

City of San Diego 2013 MSCP Rare Plant Monitoring Report

City of San Diego
Park and Recreation Department
Open Space Division

August 2013



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Appendix A - City of San Diego MSCP Rare Plant Monitoring: 2013 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 Game. 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 2013, the City performed rare plant monitoring using the methodologies from the 2007 and 2010 USGS reports for the following species/sites:

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 orcuttii – Carroll Canyon, Lopez Ridge, Nobel Drive, USIU/Scripps Ranch
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 – 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 2013.

City of San Diego MSCP Rare Plant Monitoring: 2013 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	56.0	79	1%	21	74%	6	68%	Treat NNG using CBI method when available if possible due to remote location/topography	7	9
	Dennery Ranch East	0.0	0	0%	8	19%	10	109%	Treat NNG using CBI methods when available	11	13
	Mission Trails Regional Park	17.9	737	1%	12	19%	9	68%	Continue hand-weeding program	15	17
	Otay Lakes	0.0	0	0%	13	27%	9	55%	Continue to monitor and treat weeds as necessary	19	21
	Penasquitos Canyon Obs. 1	36.8	673	1%	16	58%	9	54%	Treat NNG using CBI methods when available	23	25
	Penasquitos Canyon Obs. 2	7.9	135	1%	22	77%	9	81%	Treat NNG with CBI methods when available	26	28
	Penasquitos Canyon Obs. 3	6.3	85	2%	17	61%	6	72%	Treat NNG with CBI methods when available	29	31
	Sabre Springs East Subpopulation	21.7	45	1%	15	37%	9	100%	Treat NNG using CBI methods when available	39	41
	Sabre Springs West #1 Subpopulation	6.4	8	1%	8	24%	14	54%	Continue weeding	33	35
Sabre Springs West #2 Subpopulation	38.9	8.0	<1%	11	30%	16	118%	Treat NNG using CBI methods when available	36	38	
<i>Acmispon prostratus</i> (Nuttall's Lotus)	Mission Bay Mariner's Point	†	†	†	†	†	†	†	Area fenced for Least Tern Breeding. Continue hand weeding	52	54
	Mission Bay Dune Triangle	0.0	0	0%	6	58%	3	50%	None	45	46
	Mission Bay Hospitality Point	2712.3	294	5%	7	48%	11	65%	Continue weeding	48	50
	No Man's Land (Mission Bay Site #1)	2425.1	195	1%	8	32%	7	93%	Weeding	55	57
	SD River Rip Rap (Mission Bay Site #3)	878.2	34	4%	14	27%	13	118%	None	59	61
	South Shores (Mission Bay Site #6)	2913.8	2575	1%	9	14%	11	121%	Continue weeding and pulling hottentot fig (ongoing via TransNet grant to Audubon)	63	65
Note: Presence/absence only surveys conducted at Mariner's Point											
<i>Ambrosia pumila</i> (San Diego Ambrosia)	Mission Trails Regional Park Kumeaya Lake	8454.2	3500	1%	10	27%	7	36%	Continue weed treatment program	69	71
<i>Bloomeria clevelandii</i> (San Diego Goldenstar)	East Elliott Obs. 1	12734.7	5000	3%	16	37%	9	59%	Evaluate ability to treat NNG given remote location and steep topography	75	77
	East Elliott Obs. 2	41.7	14	1%	13	70%	7	54%	None	78	80
	East Elliott Obs. 3	0.0	0	0%	14	68%	4	14%	None	81	83
	East Elliott Obs. 4	0.0	0	0%	16	45%	4	5%	None	84	86
	East Elliott Obs. 5	330.2	89	1%	17	100%	3	12%	None	87	89
	Lopez Ridge	2632.4	1470	1%	20	106%	7	35%	Treat weeds as needed	91	93
	Marron Valley Obs. 1	N/A	20	1%	16	25%	8	71%	Any weed treatments should be tested via pilot program	95	97
	Marron Valley Obs. 2	N/A	45	1%	11	36%	9	57%	None	98	100
	Marron Valley Obs. 3	N/A	50	1%	15	41%	9	74%	Any weed treatments should be tested via pilot program	101	103
	Marron Valley Obs. 4	N/A	75	1%	10	36%	6	63%	Any weed treatments should be tested via pilot program	104	106
Mission Trails Regional Park	0.0	0	0%	13	55%	7	35%	Continue to monitor post-burn recovery and evaluate weed treatment if needed	108	110	
Otay Lakes East Obs. 1	1287.9	100	1%	12	52%	7	109%	Continue monitoring and treat weeds as needed	112	114	
Otay Lakes West Obs. 2	1287.9	50	1%	11	37%	10	49%	Continue monitoring and treat weeds as needed	115	117	
<i>Brodiaea orcuttii</i> (Orcutt's Brodiaea)	Carroll Canyon	230.7	755	3%	24	94%	6	116%	Site to be enhanced via mitigation project	121	123
	Lopez Ridge	427.1	3067	12%	20	107%	7	35%	Treat weeds as needed	125	127
	Nobel Drive	0.75	9	3%	14	85%	10	12%	Continue treatment program	129	131
	USIU/Scripps Miramar Ranch	0.0	0	0%	15	37%	12	115%	Continue to survey; if species found, treat weeds	133	135

City of San Diego MSCP Rare Plant Monitoring: 2013 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>Cylindropuntia californica</i> (Snake Cholla)	Otay Mesa	6547.3	60	1%	13	50%	7	29%	Continue to monitor and treat weeds as needed	139	141
	Goat Mesa (Spring Canyon)	1367.1	33	1%	14	51%	9	41%	Continue to monitor and treat as needed	143	145
<i>Deinandra conjugens</i> (Otay Tarplant)	Dennery Ranch East	4493.8	4500	7%	11	65%	8	66%	Weeding	153	155
	Dennery Ranch	0.0	0	0%	10	55%	5	31%	None	149	151
	Proctor Valley	0.0	0	0%	12	64%	9	93%	Treat weeds using CBI methodology when available	157	159
<i>Dicranostegia orcuttiana</i> (Orcutt's Bird's Beak)	Otay River Valley	142.9	173	2%	20	80%	5	12%	None	163	165
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> (Short-Leaved Dudleya)	Carmel Mountain Obs. 1	148.7	2490	1%	20	77%	6	12%	None	169	171
	Carmel Mountain Obs. 2	61.9	537	1%	17	93%	1	2%	None	173	175
	Carmel Mountain Obs. 3	963.5	6636	2%	21	83%	2	6%	Maintain trail closure	177	179
	Crest Canyon North	145.1	2876	1%	24	122%	2	6%	None	181	183
	Crest Canyon South	31.6	53	1%	24	73%	0	0%	None	185	187
<i>Dudleya variegata</i> (Variegated Dudleya)	Black Mountain East	0.0	0	0%	16	64%	7	81%	Treat Brachypodium if DUVA is observed	191	193
	East Elliott - Creek	0.5	1	1%	20	60%	10	78%	Treat weeds around population	195	197
	East Elliott - Hilltop	26.3	39	1%	21	83%	6	14%	Close trail	199	201
	East Elliott - Slope	8.6	2	<1%	13	49%	8	55%	Weeding	203	205
	Goat Mesa (Spring Canyon)	201.8	479	1%	14	70%	5	40%	None	207	209
	Marron Valley	80.7	1726	3%	14	77%	7	137%	Weeding	211	213
	Mercy Road	118.7	712	2%	20	64%	6	67%	None	215	217
	Mission Trails #1	63.9	19	1%	13	46%	7	28%	None	219	221
	Mission Trails #2	151.5	2414	10%	22	74%	7	73%	Weeding	223	225
	Mission Trails #3	13.5	195	1%	14	91%	9	34%	Keep NNG from invading pop	227	229
	Navajo/Mission Gorge	35.7	582	2%	13	55%	6	44%	Treat Brachypodium using CBI methods when available if logistically possible	231	233
	Otay Lakes	0.0	0	0%	10	33%	8	72%	If species found, consider weeding	235	237
	Santa Luz	0.0	0	0%	17	70%	9	66%	If species found, consider weeding	239	241
<i>Eryngium aristulatum</i> var. <i>parishii</i> (San Diego Button Celery)	Goat Mesa #1 (Spring Canyon)	75.0	878	7%	5	50%	10	51%	Continue monitoring and treat weeds as needed	245	247
	Goat Mesa #2 (Spring Canyon)	373.1	895	5%	13	55%	8	71%	Continue monitoring and treat weeds as needed	249	251
	Otay Lakes	14081.6	1600	3%	9	26%	8	58%	None, NNG cover in vernal pool due to low rainfall	253	255
<i>Monardella stoneana</i> (Jennifer's Monardella)	Otay Lakes	8.0	1	<1%	17	66%	13	70%	None	259	261
<i>Monardella viminea</i> (Willow Monardella)	Lopez Canyon West Terrace #1	0.0	0	0%	12	67%	11	20%	None	265	267
	Lopez Canyon East of Bridge #2	106.6	8	1%	16	57%	8	65%	Continue volunteer management effort	269	271
	Lopez Canyon East of Bridge #3	2.6	2	2%	9	77%	10	21%	None	273	275
	Sycamore Canyon	223.6	70	4%	14	39%	11	62%	Continue streambank monitoring, continue planning runoff mitigation via MTRP NRMP	277	279

City of San Diego MSCP Rare Plant Monitoring: 2013 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>Navarretia fossalis</i> (Spreading Navarretia)	Carroll Canyon	2.3	19	1%	10	130%	5	22%	None	283	285
	Goat Mesa (Spring Canyon)	0.0	0	0%	5	50%	10	51%	Continue monitoring and treat weeds if needed	287	289
	Nobel Drive	11.3	122	1%	14	85%	10	12%	Continue weeding project	291	293
	Otay Lakes	3.0	1	<1%	17	66%	13	69%	Continue monitoring and treat as needed	295	297
	Robinhood Ridge	0	0	0%	9	48	8	23%	None	299	301
<i>Pogogyne abramsii</i> (San Diego Mesa Mint)	Carroll Canyon	181.2	19800	45%	14	111%	5	15%	None	305	307
	Lopez Ridge	335.9	40185	35%	9	48%	8	23%	Treat weeds as needed	309	311
<i>Pogogyne nudiuscula</i> (Otay Mesa Mint)	Robinhood Ridge	13.5	10	2%	9	48%	8	23%	None	315	317
<i>Rosa minutifolia</i> (Small-leaved Rose)	Dennery Ranch	93.6	7	5%	10	55%	5	52%	None	320	322

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



© Scott McMillan, 2001

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Acanthomintha ilicifolia</i>		Common Name: San Diego Thornmint					
Site Name: Black Mountain		Management Unit #: TBA					
Date: 4/16/13		Management Regime: TBA					
Surveyors and Affiliation/Agency: <i>Betsy Miller, Kim Raeland, Mike Milano - City of San Diego</i>							
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No _____							
If not, why (if reason known or suspected)?							
Total No. Individuals: <u>79</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)							
Population/Subpopulation Area: <u>55.975</u> <u>m²</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate Units: <u>2013 GPS data</u>							
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					
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet							
Observation Location: <u>6284663.39</u> <u>1946643.29</u> <input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM							
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community: <u>ARTEMESIA CALIFORNICA - SALVIA MELLIFERA ALLIUM / ARTEMESIA CALIFORNICA - SALVIA MELLIFERA ASSOCIATION</u>							
Landowner/Manager: <u>City of San Diego Park and Recreation</u>							
Overall Site Quality** <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to <u>Good</u> <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor							
Surrounding land use: <u>open space, residential</u>							
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>moderate/high cover NNE</u>		Management Recommendation/s: <u>treat NNE using CBI method when available if possible due to remote location/topography</u>					
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	1			<i>Lesqueria feligianifolia</i>	3		
<i>Rhus integrifolia</i>	7			<i>Toxicoscordion venenosum</i>	4		
<i>Achillea glaber</i>	7			<i>Bloomeria crocea</i>	1		
<i>Salvia mellifera</i>	10			<i>Dichelostemma capitatum</i>	1		
<i>Artemisia californica</i>	2			<i>Allium haematocliton</i>	20		
<i>Artemisia californica</i>	3			<i>Calystegia macrostegia</i>	2		
<i>Malosma laurina</i>	1			<i>Delandrea fasciculata</i>	2		
<i>Peritoma arborea</i>	1			<i>Lupinus sp.</i>	1		
IV. SITE PHOTOMONITORING							
Camera type: <u>PENTAX OPTIO W90</u>							
<u>6284663.39</u>	<u>1946643.29</u>	<u>N, NE, E, SE</u>	<u>1.1 m</u>	<u>Level</u>	<u>257-263</u>	<u>S: \MSCP</u>	
Location [State Plane (ft)]	Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s	
_____	_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	_____	
V. OTHER FIELD NOTES							
Other Field Notes/Comments: _____							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Cnecidium dumosa</i>	1
<i>Calochortus splendens</i>	1
<i>Stipa pulchra</i>	3
* <i>Cynara cardunculus</i>	1
* <i>Bassica nigra</i>	3
<i>Chlorogalum parvifolium</i>	1
* <i>Bromus hordeaceus</i>	3
* <i>Brachypodium distachyon</i>	55
* <i>Avena barbata</i>	5
<i>Harpagonekta palmeri</i>	2
* <i>Sonchus asper</i>	1

***Acanthomintha ilicifolia* (San Diego Thornmint) Black Mountain**



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

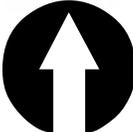


Area: 56.496 sq. m.
 Acanthomintha ilicifolia 2013

Pop. Area 2003 - 2013
Max Area: 56.496 sq. m.
Min Area: 0.13 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Mike Milano, 2013



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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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: *Acanthamintha ilicifolia* Common Name: San Diego Thornmint
 Site Name: Denny Ranch East Management Unit #: TBD
 Date: 4/20/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: *Betsy Miller, Kim Roeland, Mike Milano, Syd Wagner - City of San Diego*

Species Found? Yes No *limited rainfall, snail shells plentiful*
 If not, why (if reason known or suspected)?
 Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 0 m² Exact (based on GPS mapping) Estimate
 Units
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 1793100.27 6323383.67 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: *Simmondsia chinensis Alliance / Simmondsia chinensis - Bahiopsis laciniata Association*
 Landowner/Manager: *City of San Diego Park and Recreation*
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: *open space, residential*

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
high cover non-native herbs + grasses

Management Recommendation/s:
treat weeds using CST methods when available

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Mirabilis laevis</i>	1			<i>Eriogonum fasciculatum</i>	3		
<i>Simmondsia chinensis</i>	7			* <i>Bomus madriensis</i> ssp. <i>ruber</i>	40		
<i>Peritoma arborea</i> var. <i>arborea</i>	3			* <i>Bomus hordeaceus</i>	2		
<i>Rhus integrifolia</i>	2			* <i>Brachypodium distachyon</i>	15		
<i>Cylindropuntia prolifera</i>	1			* <i>Melilotus</i> sp.	5		
<i>Sida</i> sp.	1			* <i>Medicago polymorpha</i>	2		
<i>Desmodium fasciculatum</i>	1			* <i>Festuca perennis</i>	1		
* <i>Pentaurea melitensis</i>	30			* <i>Erodium</i> sp.	1		

IV. SITE PHOTOMONITORING
 Camera type: *PENTAX OPTIO w90*

<u>1793100.3</u>	<u>6323383.7</u>	<u>W,SW,S</u>	<u>1.1m</u>	<u>10° down</u>	<u>131-148</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
* <i>Brassica nigra</i>	1
* <i>Festuca myuros</i>	2

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



Panorama from Southern edge of population, facing West, Southwest, South.
Panorama location is 6323383.67 1793100.27 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

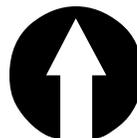
Acanthomintha ilicifolia - Dennery Canyon East



Pop. Area 2010 - 2013
Max Area: 1005.8 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Mike Milano, 2013



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SanGIS

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Bromus hordeaceus</i>	1
* <i>Lepidium sp.</i>	1
* <i>Polygonum interruptum</i>	1
<i>Convolvulus simulans</i>	<1
<i>Logfia fetaginoides</i>	<1

***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

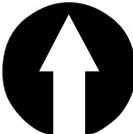


Area 2013: 17.88 sq. m.
 Acanthomintha ilicifolia

Pop. Area 2001 - 2013
Max Area: 1206.07 sq. m.
Min Area: 8.17 sq. m.

0 3.75 7.5 15 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: *Acanthomintha ilicifolia* Common Name: San Diego Thornmint
 Site Name: Otay Lakes Management Unit #: TBA
 Date: 5/2/13 Management Regime: TBA
 Surveyors and Affiliation/Agency: Boby Miller, Kim Raeborn, Mike Milano - City of San Diego

Species Found? Yes No limited population in previous years; dry year
If not, why (if reason known or suspected)?
 Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 0 m² Exact (based on GPS mapping) Estimate
Units
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6356877.62 1807531.39 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: DEINANDRA FASCICULATA PROVISIONAL ALLIANCE / DEINANDRA FASCICULATA ASSOCIATION
 Landowner/Manager: City of San Diego Public Utilities Dept.
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
moderate cover NWS + erodium

Management Recommendation/s:
continue to monitor + treat weeds as necessary

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Brodiaea tenax</i>	1			* <i>Anagallis arvensis</i>	1		
<i>Deinandra fasciculata</i>	12			* <i>Erodium</i> sp.	20		
<i>Dudleya variegata</i>	1			* <i>Centaurea melitensis</i>	3		
<i>Isocoma menziesii</i>	3			* <i>Medicago polymorpha</i>	2		
<i>Eriogonum fasciculatum</i>	1			<i>Cressa truxillensis</i>	1		
<i>Calochortus splendens</i>	1			<i>Lepidium</i> sp.	1		
<i>Silphium laciniatum</i>	2			<i>Cuscuta occidentalis</i>	1		
<i>Erigeron clevelandii</i>	1			* <i>Avena</i> sp.	1		

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W90
6356877.62 1807531.39 SE, S, SW, W .85 m 10 degrees up 135-137 S:\MSCP
Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: black tailed jackrabbit @ point

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

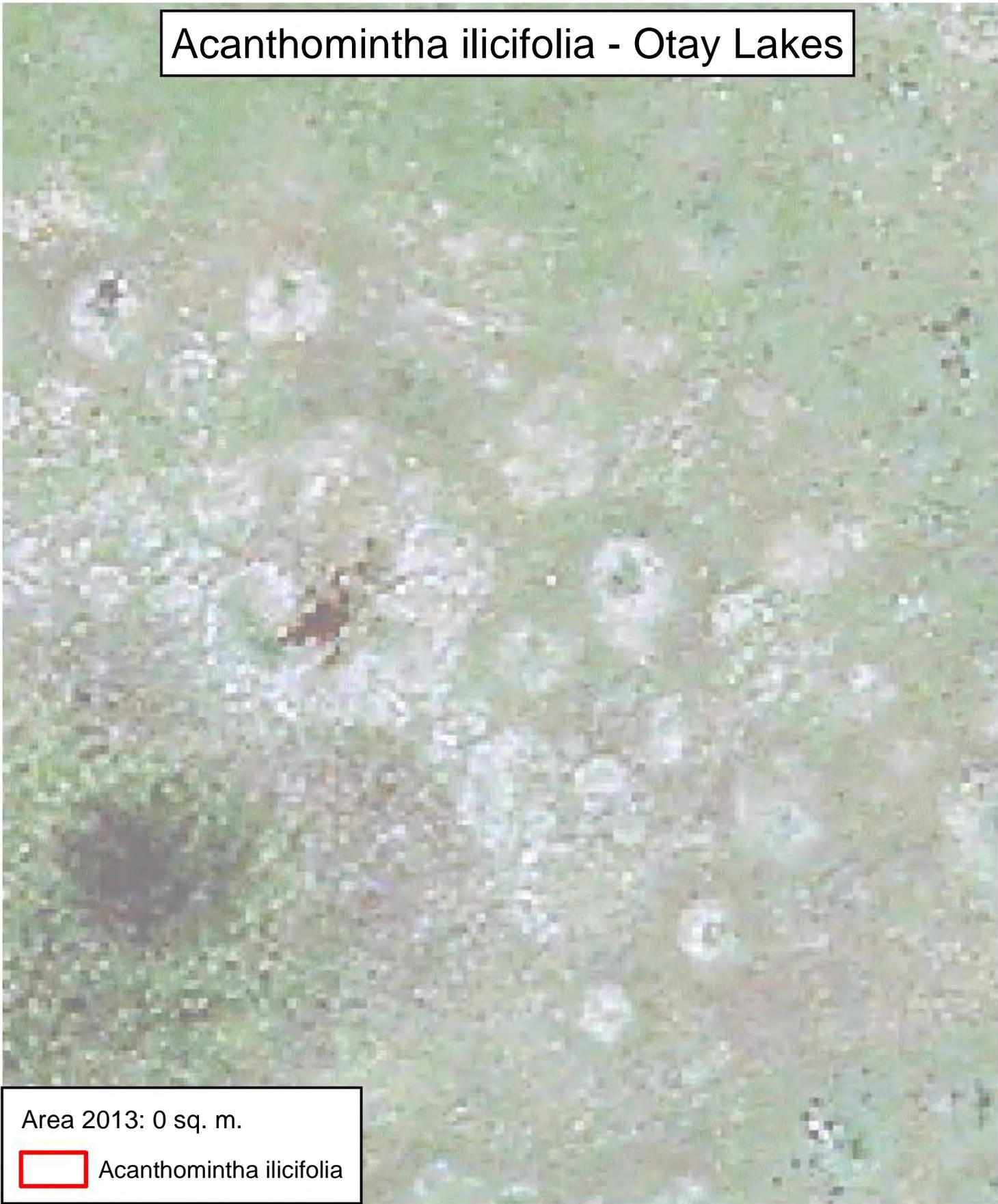
<u>Species</u>	<u>% cover</u>
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	5
* <i>Bromus hordeaceus</i>	20
* <i>Festuca myuros</i>	2
* <i>Hordeum murinum</i>	1
<i>Eryngium aristulatum</i>	1
unk plant	1

***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



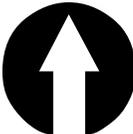
Area 2013: 0 sq. m.

 Acanthomintha ilicifolia

Pop. Area 2003 - 2013
Max Area: 10.7 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Acanthomintha ilicifolia</i>		Common Name: San Diego Thornmint					
Site Name: Penasquitos Canyon Obs. #1		Management Unit #: TBA					
Date: 4/16/13		Management Regime: TBA					
Surveyors and Affiliation/Agency: <i>Bob Miller, Kim Rockland, Mike Milano - City of San Diego</i>							
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No _____ If not, why (if reason known or suspected)?							
Total No. Individuals: <u>673</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)							
Population/Subpopulation Area: <u>36.835316</u> <u>m2</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate Units: <u>2013 GPS data</u>							
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					
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet							
Observation Location: <u>6276496.26</u> <u>1918576.06</u> <input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM							
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community: <u>SALVIA MELLIFERA ALLIANCE</u>							
Landowner/Manager: <u>City of San Diego Park and Recreation</u>							
Overall Site Quality** <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor							
Surrounding land use: <u>open space, residential</u>							
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>non native grass cover</u>		Management Recommendation/s: <u>treat grass using CBI methods when available</u>					
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	1			<i>Acmispon glaber</i>	41		
<i>Demiantha fasciculata</i>	30			<i>Dichelostemma capitatum</i>	1		
<i>Salvia mellifera</i>	5			<i>Calystegia macrostegia</i>	1		
<i>Rhus integrifolia</i>	3			<i>Convolvulus simulans</i>	3		
<i>Artemisia californica</i>	1			<i>Lupinus succulentus</i>	41		
<i>Adelphia californica</i>	5			* <i>Centaurea melitensis</i>	3		
<i>Isocoma menziesii</i>	1			* <i>Hypochaeris glabra</i>	1		
<i>Eriophyllum confertiflorum</i>	41			<i>Perocactus tridactylus</i>	41		
IV. SITE PHOTOMONITORING							
Camera type: <u>PENTAX OPTIO W90</u>							
<u>6276496.26</u>	<u>1918576.06</u>	<u>E, SE, S, SW</u>	<u>.85 m</u>	<u>Level</u>	<u>227-232</u>	<u>S:\MSCP</u>	
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
_____	_____	_____	_____	_____	_____		
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
_____	_____	_____	_____	_____	_____		
V. OTHER FIELD NOTES							
Other Field Notes/Comments: _____							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Gloemeria crocea</i>	< 1
* <i>Erodium</i> sp.	2
* <i>Aragallus arvensis</i>	1
* <i>Brachypodium distachyon</i>	40
<hr/>	
* <i>Avena barbata</i>	3
* <i>Logfia filaginoides</i>	1
* <i>Festuca myuros</i>	2
* <i>Brassica nigra</i>	< 1
<i>Stipa pulchra</i>	1
<i>Rhamnus crocea</i>	21

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Acanthomintha ilicifolia</i>	Common Name: San Diego Thornmint
Site Name: Penasquitos Canyon Obs. #2	Management Unit #: TBA
Date: 4/16/13	Management Regime: TBA
Surveyors and Affiliation/Agency: <i>Betsy Miller, Kim Reeland, Mike Milano - City of San Diego</i>	

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 135 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 7.891577 m² Exact (based on GPS mapping) Estimate
Units *2013 GPS data*

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
Collector Collection Number Museum/Herbarium

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6276540.33 1918463.76 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: SALVIA MELLIFERA ALLIANCE

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to ~~Good~~ Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>high cover NNE</u>	Management Recommendation/s: <u>treat NNE with CBT methods when available</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	1			<i>Chorogalum parvifolium</i>	1		
<i>Rhus integrifolia</i>	7			<i>Rhamnus crocea</i>	1		
<i>Adelphia californica</i>	10			<i>Quercus dumosa</i>	5		
<i>Salvia apiana</i>	1			<i>Heteromeles arbutifolia</i>	2		
<i>Salvia mellifera</i>	15			<i>Eriophyllum confertiflorum</i>	2		
<i>Jaccharis pilularis</i>	1			<i>Styria pulchra</i>	3		
<i>Artemisia californica</i>	1			<i>Calystegia macrostegia</i>	1		
<i>Callium angustifolium</i>	1			<i>Eriogonum fasciculatum</i>	4		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6276540.33</u>	<u>19188463.76</u>	<u>SE, S, SW</u>	<u>.85 m</u>	<u>5 degrees down</u>	<u>233-240</u>	<u>S:\MSCP</u>
<small>Location [State Plane (ft)]</small>	<small>Location [State Plane (ft)]</small>	<small>Direction (facing)</small>	<small>Height</small>	<small>Camera Angle</small>	<small>Photo #</small>	<small>File location/s</small>
_____	_____	_____	_____	_____	_____	_____
<small>Location [State Plane (ft)]</small>	<small>Location [State Plane (ft)]</small>	<small>Direction (facing)</small>	<small>Height</small>	<small>Camera Angle</small>	<small>Photo #</small>	<small>File location/s</small>

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

* <i>Festuca myuros</i>	15
* <i>Filago gallica</i>	1
* <i>Bromus hordeaceus</i>	2
* <i>Avena barbata</i>	3

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Cosmaderia tenellus</i>	<1
<i>Deinandra fasciculatum</i>	20
<i>Calochortus splendens</i>	1
<i>Dichelostemma capitatum</i>	1
<hr/>	
<i>Mirabilis sp.</i>	1
<i>Isocoma menziesii</i>	1
* <i>Argemone arvensis</i>	1
* <i>Hypochaeris glabra</i>	1
* <i>Centaurea melitensis</i>	2
<hr/>	
* <i>Lepidium sp.</i>	1
* <i>Brahyopodium distachyon</i>	55

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: *Acanthomintha ilicifolia* Common Name: San Diego Thornmint
 Site Name: Penasquitos Canyon Obs. #3 Management Unit #: TBA
 Date: 4/16/15 Management Regime: TBA
 Surveyors and Affiliation/Agency: Boby Miller, Kim Zealand, Mike Milane -
 City of San Diego

Species Found? Yes No
 If not, why (if reason known or suspected)?
 Total No. Individuals: 85 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 6.298643 ^{m²} Exact (based on GPS mapping) Estimate
 Units
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6276371.01 1918517.83 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: ARTEMESIA CALIFORNICA-SARNIA MELLIFERA MOUND / ARTEMESIA CALIFORNICA-SARNIA MELLIFERA ASSOCIATION
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
 moderate/high cover of NNE
 Management Recommendation/s:
 treat NNE using CBT methods when available

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	2			<i>Heteromeles arbutifolia</i>	1		
<i>Adelpha californica</i>	20			<i>Diandra fasciculata</i>	12		
<i>Rhus integrifolia</i>	5			* <i>Tentacra melitensis</i>	5		
<i>Samolus coccineus</i>	1			<i>Logfia fitanginoides</i>	1		
<i>Sarcocolla mellifera</i>	7			<i>Stipa pulchra</i>	3		
<i>Isocoma menziesii</i>	1			* <i>Hypochaeris glabra</i>	1		
<i>Artemisia californica</i>	1			* <i>Hedysarum creticum</i>	1		
<i>Penstemon glaber</i>	1			<i>Eriogonum fasciculatum</i>	1		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90
 6276371.01 1918517.83 E, SE, S, SW .85 m Level 241-247 S:\MSCP
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments:

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Chlorogalum parviflorum</i>	1
<i>Aemisson heermannii</i>	2
* <i>Festuca myuros</i>	5
* <i>Brachypodium distachyon</i>	60
<hr/>	
* <i>Avena barbata</i>	<1
<i>Anagallis arvensis</i>	1
<i>Erodium sp.</i>	<1

***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: 36.84 sq. m.

Point 3
Area: 6.3 sq. m.

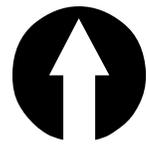
Point 2
Area: 7.89 sq. m.

