

City of San Diego 2014 MSCP Rare Plant Monitoring Report

City of San Diego
Park and Recreation Department
Open Space Division

August 2014



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Appendix A - City of San Diego MSCP Rare Plant Monitoring: 2014 Field Monitoring Dates and Staff

I. Introduction

The Biological Monitoring Plan for the Multiple Species Conservation Program (Ogden Environmental, Inc. 1996), Status Summary of MSCP Biological Monitoring Protocols (Conservation Biology Institute 2001), San Diego MSCP Rare Plant Monitoring Review and Revision (USGS, 2007) and the Assessment of Eleven Years of Rare Plant Monitoring Data from the San Diego Multiple Species Conservation Program (2010) are important components of the City of San Diego's MSCP under its 1997 Implementing Agreement (R28455) with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The monitoring program includes plant, animal, and habitat monitoring requirements for each MSCP-participating jurisdiction; the City of San Diego began rare plant monitoring in 1999. In 2014, the City performed rare plant monitoring using the Management Strategic Plan (MSP) 2014 Monitoring Protocol:

Acanthomintha ilicifolia – Black Mountain, Dennery Ranch East, Mission Trails Regional Park, Otay Lakes, Penasquitos Canyon, Sabre Springs
Acmispon prostratus – Mission Bay
Ambrosia pumila – Mission Trails Regional Park – Kumeyaay Lake
Bloomeria clevelandii – East Elliott, Lopez Ridge, Marron Valley, Mission Trails Regional Park, Otay Lakes
Brodiaea filifolia – Black Mountain
Brodiaea orcuttii – Carroll Canyon, Lopez Ridge, Nobel Drive, USIU/Scripps Ranch
Chloropyron maritimum ssp. maritimum – Dog Beach
Cylindropuntia californica var. *californica* – Otay Mesa, Spring Canyon
Deinandra conjugens – Dennery Ranch, Dennery Ranch East, Proctor Valley
Dicranostegia orcuttiana – Otay River Valley
Dudleya blochmaniae ssp. *brevifolia* – Carmel Mountain, Crest Canyon
Dudleya variegata – Black Mountain East, East Elliott, Goat Mesa/Spring Canyon, Marron Valley, Mercy Road, Mission Trails Regional Park, Navajo/Mission Gorge, Otay Lakes, Santa Luz
Eryngium aristulatum var. *parishii* – Goat Mesa/Spring Canyon, Otay Lakes
Monardella stoneana – Marron Valley, Otay Lakes
Monardella viminea – Lopez Canyon, Sycamore Canyon
Navarretia fossalis – Carroll Canyon, Goat Mesa/Spring Canyon, Nobel Drive, Otay Lakes, Robinhood Ridge
Pogogyne abramsii – Carroll Canyon, Lopez Ridge
Pogogyne nudiuscula – Robinhood Ridge
Rosa minutifolia – Dennery Ranch

The results of the rare plant monitoring are used by the City to develop a list of management needs. This separate management report will be compiled at the end of calendar year 2014.

City of San Diego MSCP Rare Plant Monitoring: 2014 Summary Results

Species	Site Name	Population			Native		Non-Native		Management Recommendations	Field Data Sht (pg.#)	Photo (pg. #)
		Area (m ²) ¹	# Individuals	Percent cover	Number of Species ²	Percent Cover ^{2,3}	Number of Species	Percent Cover ³			
<i>Acanthomintha ilicifolia</i> (San Diego Thorn-mint)	Black Mountain	0.0	0	0%	16	31%	5	8%	very low rainfall resulted in low germination/cover of non-natives that are usually present at site- Brassica nigra, Cynara cardunculus, Brachypodium distachyon	7	10, 12
	Dennerly Ranch East	0.0	0	0%	6	22%	3	11%	maintain existing fence, treat non-native forbs and grasses	13	16
	Mission Trails Regional Park	6.4	21	1%	18	44%	6	53%	continue hand-weeding program, maintain access control- fencing/signs	18	21
	Otay Lakes	0.0	0	0%	13	22%	5	15%	continue to maintain access control via signs/gates/vehicle barriers	23	26
	Penasquitos Canyon Obs. 1	12.0	98	1%	10	26%	4	10%	plants are smaller this year than usual for date- do not appear to have germinated until second (March) rain	28	31
	Penasquitos Canyon Obs. 2	0.0	0	0%	10	23%	6	13%	treat non-native grass cover	32	35
	Penasquitos Canyon Obs. 3	<1	2	<1%	14	52%	3	12%	treat non-native grass cover	36	39
	Sabre Springs East #1 Subpopulation	0.0	0	0%	10	31%	10	33%	continue to maintain weed control	41	44
	Sabre Springs West #2 Subpopulation	12.0	2	1%	10	29%	7	38%	continue to maintain weed control	45	48
Sabre Springs South #3 Subpopulation	<1	3.0	<1%	9	34%	3	20%	treat non-native grass cover	49	52	
<i>Acmispon prostratus</i> (Nuttall's Lotus)	No Man's Land (Mission Bay Site #1)	2	1	1%	6	10%	2	2%	continue to maintain access control with fencing- fencing is damaged along Sea World Drive; treat non-native forbs	69	72
	Hospitality Point (Mission Bay Site #2)	1622.0	63	1%	3	21%	5	44%	continue to maintain fencing, signs and path boundaries, treat non-native grasses with approved herbicide	60	63
	SD River Rip Rap (Mission Bay Site #3)	70.4	17	0%	4	5%	2	73%	manage/treat non-native grasses and forbs	74	77
	Mariner's Point (Mission Bay Site #4)	†	†	†	†	†	†	†	continue to restrict access with fencing and signs	65	68
	Dune Triangle (Mission Bay Site #5)	0.0	0	0%	3	38%	4	14%	none	55	58
	South Shores (Mission Bay Site #6)	66.5	19	0%	6	15%	10	42%	continue SD Audobon-led effort to treat iceplant and to remove dead biomass from previously pulled areas. Control other non-native invasive forbs and grasses as needed following removal of iceplant	79	82
Note: Presence/absence only surveys conducted at Mariner's Point											
<i>Ambrosia pumila</i> (San Diego Ambrosia)	Mission Trails Regional Park Kumeyaay Lake	6593.0	100,000	0%	7	84%	5	9%	continue herbicide treatments, mowing and hand pulling on non-native grasses and forbs; pull out Brassica nigra before seed set	85	88
<i>Bloomeria clevelandii</i> (San Diego Goldenstar)	East Elliott Obs. 1	2132.0	193	0%	10	41%	6	74%	continue to maintain trail closure and general access control	91	94
	East Elliott Obs. 2	0.0	0	0%	14	62%	3	4%	none	95	98
	East Elliott Obs. 3	0.0	0	100%	8	44%	3	3%	none	99	102
	East Elliott Obs. 4	<1	1	1%	14	47%	2	2%	none	103	106
	East Elliott Obs. 5	272.0	15	0%	12	45%	1	<1%	none	107	110
	Lopez Ridge	11.0	11	1%	19	38%	7	17%	continue to maintain fences/signs, continue trash pickup	112	115
	Marron Valley Obs. 1	0	0	0%	9	30%	4	31%	continue to maintain access control- signs, gates	117	120
	Marron Valley Obs. 2	0.0	0	0%	11	35%	5	14%	continue to maintain access control- signs, gates; weeding	121	124
	Marron Valley Obs. 3	0.0	0	0%	12	35%	4	4%	continue to maintain access control- signs, gates; weeding	125	128
	Marron Valley Obs. 4	0.0	0	0%	7	19%	3	21%	continue to maintain access control- signs, gates	129	132
Mission Trails Regional Park	0.0	0	0%	11	33%	4	4%	continue to maintain post-burn and treat non-native grasses	134	137	
Otay Lakes East Obs. 1	0.0	0	0%	11	23%	2	11%	continue to maintain access control- signs, gates, vehicle barriers	139	142	
Otay Lakes West Obs. 2	0.0	0	0%	9	16%	4	15%	continue to maintain access control- signs, gates, vehicle barriers	143	146	

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		Area (m ²) ¹	# Individuals	Percent cover	Number of Species ²	Percent Cover ^{2,3}	Number of Species	Percent Cover ³			
<i>Brodiaea filifolia</i> (Thread-leaved Brodiaea)	Black Mountain	252.0	10	1%	8	11%	7	28%	dethatch and treat weeds with herbicide over 5+ acre area	149	152
<i>Brodiaea orcuttii</i> (Orcutt's Brodiaea)	Carroll Canyon	57.6	1	1%	7	10%	2	2%	clean up broken glass	155	158
	Lopez Ridge	25.0	23	1%	19	38%	7	17%	continue to maintain fences/signs, continue trash pickup	160	163
	Nobel Drive	0	0	0%	9	29%	5	11%	continue habitat enhancement efforts	165	168
	USIU/Scripps Miramar Ranch	301.0	119	1%	17	46%	7	16%	treat non-native grasses	170	173
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> (Salt-marsh Bird's Beak)	Dog Beach	223.6	1042	5%	6	54%	1	50%	use best available method for treating Limonium within maximum extent; continue to maintain fences and signs to keep people and dogs out of sensitive habitats	177	180
<i>Cylindropuntia californica</i> (Snake Cholla)	Otay Mesa	2730	13	1%	6	51%	5	29%	submit pesticide applicator request to treat non-native grasses and mustards near photopoint- weeds from across dirt road are beginning to spread up slope towards cactus population	183	186
	Goat Mesa (Spring Canyon)	559.0	14	1%	8	32%	8	31%	continue to maintain access control- signs, fences, and gates	188	191
<i>Deinandra conjugens</i> (Olay Tarplant)	Dennerly Ranch East	<1	2	1%	9	17%	9	40%	treat non-native forbs and grasses; restrict access on unauthorized trail	195	198
	Dennerly Ranch	0.0	0	0%	9	46%	5	5%	continue to maintain fences/gates	200	203
	Proctor Valley	0.0	0	0%	5	23%	4	30%	treat exotic grasses; dethatch; continue access control	205	208
<i>Dicranostegia orcuttiana</i> (Orcutt's Bird's Beak)	Otay River Valley	9.0	1	<1%	16	63%	3	3%	continue to maintain access control with fencing; pick up cut shrubs/debris along trail	211	214
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> (Short-Leaved Dudleya)	Carmel Mountain Obs. 1	174.6	782	1%	15	24%	4	6%	continue to maintain access control via fencing, signs, barriers	217	220
	Carmel Mountain Obs. 2	26.5	63	1%	16	39%	1	1%	continue to maintain trail closure with fences, signs, native plants and other barriers	222	225
	Carmel Mountain Obs. 3	321.5	615	1%	16	39%	2	2%	continue to maintain access control via fencing, signs, barriers	227	230
	Crest Canyon North	144.3	825	1%	14	27%	2	6%	continue to manage access and monitor for trampling by adjacent homeowner	232	235
	Crest Canyon South	34.7	20	1%	12	59%	0	0%	continue to maintain access control with fencing	237	240
<i>Dudleya variegata</i> (Variegated Dudleya)	Black Mountain East	0.0	0	0%	15	56%	6	29%	treat non-native grasses and forbs, and remove thatch to encourage Dudleya to return	243	246
	East Elliott - Creek	0.0	0	0%	8	27%	6	12%	none	248	251
	East Elliott - Hilltop	<1	1	1%	16	54%	1	1%	continue to prevent use of illegal trail by closing trails with fencing, signs, etc.	253	256
	East Elliott - Slope	0.0	0	0%	9	36%	3	16%	none	258	261
	Goat Mesa (Spring Canyon)	37.0	21	1%	15	61%	3	11%	continue to maintain access control- signs, gates, fences	263	266
	Marron Valley	152.0	1878	5%	9	40%	4	28%	control of non-native grasses and forbs around areas of high density; protect soil crust when possible; continue to maintain access control via signs and gate	268	271
	Mercy Road	66.0	37	1%	18	41%	4	43%	treat non-native grasses with CBI approved methods	273	276
	Mission Trails #1	35.0	24	1%	15	28%	6	10%	continue to maintain access control with fencing, etc.	278	281
	Mission Trails #2	109.0	108	1%	15	37%	3	58%	none	283	286
Mission Trails #3	21.0	48	1%	10	39%	2	31%	none	288	291	
	Navajo/Mission Gorge	79.0	552	1%	15	40%	3	42%	continue to maintain access with fencing, gate, etc.; control non-native grass with herbicide treatment or CBI-recommended techniques when available	293	296
	Otay Lakes	475.0	641	1%	6	33%	2	6%	moderate cover non-native grasses and forbs- hand pull or treat with herbicide; continue to maintain access control- signs, gate, vehicle barrier	298	301

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		Area (m ²) ¹	# Individuals	Percent cover	Number of Species ²	Percent Cover ^{2,3}	Number of Species	Percent Cover ³			
	Santa Luz	0.0	0	0%	12	72%	4	13%	species not found at this site for several years-- consider treating non-native grasses and forbs and removing thatch; **Post-fire: monitor recovery of CSS and treat weeds/grasses as needed	303	306-309
<i>Eryngium aristulatum</i> var. <i>parishii</i> (San Diego Button Celery)	Goat Mesa #1 (Spring Canyon)	174.0	544	15%	6	41%	3	42%	continue to maintain access control- signs, fences, and gates	313	316
	Goat Mesa #2 (Spring Canyon)	689.0	1272	7%	7	21%	5	27%	continue to maintain access control- signs, fences, and gates	318	321
	Otay Lakes	1875	5100	7%	11	19%	5	9%	continue to maintain access control- signs, gate, vehicle barriers; moderate cover non-native grasses and forbs-- treat as necessary	323	326
<i>Monardella stoneana</i> (Jennifer's Monardella)	Marron Valley	NA	2	1%	18	37%	3	7%	none	329	332
	Otay Lakes	2.0	1	1%	10	51%	7	11%	none	334	337
<i>Monardella viminea</i> (Willow Monardella)	Lopez Canyon West Terrace #1	0.0	0	0%	5	36%	6	20%	none	341	344
	Lopez Canyon East of Bridge #2	102.0	8	2%	11	45%	4	19%	none	346	349
	Lopez Canyon East of Bridge #3	11.0	2	2%	8	62%	8	23%	none	351	354
	Sycamore Canyon	419.0	85	10%	12	42%	5	19%	implement erosion control measures upon adoption of NRMP	356	359
<i>Navarretia fossalis</i> (Spreading Navarretia)	Carroll Canyon	0.0	0	0%	7	32%	2	2%	no competition from weeds due to dry year	363	366
	Goat Mesa (Spring Canyon)	0.0	0	0%	6	41%	3	42%	continue to maintain access control- signs, fences, and gates	368	371
	Nobel Drive	2.0	1	<1%	9	28%	5	8%	continue habitat enhancement efforts	373	376
	Otay Lakes	0.0	0	0%	9	22%	3	17%	continue to maintain access control- signs, gates, vehicle barriers	378	381
	Robinhood Ridge	0.0	0	0%	10	26%	3	3%	treat non-native grasses and forbs	383	386
<i>Pogogyne abramsii</i> (San Diego Mesa Mint)	Carroll Canyon	107.0	432	5%	10	25%	3	3%	continue maintenance control and trash collection	389	392
	Lopez Ridge	265.0	1043	5%	19	38%	7	17%	continue to maintain fences/signs, continue trash pickup	394	397
<i>Pogogyne nudiuscula</i> (Otay Mesa Mint)	Robinhood Ridge	13	9	1%	11	27%	2	2%	treat non-native grasses and forbs	401	404
<i>Rosa minutifolia</i> (Small-leaved Rose)	Denney Ranch	249.7	9	3%	9	46%	5	5%	continue to maintain fences and gates	407	410

