisse CH	<i>Adenostemma fasciculata</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Avena barbata</i> , <i>Deinandra fasciculata</i>	BLND
Lvr18A30-15	Pt	30	432888	3741996	381		100% flw	gentle to moderate	W	rocky sandy loam	CH	<i>Bebbia junicea</i> , <i>Lupinus sparsiflorum</i> , <i>Avena barbata</i> , <i>Calystegia macrostegia</i> , <i>Bromus rubens</i> , <i>Hesperoyucca whipplei</i>	BLND, scattered
Lvr18A30-16	Pt	50	432889	3741970	368		100% fr	ridge top	N	rocky sandy loam	CH	<i>Aemisson glaber</i> , <i>Opuntia littoralis</i> , <i>Escscholzia californica</i> , <i>Lupinus sparsiflorum</i>	BLND, scattered
Lvr18A30-17	Pt	85	432918	3741823	375		100% fr	steep	ENE	rocky sandy loam	CH	<i>Bromus rubens</i> , <i>Erodium botrys</i> , <i>Avena barbata</i> , <i>Calochortus splendens</i> , <i>Lupinus sparsiflorum</i>	BLND
Lvr18M03-01	Pt	4	432553	3742163	321		100% fr	moderate	SE	rocky clay	CSS	<i>Hesperoyucca whipplei</i> , <i>Deinandra fasciculata</i> , <i>Calochortus splendens</i> , <i>Chaenactis glabriuscula</i> , <i>Cryptantha intermedia</i> , <i>Opuntia littoralis</i>	BLND, scattered patches
Lvr18M04-01	Pt	24	431450	3742085	318		100% fr	Ridge top	W	rocky clay	CSS	<i>Artemisia californica</i> , <i>Escscholzia californica</i> , <i>Sipa pulchra</i> , <i>Cryptantha intermedia</i> , <i>Calystegia macrostegia</i> , <i>Schismus barbatus</i> , <i>Opuntia littoralis</i>	BSAD, scattered patches
Lvr18M04-02	Pt	2	430691	3741434	271		100% flw	moderate	SE	rocky outcrop	CH	<i>Hesperoyucca whipplei</i> , <i>Dichelostemma capitatum</i> , <i>Bromus rubens</i> , <i>Mirabilis laevis</i> , <i>Lupinus sp.</i> , <i>Centaurea melitensis</i>	BSAD, isolated
Lvr18M15-01	Pt	1	432023	3743066	252.5		100% fr	flat		sandy	OW, wash	<i>Bromus rubens</i> , <i>Centmel</i> , <i>Brassica nigra</i> , <i>Rhupil</i> , <i>Quercus agrifolia</i>	WEIR

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Nolina cismontana - CHAPARRAL NOLINA; CRPR 1B.2