Area 2013: 51.03 sq. m.
 Acanthomintha ilicifolia

Pop. Area 2000 - 2013
Max Area: 2062 sq. m.
Min Area: 31.7 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Acanthomintha ilicifolia</i>		Common Name: San Diego Thornmint					
Site Name: Sabre Springs <u>East</u> Subpop # /		Management Unit #: TBA					
Date: <u>4/16/13</u>		Management Regime: TBA					
Surveyors and Affiliation/Agency: <u>John Miller, Kim Raeland, Mike Milano</u> <u>City of San Diego</u>							
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
If not, why (if reason known or suspected)?							
Total No. Individuals: <u>8</u>		<input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)					
Population/Subpopulation Area: <u>6.39701</u>		<u>m²</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate					
		<u>2013 GPS data</u>					
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 _____							
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet							
Observation Location: <u>6303277.45</u> <u>1923560.66</u> <input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM							
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community: <u>BACCHARIS PILULARIS MUNITI / BACCHARIS PILULARIS-HERBACEOUS ASSOCIATION</u>							
Landowner/Manager: <u>City of San Diego Park and Recreation</u>							
Overall Site Quality** <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor							
Surrounding land use: <u>open space, residential</u>							
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>weeds have been controlled within patch</u>		Management Recommendation/s: <u>continue weeding</u>					
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; *Cover%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	1			* <i>Hedysarum cretica</i>	1		
<i>Cuscuta</i> sp.	1			* <i>Alagallum arvensis</i>	12		
<i>Quercus dumosa</i>	5			* <i>Pithecis echinoides</i>	1		
<i>Adelphia californica</i>	5			* <i>Erodium</i> sp.	5		
<i>Baccharis pilularis</i>	7			* <i>Brassica nigra</i>	1		
<i>Artemisia californica</i>	3			* <i>Centauria melitensis</i>	<1		
<i>Trifolium menziesii</i>	1			* <i>Bromus hordeaceus</i>	5		
<i>Chaptalia californicum</i>	1			* <i>Bromus madritensis</i>	5		
IV. SITE PHOTOMONITORING							
Camera type: <u>PENTAX OPTIO W90</u>							
<u>6303277.45</u>	<u>1923560.66</u>	<u>S, SW, W</u>	<u>50in</u>	<u>slightly down</u>	<u>214-218</u>	<u>S:\MSCP</u>	
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s	
_____	_____	_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	_____	_____	
V. OTHER FIELD NOTES							
Other Field Notes/Comments: _____							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Bromus diandrus</i>	2
* <i>Brachypodium distachyon</i>	5
* <i>Festuca myuros</i>	15
* <i>Foeniculum vulgare</i>	<1
* <i>Carduus pycnocephalus</i>	<1
* <i>Melilotus indica</i>	<1

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: *Acanthomintha ilicifolia* Common Name: San Diego Thornmint
 Site Name: Sabre Springs West Subpop #2 Management Unit #: TBA
 Date: 4/16/13 Management Regime: TBA
 Surveyors and Affiliation/Agency: *Joby Miller, Kim Roeland, Mike Milano*
- City of San Diego

Species Found? Yes No _____
 If not, why (if reason known or suspected)?
 Total No. Individuals: 8 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 38.892185 m² Exact (based on GPS mapping) Estimate
 Units
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6303277.45 1923560.66 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: BACCHARIS PILULARIS MOUND / BACCHARIS PILULARIS-HERBACEOUS ASSOCIATION
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
high cover NNE
mustard currently controlled
 Management Recommendation/s:
treat NNE using CBT methods
when available

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	<1			<i>Sidalcea sparsiflora</i>	<1		
<i>Adolphia californica</i>	5			<i>Ceranium carolinianum</i>	1		
<i>Artemisia californica</i>	3			* <i>Anagallis arvensis</i>	7		
<i>Baccharis pilularis</i>	10			* <i>Euphorbia peplois</i>	1		
<i>Marah macrocarpus</i>	<1			* <i>Feseda luteola</i>	<1		
<i>Tocoma menziesii</i>	2			* <i>Sanchus oleraceus</i>	1		
<i>Quercus dumosa</i>	1			* <i>Synsphaera nigra</i>	1		
<i>Convolvulus simulans</i>	5			* <i>Hedysarum cretica</i>	1		

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W90
6303277.45 1923560.66 S, SW, W 50in slightly down. 219-220 S:\MSCP
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
* <i>Erodium</i> sp.	3
* <i>Lactuca scariola</i>	1
* <i>Rumex crispus</i>	21
* <i>Medicago polymorpha</i>	1
<hr/>	
* <i>Avena barbata</i>	3
<i>Acmispon glaber</i>	1
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	2
* <i>Bromus diandrus</i>	1
<hr/>	
* <i>Bromus hordeaceus</i>	10
* <i>Brachypodium distachyon</i>	45
* <i>Festuca myuros</i>	20

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Acanthomintha ilicifolia</i>		Common Name: San Diego Thornmint					
Site Name: Sabre Springs <i>South</i> Subpop # <i>3</i>		Management Unit #: TBA					
Date: <i>4/16/13</i>		Management Regime: TBA					
Surveyors and Affiliation/Agency: <i>Betsy Miller, Kim Paeland, Mike Milano - City of San Diego</i>							
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
If not, why (if reason known or suspected)?							
Total No. Individuals: <i>45</i> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)							
Population/Subpopulation Area: <i>21.685001</i> <i>m²</i> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate <i>2013 GPS data</i>							
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 _____							
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/- <i><1</i> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet							
Observation Location: <i>6303376.7</i> <i>1923491.2</i> <input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM							
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community: <i>Quercus dumosa Alliance / Quercus dumosa Association</i>							
Landowner/Manager: <i>City of San Diego Park and Recreation</i>							
Overall Site Quality** <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor							
Surrounding land use: <i>open space, industrial</i>							
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>high non-native grass cover</i>		Management Recommendation/s: <i>treat grasses using CBI methodology when available</i>					
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Acanthomintha ilicifolia</i>	<i>1</i>			<i>Apiastrum angustifolium</i>	<i>1</i>		
<i>Adelphia californica</i>	<i>5</i>			<i>Marrubium maculocarpus</i>	<i><1</i>		
<i>Quercus dumosa</i>	<i>20</i>			<i>Stachys bullata</i>	<i>1</i>		
<i>Saccharis pilularis</i>	<i>1</i>			<i>Rhus integrifolia</i>	<i>1</i>		
<i>Bocconia negandensis</i>	<i>1</i>			<i>Convolvulus simulans</i>	<i>1</i>		
<i>Deinandra fasciculata</i>	<i>1</i>			<i>Festuca microstachys</i>	<i>1</i>		
<i>Dichelostemma capitatum</i>	<i><1</i>			* <i>Anagallis monensis</i>	<i>3</i>		
<i>Toxicoscordion venenosum</i>	<i>1</i>			* <i>Juncus asper</i>	<i>1</i>		
IV. SITE PHOTOMONITORING							
Camera type: <i>PENTAX OPTIO W90</i>							
<i>6303376.7</i>	<i>1923491.2</i>	<i>NW, N, NE, E</i>	<i>45in</i>	<i>5 degrees down</i>	<i>#13</i>	<i>S: \MSCP</i>	
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s	
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s	
V. OTHER FIELD NOTES							
Other Field Notes/Comments: _____							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
* <i>Picris echioides</i>	1
* <i>Avena barbata</i>	15
* <i>Brachypodium distachyon</i>	70
* <i>Zomus madritensis</i> ssp. <i>rebens</i>	1
* <i>Festuca myuros</i>	7
<i>Eriophyllum confertiflorum</i>	1
* <i>Brassica nigra</i>	1
* <i>Reseda luteola</i>	1

***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 38.89 sq. m.



Point 1
Area 6.98 sq. m.



Point 3
Area 21.69 sq. m.

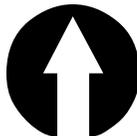


Area 2013: 67.55 sq. m.
 Acanthomintha ilicifolia

Pop. Area 2006 - 2013
Max Area: 282.1 sq. m.
Min Area: 14.56 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Acmispon prostratus
Nuttall's Lotus



© City of San Diego, 2001

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Acmispon prostratus	Common Name:	Nuttall's Acmispon
Site Name:	Mission Bay- Dune Triangle	Management Unit #:	TBD
Date:	5/24/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Mike Milano, Kristina Cary, Katherine Santos - City of San Diego			
Species Found? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If not, why (if reason known or suspected)?			
Total No. Individuals:	<u>1</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)		
Population/Subpopulation Area:	<u>N/A</u> <input type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate		
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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6266528.388 1858616.164 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: ISOLOMA MENZIESII ALLIANCE / ISOLOMA MENZIESII PROVISIONAL ALLIANCE

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open space / River channel; transportation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>Moderate cover chrysanthemum</u>	Management Recommendation/s: <u>none</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Eriogonum fasciculatum</u>	<u>5</u>			<u>*Melilotus sp.</u>	<u>25</u>		
<u>Isoloma menziesii</u>	<u>20</u>						
<u>Encelia californica</u>	<u>25</u>						
<u>Artemisia californica</u>	<u>5</u>						
<u>Baccharis sarothroides</u>	<u>2</u>						
<u>Glebionis coronaria</u>	<u>5</u>						
<u>Lepidium sp.</u>	<u>20</u>						
<u>Heliotropium curassavicum</u>	<u>1</u>						

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6266528.388</u>	<u>1858616.164</u>	<u>NE, E, SE, S, SW</u>	<u>1.1 m</u>	<u>10-15° down</u>	<u>556-563</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

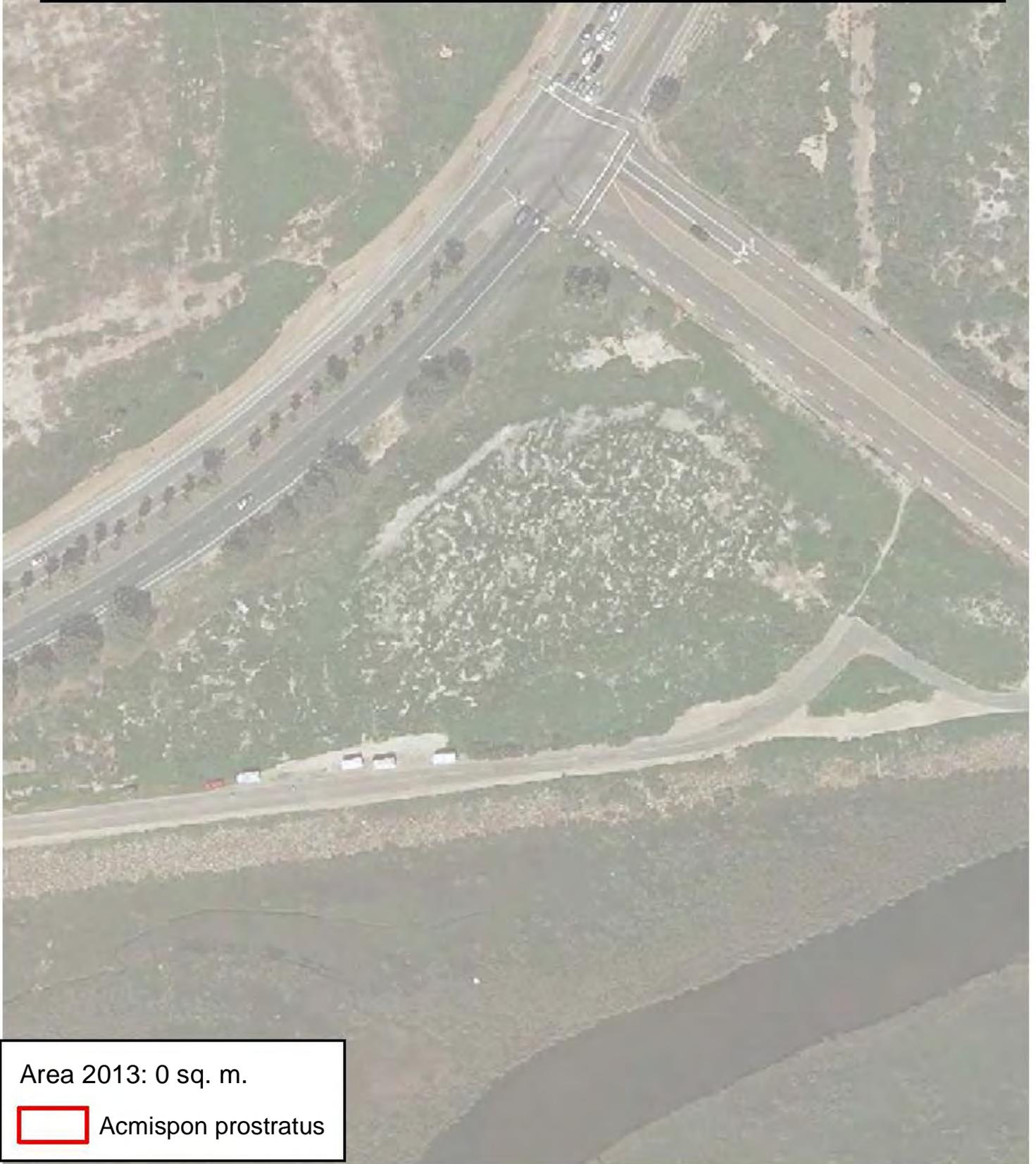
** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

***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



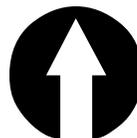
Area 2013: 0 sq. m.

 Acmispon prostratus

Pop. Area 2006 - 2013
Max Area: 725.15 sq. m.
Min Area: 0.00 sq. m.

0 12.5 25 50
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

*Digitaria sanguinalis
*Schismus barbatus

% cover

5

1

***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

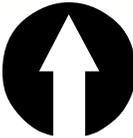


Area 2013: 2712.34 sq. m.
 Acmispon prostratus

Pop. Area 2006 - 2013
Max Area: 5505.4 sq. m.
Min Area: 2434.5 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Acmispon prostratus	Common Name:	Nuttall's Acmispon
Site Name:	Mariner's Point	Management Unit #:	TBD
Date:	5/24/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Mike Milano, Kristina Pary, Katherine Santos - City of San Diego			
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, why (if reason known or suspected)?			
Total No. Individuals:	<input type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)		
Population/Subpopulation Area:	<input type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate		
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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6255570.10 1859631.80 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: _____

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open water (channel) / active recreation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):	Management Recommendation/s:
<u>none</u>	<u>continue hand weeding</u>

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Acmispon prostratus</u>							
<u>Damissoniopsis cheiranthifolia</u>							
<u>Ambrosia chamissonis</u>							
<u>Ambrosia maritima</u>							
<u>*Bromus diandrus</u>							

Complete plant surveys not conducted due to least tern nesting area

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6255570.10</u>	<u>1859631.80</u>	<u>SE, S, SW</u>	<u>1.1 m</u>	<u>15° Down</u>	<u>572-576</u>	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: LETE on site

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

***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.

Modified Trudgen & Keighery Vegetation Condition Scale

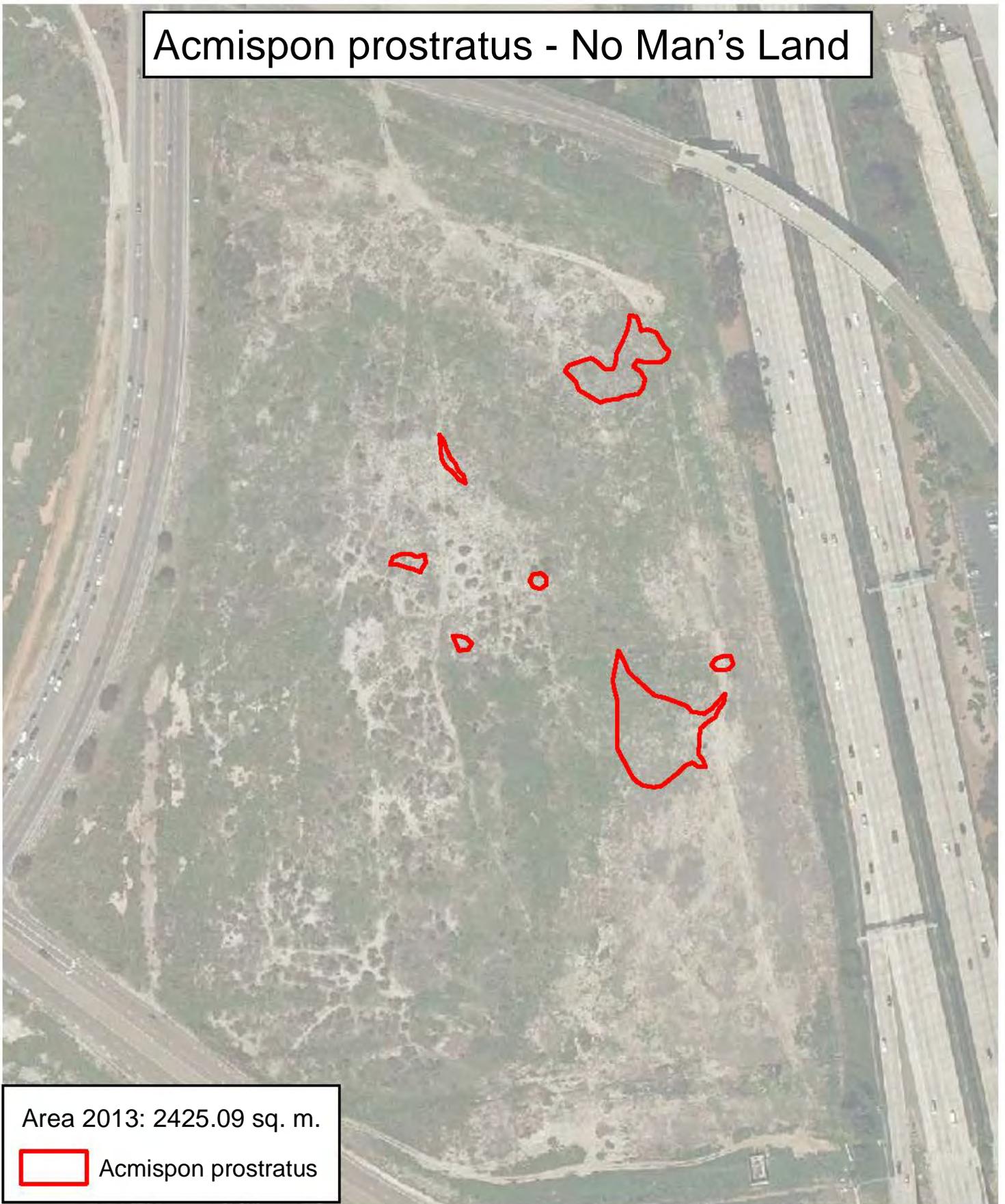
Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

***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 2013: 2425.09 sq. m.

 Acmispon prostratus

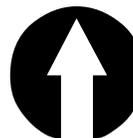
Pop. Area 2003 - 2013

Max Area: 44032.65 sq. m.

Min Area: 2425.09 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS

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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Acmispon prostratus	Common Name:	Nuttall's Acmispon
Site Name:	Rip Rap Site #3	Management Unit #:	TBD
Date:	6/4/13	Management Regime:	TBD
Surveyors and Affiliation/Agency:	MIKE MILNO, SYD MAGNER - CITY OF SAN DIEGO		

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____

Total No. Individuals: 34 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 878.722712 m² Exact (based on GPS mapping) Estimate
Units 2013 GPS DATA

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- _____ <1 meters feet

Observation Location: 6258823.55 1857305.75 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: PENNISETUM SETACEUM SEMI-NATURAL STANDS ALLIANCE / PENNISETUM SETACEUM SEMI-NATURAL STANDS ASSOCIATION

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: ACTIVE RECREATION / OPEN WATER

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
NO GRASSES, TRASH,

Management Recommendation/s: _____

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>DISTICHLIS SPICATA</u>	<u>2</u>			<u>*BRO-MUS DIANDRUS</u>	<u>15</u>		
<u>HEPETHICA GRANDIFLORA</u>	<u>1</u>			<u>*CITRANESYCE MACULATA</u>	<u>1</u>		
<u>*AVENA SP.</u>	<u>20</u>			<u>*WASHINGTONIA SP</u>	<u>1</u>		
<u>MEDICAGO POLYMORPHA</u>	<u>3</u>			<u>*MALVA PARVIFLORA</u>	<u>1</u>		
<u>ATRIPLEX LEUTIFORMIS</u>	<u>2</u>			<u>HELIOTROPUM CURASSAVICUM</u>	<u>1</u>		
<u>*ERIOGONUM FASCICULATUM</u>	<u>1</u>			<u>*MESEMBRYANTHEMUM CRYSTALLINUM</u>	<u>1</u>		
<u>*RAPHANUS SATIVUS</u>	<u>1</u>			<u>*CARPOBROTUS CHILENSIS</u>	<u>1</u>		
<u>*AMELOSIA PSILOSTACHYA</u>	<u>2</u>			<u>ACIA SP</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6258823.558</u>	<u>1857305.759</u>	<u>SW, W, NW</u>	<u>1.1 m</u>	<u>Level</u>	<u>S/OS/MSCP</u>
<small>Location [State Plane (ft)]</small>		<small>Direction (facing)</small>	<small>Height</small>	<small>Camera Angle</small>	<small>Photo #</small>
_____	_____	_____	_____	_____	_____
<small>Location [State Plane (ft)]</small>		<small>Direction (facing)</small>	<small>Height</small>	<small>Camera Angle</small>	<small>Photo #</small>
_____	_____	_____	_____	_____	_____

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-50% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* RICINUS COMMUNIS 1%

ARTIPEX PROSTRATA 1%

BACCHARIS PILULARIS 1%

TETRAGONIA TETRAGONIODES 1%

CUSCUTA sp. 1%

Aemispud PROSTRATUS 4%

* PENNISETUM SETACEUM 60%

* GLIEBIONIS CORONARIA 10%

SALICORNIA PACIFICA 8%

BATHOPSIS LACINIATA 1%

LIMONIUM CALIFORNICUM 1%

* SALSOLA TRAGUS 1%

***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



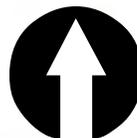
Area 2013: 878.223 sq. m.

 Acmispon prostratus

Pop. Area 2008- 2013
Max Area: 10,774.29 sq. m.
Min Area: 878.22 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Acmispon prostratus	Common Name:	Nuttall's Acmispon
Site Name:	Mission Bay- Site 6/S Shores	Management Unit #:	TBD
Date:	5/24/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <u>Betsy Miller, Kim Roeland, Mike Miland, Kristina Cury, Katherine Santos - City of San Diego</u>			
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, why (if reason known or suspected)?			
Total No. Individuals:	<u>2575</u>	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area:	<u>2913.84487</u>	<u>m²</u>	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate
Units: <u>2013 GIS Data</u>			
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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6266803.802 1859450.236 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: BRASSICA (NIGRA) + OTHER MUSTARDS SEMI-NATURAL STANDS ALLIANCE

Landowner/Manager: City of San Diego Park and Recreation BRASSICA (NIGRA) + OTHER MUSTARDS SEMI-NATURAL STANDS ASSOCIATION

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, transportation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>high cover non-native forbs (mustard, chrysanthemum) and hottentot fig</u>	Management Recommendation/s: <u>Continue weeding and pulling hottentot fig - ongoing via TransNet grant to Audubon</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Acemispon prostratus</u>	<u>1</u>			<u>* Erodium sp</u>	<u>1</u>		
<u>Baccharis sarothroides</u>	<u>2</u>			<u>Nemacaulis denudata var. d.</u>	<u>1</u>		
<u>* Glehnia coronaria</u>	<u>20</u>			<u>Camissoniopsis hisorta</u>	<u>1</u>		
<u>* Sisymbrium irio</u>	<u>10</u>			<u>* Rumex crispus</u>	<u>1</u>		
<u>* Lepidium sp.</u>	<u>5</u>			<u>* Melilotus sp. (mostly dead)</u>	<u>1</u>		
<u>* Carpobrotus edulis</u>	<u>35</u>			<u>* Schismus barbatus</u>	<u>1</u>		
<u>* Artemisia californica</u>	<u>5</u>			<u>Pseudognaphalium sp.</u>	<u>1</u>		
<u>* Bromus diandrus</u>	<u>3</u>			<u>Camissoniopsis cheiranthifolia</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6266803.802</u>	<u>1859450.236</u>	S, SW, W, NW	1.1 m	10° down	<u>535-541</u>	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: A. prostratus flowering
Native plants doing well where Hottentot fig was removed

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

	% cover	
* <i>Bromus madritensis</i>	1	
<i>Pseudognaphalium beneolens</i>	1	
* <i>Limonium perzii</i>	3	(mostly by channel)
<i>Heterotroca grandiflora</i>	1	

***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

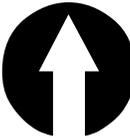


Area 2013: 2913.84 sq. m.
 Acmispon prostratus

Pop. Area 2001 - 2013
Max Area: 15970.4 sq. m.
Min Area: 15.6 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Ambrosia pumila
San Diego Ambrosia



© M. Osboure, 2006

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

species % cover
Distichlis subspicata 1

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



Panorama from Northeastern edge of population, facing Northwest, North, Northeast, East.
Panorama location is 6321443.021 1886016.476 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Ambrosia pumila - Mission Trails Regional Park



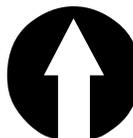
Area 2013: 8886.63 sq. m.

 Ambrosia pumila

Pop. Area 1998 - 2013
Max Area: 16809.01 sq. m.
Min Area: 5276.08 sq. m.



Source: San GIS & City of San Diego Park & Rec
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Bloomeria clevelandii
San Diego Goldenstar



© City of San Diego, 2004

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	East Elliott-Obs 1	Management Unit #:	TBA
Date:	4/18/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: <i>Judy Miller and Kim Roeland - City of San Diego</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 5,000 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 12734.670736 m² Exact (based on GPS mapping) Estimate
Units *2013 GPS data*

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____

Collector Collection Number Museum/Herbarium

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6319260.2 1891551.76 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: MAROSMA LAURINA ALLIANCE / MAROSMA LAURINA - LOTUS SCOPARIUS ASSOCIATION

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>high cover NNE post-burn</u>	Management Recommendation/s: <u>evaluate ability to treat NNE given remote location + steep topography</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<i>Bloomeria clevelandii</i>	3			* <i>Avena barbata</i>	2		
<i>Sisyrinchium bellum</i>	1			* <i>Silene gallica</i>	<1		
<i>Ceranium californicum</i>	1			* <i>Hyperbderis glabra</i>	1		
<i>Stipa pulchra</i>	1			* <i>Centaurea melitensis</i>	3		
<i>Logfia filuginoides</i>	1			* <i>Eradium sp.</i>	2		
<i>Cassula conchata</i>	<1			* <i>Bromus hordeaceus</i>	40		
<i>Callium angustifolium</i>	2			* <i>Bromus nashvilleensis ssp. rubens</i>	5		
<i>Bromus diandrus</i>	10			* <i>Brachypodium distachyon</i>	5		

IV. SITE PHOTOMONITORING

Camera type | PENTAX OPTIO W90

6319260.2	1891551.76	W, SW, S, SE, E	1.1 m	10° up	117-119	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

species

% cover

Isocoma menziesii

1

Artemisia californica

3

Rhamnus crocea

7

Mimulus aurantiacus

3

Acmispon glaberr

7

Malosma laurina

3

Rhus integrifolia

1

Sidalcea sparsiflora

1

Malacothamnus fasciculatus

1

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	East Elliott-Obs 2	Management Unit #:	TBA
Date:	4/18/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: <i>Betsy Miller and Kim Roeland, City of SD</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 14 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 41,663,087 M² Exact (based on GPS mapping) Estimate
Units *2013 GPS data*

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6317389.879 1894565.9 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: ADENOSTOMA FASCICULATUM ALLIANCE / ADENOSTOMA FASCICULATUM - LOTUS SCOPARIUS ASSOCIATION

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>Moderate cover NNG from adjacent roads / power line</i>	Management Recommendation/s: <i>NONE</i>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<i>Bloomeria clevelandii</i>	1			<i>Helianthemum scoparium</i>	2		
<i>Adenostoma fasciculatum</i>	20			<i>Selaginella cinerascens</i>	10		
<i>Malosma laurina</i>	5			<i>Lasthenia gracilis</i>	2		
<i>Rhamnus crocea</i>	20			<i>Logfia filaginoides</i>	2		
<i>Eriogonum fasciculatum</i>	1			<i>Osmadenia tenella</i>	2		
<i>Deinandra fasciculata</i>	2			* <i>Hypochaeris glabra</i>	1		
<i>Acemisson glaber</i>	2			* <i>Brachypodium distachyon</i>	5		
<i>Salvia mellifera</i>	1			* <i>Avena sp.</i>	1		

IV. SITE PHOTOMONITORING

Camera type PENTAX OPTIO W90

6317389.9	1894565.895	N,NW,W,SW,S	1.1 m	5° up	111-116	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: black-tailed jackrabbit & site

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* *Festuca myuros* 40
 * *Bromus madritensis* 5
 * *Sonchus asper* 1
 * *Bromus hordeaceus* 1

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	East Elliott-Obs 3	Management Unit #:	TBA
Date:	4/18/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: <i>Sally Miller, Kim Zealand - City of San Diego</i>			

Species Found? Yes No

If not, why (if reason known or suspected)?

Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0 m² Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6316947.573 1895951.2 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: ADENOSTOMA FASCICULATUM - Xylococcus BICOLOR ALLIANCE/ADENOSTOMA FASCICULATUM - Xylococcus BICOLOR ASSOCIATION

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>low/moderate cover NNE</u> <u>nearby access road not affecting pop.</u> <u>e.g. erosion</u>	Management Recommendation/s: <u>none</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<i>Apochaeris glabra</i>	2			<i>Crossula connata</i>	1		
<i>Ammispon glaber</i>	4			<i>Stilobcline graphaloides</i>	1		
<i>Eriogonum fasciculatum</i>	5			<i>Plantago erecta</i>	<1		
<i>Adenostoma fasciculatum</i>	35			<i>Logfia filaginoides</i>	1		
<i>Xylococcus bicolor</i>	7			* <i>Bromus haardtensis</i> ssp. <i>rubens</i>	2		
<i>Leontodon gracilis</i>	3			* <i>Festuca myuros</i>	10		
<i>Selaginella cinerascens</i>	5			* <i>Bromus diandrus</i>	<1		
<i>Chlorogalum parviflorum</i>	1			<i>Calochortus splendens</i>	1		

IV. SITE PHOTOMONITORING

Camera type PENTAX OPTIO W90

6316947.6	1895951.197	S, SW, W, NW	1.1 m	5° down	5-8	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Juncus asper</i>	1
<i>Cryptantha intermedia</i>	1

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	East Elliott-Obs 4	Management Unit #:	TBA
Date:	4/18/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: <i>John Miller, Kim Roeland - City of San Diego</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0 M² Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6317550.1 1898385.22 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: *ADENOSTOMA FASCICULATUM - XYLOCCOCCUS BICOLOR MATURE - ADENOSTOMA FASCICULATUM - XYLOCCOCCUS BICOLOR - CRANIOETHUS TOMENTOSUS ASSOCIATION*

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>nearby access road does not appear to be affecting site NO erosion</i>	Management Recommendation/s: <i>none</i>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<i>Rhamnus crocea</i>	1			<i>Croton dentiflorus ssp. gracilis</i>	<1		
<i>Navarretia hamata</i>	2			<i>Hesperoyucca whipplei</i>	1		
<i>Selaginella cinerascens</i>	7			<i>Adenostoma fasciculatum</i>	20		
<i>Labthenia gracilis</i>	2			<i>Xylococcus bicolor</i>	3		
<i>Logothia flaginoides</i>	1			<i>Malosma laurina</i>	1		
<i>Crossula binnata</i>	1			<i>Ceanothus tomentosus</i>	1		
<i>Stibcline graphabides</i>	1			<i>Trichostema lanatum</i>	<1		
<i>Chlorogalum parviflorum</i>	<1			<i>Erodium sp.</i>	<1		

IV. SITE PHOTOMONITORING

Camera type PENTAX OPTIO w90

<u>6317550.1</u>	<u>1898385.22</u>	<u>NE,N,NW,W,SW</u>	<u>1.1 m</u>	<u>10* down</u>	<u>1-4</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>o/o cover</u>
* <i>Hypochaeris glabra</i>	1
* <i>Festuca myuros</i>	3
* <i>Danuo maritensis ssp. rubens</i>	<1
<i>Calochortus splendens</i>	1

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



Panorama from Northwestern edge population, facing Northeast, North, Northwest, West, Southwest.
Panorama location is 6317550.10 189385.22 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	East Elliott-Obs 5	Management Unit #:	TBA
Date:	7/18/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: Betsy Miller and Kim Poeland, City of SD			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 89 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 330,246518 M2 Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6316118.119 1894089.91 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: ADENOSTOMA FASCICULATUM ALBIFLORUM - ADENOSTOMA FASCICULATUM - LERIODONUM FASCICULATUM / ARTEMISIA CALIFORNICA / SALVIA MELLIIFERA ASSOCIATION

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open space / military

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>low/moderate cover NNG</u> <u>post-fire area</u>	Management Recommendation/s: <u>None</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species'=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<u>Bloomeria clevelandii</u>	<u>1</u>			<u>Stipa sp.</u>	<u>30</u>		
<u>Adenostoma fasciculatum</u>	<u>40</u>			<u>Logfia filaginoides</u>	<u>5</u>		
<u>Eriophyllum confertiflorum</u>	<u>5</u>			<u>Sisyrinchium bellum</u>	<u>1</u>		
<u>Mimulus aurantiacus</u>	<u>5</u>			<u>Stylocline gnaphaloides</u>	<u>1</u>		
<u>Rhamnus crocea</u>	<u>2</u>			<u>* Festuca myuros</u>	<u>10</u>		
<u>Lasthenia gracilis</u>	<u>5</u>			<u>Navarretia hamata</u>	<u>1</u>		
<u>Calochortus splendens</u>	<u>2</u>			<u>Pellaea mucronata</u>	<u>1</u>		
<u>Quercus dumosa</u>	<u>2</u>			<u>* Hypochaeris glabra</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type PENTAX OPTIO W90

<u>6316118.1</u>	<u>1894089.91</u>	<u>SW,S,SE</u>	<u>1.1 m</u>	<u>3° up</u>	<u>9-13</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* *Bromus madritensis* 1
Azarnispon glaber 2
Chlorogalum parviflorum 1
Osmadenia tenella 1

***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 0 sq. m.

Point 3
Area 0 sq. m.

