Attachment 9









City of San Diego Park and Recreation Department **Open Space Division**

City of San Diego

Monitoring Report

2015 MSCP Rare Plant





August 2015

Cover Photo Credits (from top to bottom): Ambrosia pumila: © City of San Diego, 2015 Brodiaea orcuttii: © City of San Diego, 2015 Dudleya brevifolia: © City of San Diego, 2005 Acanthomintha ilicifolia: © City of San Diego, 2015 Monardella viminea: © City of San Diego, 2003 Dudleya variegata: © City of San Diego, 2004 Dicranostegia orcuttiana: © City of San Diego, 2005

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Appendix A - City of San Diego MSCP Rare Plant Monitoring: 2015 Field Monitoring Dates and Staff

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I. Introduction

The Biological Monitoring Plan for the Multiple Species Conservation Program (Ogden Environmental, Inc. 1996), Status Summary of MSCP Biological Monitoring Protocols (Conservation Biology Institute 2001), San Diego MSCP Rare Plant Monitoring Review and Revision (USGS, 2007) and the Assessment of Eleven Years of Rare Plant Monitoring Data from the San Diego Multiple Species Conservation Program (2010) are important components of the City of San Diego's MSCP under its 1997 Implementing Agreement (R28455) with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife. The monitoring program includes plant, animal, and habitat monitoring requirements for each MSCP-participating jurisdiction; the City of San Diego began rare plant monitoring in 1999. In 2015, the City performed rare plant monitoring using the Management Strategic Plan (MSP) 2015 Monitoring Protocol (SDMMP 2015):

Acanthomintha ilicifolia - Black Mountain, Dennery Ranch East, Los Penasquitos Canyon, Mission Trails Regional Park, Otay Lakes, Sabre Springs Acmispon prostratus – Mission Bay Ambrosia pumila – Mission Trails Regional Park (Kumeyaay Lake) Bloomeria clevelandii - East Elliott, Lopez Ridge, Marron Valley, Mission Trails Regional Park, Otay Lakes Brodiaea filifolia – Black Mountain Brodiaea orcuttii - Carroll Canyon, Lopez Ridge, Mission Trails Regional Park (Oak Creek), Nobel Drive *Chloropyron maritimum* ssp. *maritimum* – Dog Beach Cylindropuntia californica var. californica – Balboa Golf, Otay Mesa, Spring Canyon Deinandra conjugens – Dennery Ranch, Dennery Ranch East, Proctor Valley *Dicranostegia orcuttiana* – Otay River Valley Dudleya brevifolia - Carmel Mountain, Crest Canyon Dudleya variegata - Black Mountain East, East Elliott, Goat Mesa/Spring Canyon, Marron Valley, Mercy Road, Mission Trails Regional Park, Rancho Mission Canyon, Otay Lakes, Santa Luz Eryngium aristulatum var. parishii - Goat Mesa/Spring Canyon, Otay Lakes Erysimum ammophilum – Crest Canyon, North City West Open Space Monardella stoneana – Marron Valley, Otay Lakes Monardella viminea – Flanders Canyon, 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

References:

San Diego Management and Monitoring Program (SDMMP). 2015. Management Strategic Plan (MSP) 2015 Monitoring Protocol for Rare Plant Occurrences on Conserved Lands in Western San Diego County. Prepared March 11, 2014; revised March 5, 2015. This page is intentionally left blank.

City of San Diego MSCP Rare Plant Monitoring: 2015 Summary Results

			Population		Native		Non-Native				
Species	Site Name	Area (m²) ¹	# Individuals in current maximum extent	Percent cover in sampling area	Number of Species ²	Percent Cover ²	Number of Species	Percent Cover ³	Management Recommendations	Field Data Sht (pg.#)	Photo (pg. #)
Acanthomintha ilicifolia	Black Mountain	21.1	10	1%	11	87%	11	41%	Continue treating with herbicide per CBI protocol, include additional weed control (i.e. weed whipping) as needed	8	11
(San Diego Thorn-mint)	Dennery Ranch East	25.3	150	1%	9	25%	11	68%	Continue to maintain fencing around population to limit and control access; continue treating with herbicide per CBI protocol, include additional weed control (i.e. weed whipping) as needed	13	16
	Los Penasquitos Canyon Obs. 1	8.3	53	<1%	16	53%	4	26%	Analyze Feb 2015 management results and continue treatment program as necessary	18	21
	Los Penasquitos Canyon Obs. 2	0.0	0	0%	10	28%	6	42%	Analyze Feb 2015 management results and continue treatment program as necessary	23	26
	Los Penasquitos Canyon Obs. 3	7.0	4	<1%	13	36%	3	19%	Analyze Feb 2015 management results and continue treatment program as necessary	28	31
	Mission Trails Regional Park	23.6	510	0%	18	50%	6	78%	Analyze Feb 2015 management results and continue treatment program as necessary.	33	36
	Otay Lakes	0.0	0	0%	17	103%	11	39%	Treat non-native forbs (e.g. <i>Erodium</i>) as necessary; continue to control access via fencing and locked gate	38	41
	Sabre Springs East #1 Subpopulation	7.3	7	1%	13	60%	12	54%	Analyze Feb 2015 management results and continue treatment program as necessary	43	46
	Sabre Springs West #2 Subpopulation	3.2	7	1%	10	63%	11	76%	Analyze Feb 2015 management results and continue treatment program as necessary	48	51
	Sabre Springs South #3 Subpopulation	5.5	6	0%	11	35%	9	35%	Analyze Feb 2015 management results and continue treatment program as necessary	53	56
Acmispon prostratus	No Man's Land (Mission Bay Site #1)	2	2	0%	4	11%	5	50%	Treat <i>Brassica tournefortii</i> using proven methods once available	60	63
(Nuttall's Lotus)	Hospitality Point (Mission Bay Site #2)	2939.0	2,026	5%	3	11%	4	19%	Continue to pull/remove non-native species. Consider application of herbicide to treat crab grass in areas where ACPR occurs	65	68
	Rip Rap (Mission Bay Site #3)	262.3	647	0%	4	21%	10	58%	None	70	73
	Mariner's Point (Mission Bay Site #4)	†	t	†	t	†	t	t	Continue to restrict access with fencing and signs	75	78
	Dune Triangle (Mission Bay Site #5)	0.0	0	0%	4	43%	4	11%	Treat Brassica tournefortii using proven methods once available	79	82
	South Shores (Mission Bay Site #6)	6855.5	431	1%	5	5%	8	43%	Continue San Diego Audubon's management of the site; continue management of iceplant but consider starting management focusing on <i>Brassica tournefortii</i> moving forward	84	87
		Note: Presence/	absence only su	veys conducted	at Mariner's Poi	nt					
Ambrosia pumila (San Diego Ambrosia)	Mission Trails Regional Park Kumeyaay Lake	7930.3	28,456	0%	15	32%	5	11%	Continue the herbicide treatment as needed (e.g. spot-spraying for <i>Erodium</i> and <i>Brassica</i> , and control of non-native grasses)	90	93
Bloomeria clevelandii	East Elliott Obs. 1	25054.0	1100	3%	13	36%	6	54%	Continue to monitor and make sure old illegal trail does not start getting more use	96	99
(San Diego Goldenstar)	East Elliott Obs. 2	8.1	7	0%	15	74%	4	14%	None	101	104
	East Elliott Obs. 3	1900.7	59	1%	11	43%	5	11%	None	106	109
	East Elliott Obs. 4	7806.2	133	1%	18	75%	5	10%	None	111	114
	East Elliott Obs. 5	21509.7	550	2%	14	54%	4	6%	None	116	119
	Lopez Ridge	1164.0	560	1%	23	90%	6	34%	Continue to control access using fence and locked gate	121	124
	Marron Valley Obs. 1	82578*	290000*	5%	18	51%	9	38%	Continue to control access with locked gates	126	129
	Marron Valley Obs. 2	82578*	290000*	20%	22	80%	11	69%	Continue to control access with locked gates	131	134
	Marron Valley Obs. 3	82578*	290000*	7%	22	55%	15	46%	Continue to control access with locked gates	136	139
	Marron Valley Obs. 4	82578*	290000*	10%	9	42%	8	59%	Continue to control access with locked gates	141	144
	Mission Trails Regional Park	0.0	0	0%	12	43%	7	95%	Continue to maintain post-burn and treat non- native grasses	146	149
	Otay Lakes East Obs. 1	308891*	75000*	1%	18	106%	3	18%	Treat non-native forbs (<i>Erodium</i> spp.) as necessary; continue to control access via fencing and locked gate	151	154
	Otay Lakes West Obs. 2	308991*	75000*	2%	14	121%	5	25%	Treat non-native forbs (<i>Erodium</i> spp.) as necessary; continue to control access via fencing and locked gate	156	159

City of San Diego MSCP Rare Plant Monitoring: 2015 Summary Results

			Population		N	ative	Non-	Native			
Species	Site Name	Area (m²) ¹	# Individuals in current maximum extent	Percent cover in sampling area	Number of Species ²	Percent Cover ²	Number of Species	Percent Cover ³	Management Recommendations	Field Data Sht (pg.#)	Photo (pg. #)
Brodiaea filifolia (Thread-leaved Brodiaea)	Black Mountain	31.4	10	1%	7	29%	7	111%	Treat Brachypodium distachyon using CBI protocol	162	169
Brodiaea orcuttii	Carroll Canyon	504.0	1273	1%	17	67%	3	9%	None	168	171
(Orcutt's Brodiaea)	Lopez Ridge	1295.5	1771	1%	23	90%	6	34%	Continue to control access using fence and locked gate	173	176
	Oak Creek (MTRP)	20.5	19	+	26	+	17	t	None	178	181
	Nobel Drive	0	0	0%	12	35%	8	23%	Continue current management by Caltrans	183	186
Chloropyron maritimum ssp. maritimum (Salt-marsh Bird's Beak)	Dog Beach	1977.0	17793	20%	8	80%	2	16%	Repair broken fence near population; treat <i>Limonium</i> spp. with best management practices when available	190	193
	Balboa Park Golf	81.6	2	1%	20	89%	0	0%	None	196	199
Cylindropuntia californica (Snake Cholla)	Otay Mesa	1205.28	32	0%	10	30%	7	34%	Continue to control access at entrance with locked gate	201	204
	Spring Canyon	2030.0	57	0%	11	46%	10	26%	Continue to maintain access control- signs, fences, and gates	206	209
Deinandra conjugens	Dennery Ranch	70.8	5	<1%	12	43%	8 35% Continue to maintain fences/gates		212	215	
(Otay Tarplant)	Dennery Ranch East	42393.0	35000	15%	10	33%	10	45%	Treat non-native forbs and grasses; close unauthorized trail	217	220
	Proctor Valley	1732.2	380	2%	8	23%	9	83%	Treat Brachypodium distachyon using CBI methods if funding is available	222	225
Dicranostegia orcuttiana (Orcutt's Bird's Beak)	Otay River Valley	621.0	8038	5%	19	54%	2	2%	Fix peeler log fence that has been broken	228	231
Dudleya brevifolia	Carmel Mountain Obs. 1	213.8	3118	1%	12	24%	6	17%	Add cable to complete fence installation to keep people on trail	234	237
(Short-Leaved Dudleya)	Carmel Mountain Obs. 2	237.9	1053	1%	18	42%	2	3%	Continue to maintain access control with fencing, and native plantings to rehabilitate trail	239	242
	Carmel Mountain Obs. 3	1203.7	18860	1%	19	30%	2	7%	Continue to maintain access control with fencing and other trail closure techniques	244	247
	Crest Canyon North	134.4	4480	2%	17	61%	4	15%	Continue to manage access and monitor for trampling by adjacent homeowner	249	252
	Crest Canyon South	9.9	42	1%	19	47%	1	<1%	Continue to maintain access control with fencing	254	257
Dudleya variegata	Black Mountain East	0.0	0	0%	14	79%	6	58%	Treat for <i>Brachypodium distachyo;</i> spot treat for <i>Cynara cardunculus</i>	260	263
(Variegated Dudleya)	East Elliott - Creek	0.0	0	0%	14	77%	9	50%	Illegal trail will be closed as part of the on- going NRMP/Master Plan Update process	265	268
	East Elliott - Hilltop	46.2	44	1%	20	76%	5	10%	Maintain trail closure and increased enforcement	270	273
	East Elliott - Slope	0.0	0	0%	6	60%	6	48%	None	275	278
	Goat Mesa (Spring Canyon)	90.0	68	1%	18	52%	5	9%	Continue to maintain access control with fencing and locked gates Control non-native grasses and forbs around	280	283
	Marron Valley	496.3	2801	2%	12	31%	9	73%	areas of high density; protect soil crust when possible; continue to maintain access control via signs and gate	285	288
	Mercy Road	129.5	53	2%	17	86%	6	27%	None	290	293
	Mission Trails #1	2.8	7	1%	11	38%	7	25%	None	295	298
	Mission Trails #2	232.0	343	1%	13	35%	6	40%	None	300	303
	Mission Trails #3	44.7	100	2%	13	36%	8	46%	None	305	308

City of San Diego MSCP Rare Plant Monitoring: 2015 Summary Results

Species	Site Name	Area (m²) ¹	Population # Individuals in current maximum extent	Percent cover in sampling area	Number of Species ²	ative Percent Cover ²	Non- Number of Species	Percent Cover ³	Management Recommendations	Field Data Sht (pg.#)	Photo (pg. ‡
	Navajo/Mission Gorge	322.8	1007	1%	11	53%	6	56%	Treat non-natives occurring along the edge of the maximum extent (e.g. fennel); use fusilade to treat non-native grasses within current mapped extent	310	313
	Otay Lakes	0.0	0	0%	12	63%	4	11%	Maintain access control with locked gate and fencing/signs	315	318
	Santa Luz	0.0	0	0%	7	48%	9	78%	None	320	323, 324
	Goat Mesa #1							1	Continue to maintain access control with		
Eryngium aristulatum var. parishii (San Diego Button Celery)	(Spring Canyon) Goat Mesa #2	84.6 496.4	488	2%	5	20%	4	46%	fencing and locked gates Continue to maintain access control with	328	331 336
	(Spring Canyon)	430.4	100	270		0070		4070	fencing and locked gates	000	000
	Otay Lakes	9075.87	5055	5%	8	51%	7	17%	Maintain access control with locked gate and fencing and signs	338	341
Erysimum ammophilum (Coast Wallflower)	Crest Canyon	204.54	42	2%	29	74%	2	4%	 Continue to treat <i>Ehrharta calycina</i> with herbicide; last treatment was successful. 2. Brush in foot paths where they connect to main approved trails at canyon bottom 	344	347
	North City West Open Space #3 (Gully)	218	222.2	10%	17	123%	1	1%	Be careful in return visits to avoid cutting trail. Consider doing this point only in high rainfall or alternate years to minimize damage to habitat	352	354
Monardella stoneana ³ (Jennifer's Monardella)	Marron Valley	53.0	4	1%	22	51%	11	31%	None	356	359
(berniner a monardena)	Otay Lakes	0.0	0	0%	12	45%	14	46%	None	361	364
			I					Ì			
Monardella viminea (Willowy Mondardella)	Flanders Canyon	361.5	86	5%	7	70%	6	9%	None	369	371
	Lopez Canyon West Terrace #1	0.0	0	0%	13	36%	12	65%	Treat non-native grasses and forbs; consider implementing strategies to address urban runoff following pending hydrology study	373	376
	Lopez Canyon East of Bridge #2	131.4	9	2%	19	53%	11	36%	Treat non-native grasses and forbs; consider implementing strategies to address urban runoff following pending hydrology study	378	381
	Lopez Canyon East of Bridge #3	9.9	4	2%	17	62%	15	32%	Treat non-native grasses and forbs; consider implementing strategies to address urban runoff following pending hydrology study	383	386
	Sycamore Canyon	170.8	90	10%	18	45%	14	34%	None	388	391
Navarretia fossalis	Carroll Canyon	0.0	0	0%	14	63%	3	3%	None	394	397
(Spreading Navarretia)	Goat Mesa (Spring Canyon)	0.0	0	0%	5	20%	4	18%	Continue to control access with fencing and locked gates	399	402
	Nobel Drive	8.7	8	1%	12	35%	8	23%	Continue current management by Caltrans	404	407
	Otay Lakes	0.0	0	0%	21	72%	10	38%	Continue to maintain access control with fencing, locked gate and signs	409	412
	Robinhood Ridge	0.0	0	0%	10	71%	12	35%	Fix gate and replace lock; post and remove encampment	414	417
Pogogyne abramsii			_					1			
(San Diego Mesa Mint)	Carroll Canyon	165.9 395.0	1966 4500	12% 5%	16 23	61% 90%	6	5%	None Continue to control access using fence and	420	423 428
	Lopoz Hugo			570		0070		5170	locked gate	.20	720
Pogogyne nudiuscula (Otay Mesa Mint)	Robinhood Ridge	61.13	44	4%	10	71%	12	35%	Fix gate and replace lock; post and remove encampment.	432	435

Current Mapped Extent
 Number and percent cover of native species includes species of interest.
 Evin.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. 425432

Photopoint locations within the same large continuous polygon mapped as current mapped extent No data collected

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Acanthomintha ilicifolia San Diego Thorn-Mint



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	MSP - Rare Plant C	Occurrence	e Monitorii	ng Form 20	15	Page 1				
Scientific Name:	Acanthomintha ilicifolia			Common Nar	ne:	San Diego thornmint				
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_6BLMO032				
	CNDDB Elem. Occur. #:	n/a		Translocated						
Preserve:	Black Mountain Open Space Park				•		Mgmt Unit	MU6		
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment		
Occurrence Name:	Black Mountain					Sam	ole Point #:	1		
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	ırtz				Affiliation	City of Sar	n Diego		
Date:	3/17/2015		Time Start:	10:30		Time Finish:				
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	f categories d	lescribing		
phenology & evidence of h # Plants/Current	erbivory, disease & stunted growth within the sa							Г.,		
Mapped Extent:		10		t or estimate?			•	very low		
	Area of Current Mapped Extent:		21.09		square meters	exact (GPS) or estim?	exact (GPS ma		
# Plants/Sampling		yes	if not	found, known or	suspected reason:		_			
Area	-		_	exact co	ount or estimate?	exact	uncert.	very low		
	Sample Area Radius (m)	10		_			-			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)		
		Dead	1 (0%)	Flow	ering & Fruiting	6 (≥75%)				
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	6 (≥75%)		
	Is Sampling Area within Current Map	ped Extent?	yes			-				
	Collection (if not collected previously)?	no			1					
If yes:	Collector				Collection #					
	Museum/Herbarium									
II. SAMPLING AREA	II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING									
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83				
coord. system	State Plane (ft)									
Coordin's at Center of F	Plot: E:				N:		-			
Camera type:	Pentax Optio W90									
Locat. 1 CoordE, N	6284663.39		1946	643.29	Direction facing		Height	1.1 m		
	Camera angle	Level	Photo #	829-833	File location	S:\MSCP				
Locat. 2 Coord E,N					Direction facing		Height			
	Camera angle		Photo #		File location					
			1 11010 #		The location					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any								
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected		
Acanthomintha ilicifolia		1		Brassica nigra	a		12			
Peritoma arborea		1		Lupinus cocin	nus		1			
Deinandra fasciculata		4		Cynara cardu	nculus		1			
Daucus pusillus		3		Bloomeria cro	ocea		1			
Calochortus splendens		1		Logfia gallica			1			
Dichelostemma capitatu	um	7		Sonchus olera	aceus		1			
Allium haematochiton		30		Avena sp.			1			
Convolvulus simulans		20		Erodium botry	/S		1			
Harpagonella palmeri		18								
Euphorbia peplus		1								
Erodium cicutarium		1								
Brachypodium distachy	on	20		bare ground			50			
Anagallis arvensis		1		rock			3			
Phalaris minor COVER: Total % Cover:	128	1 %Herb:	127	litter %Shrub:	1	%Tree:	0			
	120	/011010.	127	,3011 ab.	1	/01166.	0			