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Habitat	Associated Species	Notes		
			UTM E	UTM N							Alt. (m)	Phenology
Nc18A17-01	Pol	18	432054	3743328	299.5	100% veg	steep	W	clay	AGL + CSS	<i>Malosma laurina, Rhus ovata, Acmispon maritimus, Phacelia parryi, Elymus condensatus, Tetradymia comosa</i>	WEIR, scattered patches; ca 410 sq. meters
Nc18A17-02	Skt	7	432151	3743458		100% veg	steep	S	clay	xeric rock cliff	<i>Acahypha californica, Malosma laurina, Nolina cismontana, Cenchrus setacea</i>	WEIR, scattered patches. Generally inaccessible on rock wall, GPS point taken at bottom of population
Nc18A17-03	Pt	1	432182	3743466		100% veg	steep	S	clay		<i>Malosma laurina</i>	WEIR, single. Inaccessible, added from field map point.
Nc18A17-04	Skt	55	432022	3743244	283	100% veg	steep	S	sandy loam	CSS	<i>Rhus integrifolia, Malosma laurina, Acmispon maritimus, Bebbia junicea, Mirabilis laevis, Phacelia parryi, Calystegia macrostegia</i>	WEIR. Scattered patches. Original count of individual stems divided by average of 12/clump
Nc18A17-05	Pt	1	432116	3743213	270	100% veg	steep	SE	rocky sandy loam	CSS	<i>Heteromeles arbutifolia, Malosma laurina, Malocephalum fascicularis, Acmispon maritimus, Calystegia macrostegia</i>	WEIR
Nc18A17-06	Pt	1	432126	3743219	269	100% veg	steep	SE	rocky sandy loam	CSS	<i>Encelia californica, Salvia mellifera, Rhus ovata, Rhus integrifolia, Acmispon maritimus</i>	WEIR
Nc18A23-01	Skt	200	432971	3743219		90% veg, 10% flw	Steep	NNW	clay	CH	<i>Lupinus hirsutissimus, Acmispon maritimus, Dichelostemma capitatum, Chaenactis artemisiifolia, Calochortus splendens, Bromus rubens</i>	WEIR, scattered patches, polygon about 8,200 sq. meters
Nc18A23-02	Pt	2	432201	3743331	292	100% veg	moderate	SW	rocky sandy loam	CSS	<i>Eriodicyon crassifolium, Mirabilis laevis, Encelia californica, Dichelostemma capitatum, Chaenactis glabruscula, Stripa coronata, Rhus ovata</i>	WEIR
Nc18A23-03	Pt	2	432213	3743368	300	100% veg	steep	S	rocky sandy loam	CSS	<i>Malosma laurina, Hesperoyucca whipplei, Melica imperfecta, Lupinus hirsutissimus, Chaenactis artemisiifolia</i>	WEIR, isolated
Nc18A23-04	Pt	8	432290	3743373	303	100%	steep	S	clayey loam	CSS	<i>Rhus integrifolia, Rhus ovata, Malocephalum fascicularis, Mirabilis laevis, Bromus rubens, Hesperoyucca whipplei</i>	WEIR, scattered
Nc18M15-01	Pt	2	432821	3742598	376.7	100% veg	ridge top, steep	W	sandy clay	chamise CH	<i>Adenostemma fasciculata, Hesperoyucca whipplei, Rhus ovata, Chaenactis artemisiifolia</i>	WEIR, scattered
Nc18M15-02	Pt	2	432812	3742632	376.7	100% veg	steep	WSW	clay loam	chamise CH	<i>Mirabilis laevis, Adenostemma fasciculata, Rhus integrifolia, Chaenactis artemisiifolia</i>	WEIR, isolated