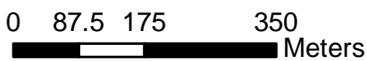
Point 2
Area 41.66 sq. m.

Point 5
Area 330.25 sq. m.

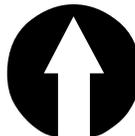
Point 1
Area 12734.67 sq. m.

Area 2013: 13106.58 sq. m.
 Bloomeria clevelandii

Pop. Area 2008 - 2013
Max Area: 809519 sq. m.
Min Area: 13106.58 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: *Boomeria clevelandii* Common Name: San Diego Goldenstar
 Site Name: Lopez Ridge Management Unit #: TBD
 Date: 4/23/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Bob Miller, Kim Zoeland, Mike Milano -
City of San Diego

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____

Total No. Individuals: 1470 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 2632.370521 m² Exact (based on GPS mapping) Estimate
 Units 2013 GPS data

Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6278246.403 1915522.734 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pools + coastal sage scrub/chaparral
 Landowner/Manager: City of San Diego Environmental Services
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
moderate cover NNG

Management Recommendation/s:
treat weeds as needed

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Brodiaea ornithia</i>	12			<i>Selaginella ciliaris</i>	5		
<i>Popogyne abramsii</i>	35			<i>Navarretia hamata</i>	4		
<i>Boomeria clevelandii</i>	1			<i>Bilocarpus brevissimus</i>	3		
<i>Zitnera venusta</i>	3			<i>Crassula coccinea</i>	1		
<i>Dodecatheon clevelandii</i>	2			<i>Plantago erecta</i>	2		
<i>Castilleja cuscuta</i> sp. <i>cuscuta</i>	1			<i>Logfia flaginoides</i>	1		
<i>Demiantra fasciculata</i>	5			<i>Deschampsia calthoides</i>	1		
<i>Allium halimifolium</i>	2			* <i>Erodium</i> sp.	2		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6278246.4</u>	<u>1915522.7</u>	<u>SW,W,NW</u>	<u>1.1m</u>	<u>10*Down</u>	<u>75-99</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover/abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

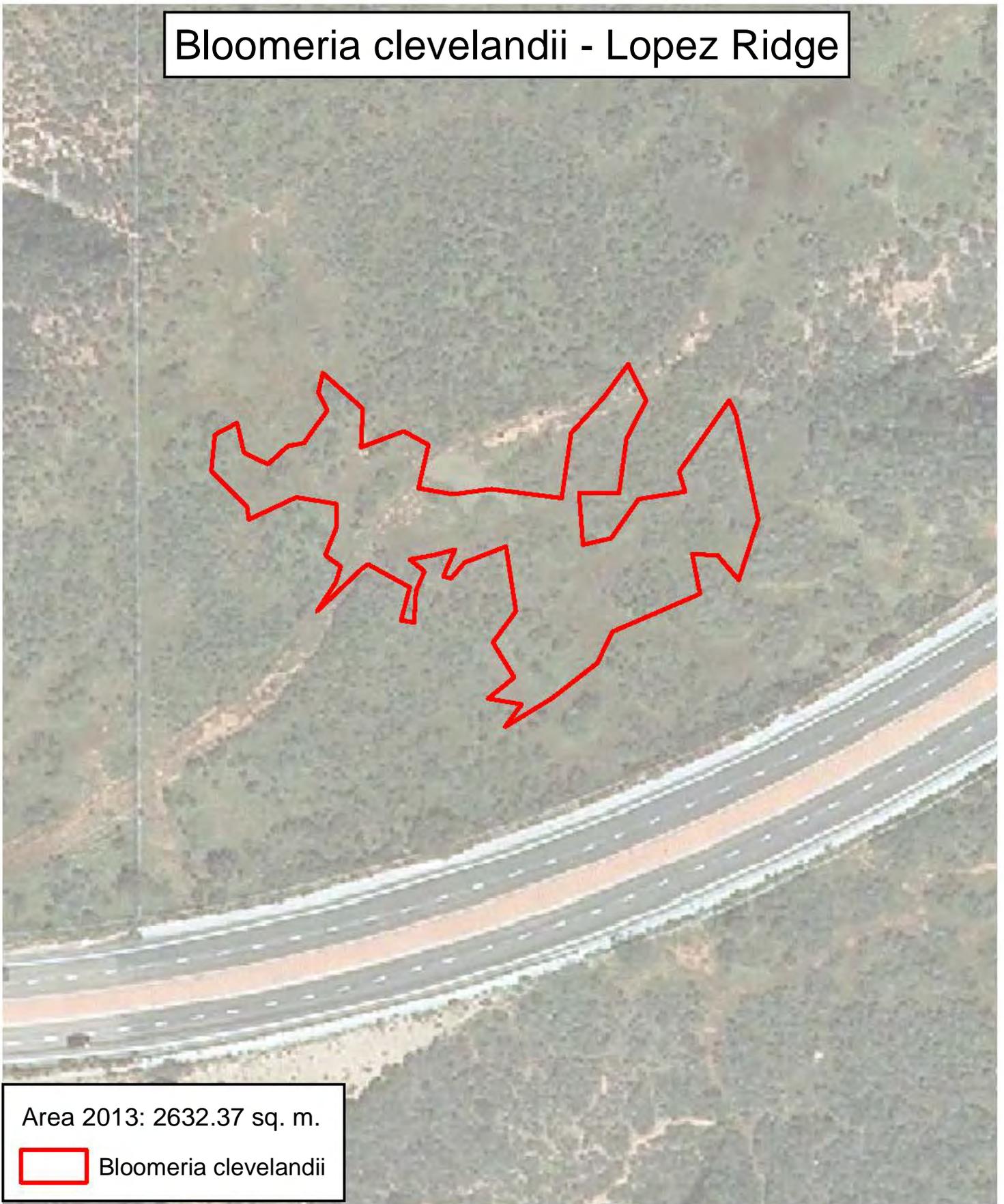
<u>species</u>	<u>% cover</u>
* <i>Hypochoeris glabra</i>	10
<i>Chlorogalum parviflorum</i>	1
* <i>Bromus hordeaceus</i>	7
* <i>Bromus madritensis ssp. rubens</i>	5
<hr/>	
* <i>Avena barbata</i>	5
* <i>Festuca myuros</i>	5
* <i>Castridium phleoides</i>	1
<i>Opuntia littoralis</i>	3
<hr/>	
<i>Acmispon glaber</i>	1
<i>Malsbema laurina</i>	3
<i>Adenostoma fasciculatum</i>	20

***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



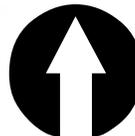
Area 2013: 2632.37 sq. m.

 Bloomeria clevelandii

Pop. Area 2011 - 2013
Max Area: 2632.37 sq. m.
Min Area: 1444.54 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Kristina Cary, 06/27/2013



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SanGIS

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	Marron Valley-Obs 1	Management Unit #:	TBD
Date:	5/14/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>Betsy Miller, Kim Roeland, Mike Milano - City of San Diego</i>			
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
If not, why (if reason known or suspected)?			
Total No. Individuals:	<u>20</u>	<input type="checkbox"/> Exact	<input checked="" type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area:	<u>N/A</u>	<input type="checkbox"/> Exact (based on GPS mapping)	<input type="checkbox"/> Estimate
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	

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6406792.116 1788002.681 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: *Bahipopsis laciniata Alliance / Bahipopsis laciniata - Artemisia californica - Erigonum fasciculatum association*

Landowner/Manager: City of San Diego Public Utilities Dept.

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>moderate/high cover non-native grass + forbs</i>	Management Recommendation/s: <i>any weed treatments should be tested via pilot project</i>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Cladonia cinerascens</i>	1			<i>Erigonum fasciculatum</i>	1		
<i>Bahipopsis laciniata</i>	1			* <i>Centaurea melitensis</i>	4		
<i>Salvia apiana</i>	2			<i>Osmadenia tenella</i>	1		
<i>Isocoma menziesii</i>	3			<i>Callium angustifolium</i>	1		
<i>Rhamnus crocea</i>	3			* <i>Erodium sp.</i>	10		
<i>Albisia laurina</i>	2			* <i>Avena sp.</i>	7		
<i>Artemisia californica</i>	3			* <i>Bromus hordeaceus</i>	7		
<i>Cortaderia filaginifolia</i>	1			* <i>Bromus madritensis</i>	30		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6406792.116</u>	<u>1788002.681</u>	<u>S, SE, N, W</u>	<u>1.1 m</u>	<u>15° down</u>	<u>439-444</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: population increased - unable to GPS population

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high.

<u>species</u>	<u>% cover</u>
<i>Stipa pulchra</i>	1
* <i>Anagallis arvensis</i>	1
* <i>Festuca myuros</i>	10
<i>Eriophyllum confertiflorum</i>	1
<hr/>	
* <i>Logfia gallica</i>	1
<i>Mimulus aurantiacus</i>	1
<i>Croton setigerus</i>	1
* <i>Hypochaeris glabra</i>	1
<hr/>	
<i>Clematis pauciflora</i>	1
<i>Bloomeria clevelandii</i>	1

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



Panorama from Western edge of population, facing South, West, North.
Panorama location is 6406792.12 1788002.68 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
* <i>Anagallis arvensis</i>	1
<i>Stipa pulchra</i>	1
* <i>Festuca myuros</i>	1
<i>Pseudognaphalium</i> sp.	1

***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.

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	Marron Valley-Obs 3	Management Unit #:	TBD
Date:	5/14/13	Management Regime:	TBD
Surveyors and Affiliation/Agency:	Betsy Miller, Kim Roeland, Mike Milano City of San Diego		

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____

Total No. Individuals: 50 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: N/A N/A Exact (based on GPS mapping) Estimate
 Units _____

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
 Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6407990.151 1787523.484 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Salvia apiana Alliance / Salvia apiana - Artemisia californica Association

Landowner/Manager: City of San Diego Public Utilities Dept.

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>Modern cover in grass</u>	Management Recommendation/s: <u>Weding</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Bloomeria clevelandii</i>	1			<i>Stipa pulchra</i>	3		
<i>Malosma laurina</i>	7			* <i>Centaurea melitensis</i>	1		
<i>Artemisia californica</i>	12			* <i>Brassica nigra</i>	1		
<i>Salvia apiana</i>	3			<i>Daucus pusillus</i>	1		
<i>Eriogonum fasciculatum</i>	2			<i>Chelanthus parryi</i>	1		
<i>Eriophyllum confertiflorum</i>	5			* <i>Avena</i> sp.	20		
<i>Isocoma menziesii</i>	1			* <i>Bromus madritensis</i>	35		
<i>Corethrogyne filaginifolia</i>	1			* <i>Erodium</i> sp.	7		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6407990.151</u>	<u>1787523.484</u>	<u>NW, N, NE, E</u>	<u>1.1 m</u>	<u>45° down</u>	<u>418-425</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: Nb mapping because population had senesced
Bloomeria coccia found in bloom behind photo point

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Species

% cover

<i>Osmadenia tenella</i>	1
<i>Grutierrezia sarothrae</i>	1
* <i>Bromus hordeaceus</i>	5
* <i>Festuca myuros</i>	3
<hr/>	
* <i>Festuca perennis</i>	1
<i>Mimulus aurantiacus</i>	1
* <i>Anagallis arvensis</i>	<1

Poa secunda

1

***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.

Modified Trudgen & Keighery Vegetation Condition Scale

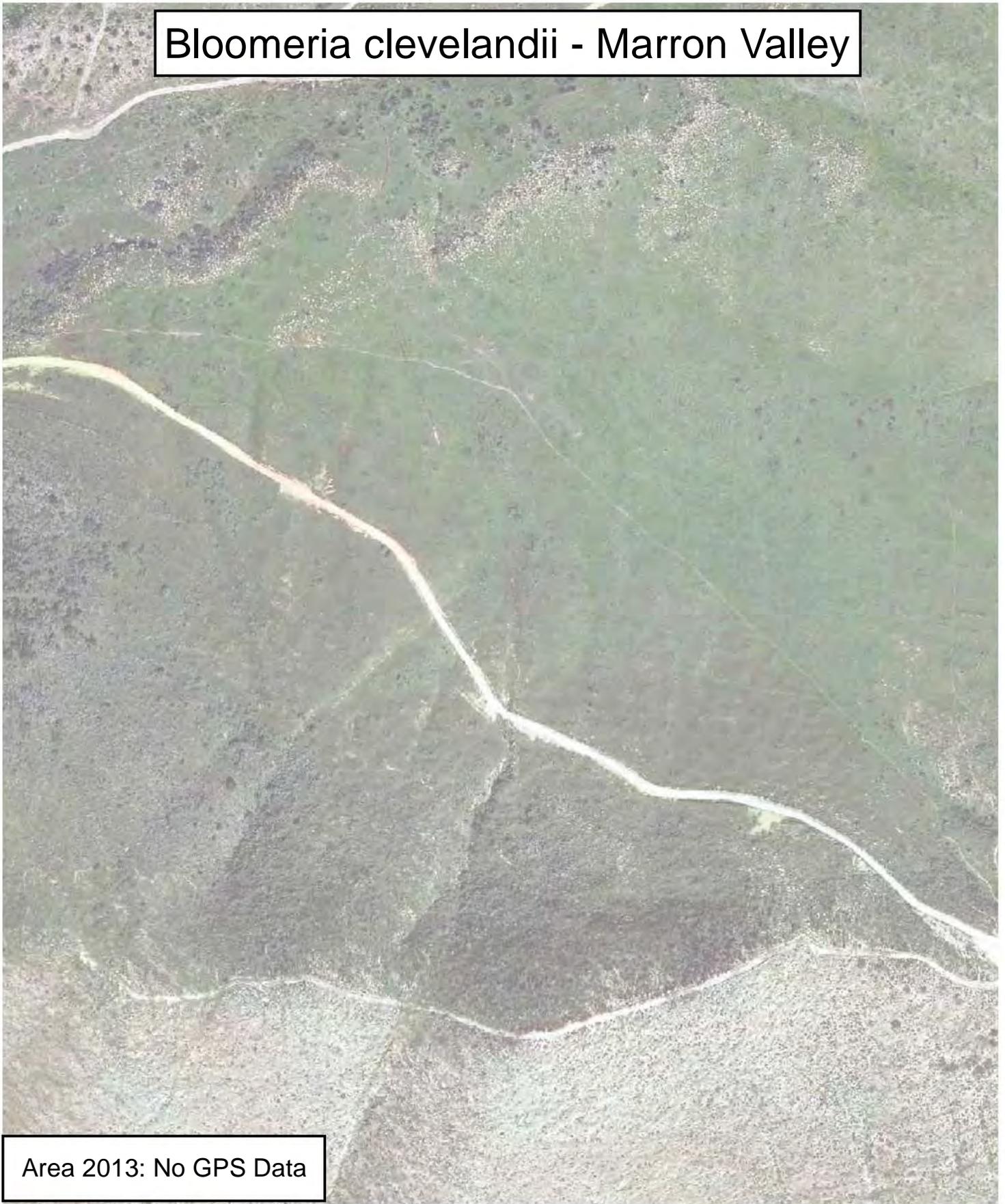
<p>Very Good-Excellent</p>	<p>80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance</p>
<p>Fair to Good</p>	<p>50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance</p>
<p>Poor</p>	<p>20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high</p>
<p>Very Poor</p>	<p>0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high</p>

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



Panorama from Eastern edge of population, facing Southwest, West, Northwest, North.
Panorama location is 6407380.17 1787837.84 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Bloomeria clevelandii - Marron Valley

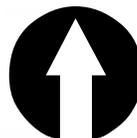


Area 2013: No GPS Data

Pop. Area 2004 - 2013
Max Area: 95087.1 sq. m.
Min Area: 49603.83 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

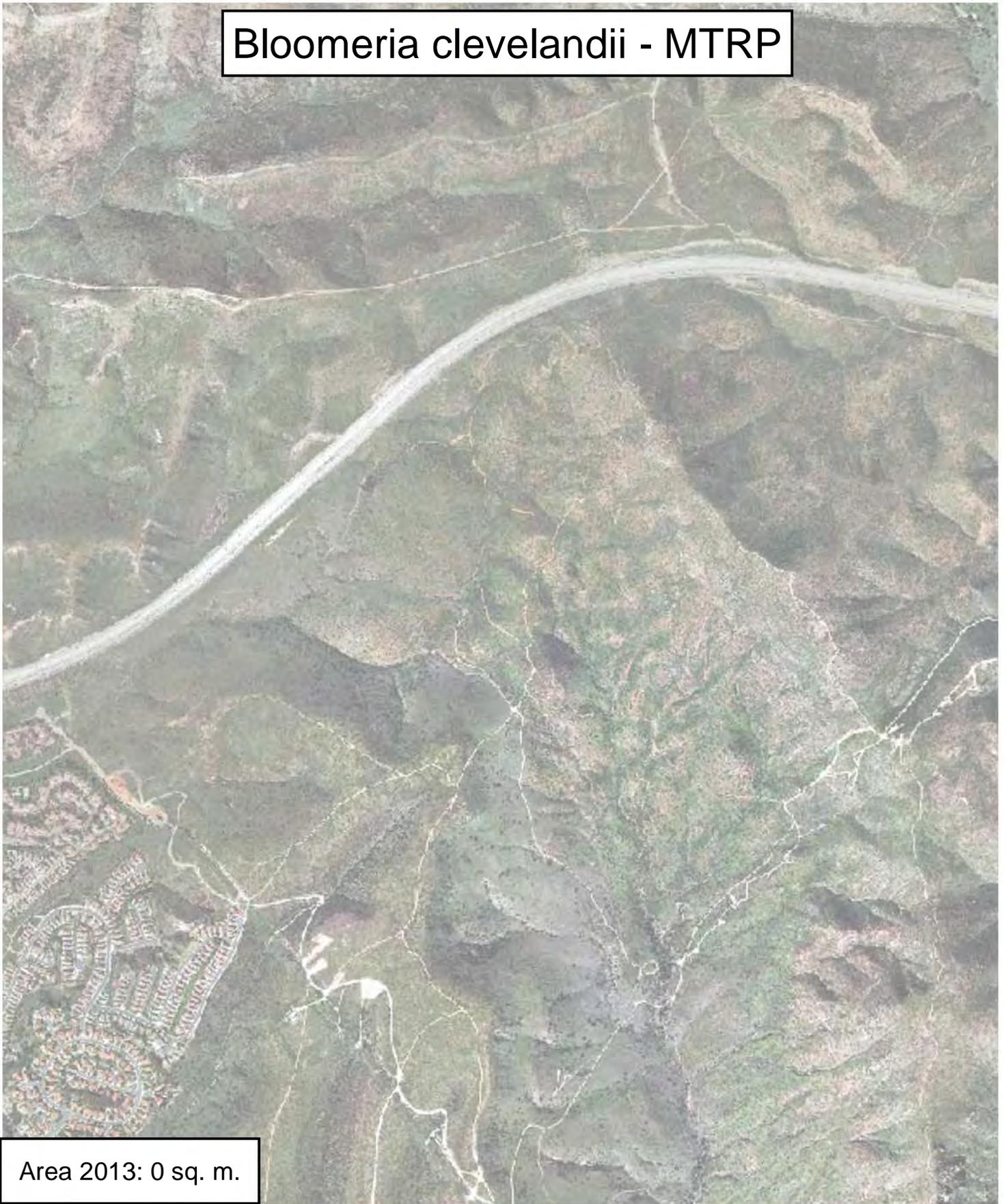
<u>species</u>	<u>% cover</u>
* <i>Festuca myuros</i>	17
* <i>Erodium sp.</i>	7
* <i>Bromus diandrus</i>	1
<i>Dodecantheon chenopodii</i>	1

***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

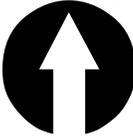


Area 2013: 0 sq. m.

Pop. Area 2001-2013
Max Area: 1255.77 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Map Created By: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Bloomeria clevelandii	Common Name:	San Diego Goldenstar
Site Name:	Otay Lakes- E Obs 1	Management Unit #:	TBD
Date:	5/2/13	Management Regime:	TBD
Surveyors and Affiliation/Agency:	John Miller, Kim Roeland, Mike Milano - City of San Diego		

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 100 Exact Estimate (use orders of 10, 100 and 1000 for estimates) 6 photopoint

Population/Subpopulation Area: _____ Units Exact (based on GPS mapping) Estimate

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6357208.466 1807472.481 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Isocoma menziesii Alliance / Isocoma menziesii Association

Landowner/Manager: City of San Diego Public Utilities Dept.

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>moderate cover non-native herbs + grass</u>	Management Recommendation/s: <u>continue to monitor and consider treating weeds as necessary</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Bloomeria clevelandii</i>	1			<i>Stipa</i> sp.	3		
<i>Eriogonum fasciculatum</i>	10			<i>Sisyrinchium bellum</i>	5		
<i>Acmispon glaber</i>	5			<i>Zizia aurea</i>	1		
<i>Isocoma menziesii</i>	7			* <i>Sanchezia aspera</i>	1		
<i>Peritoma arborea</i>	1			* <i>Hypochaeris glabra</i>	10		
<i>Delandrea fasciculata</i>	12			* <i>Eragium</i> sp.	40		
<i>Calochortus splendens</i>	1			<i>Selaginella olerascens</i>	5		
<i>Eryngium aristulatum</i>	1			* <i>Bomus hordeaceus</i>	35		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W40

6357208.466	1807472.481	NW, N	1.1 m	5* down	157-162	S/OS/MSCP
Location [State Plane (ft)]	Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: DID NOT COLLECT GPS DATA

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Bromus madritensis ssp. rubens</i>	15
* <i>Lepidium sp.</i>	1
* <i>Festuca myuros</i>	7

***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.

Modified Trudgen & Keighery Vegetation Condition Scale

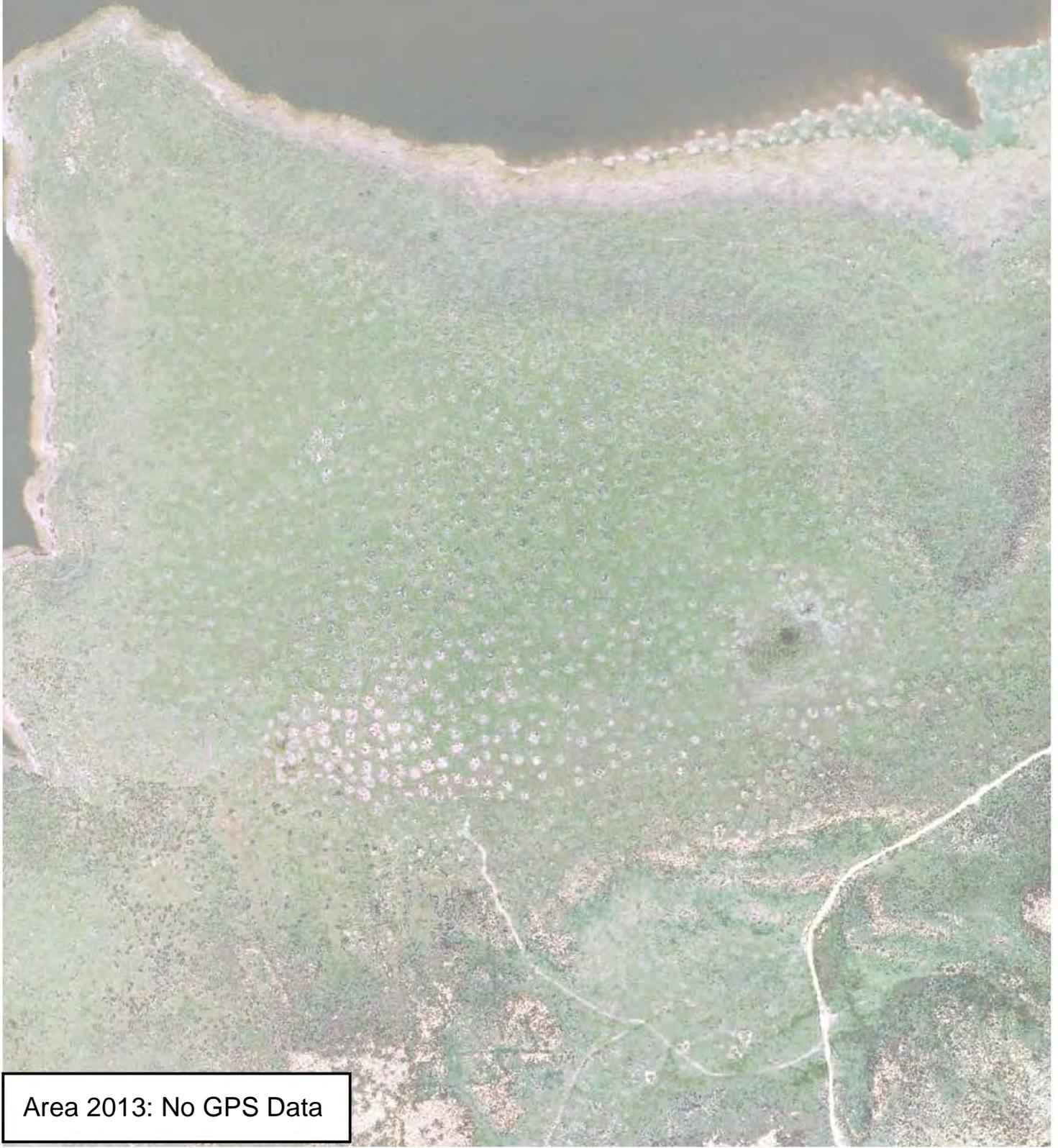
Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

***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

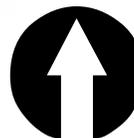


Area 2013: No GPS Data

Pop. Area 2003 - 2013
Max Area: 381089.41 sq. m.
Min Area: 456.37 sq. m.

0 35 70 140
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Brodiaea orcuttii
Orcutt's Brodiaea



© Scott McMillan, 2001

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Brodiaea orcuttii	Common Name:	Orcutt's Brodiaea
Site Name:	Carroll Canyon	Management Unit #:	TDB
Date:	4/23/13	Management Regime:	TBD
Surveyors and Affiliation/Agency:	Joby Miller, Kim Raeland, Mike Melano - City of San Diego		
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, why (if reason known or suspected)?			
Total No. Individuals:	755	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area:	230.67524	m ²	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate 2013 GPS data
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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6282439.86 1907633.765 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Deinandra fasciculata Provisional Alliance, Deinandra fasciculata Association

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, residential, mining

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>moderate cover NNG</u>	Management Recommendation/s: <u>site to be enhanced via mitigation project</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Brodiaea orcuttiana</i>	3			<i>Logfia filaginoides</i>	1		
<i>Zithea venusta</i>	3			<i>Chasmodon canbata</i>	1		
<i>Deinandra fasciculata</i>	7			<i>Stylocline gnaphaloides</i>	1		
<i>Delphinella cinerascens</i>	25			<i>Cucurbita occidentalis</i>	1		
<i>Edaphyllum confertiflorum</i>	3			<i>Chorizanthe polygonoides</i> v. <i>longispina</i>	1		
<i>Pogogyne abramsii</i>	3			<i>Psilocarphus brevissimus</i>	1		
<i>Plantago erecta</i>	3			<i>Mucilla maritima</i>	1		
<i>Navahuetia homata</i>	3			<i>Asmodea tenellus</i>	2		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

6282439.86	1907633.765	E, SE, S, SW	1.1 m	40° down	79-83	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

species

% cover

* *Erodium* sp.

30

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

species

% cover

Navarretia fossalis

1

Daucus pusillus

3

* *Centaurea melitensis*

5

* *Hypochaeris glabra*

10

* *Erodium* sp.