MSP - Rare Plant	Habitat and	Threats As	ssessment	: Form 2015	Page	e 2
IV. HABITAT ASSESSMENT IN SAMP (typically 10-m radius circle). Vegetati in the office or field, using "Associated S	ion alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Diego vegetation for definitions of habitat ass	on key (AE0 sessment ca	COM 2012)
SANDAG 2012 Vegetation Alliance/Association:		iculata provisio	onal alliance,	Deinandra fasciculata associa	ition	
Cover classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	Thatch Cover	1 (0%)	
	Thatch Depth A	verage (cm)	0	Thatch Depth max (cm)	0	
Dead Standing Biomass	yes			_		
If yes, cover/species class	Peritoma arbc	orea/2		Average height (cm)	20	
Mammal Species Activity (categ. 1-4)				•		
Feral pig activity 1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, scat, pig) dete	cted.	
ground squirr. activity 1 = No ground	squirrel burrows	detected.				
gopher activity <u>1 = No pocket</u>	gopher mounds	detected.				
Sampling area representative of mapp	ed occurrence?	yes	(If no, note d	ifferences on page 3)		
VI. THREATS ASSESSMENT IN MAX	MUM EXTEN	F - Assess th	reats within	the occurrence's maximu	m extent (cumulative
extent over years of monitoring) plus 10 Record notes on page 3. See Argentine					ssment cat	egories.
Surrounding Land Use/Activity	I	open space				
Argentine ant abundance at bait station (1-4)	1 = No ants d	etected at bai	it station or in vicinity.		
Time start 10:41 AM	Temp start	78		Time end 11:57 AM	Temp end	78
Ant sample collected? no	Ant sample #			Ant Station Photo #	1	
DISTURBANCES (Rank each as 1-6):						
Non-native forbs 4 = Disturbance	fe	eral pig activity	1 = No sign o	altered hydrology	1 = No sign	of disturbanc
Non-native grasses 4 = Disturbance	8	trampling	1 = No sign o	erosion	1 = No sign	of disturbanc
Non-native woody pl. 1 = No sign of	q	vandalism	1 = No sign o	urban runoff	1 = No sign	of disturbanc
competitive native pl. 1 = No sign of	с	urrent grazing	1 = No sign o	slope movement	1 = No sign	of disturbanc
dumping/trash 1 = No sign of	h h	istoric grazing	7 = Disturba	soil compaction	1 = No sign	of disturbanc
encampments 1 = No sign of	histo	oric agriculture	1 = No sign o			
fuel modification zone/fire break	1 = No sign of c					
road construction/maintenance	1 = No sign of c	if prese	ent, describe:			
illegal vegetation clearing	1 = No sign of c	if prese	ent, describe:			
brush management/restoration	6 = Disturbance	e occurs 50% t	o < 75% of a	Restoration: herbicide of BRI)I and mech	anical treatme
ORV activity	1 = No sign of o		ent, describe:			
Evidence of recent fire	7 = Disturbance	e occurs ≥75%	6 of area with			
If sign of recent fir	e, year burned?		2014			
Trails 1 = No sign of	disturbance with	in maxinum ex		If trails are present, are they	authorized?	
Type of trail use hiking		biking		equestrian	dog	
service vehicles		other				
illegal trail use?	1 = No sign of o	describe:				
Other disturbance? 1 = No sign of	describe:					

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_6BLMO032
Date: 3/17/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue treating with herbicide per CBI protocol, include additional weed control (i.e. weed whipping) as needed
VII. MANAGEMENT ACTIONS IN LAST YEAR
1) dethatched via Bernardo Fire May 2014
 treated with Fusilade per CBI protocols to address BRDI in Feb 2015 treated with Fusilade per CBI procotols to address BRDI in March 2015
4) mechanical removal (weed whipping) of Brassica nigra in March 2015
4) mechanical removal (weed whipping) of brassica higra in March 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



	MSP - Rare Plant C	Occurrence	e Monitoriı	ng Form 20 [°]	15	Page 1				
Scientific Name:	Acanthomintha ilicifolia			Common Nan	ne:	San Diego thornmint				
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_3DREA005				
	CNDDB Elem. Occur. #:	n/a		Translocated?						
Preserve:	Dennery Ranch						Mgmt Unit	MU3		
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment		
Occurrence Name:	Dennery Ranch East					Sam	ole Point #:	1		
Surveyors:	Kim Roeland, Daniel Schwartz					Affiliation	City of Sar	1 Diego		
Date:	3/30/2015		Time Start:	9:15		Time Finish:	10:54			
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	f categories c	lescribing		
# Plants/Current		150		it or estimate?	Exact		uncert.	low		
Mapped Extent:	Area of Current Mapped Extent:		25.279	units	square meters	exact (GPS) or estim?	exact (GPS ma		
	Species Found in Maximum Extent?	yes			suspected reason:		,	· · · · ·		
# Plants/Sampling		1					1			
Area			ľ	exact co	ount or estimate?	exact	uncert.	low		
	Sample Area Radius (m)			1		1				
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)		
			1 (0%)		ering & Fruiting		J			
	Evidence in Sampling Area (1-6):	,		Disease	1 (0%)	Stunt	ed Growth	6 (≥75%)		
	Is Sampling Area within Current Map	oped Extent?	yes							
	Collection (if not collected previously)?	no			_	_				
If yes:	Collector				Collection #					
	A LOCATION & SITE PHOTOMONIT	ORING		[-					
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83	J			
coord. system	State Plane (ft)									
Coordin's at Center of F					N:					
	Pentax Optio W90									
Locat. 1 CoordE, N	6323291.152		17930)84.325	Direction facing	W,SW,S S:\MSCP	Height	1.1 m		
	Camera angle	10° down	Photo #	913-917	File location					
Locat. 2 Coord E,N		1			Direction facing		Height			
	Camera angle		Photo #		File location					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page Collection #, o					Collect.# or NC if		
species/substrate		% Cover	collected		species/substrate		% Cover	not collected		
Simmondsia chinensis		10		Brachypodium	n distachyon		1			
Peritoma arborea		3		Chlorogalum	parviflorum		1			
Brassica nigra		3		Deinandra co	njugens		2			
Artemisia californica		2		Acanthominth	a ilicifolia		1			
Centaurea melitensis		30		Glebionis core	onaria		1			
Bromus madritensis		15		Dichelostemm	na capitatum		1			
Bromus hordeaceus		10								
Erodium cicutarium		2								
Melilotus indicus		2						ļ		
Apiastrum angustifolium	1	3								
Anagallis arvensis		1								
Festuca myuros	1		bare ground			5				
Parietaria hespera var.		2		rock litter			5			
Dysphania ambrosioide COVER: Total % Cover:	93		78	%Shrub:	15	%Tree:	-			
	1		,0	1	10	1		·		

MSP - Rare Plant	Habitat and	Threats As	sessment	Form 2015		Paç	je 2
IV. HABITAT ASSESSMENT IN SAMP (typically 10-m radius circle). Vegetat in the office or field, using "Associated S	ion alliance/as Species" data f	sociation can rom page 1.	be assigne See page 4	d using San Die for definitions of	go vegetatio f habitat ass	on key (AE sessment c	COM 2012) ategories.
SANDAG 2012 Vegetation Alliance/Association:		ninensis Alliano	ce, Simmond	sia chinensis-Bah	iopsis lacinia	ita Associati	on
Cover classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
	Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)		
Dead Standing Biomass	yes			0	haischt (aus)	100	
If yes, cover/species class Mammal Species Activity (categ. 1-4)	DIASSICA/2			Average	height (cm)	100	
Feral pig activity 1 = No feral pig	g activity (rooting	g, wallowing, vo	egetation des	truction, tracks, se	cat, pig) dete	ected.	
ground squirr. activity 1 = No ground	squirrel burrows	detected.					
gopher activity 1 = No pocket	gopher mounds	detected.					
Sampling area representative of mapp	ed occurrence?	yes	(If no, note c	lifferences on pag	e 3)		
VI. THREATS ASSESSMENT IN MAX extent over years of monitoring) plus 10 Record notes on page 3. See Argentine	0-m surroundi e Ant Protocol (i ng buffer . S (USGS 2015)	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at bait station (1-4	F)		-				
Time start	Temp start			Time end		Temp end	
Ant sample collected?	Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank each as 1-6):	1		r	1			
Non-native forbs 5 = Disturbanc		eral pig activity	1 = No sign	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 5 = Disturbanc			1 = No sign				of disturbanc
Non-native woody pl. $1 = No sign of$			1 = No sign	1		-	of disturbanc
competitive native pl. 1 = No sign of dumping/trash 1 = No sign of		urrent grazing istoric grazing					of disturbanc
encampments 1 = No sign of		oric agriculture			compaction	0 – Distaiba	
fuel modification zone/fire break		1	0				
road construction/maintenance	1 = No sign of (if prese	ent, describe:				
illegal vegetation clearing	1 = No sign of o	if prese	ent, describe:				
brush management/restoration	1 = No sign of c	disturbance wi	thin maxinum	extent or in adjac	ent 10 m bu	ffer.	
ORV activity	T = NO sign of C	if prese	ent, describe:				
Evidence of recent fire	1 No bight of C		thin maxinum				
If sign of recent fir	-			If trails are prese	nt are they	authorizod?	
Turpo of troil upo	e does not occu			ו ר	-	1	yes
		biking		equestrian	no	dog	no
service vehicles illegal trail use?		other describe:	IU	<u> </u>			
Other disturbance? 1 = No sign of			1				

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_3DREA005
Date: 3/30/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to maintain fencing around population to limit and control access; continue treating with herbicide per CBI protocol,
include additional weed control (i.e. weed whipping) as needed
VII. MANAGEMENT ACTIONS IN LAST YEAR
Fencing around population limited access; Feb/Mar 2015 site sprayed per CBI protocol
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
NOTES

Acanthomintha ilicifolia (San Diego Thornmint) Dennery Ranch East



Panorama from Southern edge of population, facing West, Southwest, South. Panorama location is 6323291.152 1793084.325 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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	MSP - Rare Plant C	ccurrence	e Monitorir	ng Form 20 [°]	15	Page 1					
Scientific Name:	Acanthomintha ilicifolia			Common Nan	ne:	San Diego thornmint					
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_6LPCA039					
	CNDDB Elem. Occur. #:	n/a		Translocated	no						
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	MU6			
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment			
Occurrence Name:	Los Penasquitos Canyon subpop #1					Sam	ole Point #:	1			
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego			
Date:	3/10/2015		Time Start:	13:05		Time Finish:	13:43				
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	f categories c	lescribing			
# Plants/Current		53		t or estimate?	exact		uncert.	low			
Mapped Extent:	Area of Current Mapped Extent:		8.29	units	square meters	exact (GPS) or estim?	exact (GPS ma			
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:						
# Plants/Sampling		1					1				
Area	53		ľ	exact co	ount or estimate?	exact	uncert.	low			
	Sample Area Radius (m)	10	_ /	I		-					
	Phenology In Sampling Area (1-6):	-	5 (50% to <7	-	2 (>0% to <10%		Fruiting	1 (0%)			
			1 (0%)		ering & Fruiting]				
	Evidence in Sampling Area (1-6):	,		Disease	1 (0%)	Stunt	ed Growth	1 (0%)			
	Is Sampling Area within Current Map	ped Extent?	yes								
	Collection (if not collected previously)?	no									
If yes:	Collector				Collection #						
	Museum/Herbarium										
	A LOCATION & SITE PHOTOMONIT					[1				
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83					
-	State Plane (ft)										
Coordin's at Center of F					N:						
Camera type: Locat. 1 CoordE, N	Pentax Optio W90 6276496.26										
Local. T CooldE, N	0270490.20		19185	576.025	Direction facing	E, SE, S, SW S:\MSCP	Height	0.85 m			
	Camera angle	Level	Photo #	693-698	File location						
Locat. 2 Coord E,N					Direction facing		Height				
	Camera angle		Photo #		File location						
				•							
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	Collection #, or					Collect.# or NC if			
species/substrate		% Cover	collected		species/substrate		% Cover	not collected			
Acanthomintha ilicifolia		0.5		Centaurea me	elitensis		3				
Adolphia californica		7		Erodium cicut	arium		1				
Rhus integrifolia		2		Stipa pulchra			1				
Salvia mellifera		5		Dichelostemm	na capitatum		0.5				
Salvia apiana		1		Erodium botry	'S		2				
Ferocactus viridescens		1		Brachypodium	n distachyon		20				
Acmispon glaber		0.5									
Lonicera subspicata		1									
Isocoma menziesii		0.5									
Daucus pusillus		3									
Acmispon maritimus		7									
Deinandra fasciculata		20		bare ground			40				
Convolvulus simulans Calochortus splendens		0.5		rock litter			5				
COVER: Total % Cover:	78.5		60.5	%Shrub:	18	%Tree:					

MSP - Rare	Plant	Habitat and	Threats As	sessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSMENT IN (typically 10-m radius circle). V in the office or field, using "Assoc	/egetati	on alliance/ass	sociation can	be assigned	d using San Dieg	go vegetatio	on key (AE	COM 2012)
SANDAG 2012 Veg Alliance/Asso	getation ociation:	Artemisia califo fasciculatum - 0	rnica - Eriogor Dpuntia littorali	num fascicula s / Dudleya (tum alliance, Arte edulis) associatior	misia califorr า	nica - Eriogo	num
Cover classe	es (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)
	I	Thatch Depth A	verage (cm)	1	Thatch Dep	oth max (cm)	5	
Dead Standing Biomass		yes			T			r
If yes, cover/specie		unknown/2			Average	height (cm)	15	l
Mammal Species Activity (categ. 1-4	4)							
Feral pig activity 1 = No	feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity 1 = No	ground	squirrel burrows	detected.					
gopher activity 1 = No	pocket g	gopher mounds	detected.					
Sampling area representative of	of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)		
VI. THREATS ASSESSMENT IN extent over years of monitoring) Record notes on page 3. See Arg	plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity a	at, or Ad	ljacent to, Site	open space					
Argentine ant abundance at bait stat	tion (1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.		
Time start 1	1:10 PM	Temp start	72F		Time end	1:40 PM	Temp end	73F
Ant sample collected? no		Ant sample #	N/A		Ant Sta	tion Photo #	699	
DISTURBANCES (Rank each as	s 1-6):	-			-		-	
Non-native forbs 3 = Dis	turbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	n of disturbanc
Non-native grasses 4 = Dis	turbance		trampling	1 = No sign (erosion	1 = No sign	n of disturbanc
Non-native woody pl. 1 = No	sign of e		vandalism	1 = No sign (urban runoff	1 = No sign	n of disturbanc
competitive native pl. 1 = No	sign of e	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	n of disturbanc
dumping/trash 1 = No	sign of e	h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	n of disturbanc
encampments 1 = No	sign of (histo	ric agriculture	1 = No sign o				
fuel modification zone/fir	e break	1 = No sign of o						
road construction/maint				ent, describe:				
illegal vegetation of	clearing	1 = No sign of c	if prese	ent, describe:				
brush management/rest	oration	7 = Disturbance	e occurs ≥75%	of area with	in maxinum exten	t.		
ORV	' activity	1 = No sign of o	if prese	ent, describe:				
		1 = No sign of c		hin maxinum				
If sign of re	ecent fire	e, year burned?						
Trails 2 = Dis	turbance	e does not occu	within maxim		If trails are prese	nt, are they	authorized?	yes
Type of trail use	hiking	yes	biking	yes	equestrian	yes	dog	yes
service v		-	other	yes				
illegal tra	ail use?	1 = No sign of c	describe:					
	sian of a			-			- 19 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_6LPCA039
Date: 3/10/2015
VI. MANAGEMENT RECOMMENDATIONS
Analyze treatment results and continue management as necessary
VII. MANAGEMENT ACTIONS IN LAST YEAR
Site treated with herbicide to address Brachypodium distachyon per CBI Protocols in Feb 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Horned lizard
NOTES

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



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



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Acanthomintha ilicifolia	Common Name:			ne:	San Diego thornmint			
	Existing MSP Occurrence?	ISP Occurrence? yes MS			urr. ID: ACIL_6LPCA039				
	CNDDB Elem. Occur. #: n/a Translocated no			no					
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	MU6	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea			
Occurrence Name:	Los Penasquitos Canyon subpop #2					Sample Point #: 2			
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation City of San Diego			
Date:	3/10/2015		Time Start:	13:50		Time Finish:	14:19		
I. OCCURRENCE S	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing								
# Plants/Current	erbivory, disease & stunted growth within the sa								
Mapped Extent:		0		nt or estimate?			4	very low	
	Area of Current Mapped Extent:		0	4	square meters	exact (GPS) or estim?	exact (GPS ma	
# Plants/Sampling	Species Found in Maximum Extent?	no	if not	tound, known or	suspected reason:			unknown	
Area	0		_	exact co	ount or estimate?	exact	uncert.	very low	
	Sample Area Radius (m)	10		_					
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	no						
				-					
	Collection (if not collected previously)?	no			1				
If yes:	Collector				Collection #				
	Museum/Herbarium								
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)								
Coordin's at Center of F	Plot: E:				N:				
Camera type:	Pentax Optio W90								
Locat. 1 CoordE, N	6276540.33		1918	463.76	Direction facing	SE, S, SW	Height	0.85 m	
	Camera angle	5° down	Photo #	700-705	File location	S:\MSCP			
Locat. 2 Coord E,N		•		•	Direction facing		Height		
,			Dhata #		Ŭ				
	Camera angle		Photo #		File location				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.					
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected	
Adolphia californica		3		Plantago elon	gata		1		
Harpagonella palmeri		1		Stipa pulchra			1		
Dichelostemma capitatu	ım	1							
Convolvulus simulans		3							
Deinandra fasciculata		15							
Microseris douglasii ssp	o. platycarpha	1							
Sonchus asper		1							
Euphorbia peplus		1							
Erodium cicutarium		1							
Brachypodium distachy	on	35							
Festuca myuros		1							
Centaurea melitensis		3		bare ground			20		
Logfia filaginoides		1		rock			3		
Daucus pusillus	70	1		litter % Shrub:	-	0/	7		
COVER: Total % Cover:	70	%Herb:	67	%Shrub:	3	%Tree:	l		

MSP - Rare	Plant	Habitat and	Threats As	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSMENT IN (typically 10-m radius circle). V in the office or field, using "Assoc	egetation	on alliance/ass pecies" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012)
SANDAG 2012 Veg Alliance/Asso		Deinandra fasc	iculata provisio	onal alliance,	Deinandra fascic	ulata associa	ation	
Cover classe	es (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	Т	hatch Cover	3 (10% to <	<25%)
	[Thatch Depth A	verage (cm)	5	Thatch Dep	oth max (cm)	10	I
Dead Standing Biomass If yes, cover/specie	es class	yes unknown/2			Average	e height (cm)	15	l
Mammal Species Activity (categ. 1-4						,		1
Feral pig activity 1 = No	feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, s	cat, pig) dete	cted.	
ground squirr. activity 1 = No	ground s	squirrel burrows	detected.					
gopher activity 1 = No	pocket g	gopher mounds	detected.					
Sampling area representative of	of mappe	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)		
VI. THREATS ASSESSMENT IN extent over years of monitoring) I Record notes on page 3. See Arg	plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity a	it, or Ad	ljacent to, Site	open space					
Argentine ant abundance at bait stat	ion (1-4))		1				
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank each as	s 1-6):				ſ			
Non-native forbs 3 = Dist			ral pig activity			ed hydrology	1 = No sign	n of disturbanc
Non-native grasses 4 = Dist				1 = No sign o			· · · · ·	n of disturbanc
Non-native woody pl. 1 = No	-			1 = No sign o				of disturbanc
competitive native pl. $1 = No$	-		urrent grazing	-	-		-	of disturbanc
dumping/trash $1 = No$			istoric grazing			I compaction	1 = No sign	n of disturbanc
encampments 1 = No	sign of (nisto	oric agriculture	1 = No sign of				
fuel modification zone/fire	e break	1 = No sign of c						
road construction/mainte				ent, describe:				
illegal vegetation of		-		ent, describe:				r
brush management/rest	oration	7 = Disturbance	e occurs ≥75%	6 of area with	in maxinum exten	t.		
		1 = No sign of o		ent, describe:				
Evidence of rec	-			thin maxinum				
		e, year burned?			lf to all			
		e does not occu			If trails are prese	-	autnorized?	yes
Type of trail use	hiking		biking		equestrian	yes	dog	yes
service v		-	other describe:	yes				
	an use !	1 = No sign of o						
Other disturbance? $1 = No$	sian of c	describe:					- 24 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_6LPCA039
Date: 3/10/2015
VI. MANAGEMENT RECOMMENDATIONS
Analyze treatment results and continue management as necessary
VII. MANAGEMENT ACTIONS IN LAST YEAR
Site treated with herbicide to address Brachypodium distachyon per CBI Protocols in Feb and Mar 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Acanthomintha ilicifolia		Common Name:		San Diego thornmint			
	Existing MSP Occurrence?	yes MSP Occurr. ID:		ID:	ACIL_6LPCA039			
	CNDDB Elem. Occur. #:	IDDB Elem. Occur. #: n/a Translocated no						
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Los Penasquitos Canyon subpop #3					Sam	ole Point #:	3
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	Diego
Date:	3/10/2015		Time Start:	14:22		Time Finish:	14:38	
	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on p. 3.							
# Plants/Current		4		it or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		6.98	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes			suspected reason:		,	
# Plants/Sampling		1	L		·		1	
Area	4		T	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	J	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	6 (≥75%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector			1	Collection #			
,	Museum/Herbarium							
	Wascanin Tolbanan							
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING		r			n	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					ſ		
Coordin's at Center of F	Plot: E:				N:		1	
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6276371.01		1918	517.83	Direction facing		Height	0.85 m
	Camera angle	Level	Photo #	707-710	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any						
species/substrate		% Cover	Collection #, or collected		species/substrate		% Cover	Collect.# or NC if not collected
Acanthomintha ilicifolia		0.5		Erodium cicut	arium		1	
Adolphia californica		10		Chlorogalum			1	
Salvia mellifera		4						
Rhus integrifolia		3						
Rhamnus crocea		1						
Plantago elongata		3						
Daucus pusillus		4						
Deinandra fasciculata		4						
Centaurea melitensis		3						
Acmispon glaber		2						
Isocoma menziesii		1						
Dichelostemma capitatu	ım	1		bare ground			35	
Stipa pulchra		1		rock			3	
Brachypodium distachy		15 % Llorbi		litter		0/ T	5	
COVER: Total % Cover:	54.5	%Herb:	33.5	%Shrub:	21	%Tree:	0	

MSP - Rare Pla	nt Habitat and	Threats A	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSMENT IN SAI (typically 10-m radius circle). Veget in the office or field, using "Associated	ation alliance/as	sociation can	be assigned	d using San Die	go vegetatio	on key (AE	COM 2012)
SANDAG 2012 Vegetati Alliance/Associatio		ciculata provisi	onal alliance,	Deinandra fascici	ulata associa	ation	
Cover classes (1-	6) Cryptogami	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)
	Thatch Depth /	Average (cm)	2	Thatch Dep	oth max (cm)	4	l
Dead Standing Biomass If yes, cover/species cla	yes ssunknown/2			Average	e height (cm)	20	I
Mammal Species Activity (categ. 1-4)				/ Weitage		20	1
Feral pig activity 1 = No feral	pig activity (rooting	g, wallowing, v	egetation des	truction, tracks, so	cat, pig) dete	ected.	
ground squirr. activity 1 = No ground	nd squirrel burrows	s detected.					
gopher activity 1 = No pock	et gopher mounds	detected.					
Sampling area representative of ma	pped occurrence?	yes	(If no, note d	lifferences on pag	le 3)		
VI. THREATS ASSESSMENT IN MA extent over years of monitoring) plus Record notes on page 3. See Argenti	10-m surround	ing buffer. ន	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity at, or	Adjacent to, Site	open space					
Argentine ant abundance at bait station (1-4)						
Time start	Temp star			Time end		Temp end	
Ant sample collected?	Ant sample #	:		Ant Sta	ation Photo #	:	
DISTURBANCES (Rank each as 1-6):			т			
Non-native forbs 3 = Disturba	nce fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	n of disturbanc
Non-native grasses 4 = Disturba	nce	trampling	1 = No sign o		erosion	1 = No sign	n of disturbanc
Non-native woody pl. 1 = No sign			1 = No sign o	t			n of disturbanc
competitive native pl. 1 = No sign		current grazing	-	1			n of disturbanc
dumping/trash <u>1 = No sign</u>		historic grazing		l	compaction	1 = No sign	n of disturbanc
encampments 1 = No sign	of d histo	oric agriculture	1 = No sign (1			
fuel modification zone/fire bre	ak 1 = No sign of	d					
road construction/maintenan			ent, describe:				
illegal vegetation cleari			ent, describe:				1
brush management/restoration	on 7 = Disturbanc	e occurs ≥75%	6 of area with	in maxinum exten	t.		
	ity 1 = No sign of		ent, describe:				
Evidence of recent f	ire 1 = No sign of	disturbance wi	thin maxinum				
	fire, year burned?						
Trails 2 = Disturba	nce does not occu	r within maxim		If trails are prese	nt, are they	authorized?	yes
Type of trail use hiki	ng yes	biking	yes	equestrian	yes	dog	yes
service vehicl		other	yes				
illegal trail us	e? 1 = No sign of	describe:					
Other disturbance? 1 = No sign	of describe:					- 29 -	_

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_6LPCA039
Date: 3/10/2015
VI. MANAGEMENT RECOMMENDATIONS
Analyze treatment results and continue management as necessary
VII. MANAGEMENT ACTIONS IN LAST YEAR
Site treated with herbicide to address Brachypodium distachyon per CBI Protocols in Feb and Mar 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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



Panorama from Western edge of population, facing East, Southeast, South, Southwest. Panorama location is 6276371.012 191857.833 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.