1) Observation area only, not necessarily representative of entire site or comparable to previous quantitative analyses.
 2) Number and percent cover of native species includes species of interest.
 3) Elvin, M.A and Sanders, S.C. (2003) A New Species of Monardella (Lamiaceae) from Baja California, Mexico, and Southern California, United States. Novon. 13:4. 425-432
 † No data collected

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Acanthomintha ilicifolia
San Diego Thorn-Mint



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Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDB EO#: EO60 Translocated? no
 Preserve: Black Mountain Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Black Mountain Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland and Betsy Miller - City of San Diego
 Date: 4/16/14 / post fire 5/23/14 Time Start: 1:51:40 Time Finish: 5:18:20
pt 10:58 pt 10:55

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No very low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: State Plane CA Zone 6
 Coordinates; E: 6284663.39 N: 1946643.29 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax K190
 Location 1 (see coordinates above) Direction (facing) N,NE,E,SE,S Height 1.1m Level 89-92 S:IMSCP
 Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Corethrogyne filiginifolia</i>	1			✓	<i>Anagallis arvensis</i>	1		
	<i>Peritoma arborea</i>	3			✓	<i>Cynara cardunculus</i>	1		
	<i>Aemisson glaber</i>	5			✓	<i>Brassica nigra</i>	3		
	<i>Artemisia californica</i>	2				<i>Opuntia sp.</i>	1		
	<i>Rhus integrifolia</i>	2			✓	<i>Brachypodium distachyon</i>	2		
	<i>Salsia mellifera</i>	1			✓	<i>Erodium sp.</i>	1		
	<i>Malesna laurina</i>	1							
	<i>Convolvulus simulans</i>	4							
	<i>Harpagocolla palmerii</i>	1							
	<i>Lupinus sp.</i>	2							
	<i>Allium haematodes</i>	1							
	<i>Aemisson micranthus</i>	1							
	<i>Dichelostemma capitatum</i>	1				Bare Ground:	60		
	<i>Calypalegia macrostegia</i>	2				Litter:	7		
	<i>Toxicoscordion venenosum</i>	3				Rock:	7		

Total % Cover: 20 % Herb Cover: 12 % Shrub Cover: 8 % Tree Cover: 0

Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD
 Preserve: Black Mountain Occurrence Name: Black Mountain
 Date: 4/16/14 ; 5/28/14 post-fire Time Start: site: 9:40 Time Finish: site: 10:20
 Surveyors & Affiliation/Agency: BM, KR point: 10:05 point: 10:55

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Lotus scoparius alliance; Lotus scoparius association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 0 Thatch Cover: 3 Thatch Depth: Ave. 3 cm Max: 5 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Bromica nigra - 2 Ave. Height? 25 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 2
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____
 Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS

very low rainfall resulted in very low germination/cover of non-natives that are usually present at site - *Brassia nigra*, *Cynara cardunculus*, *Brachypodium distachyon*

VII. MANAGEMENT ACTIONS IN LAST YEAR

access management - continued
 x no impacts from illegal access noted

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Lesser night hawk nesting @ top of hill near H₂O tower
 - previously noted @ photopoint location

Red diamond rattlesnake near bottom of trail

Harpogonilla palmerii @ pt

*This site burned partially during Bernardo Fire (5/13/14). Fire burned across maximum extent leaving unburned patches. Photopoint was re-taken and unburned patches were mapped by KR and SM on 5/23/14. site will need to be monitored for recovery post-fire; due to pattern of burned/unburned area site is good candidate for study of control/treatment of non-native grasses/forbs post-fire.

***Acanthomintha ilicifolia* (San Diego Thornmint) Black Mountain, Pre-Fire**



Panorama from Southwestern edge of population, facing North, Northeast, East, Southeast.
Panorama location is 6284663.39 1946643.29 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

***Acanthomintha ilicifolia* (San Diego Thornmint) Black Mountain, Post-Fire**



Panorama from Southwestern edge of population, facing North, Northeast, East, Southeast.
Panorama location is 6284663.39 1946643.29 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acanthomintha ilicifolia - Black Mountain

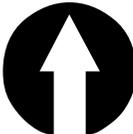


Area 2014: 0 sq. m.

Pop. Area 2003 - 2014
Max Area: 56.496 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Wendy Rogers, 2014



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MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Acanthomintha ilicifolia</u>	MSP Occurrence ID: <u>TBD</u>	
Preserve: <u>Dennery Ranch</u>	Occurrence Name: <u>Dennery Ranch East</u>	
Date: <u>4/24/14</u>	Time Start: <u>1:37</u>	Time Finish: <u>2:10</u>
Surveyors & Affiliation/Agency: <u>BM, KR, SP, WR</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Simmondsia chinensis Alliance; Simmondsia chinensis - Bahiopsis lacinata Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>60</u> Thatch Depth: Ave. <u>2</u> cm Max: <u>3</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>BRASSICA SP.</u> Ave. Height? <u>15</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open space, residential</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>2</u> Time Start: <u>1:37</u> Temp. Start: <u>68°F</u> Time Finish: <u>2:10</u> Temp. Finish: <u>68°F</u>		
Ant Sample Collected?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ant Sample #: <u>1</u> Ant Station Photo #: <u>1319</u>		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>6</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>6</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>1</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire <u>1</u>	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____	
Trails <u>1</u>	If Trails are Present, are They Authorized? Yes / No / Unknown	
Type of Trail Use?	<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles	
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Acanthomintha ilicifolia* (San Diego Thornmint) Dennery Ranch East**



Panorama from Southern edge of population, facing West, Southwest, South.
Panorama location is 6323278.112 1793071.284 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acanthomintha ilicifolia - Dennery Canyon East

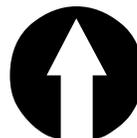


Area 2014: 0 sq. m.

Pop. Area 2010 - 2014
Max Area: 1005.8 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Wendy Rogers, 2014



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SanGIS

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDB EO#: EO33 Translocated? *no*
 Preserve: Mission Trails Regional Park Management Unit: MU4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Mission Trails Regional Park Sample Point #: 1 1
 Surveyors & Affiliation: *Kim Roeland, Wendy Rogers City of San Diego*
 Date: *4-17-14* Time Start: *11:20* Time Finish: *12:04*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 21 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 10.4 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 3 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6308619.85 N: 1881117.52 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) N,NE, E, SE, S Height 1.6m Camera Angle 10 degrees down Photo # 4-44 File location S:WSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Acanthomintha ilicifolia</i>	1			✓	<i>Erodium</i> sp.	5		
	<i>Isocoma menziesii</i>	5			✓	<i>Brachypodium distachyon</i>	40		
	<i>Salvia mellifera</i>	5			✓	<i>Sonchus</i> sp.	1		
	<i>Achillea glaber</i>	3			✓	<i>Brassica nigra</i>	3		
	<i>Malosma laurina</i>	7			✓	<i>Lepidium nitidum</i>	1		
	<i>Rhus integrifolia</i>	7			✓	<i>Centaurea melitensis</i>	2		
	<i>Peritoma arborea</i>	3			✓	<i>Anagallis arvensis</i>	2		
	<i>Eriogonum fasciculatum</i>	1							
	<i>Artemisia californica</i>	1				<i>Achillea glaber</i>	1		
	<i>Malacothamnus fasciculatus</i>	1				<i>Chamaesyce albomarginata</i>	1		
	<i>Fouquieria virens</i>	1							
	<i>Opuntia littoralis</i>	1							
	<i>Lonicera subspicata</i>	1				Bare Ground:	5		
	<i>Convolvulus simulans</i>	2				Litter:	1		
	<i>Dichelostemma capitatum</i>	2				Rock:	1		

Total % Cover: 95 % Herb Cover: 90 % Shrub Cover: 5 % Tree Cover: 0

Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD

Preserve: Mission Trails Regional Park Occurrence Name: Mission Trails Regional Park

Date: 4/17/14 Time Start: 11:20 Time Finish: 12:40

Surveyors & Affiliation/Agency: KR, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica-Eriogonum fasciculatum
Alliance / Artemisia californica-Eriogonum fasciculatum-Opuntia littoralis /
Pyrola (edulis) Association
 Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 3 Thatch Depth: Ave. 2 cm Max: 4 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Brassica sp 2 Ave. Height? 20 cm
Centauria millefolium 2
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes No Unknown and fenced
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acanthomintha ilicifolia* (San Diego Thornmint) Mission Trails Regional Park**



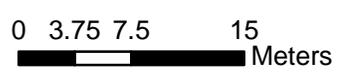
Panorama from Western edge of population, facing North, Northeast, East, Southeast, South.
Panorama location is 6308619.848 1881117.522 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acanthomintha ilicifolia - Mission Trails RP

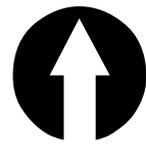


Area 2014: 6.4 sq. m.
 2014 Population Area

Pop. Area 2001 - 2014
Max Area: 1206.07 sq. m.
Min Area: 8.17 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS
22

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDDB EO#: none Translocated? *no*
 Preserve: Otay Lakes Cornerstone Lands Management Unit: *3*
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Otay Lakes Sample Point #: 1
 Surveyors & Affiliation: *Kim Raeland, Sean Parer, Betsy Miller, Wendy Rogers - City of San Diego*
 Date: *4/22/14* Time Start: *9:25 AM* Time Finish: *10:30 AM*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall - found intermittently from 2001
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356877.62 N: 1807531.39 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) SE, S, SW, W .85m 10° up 1250-1253 S:MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eryngium aristulatum</i>	7				<i>Miconseris douglasii</i> ssp. <i>platyrrhpha</i>	1		
	<i>Chelva truxillensis</i>	1				<i>Plantago truncata</i>	1		
	<i>Chlorogalum parviflorum</i>	1			✓	<i>Anagallis arvensis</i>	1		
	<i>Lasiantha californica</i>	1							
	<i>Desmodium fasciculata</i>	2							
✓	<i>Senecio chrysaceus</i>	2							
✓	<i>Erodium</i> sp.	10							
	<i>Delaginella ciurascens</i>	2							
	<i>Lepidium</i> sp.	1							
	<i>Dudleya variegata</i>	1							
✓	<i>Sabbilla fragus</i>	1							
	<i>Convolvulus simulans</i>	2							
	<i>Melilotus indica</i>	1				Bare Ground:	40		
	<i>Pentstemon melitensis</i>	1				Litter:	20		
✓	<i>Medicago polymorpha</i>	1				Rock:	12		

Total % Cover: 30 % Herb Cover: 30 % Shrub Cover: 0 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD

Preserve: Otay Lakes Cornerstone Lands Occurrence Name: Otay Lakes

Date: 4/22/14 Time Start: 9:25 Time Finish: 10:30

Surveyors & Affiliation/Agency: KR, SA, BVM, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Deinandra fasciculata Provisional Alliance
Deinandra fasciculata Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 2 Thatch Cover: 2 Thatch Depth: Ave. 3 cm Max: 5 cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass / 3 Ave. Height? 7 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>2</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>4</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
Road Construction/Maintenance 1
Vegetation Clearing 1
ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
Evidence of Recent Fire 4 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____
Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV | Service Vehicles

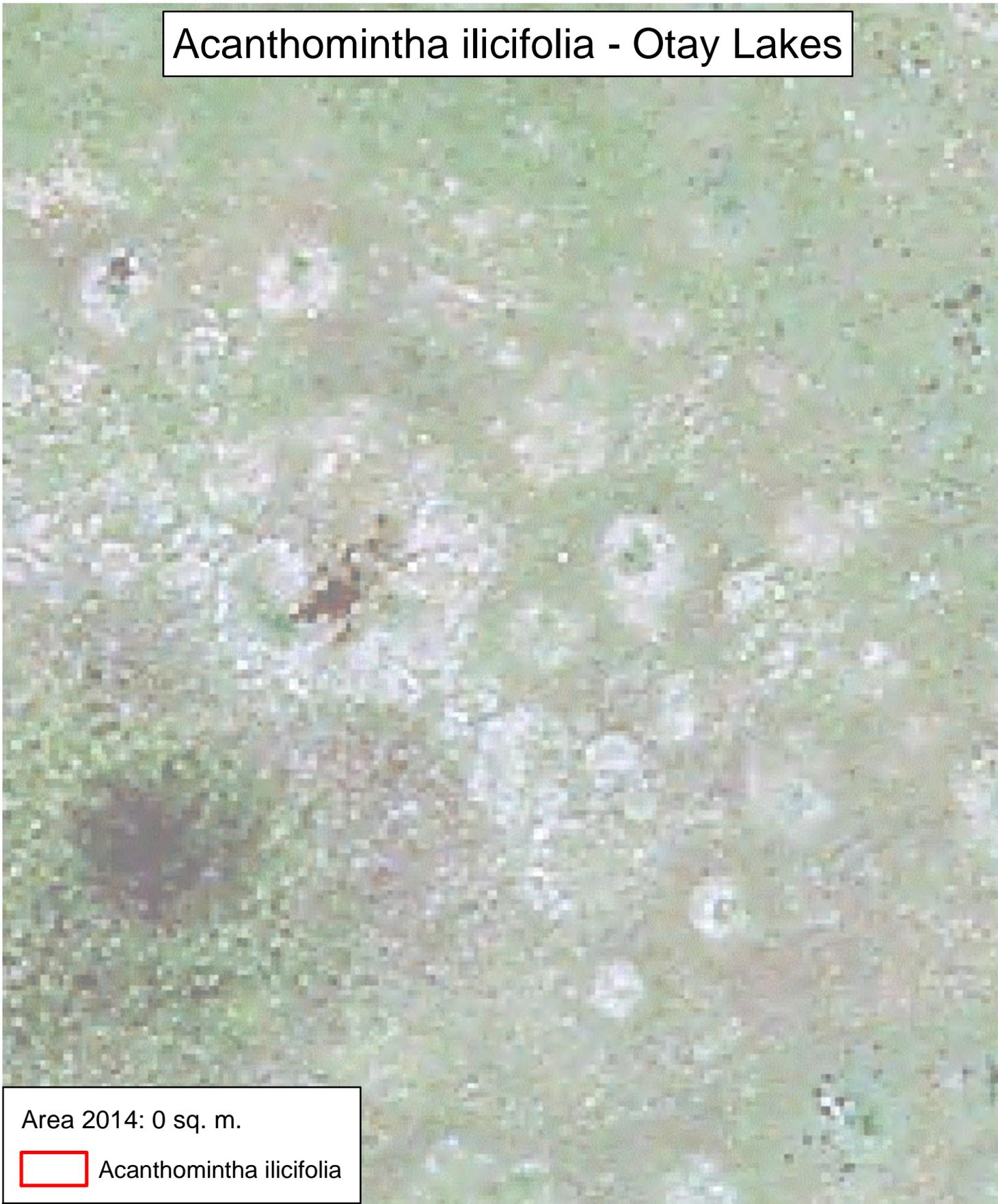
Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acanthomintha ilicifolia* (San Diego Thornmint) Otay Lakes**



Panorama from North of population, facing East, Southeast, South, Southwest.
Panorama location is 6276496.255 1918576.025 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acanthomintha ilicifolia - Otay Lakes



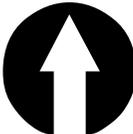
Area 2014: 0 sq. m.