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Nolina cismontana - CHAPARRAL NOLINA; CRPR 1B.2 (continued)												
LABEL	Type	Count	UTM E		Slope	Aspect	Soils	Habitat	Associated Species	Notes	GPS	
			UTM E	UTM N							Alt. (m)	Phenology
Nc18M15-03	Pol	100	432940	3742553	361	97% veg, 3% flw	moderate	W	rocky clay	CH	<i>Adenostemma fasciculata</i> , <i>Rhamnus ilicifolia</i> , <i>Centaurea melitensis</i> , <i>Acemison glaber</i> , <i>Calystegia macrostegia</i> , <i>Aripur</i> , <i>Brassica geniculata</i>	BLND, scattered patches. Polygon about 1,600 sq. meters
Nc18M18-01	Pol	8	433320	3742076	367	100% veg	gentle	E	rocky clay	chamise CH	<i>Hesperoyucca whipplei</i> , <i>Adenostemma fasciculata</i> , <i>Malosma laurina</i> , <i>Calystegia macrostegia</i> , <i>Brassica geniculata</i> , <i>Chlorogalum parviflorum</i>	BLND, scattered patches, 450 meters sq.
Nc18M18-02	Pol	20	433209	3742382	350.3	100% veg	ridge, gentle	W	clay	chamise CH	<i>Hesperoyucca whipplei</i> , <i>Adenostemma fasciculata</i> , <i>Malosma laurina</i> , <i>Chlorogalum parviflorum</i> , <i>Calochortus weedii</i> , <i>Calystegia macrostegia</i>	BLND, scattered over 1070sq. Meters
Nc18M18-03	Skt	140	433230	3742279	357.7	98% veg, 1% bud, 1% fr	ridge, mostly gentle	W	sand over rocky clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Calochortus weedii</i> , <i>Rhus ovata</i> , <i>Quercus berberidifolia</i> , <i>Chlorogalum parviflorum</i>	BLND, scattered patches
Nc18M18-04	Pol	12	433211	3742331	350.3	100% veg	ridge, gentle to steep	W	rocky & cobbly clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Chlorogalum parviflorum</i> , <i>Chaenactis artemisifolia</i> , <i>Brassica geniculata</i> , <i>Calochortus weedii</i> , <i>Malosma laurina</i>	BLND, scattered patches, about 350 m sq.
Nc18M18-05	Pt	1	433079	3742231	311.7	100% veg	moderate	E	rocky clay	chamise CH	<i>Hesperoyucca whipplei</i> , <i>Adenostemma fasciculata</i> , <i>Elymus condensatus</i> , <i>Acemison glaber</i> , <i>Calystegia macrostegia</i>	BLND, single clump on drainage slope.
Nc18M18-06	Pol	10	433280	3742116	363	100% veg	gentle	W	rocky clay with sand	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Chlorogalum parviflorum</i> , <i>Brassica geniculata</i> , <i>Calystegia macrostegia</i> , <i>Calochortus weedii</i>	BLND, scattered, Polygon about 1425 sq. meters
Nc18M18-07	Pt	1	433321	3741962	341.8	100% veg	moderate	S/SW	rocky clay	CH	<i>Adenostemma fasciculata</i> , <i>Calystegia macrostegia</i> , <i>Chlorogalum parviflorum</i> , <i>Rhus ovata</i> , <i>Nicotiana glauca</i> , <i>Brassica geniculata</i>	BLND, single
Nc18M18-08	Pt	7	433253	3741898	332	90% veg, 10% flw	moderate	E	rocky clay	CH	<i>Calystegia macrostegia</i> , <i>Adenostemma fasciculata</i> , <i>Calochortus weedii</i> , <i>Erodium cicutarium</i> , <i>Hesperoyucca whipplei</i> , <i>Brassica geniculata</i>	BLND, scattered patches
Nc18M18-09	Pt	3	433231	3742172	345.8	100% veg	moderate	W	rocky clay	CH	<i>Adenostemma fasciculata</i> , <i>Calystegia macrostegia</i> , <i>Lupinus hirsutissimus</i> , <i>Dichelostemma capitatum</i> , <i>Hesperoyucca whipplei</i> , <i>Chaenactis glabriuscula</i> , <i>Centaurea melitensis</i>	BLND, scattered patches
Nc18M22-01	Pol	293	433366	3742298	395.3	90% veg, 10% flw	moderate	NE/SW	rocky clay	CH	<i>Heteromeles arbutifolia</i> , <i>Rhus ovata</i> , <i>Malosma laurina</i> , <i>Chaenactis artemisifolia</i> , <i>Mirabilis laevis</i> , <i>Calochortus weedii</i>	BLND, scattered patches, polygon about 14,100 sq. meters.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Nolina cismontana - CHAPARRAL NOLINA; CRPR 1B.2 (continued)