15

Artemisia californica

3

Rhamnus crocea

3

Adenostoma fasciculatum

20

Eriogonum fasciculatum

1

Salsia mellifera

3

Acmispon glaber

1

* *Festuca myuros*

55

* *Bromus madritensis ssp. rubens*

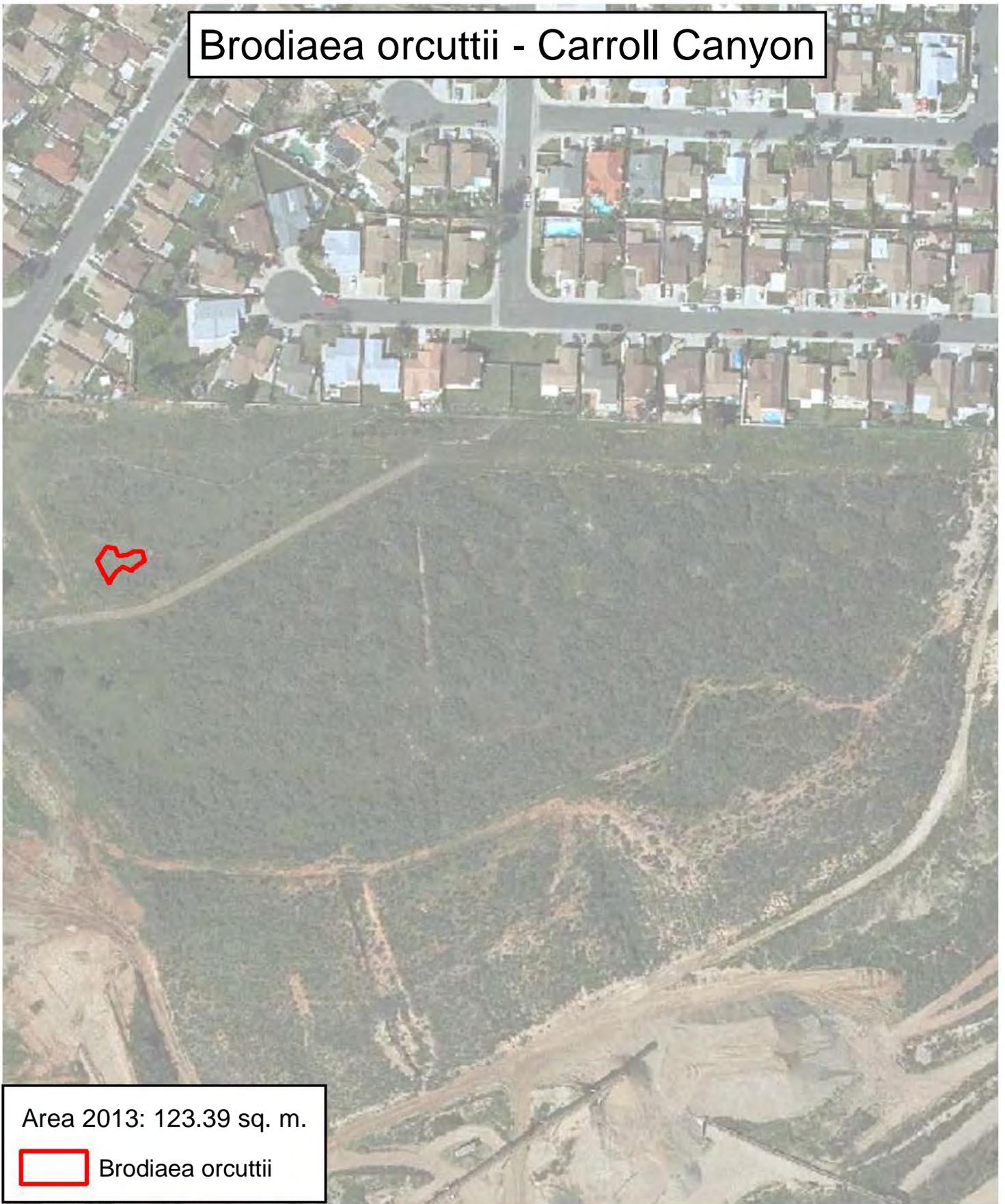
1

***Brodiaea orcuttii* (Orcutt's Brodiaea) Carroll Canyon**



Panorama from Southern edge of population, facing East, Southeast, South, Southwest.
Panorama location is 6282439.860 1907633.765 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Carroll Canyon



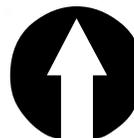
Area 2013: 123.39 sq. m.

 Brodiaea orcuttii

Pop. Area 2003 - 2013
Max Area: 4863.29 sq. m.
Min Area: 0 sq. m.

0 15 30 60 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Brodiaea orcuttii</i>	Common Name: Orcutt's brodiaea
Site Name: Lopez Ridge	Management Unit #: TBD
Date: 4/23/13	Management Regime: TBD
Surveyors and Affiliation/Agency: <i>Bob Miller, Kim Zoeland, Mike Milano - City of San Diego</i>	

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 3067 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 427.079109 m² Exact (based on GPS mapping) Estimate
Units *2013 EPS data*

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____

Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6278246.403 1915522.734 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pool + coastal sage scrub/chaparral

Landowner/Manager: City of San Diego Environmental Services

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>moderate cover NNG</u>	Management Recommendation/s: <u>treat weeds as needed</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Brodiaea orcuttia</i>	12			<i>Selaginella ciliarascens</i>	5		
<i>Pogogyne abramsii</i>	35			<i>Nardarretia hamata</i>	4		
<i>Abomeria clevelandii</i>	1			<i>Bilocarpus brevissimus</i>	3		
<i>Zitnera venusta</i>	3			<i>Crasgula compacta</i>	1		
<i>Dodecagtheon clevelandii</i>	2			<i>Plantago erecta</i>	2		
<i>Castilleja exserta</i> sp. exserta	1			<i>Logfia flaginoides</i>	1		
<i>Demianra fasciculata</i>	5			<i>Deschampsia catherinoides</i>	1		
<i>Allium halimifolium</i>	2			* <i>Eradium</i> sp.	2		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

6278246.4	1915522.7	SW,W,NW	1.1m	10°Down	75-99	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: POAB - 40185 est
RLCL - 1470 est

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Hypochaeris glabra</i>	10
<i>Chlorogalum parviflorum</i>	1
* <i>Bromus hordeaceus</i>	7
* <i>Bromus madritensis ssp. rubens</i>	5
<hr/>	
* <i>Avena barbata</i>	5
* <i>Festuca myuros</i>	5
* <i>Castidium phleoides</i>	1
<i>Opuntia littoralis</i>	3
<hr/>	
<i>Acmispon glaber</i>	1
<i>Malosma laurina</i>	3
<i>Adenostoma fasciculatum</i>	20

***Brodiaea orcuttii* (Orcutt's Brodiaea) Lopez Ridge**



Panorama from Eastern edge of population, facing Southwest, West, Northwest.
Panorama location is 6278246.405 1915522.734 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Lopez Ridge



Area 2013: 427.08 sq. m.



Brodiaea orcuttii

Pop. Area 2003 - 2013
Max Area: 568.02 sq. m.
Min Area: 91.64 sq. m.

0 5 10 20
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Brodiaea orcuttii	Common Name:	Orcutt's Brodiaea
Site Name:	Nobel Drive	Management Unit #:	TBD
Date:	4/23/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Mike Milano, City of San Diego			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 9 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0.757676 m² Exact (based on GPS mapping) Estimate
Units 2013 GIS Data

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____

Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6271105.37 1896318.834 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Demandra fasciculata Provisional Alliance, Demandra fasciculata Association

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open Space / Residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>Adjacent NNE will continue to invade</u>	Management Recommendation/s: <u>undergoing active weeding</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species'=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Navarretia fossalis</u>	<u>1</u>			<u>Deschampsia danthonioides</u>	<u>5</u>		
<u>Psilocarphus brevissimus</u>	<u>10</u>			<u>* Polypogon monspeliensis</u>	<u>1</u>		
<u>Brodiaea orcuttii</u>	<u>3</u>			<u>* Phalaris minor</u>	<u>1</u>		
<u>Demandra fasciculata</u>	<u>7</u>			<u>Logfia filaginoides</u>	<u>1</u>		
<u>Croton setigerus</u>	<u>1</u>			<u>* Bromus madritensis</u>	<u>2</u>		
<u>* Cotula australis</u>	<u>1</u>			<u>* Erodium sp</u>	<u>1</u>		
<u>Holocarpha virgata elongata</u>	<u>1</u>			<u>* Bromus hordeaceus</u>	<u>2</u>		
<u>Juncus bufonius</u>	<u>2</u>			<u>* Hypochaeris glabra</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO w90

<u>6271105.37</u>	<u>1896318.834</u>	<u>NW, W, SW, S</u>	<u>1.1 m</u>	<u>20° down</u>	<u>100-103</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Kelghery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor -	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Eriogonum fasciculatum 5
Isocoma menziesii 5
Stipa pulchra 3

 * *Lytium hyssopifolia* 1
 * *Gastrodium phleoides* 1
Pseudognaphalium californicum
 * *Arena sp* 1
 Bare ground 40

***Brodiaea orcuttii* (Orcutt's Brodiaea) Nobel Drive**



Panorama from Northern end of population, facing Southwest, South, Southeast.
Panorama location is 6271105.47 1896367.536 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Nobel Drive



Area 2013: 0.7577 sq. m.
 Brodiaea orcuttii

Pop. Area 2003 - 2013
Max Area: 22.28 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Kristina Cary, 06/27/2013



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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Artemisia californica</i>	3
* <i>Vicia villosa</i>	3
* <i>Sonchus asper</i>	1
<i>Juncus dubius</i>	2
<hr/>	
<i>Lesingia filiganifolia</i>	1
* <i>Hypochaeris glabra</i>	1
* <i>Festuca myuros</i>	10
<i>Ammispon glaber</i>	1
<i>Sidalcea sparsifolia</i>	2
<i>Calystegia macrolegia</i>	1
* <i>Festuca perennis</i>	1

***Brodiaea orcuttii* (Orcutt's Brodiaea)
USIU/Scripps Miramar Ranch**



Panorama from Southern end of population, facing Southwest, South, Southeast, East.
Panorama location is 6302393.50 1905898.59 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - USIU/Scripps Miramar Ranch



Area 2013: 0 sq. m.

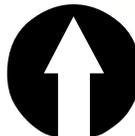


Brodiaea orcuttii

Pop. Area 2003 - 2013
Max Area: 12631.1 sq. m.
Min Area: 0 sq. m.

0 5 10 20
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Cylindropuntia californica var. *californica*
Snake Cholla



© City of San Diego, 2002

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Cylindropuntia californica var. californica Common Name: Snake Cholla
 Site Name: Otay Mesa Management Unit #: TBD
 Date: 4/20/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Bob Miller, Kim Zealand, Mike Milano, Syd Wagner - City of San Diego

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____
 Total No. Individuals: 60 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 6,547.28045 M² Exact (based on GPS mapping) Estimate
 Units: 2013 GPS data
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6323469.55 1779652.067 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: Simmondsia chinensis Alliance / Simmondsia chinensis - Raliopsis laciniata Association
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
moderate cover NNG
 Management Recommendation/s:
continue to monitor + treat weeds as needed

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Cylindropuntia californica</u>	<u>1</u>			<u>Ambrosia chamissoiifolia</u>	<u>5</u>		
<u>Cylindropuntia prolifera</u>	<u>1</u>			<u>Eriogonum fasciculatum</u>	<u>2</u>		
<u>Simmondsia chinensis</u>	<u>20</u>			<u>* Erodium sp.</u>	<u>5</u>		
<u>Artemisia californica</u>	<u>7</u>			<u>* Bromus diandrus</u>	<u>7</u>		
<u>Rhus integrifolia</u>	<u>1</u>			<u>* Bromus madriensis ssp. rubens</u>	<u>12</u>		
<u>Desmodium fasciculatum</u>	<u>3</u>			<u>* Avena barbata</u>	<u>1</u>		
<u>Marah macrocarpus</u>	<u>1</u>			<u>* Festuca perennis</u>	<u>1</u>		
<u>Encelia californica</u>	<u>2</u>			<u>* Lepidium sp.</u>	<u>1</u>		

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W40

<u>6323469.55</u>	<u>1779652.067</u>	<u>E, NE, N</u>	<u>1.1 m</u>	<u>5-10° up</u>	<u>132-136</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

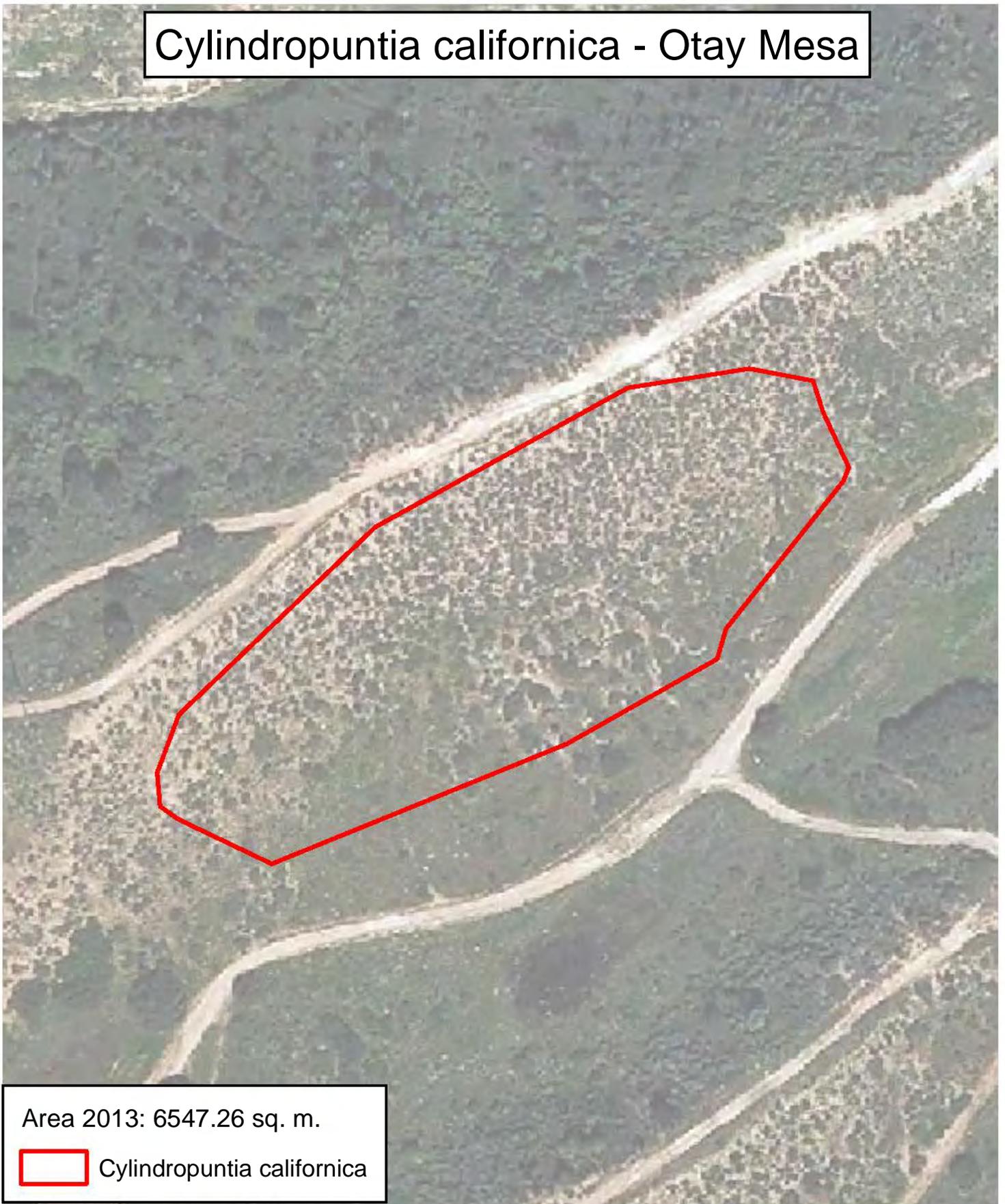
<u>Species</u>	<u>% cover</u>
<i>Bahiopsis laciniata</i>	5
<i>Euphorbia misera</i>	1
<i>Stipa pulchra</i>	1
* <i>Sisymbrium irio</i>	2

Cylindropuntia californica* var. *californica
(Snake Cholla)
Otay Mesa



Panorama from Northern edge of population, facing East, Northeast, North.
Panorama location is 6323469.55 1779652.07 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Cylindropuntia californica - Otay Mesa



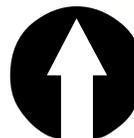
Area 2013: 6547.26 sq. m.

 Cylindropuntia californica

Pop. Area 2002 - 2013
Max Area: 6547.26 sq. m.
Min Area: 460.3 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Cylindropuntia californica var. californica	Common Name:	Snake Cholla
Site Name:	Spring Canyon	Management Unit #:	TBD
Date:	4/30/13	Management Regime:	TBD
Surveyors and Affiliation/Agency:	Betty Miller, Mike Milano, Syd Wagner - City of San Diego		

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 33 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 1357.075478 ^{M²} Exact (based on GPS mapping) Estimate
Units 2013 GPS data

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6330060.051 1781287.695 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Simmondsia chinensis Alliance / Simmondsia chinensis - Bahiopsis laciniata Alliance

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>moderate cover NNE</u>	Management Recommendation/s: <u>continue to monitor weed cover + treat as necessary</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Cylindropuntia californica</i>	1			<i>Encelia californica</i>	1		
<i>Cylindropuntia prolifera</i>	1			<i>Mamm. macrocarpus</i>	1		
<i>Simmondsia chinensis</i>	15			<i>Ferocactus viridescens</i>	1		
<i>Ambrosia - chenopodiifolia</i>	10			<i>Silpha pulchra</i>	1		
<i>Bahiopsis laciniata</i>	5			* <i>Bomys madriensis ssp. rubens</i>	20		
<i>Artemesia californica</i>	7			* <i>Centauria melifera</i>	3		
<i>Mirabilis laevis ssp. crassifolia</i>	1			* <i>Xera barbata</i>	1		
<i>Euphorbia nutans</i>	1			* <i>Erodium sp.</i>	10		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO v90

6330060.051	1781287.695	N, NE, E, SE	1.1 m	5* down	118-123	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: 4+ Black tailed jackrabbit

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

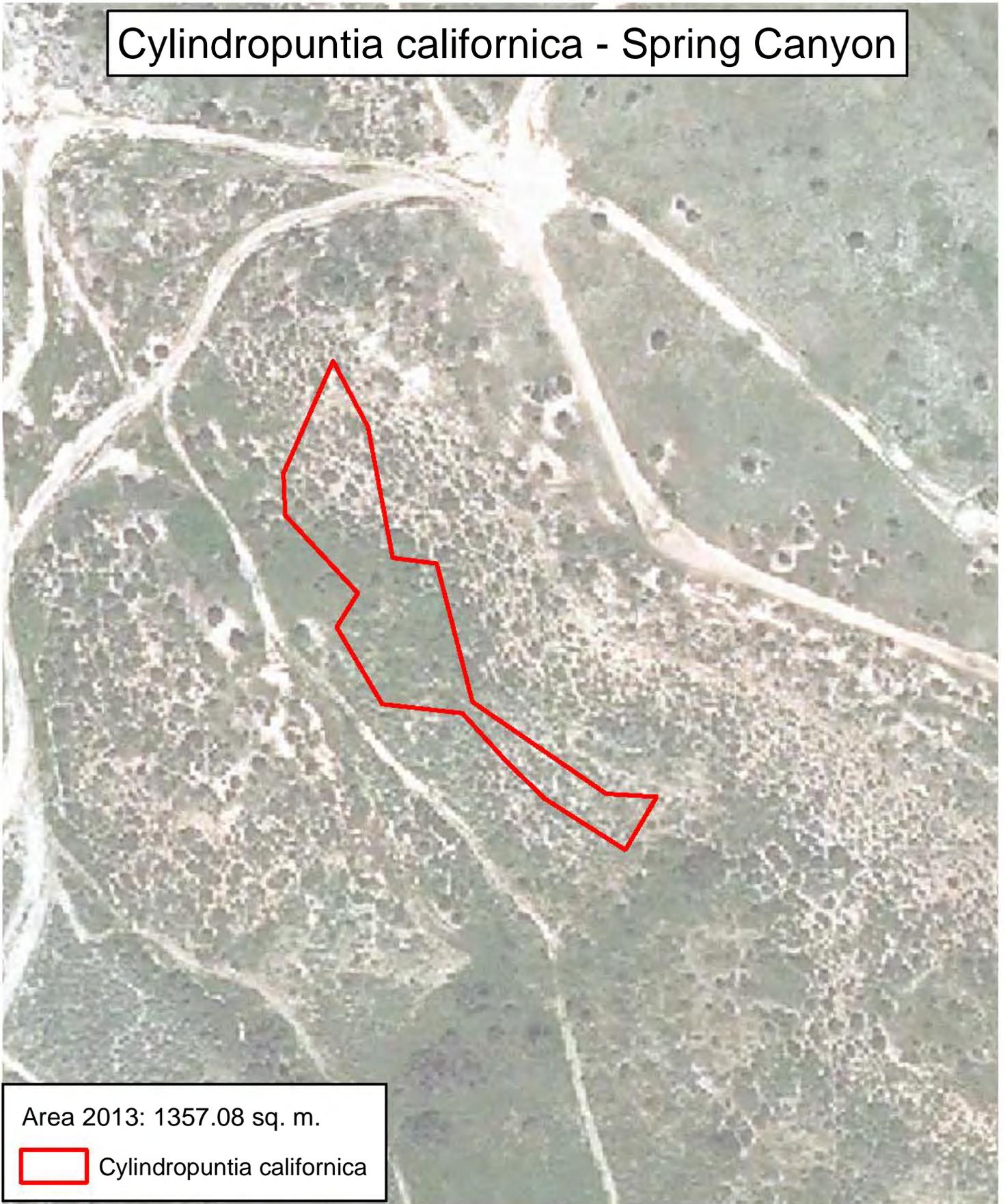
<u>species</u>	<u>% cover</u>
* <i>Lamarkea aurea</i>	1
<i>Deinandra furciculata</i>	5
* <i>Brassica nigra</i>	2
* <i>Bromus hordeaceus</i>	1
* <i>Festuca myuros</i>	2
* <i>Melilotus alba</i>	1
unk grass	21

Cylindropuntia californica* var. *californica
(Snake Cholla)
Spring Canyon



Panorama from Northeastern edge of population, facing North, Northeast, East, Southeast.
Panorama location is 6330060.05 1781287.695 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Cylindropuntia californica - Spring Canyon



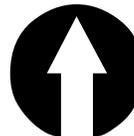
Area 2013: 1357.08 sq. m.

 Cylindropuntia californica

Pop. Area 2002 - 2013
Max Area: 3138.6 sq. m.
Min Area: 1011.71 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Deinandra conjugens
Otay Tarplant



© City of San Diego, 2005

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Deinandra conjugens	Common Name:	Otay Tarplant
Site Name:	Dennery Ranch	Management Unit #:	TBD
Date:	5/21/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>Bob Miller, Kim Ireland, Mike Melane -</i>			

Species Found? Yes No

If not, why (if reason known or suspected)?

Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0 m² Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6321404.87 1791630.28 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: SIMMONDISIA CHINENSIS ALLIANCE / SIMMONDISIA CHINENSIS - BATHIOPSIS LACINIATA ASSOCIATION

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>moderate non-native grasses / forbs within brush management zone</i>	Management Recommendation/s: <i>none</i>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; *Cover%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Rosa minutiflora</i>	5			<i>Gutierrezia sp.</i>	1		
<i>Bathypsis laciniata</i>	5			* <i>Centaurea melitensis</i>	<1		
<i>Encelia californica</i>	3			* <i>Aragallus arvensis</i>	20		
<i>Simmondsia chinensis</i>	10			* <i>Festuca myuros</i>	30		
<i>Atriplex californica</i>	25			* <i>Erodium sp.</i>	<1		
<i>Rhus integrifolia</i>	3			<i>Cylindropuntia prolifera</i>	1		
<i>Eriogonum fasciculatum</i>	1			* <i>Bromus hordeaceus</i>	<1		
<i>Deinandra fasciculata</i>	1						

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

6321404.87	1791630.28	S, SE, E	1.1 m	5° up	478-482	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Modified Trudgen & Keighery Vegetation Condition Scale

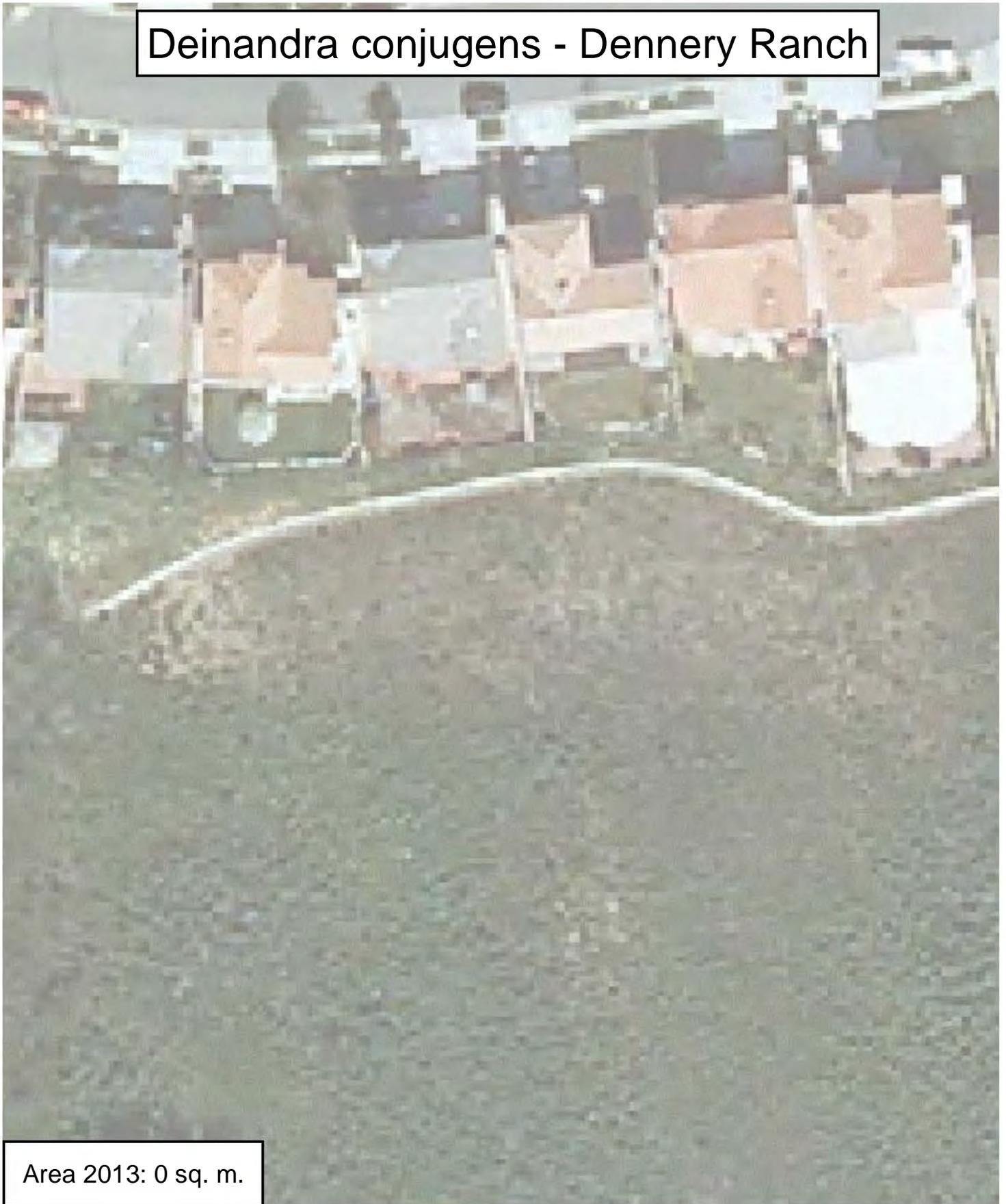
Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

***Deinandra conjugens* (Otay Tarplant) Dennery Ranch**



Panorama from Southern edge of population, facing South, Southeast, East.
Panorama location is 6321401.87 1791630.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Deinandra conjugens - Dennery Ranch

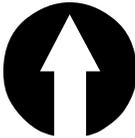


Area 2013: 0 sq. m.

Pop Area: 2001 - 2013
Max: 3623.64 sq. m.
Min: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Deinandra conjugens **Common Name:** Otay Tarplant
Site Name: Dennery Ranch East **Management Unit #:** TBA
Date: 5/21/13 **Management Regime:** TBA
Surveyors and Affiliation/Agency: Roby Miller, Kim Paeland, Mike Milano -
City of San Diego

Species Found? Yes No If not, why (if reason known or suspected)?
 Total No. Individuals: 4500 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 4493.777051 m² Exact (based on GPS mapping) Estimate
Units 2013 GPS data
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____ _____ _____
Collector Collection Number Museum/Herbarium

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6323139.66 1792737.03 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: SIMMONDSIA CHINENSIS ALLIANCE / SIMMONDSIA CHINENSIS-RATHOPODIS LACINIATA ASSOCIATION
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space, transportation, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>high cover invasive grasses + forbs</u>	Management Recommendation/s: <u>treat weeds</u>
---	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; *Cover"= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Deinandra conjugens</u>	<u>7</u>			<u>Pentstemon melitensis</u>	<u>20</u>		
<u>Peritoma arborea</u>	<u>1</u>			<u>Apogonon arvensis</u>	<u>12</u>		
<u>Simmondsia chinensis</u>	<u>7</u>			<u>Brassica nigra</u>	<u>7</u>		
<u>Tocoma menziesii</u>	<u>3</u>			* <u>Bromus hordeaceus</u>	<u>15</u>		
<u>Eriogonum fasciculatum</u>	<u>4</u>			* <u>Avena sp.</u>	<u>15</u>		
<u>Ambrosia chenopodiifolia</u>	<u>1</u>			* <u>Bromus madritensis</u>	<u>10</u>		
<u>Stipa pulchra</u>	<u>1</u>			* <u>Hedysarum cretica</u>	<u>1</u>		
<u>Saxifraga bellum</u>	<u>2</u>			* <u>Cochlidium plicoides</u>	<u>2</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO WP

<u>6323139.66</u>	<u>1792737.03</u>	<u>SW,S,SE</u>	<u>1.1m</u>	<u>5* up</u>	<u>492-497</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
* <i>Thalassia minor</i>	2
* <i>Festuca perennis</i>	20
* <i>Thalassia paradoxa</i>	1

***Deinandra conjugens* (Otay Tarplant)
Dennery Ranch East**



Panorama from Southern edge of population, facing Southwest, South, Southeast.
Panorama location is 6323139.66 1792737.05 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Deinandra conjugens - Dennery Ranch East



Area 2013: 4493.78 sq. m.

 Deinandra conjugens

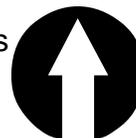
Pop Area: 2010-2013

Max: 9528.1 sq. m.

Min: 206.4 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Deinandra conjugens	Common Name:	Otay Tarplant
Site Name:	Proctor Valley	Management Unit #:	TBD
Date:	5/21/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <u>John Miller, Kim Roeland, Mike Milano</u> - City of San Diego			
Species Found? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If not, why (if reason known or suspected)?			
Total No. Individuals:	<u>0</u>	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area:	<u>0</u>	<u>10²</u>	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate
Units			
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 _____			

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6353224.493 1825326.858 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: ISOCOMA MENZIESII ALLIANCE / ISOCOMA MENZIESII PROVISIONAL ASSOCIATION

Landowner/Manager: City of San Diego Public Utilities Dept.