	MSP - Rare Plant C	Occurrence	e Monitorir	ng Form 20 [°]	15	Page 1		
Scientific Name:	Acanthomintha ilicifolia			Common Nan	ne:	San Diego thornmint		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_4MTRP021		
	CNDDB Elem. Occur. #:	EO33		Translocated?				
Preserve:	Mission Trails Regional Park						Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Mission Trails Regional Park					Sam	ole Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	irtz, Annabell	e Bernabe			Affiliation	City of Sar	1 Diego
Date:	3/10/2015		Time Start:	10:10		Time Finish:	11:47	_
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	^f categories c	lescribing
# Plants/Current		510		t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		23.58	units	square meters	exact (GPS	4	exact (GPS ma
	Species Found in Maximum Extent?	yes		•	suspected reason:		,	· · · · ·
# Plants/Sampling		1					1	
Area	0		r	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1	r	1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering			Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	oped Extent?	no]				
	Collection (if not collected previously)?	no]				
If yes:	Collector				Collection #			
,	Museum/Herbarium							
	Maccanin Iolbanan							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING		1	r		n	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					ſ		
Coordin's at Center of F	Plot: E:				N:		1	1
Camera type:	Pentax Optio W90				1			
Locat. 1 CoordE, N	6308619.85		1881	117.52	Direction facing		Height	1.6 m
	Camera angle	10° down	Photo #	686-691	File location	S:\MSCP		
Locat. 2 Coord E,N		-		-	Direction facing		Height	
	Camera angle		Photo #		File location			
					•			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any						
species/substrate		% Cover	Collection #, or collected		species/substrate		% Cover	Collect.# or NC if not collected
Rhus integrifolia		2		Convolvulus s	simulans		10	
Peritoma arborea		1		Brassica nigra	a		3	
Opuntia littoralis		1		Centaurea me	elitensis		7	
Baccharis sarothroides		1		Brachypodium	n distachyon		60	
Artemisia californica		1		Erodium cicutarium			5	
Malosma laurina		2		Logfia filaginoides			1	
Lepidium sp.		2		Sonchus asper			1	
Daucus pusillus		1		Lonicera subs	picata		1	
Malacothamnus fascicu	latus	1		Acmispon gla	ber		1	
Deinandra fasciculata		7		Heteromeles			2	
Acmispon maritimus		3						
Dichelostemma capitat	um	3		bare ground			10	
Salvia mellifera		11		rock			2	
Isocoma menziesii	100	1		litter		e	3	
COVER: Total % Cover:	128	%Herb:	103	%Shrub:	25	%Tree:	0	

MSP - Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSMENT IN SAMP (typically 10-m radius circle). Vegetation in the office or field, using "Associated S	ion alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE	COM 2012)
SANDAG 2012 Vegetation Alliance/Association:		Alliance, Salv	ia mellifera-N	lalosma laurina A	ssociation		
Cover classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)
	Thatch Depth A	verage (cm)	1	Thatch Dep	oth max (cm)	3	
Dead Standing Biomass	yes			I .			ľ
If yes, cover/species class Mammal Species Activity (categ. 1-4)	Centaurea me	elitensis		Average	e height (cm)	15	l
Feral pig activity 1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity 1 = No ground							
gopher activity 1 = No pocket	gopher mounds	detected.					
Sampling area representative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)	_	
VI. THREATS ASSESSMENT IN MAX extent over years of monitoring) plus 10 Record notes on page 3. See Argentine)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at bait station (1-4)	1 = No ants d	etected at ba	it station or in vici	nity.		
Time start 10:12 AM	Temp start	unk		Time end	10:58 AM	Temp end	unk
Ant sample collected? no	Ant sample #			Ant Sta	ition Photo #	692	
DISTURBANCES (Rank each as 1-6):	1			,			
Non-native forbs 3 = Disturbance	fe	eral pig activity		Ī	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 6 = Disturbanc		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl. 1 = No sign of			1 = No sign (-	of disturbanc
competitive native pl. 1 = No sign of		urrent grazing		t ·			of disturbanc
dumping/trash 3 = Disturbanc		istoric grazing			compaction	3 = Disturb	ance present i
encampments 1 = No sign of	nisto	oric agriculture	T = NO sign (1			
fuel modification zone/fire break	1 = No sign of o						
road construction/maintenance			ent, describe:				
illegal vegetation clearing			ent, describe:				
brush management/restoration ORV activity				extent or in adjac	ent 10 m but	fer.	
	T = NO SIGN OF C		ent, describe:				
Evidence of recent fire If sign of recent fir							
	-		2003	If trails are prese	ent, are they	authorized?	
Trails 2 = Disturbance Type of trail use				1			yes
		biking		equestrian	ΠU	dog	усъ
service vehicles illegal trail use?		other describe:		<u> </u>			
Other disturbance?			<u> </u>			- 34 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_4MTRP021
Date: 3/10/2015
Analyze Feb 2015 management results and continue treatment program as necessary
VII. MANAGEMENT ACTIONS IN LAST YEAR
Maximum extent area was treated for grasses using CBI herbicide method in Feb 2015. Area hand weeded and surrounded by fencing.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
The area where ACIL is found has been hand weeded for multiple years so it has a lower cover of invasive species.

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.



	MSP - Rare Plant C	occurrence	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Acanthomintha ilicifolia			Common Nan	ne:	San Diego thornmint		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_3OTLA012		
	CNDDB Elem. Occur. #:	n/a		Translocated?	no			
Preserve:	Otay Lakes Cornerstone Lands		Mgmt Unit MU3					
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Otay Lakes					Sam	ple Point #:	1
Surveyors:	Kim Roeland, Annabelle Bernabe					Affiliation	City of Sar	n Diego
Date:	3/24/2015		Time Start:	9:45		Time Finish:	10:42	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	^r categories o	lescribing
# Plants/Current	· · · · · · · · · · · · · · · · · · ·	0		t or estimate?	exact		uncert	very low
Mapped Extent:	Area of Current Mapped Extent:	-	0	1	square meters	exact (GPS	4	exact (GPS ma
	Species Found in Maximum Extent?	no		4	suspected reason:	population very low or		
# Plants/Sampling		1					1	
Area	0		ī	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)			1	<u> </u>	1		r
	Phenology In Sampling Area (1-6):	Ū	1 (0%)	Flowering			Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	l	
	Evidence in Sampling Area (1-6):			Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	oped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT							
GPS Accuracy: +/-			accur. units:	meters	Datum:			
-	State Plane (ft)	-	accur. units.	meters	Datam.	N/200	J	
Coordin's at Center of F					N:			
	Pentax Optio W90	1						
Locat. 1 CoordE, N	6357069.84		18075	513.802	Direction facing	S, SW, W	Height	0.85 m
	Camera angle	10° up	Photo #		File location	S:\MSCP		1
Locat. 2 Coord E.N			1 11010 #	000 000	Direction facing		Height	
			Dhata #				g	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Eriogonum fasciculatun	n	2		Erodium cicut	arium		20	
Deinandra fasciculata		15		Anagallis arve	ensis		1	
Chlorogalum parviflorur	n	7		Plagiobotrys /	Cryptantha sp,		1	
Acmispon glaber		1		Plantago erec	ta		1	
Crassula connata		25		Melilotus indic	cus		1	
Lepidium nitidum		10		Bromus madritensis			3	
Lasthenia gracilis		15		Avena sp.			1	
Bloomeria clevelandii		5		Bromus hordeaceus		2		
Cuscuta occidentalis		10		Eryngium aristulatum			2	
Acmispon micranthus		2		Hypochaeris glabra		1		
Erodium botrys		5		Sonchus aspe	er		1	
Hordeum sp.		1		Cressa truxille	ensis		1	
Isocoma menziesii		1						
Linanthus dianthiflorus		2		bare ground			10	
Convolvulus simulans Centaurea melitensis		3		rock litter			2	
COVER: Total % Cover:	142		138		4	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	012 Vegetation ce/Association:	vernal pools; D	einandra fasci	culatat Provis	ional Alliance, De	inandra fasc	iculata Asso	
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l
Dead Standing Bio		yes			T			I
If yes, cove Mammal Species Activity (ca	er/species class	unknown/2			Average	height (cm)		l
		activity (rooting	wallowing ve	enetation des	truction, tracks, so	cat nin) dete	ected	
ground squirr. activity			-			at, pig/ dete		
		gopher mounds						1
Sampling area represe				(If no, note d	lifferences on pag	e 3)	1	
VI. THREATS ASSESSM							m extent (cumulative
extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	Ū		, 		,			
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):	1						
Non-native forbs	5 = Disturbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.				1 = No sign (†			of disturbanc
competitive native pl.	_		urrent grazing istoric grazing	-	1			of disturbanc
	1 = No sign of (1 = No sign of (oric agriculture	, v	Ť.	compaction	T – NO SIGI	of disturbanc
					1			
fuel modification								
		1 = No sign of c 1 = No sign of c		ent, describe:				
brush manageme				ent, describe:	outont or in odiac	ant 10 m but	Hor	
	ORV activity	1 = No sign of c 1 = No sign of c		ent, describe:	extent or in adjac	ent 10 m bui	ter.	L
Eviden	ce of recent fire	1 = No sign of c						
		e, year burned?						
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
S	service vehicles		other		'			
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of o	describe:					- 39 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_3OTLA012
Date: 3/24/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat non-native forms (Erodium) as necessary; continue to control access via fencing and locked gate.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access control with fencing and locked gate.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB) Horned larks (10+)
NOTES

Acanthomintha ilicifolia (San Diego Thornmint) Otay Lakes



Panorama from North of population, facing West, Southwest, South. Panorama location is 6357069.84 1807513.80 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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	MSP - Rare Plant C)ccurrenc	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Acanthomintha ilicifolia			Common Nar	ne:	San Diego thornmint		
	Existing MSP Occurrence?	yes	MSP Occurr. ID:			ACIL_4SASP025		
	CNDDB Elem. Occur. #:	n/a		Translocated	no			
Preserve:	Sabre Springs			•			Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	-	
Occurrence Name:	Sabre Springs (east subpop 1)						ble Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Melanie Fonta	ana				Affiliation	City of Sar	n Diego
Date:	3/30/2015		Time Start:	10:17		Time Finish:	11:10	
	TATUS - Assess # plants in both species-spe	ocific somplin	a aroa (tunicall	v 10-m radius ci	rela) & in current m	annod avtant. Soo n. A for definitions of	f catagorias (losoribina
phenology & evidence of h	erbivory, disease & stunted growth within the sa						calegones t	lescribing
# Plants/Current Mapped Extent:		7	exact coun	t or estimate?	Exact		uncert.	low
Mapped Extern.	Area of Current Mapped Extent:		7.25	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1				Γ.	1.	
Area	7	10	Ţ	exact co	ount or estimate?	exact	uncert.	IOW
	Sample Area Radius (m)	10		1				
	Phenology In Sampling Area (1-6):	Ū	1 (0%)	Flowering			Fruiting	1 (0%)
			1 (0%)		ering & Fruiting		l	
	Evidence in Sampling Area (1-6):			Disease *	1 (0%)	Stunt	ed Growth	6 (≥75%)
	Is Sampling Area within Current Map	ped Extent?	yes]				
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
								1
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90		1		I			
Locat. 1 CoordE, N	6303376.7	1	1923	3491.2	Direction facing		Height	1.1 m
	Camera angle	10° down	Photo #	845-847	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
	Camera angle				i no locatori			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Adolphia californica		10		Bromus madr			5	
Quercus berberidifolia		5		Bromus horde			1	
Acmispon glaber		3		Brachypodiun			1	
Isocoma menziesii		5					1	
		3		Logfia gallica 1				
Artemisia californica		-		Cuscuta occidentalis 2 Acmispon beermannii 1				
Anagallis arvensis Deinandra fasciculata		10 15		Acmispon hee			1	
				Hedypnois cre			1	
Erodium cicutarium		20		Plantago elor	•		1	
Brassica nigra	2	10		Convolvulus			1	
Apiastrum angustifolium	1	3		Acanthominth			1	
Euphorbia peplus		2		bare ground			20 5	
Centaurea melitensis Festuca myuros		1		rock litter			5	
COVER: Total % Cover:	114	%Herb:	78	%Shrub:	36	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
	012 Vegetation ce/Association:	Baccharis pilula	aris Alliance, B	accharis pilul	aris/Herbaceous	Association		
Cove	er classes (1-4)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)
		Thatch Depth A	verage (cm)	1	Thatch Dep	oth max (cm)	1	
Dead Standing Bio	omass	yes			ī			[
		Brassica/2; Is	ocoma/2		Average	e height (cm)	10	
Mammal Species Activity (ca								
				egetation des	truction, tracks, se	cat, pig) dete	cted.	
ground squirr. activity								
		gopher mounds		<i></i>	100		J	
Sampling area represe					ifferences on pag			
VI. THREATS ASSESSM extent over years of moni page 5 for Overall Site Qu	toring) plus 10)-m surroundi	ng buffer. S				•	
Surrounding Land Use	-	at, or Ijacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank	each as 1-6):	I			,			
Non-native forbs	5 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	-			1 = No sign o	Î			of disturbanc
competitive native pl.	-		urrent grazing	Ť				of disturbanc
	2 = Disturbance		istoric grazing		Î	I compaction	1 = No sign	of disturbanc
encampments	2 = Disturbance	nisto	oric agriculture	1 = No sign (1			
fuel modification	zone/fire break	1 = No sign of o						
road construction				ent, describe:				
		1 = No sign of c		ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin mapped o	occurrence perime	eter or in adja	acent 10 m t	ouffer.
		1 = No sign of o		ent, describe:				
		1 = No sign of c		hin mapped o				
	-	e, year burned?			If trails are pro-	nt are these	outborized	
		e present in >0%			If trails are prese	int, are they a	aumorized?	yes
Type of trail use	hiking		biking		equestrian	no	dog	yes
	service vehicles		other	no				
		2 = Disturbance	describe:					
Other disturbance?	1 = No sign of c	describe:					- 44 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_4SASP025
Date: 3/20/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue herbicide treatment of non-native grasses in conjunction with spot treatments of forbs.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Treated Brachypodium distachyon with herbicides per CBI protocol in February and March 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Hand pulling of Euphorbia during monitoring visit.
*Cuscuta is growing on one ACIL- not sure if this should be categorized as "disease" on page 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 6303376.7 1 1923491.22 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant C)ccurrence	e Monitorii	ng Form 20	15	Page 1		
Scientific Name:	Acanthomintha ilicifolia			Common Nar	ne:	San Diego thornmint		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_4SASP025		
	CNDDB Elem. Occur. #:	n/a	a Translocated no					
Preserve:	Sabre Springs			•	•		Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Sabre Springs (west, subpop 2)						ble Point #:	2
Surveyors:	Kim Roeland, Betsy Miller, Melanie Fonta	ana					City of Sar	
Date:	3/30/2015		Time Start:	11:11		Time Finish:	-	Ŭ Ŭ
	TATUS - Assess # plants in both species-spe	ocific complin	a aroa (tunicall	v 10-m radius ci	clo) & in current m	annod avtant. Soo n. 4 for definitions o	Catagorias d	losoribina
	erbivory, disease & stunted growth within the se					apped extent. See p. 4 for deminuons of	calegones c	lescribing
# Plants/Current Mapped Extent:		7	exact cour	t or estimate?	Exact		uncert.	low
Mapped Extent.	Area of Current Mapped Extent:		3.16	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1				<u> </u>	1.	
Area		10	T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1				
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)
			1 (0%)		ering & Fruiting		l	
	Evidence in Sampling Area (1-6):	-		Disease	1 (0%)	Stunt	ed Growth	2 (>0% to <10%
	Is Sampling Area within Current Map	oped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
								1
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING		1	1		1	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				1			
Coordin's at Center of F	Plot: E:				N:		1	1
Camera type:	Pentax Optio W90		1		1			
Locat. 1 CoordE, N	6303277.45	1	1923	560.66	Direction facing		Height	1.1 m
	Camera angle	10° down	Photo #	848-851	File location	S:\MSCP		-
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			1 11010 #					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Quercus berberidifolia		5		Brachypodium			7	
Baccharis pilularis		20		Brachypodium distachyon Festuca myuros			1	
Isocoma menziesii		5						
		3		Brassica nigra 10 Centaurea melitensis 2				
Artemisia californica		3					2	
Adolphia californica				Sonchus asper 1				
Convolvulus simulan		5		Bromus madritensis 20				
Apiastrum angustifoli		5		Medicago sp			1	
Deinandra fasciculata		15		Geranium ca	alifornica		1	photo
Acanthomintha ilicifo	lia	1						
Anagalis arvensis		2						
Erodium cicutarium		20		bare ground			10	
Euphorbia peplus Helminthotheca echo	ides	10		rock litter			5	
COVER: Total % Cover:	139		103	%Shrub:	36	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
	012 Vegetation ice/Association:	Baccharis pilula	aris Alliance, B	accharis pilul	aris/Herbaceous	Association		
Cove	er classes (1-4)		c Crust Cover:	1 (0%)		hatch Cover		<10%)
		Thatch Depth A	verage (cm)	2	Thatch Dep	oth max (cm)	3	
Dead Standing Bio		yes			I			ľ
		Artemisia/2; o	ther shrub/2;	Nicotiana/2	Average	e height (cm)	50	_
Mammal Species Activity (ca								
				egetation des	truction, tracks, s	cat, pig) dete	cted.	
ground squirr. activity								
gopher activity	2 = Mounds or	gophers observ	ed adjacent to	sampling are	a but not within s	ampling area		
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)		
VI. THREATS ASSESSM extent over years of moni page 5 for Overall Site Qu	toring) plus 10)-m surroundi	ng buffer. S					
Surrounding Land Use	•	at, or Ijacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	5 = Disturbance	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	5 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash	2 = Disturbance	h	istoric grazing	6 = Disturba	soi	l compaction	1 = No sign	of disturbanc
encampments	1 = No sign of	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of a	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin mapped o	occurrence perime	eter or in adja	acent 10 m t	ouffer.
		1 = No sign of a		ent, describe:				
Eviden	ce of recent fire	1 = No sign of o	disturbance wit	hin mapped o				
		e, year burned?						
Trails	2 = Disturbance	e does not occu	r within mappe		If trails are prese	ent, are they	authorized?	yes
Type of trail use	hiking		biking		equestrian	no	dog	yes
	service vehicles		other	no				
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?							- 49 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_4SASP025
Date: 3/20/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue herbicide treatment of non-native grasses in conjunction with spot treatments of forbs.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Treated Brachypodium distachyon with herbicides per CBI protocol in February and March 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Hand pulling of Euphorbia during monitoring visit.