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Habitat	Associated Species	Notes		
			UTM E	UTM N							Alt. (m)	Phenology
Nc18M22-02	Pol	6	433363	3742354	399.9	40% veg, 60% flw	moderate	W	rocky clay	CH	<i>Rhamnus ilicifolia</i> , <i>Hesperoyucca whipplei</i> , <i>Rhus ovata</i> , <i>Calochortus weedii</i> , <i>Avena fatua</i> , <i>Bromus rubens</i> , <i>Calochortus catalinae</i>	BLND, scattered, polygon about 300 sq. meters
Nc18M30-01	Skt	2000	433360	3743207	417.3	91% veg, 5% bud, 3% flw, 1% fr	varies from gentle, moderate, to steep	E & SSE mostly	clay	CH	<i>Rhus integrifolia</i>	BLND, scattered patches
Nc18M30-02	Pt	1	433460	3743305	412.5	100% veg	moderate	ESE	clay	chamise CH	<i>Quercus berberidifolia</i> , <i>Rhus ovata</i> , <i>Rhamnus ilicifolia</i> , <i>Bloomeria crocea</i> , <i>Adenostemma fasciculata</i>	BLND
Nc18M30-03	Pt	2	433458	3742986	394.8	100% veg	moderate	E	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Keckelia antrirrhoides</i> , <i>Cercocarpus betuloides</i> , <i>Elymus condensatus</i> , <i>Calyptegia macrostegia</i> , <i>Acmispon maritimus</i>	BLND, isolated
Nc18M30-04	Pol	6	433391	3743010	409.5	100% veg	gentle	E	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Heteromeles arbutifolia</i> , <i>Calochortus weedii</i> , <i>C. splendens</i> , <i>Acmispon glaber</i>	BLND, scattered, about 270sq meters
Nc18M30-05	Pol	28	433343	3742914	422	80% veg, 20% fr	moderate	SE	gravely clay	chamise CH, sandstone exposure	<i>Adenostemma fasciculata</i> , <i>Heteromeles arbutifolia</i> , <i>Acmispon glaber</i> , <i>Calyptegia macrostegia</i> , <i>Chaenactis artemisiifolia</i> , <i>Hesperoyucca whipplei</i>	BLND, scattered patches over about 1,840 sq. meters
Nc18M30-06	Pt	1	433266	3743387	461.1	100% flw	moderate	E	red clay	chamise CH	<i>Salvia mellifera</i> , <i>Chaenactis artemisiifolia</i> , <i>Eriogonum fasciculatum</i> , <i>Adenostemma fasciculata</i> , <i>Bromus rubens</i> , <i>Calyptegia macrostegia</i> , <i>Calochortus</i>	BLND, single
Nc18M30-07	Pt	1	433443	3743358	411.6	100% veg	moderate	E	red clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Rhamnus ilicifolia</i> , <i>Acmispon strigosus</i> , <i>Calochortus weedii</i> , <i>Acmispon glaber</i> , <i>Calyptegia macrostegia</i>	BLND, single
Nc18M30-08	Pt	1	433520	3743282	411.1	100% veg	moderate	N	red clay	CH	<i>Heteromeles arbutifolia</i> , <i>Rhuitii</i> , <i>Rhus ovata</i> , <i>Stipa lepida</i> , <i>Hazardia squarrosa</i> , <i>Lomatium lucidum</i> , <i>Bloomeria crocea</i>	BLND, single
Nc18M30-09	Pt	2	433540	3743238	406.4	100% veg	moderate	SSE	red clay	CH	<i>Quercus berberidifolia</i> , <i>Lupinus hirsutissimus</i> , <i>Calyptegia macrostegia</i> , <i>Malacothammus fascicularis</i> , <i>Elymus condensatus</i> , <i>Hesperoyucca whipplei</i>	BLND, single
NC18J01-01	Pt	1	432985	3743791	385.3	100% veg	ridge, gentle	W	loamy clay	AGL, CSS	<i>Rhus integrifolia</i> , <i>Galium angustifolium</i> , <i>Hesperoyucca whipplei</i> , <i>Avena barbata</i>	WEIR, single
NC18J01-02	Pt	1	432993	3743771	386.9	100% veg	ridge, steep	S	clay	CSS, sandstone band	<i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i> , <i>Rhamnus ilicifolia</i> , <i>Mirabilis laevis</i>	WEIR, single

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

Nolina cismontana - CHAPARRAL NOLINA; CRPR 1B.2 (continued)

LABEL	Type	Count	GPS		Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTM E	UTM N						
Nc18101-03	Skt	170	432571	3744352		SE	rocky clay			WEIR, scattered patches. Polygon about 8,530 sq. meters. Count based on average low density of 0.02 plants per sq. meter.
Nc18105-01	Skt	4270	433131	3744138	ridge gentle to steep	N to NW + S	rocky clay	chamise CH		WEIR, scattered patches. Polygon about 178,000 sq. meters. Count based on average moderate density of 0.024 plants per sq. meter.
Nc18105-02	Skt	160	432772	3744387	gentle to steep	S	rocky clay	chamise CH		WEIR. Polygon about 7,870 sq. meters. 2008: Nc08105-03. Count based on average low density of 0.02 plants per sq. meter.
Nc18112-02	Skt	4	433002	3747685	steep	S	clayey		<i>Rhus integrifolia</i> , <i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i> , <i>Brickellia californica</i>	BLND, scattered patches
Nc18112-03	Pt	8	433089	3742610	steep	S	fraible rocky clay		<i>Bromus rubens</i> , <i>Hesperoyucca whipplei</i> , <i>Centaurea melitensis</i> , <i>Brassica geniculata</i> , <i>Rhus ovata</i>	BLND, scattered patches
Nc18112-04	Skt	4	433151	3742588	moderate	S	clay	below sandstone band	<i>Malosma laurina</i> , <i>Hesperoyucca whipplei</i> , <i>Helianthus gracilentus</i> , <i>Stipa coronata</i> , <i>Malacothrix saxatilis</i> , <i>Salvia mellifera</i>	BLND, one cluster forms a distinct ring.
Nc18112-05	Pt	2	433025	3742645	moderate	S	clay	CSS, CH		BLND; scattered
Nc18113-01	Skt	560	433696	3741932	ridge, gentle to steep	W	rocky clay	chamise CH, NS, sandstone	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Rhus integrifolia</i> , <i>Ceanothus sp.</i> , <i>Salvia mellifera</i> , <i>Calochortus weedii</i>	BLND, scattered patches, polygon about 24,250 sq. meters. Count based on average moderate density of 0.024 plants per sq. meter (densities of Nc18A03-09 & Nc18A03-01).
Nc18113-02	Skt	50	433838	3742098	gentle + moderately steep	W		chamise CH	<i>Adenostemma fasciculata</i> , <i>Cahystegia macrostegia</i> , <i>Stipa coronata</i> , <i>Calochortus weedii</i> , <i>Mirabilis laevis</i>	BLND; polygon about 2,190 sq. meters. Count based on average moderate density of 0.024 plants per sq. meter.