 Acanthomintha ilicifolia

Pop. Area 2003 - 2014
Max Area: 10.7 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDDDB EO#: EO19 Translocated? *No*
 Preserve: Penasquitos Canyon Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Penasquitos Canyon Obs. #1 Sample Point #: 1
 Surveyors & Affiliation: *Kim Roeland, Pina Washington, Beth Miller - City of San Diego*
 Date: *4/16/14* Time Start: *12:55 pm* Time Finish: *1:20 pm*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 98 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 98 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 12 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6276496.26 N: 1918576.06 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) E, SE, S, SW .85m Level 95-98 S:VMSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Acanthomintha ilicifolia</i>	1							
	<i>Convolvulus simulans</i>	4							
	<i>Acmispon micranthus</i>	1							
	<i>Zsocoma menausii</i>	2							
	<i>Adelphia californica</i>	5							
	<i>Salvia mellifera</i>	5							
	<i>Rhus integrifolia</i>	5							
	<i>Ferocactus viridescens</i>	1							
✓	<i>Pentstemon melitensis</i>	2							
✓	<i>Erodium sp.</i>	2							
✓	<i>Hypochaeris glabra</i>	1							
	<i>Carex thrysoideae flaginifolia</i>	1							
	<i>Apiastrum angustifolium</i>	1							
✓	<i>Brachypodium distachyon</i>	5							
						Bare Ground:	60		
						Litter:	10		
						Rock:	7		

Total % Cover: 25 % Herb Cover: 15 % Shrub Cover: 10 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD

Preserve: Penasquitos Canyon Occurrence Name: Penasquitos Canyon Obs. #1

Date: 4/16/14 Time Start: 12:55 Time Finish: 1:20

Surveyors & Affiliation/Agency: KK, GW, BYM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Salvia mellifera alliance / N/A association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 50 Thatch Depth: Ave. 3 cm Max: 9 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk/3 Ave. Height? 25 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>6</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: legal bike + ranger access
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acanthomintha ilicifolia* (San Diego Thornmint) Penasquitos Canyon Observation # 1**



Panorama from North of population, facing East, Southeast, South, Southwest.
Panorama location is 6276496.255 1918576.025 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDDDB EO#: EO19 Translocated? *no*
 Preserve: Penasquitos Canyon Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Penasquitos Canyon Obs. #2 Sample Point #: 2
 Surveyors & Affiliation: *Kim Zealand, Gina Washington, Betty Miller - City of San Diego*
 Date: *4/16/14* Time Start: *1:25 pm* Time Finish: *1:45*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No very low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6276540.33 N: 1918463.76 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax K190
 Location 1 (see coordinates above) Direction (facing): SE, S, SW Height: .85m Camera Angle: 5° down Photo #: 99-102 File location: S:\MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Nasella pulchra</i>	2			<input checked="" type="checkbox"/>	<i>Lactuca sp.</i>	2		
<input checked="" type="checkbox"/>	<i>Avena sp.</i>	2							
<input checked="" type="checkbox"/>	<i>Brachypodium distachyon</i>	4							
	<i>Isocoma menziesii</i>	1							
	<i>Adelpha californica</i>	10							
	<i>Salvia apiana</i>	1							
	<i>Salvia mellifera</i>	2							
	<i>Rhus integrifolia</i>	2							
	<i>Antennaria californica</i>	1							
	<i>Rhamnus crocea</i>	1							
	<i>Calochortus splendens</i>	1							
	<i>Conoclelus simulans</i>	2							
<input checked="" type="checkbox"/>	<i>Centaurea multiceps</i>	2				Bare Ground:	17		
<input checked="" type="checkbox"/>	<i>Erodium sp.</i>	2				Litter:	25		
<input checked="" type="checkbox"/>	<i>Anagallis arvensis</i>	1				Rock:	5		

Total % Cover: 35 % Herb Cover: 15 % Shrub Cover: 20 % Tree Cover: 0

Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD

Preserve: Penasquitos Canyon Occurrence Name: Penasquitos Canyon Obs. #2

Date: 4/16/14 Time Start: 1:25 Time Finish: 1:45

Surveyors & Affiliation/Agency: KR, GW, BM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Salvia mellifera alliance | N/A Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 4 Thatch Depth: Ave. 4 cm Max: 7 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk/2 Ave. Height? 25 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>4</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: legal mtb biking
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acanthomintha ilicifolia* (San Diego Thornmint) Penasquitos Canyon Observation # 2**



Panorama from North of population, facing Southeast, South, Southwest.
Panorama location is 6276540.332 1918463.766 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDDDB EO#: EO19 Translocated? *no*
 Preserve: Penasquitos Canyon Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Penasquitos Canyon Obs. #3 Sample Point #: 3
 Surveyors & Affiliation: *Kim Roeland, Gina Washington, Betty Miller - City of San Diego*
 Date: *4/16/14* Time Start: *1:39 pm* Time Finish: *2:06*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 2 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 2 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: <1 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6276371.01 N: 1918517.83 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax K170
 Location 1 (see coordinates above) Direction (facing) E, SE, S, SW Height .85m Level 3-8 S:IMSCP
 Camera Angle 11-14 Photo # _____ File location _____
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #		
	<i>Acanthomintha ilicifolia</i>	<1				<i>Chlorogalum parvifolium</i>	1				
	<i>Adelphia californica</i>	20				<i>Helmintholobos arbutifolia</i>	1				
	<i>Rhus integrifolia</i>	10									
	<i>Eriogonum fasciculatum</i>	1									
	<i>Sida mellifera</i>	5									
	<i>Calochortus splendens</i>	2									
	<i>Tocoma menzeisii</i>	1									
	<i>Convolvulus splendens</i>	2									
	<i>Asiastum angustifolium</i>	1									
	<i>Hemizonia nuttalliana</i>	1									
✓	<i>Centaurea melitensis</i>	3									
✓	<i>Erodium sp.</i>	2									
	<i>Stipa pulchra</i>	4				Bare Ground:	20				
✓	<i>Brachypodium distachyon</i>	7				Litter:	20				
	<i>Selaginella cicerascens</i>	2				Rock:	12				
Total % Cover:		<u>35</u>	% Herb Cover:		<u>15</u>	% Shrub Cover:		<u>20</u>	% Tree Cover:		<u>0</u>

Scientific Name: Acanthomintha ilicifolia MSP Occurrence ID: TBD

Preserve: Penasquitos Canyon Occurrence Name: Penasquitos Canyon Obs. #3

Date: 4/16/14 Time Start: 1:39 Time Finish: 2:06

Surveyors & Affiliation/Agency: KR, CW, BM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Salvia mellifera alliance / N/A Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 2 Thatch Cover: 4 Thatch Depth: Ave. 3 cm Max: 6 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk/2 Ave. Height? 20 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: legal mtn bike on trail
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acanthomintha ilicifolia* (San Diego Thornmint) Penasquitos Canyon Observation # 3**



Panorama from Western edge of population, facing East, Southeast, South, Southwest.
Panorama location is 6276371.021 191857.833 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acanthomintha ilicifolia - Los Penasquitos Canyon

Point 1
Area: 12 sq. m.



Point 3
Area: <1 sq. m.



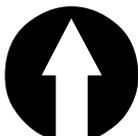
Point 2
Area: 0 sq. m.

Area 2014: 12 sq. m.
 Acanthomintha ilicifolia

Pop. Area 2000 - 2014
Max Area: 2062 sq. m.
Min Area: 12 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDDDB EO#: EO36 Translocated? no
 Preserve: Sabre Springs Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Sabre Springs East Subpop #1 Sample Point #: 1
 Surveyors & Affiliation: *Kim Roeland, Lisa Wilson, Jody Miller - City of San Diego*
 Date: *4/16/14* Time Start: *3:35 pm* Time Finish: *3:55 pm*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6303376.7 N: 1923491.2 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) Direction (facing) NW, N, NE, E Height 45 in. Camera Angle 5° down Photo # 118-120 File location S:\MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Quercus laevis</i>	5			✓	<i>Melilotus indica</i>	1		
	<i>Baccharis sarothroides</i>	3			✓	<i>Helminthotheca echioides</i>	1		
	<i>Artemisia californica</i>	5			✓	<i>Brachypodium distachyon</i>	4		
	<i>Baccharis pilularis</i>	7			✓	<i>Bromus hordeaceus</i>	2		
	<i>Adelphia californica</i>	5				<i>Bromus madritensis ssp. r</i>	1		
	<i>Trochoma menziesii</i>	2							
	<i>Acmispon glaber</i>	1							
	<i>Amsinckia sp.</i>	1							
	<i>Cuscuta occidentalis</i>	2							
✓	<i>Brassica nigra</i>	7							
✓	<i>Anagallis arvensis</i>	5							
✓	<i>Erodium sp.</i>	7				Bare Ground:	65		
✓	<i>Centaurea melitensis</i>	3				Litter:	10		
✓	<i>Senecus jacobaeus</i>	1				Rock:	7		

Total % Cover: 35 % Herb Cover: 15 % Shrub Cover: 20 % Tree Cover: 0

Scientific Name: <u>Acanthomintha ilicifolia</u>	MSP Occurrence ID: <u>TBD</u>	
Preserve: <u>Sabre Springs</u>	Occurrence Name: <u>Sabre Springs East Subpop #1</u>	
Date: <u>4/16/14</u>	Time Start: <u>3:35</u>	Time Finish: <u>3:55</u>
Surveyors & Affiliation/Agency: <u>KR, LW, BYM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Baccharis pilularis Alliance; B. pilularis/Herbaceous Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>2</u> cm Max: <u>5</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>grass/2; unk/2</u> Ave. Height? <u>20</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>4</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>4</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>unk</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire <u>1</u>	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____	
Trails <u>1</u>	If Trails are Present, are They Authorized? Yes / No / Unknown	
Type of Trail Use?	<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles	
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Acanthomintha ilicifolia* (San Diego Thornmint) Sabre Springs East Subpopulation # 1**



Panorama from South edge of subpopulation, facing Northwest, North, Northeast, East.
Panorama location is 6303390.7 1923506.3 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDB EO#: EO36 Translocated? *no*
 Preserve: Sabre Springs Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Sabre Springs West Flat Subpop #2 Sample Point #: 2
 Surveyors & Affiliation: *Kim Rosland, Lisa Wilson, Betsy Miller - City of San Diego*
 Date: *4/16/14* Time Start: *3:55* Time Finish: *4:20 pm*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: *2* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *2* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *12* *m²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *1* Flowering: *1* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *1*
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No *low rainfall*
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates; E: *6303277.45* N: *1923560.66* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax K190*
 Location 1 (see coordinates above) Direction (facing) *S, SW, W* Height *50 in.* Camera Angle *Slightly down* Photo # *129-132* File location *S:IMSCP*
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Adelphia californica</i>	7				<i>Artemisia californica</i>	2		
	<i>Apiastrum angustifolium</i>	1			<input checked="" type="checkbox"/>	<i>Bromus hordeaceus</i>	1		
	<i>Baccharis sabathreoides</i>	5							
	<i>Baccharis pilularis</i>	7							
	<i>Isocoma mazzisii</i>	2							
	<i>Croton setigerus</i>	2							
	<i>Narah macrocarpus</i>	1							
<input checked="" type="checkbox"/>	<i>Bromus macritensis</i> sp. r.	2							
<input checked="" type="checkbox"/>	<i>Helminthella echinoides</i>	1							
<input checked="" type="checkbox"/>	<i>Erodium</i> sp.	3							
	<i>Convolvulus simulans</i>	1							
<input checked="" type="checkbox"/>	<i>Anagallis arvensis</i>	3							
<input checked="" type="checkbox"/>	<i>Brodipodium distachyon</i>	25				Bare Ground:	30		
<input checked="" type="checkbox"/>	<i>Brassica nigra</i>	3				Litter:	3		
	<i>Acanthomintha ilicifolia</i>	1				Rock:	5		

Total % Cover: *70* % Herb Cover: *40* % Shrub Cover: *30* % Tree Cover: *0*

Scientific Name:	Acanthomintha ilicifolia	MSP Occurrence ID:	TBD
Preserve:	Sabre Springs	Occurrence Name:	Sabre Springs West Flat Subpop #2
Date:	4/16/14	Time Start:	3:55
		Time Finish:	4:20
Surveyors & Affiliation/Agency:	KR, LW, BYM		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>			
SANDAG 2012 Vegetation Alliance/Association: <u>Baccharis pilularis Alliance; B. pilularis/Herbaceous Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>4</u> Thatch Depth: Ave. <u>4</u> cm Max: <u>7</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Bassica/2; unk/2</u> Ave. Height? <u>12</u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>			
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____			
Disturbances (rank each as 1-6):			
Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>
Altered Hydrology	<u>1</u>	Erosion	<u>1</u>
		Urban Runoff	<u>1</u>
		Slope Movement	<u>1</u>
		Soil Compaction	<u>1</u>
Fuel Modification Zone/Fire Break <u>1</u>			
Road Construction/Maintenance <u>1</u>			
Vegetation Clearing <u>1</u>			
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____			
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____			
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown			
Type of Trail Use?			
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles			
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor			