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.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Acanthomintha ilicifolia	Common Name:		San Diego thornmint				
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACIL_4SASP025		
	CNDDB Elem. Occur. #:	-		Translocated	no			
Preserve:	Sabre Springs			•	•		Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Sabre Springs (south, subpop 3)						ole Point #:	3
Surveyors:	Kim Roeland, Betsy Miller, Melanie Fonta	ana				Affiliation City of San Diego		
Date:	3/30/2015		Time Start:	9:10		Time Finish:		Ŭ Ŭ
	TATUS - Assess # plants in both species-spe	ocific somplin	a aroa (typicall	v 10-m radius ciu	clo) & in current m	annod avtant. Soo n. 4 for definitions o	f catogorios (losoribina
	erbivory, disease & stunted growth within the se					apped extent. See p. 4 for deminuons of	calegones (lescribing
# Plants/Current Mapped Extent:		6	exact cour	t or estimate?	Exact		uncert.	low
Mapped Extent.	Area of Current Mapped Extent:		5.46	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known oi	suspected reason:			
# Plants/Sampling		1				Γ.	1.	
Area			1	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1				
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)
			1 (0%)		ering & Fruiting		J	
	Evidence in Sampling Area (1-6):		2 (>0% to <1	Disease	1 (0%)	Stunt	ed Growth	3 (10% to <25%
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING				1	1	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					1		
Coordin's at Center of F	Plot: E:				N:		1	
Camera type:	Pentax Optio W90		1					
Locat. 1 CoordE, N	6303165.8	T	1923	3485.4	Direction facing		Height	1.1 m
	Camera angle	5° down	Photo #	835-839	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			1 11010 #		The location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Adolphia californica		4	1	Brassica nigra			1	
Rhus integrifolia		3		_	eca echioides		1	
Quercus berberidifolia		7		Stipa pulchr			1	
Baccharis sarothroides		1				1		
		1	1 Avena sp.			1		
			Sonchus as			25		
- · · · · ·	Istrum angustifolium 2 coscordion venenosum 1		Bromus mad	im distachyon		25		
		1		DIOIIIUS IIIdo			1	
Deinandra fasciculata		2						
Convolvulus simulan	5	12						
Anagallis arvensis		2		h				
Euphorbia peplus		2		bare ground			15	
Erodium cicutarium Sonchus asper		1		rock litter			5	
COVER: Total % Cover:	70	%Herb:	54	%Shrub:	16	%Tree:		

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE essment c	COM 2012) ategories.
SANDAG 20 Allian	012 Vegetation ce/Association:	Bromus (diandr distachyon Sen	us, hordeaceu ni-Natural Star	s)-Brachypoo d Type	lium distachyon S	Semi-Natural	Stands, Bra	chypodium
Cove	er classes (1-4)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)
		Thatch Depth A	verage (cm)	3	Thatch Dep	oth max (cm)	5	l
Dead Standing Bio		yes unkown shrub	12		Average	e height (cm)	25	í
Mammal Species Activity (ca			<i>Π</i> Ζ		Average	e neight (chi)	23	l
Feral pig activity	1 = No feral pig	activity (rooting	ı, wallowing, ve	egetation des	truction, tracks, s	cat, pig) dete	cted.	1
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket g	gopher mounds	detected.					
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)		
VI. THREATS ASSESSM extent over years of moni- page 5 for Overall Site Qu	toring) plus 10)-m surroundi	ng buffer. S				•	
Surrounding Land Use	•	at, or ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):				T			
Non-native forbs			ral pig activity		Ī			n of disturbanc
Non-native grasses				1 = No sign o				of disturbanc
Non-native woody pl.	· ·			1 = No sign o			· ·	n of disturbanc
competitive native pl.	1 = No sign of of 1 = No sign of of 1 = No sign of 0		urrent grazing istoric grazing	-	Ī			n of disturbanc
	1 = No sign of o		oric agriculture			compaction	1 – 1 1 0 Sigi	
fuel modification					1			
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	6 = Disturbance	e occurs ≥50%	of area within	herbicide treatme	ent of BRDI		
	ORV activity	1 = No sign of c	if prese	ent, describe:				
		1 = No sign of c		hin mapped o				
	-	e, year burned?						
	2 = Disturbance	e does not occu	r within mappe		If trails are prese	ent, are they a	authorized?	yes
Type of trail use	hiking	yes	biking	yes	equestrian	yes	dog	yes
	service vehicles		other	no				
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of	describe:					- 54 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acanthomintha ilicifolia MSP Occur ID. ACIL_4SASP025
Date: 3/20/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue herbicide treatment of non-native grasses in conjunction with spot treatments of forbs.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Treated Brachypodium distachyon with herbicides per CBI protocol in February and March 2015
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Hand pulling of Brassica, Anagallis, Euphorbia during monitoring visit.

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



Panorama from Southwestern edge of subpopulation, facing Southeast, South, Southwest. Panorama location is 6303165.85 1923485.4 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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Acmispon prostratus Nuttall's Lotus



© City of San Diego, 2001

	MSP - Rare Plant C	Occurrence	e Monitorir	ng Form 20	15	Page 1		
Scientific Name:	Acmispon prostratus		Common Name:		Nuttall's acmispon			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACPR_1NMLA001		
	CNDDB Elem. Occur. #:	CNDDB Elem. Occur. #: EO6 Translocated no						
Preserve:	Mission Bay Park						Mgmt Unit	MU1
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Site 1 East of Sea World Drive, West of	Interstate 5 =	No Man's La	nd Site		Sam	ole Point #:	
	Betsy Miller, Kim Roeland, Annabelle Bernabe (1); Keith Greer, Katie Day (2); Rebecca Schwartz							San Diego, (2) (3) San Diego
Surveyors:	(3)		1	1			Audubon	1
Date:	5/21/2015		Time Start:	11:15		Time Finish:	12:30	
	TATUS - Assess # plants in both species-sp erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	f categories o	lescribing
# Plants/Current		2		, it or estimate?	exact		uncert.	very low
Mapped Extent:	Area of Current Mapped Extent:		2	1	square meters	exact (GPS	•	exact (GPS m
		ves		4		detected; decline suspected du		
# Plants/Sampling	-	1					1	[
Area	0		T	exact c	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering			Fruiting	1 (0%)
		Dead	1 (0%)		ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):			Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	oped Extent?	no					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING		[Г	1	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					I		
Coordin's at Center of F	Plot: E:				N:		1	
	Pentax Optio W90							
Locat. 1 CoordE, N	6267668.046		18597	784.459	Direction facing	SE,S,SW, W S:\MSCP	Height	1.1 m
	Camera angle	5° down	Photo #	55-63	File location		1	
Locat. 2 Coord E,N		1			Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page Collection #, or					Collect.# or NC i
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Heliotropium curassavio	cum	3						
Schismus barbata		1						
Heterotheca grandiflora	l	2						
Erodium cicutarium		1						
Camissoniopsis bistorta	3	5						
Glebionis coronaria		5						
Baccharis sarothroides		1						
Erodium botrys		3						
Brassica tournefortii		40						
							_	
				bare ground			20	
<u> </u>				rock (shell) litter			5	
COVER: Total % Cover:	61	%Herb:	60	%Shrub:	1	%Tree:	0	

MSP - R	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMEN (typically 10-m radius circle in the office or field, using "A	e). Vegetati	on alliance/ass	sociation can	be assigned	d using San Dieg	go vegetatio	on key (AE	COM 2012)
SANDAG 2012	Vegetation	Brassica (nigra Type) and Other Mi	ustards Semi-	Natural Stands, B	Brassica nigra	a Semi-Natu	ral Stand
Cover c	alasses (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
	r	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bioma	ISS	no			T			ſ
If yes, cover/s					Average	e height (cm)		
Mammal Species Activity (categ								
Feral pig activity 1 =				egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity 1 =		- -						
gopher activity 1 =							J	
Sampling area representa					lifferences on pag	•		
VI. THREATS ASSESSMEN extent over years of monitori Record notes on page 3. See	ing) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activ	vity at, or Ad	jacent to, Site	open space; t	ransportation				
Argentine ant abundance at bait	t station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank eac	ch as 1-6):				т			
Non-native forbs 5 =	= Disturbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 3 =	= Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl. 1 =	-			1 = No sign (1		-	of disturbanc
competitive native pl. 1 =			urrent grazing		1			of disturbanc
dumping/trash <u>1 =</u>			istoric grazing		Ī	compaction	1 = No sign	of disturbanc
encampments 1 =	= No sign of (histo	oric agriculture	1 = No sign (1			
fuel modification zor	ne/fire break	1 = No sign of c						
road construction/n		0		ent, describe:				
		2 = Disturbance		ent, describe:				[
brush management/					extent or in adjac	ent 10 m buf	fer.	
		T = NO sign of C		ent, describe:				
	-	1 = No sign of one of the sign		thin maxinum	ł			
		-			If trails are prese	ont are they :	authorized?	
Type of trail use		e present in >0%			ו ר			yes
	hiking		biking		equestrian	no	dog	no
	vice vehicles	yes 1 = No sign of c	other describe:	no				
Other disturbance?								
	= No sian of a	describe:					- 61 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acmispon prostratus MSP Occur ID. ACPR_1NMLA001
Date: 5/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat Brassica tournefortii using approved methods once available
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Brassica tournefortii: 2 crops seen during this monitoring visit; the older one with many seeds and a seedling crop
all over. Seeds cleaned from boots and equipment after this site visit.

Acmispon prostratus (Nuttall's Acmispon) Mission Bay – No Man's Land



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.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Acmispon prostratus		Common Name:		Nuttall's acmispon				
	Existing MSP Occurrence?	nce? yes MSP Occurr. ID:			ID:	ACPR_1HOPO002			
	CNDDB Elem. Occur. #:	EO31		Translocated	no				
Preserve:	Mission Bay Park						Mgmt Unit	MU1	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment	
Occurrence Name:	Site 2. Hospitality Point					Sam	ple Point #:	2	
0	Deter Miller Kim Declard Assets II.		tia Dav. (0)			A feili - ti	(1) City of SANDAG	San Diego; (2)	
Surveyors: Date:	Betsy Miller, Kim Roeland, Annabelle Be 5/21/2015	mabe (1), Ka	Time Start:	14:20		Time Finish:	5ANDAG 15:23		
	ł								
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	f categories o	lescribing	
# Plants/Current Mapped Extent:		2026	exact coun	t or estimate?	exact		uncert.	low	
Mapped Extent.	Area of Current Mapped Extent:		2938.99	units	square meters	exact (GPS) or estim?	exact (GPS ma	
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:				
# Plants/Sampling		1					l		
Area		10	T	exact co	ount or estimate?	exact	uncert.	IOW	
	Sample Area Radius (m)	10		Flowering	2 (>0% to <10%	- \	Fruiting	1 (00()	
	Phenology In Sampling Area (1-6):	Vegetative	0 (275%) 1 (0%)		ering & Fruiting		Fruiting	1 (0%)	
	Evidence in Sempling Area (1.6):						ed Growth	1 (09/)	
	Evidence in Sampling Area (1-6): Is Sampling Area within Current Map	-		Disease	1 (0%)	Stuni	eu Growin	1 (0%)	
			yes	1					
	Collection (if not collected previously)?	no			1				
If yes:	Collector	Collector Collection #							
	Museum/Herbarium								
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)								
Coordin's at Center of F	Plot: E:				N:				
Camera type:	Pentax Optio W90								
Locat. 1 CoordE, N	6256864.804	r	18575	560.724	Direction facing		Height	1.1 m	
	Camera angle	5° down	Photo #	3591-3601	File location	S:\MSCP		-	
Locat. 2 Coord E,N				-	Direction facing		Height		
	Camera angle		Photo #		File location				
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any							
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected	
Acmispon prostratus		5							
Washingtonia sp.		1							
Camissoniopsis bistorta	a	5							
Digitaria sanguinalis		10							
Bromus diandrus		7							
Glebionis coronaria		1							
Abronia maritima		1							
				bare ground			60		
				rock litter			5		
COVER: Total % Cover:	30	%Herb:	29		0	%Tree:	1		

MSP - R	are Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMENT (typically 10-m radius circle in the office or field, using "As	e). Vegetations ssociated S	on alliance/ass pecies" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Die	go vegetatio f habitat ass	on key (AE) sessment c	COM 2012) ategories.
SANDAG 2012 Alliance/A	Vegetation Association:	maritima Assoc	iation		mance, Ambrosia	chamissonis		
Cover cla	asses (1-6)	Cryptogamic	Crust Cover:	1 (0%)	Т	hatch Cover	1 (0%)	
	Г	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Biomas		yes			I			1
If yes, cover/sp Mammal Species Activity (categ.		Washingtonia	stump/2		Average	e height (cm)	15	
Feral pig activity 1 =	÷	activity (rooting	. wallowing. ve	egetation des	truction. tracks. s	cat. pig) dete	cted.	
ground squirr. activity 1 =			-					
gopher activity 1 =								
Sampling area representation	ive of mappe	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)	-	
VI. THREATS ASSESSMEN extent over years of monitorir Record notes on page 3. See	ng) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activi	ity at, or Ad	jacent to, Site	Developed pa	ırk, parking lo	t, open channel			
Argentine ant abundance at bait	station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank each	h as 1-6):				r			
Non-native forbs 3 =	Disturbance	fe	ral pig activity	1 = No sign o	alter	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 4 =				1 = No sign o				of disturbanc
Non-native woody pl. 3 =				1 = No sign (of disturbanc
competitive native pl. 1 =	-		urrent grazing	-	-			of disturbanc
dumping/trash 1 = encampments 1 =	-		istoric grazing ric agriculture			r compaction	T = NO Sign	or disturbanc
				T – NO SIGIT	l			
fuel modification zon								
road construction/m	ŀ			ent, describe:				
		1 = No sign of c		ent, describe:				
brush management/r C	DRV activity	7 = Disturbance 1 = No sign of c	e occurs ≥75%		in maxinum exten	it.		
		1 = No sign of c 1 = No sign of c		ent, describe:				
		e, year burned?		in maxinum				
		e present in >0%			If trails are prese	ent, are they	authorized?	yes
Type of trail use	hiking		biking		equestrian	no	dog	-
servi	ice vehicles	-	other		- 1. 	L		2
	, i i i i i i i i i i i i i i i i i i i	1 = No sign of c						
	No sign of e	describe:					- 66 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acmispon prostratus MSP Occur ID. ACPR_1HOPO002
Date: 5/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to pull/remove non-native species. Consider application of herbicide to treat crab grass in areas where ACPR occurs.
VII. MANAGEMENT ACTIONS IN LAST YEAR
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES Probation crew just finished pulling weeds and raking that site; native species avoided. Trails = interpretive walk with
signs.

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



Panorama from Southern edge of population, facing Southwest, West, Northwest. Panorama location is 6256864.804 1857560.724 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.


	MSP - Rare Plant C	ocurrence	e Monitorii	ng Form 20	15	Page 1		
Scientific Name:	Acmispon prostratus			Common Nar	ne:	Nuttall's acmispon		
	Existing MSP Occurrence?	ves		MSP Occurr.	ID:	ACPR 1RRSO003		
	CNDDB Elem. Occur. #:	-		Translocated	no			
Preserve:	Flood Control Channel Southern Wildlife						Mgmt Unit	MU1
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Site 3. Rip Rap South of Hospitality Point	ŀ			g.		ble Point #:	3
Surveyors:	Annabelle Bernabe, Robin Gilson						City of Sar	
Date:	6/3/2015		Time Start:	8:34		Time Finish:	11:25	Diogo
			•				-	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	r categories c	lescribing
# Plants/Current		647	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		262.34	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		•	suspected reason:		/	
# Plants/Sampling		1					1	
Area	0		T	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1	r	1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector		Collection #					
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:			
	State Plane (ft)		accur. units.	meters	Datum	NAD00	1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90				IN.			
Locat. 1 CoordE, N	6258823.55		1957	305.75	Direction facing	SW W NW	Height	1.1 m
,						S:\MSCP	Tieight	1.1111
	Camera angle	Level	Photo #	4017-4027				
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page Collection #. o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Pennisetum setaceum		45						
Distichlis spicata		10						
Salicornia pacifica		5						
Salsola tragus		1						
Medicago polymorpha		1						
Bromus diandrus		1						
Brassica tournefortii		3						
Frankenia salina		5						
Glebionis coronaria		3						
Malva parviflora		1						
Erodium cicutarium		1						
Melilotus indicus		1		bare ground			7	
Heterotheca grandiflora		1		rock			10	
Tribulis terrestris	_	1		litter			45	
COVER: Total % Cover:	79	%Herb:	74	%Shrub:	5	%Tree:	0	

MSP - Rare	Plant	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMENT IN (typically 10-m radius circle). V in the office or field, using "Assoc	egetatio	on alliance/as pecies" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
SANDAG 2012 Veg Alliance/Asso		Distichlis spicat	a Alliance, Dis	tichlis spicata	a-Annual Grasses	Association		
Cover classe	es (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
	Г	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Biomass		no			т			1
If yes, cover/specie					Average	e height (cm)		
Mammal Species Activity (categ. 1-4		activity (reating		actation day	truction tracks of	oot nig) data	otod	
Feral pig activity 1 = No t			-					
ground squirr. activity 2 = Burn gopher activity 1 = No					sampling area bu	t not within s	ampling are	
Sampling area representative c		•		(If no note d	lifferences on pag	10.2)	1	
VI. THREATS ASSESSMENT IN							m avtant (oumulativo
extent over years of monitoring) Record notes on page 3. See Arg	plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity a	t, or Ad	jacent to, Site	flood control o	channel, park	ing			
Argentine ant abundance at bait stati	ion (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank each as	: 1-6):				т			
Non-native forbs 4 = Dist	turbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 5 = Dist			trampling	1 = No sign (of disturbanc
Non-native woody pl. 1 = No				1 = No sign (1			of disturbanc
competitive native pl. <u>1 = No</u>			urrent grazing		1			of disturbanc
dumping/trash 3 = Dist			istoric grazing	-	Ī	compaction	$\gamma = No sign$	of disturbanc
encampments 1 = No s	sign of e	nisic	ric agriculture	T = NO SIGN (1			
fuel modification zone/fire	e break	1 = No sign of o						
road construction/mainte				ent, describe:				
illegal vegetation o				ent, describe:				
brush management/resto	o otivitvi					ent 10 m but	fer.	
		1 = No sign of c		ent, describe:				
Evidence of rec		1 = No sign of o e, year burned?		nin maxinum	l			
		-			If trails are prese	ent. are thev	authorized?	
Type of trail use $2 = Dist$	hiking	e does not occur	within maxim biking		equestrian	-		yes
service v			other		equestindi		dog	300
	- F	1 = No sign of o		,00	1			
Other disturber and	sign of (describe:					- 71 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acmispon prostratus MSP Occur ID. ACPR_1RRS0003
Date: 6/3/2015
VI. MANAGEMENT RECOMMENDATIONS
VII. MANAGEMENT ACTIONS IN LAST YEAR
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Sampling area had greatest amount of P. setaceum in comparison to the maximum extent. Paved bike path is adjacent to population area.
adjacent to population area.