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>high cover non-native grasses</u>	Management Recommendation/s: <u>treat weeds using CBZ methodology when available</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Deinandra fasciculata</i>	<1			<i>Calochortus splendens</i>	1		
<i>Ammannia glabra</i>	3			<i>Stipa pulchra</i>	7		
<i>Isocoma menziesii</i>	20			* <i>Hedysarum cretica</i>	1		
<i>Saccharis sarothroides</i>	1			* <i>Elymus</i> sp.	2		
<i>Artemisia californica</i>	1			* <i>Centaurea melitensis</i>	2		
<i>Eriogonum fasciculatum</i>	1			<i>Allium</i> sp.	1		
<i>Sisynchium bellum</i>	7			* <i>Brachypodium distachyon</i>	80		
<i>Dichelostemma capitatum</i>	20			* <i>Festuca perennis</i>	5		

IV. SITE PHOTOMONITORING

Camera type: PENTAX W90

<u>6353224.493</u>	<u>1825326.86</u>	<u>E, SE, S</u>	<u>1.1 m</u>	<u>5° down</u>	<u>500-505</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: LBV is "riparian" area to south near gravel road

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Avena</i> sp.	1
* <i>Lalsola tragus</i>	<1
* <i>Brassica nigra</i>	<1
* <i>Bromus madritensis</i>	1
<hr/>	
<i>Putenzija</i> sp.	1

***Deinandra conjugens* (Otay Tarplant) Proctor Valley**



Panorama from Southeastern edge of population, facing East, Southeast, South.
Panorama location is 6353224.49 18525326.86 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Deinandra conjugens - Proctor Valley

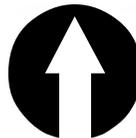


Area 2013: 0 sq. m.

Pop Area: 2003 - 2013
Max: 3347.3 sq. m.
Min: 0 sq. m.



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Dicranostegia orcuttiana
Orcutt's Bird's Beak



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dicranostegia orcuttiana	Common Name:	Orcutt's Bird's Beak				
Site Name:	Otay River Valley	Management Unit #:	TBD				
Date:	5/21/13	Management Regime:	TBD				
Surveyors and Affiliation/Agency: <u>Betsy Miller, Kim Roeland, Mike Milano - City of San Diego</u>							
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
If not, why (if reason known or suspected)?							
Total No. Individuals:	<u>173</u>	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)				
Population/Subpopulation Area:	<u>142,912,883</u>	<u>m²</u> Units	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate <u>2013 GPS data</u>				
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				
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/-	<u><1</u>	<input checked="" type="checkbox"/> meters	<input type="checkbox"/> feet				
Observation Location:	<u>6316914.067</u>	<u>1794310.864</u>	<input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM				
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community:	<u>MEDITERRANEAN CALIFORNIA NATURALIZED ANNUAL + PERENNIAL GRASSLAND SEMI-NATURAL STANDS</u>						
Landowner/Manager:	<u>City of San Diego Park and Recreation</u> <u>BACCHARIS SAROTHOIDES PROVISIONAL ALLIANCE + ASSOCIATION</u>						
Overall Site Quality**	<input checked="" type="checkbox"/> Very Good-Excellent	<input type="checkbox"/> Fair to Good	<input type="checkbox"/> Poor <input type="checkbox"/> Very Poor				
Surrounding land use:	<u>open space</u>						
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):	Management Recommendation/s:						
<u>Trail is fenced</u> <u>Fence is in good condition</u>	<u>none</u>						
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; *Cover*= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dicranostegia orcuttiana</u>	<u>2</u>			<u>Malgosia laurina</u>	<u>3</u>		
<u>Rhus integrifolia</u>	<u>15</u>			<u>Heteromeles arbutifolia</u>	<u>2</u>		
<u>Baccharis sarothoides</u>	<u>10</u>			<u>*Marubium vulgare</u>	<u>2/1</u>		
<u>Baccharis salicifolia</u>	<u>3</u>			<u>Psuedognaphalium californicum</u>	<u>1</u>		
<u>Mimulus aurantiacus</u>	<u>15</u>			<u>*Brassica nigra</u>	<u>2</u>		
<u>Sprenesia californica</u>	<u>10</u>			<u>Eriogonum flavibunda</u>	<u>1</u>		
<u>Callium nuttallii</u>	<u>1</u>			<u>Baccharis pilularis</u>	<u>1</u>		
<u>Isocoma unguiculata</u>	<u>2</u>			<u>Dioscorea puberulenta</u>	<u>1</u>		
IV. SITE PHOTOMONITORING							
Camera type:	<u>PENTAX OPTIO W90</u>						
<u>6316914.067</u>	<u>1794310.869</u>	<u>N, NE, E</u>	<u>1.1 m</u>	<u>10-15° down</u>	<u>451-455</u>	S/OS/MSCP	
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
V. OTHER FIELD NOTES							
Other Field Notes/Comments: <u>LBV heard @ photopoint</u> <u>YBCH "</u>							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Peritoma arborea</i>	1
<i>Pseudognaphalium bicolor</i>	1
* <i>Festuca myuros</i>	3
* <i>Bromus madritensis</i>	4
<i>Rhamnus crocea</i>	2
<i>Salix sp.</i>	7
* <i>Chrysanthemum coronarium</i>	2
<i>Pseudognaphalium tenax</i>	1
<i>Laemucia coulteri</i>	<1

***Dicranostegia orcuttiana* (Orcutt's Bird's Beak) Otay River Valley**



Panorama from Southwestern end of population, facing North, Northeast, East.
Panorama location is 6316914.07 1794310.86 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dicranostegia orcuttiana - Otay River Valley

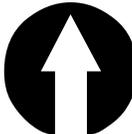


Area 2013: 142.91 sq. m.
 Dicranostegia orcuttiana

Pop. Area 2003 - 2013
Max Area: 222.34 sq. m.
Min Area: 41 sq. m.



Source: San GIS & City of San Diego Park & Rec
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Dudleya blochmaniae ssp. *brevifolia*
Short-Leaved Dudleya



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Dudleya blochmaniae ssp. brevifolia Common Name: Short-Leaved Dudleya
 Site Name: Carmel Mountain-Subpop 1 Management Unit #: TBD
 Date: 4/24/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Bobby Miller, Kim Roeland, Carina Kleber, Kristina Gray - City of San Diego

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____
 Total No. Individuals: 2,490 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 148.666527 m² Exact (based on GPS mapping) Estimate
 Units: 2013 GPS data
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6264028.673 1920613.917 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Adenostoma fasciculatum - Xylococcus bicolor Alliance / Adenostoma fasciculatum Association
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): none
 Management Recommendation/s: none

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dudleya blochmaniae ssp. b.</u>	<u>1</u>			<u>Slaginella cinerascens</u>	<u>20</u>		
<u>Eriodanum fasciculatum</u>	<u>3</u>			<u>Pseudognaphalium stramineum</u>	<u>1</u>		
<u>Adenostoma fasciculatum</u>	<u>3</u>			<u>Logfia gallica</u>	<u>1</u>		
<u>Xylococcus bicolor</u>	<u>4</u>			<u>Dodecatheon clevelandii</u>	<u>1</u>		
<u>Salvia mellifera</u>	<u>2</u>			<u>Deinandra fasciculata</u>	<u>1</u>		
<u>Eriophyllum confertiflorum</u>	<u>1</u>			<u>* Hesperochloa glabra</u>	<u>1</u>		
<u>Opuntia littoralis</u>	<u>1</u>			<u>* Erodium sp.</u>	<u>1</u>		
<u>Ferocactus viridescens</u>	<u>1</u>			<u>* Lepidium sp.</u>	<u><1</u>		

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix L11
6264028.673 1920613.917 SW, W, NW, N 1.1 m 10° down 1279-1282 S/OS/MSCP
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s
 _____ _____ _____ _____ _____ _____
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>sp cover</u>
<i>Osmadenia tenella</i>	1
<i>Pentagramma triangularis</i>	<1
<i>Crasula</i> <i>connata</i>	1
<i>Plantago erecta</i>	2
<hr/>	
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	3
* <i>Festuca nigra</i>	5
* <i>Avena barbata</i>	1
<i>Toxicoscordion venenosum</i>	1
<hr/>	
<i>Antirrhinum nuttallianum</i> ssp. n.	1
<i>Dichelostemma capitatum</i>	1
bare ground	30

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Carmel Mountain Subpopulation # 1



Panorama from Northwestern edge of population, Southwest, West, Northwest, North.
Panorama location is 6264028.67 1920613.92 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Carmel Mountain Subpop 1



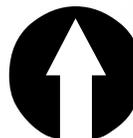
Area 2013: 148.67 sq. m.

 Dudleya brevifolia

Pop. Area 2001 - 2013
Max Area: 313.30 sq. m.
Min Area: 137.43 sq. m.

0 3.75 7.5 15 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Dudleya blochmaniae ssp. Brevifolia **Common Name:** Short-Leaved Dudleya
Site Name: Carmel Mountain- Subpop 2 **Management Unit #:** TBD
Date: 4/24/13 **Management Regime:** TBD
Surveyors and Affiliation/Agency: Bob Miller, Kim Rueland, Carina Kleber, Kristina Cary - City of San Diego

Species Found? Yes No If not, why (if reason known or suspected)?
 Total No. Individuals: 537 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 61,929,596 m² Exact (based on GPS mapping) Estimate
Units 2013 GPS data
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
Collector Collection Number Museum/Herbarium

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6265696.736 1920365.462 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: ADENOSTOMA FASCICULATUM Alliance / Adenostoma fasciculatum Southern Maritime
 Landowner/Manager: City of San Diego Park and Recreation Association
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
nearby trails have been closed
vernal pool restoration in progress

Management Recommendation/s:
none

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dudleya blochmaniae ssp. b.</u>	<u>1</u>			<u>Plantago erecta</u>	<u>1</u>		
<u>Adenostoma fasciculatum</u>	<u>15</u>			<u>Cardiospermum ramosissimum</u>	<u>1</u>		
<u>Eriogonum fasciculatum</u>	<u>1</u>			<u>Chorizanthe polygonoidea var. l.</u>	<u>1</u>		
<u>Xylococcus bicolor</u>	<u>1</u>			<u>Navarretia tomentosa</u>	<u>1</u>		
<u>Mimulus aurantiacus</u>	<u>1</u>			<u>Dejanira fasciculata</u>	<u>1</u>		
<u>Saxia mellifera</u>	<u>5</u>			<u>Selaginella cinerascens</u>	<u>30</u>		
<u>Acmispon glaber</u>	<u>1</u>			<u>Chassula comata</u>	<u>1</u>		
<u>Stybelium gnaphaloides</u>	<u>1</u>			<u>Logfia filaginoidea</u>	<u>1</u>		
				<u>* Festuca spurius</u>	<u>2</u>		
				<u>bare ground</u>	<u>30</u>		

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix 111
6265696.736 1920365.462 N, NE, E, SE 1.1 m 10° down 1267-1269 S/OS/MSCP
Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Carmel Mountain Subpopulation # 2



Panorama from Northeastern edge of population, North, Northeast, East, Southeast.
Panorama location is 6265696.74 1920365.46 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Carmel Mountain Subpop 2



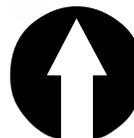
Area 2013: 61.93 sq. m.

 Dudleya brevifolia

Pop. Area 2001 - 2013
Max Area: 249.35 sq. m.
Min Area: 61.93 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya blochmaniae ssp. Brevifolia	Common Name:	Short-Leaved Dudleya				
Site Name:	Carmel Mountain- Subpop 3	Management Unit #:	TBD				
Date:	4/24/13	Management Regime:	TBD				
Surveyors and Affiliation/Agency: <i>Bob Miller, Kim Rowland, Carina Weber, Kristina Cary - City of San Diego</i>							
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
If not, why (if reason known or suspected)?							
Total No. Individuals:	<u>6636</u>	Exact <input type="checkbox"/> Estimate <input checked="" type="checkbox"/> (use orders of 10, 100 and 1000 for estimates)					
Population/Subpopulation Area:	<u>963.494068</u>	<u>m²</u> Units <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate	<u>2013 GPS data</u>				
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				
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error:	+/- <u><1</u>	<input checked="" type="checkbox"/> meters <input type="checkbox"/> feet					
Observation Location:	<u>6265528.098</u>	<u>1920724.116</u>	<input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM				
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community:	<u>ADENOSTOMA FASCICULATUM Alliance / Adenostoma fasciculatum Southern Maritime Association</u>						
Landowner/Manager:	<u>City of San Diego Park and Recreation</u>						
Overall Site Quality**	<input checked="" type="checkbox"/> Very Good-Excellent	<input type="checkbox"/> Fair to Good	<input type="checkbox"/> Poor <input type="checkbox"/> Very Poor				
Surrounding land use:	<u>open space</u>						
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):		Management Recommendation/s:					
<u>nearby trail is closed</u>		<u>maintain trail closure</u>					
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; *Cover*= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Dudleya blochmaniae ssp. b.</i>	2			<i>Salvia mellifera</i>	2		
<i>Adenostoma fasciculatum</i>	20			<i>Eriophyllum confertiflorum</i>	1		
<i>Eriogonum fasciculatum</i>	3			<i>Stipa pulchra</i>	<1		
<i>Rhus integrifolia</i>	2			<i>Opuntia littoralis</i>	1		
<i>Xylococcus bicolor</i>	2			<i>Yucca schidigera</i>	1		
<i>Mimulus aurantiacus</i>	2			<i>Sarcocolla bocconi</i>	1		
<i>Ferocactus viridescens</i>	1			<i>Crosetia connata</i>	1		
<i>Malosma laurina</i>	3			<i>Chorizanthe polygona</i> var. <i>longispina</i>	1		
IV. SITE PHOTOMONITORING							
Camera type:	Nikon Coolpix <u>L11</u>						
<u>6265528.098</u>	<u>1920724.116</u>	<u>SE, S, SW, NW</u>	<u>1.1 m</u>	<u>10° down</u>	<u>1271-1275</u>	<u>S/OS/MSCP</u>	
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
V. OTHER FIELD NOTES							
Other Field Notes/Comments: <u>DUBR is establishing in old road bed</u>							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
<i>Desmodium fusciculata</i>	1
<i>Selaginella cinerascens</i>	35
<i>Navarretia hamata</i>	1
* <i>Festuca myuros</i>	5
* <i>Bromus madritensis ssp. rubens</i>	1
<i>Quercus berberidifolia</i>	1
<i>Toxicoscordion fremontii</i>	<1

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Carmel Mountain Subpopulation # 3



Panorama from Southwestern edge of population, Southeast, South, Southwest, West, Northwest.
Panorama location is 6265528.09 1920724.12 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Carmel Mountain Subpop 3



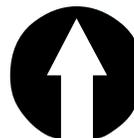
Area 2013: 963.49 sq. m.

 Dudleya Brevifolia

Pop. Area 2001 - 2013
Max Area: 1487.37 sq. m.
Min Area: 685.06 sq. m.

0 4.5 9 18
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Dudleya blochmaniae ssp. Brevifolia **Common Name:** Short-Leaved Dudleya
Site Name: Crest Canyon- N Subpop **Management Unit #:** TBD
Date: 4/24/13 **Management Regime:** TBD
Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Kristina Cany
City of SD

Species Found? Yes No _____
If not, why (if reason known or suspected)?
Total No. Individuals: 2876 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area: 145.134014 m² Exact (based on GPS mapping) Estimate
Units 2013 GIS Data
Collection (if not collected previously)? Yes No Collected Previously
If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
Accuracy of Coordinates/GPS Error: +/- <1 meters feet
Observation Location: 6253917.074 1928311.12 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
Vegetation Community: ADENOSTOMA FASCICULATUM Alliance/ Adenostoma fasciculatum
Landowner/Manager: City of San Diego Park and Recreation Southern Maritime Alliance
Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
Surrounding land use: open space / Residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): None
Management Recommendation/s: None

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dudleya brevifolia</u>	<u>1</u>			<u>Mimulus aurantiacus</u>	<u>5</u>		
<u>Rhus integrifolia</u>	<u>5</u>			<u>Chlorogalum parviflorum</u>	<u>2</u>		
<u>Rhamnus ilicifolia</u>	<u>2</u>			<u>Acmispon glaber</u>	<u>1</u>		
<u>Heteromesa abutilifolia</u>	<u>5</u>			<u>Selaginella cinerascens</u>	<u>15</u>		
<u>Artemisia californica</u>	<u>5</u>			<u>Stipa pulchra</u>	<u>1</u>		
<u>Eriogonum fasciculatum</u>	<u>7</u>			<u>Pseudognaphalium benedens</u>	<u>2</u>		
<u>Salvia mellifera</u>	<u>2</u>			<u>Marah macrocarpus</u>	<u>1</u>		
<u>Cneonidium dumosum</u>	<u>2</u>			<u>Xylococcus bicolor</u>	<u>10</u>		

IV. SITE PHOTOMONITORING
Camera type: PENTAX OPTIO W90
6253917.074 1928311.12 W, NW, N, NE, E 1.1 m 10° down 1291-1294 S/OS/MSCP
Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<i>Adenostoma fasciculatum</i>	5
<i>Solanum parishii</i>	2
<i>Navarretia hamata</i>	1
<i>Crassula connata</i>	2
<hr/>	
* <i>Bromus madritensis</i>	3
* <i>Festuca myuros</i>	3
<i>Logfia filaginoides</i>	2
<hr/>	
Bare ground	40
<i>Dichondra occidentalis</i>	1
<i>Corethrogyne filaginifolia</i>	3

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Crest Canyon – Northern Subpopulation



Panorama from Northeastern edge of population, West, North, East.
Panorama location is 6253917.07 1928311.12 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Crest Canyon North



Area 2013: 145.13 sq. m.
 Dudleya brevifolia

Pop. Area 2001 - 2013
Max Area: 180.05 sq. m.
Min Area: 123.32 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Dudleya blochmaniae ssp. brevifolia **Common Name:** Short-Leaved Dudleya
Site Name: Crest Canyon- S Subpop **Management Unit #:** TBD
Date: 4/24/13 **Management Regime:** TBD
Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Carina Weber, Kristina Lang
City of San Diego

Species Found? Yes No _____
If not, why (if reason known or suspected)?
Total No. Individuals: 53 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area: 31.60194 m² Exact (based on GPS mapping) Estimate
Units 2013 GIS Data
Collection (if not collected previously)? Yes No Collected Previously
If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
Accuracy of Coordinates/GPS Error: +/- <1 meters feet
Observation Location: 6253843.223 1927609.02 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
Vegetation Community: Adenostoma fasciculatum Alliance/Adenostoma fasciculatum Southern Maritime Alliance
Landowner/Manager: City of San Diego Park and Recreation
Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
Surrounding land use: open space / residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): None
Management Recommendation/s: None

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dudleya brevifolia</u>	<u>1</u>			<u>Rhus integrifolia</u>	<u>10</u>		
<u>Adenostoma fasciculatum</u>	<u>20</u>			<u>Dudleya tancredata</u>	<u>2</u>		
<u>Cheeridium dumosum</u>	<u>5</u>			<u>Hazardia squarrosa</u>	<u>1</u>		
<u>Salvia mellifera</u>	<u>5</u>			<u>Deinandra fasciculata</u>	<u>1</u>		
<u>Mimulus aurantiacus</u>	<u>3</u>			<u>Xylococcus bicolor</u>	<u>1</u>		
<u>Eriogonum fasciculatum</u>	<u>5</u>			<u>Selaginella cernerascens</u>	<u>5</u>		
<u>Ceanothus verrucosus</u>	<u>1</u>			<u>Opuntia littoralis</u>	<u>1</u>		
<u>Chlorogalum parviflorum</u>	<u>2</u>			<u>Stylocline gnaphaloides</u>	<u>1</u>		

IV. SITE PHOTOMONITORING
Camera type: PENTAX OPTIO w90
6253843.223 1927609.02 NW, N, NE 1.1 m 5° down 1287-1290 S/OS/MSCP
Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Cardionema ramosissimum 1

Pseudognaphalium beneolens 1

Malosma laurina 1

Marah macrocarpus 1

Crassula connata 1

Chorizanthe sp. 2

Artemisia californica 1

Stipa pulchra 1

Dudleya blochmaniae* spp. *brevifolia
(Short-Leaved Dudleya)
Crest Canyon – Southern Subpopulation



Panorama from Northern edge of population, Northwest, North, Northeast.
Panorama location is 6253843.22 1927609.02 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya brevifolia - Crest Canyon South



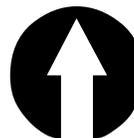
Area 2013: 31.6 sq. m.

 Dudleya brevifolia

Pop. Area 2005 - 2013
Max Area: 31.6 sq. m.
Min Area: 6.95 sq. m.

0 2.5 5 10
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Dudleya variegata
Variegated Dudleya



© City of San Diego, 2004

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	Black Mtn East	Management Unit #:	TBD
Date:	5/4/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>Joey Miller, Kim Roeland, Mike Milane</i> <i>- City of San Diego</i>			

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____

Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0 0² Exact (based on GPS mapping) Estimate
 Units _____

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
 Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6291943.74 1939635.453 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Salvia apiana Alliance / Salvia apiana - Artemisia californica

Landowner/Manager: City of San Diego Park and Recreation Association

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, water storage, transportation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
very high cover brachypodium

Management Recommendation/s:
treat brachypodium if DUVA is observed

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species'-List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Salvia apiana</i>	7			<i>Calochortus optendens</i>	2		
<i>Rhus integrifolia</i>	1			<i>Synsphyrium bellum</i>	9		
<i>Baccharis pilularis</i>	2			<i>Crothogeomys filiganiifolia</i>	1		
<i>Eriogonum fasciculatum</i>	4			<i>Calceola maculosa</i>	2		
<i>Artemisia californica</i>	3			<i>Mimulus laevis</i>	1		
<i>Isocoma menziesii</i>	2			<i>Stipa pulchra</i>	20		
<i>Pseudognaphalium californicum</i>	1			* <i>Cynara cardunculus</i>	12		
<i>Calium angustifolium</i>	1			<i>Boomeria coccinea</i>	2		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6291943.74</u>	<u>1939635.453</u>	<u>E, SE, S</u>	<u>1.1 m</u>	<u>5° down</u>	<u>204-208</u>	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

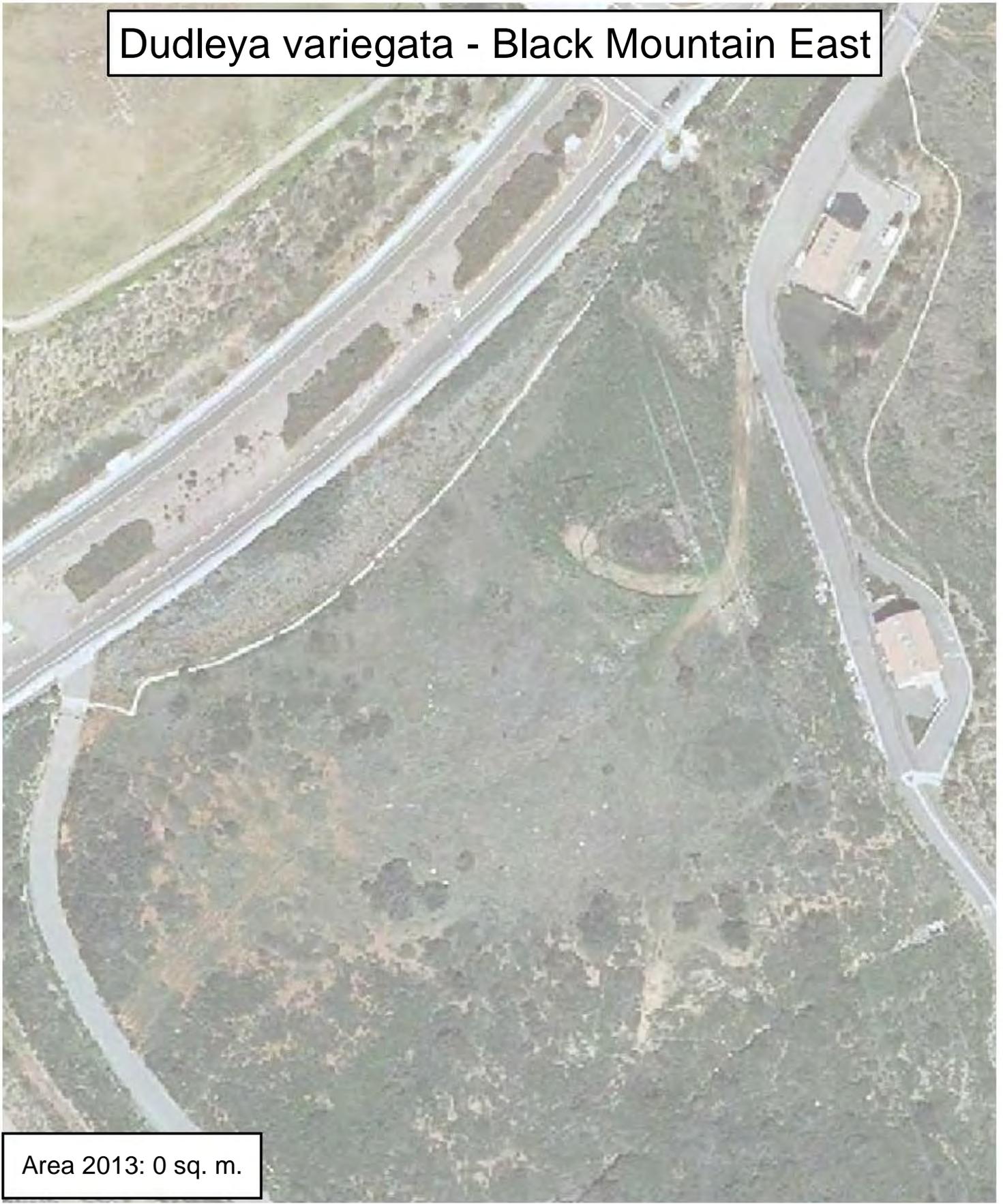
<u>Species</u>	<u>% cover</u>
* <i>Brachypodium distachyon</i>	60
* <i>Avena barbata</i>	2
<i>Dichelostemma capitatum</i>	1
* <i>Sonchus oleraceus</i>	1
<hr/>	
* <i>Festuca myuros</i>	2
* <i>Foeniculum vulgare</i>	1
* <i>Bromus hordeaceus</i>	3

***Dudleya variegata* (Variegated Dudleya) Black Mountain East**



Panorama from Southeastern edge of population, facing East, Southeast, South.
Panorama location is 6291943.74 1939635.45 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Black Mountain East

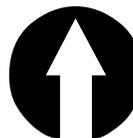


Area 2013: 0 sq. m.

Pop. Area 2001 - 2013
Max Area: 1845.93 sq. m.
Min Area: 0.0 sq. m.

0 12.5 25 50 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	East Elliott-Creek	Management Unit #:	TBA
Date:	5/1/13	Management Regime:	TBA
Surveyors and Affiliation/Agency:	Betsy Miller, Kim Poeland, Mike Milano City of San Diego		
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, why (if reason known or suspected)?			
Total No. Individuals:	1	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area:	0.50	m ²	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate 2013 GIS Data
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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6316394.856 1897093.54 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Isocoma menziesii Alliance / Isocoma menziesii Provisional Association

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open space / Military

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>Moderate-high cover NW grass</u>	Management Recommendation/s: <u>Treat weeds around population</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<i>Rhus integrifolia</i>	5			<i>Stipa pulchra</i>	10		
<i>Isocoma menziesii</i>	15			<i>Delinandra fasciculata</i>	5		
<i>Eriogonum fasciculatum</i>	5			* <i>Aragallis arvensis</i>	1		
<i>Galium angustifolium</i>	2			* <i>Erodium sp.</i>	5		
<i>Achillea glabra</i>	5			* <i>Avena sp.</i>	35		
<i>Calochortus splendens</i>	2			* <i>Vulpia myuros</i>	5		
<i>Opuntia littoralis</i>	1			* <i>Bromus medietensis</i>	5		
<i>Baccharis sarothroides</i>	1			* <i>Brachypodium distachyon</i>	10		

IV. SITE PHOTOMONITORING

Camera type Pentax Optio W90

<u>6316394.9</u>	<u>1897093.542</u>	<u>SW,W,NW,N</u>	<u>1.1 m</u>	<u>Level</u>	<u>291-299</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

(Continue on back if needed.)

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* <i>Logfia gallica</i>	5
* <i>Brassica nigra</i>	1
* <i>Bromus hordeaceus</i>	10
<i>Dudleya variegata</i>	1
<i>Selaginella bigelovii</i>	<1
<i>Artemisia californica</i>	1
<i>Enodictyon crassifolium</i>	1
<i>Salvia mellifera</i>	1
* <i>Hedypnois cretica</i>	<1
<i>Chamaecrista</i>	1
<i>Adenostoma fasciculatum</i>	1
<i>Calystegia macrostegia</i>	<1
<i>Salvia apiana</i>	1
<i>Pellaea mucronata mucronata</i>	<1

***Dudleya variegata* (Variegated Dudleya)**
East Elliott - Creek



Panorama from Northwestern edge of population, facing Southwest, West, Northwest, North.
Panorama location is 6316694.86 1897093.54 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - East Elliott Creek



Area 2013: 0.5 sq. m.
 Dudleya variegata

Pop. Area 2004 - 2013
Max Area: 1725.22 sq. m.
Min Area: 0.0 sq. m.

0 1.5 3 6 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	East Elliott-Hilltop	Management Unit #:	TBA
Date:	5/9/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Mike Milano City of San Diego			

Species Found? Yes No _____ If not, why (if reason known or suspected)?