***Acanthomintha ilicifolia* (San Diego Thornmint) Sabre Springs West Flat Subpopulation # 2**



Panorama from Northwestern edge of subpopulation, facing South, Southwest, West.
Panorama location is 6303277.454 1923560.662 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Scientific Name: *Acanthomintha ilicifolia* MSP Occurrence ID: TBD
 Common Name: San Diego thorn-mint CNDB EO#: EO36 Translocated? no
 Preserve: Sabre Springs Management Unit: MU6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Sabre Springs Southern Subpop #3 Sample Point #: 3
 Surveyors & Affiliation: Kim Rockwell, Leina Wilson, Betsy Miller - City of San Diego
 Date: 4/16/14 Time Start: 3:05 pm Time Finish: 3:30 pm

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 3 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 3 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: <1 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6303165.8 N: 1923485.4 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) Direction (facing) NW, N, NE, E Height 45 in. Camera Angle 5° down Photo # 115-117 File location S:IMSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Acanthomintha ilicifolia</i>	<1							
	<i>Quercus berberidifolia</i>	15							
	<i>Thus integrifolia</i>	5							
	<i>Isocoma menziesii</i>	1							
	<i>Adolphia californica</i>	5							
	<i>Baccharis pilularis</i>	1							
	<i>Toxicoscordion venenosum</i>	2							
	<i>Convolvulus simulans</i>	2							
	<i>Anagallis arvensis</i>	2							
✓	<i>Lactuca sp.</i>	1							
✓	<i>Avena sp.</i>	7							
✓	<i>Brachypodium distachyon</i>	12							
						Bare Ground:	17		
						Litter:	10		
						Rock:	5		

Total % Cover: 40 % Herb Cover: 22 % Shrub Cover: 18 % Tree Cover: 0

Scientific Name:	Acanthomintha ilicifolia	MSP Occurrence ID:	TBD
Preserve:	Sabre Springs	Occurrence Name:	Sabre Springs Southern Subpop #3
Date:	4/16/14	Time Start:	3:05
		Time Finish:	3:30
Surveyors & Affiliation/Agency:	KR, LW, BM		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.			
SANDAG 2012 Vegetation Alliance/Association: <u>Quercus (berberidifolia x acutidens) Alliance</u> <u>Quercus (berberidifolia x acutidens) Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>4</u> Thatch Depth: Ave. <u>2</u> cm Max: <u>4</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Avena sp/2</u> Ave. Height? <u>12</u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.			
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____			
Disturbances (rank each as 1-6):			
Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>unk</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>
Altered Hydrology	<u>1</u>	Erosion	<u>1</u>
Urban Runoff	<u>1</u>	Slope Movement	<u>1</u>
Soil Compaction	<u>1</u>		
Fuel Modification Zone/Fire Break <u>1</u>			
Road Construction/Maintenance <u>1</u>			
Vegetation Clearing <u>1</u>			
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____			
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____			
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown			
Type of Trail Use?			
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles			
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor			

***Acanthomintha ilicifolia* (San Diego Thornmint) Sabre Springs Southern Subpopulation # 3**



Panorama from Southwestern edge of subpopulation, facing Southeast, South, Southwest.
Panorama location is 6303165.7 1923485.4 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acanthomintha ilicifolia - Sabre Springs

Point 2
Area 12 sq. m.



Point 1
Area: 0 sq. m.

Point 3
Area <1 sq. m.

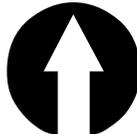


Area 2014: 12 sq. m.
 Acanthomintha ilicifolia

Pop. Area 2006 - 2014
Max Area: 282.1 sq. m.
Min Area: 12 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Acmispon prostratus
Nuttall's Lotus



© City of San Diego, 2001

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Acmispon prostratus</u>	MSP Occurrence ID: <u>ACPR_1DUTR005</u>	
Preserve: <u>Mission Bay Park</u>	Occurrence Name: <u>Dune Triangle</u>	
Date: <u>5/16/14</u>	Time Start: <u>3:15</u>	Time Finish: <u>3:45</u>
Surveyors & Affiliation/Agency: <u>KR, BM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Isocoma menziesii Alliance / Isocoma menziesii Provisional Association.</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>1</u> Thatch Depth: Ave. <u>n/a</u> cm Max: <u>n/a</u> cm		
Dead Standing Biomass? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>3</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space, transportation</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>4</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>6</u> <i>SD River flood control channel</i>
Non-Native Grasses <u>1</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>1</u>	Soil Compaction <u>4</u>
Encampments <u>3</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>3</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown		
Type of Trail Use?		
<input checked="" type="checkbox"/> Hiking <input checked="" type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input checked="" type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: ACPR-1DUTR005 Species: Acemison prostratus

Page 3
Date: 5/16/14

VI. MANAGEMENT RECOMMENDATIONS

None

VII. MANAGEMENT ACTIONS IN LAST YEAR

None

VIII. CNDDDB SPECIES DETECTED & NOTES

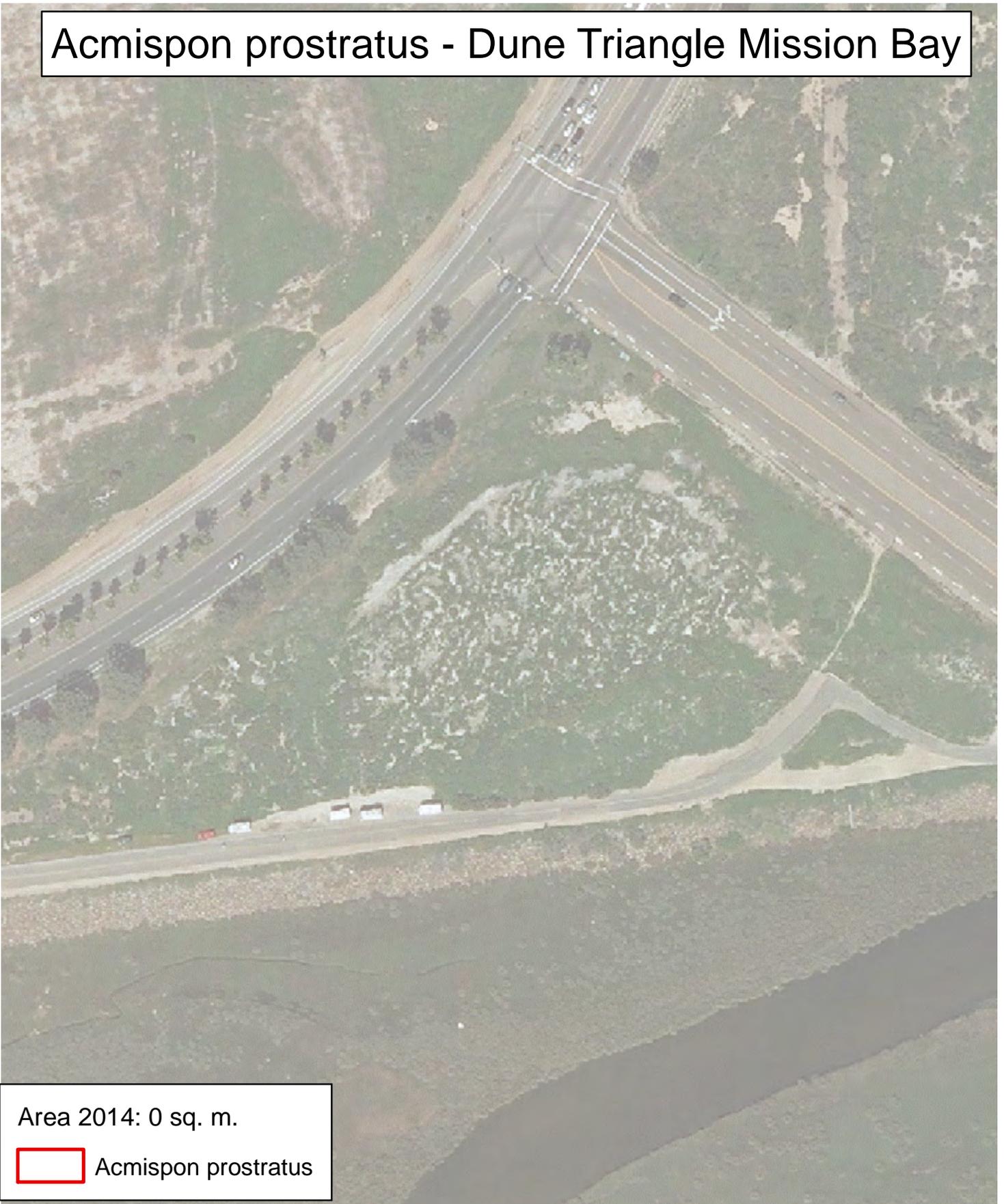
List any plant or animal species to add to the CNDDDB:

***Acmispon prostratus* (Nuttall's Acmispon) Mission Bay – Dune Triangle**



Panorama from the Southern edge of population, facing Northeast, East, Southeast, South, Southwest.
Panorama location is 6266528.38 1858616.164 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acmispon prostratus - Dune Triangle Mission Bay



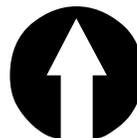
Area 2014: 0 sq. m.

 Acmispon prostratus

Pop. Area 2006 - 2014
Max Area: 725.15 sq. m.
Min Area: 0.00 sq. m.

0 15 30 60
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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Scientific Name: Acmispon prostratus MSP Occurrence ID: ACPR_1HOPO002

Preserve: Mission Bay Park Occurrence Name: Site 2 Hospitality Point

Date: 5/16/14 Time Start: 9:35 AM Time Finish: 10:33 AM

Surveyors & Affiliation/Agency: BM, KR, SM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Distichlis spicata Alliance / Distichlis spicata - Annual Grasses Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. _____ cm Max: _____ cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk: 2 Ave. Height? 10 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): transportation / parking ; park ; open water

Argentine Ant Abundance at Bait Station (1-4): 2 Time Start: 9:35 Temp. Start: 80° Time Finish: 10:31 Temp. Finish: 80°

Ant Sample Collected?: Yes No Ant Sample #: 4 Ant Station Photo #: 1558

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>4</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>3 (palms)</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 4 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: ACPR-1HOP0002 Species: Acmispon prostratus Date: 05/16/14

VI. MANAGEMENT RECOMMENDATIONS

- continue to maintain fencing, signs, and path boundaries
- treat non-native grasses with approved herbicide

VII. MANAGEMENT ACTIONS IN LAST YEAR

- aless control maintained w/ fencing, signs, and small rocks delineating approved path

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Ø - Kildee nest w/in sampling area

***Acmispon prostratus* (Nuttall's Acmispon) Mission Bay – Hospitality Point Site # 2**



Panorama from Southern edge of population, facing Southwest, West, Northwest.
Panorama location is 6256896.06 1857539.66 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acmispon prostratus - Hospitality Point



Area 2014: 1622.0 sq. m.
 Acmispon prostratus

Pop. Area 2006 - 2014
Max Area: 5505.4 sq. m.
Min Area: 1622.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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SanGIS

Scientific Name: <u>Acroispon prostratus</u>	MSP Occurrence ID: <u>ACPR_1MAPO004</u>	
Preserve: <u>Mission Bay Park</u>	Occurrence Name: <u>Site 4 Mariner's Point</u>	
Date: <u>5/16/14</u>	Time Start: <u>12:45</u>	Time Finish: <u>12:55</u>
Surveyors & Affiliation/Agency: <u>BM, KR, SM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Abronia latifolia - Ambrosia chamissonis Alliance</u> <u>Ambrosia chamissonis - Abronia maritima - Calicle maritima Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>1</u> Thatch Depth: Ave. _____ cm Max: _____ cm		
Dead Standing Biomass? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open water / parking lot (dirt)</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>N/A</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>dredging / stabilizing bank</u>
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>1</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: ACPR-1MAP0004

Species: Acemison prostratus

Date: 05/16/14

VI. MANAGEMENT RECOMMENDATIONS

continue to restrict access w/ fencing and signs

VII. MANAGEMENT ACTIONS IN LAST YEAR

access restricted with fence and signs

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Least tern nesting site

***Acmispon prostratus* (Nuttall's Acmispon) Mariners Point**



Panorama from Northern edge of population, facing Southeast, South, Southwest.
Panorama location is 6255570.10 1859631.8 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Scientific Name: Acmispon prostratus MSP Occurrence ID: ACPR_1NML001

Preserve: Mission Bay Park Occurrence Name: No Man's Land

Date: 5/27/14 Time Start: 8:52 Time Finish: 10:20

Surveyors & Affiliation/Agency: KR, WR, SM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area** (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Glebionis coronaria Semi-Natural Stands

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Glebionis coronaria: 4 Ave. Height? 30 cm
Raphanus sativus: 4
Hemitheca grandiflora: 3
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1 → there were a bunch of small holes, possibly mice or lizards
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): transportation; open space

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 8:52 Temp. Start: 72°F Time Finish: 9:28 Temp. Finish: 75°F

Ant Sample Collected?: Yes No Ant Sample #: N/A Ant Station Photo #: 1025

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>6</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>3</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>3</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 3 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