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



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



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Acmispon prostratus			Common Nar	ne:	Nuttall's acmispon		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ACPR_1MAPO004		
	CNDDB Elem. Occur. #:	EO28		Translocated	no			
Preserve:	Mission Bay Park						Mgmt Unit	MU1
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depart	tment
Occurrence Name:	Site 4. Mariner's Point, Least Tern Nestir	ig Site				Sam	ole Point #:	4
Surveyors:	Betsy Miller, Kim Roeland		-			Affiliation	City of San	1 Diego
Date:	5/22/2015		Time Start:	13:07		Time Finish:	13:30	
nhanology & avidance of h	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	ⁱ categories d	lescribing
# Plants/Current	N/A			nt or estimate?			uncert.	
Mapped Extent:	Area of Current Mapped Extent:	N/A		units		exact (GPS	4	
	Species Found in Maximum Extent?		if not	-	suspected reason:		<u></u>	
# Plants/Sampling		1	L	·	•		1	
Area	N/A		1	exact co	ount or estimate?		uncert.	L
	Sample Area Radius (m)			1		1		
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	L
		Dead		Flow	ering & Fruiting		j	
	Evidence in Sampling Area (1-6):	Herbivory		Disease		Stunt	ed Growth	<u> </u>
	Is Sampling Area within Current Map	ped Extent?						
	Collection (if not collected previously)?			1				
If yes:	Collector		Collection #					
	Museum/Herbarium							
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING		1	1			
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83	İ	
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			r
	Pentax Optio W90				1		ļ	
Locat. 1 CoordE, N	6255570.1	r	1857	963.18	Direction facing		Height	1.1 m
	Camera angle	15° down	Photo #	609-612	File location	S:\MSCP		
Locat. 2 Coord E,N		r		T	Direction facing		Height	
	Camera angle		Photo #		File location			
		•		•				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any						
species/substrate		% Cover	Collection #, o collected	or NC if not	species/substrate			Collect.# or NC if not collected
Acmispon prostratus		3						
Camissoniopsis bistorta	I	1						
Ambrosia chamissonis		5						
Abronia maritima		3						
Nemacaulis denudata		1						
Bromus diandrus		1						
Digitaria sanguinalis		20						
Camissoniopsis cheiran	thifolia	2						
Mesembryanthemum cr	ystallinum	2						
Cakile maritima		1						
				bare ground				
				rock				
		0/111		litter		0/ -		
COVER: Total % Cover:		%Herb:		%Shrub:		%Tree:	L!	ł

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2	
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4 t	d using San Die for definitions of	go vegetatio habitat ass	on key (AE) essment c	COM 2012) ategories.	
SANDAG 20 Allian	012 Vegetation ice/Association:	Vegetation Ambrosia chamissonis-Abronia maritima Alliance, Ambrosia chamissonia-Abronia maritima-Cakile Association: maritima Association							
Cove	er classes (1-6)	Cryptogamic	Crust Cover:		Т	hatch Cover			
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)			
Dead Standing Bio	omass				ſ			ſ	
	er/species class				Average	e height (cm)			
Mammal Species Activity (ca									
Feral pig activity									
ground squirr. activity									
gopher activity				(If we wate d	:66				
Sampling area represe					ifferences on pag				
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	ee page 4 f	or definitions of				
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site							
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #			
DISTURBANCES (Rank	each as 1-6):				r				
Non-native forbs		fe	ral pig activity		alter	ed hydrology			
Non-native grasses			trampling			erosion			
Non-native woody pl.			vandalism			urban runoff			
competitive native pl.			urrent grazing			e movement			
dumping/trash encampments			istoric grazing pric agriculture		SOI	l compaction			
encampments		Tiste	ne agriculture		L				
fuel modification	zone/fire break								
road constructio			if prese	ent, describe:					
	etation clearing		if prese	ent, describe:					
brush manageme	ORV activity								
Eviden	ce of recent fire		if prese	ent, describe:					
	sign of recent fire								
Trails	-				If trails are prese	ent, are they a	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
	service vehicles		other						
	illegal trail use?		describe:						
Other disturbance?		describe:					- 76 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acmispon prostratus MSP Occur ID. ACPR_1MAPO004
Date: 5/22/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to maintain fencing and continue SD Audubon's work (including Transnet project)
VII. MANAGEMENT ACTIONS IN LAST YEAR
Fencing and signs in place around site; SD Audubon actively manages site with funds from Transnet
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
California least tern (designated nesting site); horned larks also present
NOTES
Full habitat assessment not completed due to site being closed for least tern nesting season

Acmispon prostratus (Nuttall's Acmispon) Mariners Point



Panorama from Northern edge of population, facing Southeast, South, Southwest. Panorama location is 6255570.10 1857963.18 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.

	MSP - Rare Plant C	ccurrence	e Monitoriı	ng Form 20 [°]	15	Page 1		
Scientific Name:	Acmispon prostratus		Common Name:			Nuttall's acmispon		
	Existing MSP Occurrence?	yes		MSP Occurr.	D:	ACPR_1DUTR005		
	CNDDB Elem. Occur. #:	EO6		Translocated?	yes			
Preserve:	Mission Bay Park						Mgmt Unit	MU1
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depart	tment
Occurrence Name:	Site 5. Dune Triangle					Sam	ple Point #:	5
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	mabe				Affiliation	City of San	n Diego
Date:	5/21/2015		Time Start:	13:30		Time Finish:	13:52	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	f categories d	lescribing
# Plants/Current		0		t or estimate?	exact		uncert.	very low
Mapped Extent:	Area of Current Mapped Extent:		0	1	square meters	exact (GPS	-	exact (GPS ma
		no		4	suspected reason:			n recent years
# Plants/Sampling							1	,
Area	0		ľ	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	-	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flowe	ering & Fruiting	1 (0%)]	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	no					
	Collection (if not collected previously)?	no		1				
If yes:	Collector				Collection #			
1 900.								
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6266528.388		18586	516.164	Direction facing	NE, E, SE, S, SW	Height	1.1 m
	Camera angle	10-15° down	Photo #	3569-3577	File location	S:\MSCP		
Locat. 2 Coord E,N	Ť			•	Direction facing		Height	
	Comora onglo		Photo #	3578-3589	File location			
	Camera angle		FIIOLO #	3576-3589	T IIE IOCALION			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate			Collect.# or NC if not collected
Eriogonum fasciculatum	1	1	Concelea		species/substrate		70 00001	
Isocoma menziesii	1	1						
Encelia californica		40						
Heliotropium curassavio	nim	40						
Melilotus sp.		7						
Glebionis coronaria		1						
Brassica tournefortii		2						
Centaurea melitensis		1						
		1					<u> </u>	
-								
							<u> </u>	
				bare ground			30	
				rock			1	
				litter (shell)			2	
COVER: Total % Cover:	54	%Herb:	12	%Shrub:	42	%Tree:	0	

MSP -	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Pag	e 2
IV. HABITAT ASSESSME (typically 10-m radius cir in the office or field, using	rcle). Vegetati "Associated S	on alliance/as Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012)
	012 Vegetation ce/Association:		iica Alliance, E	ncelia califori	nica-Artemisia cal	ifornica Asso	ociation	
Cove	er classes (1-6)	Cryptogami	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	Average (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio		yes			1			ſ
If yes, cove Mammal Species Activity (ca		Encelia and Is	socoma/3		Average	e height (cm)	100	l
Feral pig activity		activity (rooting	, wallowing, ve	egetation des	truction, tracks, s	cat, pig) dete	ected.	
ground squirr. activity				<u> </u>	i			
		gopher mounds						
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	je 3)	_	
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. §	toring) plus 10)-m surroundi	ing buffer. S	See page 4 f	or definitions of			
Surrounding Land Use/Ac	ctivity at, or Ac	ljacent to, Site	open space; t	ransportation	; bike path			
Argentine ant abundance at I	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank e	each as 1-6):	1		r	т			
Non-native forbs			eral pig activity		l			of disturbanc
Non-native grasses	-			1 = No sign (of disturbanc
Non-native woody pl.				1 = No sign (†			of disturbanc
competitive native pl. dumping/trash			urrent grazing		1		-	of disturbanc
	1 = No sign of o		oric agriculture		Ī	reompaction	1 – 140 Sigi	
fuel modification			1		1			
road constructio	on/maintenance	1 = No sign of o	if prese	ent, describe:				
illegal vege	etation clearing	1 = No sign of o	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	thin maxinum	extent or in adjac	ent 10 m but	ffer.	
	ORV activity	T = NO SIGN OF C		ent, describe:				
		1 = No sign of o		thin maxinum				
	-	e, year burned?]			
	2 = Disturbance	e does not occu	r within maxim		If trails are prese		authorized?	yes
Type of trail use	hiking		biking	yes	equestrian	no	dog	no
	service vehicles		other	no				
	megai trall use?	1 = No sign of o	describe:					
Other disturbance?	1 = No sign of	describe:					- 80 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acmispon prostratus MSP Occur ID. ACPR_1DUTR005
Date: 5/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat Brassica tournefortii using best available methods
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
BSSP singing from marsh within flood control channel
NOTES
bike path adjacent to site

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.



Source: San GIS & City of San Diego Park & Rec Created by: Annabelle Bernabe, 2015

Min Area: 0.00 sq. m.





	MSP - Rare Plant C	ocurrence	e Monitorii	ng Form 20	15	Page 1		
Scientific Name:	Acmispon prostratus			Common Name: Nuttall's acmispon				
	Existing MSP Occurrence?	yes MSP Occurr. ID:			ACPR 1SOSH006			
	CNDDB Elem. Occur. #:			Translocated				
Preserve:	Mission Bay Park Mgmt Unit MU1							
Land Owner:	City of San Diego Land Mangr: City of San Diego Park and Recreation Department							
Occurrence Name:	Site 6. South Shores Sample Point #:							
						Cum		6 San Diego; (2)
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be (3)	rnabe (1); Ke	eith Greer, Ka	tie Day (2); Re	becca Schwartz	Affiliation		(3) San Diego
Date:	5/21/2015		Time Start:	8:40		Time Finish:	11:00	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	f categories o	describing
# Plants/Current		431	exact cour	t or estimate?	exact		uncert.	very low
Mapped Extent:	Area of Current Mapped Extent:		6855.51	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	- found, known or	suspected reason:			
# Plants/Sampling		1	•				1	
Area	1		T	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)			1		1		
	Phenology In Sampling Area (1-6):	Vegetative	6 (≥75%)	Flowering			Fruiting	1 (0%)
		Dead	1 (0%)		ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If yes:	Collector			I	Collection #			
ii yoo.								
	Museum/Herbarium							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)						-	
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6266789.998		18594	195.947	Direction facing	S,SW, W, NW	Height	1.1 m
	Camera angle	10° down	Photo #	33-40	File location	S:\MSCP		
Locat. 2 Coord E,N		•		•	Direction facing		Height	
,			Dhata #	44.50				4
	Camera angle		Photo #	41-53	File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
		°(0	Collection #, o				0/ O	Collect.# or NC if
species/substrate		% Cover	collected		species/substrate	din n biomana	% Cover	not collected
Acmispon prostratus		1		Dead Carpob	rotus = dead stan			
Baccharis sarothroides		1						
Heliotropium curassavio		1						
Carpobrotus edulis (aliv	· ·	1						
Camissoniopsis lewesii		1						
Lepidium sp.		1						
Chenopodium murale		1						
Glebionis coronaria		2						
Erodium cicutarium		1						
Schismus barbatus		1						
Heterotheca grandiflora		1					-	
Brassica tournefortii Melilotus offinalis		35		bare ground rock (SHELL)		5	
				litter	1		5	
COVER: Total % Cover:	48	%Herb:	47	%Shrub:	1	%Tree:	0	

MSP -	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMI (typically 10-m radius cir in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	012 Vegetation ce/Association:) and Other Mi	ustards Semi-	Natural Stands, E	Brassica nigra	a Semi-Natu	ral Stand
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass er/species class	yes Carpobrotus s	sn /3		Average	e height (cm)	5	
Mammal Species Activity (ca			,p., o		, werage			
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, se	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket g	gopher mounds	detected.					
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	je 3)		
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. §	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Ad	ctivity at, or Ad	ljacent to, Site	transportation	; river channe	el			
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank e	each as 1-6):				т		r	
Non-native forbs			eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.				1 = No sign (t			of disturbanc
competitive native pl.			urrent grazing		1			of disturbanc
dumping/trash			istoric grazing		l	l compaction	1 = No sign	of disturbanc
encampments	1 = No sign of (histo	oric agriculture	1 = No sign	1			
fuel modification	zone/fire break	1 = No sign of o						
road constructio				ent, describe:				
	etation clearing			ent, describe:				
brush manageme	ent/restoration	7 = Disturbance	e occurs ≥75%	6 of area with	in maxinum exten	t.		
		1 = No sign of o		ent, describe:				
	ce of recent fire			thin maxinum				
lf s	sign of recent fire	e, year burned?						
	1 = No sign of c	disturbance with	in maxinum ex		If trails are prese	ent, are they	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
s	service vehicles		other					
i	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sian of a	describe:					- 85 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Acmispon prostratus MSP Occur ID. ACPR_1SOSH006
Date: 5/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue San Diego Audubon's management of the site; continue management of iceplant but consider starting management focusing on the Sahara mustard moving forward, including reaching out to desert land managers
VII. MANAGEMENT ACTIONS IN LAST YEAR SD Audubon management of site using TransNet grant funding; management included herbicide application by
contractor targeting ice plant on 3 dates in 2014 and hand removal of ice plant using City Probation crews on three
occasions in 2014.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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 6266789.998 1859495.947 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Ambrosia pumila San Diego Ambrosia



© City of San Diego 2015

MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Ambrosia pumila			Common Name:		San Diego ambrosia		
	Existing MSP Occurrence?	yes		MSP Occurr. ID:		AMPU_4KULA005		
	CNDDB Elem. Occur. #:	EO12		Translocated				
Preserve:	Mission Trails Regional Park		Mgmt Unit MU4					
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	- v	
Occurrence Name:	Kumeyaay Lake						1	
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	mabe Jasor	Allen			· · · · · · · · · · · · · · · · · · ·	City of Sar	
Date:	5/19/2015			9:15		Time Finish:		
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	t categories d	lescribing
# Plants/Current		28456	exact cour	t or estimate?	exact		uncert.	medium
Mapped Extent:	Area of Current Mapped Extent:		7930.27	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves	if not	•	suspected reason:		,	
# Plants/Sampling		1	1		•		1	
Area	0		т	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	no					
	Collection (if not collected previously)?	no		1				
If you:		110						
If yes:	Collector	Collection #						
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
2	State Plane (ft)						1	
Coordin's at Center of F	· ·				N:			
	Pentax Optio W90				•			
	6321443.02		1886	016.48	Direction facing	NW. N. NE. E	Height	50 in
	Camera angle	5° down	Photo #		File location	S:\MSCP		
Locat. 2 Coord E,N		5 down	1 11010 #	5500-5571	Direction facing		Height	
Local. 2 Coold L,N					Ŭ		Theight	
	Camera angle		Photo #		File location			
III ASSOCIATED S	PECIES If need more room, record additiona	l data and anv	notes on nage	3				
		r data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Eriogonum fasciculatum	1	10		Isocoma men	ziesii		1	
Nuttallanthus texanus		7		Daucus pusillus			1	
Artemisia californica		1		Deinandra fasciculata			1	
Centaurea melitensis		1		Pseudognaphalium californicu		n	1	
Heteromeles arbutifolia		1		Camissoniopsis bistorta			2	
Brassica nigra		1		Corethrogyne filaginifolia			1	
Croton setigerus		2						
Quercus agrifolia		1	(planted)					
Erodium botrys		7						
Baccharis sarothroides		1						
Populus fremontii		1	(planted)					
Crassula connata		1		bare ground			1	
Bromus madritensis		1		rock			0	
Festuca myuros COVER: Total % Cover:	43	1 %Herb:	27	litter %Shrub:	14	%Tree:	2	
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·						

MSP - Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.							
SANDAG 2012 Vegetation Alliance/Association:	Artemisia califo fasciculatum-M	rnica-Eriogonı alosma laurina	um fasciculatu Association	um Alliance, Artem	nisia californi	ca-Eriogonu	IM
Cover classes (1-6)	Cryptogami	c Crust Cover:	1 (0%)	Т	hatch Cover	1 (0%)	
	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Biomass	yes			T			ſ
If yes, cover/species class	unknown shru	ıb		Average	height (cm)	80	
Mammal Species Activity (categ. 1-4)	r optivity (ropting		actation day	truction tracks or	ot pig) data	atad	
Feral pig activity 1 = No feral pig ground squirr. activity 1 = No ground			egetation des		at, pig) dete	cieu.	
gopher activity 1 = No pocket						(old)	
Sampling area representative of mapp			(If no note d	lifferences on page	e 3)	(010)	
VI. THREATS ASSESSMENT IN MAXI		<i>.</i>		1 0	,	m extent (cumulative
extent over years of monitoring) plus 10 Record notes on page 3. See Argentine)-m surroundi	ng buffer. S	See page 4 f	or definitions of			
Surrounding Land Use/Activity at, or Ac	ljacent to, Site	open space; <u>(</u>	gravel parking	ı lot			
Argentine ant abundance at bait station (1-4)	2 = 1-50 Arge	ntine ants de	tected at bait stati	on.		
Time start 9:20 AM	Temp start	66F		Time end	9:45 AM	Temp end	66F
Ant sample collected? yes	Ant sample #		5	Ant Sta	tion Photo #	3518	
DISTURBANCES (Rank each as 1-6):	1			т			
Non-native forbs <u>3 = Disturbance</u>		eral pig activity		1			of disturbanc
Non-native grasses 3 = Disturbance			1 = No sign (of disturbanc
Non-native woody pl. $1 = No sign of contract of the second seco$	1		1 = No sign (t			of disturbanc
competitive native pl. <u>1 = No sign of</u> dumping/trash <u>1 = No sign of</u>		urrent grazing istoric grazing	•	1			of disturbanc
encampments 1 = No sign of		oric agriculture		Ī	compaction	1 – 140 Sign	
fuel modification zone/fire break	[1	1 No olgin	1			
road construction/maintenance			ant describer				
illegal vegetation clearing			ent, describe: ent, describe:				
brush management/restoration				extent or in adiac	ent 10 m but	fer	
ORV activity	1 = No sign of o	if prese	ent, describe:				
Evidence of recent fire							
If sign of recent fir	e, year burned?						
Trails 2 = Disturbance	e does not occu	r within maxim		If trails are prese	nt, are they a	authorized?	yes
Type of trail use hiking	yes	biking	yes	equestrian	yes	dog	yes
service vehicles		other	no				
illegal trail use?	1 = No sign of o	describe:					
Other disturbance? $1 = No sign of contract of the second	describe:					- 91 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Ambrosia pumila MSP Occur ID. AMPU_4KULA005
Date: 5/19/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue the herbicide treatment as needed (e.g. spot-spraying for Erodium and Brassica, and control of non-native grasses)
VII. MANAGEMENT ACTIONS IN LAST YEAR
Application of herbicide: glyphosate spot spray and fusilade along perimeter
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
YBCH and YEWA heard calling from riparian area near the lake; Orange-throated whiptail seen on mounds with
buckwheat near the western edge of the population
NOTES

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



Panorama from Western edge of population, facing Northwest, North, Northeast, East. Panorama location is 6321443.02 1886016.48 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Bloomeria clevelandii San Diego Goldenstar



© City of San Diego, 2015

MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Bloomeria clevelandii		Common Name:		San Diego goldenstar			
	Existing MSP Occurrence?	yes		MSP Occurr. ID:		BLCL_4EAEL014		
	CNDDB Elem. Occur. #:	EO3	Translocated no					
Preserve:	Mission Trails Regional Park						Mamt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	East Elliott				<u> </u>	Sample Point #:		
Surveyors:	Kim Roeland, Betsy Miller, Annnabelle B	ernabe					City of Sar	n Diego
Date:	4/14/2015		Time Start:	15:48		Time Finish:		
					())); ())			
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	t categories d	lescribing
# Plants/Current		1100	exact cour	t or estimate?	estimate (extrap	olate partial ct)	uncert.	medium
Mapped Extent:	Area of Current Mapped Extent:		25054		square meters) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves			suspected reason:		,	
# Plants/Sampling		1		, .			1	
Area	191		т	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	h	1		r
	Phenology In Sampling Area (1-6):	Vegetative	2 (>0% to <1	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				1				
	Collection (if not collected previously)?	no						
If yes:	Collector		Collection #					
	Museum/Herbarium							
IL SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)		accur. units.	meters	Datam.	N/1200	1	
Coordin's at Center of F	· ·				N:			
	Pentax Optio W90	l						
Locat. 1 CoordE, N	63192620.21		1801	551.76	Direction facing	W, SW, S, SE, E	Height	1.1 m
,	2	100.1			-	S:\MSCP	rieigiit	1.110
	Camera angle	10° down	Photo #	3167-3173	File location			
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Bloomeria clevelandii		3		Bromus horde	aceus		5	
Malosma laurina		6		Artemisia californica			2	
Salvia apiana		3		Brachypodium distachyon			40	
Ceanothus tomentosus		3		Sisyrinchium bellum			2	
Rhamnus crocea		3		Avena sp.			1	
Mimulus aurantiacus		2						
Acmispon glaber		2						
Deinandra fasciculata		4						
Osmadenia tenella		3						
Stipa pulchra		2						
Galium angustifolium		1						
Centaurea melitensis		2		bare ground			7	
Hypochaeris glabra		1		rock			15	
Bromus madritensis		5		litter			3	
COVER: Total % Cover:	90	%Herb:	71	%Shrub:	19	%Tree:	0	

MSP - Rare Plan	t Habitat and	Threats As	Assessment Form 2015 Page 2				
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.							
SANDAG 2012 Vegetatio Alliance/Associatior		a Alliance, Ma	losma laurina	-Lotus scoparius	Association		
Cover classes (1-6) Cryptogami	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)
	Thatch Depth A	Average (cm)	2	Thatch Dep	oth max (cm)	2	
Dead Standing Biomass	yes			r			r
If yes, cover/species clas	s Acmispon gla	ber (?)/2		Average	e height (cm)	15	
Mammal Species Activity (categ. 1-4)							
Feral pig activity 1 = No feral p	ig activity (rooting	g, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity 1 = No ground	d squirrel burrows	detected.					
gopher activity 1 = No pocket	gopher mounds	detected.					
Sampling area representative of map	ped occurrence?	yes	(If no, note d	ifferences on pag	je 3)		
VI. THREATS ASSESSMENT IN MAX extent over years of monitoring) plus 1 Record notes on page 3. See Argentin	0-m surround e Ant Protocol (i ng buffer . S USGS 2015)	See page 4 f	or definitions of		•	
Surrounding Land Use/Activity at, or A	djacent to, Site	open space					
Argentine ant abundance at bait station (1-	4)	1 = No ants d	etected at ba	it station or in vici	nity.		
Time start 3:45 AM	1 Temp start	75 F		Time end	4:20 AM	Temp end	75 F
Ant sample collected? no	Ant sample #			Ant Sta	ition Photo #	3174	L
DISTURBANCES (Rank each as 1-6):	-			,			
Non-native forbs 3 = Disturban	<u>ce</u> fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 6 = Disturban	26	trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl. 1 = No sign of	- o	vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl. 1 = No sign of		current grazing	1 = No sign o	i i i i i i i i i i i i i i i i i i i			of disturbanc
dumping/trash 1 = No sign of		istoric grazing			l compaction	1 = No sign	of disturbanc
encampments 1 = No sign of	histo	oric agriculture	1 = No sign of				
fuel modification zone/fire brea	k 1 = No sign of o			r			
road construction/maintenanc			ent, describe:				
illegal vegetation clearin			ent, describe:				
brush management/restoration	1 = No sign of o	disturbance wit	thin maxinum	extent or in adjac	ent 10 m but	ffer.	
	y 1 = No sign of o		ent, describe:				
Evidence of recent fir			6 of area with				
If sign of recent f	-		2003	4			
Trails 1 = No sign of	disturbance with	in maxinum ex		If trails are prese	ent, are they	authorized?	
Type of trail use hiking	9	biking		equestrian		dog	
service vehicle	s	other					
illegal trail use	? 1 = No sign of o	describe:		illegal trail ha	ad been bru	ished and i	s recovering
Other disturbance? 1 = No sign of	describe:					- 97 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4EAEL014
Date: 4/14/2015
VI. MANAGEMENT RECOMMENDATIONS Continue to monitor and make sure old illegal trail does not start getting more use.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Trail brushing and signs installed to close illegal trail.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
2 rattlesnakes