APPENDIX E: RARE PLANT SITE SPECIFIC DATA NROC LANDS

<i>Nolina cismontana</i> - CHAPARRAL NOLINA; CRPR 1B.2 (continued)											
LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTM E	UTM N	Alt. (m)						
Nc18119-01	Skt	850	433712	3741661		gentle to moderate	W	clay & sandstone	chamise CH	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Malosma laurina</i> , <i>Calochortus weedii</i> , <i>Hazardia squarrosa</i> , <i>Chlorogalum parviflorum</i>	BLND; scattered patches; polygon about 36,990 sq. meters. Count based on average moderate density of 0.024 plants per sq. meter.
Nc18119-02	Skt	184	433851	3742230		gentle to moderate	W	rocky clay	chamise CH		BLND; polygon about 8,010 sq. meters. Count based on average moderate density of 0.024 plants per sq. meter.
Nc18127-01	Pt	1	433010	3742203	326.3	gentle	SE	rocky clay	chamise CH	<i>Hesperoyucca whipplei</i> , <i>Galium angustifolium</i> , <i>Acmispon glaber</i> , <i>Malosma laurina</i> , <i>Adenostemma fasciculata</i>	BLND, single. Along old dirt road bed.
Nc18129-01	Pt	5	433571	3742687	401.2	moderate	NE	clay	chamise CH	<i>Adenostemma fasciculata</i> , <i>Cercocarpus betuloides</i> , <i>Elymus condensatus</i> , <i>Hazardia squarrosa</i> , <i>Calochortus weedii</i> , <i>Keckelia cordifolia</i> , <i>Malacothamnus fasciculatus</i> , <i>Chlorogalum pomeridianum</i>	BLND, patch
Nc18129-02	Pol	40	433412	3743076	410.1	gentle to moderate	NE	clay	chamise CH, sandstone exposures	<i>Adenostemma fasciculata</i> , <i>Hesperoyucca whipplei</i> , <i>Chlorogalum pomeridianum</i>	BLND, scattered patches, polygon about 980 m sq.

9252

Romneya coulteri - COULTER'S MATILIJIA POPPY; CRPR 4.2

<i>Romneya coulteri</i> - COULTER'S MATILIJIA POPPY; CRPR 4.2											
LABEL	Type	Count	GPS			Slope	Aspect	Soils	Habitat	Associated Species	Notes
			UTM E	UTM N	Alt. (m)						
Rc18M22-01 (a)	POL	340	433016	3742739	431.8	moderate	NW	clay loam		<i>Avena fatua</i> , <i>Calystegia macrostegia</i> , <i>Phacelia cicutaria</i> , <i>Marah macrocarpus</i> , <i>Bromus rubens</i>	WEIR, patch
Rc18119-01	Pt	3	435166	3743140	528.3	gentle, ridge top	WNW	clay loam	AGL + CSS	<i>Bromus diandrus</i> , <i>Avena fatua</i> , <i>Artemisia californica</i> , <i>Salvia aptiana</i> , <i>Malacothamnus fasciculatus</i>	GYPS, patch

343

(a) The 340 count for this population also includes seedlings, which probably account for three-quarters of the plants.