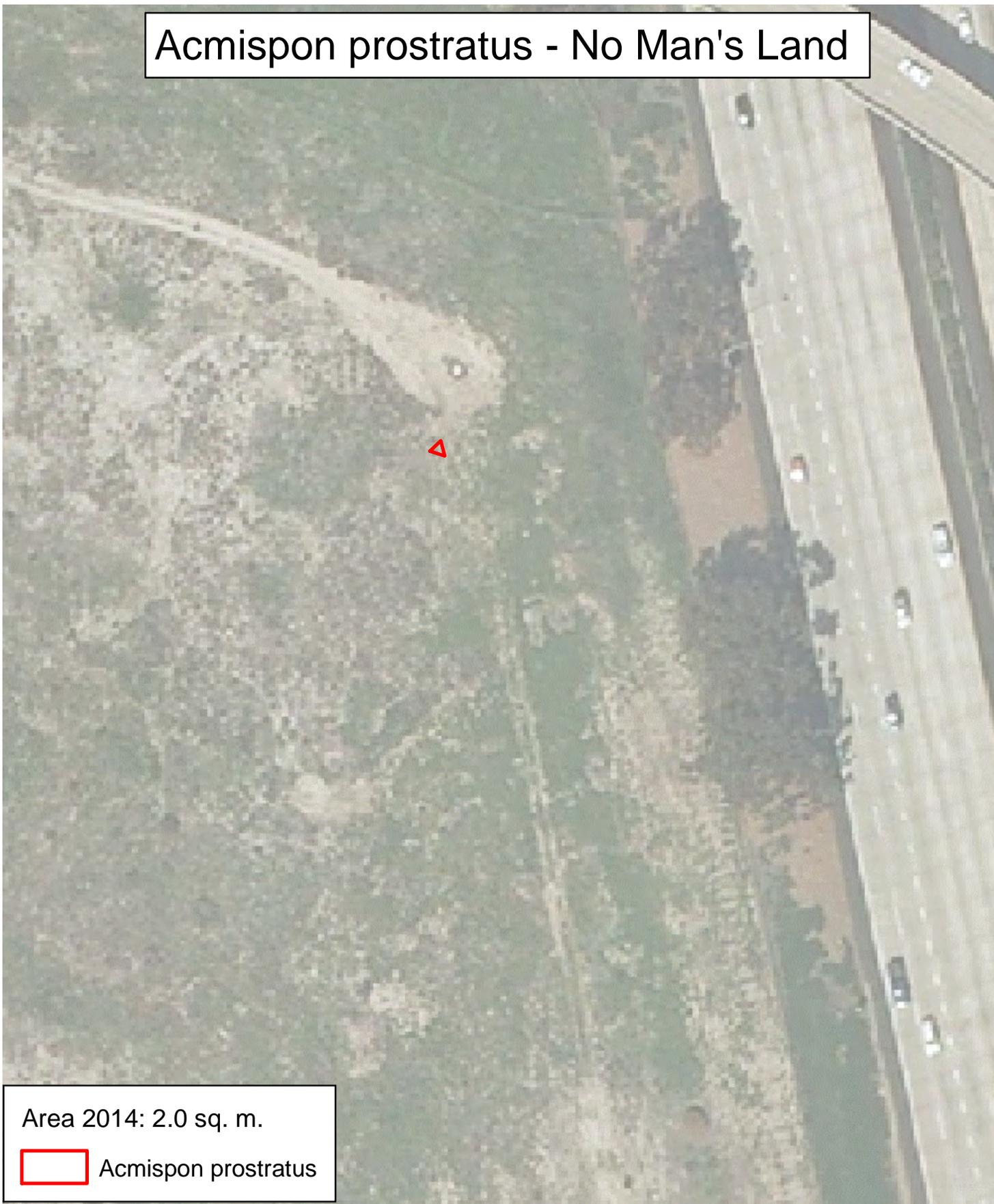
Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acmispon prostratus* (Nuttall's Acmispon) Mission Bay – No Man's Land Site # 1**



Panorama from Southwestern edge of population, facing Southeast, South, Southwest, West.
Panorama location is 6267668.04 1859784.45 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acmispon prostratus - No Man's Land



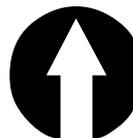
Area 2014: 2.0 sq. m.

 Acmispon prostratus

Pop. Area 2003 - 2014
Max Area: 44032.65 sq. m.
Min Area: 2.0 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Acmispon prostratus MSP Occurrence ID: ACPR_1RRSO003

Preserve: Flood Control Channel Southern Wildlife Preserve Occurrence Name: Site 3 Rip Rap

Date: 5/16/14 Time Start: 11:00 Time Finish: 11:50

Surveyors & Affiliation/Agency: BM, KR, SM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within *species-specific sampling area* (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Pennisetum setaceum Semi-Natural Stands/
Pennisetum setaceum Semi-Natural Stands

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. _____ cm Max: _____ cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Pennisetum: 2 Ave. Height? 10 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 4 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3. more pennisetum

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the *occurrence's maximum extent* (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open water (channel); bike path

Argentine Ant Abundance at Bait Station (1-4): NA Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>6</u> (flood control channel)
Non-Native Grasses	<u>6</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
Road Construction/Maintenance 1
Vegetation Clearing 1
ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown
Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Acmispon prostratus* (Nuttall's Acmispon) Mission Bay – Rip Rap**



Panorama from Southern edge of population, facing South, Southwest, Northwest.
Panorama location is 6258823.558 1857305.759 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acmispon prostratus - Rip Rap, Mission Bay



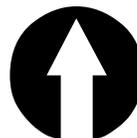
Area 2014: 70.41 sq. m.

 Acmispon prostratus

Pop. Area 2008- 2014
Max Area: 10,774.29 sq. m.
Min Area: 70.41 sq. m.

0 25 50 100 Meters

Source: San GIS & City of San Diego Park & Rec
Map Created By: Sara Meszaros, 2014



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Scientific Name: Acrispon prostratus MSP Occurrence ID: ACPR_1SOSH006

Preserve: Mission Bay Park Occurrence Name: Site 6 South Shores

Date: 5/16/14 Time Start: 1:57 Time Finish: 2:50

Surveyors & Affiliation/Agency: BM, KR, SM - City SD RS, EH - San Diego Audubon

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area** (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands / Mediterranean California Naturalized Annual + Perennial Grassland Semi-Natural Stands

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Carpobrotus: 5 Ave. Height? 6 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 3 Gopher Activity: 3
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): transportation; open water

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>6</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>1</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 10 - hand pulling of re-plant by San Diego Audubon
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

VI. MANAGEMENT RECOMMENDATIONS

-Continue SD Audubon-led effort to treat iceplant and to remove dead biomass from previously pulled areas. Control other non-native invasive forbs and grasses as needed following removal of iceplant.

VII. MANAGEMENT ACTIONS IN LAST YEAR

-In 2013, SD Audubon continued efforts to treat and remove iceplant from site. Efforts included ① Application of herbicide ② Hand-pulling of iceplant. Iceplant was piled on-site for decomposition and will be removed at the end of SD Audubon's grant funding.

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

ACPR much reduced at this site. Where found individuals were small and found growing over dead iceplant.

***Acmispon prostratus* (Nuttall's Acmispon) Mission Bay – South Shores Site # 6**



Panorama from Western edge of population, facing South, Southwest, West, Northwest.
Panorama location is 6266803.80 1859450.24 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Acmispon prostratus - South Shores



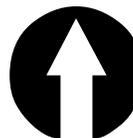
Area 2014: 66.51 sq. m.

 Acmispon prostratus

Pop. Area 2001 - 2014
Max Area: 15970.4 sq. m.
Min Area: 15.6 sq. m.

0 10 20 40
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Sara Meszaros, 2014



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Ambrosia pumila
San Diego Ambrosia



© M. Osboure, 2006

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Ambrosia pumila MSP Occurrence ID: AMPU_4KULA005
 Common Name: San Diego ambrosia CNDDDB EO#: EO12 Translocated? No
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Kumeyaay Lake Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller and Kim Roeland - City of San Diego
 Date: 6/4/14 Time Start: 9:59 Time Finish: 12:45

I. OCCURRENCE STATUS - Assess # plants in both the species-specific, **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 100,000 Exact Count Estimate (1,000s, 10,000s) Uncertainty? high
 Area of Current Mapped Extent: 6,593 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 3 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6321443.020 N: _____ 1886016.48 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) NW, N, NE, E Height 50 in. Camera Angle 5° down Photo # 1660-1663 S/OS/MSCP File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eriogonum fasciculatum</i>	40							
	<i>Isocoma menziesii</i>	7							
	<i>Croton setigerus</i>	40							
	<i>Acmispon americanus</i>	1							
	<i>Camissoniopsis hirtella</i>	1							
	<i>Daucus pusillus</i>	1							
✓	<i>Brassica nigra</i>	1							
✓	<i>Hypochaeris glabra</i>	1							
✓	<i>Centaurea melitensis</i>	5							
✓	<i>Erodium cicutarium</i>	1							
✓	<i>Sonchus asper</i>	1							
	<i>Distichlis spicata</i>	1							
						Bare Ground:	5		
						Litter:	2		
						Rock:	0		

Total % Cover: 85 % Herb Cover: 45 % Shrub Cover: 40 % Tree Cover: 0

Scientific Name: <u>Ambrosia pumila</u>	MSP Occurrence ID: <u>AMPU_4KULA005</u>	
Preserve: <u>Mission Trails Regional Park</u>	Occurrence Name: <u>Kumeyaay Lake</u>	
Date: <u>6/4/14</u>	Time Start: <u>9:59</u>	Time Finish: <u>12:45</u>
Surveyors & Affiliation/Agency: <u>KR, BM - City of San Diego</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Eriogonum fasciculatum Alliance</u> <u>Eriogonum fasciculatum Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>2</u> cm Max: <u>2</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>unk: 2</u> Ave. Height? <u>10</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space / dirt parking</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>1</u> Time Start: <u>9:59</u> Temp. Start: <u>70°F</u> Time Finish: <u>12:42</u> Temp. Finish: <u>83°F</u>		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: <u>N/A</u> Ant Station Photo #: <u>1673</u>		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>4</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>4</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>unk</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>unk</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/ <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>2</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown <u>fenced</u>		
Type of Trail Use?		
<input checked="" type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: AMPU-4KULAD05 Species: AMPU

Page 3

Date: 6/4/14

VI. MANAGEMENT RECOMMENDATIONS

- continue herbicide treatments, mowing, and hand pulling on non-native grasses and forbs
- pull out Brassica nigra before seed set

VII. MANAGEMENT ACTIONS IN LAST YEAR

- mowing and hand weeding around main Ambrosia population

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Robust growth of AMPU in areas with active management

Population @ Old Mission Dam also mapped w/ GPS

YBLH detected near Old Mission Dam - point taken

***Ambrosia pumila* (San Diego Ragweed) Mission Trails Regional Park- Kumeyaay Lake**



Panorama from Western edge of population, facing Northwest, North, Northeast, East.
Panorama location is 6321443.020 1886016.48 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Ambrosia pumila - Mission Trails Regional Park



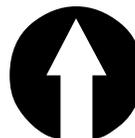
Area 2014: 6593 sq. m.

 Ambrosia pumila

Pop. Area 1998 - 2014
Max Area: 16809.01 sq. m.
Min Area: 5276.08 sq. m.

0 12.5 25 50
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Bloomeria clevelandii
San Diego Goldenstar



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name:	Bloomeria clevelandii	MSP Occurrence ID:	BLCL_4EAEL014								
Common Name:	San Diego goldenstar	CNDDB EO#:	EO3 Translocated? <input type="checkbox"/> no								
Preserve:	Mission Trails Regional Park	Management Unit:	4								
Land Owner:	City of San Diego	Land Manager:	City of San Diego PRD								
Occurrence Name:	East Elliott	Sample Point #:	1								
Surveyors & Affiliation:	<i>Kim Reelant, Roland Sosa, Betty Miller - City of San Diego</i>										
Date:	<i>4/25/14</i>	Time Start:	<i>2:00 pm</i> Time Finish: <i>4:00 pm</i>								
I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent . See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.											
# Plants/Sampling Area:	<u>0</u>	<input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (extrapolate partial count)	Uncertainty? <u>low</u>								
# Plants/Current Mapped Extent:	<u>193</u>	<input checked="" type="checkbox"/> Exact Count <input type="checkbox"/> Estimate (1,000s, 10,000s)	Uncertainty? <u>low</u>								
Area of Current Mapped Extent:	<u>2132</u>	<u>m²</u> units	<input checked="" type="checkbox"/> Exact (GPS mapping) <input type="checkbox"/> Estimate								
Phenology in Current Mapped Extent (Categories 1-5):	Vegetative: <u>2</u>	Flowering: <u>5</u>	Fruiting: <u>1</u> Dead: <u>2</u>								
Evidence in Current Mapped Extent (Categories 1-5) of:	Herbivory: <u>2</u>	Disease: <u>1</u>	Stunted Growth: <u>2</u>								
Is Sampling Area within Current Mapped Extent?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										
Species Found in Maximum Extent?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										
If not, why (if reason known or suspected)?											
Collection (if not collected previously)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Collected Previously										
If yes:	Collector	Collection Number	Museum/Herbarium								
II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING											
GPS Accuracy:	+/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet		Datum: _____								
Coordinates; E:	<u>6317550.1</u>	N:	<u>1898385.22</u> <input checked="" type="checkbox"/> State Plane (ft) <input type="checkbox"/> UTM (m) <input type="checkbox"/> Lat-Long (dec deg)								
Camera type:	<u>Pentax W90</u>										
Location 1 (see coordinates above)	NE, N, NW, W, SW	1.1m	10° down <u>1353-1356</u> S:\MSCP								
	Direction (facing)	Height	Camera Angle Photo # File location								
Location 2 [Coordinates]	Direction (facing)	Height	Camera Angle Photo # File location								
III. ASSOCIATED SPECIES IN SAMPLING AREA <i>If need more room, record additional data and any notes on page 3.</i>											
Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #		
	<i>Artemisia californica</i>	7			<input checked="" type="checkbox"/>	<i>Bromus diandrus</i>	2				
	<i>Acmispon glaber</i>	5									
	<i>Minulus aurantiacus</i>	5									
	<i>Rhamnus crocea</i>	5									
	<i>Sabia apiara</i>	2									
	<i>Lonicera subspicata</i>	2									
	<i>Callium angustifolium</i>	3									
	<i>Stipa pulchra</i>	10									
	<i>Calochortus splendens</i>	1									
<input checked="" type="checkbox"/>	<i>Centaurea melitensis</i>	10									
<input checked="" type="checkbox"/>	<i>Eradium sp.</i>	17									
<input checked="" type="checkbox"/>	<i>Brachypodium distachyon</i>	35									
<input checked="" type="checkbox"/>	<i>Bromus madritensis ssp. r.</i>	5				Bare Ground:	5				
<input checked="" type="checkbox"/>	<i>Bromus hordeaceus</i>	5				Litter:	5				
	<i>Elytrichium bellum</i>	1				Rock:	12				
Total % Cover:		<u>96</u>	% Herb Cover:		<u>25</u>	% Shrub Cover:		<u>65</u>	% Tree Cover:		<u>0</u>

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_4EAELO14

Preserve: Mission Trails Regional Park Occurrence Name: East Elliott #4

Date: 4/25/14 Time Start: 2:00 Time Finish: 4:00

Surveyors & Affiliation/Agency: KB, RS, BJA

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica alliance; Artemisia californica - Mimulus aurantiacus association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 3 Thatch Depth: Ave. 3 cm Max: 5 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: _____ Ave. Height? _____ cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>5</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: illegal trail from 2013 closed
 Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: BLCL_4EAE014

Species: Bloomeria clevelandii

Page 3

Date: 04/25/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain trail closure + general access control

VII. MANAGEMENT ACTIONS IN LAST YEAR

illegal trail through population was closed
increased ranger patrols + educational outreach for Preserve
5 new ranger staff for preserve hired
general trail review + revision under way via Master Plan Update