Bloomeria clevelandii (San Diego Goldenstar) East Elliott # 1



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



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Bloomeria clevelandii			Common Name: San Dieg		an Diego goldenstar		
	Existing MSP Occurrence?	yes		MSP Occurr. ID:		BLCL_4EAEL014		
	CNDDB Elem. Occur. #:	EO3		Translocated?				
Preserve:	Mission Trails Regional Park				•		Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	East Elliott					Sample Point #:		
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/14/2015		Time Start:	14:48		Time Finish:	15:09	
	TATUS - Assess # plants in both species-spe	ocific complin	a aroa (typicall	v 10-m radius cir	clo) & in current m	annad avtant. Soo n. 4 for definitions of	Catagorias d	losoribina
phenology & evidence of h	erbivory, disease & stunted growth within the sa						calegones c	lescribing
# Plants/Current Mapped Extent:		7	exact coun	t or estimate?	exact	1	uncert.	low
mapped Extern.	Area of Current Mapped Extent:		8.07	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling	-]						
Area		10	ľ	exact co	ount or estimate?	exact	uncert.	IOW
	Sample Area Radius (m)	10	4 (00()		4 (00()]	En sitis a	4 (00()
	Phenology In Sampling Area (1-6):	Vegetative		Flowering		4 (00/)	Fruiting	1 (0%)
			1 (0%)		ering & Fruiting			4 (00()
	Evidence in Sampling Area (1-6):	,		Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	10					
	Collection (if not collected previously)? no							
If yes:	Collector		Collection #					
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT	ORING					[
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83	J	
	State Plane (ft)							
Coordin's at Center of F					N:			
Camera type: Locat. 1 CoordE, N	Pentax Optio W90 6317389.9		10015					
200at. 1 000id2, N				65.895	Direction facing	N, W, S S:WSCP	Height	1.1 m
	Camera angle	5° up	Photo #	3158-3166	File location			
Locat. 2 Coord E,N		[Direction facing		Height	
	Camera angle		Photo #		File location			
				•				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	Collection #, or					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Adenostoma fasciculatu	ım	20		Lepidium sp.			1	
Eriogonum fasciculatum	1	3		Festuca myuros			10	
Malosma laurina		7		Hypochaeris glabra			2	
Ceanothus tomentosus		25		Cordylanthus rigidus			1	
Deinandra fasciculata		5		Salvia mellifera			1	
Pseudognaphalium cali	fornicum	1						
Logfia filaginoides		3						
Chlorogalum parviflorur	n	2						
Acmispon glaber		1						
Osmadenia tenella		1						
Crassula connata		2						
Acmispon heermannii		1		bare ground			20	
Erodium cicutarium Daucus pusillus		1		rock litter			30 15	
COVER: Total % Cover:	88	%Herb:	31	%Shrub:	57	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2	
	r cle) . Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4 t	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.	
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)	0	Thatch Dep	oth max (cm)	0		
Dead Standing Bio	mass	yes			ſ			r	
		unknown shru	b/2	b/2 Average height (cm) 7					
Mammal Species Activity (ca	ateg. 1-4)								
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.		
ground squirr. activity	1 = No ground	squirrel burrows	detected.						
gopher activity	1 = No pocket (gopher mounds	detected.						
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)			
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. S	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/Ac	ctivity at, or Ac	ljacent to, Site	Open space						
Argentine ant abundance at I	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #			
DISTURBANCES (Rank e	each as 1-6):				_				
Non-native forbs	3 = Disturbance	fe	ral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc	
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc	
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc	
dumping/trash	1 = No sign of	h	istoric grazing	1 = No sign o	soil	compaction	1 = No sign	of disturbanc	
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o					
fuel modification	zone/fire break	1 = No sign of c							
road constructio	n/maintenance	3 = Disturbance	if prese	ent, describe:					
illegal vege	etation clearing	1 = No sign of o	if prese	ent, describe:					
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin maxinum	extent or in adjac	ent 10 m buf	fer.		
	ORV activity	3 = Disturbance	if prese	ent, describe:					
Evidenc		7 = Disturbance		of area with					
		e, year burned?							
Trails	3 = Disturbance	e present in >0%	<u>₀́ to <10%</u> of a		If trails are prese	ent, are they	authorized?	yes	
Type of trail use	hiking		biking		equestrian		dog		
s	ervice vehicles	yes	other	no					
i	llegal trail use?	1 = No sign of o	describe:						
Other disturbance?	1 = No sign of						- 102 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4EAEL014
Date: 4/14/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Bloomeria clevelandii (San Diego Goldenstar) East Elliott # 2



Panorama from Southeastern edge of population, facing North, West, South. Panorama location is 6317389.88 1894565.90 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.


	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Bloomeria clevelandii			Common Nan	ne:	San Diego goldenstar			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_4EAEL014			
	CNDDB Elem. Occur. #:	EO3		Translocated?					
Preserve:	Mission Trails Regional Park						Mgmt Unit	MU4	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department			
Occurrence Name:	East Elliott					Sam	ble Point #:	3	
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	Diego	
Date:	4/14/2015		Time Start: 11:20			Time Finish:	12:05		
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	^f categories c	lescribing	
# Plants/Current		59 exact count or estimate? exact			uncert.	low			
Mapped Extent:	Area of Current Mapped Extent:		1900.7	1	square meters	exact (GPS	4	exact (GPS ma	
		yes		•	suspected reason:		/		
# Plants/Sampling		1					1		
Area	5		r	exact co	ount or estimate?	exact		very low	
	Sample Area Radius (m)	10		1		1			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	oped Extent?	yes						
	Collection (if not collected previously)?	no							
If yes:	Collector	Collection #							
	Museum/Herbarium								
	Wuseunin Terbanum								
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)				r				
Coordin's at Center of F	lot: E:				N:		n		
Camera type:	Pentax Optio W90				r				
Locat. 1 CoordE, N	6316943.661	T	18959	945.738	Direction facing		Height	1.1 m	
	Camera angle	5° down	Photo #	3143-3150	File location	S:\MSCP			
Locat. 2 Coord E,N					Direction facing		Height		
	Camera angle		Photo #		File location				
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.					
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected	
Bloomeria clevelandii		1		Selaginella cir			3		
Adenostoma fasciculatu	ım	17		Navarretia ha			2		
Eriogonum fasciculatum		7							
Lasthenia coronaria		4							
Crassula connata		3							
Chlorogalum parviflorur	n	2							
Logfia filaginoides		2							
Acmispon glaber		1							
Hypochaeris glabra		3							
Centaurea melitensis		2							
Festuca myuros		2							
Bromus madritensis		3		bare ground			30		
Erodium botrys		1		rock			20		
Calochortus splendens		1		litter	ſ	Г	7		
COVER: Total % Cover:	54	%Herb:	29	%Shrub:	25	%Tree:	0		

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using SANDAG 2 Alliar	rcle). Vegetati "Associated S	on alliance/ass Species" data f Adenostoma fa	sociation can rom page 1. s sciculatum-Xy	be assigned See page 4 ococcus bico	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	er classes (1-6)		c Crust Cover:		т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio		yes			I			ſ
	er/species class	Acmispon gla	ber/2; unknov	vn shrubs/2	Average	e height (cm)	7	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket g	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):				_			
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of o						
road construction	on/maintenance	2 = Disturbance	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin maxinum	extent or in adjac	ent 10 m buf	fer.	
	ORV activity	1 = No sign of c	if prese	ent, describe:				
Eviden	ce of recent fire							
	sign of recent fire			2003				
Trails	2 = Disturbance	e does not occu	r within maxim		If trails are prese	ent, are they a	authorized?	ves
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other	no				
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of			-			- 107 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4EAEL014
Date: 4/14/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Coast horned lizard
NOTEO
NOTES The vegetation type for the sampling area keys out to Adenostoma fasciculatum Alliance; Adenostoma fasciculatum
Southern Maritime Association which does not appear to correctly reflect the habitat; the vegetation type listed for
this site takes into consideration other diagnostic species are found beyond the sampling area

Bloomeria clevelandii (San Diego Goldenstar) East Elliott # 3



Panorama from Northwestern edge of population, facing South, Southwest, West, Northwest. Panorama location is 6316943.661 1895945.738 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant C	ocurrence	e Monitorii	ng Form 20	15	Page 1		
Scientific Name:	Bloomeria clevelandii			Common Nar	ne:	San Diego goldenstar		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_4EAEL014		
	CNDDB Elem. Occur. #:	EO3		Translocated	no			
Preserve:	Mission Trails Regional Park			•			Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	East Elliott				·	Sam	ole Point #:	4
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/14/2015		Time Start: 9:57			Time Finish:	11:06	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions o	f categories o	lescribing
# Plants/Current		133 exact count or estimate? exact			uncert.	low		
Mapped Extent:	Area of Current Mapped Extent:		7806.19	1	square meters	exact (GPS	4	exact (GPS ma
	Species Found in Maximum Extent?	ves			suspected reason:		,	
# Plants/Sampling		1					1	[
Area			т	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	·			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	5 (50% to <75%)	Fruiting	2 (>0% to <10%
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	3 (10% to <25%
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected provided)			1				
16	Collection (if not collected previously)?	no a u u u						
If yes:	Collector	Collection #						
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				1		1	
Coordin's at Center of F	· · ·				N:			
	Pentax Optio W90							
Locat. 1 CoordE, N	6317566.226		1898	394.55	Direction facing	NE, N, W, SW+A1	Height	1.1 m
	Camera angle	10° up	Photo #	3126-3142		S:\MSCP		
Locat. 2 Coord E,N	ourried angle	10 00	1 11010 #	0120 0142	Direction facing		Height	
					Ŭ		rieight	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Bloomeria clevelandii		1		Centaurea me	elitensis		2	
Adenostoma fasciculatu	Jm	35		Hypochaeris g	glabra		1	
Hesperoyucca whipplei		1		Festuca myur	os		5	
Xylococcus bicolor		7		Bromus madr	itensis		1	
Malosma laurina		3		Logfia filagino	bides		2	
Ceanothus tomentosus		5		Plantago erec	ta		1	
Navarretia hamata		5		Osmadenia te	enella		1	
Antirrhinum nuttallianun	n	1		Acmispon glaber 1				
Lasthenia coronaria		2		Erodium botry			1	
Crassula connata		3						
Selaginella cinerascens	3	3						
Stylocline gnaphaloides		2		bare ground			25	
Chlorogalum parviflorur		1		rock			20	
Dichelostemma capitatu		1		litter			5	
COVER: Total % Cover:	85	%Herb:	33	%Shrub:	52	%Tree:	0	

MSP - F	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMEN (typically 10-m radius circle in the office or field, using "A	e). Vegetations of the second state of the second s	on alliance/ass pecies" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
SANDAG 2012 Alliance/	2 Vegetation /Association:	Adenostoma fas bicolor-Ceanoth	sciculatum-Xyl nus tomentosu	ococcus bico s Association	lor Alliance, Aden	ostoma fasc	iculatum-Xyl	ococcus
Cover c	classes (1-6)	Cryptogamic	c Crust Cover:	3 (10% to <2	т	hatch Cover	1 (0%)	
	Г	Thatch Depth A	verage (cm)	0	Thatch Dep	oth max (cm)	0	
Dead Standing Bioma	ass	yes			Т			1
		helianthemum	scoparium/2	2	Average	height (cm)	10	
Mammal Species Activity (catego		activity (reating		actation day	truction tracks or	ot pig) data	otod	
Feral pig activity 1 = ground squirr. activity 1 =				egetation des		at, pig) dete	cieu.	
gopher activity 1 =	-							
Sampling area representa				(If no note d	ifferences on pag	e 3)	1	
VI. THREATS ASSESSMEN							m oxtont (oumulativo
extent over years of monitori Record notes on page 3. See	ing) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activ	vity at, or Ad	jacent to, Site	open space					
Argentine ant abundance at bai	it station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank eac	ch as 1-6):				T			
Non-native forbs <u>3</u> =			ral pig activity		T			of disturbanc
Non-native grasses <u>3</u> =				1 = No sign o				of disturbanc
Non-native woody pl. 1 =				1 = No sign o	1			of disturbanc
competitive native pl. 1 =			urrent grazing					of disturbanc
dumping/trash 1 = encampments 1 =	-		istoric grazing ric agriculture			compaction	T = NO sign	of disturbanc
encampments <u>r</u> -	- NO SIGILOLO	TIISIC		T – NO SIGIT	1			
fuel modification zor	ne/fire break	1 = No sign of o						
road construction/r	-			ent, describe:				
		1 = No sign of o		ent, describe:				
brush management	ORV activity	1 = No sign of c	listurbance wit		extent or in adjac	ent 10 m buf	fer.	
		1 = No sign of o		ent, describe:				
	-	7 = Disturbance e, year burned?						
				2003	If trails are prese	nt are they	authorized?	
Type of trail use	= Disturbance hiking	e does not occur			equestrian			
	vice vehicles	-	biking other		equestiall	yes	dog	y c 3
		yes 1 = No sign of o			<u> </u>			
Other disturber and	= No sign of (- 112 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4EAEL014
Date: 4/14/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB) orange-throated whiptail
NOTES

Bloomeria clevelandii (San Diego Goldenstar) East Elliott # 4



Panorama from Northwestern edge population, facing Northeast, North, West, Southwest. Panorama location is 6317566.226 189394.550 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant C	Occurrence	e Monitorii	ng Form 20	15	Page 1			
Scientific Name:	Bloomeria clevelandii			Common Nan	ne:	San Diego goldenstar			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_4EAEL014			
	CNDDB Elem. Occur. #:	n. Occur. #: EO3 Translocated no							
Preserve:	Mission Trails Regional Park						Mgmt Unit	MU4	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department			
Occurrence Name:	East Elliott					Sam	ole Point #:	5	
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego	
Date:	4/14/2015		Time Start:	ne Start: 12:39 Time Finish: 14:29					
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	^r categories c	lescribing	
# Plants/Current Mapped Extent:		550 exact count or estimate? estimate (extrapolate		olate partial ct)	uncert.	medium			
Mapped Extent.	Area of Current Mapped Extent:		21509.7	units	square meters	exact (GPS) or estim?	exact (GPS ma	
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:				
# Plants/Sampling	-	1				Γ.	1.		
Area		10	[exact co	ount or estimate?	exact	uncert.	low	
	Sample Area Radius (m)		1 (00()		a (====()]		4 (00()	
	Phenology In Sampling Area (1-6):	Vegetative		Flowering		4 (00)	Fruiting	1 (0%)	
			1 (0%)		ering & Fruiting]	4 (00)	
	Evidence in Sampling Area (1-6):	,		Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	yes]					
	Collection (if not collected previously)?	no			1				
If yes:	Collector	Collection #							
	Museum/Herbarium								
	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83			
-	State Plane (ft)						1		
Coordin's at Center of F	h				N:				
	Pentax Optio W90								
Locat. 1 CoordE, N	6316118.119		1894	089.91	Direction facing	SW, S, SE	Height	1.1 m	
	Camera angle	3° up	Photo #	3151-3157	File location	S:\MSCP			
Locat. 2 Coord E,N					Direction facing		Height		
,	Comera angle		Photo #		Ŭ				
	Camera angle		P11010 #		File location				
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.					
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected	
Bloomeria clevelandii		2	conected	Antirrhinum n			1	not conceted	
Adenostoma fasciculatu	ım	30		Hypochaeris g			1		
Quercus berberidifolia		3		Eriophyllum c	-		1		
Mimulus aurantiacus		5		Gastridium ph			1		
Osmadenia tenella		2		ououndiani pr					
Stylocline gnaphaloides	3	3							
Chlorogalum parviflorur		1							
Helianthemum scopariu		1							
Logfia filaginoides		1							
Festuca myuros		3							
Lamarckia aurea		1							
Calochortus splendens		1		bare ground			15		
Stipa pulchra		1		rock			20		
Ceanothus tomentosus		2 0/11arbi		litter			3		
COVER: Total % Cover:	60	%Herb:	20	%Shrub:	40	%Tree:	0		

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using SANDAG 20	rcle). Vegetati Associated S	on alliance/ass Species" data f Adenostoma fa	sociation can rom page 1. s sciculatum-Xyl	be assigned See page 4 ococcus bico	d using San Die	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
Allian	ice/Association:	bicolor-Ceanoth	nus tomentosu	s	1			
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	Т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass	yes			т			1
If yes, cove	er/species class	Helianthemun	n scoparium/:	3	Average	e height (cm)	5	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	i, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket g	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):	_			_			
Non-native forbs	3 = Disturbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of o						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of o	if prese	ent, describe:				
brush manageme	ent/restoration	2 = Disturbance	e does not occ	ur within max	imum extent but is	s detected wi	ithin the surr	ounding 10 m
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Eviden	ce of recent fire	7 = Disturbance	e occurs ≥75%	of area with				
lf s	sign of recent fire	e, year burned?		2003				
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of e						- 117 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4EAEL014
Date: 4/14/2015
VI. MANAGEMENT RECOMMENDATIONS None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES The vegetation type for the sampling area keys out to Adenostoma fasciculatum Alliance; Adenostoma fasciculatum
Southern Maritime Association which does not appear to correctly reflect the habitat; the vegetation type listed for
this site takes into consideration other diagnostic species are found beyond the sampling area

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.