Total No. Individuals: 39 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 26.348778 m² Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously
If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6316264.127 1897663.71 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Adenostoma fasciculatum Alliance / Adenostoma fasciculatum
Southern Maritime Association

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>low-moderate cover non-native grasses</u> <u>* new ^{illegal} trail cut into hilltop next to Dudleya</u>	Management Recommendation/s: <u>Close trail</u>
---	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
Dudleya variegata	1			Deinandra fasciculata	2		
Adenostoma fasciculatum	30			Dichondra occidentalis	1		
Eriogonum fasciculatum	10			Ferocactus viridescens	1		
Salvia mellifera	1			Calystegia maritima	1		
Xylococcus bicolor	1			Cuscuta californica	5		
Hesperaloe parviflora	2			Artemisia californica	5		
Helianthemum scapanum	1			*Lepidium sp.	1		
Calochortus splendens	1			Malosma laurina	1		

IV. SITE PHOTOMONITORING

Camera type Pentax Optio W90

6316264.1	1897663.71	SE,S,SW	1.1 m	Level	341-346	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: Photos taken of cutting that had been done to open illegal trail - cut branches piled along side illegal trail

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

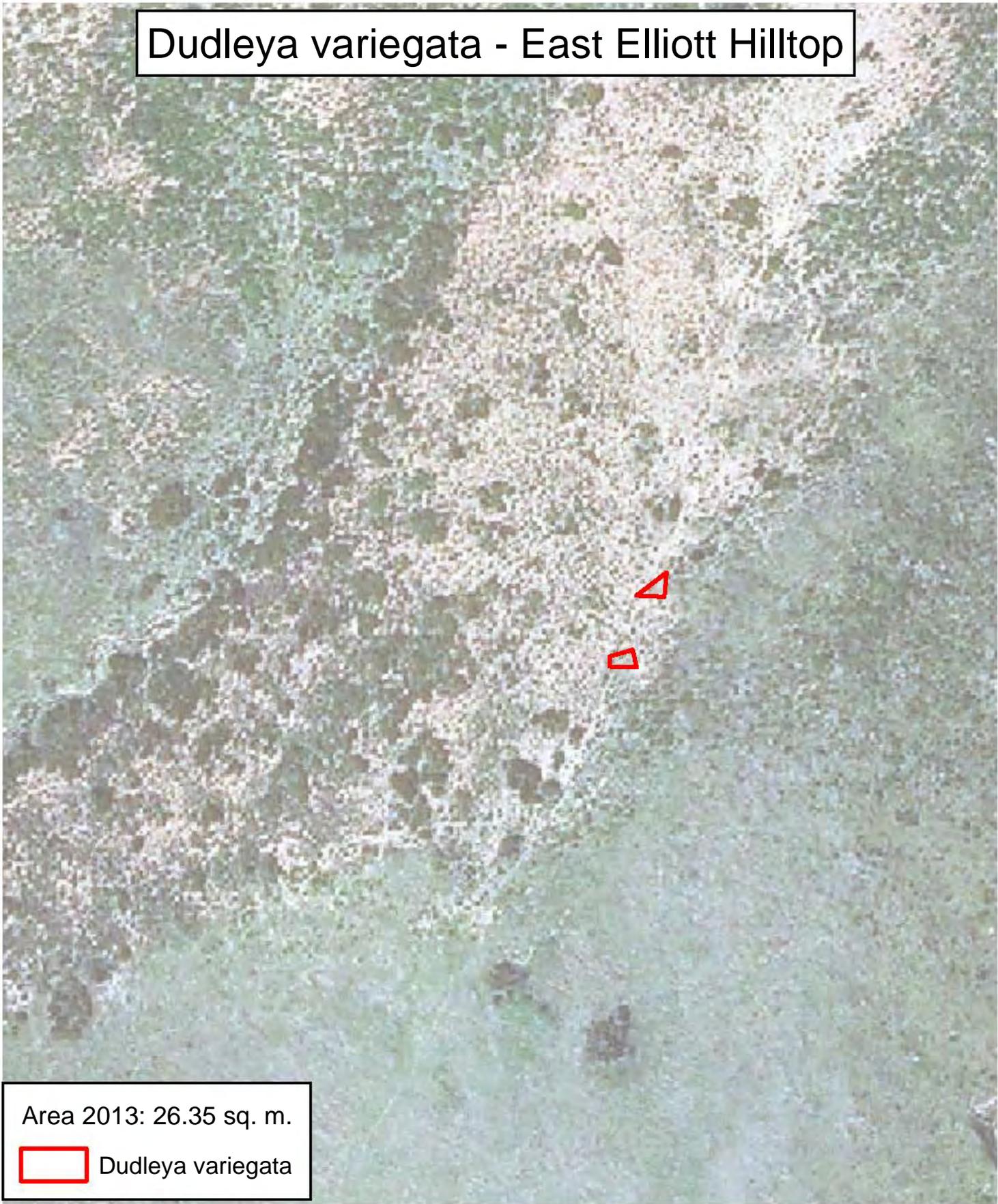
<i>Navaretia hamata</i>	5
<i>Pseudognaphalium microcephalum</i>	1
* <i>Logfia gallica</i>	5
<i>Luzurnia gracilis</i>	<1
* <i>Avena</i> sp.	1
<i>Stipa pulchra</i>	7
<hr/>	
* <i>Bromus madritensis</i>	1
* <i>Centaurea melitensis</i>	5
* <i>Hypochaeris glabra</i>	1
<i>Porophyllum gracile</i>	5
<i>Daucus pusillus</i>	1

***Dudleya variegata* (Variegated Dudleya) East Elliott - Hilltop**



Panorama from the Southwestern edge of population, facing Southeast, South, Southwest.
Panorama location is 6316264.13 1897663.71 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - East Elliott Hilltop

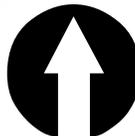


Area 2013: 26.35 sq. m.
 Dudleya variegata

Pop. Area 2004 - 2013
Max Area: 369.1 sq. m.
Min Area: 0.0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	East Elliott-Slope	Management Unit #:	TBA
Date:	5/9/13	Management Regime:	TBA
Surveyors and Affiliation/Agency: <u>Betsy Miller, Kevin Roeland, Mike Milano</u> <u>City of San Diego</u>			

Species Found? Yes No _____
If not, why (if reason known or suspected)?

Total No. Individuals: 2 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 8.56 m² Exact (based on GPS mapping) Estimate
Units 2013 GIS Data

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6315780.586 1896466.99 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Isocoma menziesii Alliance / Isocoma menziesii Association

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open space / Military

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>High cover non-native grass esp. Brachypodium</u>	Management Recommendation/s: <u>Weeding around pop</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<i>Dudleya variegata</i>	41			* <i>Centaurea melitensis</i>	7		
<i>Eriogonum fasciculatum</i>	10			<i>Calochortus splendens</i>	1		
<i>Isocoma menziesii</i>	5			<i>Malosina laurina</i>	1		
<i>Achillea glaber</i>	13			<i>Opuntia littoralis</i>	1		
<i>Ferocactus viridescens</i>	1			<i>Stipa pulchra</i>	1		
<i>Deinandra fasciculata</i>	10			* <i>Logfia gallica</i>	1		
<i>Selaginella bigelovii</i>	2			* <i>Avena</i> sp.	5		
* <i>Erodium</i> sp.	5			<i>Daucus pusillus</i>	<1		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

6315780.6	1896466.988	W,NW,N,NE	1.1 m	Level	303-315	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

- * *Hypochaeris glabra* 1
- * *Bromus madritensis* 5
- Salvia opiana* 1
- * *Brachypodium distachyon* 30
- * *Lepidium* sp. 41

***Dudleya variegata* (Variegated Dudleya)**
East Elliott - Slope



Panorama from the Southern edge of population, facing West, Northwest, North, Northeast.
Panorama location is 6315780.58 1896466.98 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - East Elliott Slope



Area 2013: 8.56 sq. m.

 Dudleya variegata

Pop. Area 2004 - 2013
Max Area: 1155.2 sq. m.
Min Area: 0.0 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya				
Site Name:	Goat Mesa/Spring Canyon	Management Unit #:	TBD				
Date:	4/30/13	Management Regime:	TBD				
Surveyors and Affiliation/Agency: <i>Boby Miller, Keli Pala, Kim Roeland, Mike Milano, Syd Wagner - City of San Diego</i>							
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If not, why (if reason known or suspected)?					
Total No. Individuals:	<u>479</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)						
Population/Subpopulation Area:	<u>201.804145</u> <u>m²</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate	<u>2013 GPS data</u>					
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 _____				
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error:	+/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet						
Observation Location:	<u>6330814.789</u> <u>1782236.114</u> <input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM						
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community:	<u>SIMMONDSIA CHINENSIS ALLIANCE / SIMMONDSIA CHINENSIS-BATHOPSIS LACINIATA ASSOCIATION</u>						
Landowner/Manager:	<u>City of San Diego Park and Recreation</u>						
Overall Site Quality**	<input checked="" type="checkbox"/> Very Good-Excellent	<input checked="" type="checkbox"/> Fair to Good	<input type="checkbox"/> Poor <input type="checkbox"/> Very Poor				
Surrounding land use:	<u>open space</u>						
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):	Management Recommendation/s:						
<u>none</u>	<u>none</u>						
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Dudleya variegata</i>	7			<i>Calochortus splendens</i>	1		
<i>Avena barbata</i>	7			<i>Ambrosia chenopodiifolia</i>	2		
* <i>Erodium</i> sp.	20			<i>Simmondsia chinensis</i>	7		
<i>Demandra fasciculata</i>	15			<i>Stipa</i> spp.	3		
* <i>Bomus dracunculoides</i> ssp. <i>rubens</i>	15		15	<i>Ferocactus viridescens</i>	1		
* <i>Bomus horstae</i>	2			<i>Elaginella cinerascens</i>	15		
<i>Eriogonum fasciculatum</i>	7			<i>Lepidium</i> sp.	<1		
<i>Artemisia californica</i>	2			<i>Crotonia connata</i>	1		
IV. SITE PHOTOMONITORING							
Camera type:	<u>PENTAX OPTIO w90</u>						
6330814.789	1782236.114	SE, S, SW	1.1 m	Level	<u>104-108</u>	S/OS/MSCP	
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
V. OTHER FIELD NOTES							
Other Field Notes/Comments: _____							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Festuca myuros</i>	2
<i>Cylindropuntia prolifera</i>	1
* <i>Lamarkea aurea</i>	1

***Dudleya variegata* (Variegated Dudleya)**
Goat Mesa/Spring Canyon



Panorama looking towards the Southwestern edge of the population, facing Southeast, South, Southwest.

Panorama location is 6330814.78 1782263.11 NAD83 State Plane California Zone 6 (feet)

Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Goat Mesa/Spring Canyon



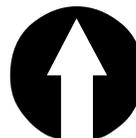
Area 2013: 201.8 sq. m.

 Dudleya variegata

Pop. Area 2003 - 2013
Max Area: 1065.54 sq. m.
Min Area: 45.57 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* *Bromus hordeaceus* 20
 * *Festuca myuros* 15
Osmorhiza tenella 1
Gutierrezia sarothrae 3
 * *Centaurea melitensis* 1

***Dudleya variegata* (Variegated Dudleya)**
Marron Valley



Panorama from Northern edge of population, facing Southeast, South, Southwest.
Panorama location is 6407136.24 1787954.48 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Marron Valley



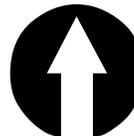
Area 2013: 80.7 sq. m.

 Dudleya variegata

Pop. Area 2005 - 2013
Max Area: 133.5 sq. m.
Min Area: 33.6 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <u>Dudleya variegata</u>	Common Name: <u>Variegated Dudleya</u>
Site Name: <u>Mercy Road</u>	Management Unit #: <u>TBD</u>
Date: <u>5/9/13</u>	Management Regime: <u>TBD</u>
Surveyors and Affiliation/Agency: <u>Betsy Miller, Kim Roeland, Milca Milano</u> <u>City of San Diego</u>	
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If not, why (if reason known or suspected)?	
Total No. Individuals: <u>712</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)	
Population/Subpopulation Area: <u>118.68</u> <u>m²</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate	<u>2013 GIS Data</u>
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 _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6294234.759 1924445.854 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Artemisia californica - Erigeron fasciculatum Alliance / Artemisia californica - Erigeron fasciculatum - Opuntia littoralis / Dudleya (edulis) Assoc.

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open space / Residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>Low to moderate cover</u> <u>NO grass and Erodium</u>	Management Recommendation/s: <u>None</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; *Cover*= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dudleya variegata</u>	<u>2</u>			<u>Opuntia littoralis</u>	<u>1</u>		
<u>Artemisia californica</u>	<u>7</u>			<u>Acanispon glaber</u>	<u>3</u>		
<u>Rhus integrifolia</u>	<u>5</u>			<u>Cochlospora filaginifolia</u>	<u>1</u>		
<u>Erigeron fasciculatum</u>	<u>3</u>			<u>Deinandra fasciculata</u>	<u>5</u>		
<u>Adolphia californica</u>	<u>3</u>			<u>Sisyrinchium bellum</u>	<u>1</u>		
<u>Pentstemon arborea</u>	<u>1</u>			<u>Calochortus splendens</u>	<u>1</u>		
<u>Salvia mellifera</u>	<u>1</u>			<u>Bloomeria crocea</u>	<u>1</u>		
<u>Isocoma menziesii</u>	<u>5</u>			<u>Tettnera venusta</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6294234.759</u>	<u>1924445.8536</u>	<u>SW, W, NW</u>	<u>1.1 m</u>	<u>5* down</u>	<u>283-287</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back-of-form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<i>Lomatium dasycarpum</i>	5
<i>Stipa pulchra</i>	7
<i>Selaginella cinerascens</i>	10
* <i>Valpara myuros</i>	40
* <i>Bromus madritensis</i>	1
* <i>Erodium sp</i>	10
<i>Logfia filaginoides</i>	1
* <i>Hypochaeris glabra</i>	1
* <i>Pentaurca melitensis</i>	1
* <i>Brachypodium distachyon</i>	10

***Dudleya variegata* (Variegated Dudleya)**
Mercy Road



Panorama from Northwestern edge of population, facing Southwest, West, Northwest.
Panorama location is 6294492.70 1924435.77 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mercy Road



Area 2013: 118.68 sq. m.

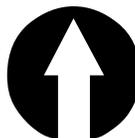


Dudleya variegata

Pop. Area 2003 - 2013
Max Area: 494.99 sq. m.
Min Area: 118.68 sq. m.

0 5 10 20
Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	MTRP- Subpop 1	Management Unit #:	TBD
Date:	5/9/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>Betsy Miller + Mike Milano - City of San Diego</i>			

Species Found? Yes No _____
If not, why (if reason known or suspected)?

Total No. Individuals: 19 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 63.91 m² Exact (based on GPS mapping) Estimate
Units *2013 GPS data*

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6309627.306 1879705.912 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: *Artemisia californica - Eriogonum fasciculatum Alliance / Artemisia californica - Eriogonum fasc - Opuntia littoralis / Dudleya (edulis) Association*

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>nearby trail is fenced</i>	Management Recommendation/s: <i>none</i>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Dudleya variegata</i>	1			* <i>Erodium</i> sp.	7		
<i>Eriogonum fasciculatum</i>	10			* <i>Centaurea melitensis</i>	2		
<i>Febria arborea</i>	5			* <i>Lagfia gallica</i>	3		
<i>Malosma laurina</i>	3			<i>Felocactus viridescens</i>	1		
<i>Artemisia californica</i>	1			<i>Stipa pulchra</i>	10		
<i>Deinandra fasciculata</i>	7			<i>Avena</i> sp.	1		
<i>Staginetta cinerascens</i>	3			* <i>Bomus madritensis</i> sp. <i>rubens</i>	3		
<i>Calochortus splendens</i>	1			* <i>Bomus hordeaceus</i>	1		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6309627.306</u>	<u>1879705.912</u>	<u>NW, N, NE</u>	<u>1.1 m</u>	<u>5° down</u>	<u>384-388</u>	S/OS/MCSP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
<i>Ammispon glaber</i>	2
<i>Bahipisis lacinata</i>	1
* <i>Bachypodium distachyon</i>	7
* <i>Festuca myuros</i>	5

***Dudleya variegata* (Variegated Dudleya)**
Mission Trails Regional Park Subpopulation # 1



Panorama from the Southern edge of population, facing Northwest, North, Northeast.
Panorama location is 6309627.30 1879705.91 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mission Trails RP Pt. 1



Area 2013: 63.92 sq. m.

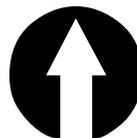


Dudleya variegata

Pop. Area 2004 - 2013
Max Area: 386.4 sq. m.
Min Area: 20.4 sq. m.

0 5 10 20 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <u>Dudleya variegata</u>	Common Name: <u>Variegated Dudleya</u>
Site Name: <u>MTRP- Subpop 2</u>	Management Unit #: <u>TBD</u>
Date: <u>5/9/13</u>	Management Regime: <u>TBD</u>
Surveyors and Affiliation/Agency: <u>Betsy Miller, Erin Roeland, Mike Miller</u> <u>City of San Diego</u>	
Species Found? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If not, why (if reason known or suspected)?	
Total No. Individuals: <u>2414</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)	
Population/Subpopulation Area: <u>151.48</u> <u>m²</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate	Units: <u>2013 GIS Data</u>
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 _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6309627.305 1879705.912 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Artemisia californica - Erigeron fasciculatum Alliance / Artemisia californica - Erigeron fasciculatum - Opuntia littoralis / Dudleya (edulis) Association

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open Space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>Moderate cover in grass</u>	Management Recommendation/s: <u>Weeding</u>
---	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Dudleya variegata</u>	<u>10</u>			<u>Dichelostemma capitatum</u>	<u><1</u>		
<u>Malosma laurina</u>	<u>3</u>			<u>Dichondra occidentalis</u>	<u><1</u>		
<u>Erigeron fasciculatum</u>	<u>10</u>			<u>Ferocactus viridescens</u>	<u>1</u>		
<u>Artemisia californica</u>	<u>5</u>			<u>Opuntia littoralis</u>	<u>1</u>		
<u>Galium angustifolium</u>	<u>1</u>			<u>Selaginella cinerascens</u>	<u>10</u>		
<u>Malacothamnus fasciculatus</u>	<u>1</u>			<u>Isocoma menziesii</u>	<u>1</u>		
<u>Acmispon glaber</u>	<u>5</u>			<u>Corethroglum filaginifolia</u>	<u>1</u>		
<u>Calochortus splendens</u>	<u>1</u>			<u>Deinandra fasciculata</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6309627.306</u>	<u>1879705.912</u>	<u>NW, N, NE</u>	<u>1.1 m</u>	<u>10-15° down</u>	<u>308-373</u>	<u>SIOS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<i>Penitoma arborescens</i>	1
<i>Sisyrinchium bellum</i>	1
<i>Baccharis sarothroides</i>	1
* <i>Centaurea melitensis</i>	1
* <i>Brassica nigra</i>	1
* <i>Avena</i> sp.	5
* <i>Erodium</i> sp.	3
<i>Selaginella bigelovii</i>	21
<i>Stipa pulchra</i>	15
<i>Lomatium dasycarpum</i>	3
* <i>Brachypodium distachyon</i>	40
* <i>Vulpia myuros</i>	20
* <i>Logfia gallica</i>	3

***Dudleya variegata* (Variegated Dudleya) Mission Trails Regional Park Subpopulation # 2**



Panorama from Northeastern edge of population, facing West, Northwest, North.
Panorama location is 6309627.31 1879705.91 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

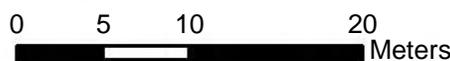
Dudleya variegata - Mission Trail Regional Park Pt 2



Area 2013: 151.48 sq. m.

 Dudleya variegata

Pop. Area 2004 - 2013
Max Area: 241.36 sq. m.
Min Area: 36.16 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	MTRP- Subpop 3	Management Unit #:	TBD
Date:	5/9/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>Betsy Miller, Kim Roeland, Mike Milano</i> <i>City of San Diego</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 195 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 13.52 M² Exact (based on GPS mapping) Estimate
2013 GIS Data

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6309578.77 1880426.963 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Malosma laurina Alliance / Malosma laurina - Lotus scoparius

Landowner/Manager: City of San Diego Park and Recreation Association

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: Open Space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>non-native grasses @ high cover along edge of population</i>	Management Recommendation/s: <i>keep non grasses from invading pop.</i>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Dudleya variegata</i>	1			<i>Calochortus splendens</i>	1		
<i>Malosma laurina</i>	15			<i>Dichondra occidentalis</i>	1		
<i>Acmispon glaber</i>	15			* <i>Erodium</i> sp.	5		
<i>Galium angustifolium</i>	5			<i>Selaginella bigelovii</i>	40		
<i>Opuntia littoralis</i>	1			<i>Selaginella circrescens</i>	3		
<i>Eriogonum fasciculatum</i>	3			<i>Dodecatheon clevelandii</i>	3		
<i>Socoma menziesii</i>	1			* <i>Avena</i> sp.	5		
<i>Artemisia californica</i>	1			* <i>Brachypodium distachyon</i>	5		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6309578.77</u>	<u>1880426.963</u>	<u>SE, S, SW</u>	<u>1.1 m</u>	<u>5-10* down</u>	<u>378-383</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* <i>Logfia gallica</i>	5
<i>Chlorogalum parviflorum</i>	1
* <i>Bromus hordeaceus</i>	1
* <i>Bromus diandrus</i>	1
* <i>Bromus madritensis</i>	1
* <i>Vulpia myuros</i>	10
* <i>Silene gallica</i>	1

***Dudleya variegata* (Variegated Dudleya)**
Mission Trails Regional Park Subpopulation # 3



Panorama from Southwestern edge of population, facing Southeast, South, Southwest.
Panorama location is 6309578.77 1880426.96 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Mission Trail Regional Park Pt 3



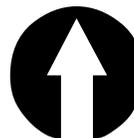
Area 2013: 13.52 sq. m.

 Dudleya variegata

Pop. Area 2004 - 2013
Max Area: 44.34 sq. m.
Min Area: 0.038 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Dudleya variegata	Common Name:	Variegated Dudleya
Site Name:	Navajo/Mission Gorge	Management Unit #:	TBD
Date:	5/9/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>John Miller, Mike Melano - City of San Diego</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 582 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 35.656 m² Exact (based on GPS mapping) Estimate
Units 2013 GPS data

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6313035.509 1873558.418 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: *Artemisia californica - Eriogonum fasciculatum Alliance / Artemisia californica - Eriogonum fasciculatum*

Landowner/Manager: City of San Diego Park and Recreation - Opuntia littoralis / Dudleya (edulis) Association

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>moderate/high cover Brachypodium</i>	Management Recommendation/s: <i>treat Brachypodium using CBZ methods when available if logistically possible</i>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.

Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Dudleya variegata</i>	2			<i>Sporobolus vaginatus</i>	2		
<i>Mimulus aurantiacus</i>	7			* <i>Brassica nigra</i>	1		
<i>Jaccharis sarothroides</i>	7			* <i>Anagallis arvensis</i>	1		
<i>Rhus integrifolia</i>	2			<i>Stipa pulchra</i>	3		
<i>Eriogonum fasciculatum</i>	7			* <i>Brachypodium distachyon</i>	40		
<i>Eriophyllum confertiflorum</i>	4			* <i>Pectuca myuros</i>	1		
<i>Heteromeles arbutifolia</i>	3			<i>Isocoma henrici</i>	1		
<i>Sisymbrium bellum</i>	15			<i>Salvia mellifera</i>	1		

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

6313035.509	1873558.418	NE, E, SE	1.1 m	5-10* down	395-406	S/S/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>Species</u>	<u>% cover</u>
<i>Callium angustifolium</i>	1
* <i>Bromus hordeaceus</i>	<1
* <i>Bromus madritensis</i> sp. <i>rubens</i>	<1

***Dudleya variegata* (Variegated Dudleya) Navajo/Mission Gorge**



Panorama from Northwestern edge of population, facing Northeast, East, Southeast.
Panorama location is 6313087.92 1873620.15 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Navajo/Mission Gorge



Area 2013: 35.66 sq. m.

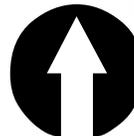
 Dudleya variegata

Pop. Area 2003 - 2013
Max Area: 451.44 sq. m.
Min Area: 26.2 sq. m.

0 2.5 5 10 Meters



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

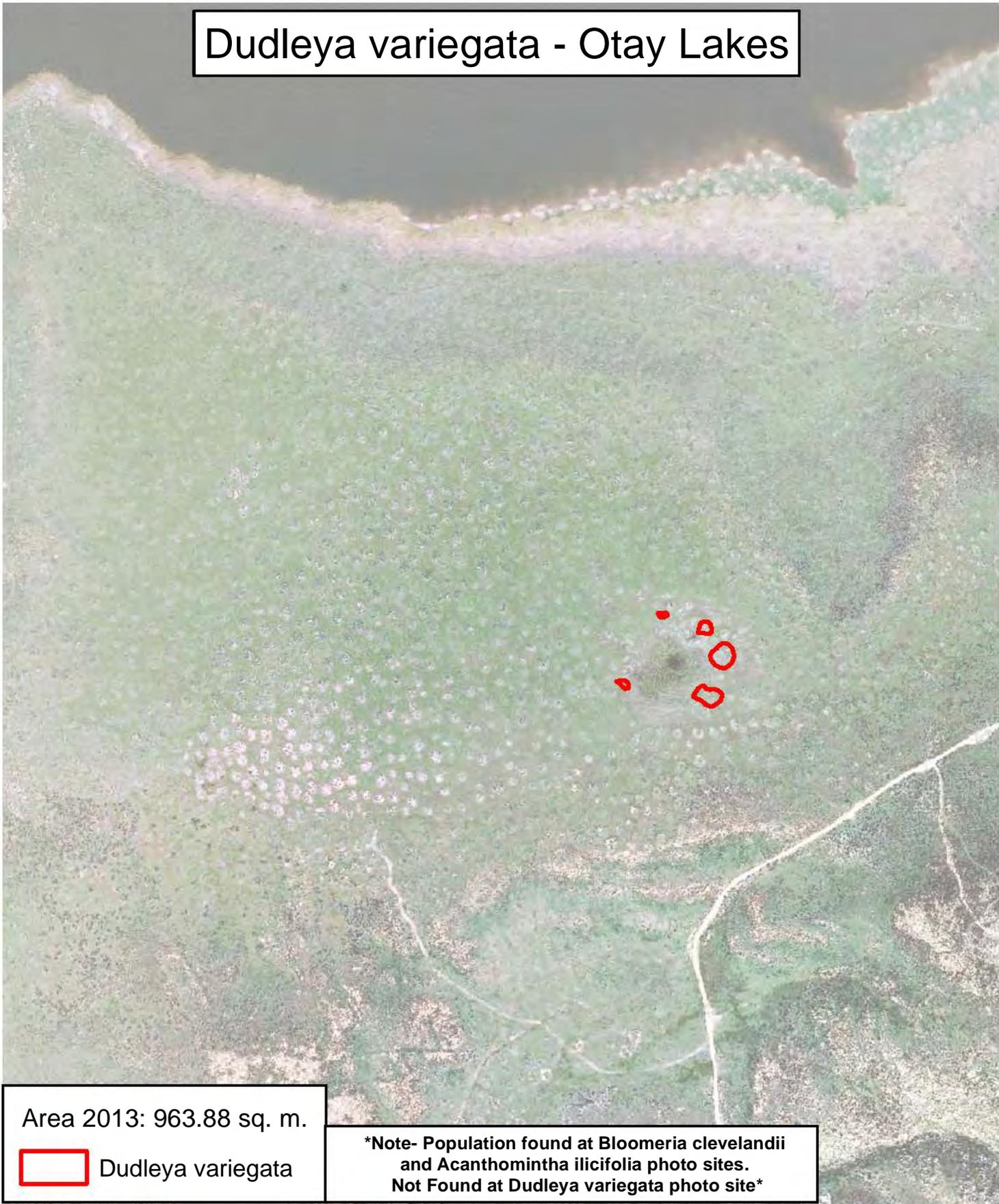
Penitoma arborea <1
Bare ground 3

***Dudleya variegata* (Variegated Dudleya) Otay Lakes**



Panorama from Northeastern edge of the population, facing North, Northeast, East, Southeast.
Panorama location is 635639.91 1807139.55 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Otay Lakes



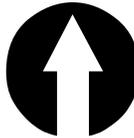
Area 2013: 963.88 sq. m.
 Dudleya variegata

Note- Population found at Bloomeria clevelandii and Acanthomintha ilicifolia photo sites. Not Found at Dudleya variegata photo site

Pop. Area 2003 - 2013
Max Area: 196313.44 sq. m.
Min Area: 963.88 sq. m.



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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* <i>Brachypodium distachyon</i>	50
* <i>Avena</i> sp.	<1
* <i>Bromus madritensis</i>	1
* <i>Bromus hordeaceus</i>	5
* <i>Vulpia myuros</i>	1
<i>Leinandra fasciculata</i>	<1
<i>Elymus triticoides triticoides</i>	<1
<i>Corethrogyne filaginifolia</i>	<1
<i>Acmispon glaber</i>	<1
<i>Dichelostemma capitatum</i>	<1

***Dudleya variegata* (Variegated Dudleya)**
Santa Luz East



Panorama from Northeastern edge of population, facing Southeast, East, Northeast.
Panorama location is 6289735.96 1940293.56 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

***Dudleya variegata* (Variegated Dudleya)**
Santa Luz West



Panorama from Northeastern edge of population, facing Southwest, West, Northwest.
Panorama location is 6289735.96 1940293.56 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Santa Luz

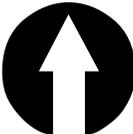


Area 2013: 0 sq. m.

Pop. Area 2001 - 2013
Max Area: 617.05 sq. m.
Min Area: 0 sq. m.



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Eryngium aristulatum var. *parishii*
San Diego Button Celery



© City of San Diego, 2005

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Eryngium aristulatum var. parishii	Common Name:	San Diego Button Celery
Site Name:	Goat Mesa/Spring Canyon- Obs 1	Management Unit #:	TBD
Date:	4/30/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: Kim Roeland, Keli Balo City of San Diego			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 878 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 75,003377 M² Exact (based on GPS mapping) Estimate
Units 2013 GIS mapping

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6330499.213 1781402.689 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: VP, non-native grassland

Landowner/Manager: City of San Diego PUD Metro

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>NON GRASSES - moderate cover</u>	Management Recommendation/s: <u>continue monitoring and treat weeds if warranted</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Derandrea fasciculata</i>	35			<i>Psilocarphus brevissimus</i>	5		
* <i>Erodium</i> sp.	30			* <i>Anagallis arvensis</i>	<1		
* <i>Centaurea melitensis</i>	2			<i>Eryngium aristulatum</i>	7		
* <i>Bromus madritensis</i>	2			<i>Myosurus minimus</i>	<1		
<i>Simmondsia chinensis</i>	2			* <i>Lamarckia aurea</i>	<1		
* <i>Bromus diandrus</i>	1			* <i>Festuca myuros</i>	2		
* <i>Lepidium</i> 1 sp.	10			* <i>Spergularia boltoni</i>	<1		
* <i>Bromus hordeaceus</i>	2						

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

6330499.213	1781402.689	N, NE, E, SE, S	1.1 m	1* down	114-117	S/O/S/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Eryngium aristulatum* var. *parishii
(San Diego Button Celery)
Goat Mesa/Spring Canyon Observation # 1



Panorama from Eastern edge of population, facing North, East, South.
Panorama location is 6330499.21 1781402.689 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Eryngium aristulatum - Goat Mesa/Spring Cyn Obs. 1



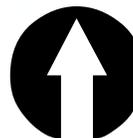
Area 2013: 75.01 sq. m.

 Eryngium aristulatum

Pop. Area 2011 - 2013
Max Area: 75.01 sq. m.
Min Area: 49.2 sq. m.

0 3.75 7.5 15 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Toxicoscordion sp. 1
Selaginella bigelovii 10
 * *Salsola tragus* <1
Brodiaea terrestris <1
Logfia sp. 2

Eryngium aristulatum* var. *parishii
(San Diego Button Celery)
Goat Mesa/Spring Canyon Observation # 2



Panorama from Northern edge of population, facing South, West, North.
Panorama location is 6329894.69 1781861.52 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Eryngium aristulatum - Goat Mesa/Spring Cyn Obs. 2



Area 2013: 424.56 sq. m.