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

rufous crowned sparrow near photo point

***Bloomeria clevelandii* (San Diego Goldenstar) East Elliott # 1**



Panorama from Southwestern edge of population, facing West, Southwest, South, Southeast, East.
Panorama location is 6319260.20 1891551.76 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_4EAEL014
 Common Name: San Diego goldenstar CNDDDB EO#: EO3 Translocated? no
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: East Elliott Sample Point #: 2
 Surveyors & Affiliation: Kim Beeland, Roland Sosa, Boby Miller - City of San Diego
 Date: 4/28/14 Time Start: 1:30 pm Time Finish: 1:45 pm

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall, not found multiple previous years
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6317389.9 N: 1894565.895 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax H90
 Location 1 (see coordinates above) Direction (facing) N, NW, W, SW, S Height 1.1m Camera Angle 5° up Photo # 1348-1352 File location S:IMSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Arenostoma fasciculatum</i>	30				<i>Plantago creta</i>	1		
	<i>Eriogonum fasciculatum</i>	5				<i>Navaretia humata</i>	1		
	<i>Malosma lauring</i>	5							
	<i>Corethrosclopus tomentosus</i>	10							
	<i>Loafia gallica</i>	1							
✓	<i>Hypochaeris glabra</i>	1							
✓	<i>Eradium sp.</i>	2							
✓	<i>Bromus macrisleensis ssp. n.</i>	1							
	<i>Dianandra fasciculata</i>	1							
	<i>Cryptantha sp.</i>	1							
	<i>Hemizon glaber</i>	1							
	<i>Elaginella cinerascens</i>	1							
	<i>Lactheria californica</i>	1							
	<i>Ara h macrocarphus</i>	1							
	<i>Xylococcus bicolor</i>	3							
						Bare Ground:	10 15		
						Litter:	10		
						Rock:	20		

Total % Cover: 60 % Herb Cover: 7 % Shrub Cover: 53 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_4EAEL014

Preserve: Mission Trails Regional Park Occurrence Name: East Elliott #2

Date: 4/25/14 Time Start: 1:30 Time Finish: 1:45

Surveyors & Affiliation/Agency: KR, RS, BM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum - Xylococcus bicolor Alliance;
Adenostoma fasciculatum - Xylococcus bicolor - Ceanothus tomentosus Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 2 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Helianthemum / 3 Ave. Height? 7 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
Road Construction/Maintenance 3 SOBE access road
Vegetation Clearing 1
ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____
Trails 3 If Trails are Present, are They Authorized? Yes No / Unknown SOBE access road
Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: BLCL_4EAEL014

Species: *Bloomeria clevelandii*

Date: 04/25/14

VI. MANAGEMENT RECOMMENDATIONS

none

VII. MANAGEMENT ACTIONS IN LAST YEAR

*increased ranger patrols + educational outreach for Preserve
- 5 new rangers hired,*

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

***Bloomeria clevelandii* (San Diego Goldenstar) East Elliott # 2**



Panorama from Southeastern edge of population, facing North, West, South.
Panorama location is 6319260.20 1891551.76 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Scientific Name: *Bloomeria clevelandii* MSP Occurrence ID: BLCL_4EAEL014
 Common Name: San Diego goldenstar CNDDB EO#: EO3 Translocated? NO
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: East Elliott Sample Point #: 3
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Roland Sosa - city of San Diego
 Date: 4/25/14 Time Start: 10:50 Time Finish: 11:04

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: N/A m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6316947.6 N: 1895951.2 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax optio W90
 Location 1 (see coordinates above) S, SW, W, NW 1.1m 5° down 1334-1342 S:MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Adenostoma fasciculatum</i>	25							
	<i>Eriogonum fasciculatum</i>	7							
	<i>Xylococcus bicolor</i>	5							
	<i>Adonis glabra</i>	3							
	<i>Lasthenia gracilis</i>	1							
	<i>Plagiobotrys</i> sp.	1							
✓	<i>Hypochaeris glabra</i>	1							
✓	<i>Erodium</i> sp.	1							
	<i>Stylocline gnaphaloides</i>	1							
	<i>Selaginella ciliaris</i>					dealt sa crust cover			
✓	<i>Bromus madritensis</i>	1							
	<i>Calechortus splendens</i>	1							
						Bare Ground:	15		
						Litter:	5		
						Rock:	5		

Total % Cover: 40 % Herb Cover: 1 % Shrub Cover: 40 % Tree Cover: 0

Scientific Name: <u>Bloomeria clevelandii</u>	MSP Occurrence ID: <u>BLCL_4EAEL014</u>	
Preserve: <u>Mission Trails Regional Park</u>	Occurrence Name: <u>East Elliott #3</u>	
Date: <u>4/25/14</u>	Time Start: <u>10:50</u>	Time Finish: <u>11:06</u>
Surveyors & Affiliation/Agency: <u>BM, KR, PS</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Adenostoma fasciculatum - Xylococcus bicolor Alliance</u> <u>Adenostoma fasciculatum - Xylococcus bicolor Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>4</u> Thatch Cover: <u>1</u> Thatch Depth: Ave. _____ cm Max: _____ cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Artemisia; 2</u> Ave. Height? <u>20</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open Space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>N/A</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>1</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire <u>1</u>	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____	
Trails <u>3</u>	If Trails are Present, are They Authorized? <u>Yes</u> / No / Unknown	
Type of Trail Use?	<input checked="" type="checkbox"/> Hiking <input checked="" type="checkbox"/> Biking <input checked="" type="checkbox"/> Equestrian <input checked="" type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles	
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Bloomeria clevelandii* (San Diego Goldenstar)
East Elliott # 3**



Panorama from Northwestern edge of population, facing South, Southwest, West, Northwest.
Panorama location is 6316947.57 1895951.19 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Bloomeria clevelandii* MSP Occurrence ID: BCLCL_4EAEL014
 Common Name: San Diego goldenstar CNDDB EO#: EO3 Translocated? NO
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: East Elliott # 4 Sample Point #: 4
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Roland Sosa - City of San Diego
 Date: 4/25/14 Time Start: 9:40 Time Finish: 10:27

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 1 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: see above Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: < 1 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1* Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- < 1 meters feet Datum: _____
 Coordinates: E: 16317559.651 N: 1898427.533 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) W, SW, S, SE, E 1.1m 10° up 1325-1331 S: MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Ceanothus tomentosus</i>	1			<input checked="" type="checkbox"/>	<i>Hypochaeris glabra</i>	1		
	<i>Adenostoma fasciculatum</i>	30							
	<i>Xylococcus brevior</i>	5							
	<i>Malosma laurina</i>	2							
	<i>Hesperoyucca whipplei</i>	1							
	<i>Rhamnus crocea</i>	1							
	<i>Bloomeria clevelandii</i>	1							
	<i>Logfia filaginoides</i>	1							
	<i>Lathenia gracilis</i>	1							
	<i>Selaginella cinerascens</i>	→ dead, see				crust cover			
	<i>Stylodine graphaloides</i>	1							
	<i>Navaretia hamata</i>	1							
<input checked="" type="checkbox"/>	<i>Erodium</i> sp.	1				Bare Ground: 20			
	<i>Calochortus splendens</i>	1				Litter: 5			
	<i>Apiastrum angustifolium</i>	1				Rock: 5			

Total % Cover: 40 % Herb Cover: 2 % Shrub Cover: 38 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Bloomeria clevelandii</u>	MSP Occurrence ID: <u>BLCL_4EAEL014</u>	
Preserve: <u>Mission Trails Regional Park</u>	Occurrence Name: <u>East Elliott #1</u>	
Date: <u>4/25/14</u>	Time Start: <u>9:40</u>	Time Finish: <u>10:27</u>
Surveyors & Affiliation/Agency: <u>BM, KR, RS</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Adenostoma fasciculatum - Xylococcus bicolor Alliance</u> <u>Adenostoma fasciculatum - Xylococcus bicolor - Ceanothus tomentosus Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>4</u> Thatch Cover: <u>1</u> Thatch Depth: Ave. _____ cm Max: _____ cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Adenostoma, Arnispon</u> Ave. Height? <u>8</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open Space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>3</u> Time Start: <u>9:40</u> Temp. Start: <u>100 F</u> Time Finish: <u>10:25</u> Temp. Finish: <u>63 F</u>		
Ant Sample Collected?: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ant Sample #: <u>2</u> Ant Station Photo #: <u>1333</u>		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>1</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>1</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>1</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire <u>1</u>	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____	
Trails <u>2</u>	If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> Unknown	
Type of Trail Use?	<input checked="" type="checkbox"/> Hiking <input checked="" type="checkbox"/> Biking <input checked="" type="checkbox"/> Equestrian <input checked="" type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles	
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: BLCL_4EAEL014 Species: BLCL

Date: 4/25/14

VI. MANAGEMENT RECOMMENDATIONS

none

VII. MANAGEMENT ACTIONS IN LAST YEAR

increased ranger patrols + educational outreach for Preserve
- 5 new ranger staff hired

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

approximately 10 additional plants seen but not flowering -
not sure if is common species or BLCL

* other possible individuals were heavily eaten - herbivory

***Bloomeria clevelandii* (San Diego Goldenstar) East Elliott # 4**



Panorama from Northwestern edge population, facing Northeast, North, Northwest, West, Southwest.

Panorama location is 6317566.250 189394.535 NAD83 State Plane California Zone 6 (feet)

Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_4EAELO15
 Common Name: San Diego goldenstar CNDDB EO#: EO3 Translocated? na
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: East Elliott Sample Point #: 5
 Surveyors & Affiliation: Kim Raeland, Roland Josa, Beth Miller - City of San Diego
 Date: 4/25/14 Time Start: 11:30 AM Time Finish: 12:45 PM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 15 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 272 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 2 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 2 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6316118.119 N: 1894089.91 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) SW, S, SE Direction (facing) SW, S, SE Height 1.1m Camera Angle 3° up Photo # 1345-1347 File location S:MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Quercus berberidifolia</i>	2							
	<i>Chorogalum parviflorum</i>	1							
	<i>Hellianthus scparium</i>	5							
	<i>Calochortus splendens</i>	1							
	<i>Felcea mucronata</i>	1							
	<i>Eriophyllum confertiflorum</i>	1							
	<i>Abronia fasciculatum</i>	30							
	<i>Mimulus aurantiacus</i>	7							
✓	<i>Brachypodium distachyon</i>	<1							
	<i>Sium helium</i>	1							
	<i>Ceanothus tomentosus</i>	2							
	<i>Stipa sp.</i>	3							
	unk plant	1							
						Bare Ground:	10		
						Litter:	3		
						Rock:	15		

Total % Cover: 55 % Herb Cover: 10 % Shrub Cover: 45 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_4EAEL014
 Preserve: Mission Trails Regional Park Occurrence Name: East Elliott #5
 Date: 4/25/14 Time Start: 11:30 Time Finish: 12:45
 Surveyors & Affiliation/Agency: SR, RS, BM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance; Adenostoma fasciculatum - (Griogonum fasciculatum | Artemisia californica | Salvia mellifera) Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)

Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Helianthemum/4, Stipa/3 Ave. Height? 10 cm

Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1

Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>2</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____

Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____

Trails 2 If Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use? trail system under revision to authorize old road cut as trail

- Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: BLCL_4EAEL014

Species: BLCL FES

Date: 4/25/14

VI. MANAGEMENT RECOMMENDATIONS

none

VII. MANAGEMENT ACTIONS IN LAST YEAR

general preserve access control;
closure/restoration of illegally constructed trails in preserve
five new ranger staff added to preserve program
fall trail review + revision via Master Plan Update

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

horned lizard - see ERS pt near photopoint

***Bloomeria clevelandii* (San Diego Goldenstar) East Elliott # 5**



Panorama from Western edge of population, facing Southwest, South, Southeast.
Panorama location is 6316118.12 1894089.91 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Bloomeria clevelandii - East Elliott

Point 4
Area <1 sq. m.

Point 3
Area 0 sq. m.

Point 2
Area 0 sq. m.

Point 5
Area 272 sq. m.

Point 1
Area 2132 sq. m.

Area 2014: 2404.0 sq. m.

 Bloomeria clevelandii

Pop. Area 2008 - 2014
Max Area: 809519 sq. m.
Min Area: 2404 sq. m.

0 87.5 175 350
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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SanGIS

Scientific Name: *Bloomeria clevelandii* MSP Occurrence ID: BLCL_6LORI021
 Common Name: San Diego Goldenstar CNDDDB EO#: EO10 Translocated? No
 Preserve: Los Peñasquitos Canyon Preserve Management Unit: U
 Land Owner: City of San Diego Land Manager: City of San Diego Env. Services
 Occurrence Name: Lopez Ridge Sample Point #: 1
 Surveyors & Affiliation: Beth Miller, Kim Roeland, Sara Muszars - City of San Diego
 Date: 4/21/14 Time Start: 12:40 pm Time Finish: 2:00 pm

I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 1 Exact estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 11 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 11 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 2 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6278246.403 N: 1915522.734 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax A90
 Location 1 (see coordinates above) SW, W, NW 1.1m 10° down 1227-1232 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Pogogyne abramsii</i>	5				<i>Pisibrachys foellus</i>	1		
	<i>Brodiaea orcutia</i>	1				<i>Pisibrachys brevissimus</i>	1		
	<i>Bloomeria clevelandii</i>	1			✓	<i>Erodium</i> sp.	5		
	<i>Lasthenia californica</i>	1				<i>Lupinus bicolor</i>	1		
	<i>Allium haematodes</i>	3			✓	<i>Avena</i> sp.	2		
	<i>Adenostoma fasciculatum</i>	7				<i>Stipa pulchra</i>	1		
	<i>Opuntia littoralis</i>	3			✓	<i>Bromus madritensis</i> ssp. c.	1		
	<i>Selaginella selaginoides</i>	3			✓	<i>Bromus hordeaceus</i>	1		
	<i>Adiantum glaberrimum</i>	1			✓	<i>Hordeum murinum</i>	4		
	<i>Pseudognaphalium bioretii</i>	1				<i>Plantago erecta</i>	<1		
	<i>Malva laurina</i>	2			✓	<i>Sonchus oleraceus</i>	1		
	<i>Penstemon fasciculatus</i>	3							
	<i>Chorizanthe parvifolia</i>	1				Bare Ground:	20		
✓	<i>Hypochaeris glabra</i>	3				Litter:	7		
	<i>Navarretia tomentosa</i>	1				Rock:	25		

Total % Cover: 35 % Herb Cover: 28 % Shrub Cover: 7 % Tree Cover: 0

Scientific Name: Pogogyne abramsii MSP Occurrence ID: BLCL_6LORI021

Preserve: Los Peñasquitos Canyon Preserve Occurrence Name: Lopez Ridge

Date: 4/21/14 Time Start: 12:40 Time Finish: 2:00

Surveyors & Affiliation/Agency: KA, SM, BYM

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Adenostoma fasciculatum Alliance / Adenostoma fasciculatum - Lotus scoparius Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 5 cm Max: 8 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass/4; 2 ^{*psilocarphus brevissimus*} Ave. Height? 6 cm
 Mammal Species Activity Categories (1-4); Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space, transportation, residential

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles
site not open to public

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

MSP - Management Needs and Notes

Occurrence ID: BLCL_6LORI021

Species: BLCL

Page 3

Date: 04/21/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain fences/signs
continue trash pick-up

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained fences/signs
trash removal

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

Lined area for listing species.