	MSP - Rare Plant C	Occurrence	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Bloomeria clevelandii	-		Common Nar	me:	San Diego goldenstar		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_6LORI021		
	CNDDB Elem. Occur. #:	EO10		Translocated	no			
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City San Diego Environmental Ser	vices Depa	rtment/California
Occurrence Name:	Lopez Ridge					Sam	ole Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/2/2015		Time Start:	10:07		Time Finish:	12:15	
I. OCCURRENCE S	TATUS - Assess # plants in both species-spe	ecific samplin	a area (typicall	v 10-m radius cii	rcle) & in current m	apped extent. See p. 4 for definitions o	f categories o	lescribina
phenology & evidence of h	erbivory, disease & stunted growth within the sa						1	.
# Plants/Current Mapped Extent:		560	560 exact count or estimate? exact		I	uncert.	low	
	Area of Current Mapped Extent:		1164	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known o	r suspected reason:			
# Plants/Sampling Area		1		exact o	ount or estimate?	exact	uncert.	low
7404	Sample Area Radius (m)	10	Ī	CAUCI O		CAUCI		1011
	Phenology In Sampling Area (1-6):	Vegetative		Flowering	6 (≥75%)		Fruiting	1 (0%)
	r henology in camping vica (1 o).	Ŭ	1 (0%)	-	ering & Fruiting	1 (0%)	Traiting	1 (070)
	Evidence in Sampling Area (1-6):			Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Mar	,		Discuse	1 (070)		cu crowin	1 (070)
			yes]				
	Collection (if not collected previously)?	no			1			
If yes:	Collector				Collection #			ſ
	Museum/Herbarium							
GPS Accuracy: +/-	A LOCATION & SITE PHOTOMONIT	ORING			Deturn	NAD02		
-			accur. units:	meters	Datum:	NAD65	J	
_	State Plane (ft)				N			
Coordin's at Center of F					N:			
Locat. 1 CoordE, N	Pentax Optio W90 6278246.403		10155	522.734	Direction facing	SW, W, NW, N, NE	Lloight	1.1 m
,		_			_	S:\OS\MSCP	Height	1.110
	Camera angle	10° down	Photo #	3030-3038				
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
	PECIES If need more room, record additiona	l data and any	notes on page	3				
III. ACCOUNTED O		i uata anu any	Collection #	5.				Collect.# (if
species/substrate		Cover	(if collected)		species/substrate		Cover	collected)
Adenostoma fasciculatu	um	30		Antirrhinum n	uttallianum		1	(dead)
Pogogyne abramsii		5		Plantago erec	ta		1	
Crassula connata		5		Logfia filagino			1	
Navarretia hamata		5		Dichelostemn	•		1	
Osmadenia tenella		1		Erodium botry			2	
Deinandra fasciculata		7		Hypochaeris			5	
Zeltnera venusta		1		Festuca myur			20	
Castilleja exserta		1		Bromus madr			5	
Allium haematochiton		2	old	Juncus bufon				(BM to check)
Deschampsia danthoni	oides	1		Bromus horde			1	
Bloomeria clevelandii		1		Hordeum mu			1	
Brodiaea orcuttii Psilocarphus brevissim		1		Lepidium nitio			1	
Muilla maritima	40	1		Helianthemur			1	
Selaginella cinerascens	3	20	(dead, see a	bare ground			2	
				rock			2	
COVER: Total % Cover:	124	%Herb:	94	litter %Shrub:	30	%Tree:	1	
	124	/011010.	94	/00111uD.		701166.	0	1

MSP	 Rare Plant 	Habitat and	Threats As	sessment	: Form 2015		Pag	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
	012 Vegetation ice/Association:	Adenostoma fa	sciculatum Alli	ance, Allianc	e level only; verna	Il pool		
Cov	er classes (1-4)	Cryptogamic	c Crust Cover:	3 (10% to <2	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio		yes	<u> </u>		I.			[
If yes, cove Mammal Species Activity (ca	er/species class ateg. 1-4)	Adenostoma/2	2		Average	height (cm)	40	
		activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity								
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note c	lifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni page 5 for Overall Site Qu	toring) plus 10)-m surroundi	ing buffer. S					
Surrounding Land Use	•	at, or Ijacent to, Site	Open Space					
Argentine ant abundance at	bait station (1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.		
Time start	10:05 AM	Temp start	68F		Time end	11:30 AM	Temp end	73F
Ant sample collected?	no	Ant sample #			Ant Sta	tion Photo #	3061	
DISTURBANCES (Rank	each as 1-6):	1		r	т		r	
Non-native forbs			eral pig activity		T		· · · · ·	of disturbanc
Non-native grasses				1 = No sign	Ī			of disturbanc
Non-native woody pl.	-			1 = No sign	t		_	of disturbanc
competitive native pl.	1 = No sign of c 1 = No sign of c		urrent grazing istoric grazing		1 .		-	of disturbanc
	1 = No sign of c		oric agriculture		Ī	compaction	1 – 1 1 0 sigi	
fuel modification			1		ı 			
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin mapped	occurrence perime	eter or in adja	acent 10 m t	ouffer.
	ORV activity	T = NO SIGN OF C		ent, describe:				
	ce of recent fire			hin mapped				
	sign of recent fire	-]			
	1 = No sign of o	disturbance with			If trails are prese	nt, are they	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?		describe:					
Other disturbance?	1 = No sign of o	describe:					- 122 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_6LORI021
Date: 4/2/2015
VI. MANAGEMENT RECOMMENDATIONS Continue to control access using fence and locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access controlled with fencing and locked gate
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Bloomeria clevelandii (San Diego Goldenstar) Lopez Ridge



Panorama from Eastern edge of population, facing Southwest, West, Northwest, North, Northeast. Panorama location is 6278246.40 1915522.73 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Bloomeria clevelandii			Common Nar	ne:	San Diego goldenstar		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_3MAVA005		
	CNDDB Elem. Occur. #:	EO68		Translocated				
Preserve:	Marron Valley			•	•		Mgmt Unit	MU6
Land Owner:	City of San Diego Land Mangr: City of San Diego Public Utilities Department							
Occurrence Name:	Marron Valley					Sam	ole Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe. Danie	l Schwartz				City of Sar	n Diego
Date:	4/1/2015			14:20		Time Finish:		
	TATUS - Assess # plants in both species-spe	ocific complin	a area (turnicall	v 10 m rodius si	rola) & in aurrant m	approdestant See n. 4 for definitions of	f actorica d	loooribing
	erbivory, disease & stunted growth within the sa				cie) & in current in	apped extent. See p. 4 for definitions of	calegones l	lescribing
# Plants/Current Mapped Extent:		290000	000 exact count or estimate? estimate (extrapo			olate partial ct)	uncert.	medium
Mapped Extent.	Area of Current Mapped Extent:		82578	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	r suspected reason:			
# Plants/Sampling			-				1	
Area	1001		T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)			1		1		r
	Phenology In Sampling Area (1-6):	Vegetative	2 (>0% to <1	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	oped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If yes:	Collector	110			Collection #			
ii yes.					Collection #			
	Museum/Herbarium							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				-		4	
Coordin's at Center of F					N:			
	Pentax Optio W90							
Locat. 1 CoordE, N	6406792.551		17880)21.137	Direction facing	S, SE, N, W	Height	1.1 m
	Camera angle	15° down	Photo #	3021-3026		S:\MSCP		
Locat. 2 Coord E.N		15 00001	1 11010 #	3021-3020	Direction facing		Hoight	
Local. 2 Coold L,N					Ŭ		Height	
	Camera angle		Photo #		File location			
III ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on nage	3				
		r data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected	[species/substrate		% Cover	not collected
Bloomeria clevelandii		5		Stipa pulchra			1	
Isocoma menziesii		3		Bromus madr	itensis ssp. ruber	IS	3	
Malosma laurina		2		Bromus horde	eaceus		12	
Artemisia californica		5		Clematis pau	ciflora		7	
Eriogonum fasciculatun	n	3		Festuca myur	OS		1	
Salvia apiana		2		Silene gallica			12	
Rhamnus crocea		3		Festuca perei	nnis		1	
Gutierrezia californica		3		Erodium cicut	tarium		2	
Galium angustifolium		1		Clarkia purpu	rea		1	
Bahiopsis laciniata		1		Logifa filagino	bides		1	
Dichelostemma capitat	um	1		Anagallis arve	ensis		1	
Centaurea melitensis		8		Hypochaeris	glabra		1	
Osmadenia tenella		2		bare ground			17	
Acmispon micranthus		2		rock			2	
Erodium botrys		5		litter	1	~~~	8	
COVER: Total % Cover:	89	%Herb:	67	%Shrub:	22	%Tree:	0	1

MSP -	 Rare Plant 	Habitat and	Threats As	sessment	: Form 2015	Pag	e 2
(typically 10-m radius ci	r cle) . Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	s within species-specific s d using San Diego vegetation for definitions of habitat ass	on key (AE sessment c	COM 2012) ategories.
Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands, SANDAG 2012 Vegetation Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands Alliance/Association:							
Cove	er classes (1-6)	Cryptogamic	Crust Cover:	1 (0%)	Thatch Cover	2 (>0% to <	<10%)
		Thatch Depth A	verage (cm)	5	Thatch Depth max (cm)	15	
Dead Standing Bio	mass	yes			т	1	T
If yes, cove	er/species class	unknown shru	bs/2		Average height (cm)	25	
Mammal Species Activity (ca	ateg. 1-4)						
Feral pig activity	1 = No feral pig	activity (rooting	ı, wallowing, ve	egetation des	truction, tracks, scat, pig) dete	ected.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.			1	
gopher activity	3 = <10 mound	s observed with	in sampling ar	ea.			
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on page 3)		
	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	the occurrence's maximu or definitions of threat asse p bait, etc.	•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space				
Argentine ant abundance at	bait station (1-4)					
Time start		Temp start			Time end	Temp end	
Ant sample collected?	each as 1-6):	Ant sample #			Ant Station Photo #		
Non-native forbs	4 = Disturbance	fe	ral pig activity	1 = No sign (altered hydrology	1 = No sigr	n of disturbanc
Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	1 = No sigr	n of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	1 = No sigr	n of disturbanc
competitive native pl.			urrent grazing	- · ·		-	
	1 = No sign of o		istoric grazing			1 = No sigr	n of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (1		
fuel modification	zone/fire break	1 = No sign of c			r		
road construction		•		ent, describe:			
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:			
brush manageme	ent/restoration	1 = No sign of c	listurbance wit	hin maxinum	extent or in adjacent 10 m but	ffer.	
	ORV activity	7 = Disturbance	if prese	ent, describe:			
Eviden	ce of recent fire	7 = Disturbance	e occurs ≥75%	of area with			
lfs	ign of recent fire	e, year burned?		2003	4		
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are present, are they	authorized?	
Type of trail use	hiking		biking		equestrian	dog	
s	ervice vehicles		other				
i	illegal trail use?	1 = No sign of c	describe:				
Other disturbance?	1 = No sign of o	describe:				- 127	_

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_3MAVA005
Date: 4/1/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access with locked gates
VII. MANAGEMENT ACTIONS IN LAST YEAR
None
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
1) red diamond rattlesnake in area to the south (upslope) of photopoint
NOTES
Gopher activity was not recent.
Current Mapped extent covers all 4 monitoring locations. Exact count was completed within the sampling area for each of the 4 monitoring locations. Then estimate was made based on the average density within the 4 sampling
areas. Average estimate = 290,000. High estimate (based on highest density) = 408,000. Low estimate = 164,000.

Bloomeria clevelandii (San Diego Goldenstar) Marron Valley # 1



Panorama from Western edge of population, facing Southeast, South, West, North. Panorama location is 6406792.551 1788021.0137 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant C	ccurrence	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Bloomeria clevelandii			Common Nar	ne:	San Diego goldenstar		
	Existing MSP Occurrence?	ves		MSP Occurr.	ID:	BLCL 3MAVA005		
	CNDDB Elem. Occur. #:	-		Translocated				
Preserve:	Marron Valley	2000		Transiocated			Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	<u> </u>	WOO
					Lanu Marigi.			2
Occurrence Name:	Marron Valley		. D l				ole Point #:	2
Surveyors: Date:	Betsy Miller, Kim Roeland, Daniel Schwa 4/1/2015	rtz, Annabeli	Time Start:	11:56		Time Finish:	City of Sar 12:23	1 Diego
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	categories o	lescribing
# Plants/Current		290000			optimate (outrop	alata partial at)	upcort	medium
Mapped Extent:		290000		1	estimate (extrapo			
	Area of Current Mapped Extent:		82578	4	square meters	exact (GPS) or estim?	exact (GPS ma
# Planta/Sampling	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling Area				exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10	Ī					
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Ū	1 (0%)	-	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):			Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map			Disease	. (070)	Stunt		. (070)
			yc3	1				
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
								·
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING				Г	r	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:		1	1
Camera type:	Pentax Optio W90		r					
Locat. 1 CoordE, N	64067225.72		17878	397.828	Direction facing		Height	1.1 m
	Camera angle	15° down	Photo #	990-995	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Comora angle		Dhoto #		File leastion			
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
		°(0	Collection #, o	r NC if not			°(0	Collect.# or NC if
species/substrate		% Cover	collected	F	species/substrate		% Cover	not collected
Bloomeria clevelandii		20		Festuca myur			1	
Artemisia californica		15		Bromus madr			30	
Eriogonum fasciculatun	n	5		Malosma laurina			2	
Isocoma menziesii		3		Baccharis sarothroides			2	
Gutierrezia californica		2		Gastridium ph	lleoides		1	
Clarkia purpurea		2		Acmispon mic	cranthus		1	
Crassula connata		5		Bromus horde	aceus		5	
Osmadenia tenella		5		Stipa pulchra			1	
Calochortus splendens		5		Centaurea melitensis			1	
Selaginella cinerascens	3	1		Brassica nigra	3		1	
Logfia filaginioides		1		Calystegia ma	acrostegia		2	
Stylocline gnaphaloides	3	1		Sanicula argu	ta		1	
Silene gallica		1		Avena sp.			7	
Dichelostemma capitat	um	3		Sonchus olera			1	
Salvia apiana		1		Lepidium nit bare ground	IUUIII		2	
Plantago erecta Erodium botrys		20		rock			2	
Hypochaeris glabra		1		litter			0	
COVER: Total % Cover:	149	%Herb:	99	%Shrub:	50	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSME (typically 10-m radius circ in the office or field, using "	cle) . Vegetati 'Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
	12 Vegetation e/Association:	Salvia apiana A	Illiance, Salvia	apiana-Arter	nisia californica A	ssociation		
Cover	r classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bion	nass	yes			r			I
	/species class	Isocoma/2			Average	e height (cm)	20	
Mammal Species Activity (cat								
Feral pig activity 1				egetation des	truction, tracks, so	cat, pig) dete	ected.	
ground squirr. activity 1		-						
gopher activity 4							(old gopher	holes)
Sampling area represen			•		ifferences on pag	,		
VI. THREATS ASSESSME extent over years of monito Record notes on page 3. S	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Act	tivity at, or Ad	ljacent to, Site	Open space					
Argentine ant abundance at ba	ait station (1-4))	1 = No ants d	etected at bai	t station or in vicir	nity.		
Time start	11:56 AM	Temp start	70F		Time end	1:00 AM	Temp end	70F
Ant sample collected? n	10	Ant sample #			Ant Sta	tion Photo #	3010	
DISTURBANCES (Rank ea	ach as 1-6):							
Non-native forbs 4	1 = Disturbance	fe	ral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 5	5 = Disturbance		trampling	1 = No sign o		erosion	3 = Disturb	ance present i
Non-native woody pl. 1	I = No sign of (vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl. 1	-		urrent grazing	· ·			-	of disturbanc
dumping/trash 1			istoric grazing		soil	compaction	3 = Disturb	ance present i
encampments 1	I = No sign of (histo	oric agriculture	1 = No sign o				
fuel modification z	one/fire break	1 = No sign of c						
road construction				ent, describe:				
		1 = No sign of c		ent, describe:				
brush managemer	nt/restoration	1 = No sign of c	listurbance wit	hin maxinum:	extent or in adjac	ent 10 m but	ffer.	
		1 = No sign of c		ent, describe:				
	•	6 = Disturbance		o < 75% of a				
	gn of recent fire	e, year burned?		2003				
	I = No sign of c	disturbance with	in maxinum ex		If trails are prese	nt, are they	authorized?	
Type of trail use	hiking	no	biking	no	equestrian	no	dog	no
	ervice vehicles		other	no				
ill -	egal trail use?	1 = No sign of c	describe:					
Other disturbance? 1	I = No sian of a	describe:					- 132 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_3MAVA005
Date: 4/1/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access with locked gates
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access control with locked gates
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Current Mapped extent covers all 4 monitoring locations. Exact count was completed within the sampling area for
each of the 4 monitoring locations. Then estimate was made based on the average density within the 4 sampling areas. Average estimate = 290,000. High estimate (based on highest density) = 408,000. Low estimate = 164,000

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.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Bloomeria clevelandii			Common Name:		San Diego goldenstar		
	Existing MSP Occurrence?	yes	MSP Occurr. ID:		BLCL_3MAVA005			
	CNDDB Elem. Occur. #:	EO68		Translocated	no			
Preserve:	Marron Valley						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Marron Valley					Sam	ole Point #:	3
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe, Danie	l Schwartz			Affiliation	City of Sar	Diego
Date:	4/1/2015		Time Start:	9:50		Time Finish:	-	
	TATUS - Assess # plants in both species-spe	ocific complin	a aroa (tunicall	v 10-m radius ci	rela) & in current m	annad axtant. See p. 4 for definitions o	f catagorias d	loscribina
phenology & evidence of h	erbivory, disease & stunted growth within the sa					apped extent. See p. 4101 denimions o	calegones c	escribing
# Plants/Current Mapped Extent:		290000	exact cour	t or estimate?	estimate (extrap	olate partial ct)	uncert.	medium
mapped Extent.	Area of Current Mapped Extent:		82.578	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1					1.	
Area			T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):		1 (0%)	Flowering			Fruiting	1 (0%)
		Dead	1 (0%)		ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING				1		
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90		T		1			
Locat. 1 CoordE, N	6407990.151		17875	523.484	Direction facing		Height	1.1 m
	Camera angle	45° down	Photo #	2962-2967	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			FIIOLO #		T lie location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	З.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
		7	collected	Carathraguma			% Cover	not collected
Bloomeria clevelandii				Corethrogyne	Ť.		1	
Salvia apiana		5		Bromus hordeaceus			-	
Artemisia californica Eriogonum fasciculatun	-	7		Erodium cicul	anum		2	
		3		Stipa pulchra			3	
Dichelostemma capitati	um	7		Hypochaeris glabra			3	
Layia platyglossa		7		Logfia filagino			2	
Malosma laurina		2		Pellaea mucro			10	
Eriophyllum confertifloru	um			Bromus diano			10	
Galium angustifolium		2		Hedypnois cro			1	
Gutierrezia californica		1		Microseris do	•		1	
Plantago erecta		5		Sonchus aspe			1	
Isocoma menziesii		1		Festuca pere			4	
Pseudognaphalium mic	crocephalum	1		Trifolium willd			1	
Phalaris minor		1		Anagallis arve			1	
Brassica nigra		1		Pentagramma			1	
Avena sp.		7		Daucus pusill			1	
Bromus madritensis ss	p. rubens	5		Clarkia purpu	rea		1	
Festuca myuros		4		bare ground			20	
Erodium botrys Centaurea melitensis		2		rock litter			12	
COVER: Total % Cover:	101	%Herb:	83	%Shrub:	18	%Tree:	0	

MSP - Rare	Plant Habitat and	Threats As	sessment	Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN S (typically 10-m radius circle). Ve in the office or field, using "Associa	egetation alliance/ass ated Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)	
SANDAG 2012 Vege Alliance/Assoc	etation Salvia apiana A siation:	Alliance, Salvia	apiana-Arter	nisia californica A	ssociation			
Cover classes	s (1-6) Cryptogami	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	<10%)	
	Thatch Depth A	Average (cm)	5	Thatch Dep	oth max (cm)	7		
Dead Standing Biomass	yes s class unknown shru	lubs/2		Average	e height (cm)	20		
Mammal Species Activity (categ. 1-4)								
Feral pig activity 1 = No fe	eral pig activity (rooting	g, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	ected.		
ground squirr. activity 1 = No g	round squirrel burrows	detected.						
gopher activity 1 = No p	ocket gopher mounds	detected.						
Sampling area representative of	mapped occurrence?	yes	(If no, note d	lifferences on pag	e 3)			
VI. THREATS ASSESSMENT IN extent over years of monitoring) p Record notes on page 3. See Arge	lus 10-m surroundi	ing buffer. S	See page 4 f	or definitions of		```		
Surrounding Land Use/Activity at,	, or Adjacent to, Site	Open space						
Argentine ant abundance at bait static	on (1-4)	1 = No ants d	etected at ba	it station or in vici	nity.			
Time start 9:	54 AM Temp start	68		Time end	10:43 AM	Temp end	70	
Ant sample collected? no	Ant sample #	n/a		Ant Sta	tion Photo #	2968		
DISTURBANCES (Rank each as	1-6):			т				
Non-native forbs 4 = Distu	Irbance fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses <u>5 = Distu</u>		trampling	1 = No sign (Ī			ance present i	
Non-native woody pl. 1 = No si			1 = No sign (†			of disturbanc	
competitive native pl. $1 = No si$		current grazing	-	1 .			of disturbanc	
dumping/trash 1 = No si		istoric grazing		Ť.	compaction	3 = Disturba	ance present i	
encampments 1 = No si	ign of a histo	oric agriculture	1 = No sign (1				
fuel modification zone/fire	break 1 = No sign of o							
road construction/mainte			ent, describe:					
	earing 1 = No sign of o	-	ent, describe:					
brush management/resto	ration 1 = No sign of a	disturbance wit	hin maxinum:	extent or in adjac	ent 10 m but	ffer.		
ORV a	1 = NO SIGN OF C		ent, describe:					
	ent fire 7 = Disturbance		of area with					
	cent fire, year burned?		2003	4				
	ign of disturbance with	in maxinum ex		If trails are prese	nt, are they	authorized?		
Type of trail use	hiking	biking		equestrian		dog		
service ve		other						
illegal trai	il use? 1 = No sign of o	describe:						
Other disturbance? 1 = No si	ign of describe:					- 137 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_3MAVA005
Date: 4/1/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access with locked gates.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access control with locked gates
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES Current Mapped extent covers all 4 monitoring locations. Exact count was completed within the sampling area for
each of the 4 monitoring locations. Then estimate was made based on the average density within the 4 sampling
areas. Average estimate = 290,000. High estimate (based on highest density) = 408,000. Low estimate = 164,000

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.