 Eryngium aristulatum

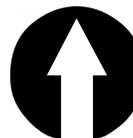
Pop. Area 2011 - 2013

Max Area: 658.22

Min Area: 424.56

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <u>Eryngium aristulatum var parishii</u>	Common Name: <u>San Diego Button Celery</u>
Site Name: <u>Otay Lakes</u>	Management Unit #: <u>TBA</u>
Date: <u>5/2/13</u>	Management Regime: <u>TBA</u>
Surveyors and Affiliation/Agency: <u>Bobby Miller, Kim Rowland, Mike Milano - City of San Diego</u>	

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 1600 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 14081.55154 m² Exact (based on GPS mapping) Estimate
Units: 2013 GPS data

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 _____ meters feet

Observation Location: 6356775.901 1807379.03 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pool

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>moderate cover NNE</u>	Management Recommendation/s: <u>none - NNE cover in vernal pool due to low rainfall</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll.
<u>Eryngium aristulatum</u>	<u>3</u>			* <u>Frodium sp.</u>	<u>20</u>		
<u>Desmodium fasciculata</u>	<u>12</u>			<u>Psilocarphus brevissimus</u>	<u>3</u>		
<u>Dudleya variegata</u>	<u>1</u>			<u>Acmispon glaber</u>	<u>1</u>		
* <u>Centauria melitensis</u>	<u>5</u>			* <u>Isocoma menziesii</u>	<u>3</u>		
* <u>Festuca perennis</u>	<u>1</u>			* <u>Hypochaeris glabra</u>	<u>3</u>		
* <u>Bromus hordeaceus</u>	<u>20</u>			<u>unk plant</u>	<u>1</u>		
* <u>Festuca myuros</u>	<u>3</u>			<u>Chlorogalum parviflorum</u>	<u>1</u>		
* <u>Bromus madritensis ssp. rubrus</u>	<u>5</u>			* <u>Salsola tragus</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

6356775.9	1807379.03	NE, E, SE	1.1 m	10° down	169-175	S: MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/:

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure Intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

species

% cover

Lepidium nitidum

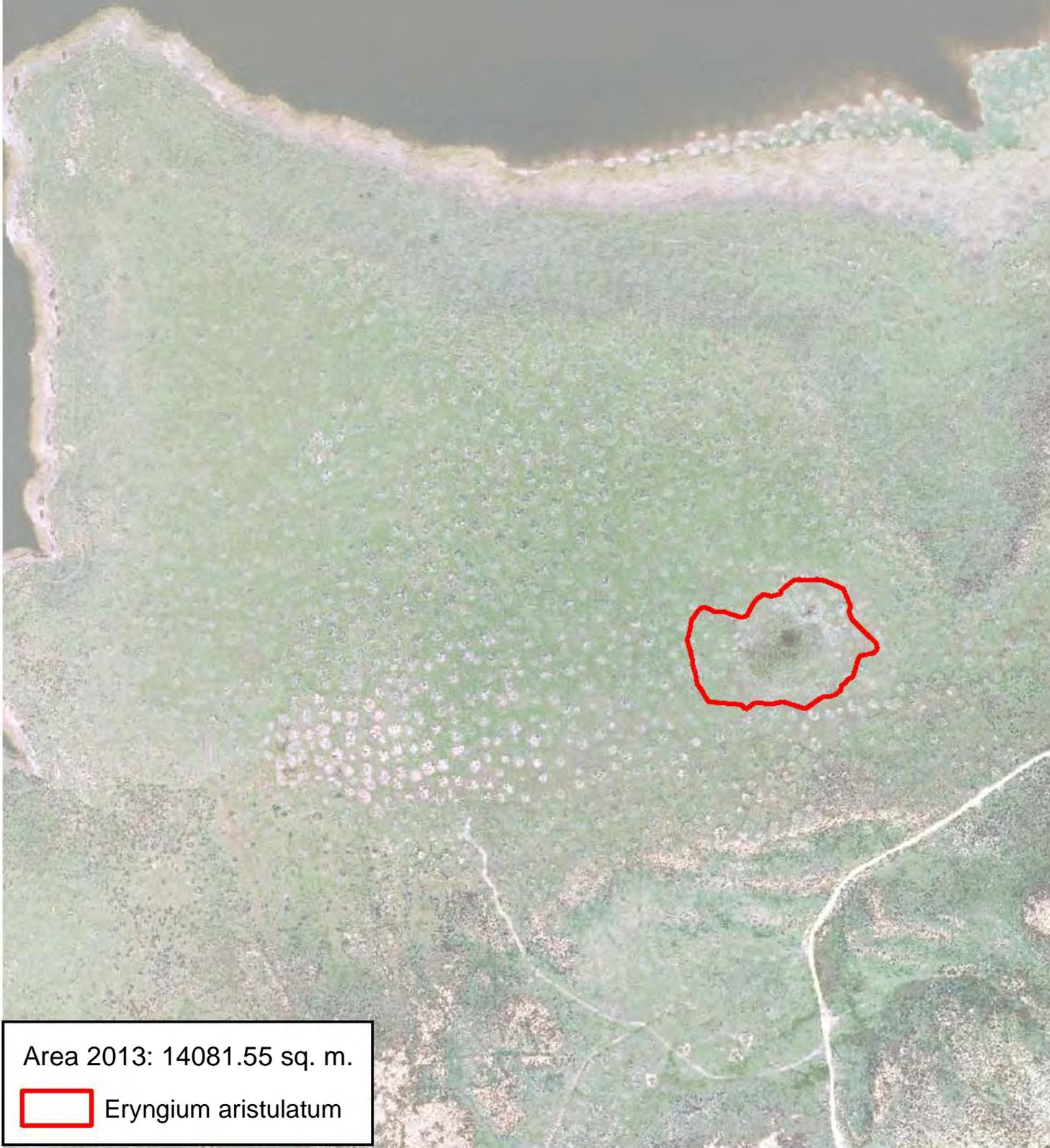
1

Eryngium aristulatum* var. *parishii
(San Diego Button Celery)
Otay Lakes



Panorama from Northern edge of population, facing Northeast, East, Southeast.
Panorama location is 6356775.9 1807379.03 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Eryngium aristulatum - Otay Lakes



Area 2013: 14081.55 sq. m.

 Eryngium aristulatum

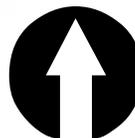
Pop. Area 2013

Max Area: 14081.55 sq. m.

Min Area: 14081.55 sq. m.

0 35 70 140
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Monardella stoneana
Jennifer's Monardella



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Monardella stoneana	Common Name:	Willow Monardella				
Site Name:	Otay Lakes	Management Unit #:	TBD				
Date:	5/2/2013	Management Regime:	TBD				
Surveyors and Affiliation/Agency: <u>Betsy Miller, Kim Roeland, Mike Milano</u> <u>City of San Diego</u>							
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
If not, why (if reason known or suspected)?							
Total No. Individuals:	<u>1</u>	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)				
Population/Subpopulation Area:	<u>7.980933</u>	<u>m2</u>	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate				
Units <u>2013 GIS Data</u>							
Collection (if not collected previously)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Collected Previously					
If yes:	Collector	Collection Number	Museum/Herbarium				
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/-	<u><1</u>	<input checked="" type="checkbox"/> meters	<input type="checkbox"/> feet				
Observation Location:	<u>6357735.58</u>	<u>1805911.58</u>	<input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM				
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community:	<u>BATHIOPSIS LACINIATA ALLIANCE / BATHIOPSIS LACINIATA-ARTEMESIA CALIFORNICA-ERIOGONUM FASCICULATUM ASSOCIATION</u>						
Landowner/Manager:	<u>City of San Diego Public Utilities Dept. Water Division</u>						
Overall Site Quality**	<input type="checkbox"/> Very Good-Excellent	<input type="checkbox"/> Fair to Good	<input type="checkbox"/> Poor <input type="checkbox"/> Very Poor				
Surrounding land use:	<u>open space</u>						
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):	Management Recommendation/s:						
<u>Moderate cover mustard, NHT, tristle</u>	<u>continue monitoring and treat as needed</u>						
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit.							
Species*=List all species (sci. name). Use * to indicate non-native species; *Cover%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Rhamnus ovcea</u>	<u>1</u>			<u>Jva hayesiana</u>	<u>2s</u>		
<u>Malosma Laurina</u>	<u>10</u>			<u>Monardella viminea</u>	<u><1</u>		
<u>Baccharis salicifolia</u>	<u>2</u>			<u>Artemisia glaber</u>	<u>2</u>		
<u>Artemisia californica</u>	<u>2</u>			<u>Eriodictyon macrocalyx</u>	<u>5</u>		
<u>Lonicera subspicata</u>	<u>5</u>			<u>Pseudogaphalium californicum</u>	<u>1</u>		
<u>Marah macrocarphus</u>	<u>1</u>			<u>*Tamarix sp.</u>	<u>2</u>		
<u>Eriogonum fasciculatum</u>	<u>5</u>			<u>* Carduus pycnocephalus</u>	<u>2</u>		
<u>Bathiopsis laciniata</u>	<u>5</u>			<u>* Brachypodium distachyon</u>	<u>2</u>		
IV. SITE PHOTOMONITORING							
Camera type:	<u>Pentax Optio W90</u>						
<u>6357735.58</u>	<u>1805911.58</u>	<u>NE, E, SE</u>	<u>1.1 m</u>	<u>1* down</u>	<u>198-204</u>	<u>S/OS/MSCP</u>	
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s	
V. OTHER FIELD NOTES							
Other Field Notes/Comments:							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back-of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified. Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

- * *Brassica nigra* 2
- * *Avena sp* 2
- * *Festuca perennis* 5
- * *Centaurea melitensis* 1
- * *Festuca myuros* 20
- * *Phalaris minor* 1
- * *Bromus diandrus* 30
- * *Silybum marianum* 1
- Heteromeles arbutifolia* 2
- Acmispon americanus* 2
- * *Sonchus asper* 1
- * *Polygonum monspeliensis* 1
- Scrophularia californica* 1
- Bachan's sarothroides* 1

***Monardella stoneana* (Jennifer's Monardella) Otay Lakes**



Panorama from Northern edge of population, facing Northeast, East, Southeast.
Panorama location is 6357735.58 1805911.58 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella stoneana - Otay Lakes



Area 2013: 7.98 sq. m

 Monardella stoneana

Pop. Area 2002 - 2013
Max Area: 7.98 sq. m.
Min Area: 0 sq. m.



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Monardella viminea
Willowy Monardella



© City of San Diego, 2003

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance.
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

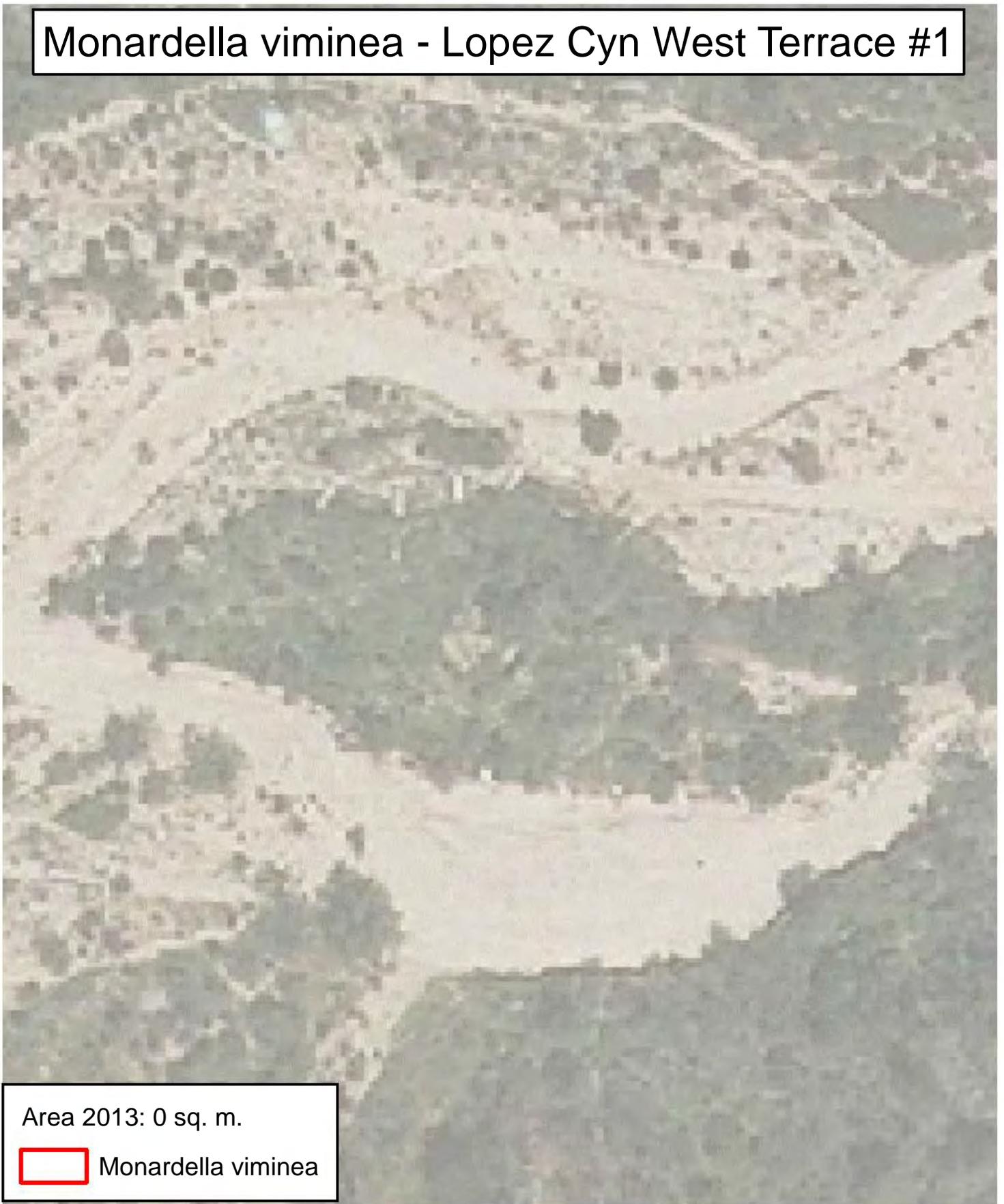
* *Avena* sp 1
 * *Festuca myuros* 1
 * *Rumex crispus* 1
 * *Bromus hordeaceus* 1
Toxicodendron diversilobum 3
 * *Carduus pycnocephalus* 1
Orobancha parishii 1

***Monardella viminea* (Willowy Monardella) Lopez Canyon – West Terrace Observation # 1**



Panorama from Southern edge of population, facing South, Southwest, West.
Panorama location is 6275731.67 1913221.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Lopez Cyn West Terrace #1



Area 2013: 0 sq. m.

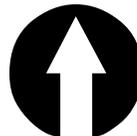


Monardella viminea

Pop. Area 2004 - 2013
Max Area: 1459.15 sq. m.
Min Area: 0 sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Monardella viminea Common Name: Willowly Monardella
 Site Name: Lopez Canyon- E of Bridge Site #2 Management Unit #: TBD
 Date: 6/13/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Betsy Miller, Kim Roeland, Mete Milano, Kristina Gray
City of San Diego

Species Found? Yes No _____
 If not, why (if reason known or suspected)?
 Total No. Individuals: 8 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 106.627671 m² Exact (based on GPS mapping) Estimate
 Units
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6278287.281 1913733.66 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: BACCHARIS SAROTHAIDES PROVISIONAL ALLIANCE / BACCHARIS SAROTHAIDES ASSOCIATION
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space, transportation, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
stream bank erosion
moderate cover invasive species
 Management Recommendation/s:
continue volunteer management efforts

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species'=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Monardella viminea</u>	<u>1</u>			<u>Artemisia californica</u>	<u>1</u>		
<u>Baccharis sarothoides</u>	<u>12</u>			<u>Rhamnus crocea</u>	<u>1</u>		
<u>Eriogonum fasciculatum</u>	<u>7</u>			<u>Grisebilla californica</u>	<u>1</u>		
<u>Coleogyne multiflorus</u>	<u>7</u>			<u>Ribes speciosum</u>	<u>1</u>		
<u>Toxicodendron diversilobum</u>	<u>2</u>			<u>Quercus laevis</u>	<u>1</u>		
<u>Artemisia palmeri</u>	<u>7</u>			<u>Salvia mellifera</u>	<u>3</u>		
<u>Marah macrocarpa</u>	<u>2</u>			<u>* Jonchus sp.</u>	<u>1</u>		
<u>Fraxinus ilicifolia</u>	<u>5</u>			<u>* Centaurea melitensis</u>	<u>2</u>		

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W90
6278287.281 1913733.66 NE, E, SE 1.1 m 5* down 701-704 S/OS/MSCP
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Brassica nigra</i>	3
* <i>Erodium sp.</i>	2
<i>Poa annua</i>	1
* <i>Silybum marianum</i>	2
<hr/>	
* <i>Bromus madritensis</i>	20
* <i>Festuca myuros</i>	20
* <i>Bromus diandrus</i>	15
<i>Cryptantha sp.</i>	5

***Monardella viminea* (Willowy Monardella)**
Lopez Canyon – East of Bridge Observation # 2



Panorama from Southeastern edge of population, facing Northeast, East, Southeast.
Panorama location is 6278287.28 1913733.66 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Lopez Cyn West Terrace #2



Area 2013: 106.63 sq. m.

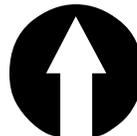


Monardella viminea

Pop. Area 2003 - 2013
Max Area: 435.77 sq. m.
Min Area: 1 sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Monardella viminea Common Name: Willow Monardella
 Site Name: Lopez Canyon- E of Bridge Site #3 Management Unit #: TBD
 Date: 6/13/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Betsy Miller, Kim Poeland, Milce Milano, Kristina Cary - City of San Diego

Species Found? Yes No If not, why (if reason known or suspected)?
 Total No. Individuals: 2 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 2,644,482 m² Exact (based on GPS mapping) Estimate
Units 2013 GIS Data
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
Collector Collection Number Museum/Herbarium

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6279603.64 1914641.49 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: LEUCOCARPUS MONTANUS ALLANCE / CEREOCARPUS MINUTIFLORUS / PRAIRISCIAPUS ASSOCIATION
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space, transportation, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
stream bed erosion
moderate cover non-native sp.

Management Recommendation/s:
check erosion control structure

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; *Cover%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Monardella viminea</u>	<u>2</u>			<u>* Euphorbia peplus</u>	<u>1</u>		
<u>Cercocarpus minutiflorus</u>	<u>40</u>			<u>* Brassica nigra</u>	<u>1</u>		
<u>Toxicodendron diversilobum</u>	<u>20</u>			<u>* Glebionis coronarium</u>	<u>1</u>		
<u>Baccharis sarothroides</u>	<u>10</u>			<u>Pseudognaphalium stramineum</u>	<u>1</u>		
<u>Iva hayesiana</u>	<u>2</u>			<u>* Avena sp.</u>	<u>7</u>		
<u>Eriogonum fasciculatum</u>	<u>1</u>			<u>* Festuca myuros</u>	<u>5</u>		
<u>Artemisia californica</u>	<u>1</u>			<u>* Brachypodium distachyon</u>	<u>2</u>		
<u>* Foeniculum vulgare</u>	<u>1</u>			<u>* Sonchus asper</u>	<u>1</u>		

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W70
6279603.64 1914641.49 SW, W, NW 1.1 m 5° down 705-709 S/OS/MSCP
Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* *Bromus madritensis* 1

* *carduus pycnocephalus* 1
Xanthium strumarium 1

***Monardella viminea* (Willowy Monardella)**
Lopez Canyon – East of Bridge Observation # 3



Panorama from Southwestern edge of population, facing Southwest, West, Northwest.
Panorama location is 6279603.64 1914641.49 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Lopez Canyon East #3



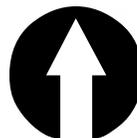
Area 2013: 2.64 sq. m.

 Monardella viminea

Pop. Area 2003 - 2013
Max Area: 290.5 sq. m.
Min Area: 1 sq. m

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Monardella viminea	Common Name:	Wollyow Monardella				
Site Name:	Sycamore Canyon	Management Unit #:	TBD				
Date:	6/13/13	Management Regime:	TBD				
Surveyors and Affiliation/Agency:	Jody Miller, Kim Roeland, Mike Milano, Kristina Cary City of San Diego						
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Total No. Individuals:	70 <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)						
Population/Subpopulation Area:	725.633779 m ² <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate 2013 GPS data						
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				
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error:	+/- <1 <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet						
Observation Location:	6334291.64	1916600.963	<input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM				
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community:	ADENOSTOMA FASCICULATUM ALLIANCE / ADENOSTOMA FASCICULATUM - (ERIGANUM FASCICULATUM / ADENOSTOMA CALIFORNICUM / SALIX MELIIFERA) ASSOCIATION						
Landowner/Manager:	City of San Diego Park and Recreation						
Overall Site Quality**	<input type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Very Poor						
Surrounding land use:	open space						
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):	stream bank erosion high cover non-native grasses						
Management Recommendation/s:	continue streambank monitoring continue planning runoff mitigation via MTRP NEMP						
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit. Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
Monardella viminea	4			Artemisia californica	3		
Erigeron fasciculatus	7			Salix meliifera	4		
Prunus ilicifolia	2			Callium angustifolium	2		
Adenostoma fasciculata	2			Erigeron foliosus	1		
Heteromeles arbutifolia	1			Caryopteris macrostegia	1		
Salix apiana	5			Stipa pulchra	1		
Cercocarpus minutiflorus	3			* Hypochaeris glabra	1		
Rhamnus crocea	1			* Lepidium sp.	2		
IV. SITE PHOTOMONITORING							
Camera type:							
633497.64	1916600.963	SE, S, SW	1.1 m	5* down	092-095	S/OS/MSCP	
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s	
V. OTHER FIELD NOTES							
Other Field Notes/Comments: CAEN heard in from pt : 11 AM - 11:08 AM							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

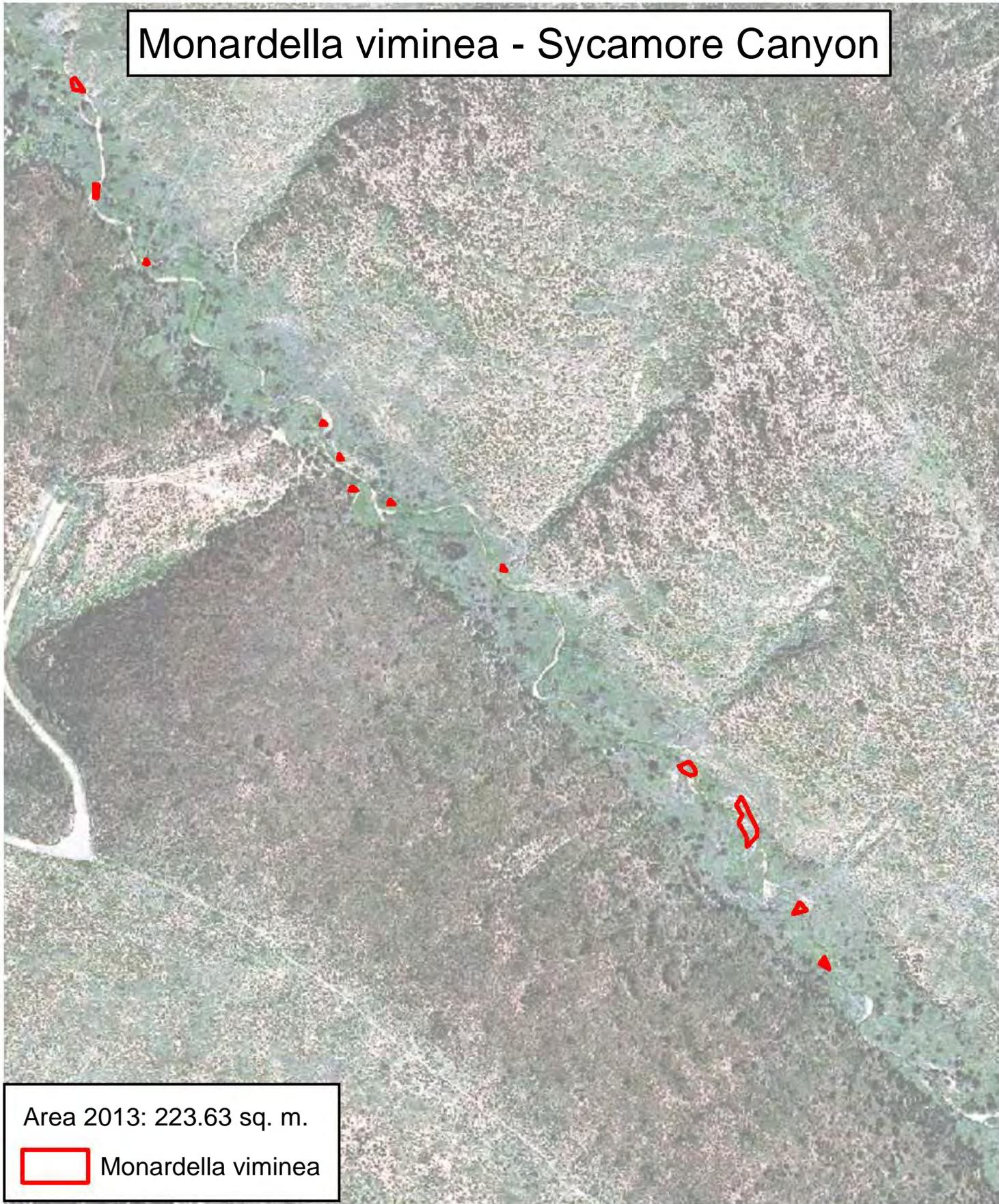
<u>species</u>	<u>% cover</u>
<i>Selaginella cinerascens</i>	1
* <i>Centaurea melitensis</i>	1
<i>Selaginella bigelovsii</i>	1
* <i>Avena sp.</i>	2
<hr/>	
* <i>Festuca myuros</i>	20
* <i>Bromus madritensis</i>	1
* <i>Bromus hordeaceus</i>	4
* <i>Bromus diandrus</i>	25
<hr/>	
* <i>Erodium sp.</i>	3
* <i>Tranica nigra</i>	2
* <i>Alex gallica</i>	1

***Monardella viminea* (Willowy Monardella) Sycamore Canyon**



Panorama from Southern end of population, facing Southeast, South, Southwest.
Panorama location is 6334297.64 1916600.96 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Sycamore Canyon

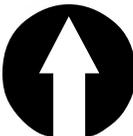


Area 2013: 223.63 sq. m.
 Monardella viminea

Pop. Area 2001 - 2013
Max Area: 15970.4 sq. m.
Min Area: 15.6 sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Navarretia fossalis
Spreading Navarretia



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Navarretia fossalis	Common Name:	Spreading Navarretia
Site Name:	Carroll Canyon	Management Unit #:	TBD
Date:	4/23/13	Management Regime:	TBD
Surveyors and Affiliation/Agency:	Boby Miller, Kim Roeland, Mike Milano - City of San Diego		

Species Found? Yes No _____
If not, why (if reason known or suspected)?

Total No. Individuals: 19 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 2.32051 m² Exact (based on GPS mapping) Estimate
Units 2013 GPS data

Collection (if not collected previously)? Yes No Collected Previously

If yes: _____
Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6282852.814 1907472.268 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pool + chamise chaparral

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, residential, mining

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>none</u>	Management Recommendation/s: <u>none</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Eryngium aristulatum</i>	30			* <i>Polygonum mon. spaldenianis</i>	2		
<i>Pegomya abramisii</i>	35			* <i>Festuca myuros</i>	15		
<i>Psilocarphus brevissimus</i>	10			* <i>Bromus madritensis ssp. rubens</i>	2		
<i>Deschampsia catheroides</i>	1			<i>Cuscuta occidentalis</i>	5		
<i>Brodiaea ornithia</i>	1			* <i>Hypochaeris glabra</i>	2		
<i>Navarretia hamata</i>	2			<i>Navarretia fossalis</i>	1		
<i>Benardia fasciculata</i>	25			* <i>Erodium cicutarium</i>	1		
<i>Adenostoma fasciculatum</i>	20						

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO w90

<u>6282852.814</u>	<u>1907472.268</u>	<u>S, SW, W, NW</u>	<u>1.1 m</u>	<u>15* down</u>	<u>84-87</u>	<u>S/OS/MSCP</u>
<small>Location [State Plane (ft)]</small>		<small>Direction (facing)</small>	<small>Height</small>	<small>Camera Angle</small>	<small>Photo #</small>	<small>File location/s</small>
_____	_____	_____	_____	_____	_____	_____
<small>Location [State Plane (ft)]</small>		<small>Direction (facing)</small>	<small>Height</small>	<small>Camera Angle</small>	<small>Photo #</small>	<small>File location/s</small>

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

***Navarretia fossalis* (Spreading Navarretia) Carroll Canyon**



Panorama from Northern edge of population, facing South, Southwest, West, Northwest.
Panorama location is 6282852.81 1907472.26 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Carroll Canyon



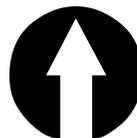
Area 2013: 4.37 sq. m.

 Navarretia fossalis

Pop. Area 2012-2013
Max Area: 4.37 sq. m.
Min Area: 0 sq. m

0 2.5 5 10
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <u>Navarretia fossalis</u>	Common Name: <u>Spreading Navarretia</u>
Site Name: <u>Goat Mesa/Spring Canyon</u>	Management Unit #: <u>TBD</u>
Date: <u>4/30/13</u>	Management Regime: <u>TBD</u>
Surveyors and Affiliation/Agency: <u>Kim Boeland, Keli Balo - City of San Diego</u>	

Species Found? Yes No _____
If not, why (if reason known or suspected)?

Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0 m² Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously
If yes: _____

Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6330499.713 1781402.49 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Vernal pools, non-native grassland

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>NN grasses - moderate cover</u>	Management Recommendation/s: <u>continue monitoring and treat weeds if warranted</u>
---	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Deinandra fasciculata</u>	<u>35</u>			<u>Psilocarpus brevissimus</u>	<u>5</u>		
* <u>Erodium sp.</u>	<u>30</u>			* <u>Antigalis arvensis</u>	<u>1</u>		
* <u>Centaurea melitensis</u>	<u>2</u>			<u>Eryngium aristulatum</u>	<u>7</u>		
* <u>Bromus madritensis</u>	<u>2</u>			<u>Myosurus minimus</u>	<u>1</u>		
<u>Simmondsia chinensis</u>	<u>2</u>			* <u>Lamanchia aurea</u>	<u>1</u>		
* <u>Bromus diandrus</u>	<u>1</u>			* <u>Festuca myuros</u>	<u>2</u>		
* <u>Bromus hordeaceus</u>	<u>2</u>			* <u>Spergularia bocconi</u>	<u>1</u>		
* <u>Lepidium sp.</u>	<u>10</u>						

IV. SITE PHOTOMONITORING

Camera type: Pentax Optio W90

<u>6330499.713</u>	<u>1781402.49</u>	<u>S, SW, W, NW, N</u>	<u>1.1 m</u>	<u>10* down</u>	<u>114-117</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

***Navarretia fossalis* (Spreading Navarretia) Goat Mesa/Spring Canyon**



Panorama from Southeastern edge of population, facing South, West, North.
Panorama location is 6330499.71 1781402.49 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Goat Mesa/Spring Canyon



Area 2013: 0 sq. m.