***Bloomeria clevelandii* (San Diego Goldenstar) Lopez Ridge**



Panorama from Eastern edge of population, facing Southwest, West, Northwest.
Panorama location is 6278246.41 1915522.73 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Bloomeria clevelandii - Lopez Ridge



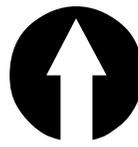
Area 2014: 12 sq. m.

 Bloomeria clevelandii

Pop. Area 2011 - 2014
Max Area: 2632.37 sq. m.
Min Area: 12 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_3MAVA005
 Common Name: San Diego goldenstar CNDDDB EO#: EO68 Translocated? No
 Preserve: Marron Valley Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Marron Valley Sample Point #: 1
 Surveyors & Affiliation: Bob Miller, Sean Faver, Wendy Rogers - City of San Diego
 Date: 4/22/14 Time Start: 3:30 pm Time Finish: 4:05 pm

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates: E: W406772.678 N: 1778001.250 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) Direction (facing): S, SE, N, W Height: 1.1m Camera Angle: 15° down Photo #: 127-129 File location: _____
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Salvia apiana</u>	<u>1</u>							
	<u>Artemisia californica</u>	<u>5</u>							
	<u>Rhynchospora</u>	<u>2</u>							
	<u>Corethrogyne filaginifolia</u>	<u>1</u>							
	<u>Trochena menziesii</u>	<u>7</u>							
	<u>Eriophyllum confertiflorum</u>	<u>1</u>							
	<u>Bahiaopsis laciniata</u>	<u>2</u>							
	<u>Eriogonum fasciculatum</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Callitriche melitensis</u>	<u>5</u>							
<input checked="" type="checkbox"/>	<u>Bromus macrotensis sp. n.</u>	<u>15</u>							
<input checked="" type="checkbox"/>	<u>Frodium sp.</u>	<u>10</u>							
<input checked="" type="checkbox"/>	<u>Avena sp.</u>	<u>1</u>							
	<u>Gutierrezia californica</u>	<u>10</u>							
						Bare Ground:	<u>30</u>		
						Litter:	<u>15</u>		
						Rock:	<u>5</u>		

Total % Cover: 40 % Herb Cover: 20 % Shrub Cover: 20 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Bloomeria clevelandii</u>	MSP Occurrence ID: <u>BLCL_3MAVA005</u>	
Preserve: <u>Marron Valley</u>	Occurrence Name: <u>Marron Valley #1</u>	
Date: <u>4/22/14</u>	Time Start: <u>3:30</u> Time Finish: <u>4:05</u>	
Surveyors & Affiliation/Agency: <u>BM, SP, KLR</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Bahiopsis lacinata Alliance</u> <u>Bahiopsis lacinata - Artemisia californica - Eriogonum fasciculatum Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%) Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>4</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>5</u> cm Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>unk grass/3</u> Ave. Height? <u>5</u> cm Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>3</u> Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____ Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>4</u> Non-Native Grasses <u>4</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>6</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u> Road Construction/Maintenance <u>1</u> Vegetation Clearing <u>1</u> ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____ Evidence of Recent Fire <u>6</u> If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: _____ Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown Type of Trail Use? <input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: BLCL_3MAVA005

Species: BLCL

Page 3

Date: 4/22/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs, gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained access control - signs, gates

VIII. CNDDDB SPECIES DETECTED & NOTES

List any plant or animal species to add to the CNDDDB:

***Bloomeria clevelandii* (San Diego Goldenstar) Marron Valley # 1**



Panorama from Western edge of population, facing South, West, North.
Panorama location is 6406792.477 1788021.049 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Bloomeria clevelandii* MSP Occurrence ID: *BLCL - 3MAVA 005*
 Common Name: San Diego goldenstar CNDDDB EO#: *EO68* Translocated? *NO*
 Preserve: *Marron Valley* Management Unit: *3*
 Land Owner: *City of San Diego* Land Manager: *City of San Diego PUD*
 Occurrence Name: *Marron Valley* Sample Point #: *2*
 Surveyors & Affiliation: *Kim Roeland, Sean Paver, Wendy Rogers - City of SD*
 Date: *4/22/14* Time Start: *3:19* Time Finish: *3:38*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: *0* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *0* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *N/A* *m²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *1* Flowering: *1* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *1*
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No *low rainfall*
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates; E: *64067225.718* N: *1787897.828* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax Optio W90*
 Location 1 (see coordinates above) *S, SW* *1.1m* *15° down* *1284-1286* *S:MSCP*
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Malosma laurina</i>	<i>5</i>			<input checked="" type="checkbox"/>	<i>Festuca myuros</i>	<i>1</i>		
	<i>Salvia apiana</i>	<i>2</i>			<input checked="" type="checkbox"/>	<i>Brassica sp.</i>	<i>1</i>		
	<i>Isoloma menziesii</i>	<i>5</i>							
	<i>Eriogonum fasciculatum</i>	<i>2</i>							
	<i>Gutierrezia californica</i>	<i>1</i>							
	<i>Artemisia californica</i>	<i>15</i>							
	<i>Corethrogyne filaginifolia</i>	<i>1</i>							
	<i>Osma denia tenella</i>	<i>1</i>							
	<i>Baccharis sarothroides</i>	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Erodium sp.</i>	<i>10</i>							
<input checked="" type="checkbox"/>	<i>Bromus madritensis</i>	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Avena sp.</i>	<i>1</i>							
	<i>Calystegia macrostegia</i>	<i>1</i>				Bare Ground:	<i>2</i>		
	<i>Stipa pulchra</i>	<i>1</i>				Litter:	<i>0</i>		
						Rock:	<i>1</i>		

Total % Cover: *50* % Herb Cover: *30* % Shrub Cover: *20* % Tree Cover: *0*

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_3MAVA005

Preserve: Marron Valley Occurrence Name: Marron Valley #2

Date: 4/22/14 Time Start: 3:19 Time Finish: 3:38

Surveyors & Affiliation/Agency: LR, SP, WR

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area** (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Salvia apiana Alliance; Salvia apiana-Artemisia californica Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 3 Thatch Depth: Ave. 2 cm Max: 5 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Isoloma, Avena, Bromus Ave. Height? 10 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 4 Gopher Activity: 4
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent** (cumulative extent over years of monitoring) **plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): Open Space

Argentine Ant Abundance at Bait Station (1-4): N/A Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>5</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>6</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1 - cattle n. of River</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	_____	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	_____		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____
 Trails 5 If Trails are Present, are They Authorized? Yes No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles Border Patrol

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Bloomeria clevelandii* (San Diego Goldenstar) Marron Valley # 2**



Panorama from Western edge of population, facing South, Southwest.
Panorama location is 6407225.72 1787897.83 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Scientific Name: *Bloomeria clevelandii* MSP Occurrence ID: BLCL-3MAVA005
 Common Name: San Diego goldenstar CNDDDB EO#: EO68 Translocated? No
 Preserve: Marron Valley Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Marron Valley Sample Point #: 3
 Surveyors & Affiliation: Kim Roeland, Sean Paver, Wendy Rogers - City of SD
 Date: 4/22/14 Time Start: 2:51 Time Finish: 3:15

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: N/A m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6407990.151 N: 1787523.484 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) NW, N, NE, E 1.1m 45° down 1276-1280 S:IMSCP
 Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____
 Location 2 [Coordinates] _____ Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
					✓	<i>Erodium sp.</i>	1		
	<i>Artemisia californica</i>	7							
	<i>Malosma laurina</i>	5							
	<i>Eriogonum fasciculatum</i>	3							
	<i>Salvia apiana</i>	3							
	<i>Isocoma menziesii</i>	3							
	<i>Pseudognaphalium sp.</i>	1							
	<i>Mimulus aurantiacus</i>	1							
	<i>Gutierrezia californica</i>	1							
	<i>Corethrogyne filaginifolia</i>	3							
	<i>Stipa pulchra</i>	7							
	<i>Calystegia macrostegia</i>	1							
✓	<i>Centaurea melitensis</i>	1				Bare Ground:	0		
✓	<i>Arena sp.</i>	1				Litter:	3		
✓	<i>Bromus madritensis</i>	1				Rock:	3		

Total % Cover: 40 % Herb Cover: 10 % Shrub Cover: 30 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Bloomeria clevelandii</u>	MSP Occurrence ID: <u>BLCL_3MAVA005</u>	
Preserve: <u>Marron Valley</u>	Occurrence Name: <u>Marron Valley #3</u>	
Date: <u>4/22/14</u>	Time Start: <u>2:51</u>	Time Finish: <u>3:15</u>
Surveyors & Affiliation/Agency: <u>KR, SP, WR</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Artemisia californica - Eriogonum fasciculatum</u> <u>Alliance; Artemisia californica - Eriogonum fasciculatum - Malosma laurina Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>1</u> Thatch Depth: Ave. _____ cm Max: _____ cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Avena, Bromus; 2</u> Ave. Height? <u>15</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>2</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>N/A</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>5</u> Non-Native Grasses <u>5</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> - cows on N side of creek Historic Grazing <u>6</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u> <u>2</u> → nearby tailings from road crushed Malosma		
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>2</u> If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles <u>Border Patrol</u>		
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Bloomeria clevelandii* (San Diego Goldenstar) Marron Valley # 3**



Panorama from Northeastern edge of population, facing Northwest, North, Northeast, East.
Panorama location is 6407990.15 1787523.48 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Habitat and Threats Assessment Form

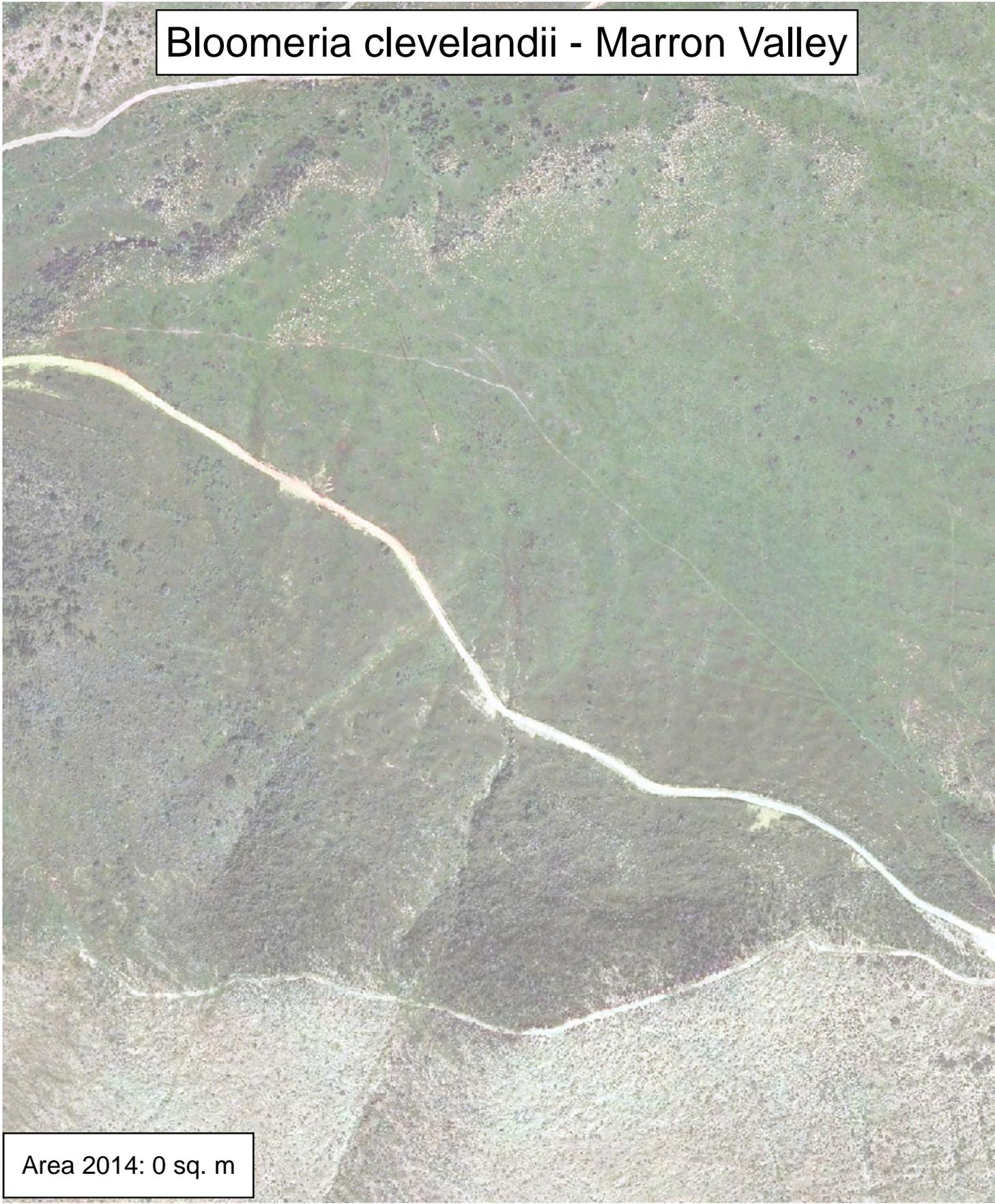
Scientific Name:	Bloomeria clevelandii	MSP Occurrence ID:	BLCL_3MAVA005
Preserve:	Marron Valley	Occurrence Name:	Marron Valley #4
Date:	4/22/14	Time Start:	3:00
		Time Finish:	3:30
Surveyors & Affiliation/Agency:	BM, WR		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>			
SANDAG 2012 Vegetation Alliance/Association: <u>Isocoma menziesii Alliance</u> <u>Isocoma menziesii Provisional Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>2</u> Thatch Cover: <u>5</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>5</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>unk grass/3</u> Ave. Height? <u>.5</u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>4 not recent</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>			
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____			
Disturbances (rank each as 1-6):			
Non-Native Forbs <u>4</u> Non-Native Grasses <u>3</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>6</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>			
Road Construction/Maintenance <u>2</u>			
Vegetation Clearing <u>1</u>			
ORV/Mountain Bike Activity <u>2</u> If Observed, List Type(s) of ORV/Bike Activity: <u>Border Patrol on road</u>			
Evidence of Recent Fire <u>6</u> If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: _____			
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown			
Type of Trail Use?			
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles			
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor			

***Bloomeria clevelandii* (San Diego Goldenstar)
Marron Valley # 4**



Panorama from Eastern edge of population, facing Southwest, West, Northwest, North.
Panorama location is 6407366.187 1787837.575 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Bloomeria clevelandii - Marron Valley

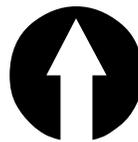


Area 2014: 0 sq. m

Pop. Area 2004 - 2014
Max Area: 95087.1 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



Every reasonable effort has been made to assure the accuracy of this map. However, neither the SanGIS participants nor San Diego Data Processing Corporation assume any liability arising from its use.