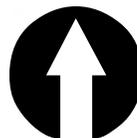


Navarretia fossalis

Pop. Area 2013
Max Area: N/A sq. m.
Min Area: N/A sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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SanGIS
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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Navarretia fossalis Common Name: Spreading Navarretia
 Site Name: Nobel Drive Management Unit #: TBD
 Date: 4/23/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Betsy Miller, Kim Poeland, Mike Milano,
City of San Diego

Species Found? Yes No _____
 If not, why (if reason known or suspected)? _____

Total No. Individuals: 122 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 11: 261541 m² Exact (based on GPS mapping) Estimate
2013 GIS Data

Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector: _____ Collection Number: _____ Museum/Herbarium: _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6271105.37 1896318.834 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pools in non-native grassland and disturbed coastal sage scrub
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space / Residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
Adjacent NNG will continue to invade

Management Recommendation/s:
undergoing active weeding

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Navarretia fossalis</u>	<u>1</u>			<u>Deschampsia danthonioides</u>	<u>5</u>		
<u>Psilocarphus brevissimus</u>	<u>10</u>			<u>* Polypogon monspeliensis</u>	<u>1</u>		
<u>Brodiaea orcuttii</u>	<u>3</u>			<u>* Phalaris minor</u>	<u>1</u>		
<u>Deinandra fusciculata</u>	<u>7</u>			<u>Logfia filanginoides</u>	<u>1</u>		
<u>Croton setigerus</u>	<u>1</u>			<u>* Bromus madritensis</u>	<u>2</u>		
<u>* Cotula australis</u>	<u>1</u>			<u>* Erodium sp</u>	<u>1</u>		
<u>Holocarpha virgata elongata</u>	<u>1</u>			<u>* Bromus hordeaceus</u>	<u>2</u>		
<u>Juncus bufonius</u>	<u>2</u>			<u>* Hypochaeris glabra</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO w90
6271105.37 1896318.834 NW, W, SW, S 1.1 m 20* down 100-103 S/OS/MSCP
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

Eriogonum fasciculatum 5
Isocoma menziesii 5
Stipa pulchra 3

* *Lythrum hyssopifolia* 1
 * *Gastrodium phleoides* 1
Pseudognaphalium californicum
 * *Arena* sp 1
 Bare ground 40

***Navarretia fossalis* (Spreading Navarretia) Nobel Drive**



Panorama from Northern edge of population, facing Southwest, South, Southeast.
Panorama location is 6271105.47 1896367.536 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Nobel Drive

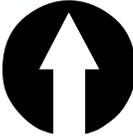


Area 2013: 11.262 sq. m.
 Navarretia fossalis

Pop. Area 2012 - 2013
Max Area: 11.262 sq. m.
Min Area: 0 sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Navarretia fossalis	Common Name:	Spreading Navarretia
Site Name:	Otay Lakes	Management Unit #:	TBD
Date:	5/2/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <u>Betsy Miller, Kim Roeland, Mike Milano</u> <u>City of San Diego</u>			
Species Found?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If not, why (if reason known or suspected)?			
Total No. Individuals:	<u>1</u>	<input checked="" type="checkbox"/> Exact	<input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)
Population/Subpopulation Area:	<u>3.036585</u>	<u>m²</u>	<input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate
Units <u>2013 GIS Data</u>			
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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 635504.7 1807021.28 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Vernal Pool w/ Disturbed Coastal sage scrub

Landowner/Manager: City of San Diego Public Utilities Dept. Water Division

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>NN grasses + erodium</u>	Management Recommendation/s: <u>continue monitoring and treat as needed</u>
--	--

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'%= % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Eriogonum fasciculatum</u>	<u>15</u>			<u>Deschampsia danthonioides</u>	<u>3</u>		
<u>Malosma laurina</u>	<u>2</u>			<u>Juncus sp.</u>	<u>2</u>		
<u>Acmispon glaber</u>	<u>2</u>			<u>*Anagalis arvensis</u>	<u>1</u>		
<u>Eryngium aristulatum</u>	<u>5</u>			<u>psilocarphus brevissimus</u>	<u>1</u>		
<u>Deinandra fasciculata</u>	<u>10</u>			<u>*Erodium sp.</u>	<u>7</u>		
<u>Zethnera venusta</u>	<u>2</u>			<u>*Hypochaeris glabra</u>	<u>5</u>		
<u>Artemisia californica</u>	<u>1</u>			<u>*Lepidium sp.</u>	<u>1</u>		
<u>Brodiaea terrestris</u>	<u><1</u>			<u>*Cratidium s. phleoides</u>	<u>1</u>		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>635504.7</u>	<u>1807021.28</u>	<u>NW, N</u>	<u>1.1 m</u>	<u>10° down</u>	<u>190-195</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: BT Jackrabbit to E of site
300W 5 burrows

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

* *Bromus hordeaceus* 15
 * *Festuca myuros* 7
 Selaginella bigelovii 15

Narraretia fossalis 4
Calochortus splendens 4

Bare ground 2

* *Bromus madritensis* 1

***Navarretia fossalis* (Spreading Navarretia) Otay Lakes**



Panorama from Northwestern edge of population, facing Northwest, West.
Panorama location is 6355504.70 1807021.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Otay Lakes

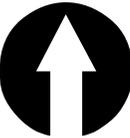


Area 2013: 3.04 sq. m.
 Navarretia fossalis

Pop. Area 2008-2013
Max Area: 3.04 sq. m.
Min Area: 0 sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Navarretia fossalis	Common Name:	Spreading Navarretia
Site Name:	Robinhood Ridge	Management Unit #:	TBD
Date:	5/2/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>John Miller, Kim Roeland, Mike Milano - City of San Diego</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 0 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 0 m² Exact (based on GPS mapping) Estimate
Units

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6329438.23 1790979.82 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pool, Coastal sage scrub

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, transportation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>low/moderate cover NNE</u>	Management Recommendation/s: <u>none</u>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Eriogonum fasciculatum</i>	2			<i>Stipa pulchra</i>	1		
<i>Pogogyne nudicaulis</i>	2			* <i>Anagallis arvensis</i>	2		
<i>Elymus aristulatus</i>	15			* <i>Mesembryanthemum nodiflorum</i>	1		
<i>Artemisia californica</i>	20			* <i>Erodium</i> sp.	2		
<i>Zahneria lacinata</i>	3			* <i>Avena</i> sp.	1		
<i>Ferocactus viridescens</i>	3			* <i>Bromus madriidensis</i> ssp. <i>rubens</i>	5		
<i>Deschampsia caryophyllodes</i>	1			* <i>Bromus hordeaceus</i>	10		
<i>Cylindropuntia prolifera</i>	1			* <i>Festuca perennis</i>	1		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

<u>6329438.23</u>	<u>1790979.82</u>	<u>S, SW, W</u>	<u>1.1 m</u>	<u>Level</u>	<u>205-209</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

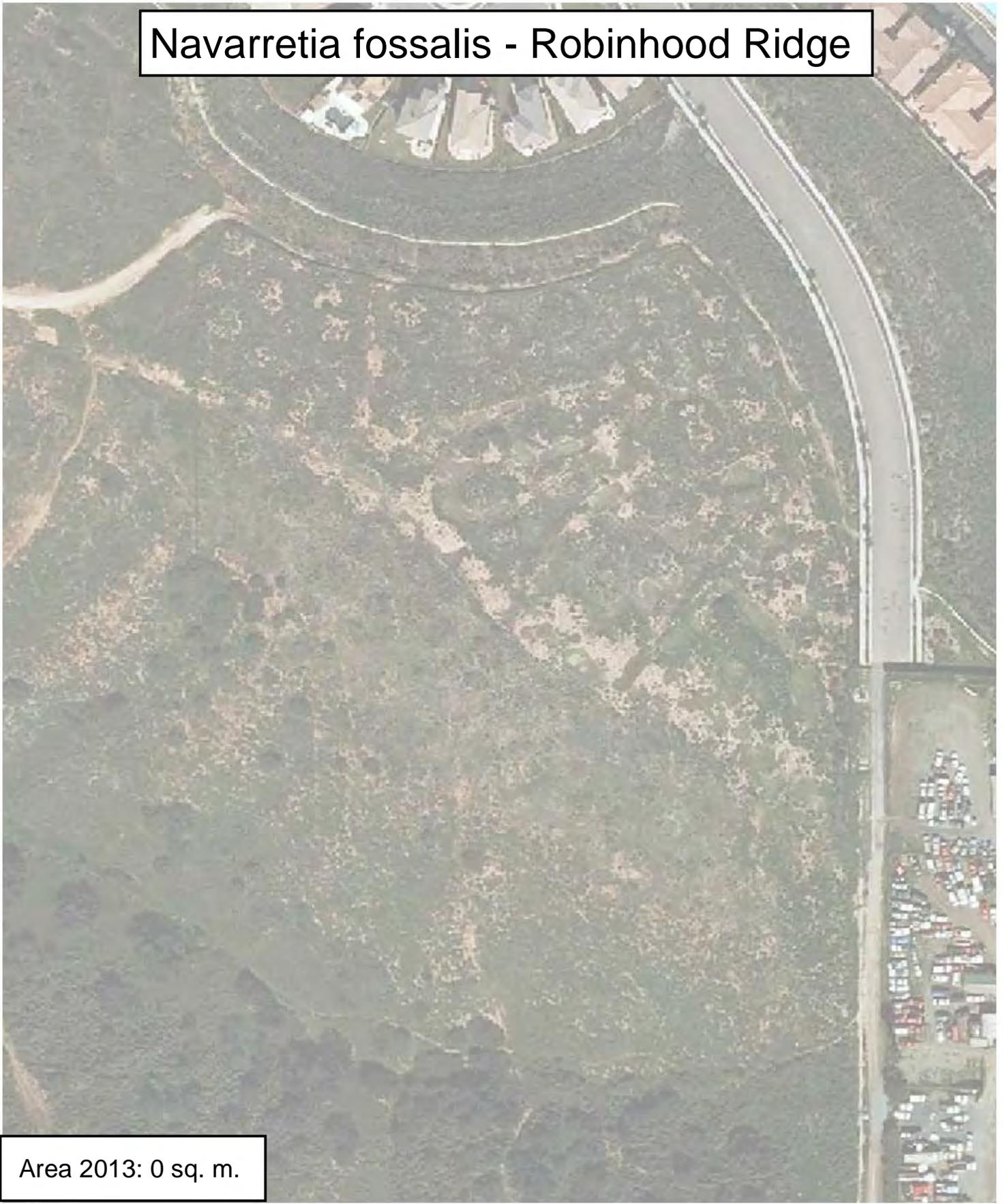
species % cover
 * *Festuca myuros* 1

***Navarretia fossalis* (Spreading Navarretia) Robinhood Ridge**



Panorama from Northwestern edge of population, facing South, Southwest, West
Panorama location is 6329438.23 1790979.82 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Robinhood Ridge

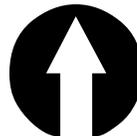


Area 2013: 0 sq. m.

Pop. Area 2011-2013
Max Area: 0 sq. m.
Min Area: 0 sq. m.

0 15 30 60 Meters

Source: San GIS & City of San Diego Park & Rec
Map Created By: Mike Milano, 2013



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Pogogyne abramsii
San Diego Mesa Mint



© City of San Diego, 2005

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name:	Pogogyne abramsii	Common Name:	San Diego Mesa Mint
Site Name:	Carroll Canyon	Management Unit #:	TBD
Date:	4/23/13	Management Regime:	TBD
Surveyors and Affiliation/Agency: <i>Bob Miller, Kim Roeland, Mike Milano - City of San Diego</i>			

Species Found? Yes No If not, why (if reason known or suspected)?

Total No. Individuals: 19800 Exact Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 181.213408 m² Exact (based on GPS mapping) Estimate
Units *2013 GPS data*

Collection (if not collected previously)? Yes No Collected Previously

If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- <1 meters feet

Observation Location: 6282860.426 1907341.599 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: vernal pool + chamise chaparral

Landowner/Manager: City of San Diego Park and Recreation

Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor

Surrounding land use: open space, mining, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <i>none</i>	Management Recommendation/s: <i>none</i>
--	---

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Pogogyne abramsii</i>	45			<i>Croagula occidentalis</i>	1		
<i>Eriogonum aristulatum</i>	20			<i>Lagfia flaginoides</i>	1		
<i>Brodiaea orcutia</i>	1			* <i>Sonchus asper</i>	1		
<i>Lathenia gracilis</i>	1			* <i>Hypochaeris glabra</i>	2		
<i>Navarretia hamata</i>	7			<i>Eriophyllum confertiflorum</i>	1		
<i>Psilocarphus brevissimus</i>	4			<i>Deschampsia carythoides</i>	<1		
<i>Cucuta occidentalis</i>	3			<i>Zeltnera venusta</i>	<1		
<i>Demandra fasciculata</i>	25			* <i>Pentstemon melitensis</i>	1		

IV. SITE PHOTOMONITORING

Camera type: PENTAX OPTIO W90

6282860.426	1907341.599	N, NE, E	1.1 m	15* down	85-92	S/OS/MSCP
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Festuca myuros</i>	10
<i>Chlorogalum parviflorum</i>	<1
* <i>Bromus madritensis ssp. rubens</i>	1

***Pogogyne abramsii* (San Diego Mesa Mint)
Carroll Canyon**



Panorama from Northern edge of population, facing North, Northeast, East.
Panorama location is 6282860.43 1907341.59 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Pogogyne abramsii - Carroll Canyon

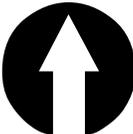


Area 2013: 181.21 sq. m.
 Pogogyne abramsii

Pop. Area 2012-2013
Max Area: 387.36
Min Area: 181.21



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: *Pogogyne abramsii* Common Name: *San Diego Mesa Mint*
 Site Name: Lopez Ridge Management Unit #: TBD
 Date: 4/23/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: *Bob Miller, Kim Zealand, Mike Milano - City of San Diego*

Species Found? Yes No
 Total No. Individuals: 40185 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 335.921138 m² Exact (based on GPS mapping) Estimate
 If yes: 2013 GPS data
 Collection (if not collected previously)? Yes No Collected Previously
 Collector: _____ Collection Number: _____ Museum/Herbarium: _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6278246.403 1915522.734 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: vernal pools + coastal sage scrub/chaparral
 Landowner/Manager: City of San Diego Environmental Services
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
moderate cover NNG
 Management Recommendation/s:
treat weeds as needed

III. ASSOCIATED SPECIES
 List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Brodiaea oxycantha</i>	12			<i>Selaginella cinerascens</i>	5		
<i>Pogogyne abramsii</i>	35			<i>Navaretia hamata</i>	4		
<i>Cibonotia clevelandii</i>	1			<i>Bilocarpus brevissimus</i>	3		
<i>Zeltnera venusta</i>	3			<i>Crassula coccinea</i>	1		
<i>Dodecatheon clevelandii</i>	2			<i>Plantago erecta</i>	2		
<i>Castilleja exserta</i> sp. exserta	1			<i>Logfia flaginoides</i>	1		
<i>Penstemon fasciculata</i>	5			<i>Deschampsia catherinoides</i>	1		
<i>Allium haematocyon</i>	2			* <i>Erodium</i> sp.	2		

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W90
6278246.4 1915522.7 SW,W,NW 1.1m 10°Down 75-99 S/OS/MSCP
 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

 Location [State Plane (ft)] Direction (facing) Height Camera Angle Photo # File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: POAB - 40185 est
BLCC - 1470 est

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover/abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

<u>species</u>	<u>% cover</u>
* <i>Hypochaeris glabra</i>	10
<i>Chlorogalum parviflorum</i>	1
* <i>Bromus hordeaceus</i>	7
* <i>Bromus madritensis ssp. rubens</i>	5
<hr/>	
* <i>Avena barbata</i>	5
* <i>Festuca myuros</i>	5
* <i>Casuarina phlegoides</i>	1
<i>Opuntia littoralis</i>	3
<hr/>	
<i>Acmispon glaber</i>	1
<i>Melospiza laurina</i>	3
<i>Adenostoma fasciculatum</i>	20

***Pogogyne abramsii* (San Diego Mesa Mint)
Lopez Ridge**



Panorama from Eastern edge of population, facing Southwest, West, Northwest.
Panorama location is 6278246.405 1915522.734 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Pogogyne abramsii - Lopez Ridge



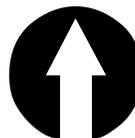
Area 2013: 355.92 sq. m.

 Pogogyne abramsii

Pop. Area 2012 - 2013
Max Area: 452.6 sq. m.
Min Area: 355.92 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Pogogyne nudiuscula
Otay Mesa Mint



© City of San Diego, 2003

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: <i>Pogogyne nudiuscula</i>		Common Name: <i>Clay Mesa Mint</i>					
Site Name: Robinhood Ridge		Management Unit #: TBD					
Date: 5/2/13		Management Regime: TBD					
Surveyors and Affiliation/Agency: <i>John Miller, Kim Roeland, Mike Milano - City of San Diego</i>							
Species Found? <input checked="" type="checkbox"/> Yes [<input type="checkbox"/> No _____ If not, why (if reason known or suspected)?							
Total No. Individuals: <u>10</u> <input checked="" type="checkbox"/> Exact <input type="checkbox"/> Estimate (use orders of 10, 100 and 1000 for estimates)							
Population/Subpopulation Area: <u>13, 547.131</u> <u>m²</u> <input checked="" type="checkbox"/> Exact (based on GPS mapping) <input type="checkbox"/> Estimate <i>see 2013 GPS data</i>							
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					
I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION							
Accuracy of Coordinates/GPS Error: +/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet							
Observation Location: <u>6329438.23</u>		<u>1790979.82</u> <input checked="" type="checkbox"/> State Plane (feet) <input type="checkbox"/> UTM					
II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT							
Vegetation Community: <u>vernal pool coastal sage scrub</u>							
Landowner/Manager: <u>City of San Diego Park and Recreation</u>							
Overall Site Quality** <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor							
Surrounding land use: <u>open space, transportation</u>							
Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): <u>low/moderate cover NNE</u>		Management Recommendation/s: <u>none</u>					
III. ASSOCIATED SPECIES							
List dominant, subdominant and invasive species in/near target species observation area/management unit. Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover'=% cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).							
Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<i>Eriogonum fasciculatum</i>	2			<i>Stipa pulchra</i>	1		
<i>Pogogyne nudiuscula</i>	2			* <i>Anagallis arvensis</i>	2		
<i>Elygium aristulatum</i>	15			* <i>Mesembryanthemum nodiflorum</i>	1		
<i>Artemisia californica</i>	80			* <i>Erodium</i> sp.	2		
<i>Bahiopsis lacinata</i>	3			* <i>Avena</i> sp.	1		
<i>Ferocactus viridescens</i>	3			* <i>Bomus madriensis</i> ssp. <i>rubens</i>	5		
<i>Deschampsia caryophyllodes</i>	1			* <i>Bomus hordeaceus</i>	10		
<i>Cylindropuntia prolifera</i>	1			* <i>Festuca perennis</i>	1		
IV. SITE PHOTOMONITORING							
Camera type: <u>PENTAX OPTIO w90</u>							
<u>6329438.23</u>	<u>1790979.82</u>	<u>S, SW, W</u>	<u>1.1 m</u>	<u>Level</u>	<u>205-209</u>	<u>S/OS/MSCP</u>	
Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s		
_____	_____	_____	_____	_____	_____		
_____	_____	_____	_____	_____	_____		
V. OTHER FIELD NOTES							
Other Field Notes/Comments: _____							

** Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)

Modified Trudgen & Keighery Vegetation Condition Scale

Very Good-Excellent	80-100% Native Flora Composition Vegetation Structure intact or nearly so Cover /abundance of weeds < 5% No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition Vegetation structure modified or somewhat modified Cover/abundance of weeds 5-20% any number of individuals Possible minor signs of disturbance
Poor	20-50% Native Flora Composition Vegetation structure modified Cover/abundance of weeds 20-60% any number of individuals Disturbance incidence high
Very Poor	0-20% Native Flora Composition Vegetation Structure disappeared Cover/abundance of weeds 60-80% any number of individuals Disturbance incidence very high

species
% cover

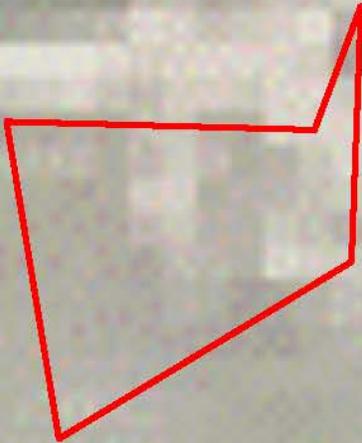
* *Festuca myuros*
1

***Pogogyne nudiuscula* (Otay Mesa Mint) Robinhood Ridge**



Panorama from Southwestern edge of population, facing South, Southwest, West.
Panorama location is 632938.23 1790979.82 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Pogogyne nudiuscula - Robinhood Ridge

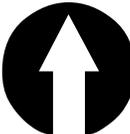


Area 2013: 13.55 sq. m.
 Pogogyne nudiuscula

Pop. Area 2012-2013
Max Area: 28.58
Min Area: 13.55



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Rosa minutifolia
Baja Rose



© Stan Shebs, 2007

Multiple Species Conservation Program (MSCP) Rare Plant Field Survey Form

Scientific Name: Rosa minutiflora Common Name: Small-leaved Rose
 Site Name: Dennery Ranch Management Unit #: TBD
 Date: 5/21/13 Management Regime: TBD
 Surveyors and Affiliation/Agency: Betsy Miller, Kim Ireland, Mike Milano -

Species Found? Yes No
 If not, why (if reason known or suspected)?
 Total No. Individuals: 7 Exact Estimate (use orders of 10, 100 and 1000 for estimates)
 Population/Subpopulation Area: 93.616602 m² Exact (based on GPS mapping) Estimate
 Units
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION
 Accuracy of Coordinates/GPS Error: +/- <1 meters feet
 Observation Location: 6321404.87 1791630.28 State Plane (feet) UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT
 Vegetation Community: SIMMONDSIA CHINENSIS ALLIANCE / SIMMONDSIA CHINENSIS - BAHIOPSIS LACINATA ASSOCIATION
 Landowner/Manager: City of San Diego Park and Recreation
 Overall Site Quality** Very Good-Excellent Fair to Good Poor Very Poor
 Surrounding land use: open space, residential

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
moderate non-native grasses / forbs within brush management zone
 Management Recommendation/s:
none

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit.
 Species*=List all species (sci. name). Use * to indicate non-native species; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted).

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
<u>Rosa minutiflora</u>	<u>5</u>			<u>Cutierrezia sp.</u>	<u>1</u>		
<u>Bahioopsis lacinata</u>	<u>5</u>			* <u>Centaurea melitensis</u>	<u><1</u>		
<u>Encelia californica</u>	<u>3</u>			* <u>Anagallis arvensis</u>	<u>20</u>		
<u>Simmondsia chinensis</u>	<u>10</u>			* <u>Fabruca myuros</u>	<u>30</u>		
<u>Aptenesis californica</u>	<u>25</u>			* <u>Erodium sp.</u>	<u><1</u>		
<u>Rhus integrifolia</u>	<u>3</u>			<u>Cylindropuntia prolifera</u>	<u>1</u>		
<u>Eriogonum fasciculatum</u>	<u>1</u>			* <u>Bromus hordeaceus</u>	<u><1</u>		
<u>Delinandra fasciculata</u>	<u>1</u>						

IV. SITE PHOTOMONITORING
 Camera type: PENTAX OPTIO W90

<u>6321404.87</u>	<u>1791630.28</u>	<u>S, SE, E</u>	<u>1.1 m</u>	<u>5° up</u>	<u>478-482</u>	<u>S/OS/MSCP</u>
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
_____	_____	_____	_____	_____	_____	_____
Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s

V. OTHER FIELD NOTES
 Other Field Notes/Comments: _____

***Rosa minutifolia* (Baja Rose) Dennery Ranch**



Panorama from Southern edge of population, facing South, Southeast, East.
Panorama location is 6321404.87 1791630.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

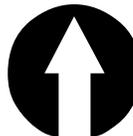
Rosa minutifolia - Dennery Ranch



Pop. Area 2003 - 2013
Max Area: 214.3 sq. m.
Min Area: 3.1 sq. m



Source: San GIS & City of San Diego Park & Rec
Created by: Mike Milano, 2013



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Acknowledgments

The following staff assisted in the preparation of this report:

Betsy Miller, Senior Planner

Kim Roeland, Biologist III

Kristina Cary, Open Space Intern

Mike Milano, Open Space Intern

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APPENDIX A

**CITY OF SAN DIEGO RARE PLANT MONITORING:
2013 MONITORING DATES AND STAFF**

Species	Risk Group (SDSU '06)	Risk Group (Ogden '96)	Site	Survey Date	Staff	Methodology
<i>Acanthomintha ilicifolia</i> (San Diego Thorn-mint)	First	Second	Blk Mtn Park West	16 Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Dennerly Canyon East	30-Apr	BYM, KR, MM, SM	GPS, Photo, Habitat Assessment
			Mission Trails Regional Park	18-Apr	BYM, KR	GPS, Photo, Habitat Assessment
			Otay Lakes	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Penasquitos Canyon	16-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Sabre Springs/Poway	16-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Acmispon [Lotus] nuttallianus</i> (Nuttall's lotus)	First	First	Dune Triangle	24-May	BYM, KR, MM, KC, KCS	GPS, Photo, Habitat Assessment
			Hospitality Point (Site 2)	24-May	BYM, KR, MM, KC, KCS	GPS, Photo, Habitat Assessment
			Mariner's Point (Site 4)	24-May	BYM, KR, MM, KC, KCS	Presence/Absence
			No Man's Land (Site 1)	24-May	BYM, KR, MM, KC, KCS	GPS, Photo, Habitat Assessment
			South Shores (Site 6)	24-May	BYM, KR, MM, KC, KCS	GPS, Photo, Habitat Assessment
<i>Ambrosia pumila</i> (San Diego Ambrosia)	First	Second	Mission Trails Regional Park	15-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Bloomeria [Muilla] clevelandii</i> (San Diego Goldenstar)	Second	Second	East Elliott/Sycamore Canyon	18-Apr	BYM, KR	GPS, Photo, Habitat Assessment
			Lopez Ridge	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Marron Valley	15-May	BYM, KR, MM	Photo, Habitat Assessment
			Mission Trails Regional Park	18-Apr	BYM, KR	GPS, Photo, Habitat Assessment
			Otay Lakes	2-May	BYM, KR, MM	Photo, Habitat Assessment

Species	Risk Group (SDSU '06)	Risk Group (Ogden '96)	Site	Survey Date	Staff	Methodology
<i>Brodiaea orcuttii</i> (Orcutt's Brodiaea)	Third	Second	Carroll Canyon	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Lopez Ridge	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Nobel Drive	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			USIU/Alliant/ Scripps Ranch	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Cylindropuntia [Opuntia] californica [var. serpentina]</i> (Snake Cholla)	Second	Third	Otay Mesa	30-Apr	BYM, KR, MM, SM	GPS, Photo, Habitat Assessment
			Spring Canyon	30-Apr	BYM, MM, SM	GPS, Photo, Habitat Assessment
<i>Deinandra [Hemizonia] conjugens</i> (Otay Tarplant)	First	First	Dennery Ranch	21-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Dennery Ranch East	21-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Proctor Valley	21-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Dicranostegia orcuttiana</i> [<i>Cordylanthus orcuttianus</i>] (Orcutt's Bird's Beak)	First	First	Otay River Valley	21-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> (Short Leaf Dudleya)	First	First	Carmel Mountain	24-Apr	BYM, KR, CW, KC	GPS, Photo, Habitat Assessment
			Crest Canyon	24-Apr	BYM, KR, CW, KC	GPS, Photo, Habitat Assessment
<i>Dudleya variegata</i> (Variegated Dudleya)	Second	First	Blk Mtn Park East	7-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			East Elliott	9-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Goat Mesa/ Spring Canyon	30-Apr	BYM, KB, KR, MM, SM	GPS, Photo, Habitat Assessment
			Marron Valley	14-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Mercy Road	9-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Mission Trails Regional Park	9-May	BYM, MM	GPS, Photo, Habitat Assessment
			Navajo/Margarum/ Mission Gorge	9-May	BYM, MM	GPS, Photo, Habitat Assessment
			Otay Lakes	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Santa Luz	7-May	BYM, KR, MM	GPS, Photo, Habitat Assessment

Species	Risk Group (SDSU '06)	Risk Group (Ogden '96)	Site	Survey Date	Staff	Methodology
<i>Eryngium aristulatum</i> var. <i>parishii</i> (San Diego Button Celery)	Second	None	Goat Mesa/Spring Canyon (J16-18)	30-Apr	BYM, KR, KB, SM, MM	GPS, Photo, Habitat Assessment
			Otay Lakes	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Monardella stoneana</i> (Jennifer's Monardella) and <i>Monardella viminea</i> (Willow Monardella)	Second	First	Otay Lakes	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Lopez Canyon	13-Jun	BYM, KR, MM, KC	GPS, Photo, Habitat Assessment
			Sycamore Canyon	13-Jun	BYM, KR, MM, KC	GPS, Photo, Habitat Assessment
<i>Navarretia fossalis</i> (Spreading Navarretia)	First	None	Carroll Canyon	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Goat Mesa/Spring Canyon (J16-18)	30-Apr	KR, KB	GPS, Photo, Habitat Assessment
			Nobel Drive	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Otay Lakes	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Robinhood Ridge	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Pogogyne abramsii</i> (San Diego Mesa Mint)	Second	None	Carroll Canyon	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
			Lopez Ridge	23-Apr	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Pogogyne nudiuscula</i> (Otay Mesa Mint)	First	None	Robinhood Ridge	2-May	BYM, KR, MM	GPS, Photo, Habitat Assessment
<i>Rosa minutifolia</i> (Baja Rose)	First	Third	Dennery Ranch	21-May	BYM, KR, MM	GPS, Photo, Habitat Assessment

Survey Staff

BYM = Betsy Miller, Senior Planner

KR = Kim Roeland, Biologist III

MM = Mike Milano, Management Intern

KC = Kristina Cary, Management Intern

SM = Syd Magner, Management Intern

KW = Karina Weber, Park Ranger

KB = Keli Balo, Senior Planner, PUD

KCS = Katherine Comer Santos, Biologist III, ECP