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Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BCLC-4MTRP023
 Common Name: San Diego goldenstar CNDDB EO#: EO2 Translocated? NO
 Preserve: Mission Trails Regional Park Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego
 Occurrence Name: Mission Trails Regional Park Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers - city of San Diego
 Date: 5/6/14 Time Start: 9:40 Time Finish: 10:00

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No very low rainfall
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates: E: 6307533.854 N: 188727.084 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) SE, E, NE, N 1.1m Level 1426-1429 S:IMSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Artemisia californica</u>	<u>10</u>							
	<u>Armispon glaber</u>	<u>5</u>							
	<u>Aderostoma fasciculatum</u>	<u>10</u>							
	<u>Pseudognaphalium californicum</u>	<u>1</u>							
	<u>Mimulus aurantiacus</u>	<u>2</u>							
	<u>Malosma launna</u>	<u>1</u>							
	<u>Quercus berberidifolia</u>	<u>1</u>							
	<u>Helianthemum scoparium</u>	<u>1</u>							
	<u>Stipa pulchra</u>	<u>1</u>							
	<u>Baccharis sarothroides</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Erodium sp.</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Bromus madritensis</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Avena sp.</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Brachypodium distachyon</u>	<u>100</u>							
						Bare Ground:	<u>0</u>		
						Litter:	<u>0</u>		
						Rock:	<u>0</u>		

Total % Cover: 95 % Herb Cover: 70 % Shrub Cover: 25 % Tree Cover: 0

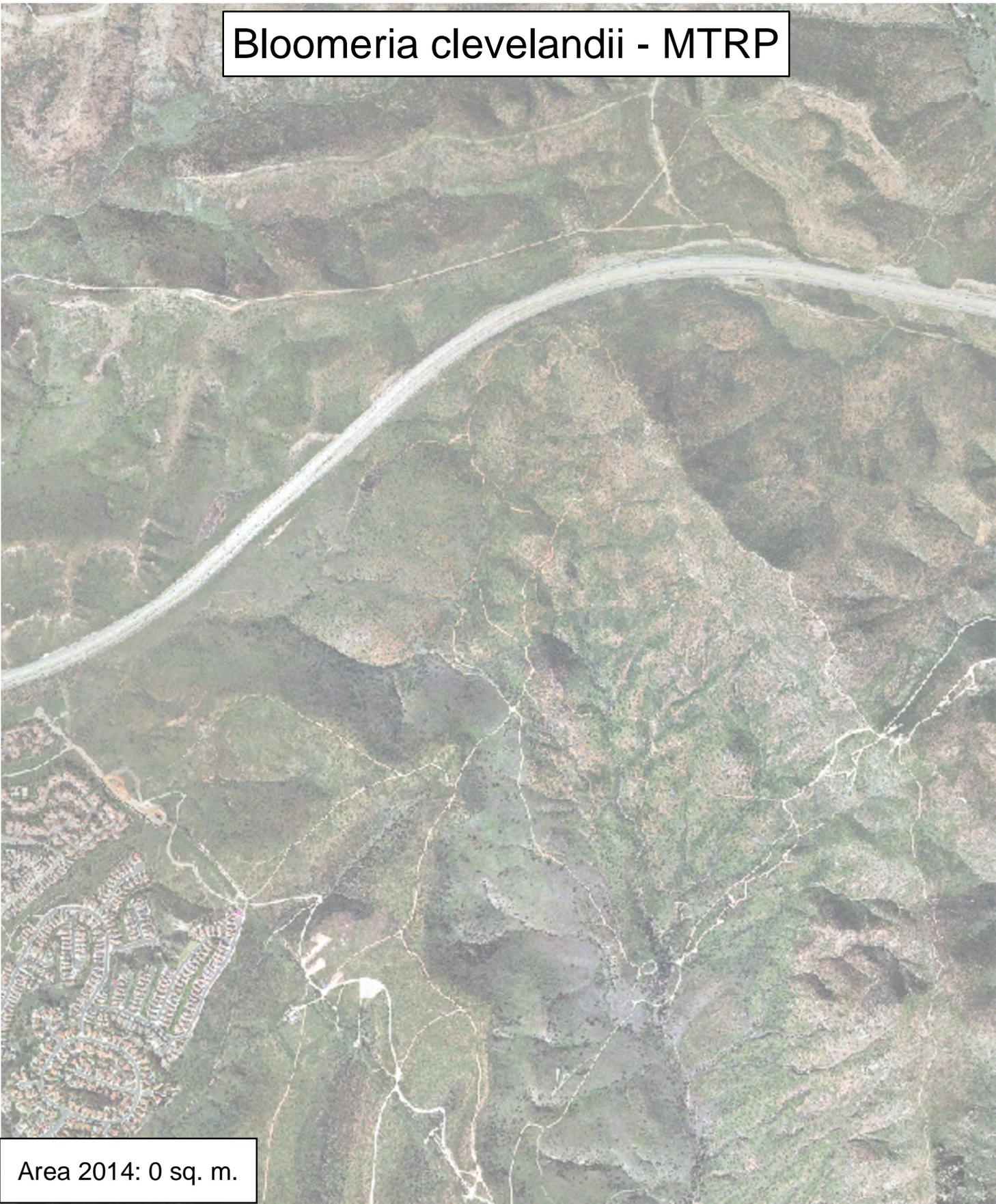
Scientific Name: <u>Bloomeria clevelandii</u>	MSP Occurrence ID: <u>BLCL_4MTRP023</u>	
Preserve: <u>Mission Trails Regional Park</u>	Occurrence Name: <u>Mission Trails Regional Park</u>	
Date: <u>5/6/14</u>	Time Start: <u>9:40</u> Time Finish: <u>10:00</u>	
Surveyors & Affiliation/Agency: <u>BMM, KR, WR</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Adenostoma fasciculatum Alliance!</u> <u>Adenostoma fasciculatum - (Eriogonum fasciculatum / Artemisia californica / Salvia mellifera)</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%) Association		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>4</u> Thatch Depth: Ave. <u>4</u> cm Max: <u>6</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Admisspon: 2 / Brassica: 2</u> Ave. Height? <u>20</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open Space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>N/A</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u> Non-Native Grasses <u>6</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>unk</u> Historic Agriculture <u>unk</u>	Altered Hydrology <u>1</u> Erosion <u>1</u> Urban Runoff <u>1</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u> Road Construction/Maintenance <u>1</u> Vegetation Clearing <u>1</u> ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____ Evidence of Recent Fire <u>6</u> If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: _____ Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown Type of Trail Use? <input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Bloomeria clevelandii* (San Diego Goldenstar) Mission Trails Regional Park**



Panorama from Northwestern edge of population, facing Southeast, South, Southwest, West, Northwest, North.
Panorama location is 6307533.854 1887727.084 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Bloomeria clevelandii - MTRP

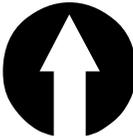


Area 2014: 0 sq. m.

Pop. Area 2001-2014
Max Area: 1255.77 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Wendy Rogers, 2014



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Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_3OTLA006
 Common Name: San Diego goldenstar CNDDDB EO#: none Translocated? no
 Preserve: Otay Lakes Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Otay Lakes #1 Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Sean Faver, Rety Miller, Wendy Rogers - City of SD
 Date: 4/22/14 Time Start: 9:20 am Time Finish: 9:45 AM

I. OCCURRENCE STATUS - Assess # plants in both the species-specific **sampling area** (typically 10-m radius circle) & in the **current mapped extent**. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: 0 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 0 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No very low rainfall - potential veg parts found during pre-surveys but B flowers this year
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6357208.466 N: 1807472.481 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax N90
 Location 1 (see coordinates above) Direction (facing) NW, N Height 1.1m Camera Angle 5° down Photo # 1245-1249 File location S:\MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA If need more room, record additional data and any notes on page 3.

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eriogonum fasciculatum</i>	3							
	<i>Pertinax arborea</i>	1							
	<i>Acmispon glaber</i>	3							
	<i>Lesqueria californica</i>	1							
	<i>Plagiobothrys</i> sp.	1							
	<i>Stagisida cinnascens</i>	5							
	<i>Dirandra fasciculatum</i>	2							
✓	<i>Erodium</i> sp.	10							
	<i>Chlorogalum parviflorum</i>	1							
✓	<i>Bambusa madri-fensis</i> ssp. r.	1							
	<i>Hypochaeris glabra</i>	1							
	<i>Trocama menziesii</i>	2							
	<i>Microseris douglasii</i> ssp. p.	1							
						Bare Ground:	30		
						Litter:	5		
						Rock:	3		

Total % Cover: 35 % Herb Cover: 25 % Shrub Cover: 10 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Bloomeria clevelandii MSP Occurrence ID: BLCL_30TLA006

Preserve: Otay Lakes Occurrence Name: Otay Lakes #1

Date: 4/22/14 Time Start: 9:20 Time Finish: 9:45

Surveyors & Affiliation/Agency: BYM, KR, SP, WK

IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within **species-specific sampling area (typically 10-m radius circle)**. Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.

SANDAG 2012 Vegetation Alliance/Association: Deinandra fasciculata alliana / Deinandra fasciculata association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 2 Thatch Cover: 2 Thatch Depth: Ave. 1 cm Max: 3 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass/3 Ave. Height? 6 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 2
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the **occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer**. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.

Surrounding Land Use at Site (>Maximum Extent): open space

Argentine Ant Abundance at Bait Station (1-4): n/a Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____

Ant Sample Collected?: Yes No Ant Sample #: _____ Ant Station Photo #: _____

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV/Mountain Bike Activity 1 If Observed, List Type(s) of ORV/Bike Activity: historic issues - Border Patrol curtailed via barriers + signs
 Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

Overall Site Quality (see page 5): Very Good-Excellent Fair to Good Poor Very Poor

***Bloomeria clevelandii* (San Diego Goldenstar)
Otay Lakes Observation # 1**



Panorama from Northeastern edge of population, facing Northwest, North.
Panorama location is 6357208.466 1807472.481 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: *Bloomeria clevelandii* MSP Occurrence ID: BLCL_3OTLA006
 Common Name: San Diego goldenstar CNDDB EO#: none Translocated? *no*
 Preserve: Otay Lakes Management Unit: *3*
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Otay Lakes #2 Sample Point #: *2*
 Surveyors & Affiliation: *Kim Roeland, San Paver, Roby Miller, Wendy Rogers - City of San Diego*
 Date: *1/22/14* Time Start: *10:40 AM* Time Finish: *11:10*

I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.

Plants/Sampling Area: *0* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *0* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *0* *m²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *1* Flowering: *1* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *1*
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No *very low rainfall - some potential vegetative parts found during pre-surveys but*
 If not, why (if reason known or suspected)? *no flowers this year*
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates; E: *6356421.867* N: *1807483.77* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax K190*
 Location 1 (see coordinates above) Direction (facing) *N, NE, E* Height *1.1m* Camera Angle *15° down* Photo # *1257-1262* File location *S:MSCP*
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

III. ASSOCIATED SPECIES IN SAMPLING AREA *If need more room, record additional data and any notes on page 3.*

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Peritoma arborea</i>	<i>3</i>							
	<i>Crocuta occidentalis</i>	<i>2</i>							
<input checked="" type="checkbox"/>	<i>Erodium sp.</i>	<i>12</i>							
	<i>Cressa truxillensis</i>	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Salsola tragus</i>	<i>1</i>							
	<i>Sisyrinchium bellum</i>	<i>3</i>							
	<i>Cryptantha sp.</i>	<i>1</i>							
	<i>Beinandra fracciculata</i>	<i>2</i>							
	<i>Chrozogalum parvifolium</i>	<i>2</i>							
<input checked="" type="checkbox"/>	<i>Bumelia madritensis sp. n.</i>	<i>1</i>							
	<i>Eriogonum fasciculatum</i>	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Hypochaeris glabra</i>	<i>1</i>							
	<i>Delphinella cinerascens</i>	<i>1</i>							
						Bare Ground:	<i>65</i>		
						Litter:	<i>15</i>		
						Rock:	<i>12</i>		

Total % Cover: *35* % Herb Cover: *30* % Shrub Cover: *5* % Tree Cover: *0*

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name:	Bloomeria clevelandii	MSP Occurrence ID:	BLCL_30TLA006
Preserve:	Otay Lakes	Occurrence Name:	Otay Lakes #2
Date:	4/22/14	Time Start:	10:40
		Time Finish:	11:10
Surveyors & Affiliation/Agency:	KR, SP, BM, WR		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>			
SANDAG 2012 Vegetation Alliance/Association: <u>Deinandra fasciculata Provisional Alliance</u> <u>Deinandra fasciculata Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>2</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>2</u> cm Max: <u>4</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>wak grass/3</u> Ave. Height? <u> </u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>			
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: <u> </u> Temp. Start: <u> </u> Time Finish: <u> </u> Temp. Finish: <u> </u>			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: <u> </u> Ant Station Photo #: <u> </u>			
Disturbances (rank each as 1-6):			
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>	
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>	
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>	
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>	
Dumping/Trash <u>1</u>	Historic Grazing <u>6</u>	Soil Compaction <u>1</u>	
Encampments <u>1</u>	Historic Agriculture <u>1</u>		
Fuel Modification Zone/Fire Break <u>1</u>			
Road Construction/Maintenance <u>1</u>			
Vegetation Clearing <u>1</u>			
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: <u> </u>			
Evidence of Recent Fire <u>6</u> If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: <u> </u>			
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown			
Type of Trail Use?			
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles			
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to <u>Good</u> <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor			

***Bloomeria clevelandii* (San Diego Goldenstar) Otay Lakes Observation # 2**



Panorama from Southeastern edge of population, facing North, Northeast, East.
Panorama location is 6356421.86 1807483.77 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Bloomeria clevelandii - Otay Lakes



Area 2014: No GPS Data

Pop. Area 2003 - 2014
Max Area: 381089.41 sq. m.
Min Area: 0 sq. m.

0 35 70 140
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Wendy Rogers, 2014



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