Stantin Kannar Biosnamic severated Common Name: Sam Diggs gedenatar Exiting MSP Coournes?	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
CNDDB Etem. Occur: # E088 transocator transocator <thtransocator< th=""> transocator</thtransocator<>	Scientific Name:	Bloomeria clevelandii			Common Nar	ne:	San Diego goldenstar		
Presence: Marcon Valley Calley of San Diego Dubits Utilities Department Assume Point #		Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL 3MAVA005		
and Owner Day of sam Dago Land Mange City of Sam Dago Allip Point I 4 Occurrents Name March Valley Sample Point I 4 5 Date 4 4 4 5 Date 4 4 4 4 5 Date 4 4 100 Time Start 1100 Time Start 1100 <td></td> <td>CNDDB Elem. Occur. #:</td> <td>EO68</td> <td></td> <td>Translocated</td> <td>no</td> <td></td> <td></td> <td></td>		CNDDB Elem. Occur. #:	EO68		Translocated	no			
and Owner Day of sam Dago Land Mange City of Sam Dago Allip Point I 4 Occurrents Name March Valley Sample Point I 4 5 Date 4 4 4 5 Date 4 4 4 4 5 Date 4 4 100 Time Start 1100 Time Start 1100 <td>Preserve:</td> <td>Marron Valley</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td>Mamt Unit</td> <td>MU3</td>	Preserve:	Marron Valley			•			Mamt Unit	MU3
Occurrent Name Marrow Valley Sample Point IS 4 Sarvayoro: Betry Millis, Kin Roeland, Daniel Schwartz, Annabele Benabe Attiation City of Sac Diego Date 41/2015 Time Flank 11.05 Time Flank 11.05 I. OCCURRENCE STATUS 4 assess prices in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years in total posses apone, analysis with Rock and years apone, analysis wi						Land Manor:	City of San Diego Public Utilities D	, i	
Sungeon: Early Miler, Kim Roeland, Daniel Schwartz, Annabelle Bernabs Antiout City of San Diago Date: 412015 Time Reat: 1100 Time Reat: 1100 Time Reat: 1100 1100 Time Reat: 1100 Time Reat: 1100 Time Reat: 1100 1100 Time Reat: 1100 Time Reat: 1						<u> </u>		-	4
Date 41/2015 Time Failst 11:90 Time Failst 11:90 L OCCURRENCE STATUS Adapted Statuts Statut Control 4 Adapted Statut Statut 4 Adapted Statut Statut 4 Adapted Statut Statut Control Adapted Statut Statut Statut Control Contro Contro Contro		-	rtz Annabell	e Bernabe					
phonology & calcition of Proteining, decare & autorition provided within the camping and Record any ratio or pr. 3. # PlantsUsangline					11:09				
phonology & calcition of Proteining, decare & autorition provided within the camping and Record any ratio or pr. 3. # PlantsUsangline					10 11 1				
Mapped Extent Calcolor of extentiar extente consponte parts (CPS) or extention exact exact (CPS) or extention exact exact exact (CPS) or extention exact						cie) & in current m	happed extent. See p. 4 for definitions o	t categories c	lescribing
Area of Current Mapped Extent 282578 untile leguar meters exact (GPS) or estim? leadt (GPS may support research resear			290000	exact coun	t or estimate?	estimate (extrap	olate partial ct)	uncert.	medium
Plants/Samplea Area (19) Area (19) Sample Area Radius (m) 10 Phenology In Sampling Area (1-6): Vegatative 1(0%) Evidence in Sampling Area (1-6): Vegatative L(0%) Evidence in Sampling Area (1-6): Vegatative Callection (f not collected previously)? Is Sampling Area (1-6): Vegatative Callection (f not collected previously)? If yes: Collection (f not collected previously)? If yes: Collection & SITE PHOTOMONITORING GPS Acouracy: +i Callection (f not collected previously)? Collection # C	mapped Extent.	Area of Current Mapped Extent:		82578	units	square meters	exact (GPS) or estim?	exact (GPS ma
Area 1235 exact count or estimate? [east uncert [ow Simple Area Radius (m) 10		Species Found in Maximum Extent?	yes		•	suspected reason:			
Sample Area Radius (m) 10 Phonology in Sampling Area (1-6): Vegetative 1(0%) Flowering & Fruiting 1(0%) Fruiting 1(0%) Evidence in Sampling Area (1-6): Vegetative 1(0%) Dead 1(0%) Deade 1(0%) Deade 1(0%) Evidence in Sampling Area (1-6): Hetrivory 1(0%) is Sampling Area within Current Mapped Extent? Deade 1(0%) Deade 1(0%) Deade 1(0%) If yes: Collection (fnot collected previously?)? no Collection (fnot collected previously?)? Deade 1(0%) Deade 1(0%) <t< td=""><td># Plants/Sampling</td><td></td><td></td><td>•</td><td></td><td></td><td></td><td>1</td><td></td></t<>	# Plants/Sampling			•				1	
Phenology In Sampling Area (1-6): Vegetative Dead 1 (0%) (0%) Flowering & Fruiting 1 (0%) Fruiting 1 (0%) Evidence in Sampling Area within Current Mapped Extent? 1 (0%) Sampling Area within Current Mapped Extent? Disease 1 (0%) Stanted Growth 1 (0%) Collection (f not collected previously? no Collecton # Collecton # Collecton # If yes: Collecton & SITE PHOTOMONITORING Collecton # Collecton # Collecton # GPS Accuracy: +1-st1 accur. units meters Datum: NAD83 Collecton # Cooldrin at Center of Plot E: N Collecton # Collecton # Cooldrin at Center of Plot E: N Cooldring SE, E, NE, N Height 1.1 m Cooldrin at Center of Plot E: N SindSCP Collection foring SE, E, NE, N Height 1.1 m Cooldrin at Center of Plot E: N SindSCP Collection foring SE, E, NE, N Height 1.1 m Cooldrin at Center of Plot E: N Coolection foring Se: E, NE, N Height 1.1 m Coolection for or to foring E: E: E, N Height	Area	1235		T	exact co	ount or estimate?	exact	uncert.	low
Beak 1 (2%) Flowering & Fruiting 1 (0%) Evidence in Sampling Area (1-6): Hetrivory (1 (0%) Disease 1 (0%) Stunted Growth 1 (0%) Callection (if not collected previously)? no Collection (if not collected previously)? no Callection (if not collected previously)? no Collection (if not collected previously)? no II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING Collector N N Coordins a Cleant of Plot: E: N Collector N Contrain type / Pentox Optio W90 Direction facing SE.E., NE, N Height 1.1 m Camera angle Level Photo # 0 77: 975-900 File location Statistics II. ASSOCIATED SPECIES If readman angle Photo # 0 77: 975-900 File location III. ASSOCIATED SPECIES If readman angle Photo # 0 77: 975-900 File location Statistics III. ASSOCIATED SPECIES If readman angle Photo # 0 72: 975-900 Contrain angle If readman angle Contrain angle If readman angle Contrain angle If readman angle If readman angle<		Sample Area Radius (m)	10		1		1		
Evidence in Sampling Area (t-6): Herbivory 1(0%) Disease 1(0%) Stunied Growth 1(0%) Is Sampling Area within Current Mapped Extent? yes Io Io Io If yes: Collection (f not collected previously? Io Io Io If yes: Collection for the collected previously? Io Io Io If yes: Collection for the collected previously? Io Io Io If yes: Collection for the collected previously? Io Io Io If yes: Collection for the collected previously? Io Io Io Coordins at Center of Piot: E: In Io Io Io Coordins at Center of Piot: E: In Io Io Io Io Locat: 1 CoordE, N 6407366.178 178737.873 Direction facing Height I.1 m Locat: 2 CoordE, N 6407366.178 178737.873 Direction facing Io Io II. ASSOCIATED SPECIES If need more non, moont additional data and any roles on gales 3. Io Collection at any collected on N C if not species/bubbit// Stude Io Io S		Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
Is Sampling Area within Current Mapped Extent? vessors Collection (if not collected previously)? If yes: Collector previously)? If yes: Collector A SITE PHOTOMONITORING GPS Accuracy: 1 th <1			Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)]	
Collection (if not collected previously)? no If yes: Collection # If yes: Collection # ISAMPLING AREA LOCATION & SITE PHOTOMONITORING Interface GPS Accuracy: +1 coord: accur. units: II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +1 coord: accur. units: II. Participation Coding at Chenter of Piot: E: Coding at Chenter of Piot: N: Camera type: Pentox 0pio W90 Locat. 1 Coord: E. Camera angle Level Photo # of 1/8 is location Camera angle Level Photo # of 1/8 is location Camera angle Photo # File location II. ASSOCIATED SPECIES // new more mom, record additional data and any rotes on page 3. collector for NC if not periodicated if on NC if Isocoma menziesii 7 Calcetor for NC if If opponum fasciculatum 3 Oemetria negle Image isolation if and isolation if a		Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
If yes: Callector Callector Museum/Herbatum I. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +i- 1 coord: system (State Plane (ft) Coordin's at Center of Plot: E: Camera type Pentax Optio W90 Locat: 1 Coord -E, N Camera angle Level Photo # JP374: 975-980 Locat: 2 CoordE, N Camera angle Level Photo # JP374: 975-980 File location Camera angle Level Collecting facing Collecting facing Collecting facing Colspan="2">Collecting facing Locat: 2 CoordE, N Camera angle Level Photo # JP374: 975-980 File location Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2" Locat: 2 CoordE, N Colspan="2">Colspan= 2" CoordE, N <td></td> <td>Is Sampling Area within Current Map</td> <td>ped Extent?</td> <td>yes</td> <td></td> <td></td> <td></td> <td></td> <td></td>		Is Sampling Area within Current Map	ped Extent?	yes					
If yes: Callector Callector Museum/Herbatum I. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +i- 1 coord: system (State Plane (ft) Coordin's at Center of Plot: E: Camera type Pentax Optio W90 Locat: 1 Coord -E, N Camera angle Level Photo # JP374: 975-980 Locat: 2 CoordE, N Camera angle Level Photo # JP374: 975-980 File location Camera angle Level Collecting facing Collecting facing Collecting facing Colspan="2">Collecting facing Locat: 2 CoordE, N Camera angle Level Photo # JP374: 975-980 File location Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2" Locat: 2 CoordE, N Colspan="2">Colspan= 2" CoordE, N <td></td> <td>Collection (if not collected previously)?</td> <td>no</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td>		Collection (if not collected previously)?	no		1				
Museum/Heteratum II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: */- 1 accur. units: meters Datum: NAD83 Coordin's at Center of Plot: E: N: N: N: N: Carnera type Pentax Optio W90 Image: State Plane (ft) Image: State Plane (ft) Image: State Plane (ft) Image: State Plane (ft) Locat. 1 Coord – E. N 607366.178 1787837.573 Direction facing State Plane (ft) Image: State Plane (ft) Locat. 2 Coord – E. N 607366.178 Image: State Plane (ft) Image: State Plane (ft) Image: State Plane (ft) Locat. 2 Coord – E. N Gamera angle Lovel Photo # 9.974, 975-980 File location II. ASSOCIATED SPECIES If meed more noom, record additional data and any notes on page 3. Collect or NC if not species/substrate % Cover not collected of Bloomeria cleveland Biomeria clevelandli 10 Brassica nigra 1 Image: State Plane (ft) Stocoma menziesii 7 Calcehortus splendens 1 Image: State Plane (ft) Isocoma menziesii 7 Calcehortus splendens 1 Image: State Plane (ft) Image	If yes:					Collection #			
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GPS Accuracy: +/- <1 accur. units: meters Datum: NAD83 Coordin's at Center of Plot: E: N:		Museum/Herbarium							
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Coordin's at Center of Plot: E: N: Camera type: Pentax Optio W90 Iteration in the second secon	coord. system	State Plane (ft)							
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Camera angle Level Photo # 9-974; 975-980 File location Locat. 2 Coord E,N	Locat. 1 CoordE, N	6407366.178		17878	337.573	Direction facing	SE, E, NE, N	Height	1.1 m
Locat. 2 Coord E,N Direction facing Height Camera angle Photo # File location HI. ASSOCIATED SPECIES // need more room, record additional data and any notes on page 3. Collection #, or NC if not species/substrate Collection #, or NC if not species/substrate Collection #, or NC if not species/substrate Bloomeria clevelandii 10 Brassica nigra 1 Isocoma menziesii 7 Calochortus splendens 1 Artemisia californica 15 Osmadenia tenella 2 Eriogonum fasciculatum 3 Image: Collection #, or NC if not splendens Image: Collection #, or NC if not splendens Gutierrezia californica 15 Osmadenia tenella 2 Image: Collection #, or NC if not splendens Gutierrezia californica 1 Image: Collection #, or NC if not splendens 1 Image: Collection #, or NC if not splendens Image: Collection #, or NC if not splendens 1 Gutierrezia californica 15 Osmadenia tenella 2 Image: Collection #, or NC if not splendens 1 Gastridium phleoides 1 Image: Collection #, or NC if not splendens Image: Collection #, or NC if not splendens Image: Collection #, or NC if not splendens Image: Collection #, or NC if not splen		Camera angle	l evel	Photo #	9-974 975-980	File location	S:\MSCP		
Camera angle Photo # File location III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3. Collection #, or NC if not species/substrate Collection #, or NC if not collected Collection #, or NC if not collected Bloomeria clevelandii 10 Brassica nigra 1 Isocoma menziesii 7 Calochortus splendens 1 Artemisia californica 15 Osmadenia tenella 2 Eriogonum fasciculatum 3	Locat 2 Coord E N		2010.	1 11010 #	0 01 1, 010 000			Height	
III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3. Collection M, or NC if not species/substrate Collect or NC if not collected Species/substrate % Cover Collection M, or NC if not species/substrate % Cover Collection M, or NC if not species/substrate % Cover Collection M, or NC if not species/substrate % Cover Collection M, or NC if not species/substrate % Cover Collection M, or NC if not collected % Cover Collection M, or NC if not collected Bloomeria clevelandii 10 Brassica nigra 1<						Ŭ		rieigiit	
species/substrate % Cover Collection #, or NC if not species/substrate % Cover Collect # or NC if not collected Bloomeria clevelandii 10 Brassica nigra 1 Isocoma menziesii 7 Calochortus splendens 1 Artemisia californica 15 Osmadenia tenella 2 Eriogonum fasciculatum 3 Gutierrezia californica 1 Eriogonum fasciculatum 3 Gutierrezia californica 1 Eriogonum fasciculatum 3 Gastridium phleoides 1		Camera angle		Photo #		File location			
species/substrate % Cover Collection #, or NC if not species/substrate % Cover Collect # or NC if not collected Bloomeria clevelandii 10 Brassica nigra 1 Isocoma menziesii 7 Calochortus splendens 1 Artemisia californica 15 Osmadenia tenella 2 Eriogonum fasciculatum 3 Gutierrezia californica 1 Eriogonum fasciculatum 3 Gutierrezia californica 1 Eriogonum fasciculatum 3 Gastridium phleoides 1	III. ASSOCIATED SI	PECIES If need more room. record additiona	l data and anv	notes on page	3.				
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Isocoma menziesii7Calochortus splendens1Artemisia californica15Osmadenia tenella2Eriogonum fasciculatum3Gutierrezia californica1Erodium botrys20Gastridium phleoides1Bromus madritensis20Avena sp.7Festuca myuros2Hypochaeris glabra3Bromus hordeaceus5bromus crocea2Logfia filaginoides1Itter0	•			collected		species/substrate		% Cover	not collected
Artemisia californica15Osmadenia tenella2Eriogonum fasciculatum3Gutierrezia californica1Erodium botrys20Gastridium phleoides1Bromus madritensis20Avena sp.7Festuca myuros2Hypochaeris glabra3Bromus hordeaceus5Bromus crocea22Rhamnus crocea1Logfia filaginoides10	Bloomeria clevelandii							1	
Eriogonum fasciculatum31Gutierrezia californica11Erodium botrys201Gastridium phleoides11Bromus madritensis201Avena sp.71Festuca myuros21Hypochaeris glabra31Bromus hordeaceus5bare groundAvena sp.22			7		Calochortus s	plendens			
Gutierrezia californica 1 Image: colored structure 1 Erodium botrys 20 Image: colored structure 1 Gastridium phleoides 1 Image: colored structure 1 Bromus madritensis 20 Image: colored structure 1 Avena sp. 7 Image: colored structure 1 Festuca myuros 2 Image: colored structure 1 Hypochaeris glabra 3 Image: colored structure 2 Rhamnus crocea 2 rock 5 (road bed) Logfia filaginoides 1 litter 0	Artemisia californica		15		Osmadenia te	enella		2	
Erodium botrys201Gastridium phleoides11Bromus madritensis201Avena sp.71Festuca myuros21Hypochaeris glabra31Bromus hordeaceus5bare groundRhamnus crocea27Logfia filaginoides1litter	Eriogonum fasciculatum	1	3						
Gastridium phleoides 1 1 1 Bromus madritensis 20 1 1 Avena sp. 7 1 1 Festuca myuros 2 1 1 Hypochaeris glabra 3 1 1 Bromus hordeaceus 5 bare ground 2 Rhamnus crocea 2 1 1 Logfia filaginoides 1 1 1	Gutierrezia californica		1						
Bromus madritensis201Avena sp.71Festuca myuros21Hypochaeris glabra31Bromus hordeaceus5bare ground2Rhamnus crocea211Logfia filaginoides1litter0	Erodium botrys		20						
Avena sp.71Festuca myuros22Hypochaeris glabra3Bromus hordeaceus5bare ground2Rhamnus crocea2Logfia filaginoides1Itter0	Gastridium phleoides		1						
Festuca myuros 2 Image: constraint of the sector of t	Bromus madritensis		20						
Hypochaeris glabra 3 Image: constraint of the second seco	Avena sp.		7						
Brownus hordeaceus 5 bare ground 2 Rhamnus crocea 2 rock 5 (road bed) Logfia filaginoides 1 litter 0	Festuca myuros		2						
Rhamnus crocea 2 rock 5 (road bed) Logfia filaginoides 1 litter 0	Hypochaeris glabra		3						
Logfia filaginoides 1 litter 0			5		-				
			2						,
COVER: Total % Cover: 101 %Herb: 73 %Shrub: 28 %Tree: 0	COVER: Total % Cover:	101	/ %Herb:	73		28	%Tree:		

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using SANDAG 20	rcle). Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. s rnica-Eriogonu	be assigned See page 4 Im fasciculati	d using San Die	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	er classes (1-6)		c Crust Cover:		т	hatch Cover	1 (0%)	
		Thatch Depth A			l	oth max (cm)		
Dead Standing Bio	omass	yes	(0)		I			l I
If yes, cove	er/species class	Isocoma/2			Average	e height (cm)	30	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	ected.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	4 = ≥10 mound	s or one or more	e gophers seer	n within samp	ling area.		(old)	
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3. Surrounding Land Use/A	toring) plus 1(See Argentine)-m surroundi Ant Protocol (ng buffer. S USGS 2015)	See page 4 f	or definitions of			
Surrounding Land Use/A	clivity at, of At	Jacent IO, Sile	Open Space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):	1						
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	3 = Disturba	ance present i
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	6 = Disturba	soil	compaction	3 = Disturba	ance present i
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of c			-			
road construction	on/maintenance	3 = Disturbance	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	listurbance wit	hin maxinum	extent or in adjac	ent 10 m but	ffer.	
	ORV activity	1 = No sign of c	if prese	ent, describe:				
Eviden		6 = Disturbance		o < 75% of a				
lf s	sign of recent fire	e, year burned?		2003				
Trails	1 = No sign of (disturbance with	in maxinum ex		If trails are prese	ent, are they	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of			-			- 142 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_3MAVA005
Date: 4/1/2015
VI. MANAGEMENT RECOMMENDATIONS
Maintain access control with locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access control maintained with locked gate
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Current Mapped extent covers all 4 monitoring locations. Exact count was completed within the sampling area for
each of the 4 monitoring locations. Then estimate was made based on the average density within the 4 sampling areas. Average estimate = 290,000. High estimate (based on highest density) = 408,000. Low estimate = 164,000
areas. Average estimate – 290,000. High estimate (based on highest density) – 400,000. Low estimate – 104,000

Bloomeria clevelandii (San Diego Goldenstar) Marron Valley # 4



Panorama from Eastern edge of population, facing Southeast, East, Northeast, North. Panorama location is 6407366.178 1787837.573 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Bloomeria clevelandii			Common Nan	ne:	San Diego goldenstar		
	Existing MSP Occurrence?	yes	MSP Occurr. ID:			BLCL_4MTRP023		
	CNDDB Elem. Occur. #:	EO2		Translocated?	no			
Preserve:	Mission Trails Regional Park						Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego	-	
Occurrence Name:	Mission Trails Regional Park					Sample Point #: 1		
Surveyors:	Kim Roeland, Betsy Miller					Affiliation	City of Sar	Diego
Date:	4/23/2015		Time Start:	9:25		Time Finish:	11:10	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	^f categories d	lescribing
phenology & evidence of h # Plants/Current	erbivory, disease & stunted growth within the sa	ampling area. F					r	[
Mapped Extent:		0	exact cour	nt or estimate?	exact	[uncert.	low
	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma
		no	if not	found, known or	suspected reason:	r	not found s	since 2003 fire
# Plants/Sampling Area	0			exact co	ount or estimate?	exact	uncert.	low
, 104	Sample Area Radius (m)	10	ľ	chuốt ốc		0,000	unoont	
	Phenology In Sampling Area (1-6):		1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Ū	1 (0%)		ering & Fruiting	1 (0%)	l	1 (070)
	Evidence in Sampling Area (1-6):			Disease	0 0		ed Growth	1 (0%)
	Is Sampling Area within Current Map	,		Disease	1 (070)	Stuni	eu Olowill	1 (070)
			yes	1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector				Collection #			
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT							
GPS Accuracy: +/-			accur. units:	meters	Datum:			
-	State Plane (ft)		accur. units.	meters	Datum.	NAD00	1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90							
Locat. 1 CoordE, N	6307533.854		1887	727.084	Direction facing	SE E NE N	Height	1.1 m
						S:\MSCP	rieight	1.1.111
	Camera angle	Level	Photo #	295-302	File location			
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
			Collection #, o	r NC if not	onopies (sub. 1. 1		9/ 0	Collect.# or NC if not collected
species/substrate		% Cover	collected	[species/substrate		% Cover	not collected
Acmispon glaber Artemisia californica		15		Dodecatheon			1	
				Bromus diand			1	
Adenostoma fasciculatu	um	5		Bromus madr	Itensis		1	
Mimulus aurantiacus		2		Quercus sp.	file similar		2	
Deinandra fasciculata		4		Corethrogyne	maginnona		1	
Calochortus splendens		7						
Stipa pulchra Erodium botrys		5						
Brachypodium distachy	00	65						
		20						
Festuca myuros		20						
Avena sp. Sanicula arguta		1		bare ground			5	
Hypochaeris glabra		1		rock			5	
Isocoma menziesii		1		litter			3	
COVER: Total % Cover:	138	%Herb:	110	%Shrub:	28	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
	rcle). Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	er classes (1-6)	Cryptogamic Thatch Depth A	c Crust Cover:	1 (0%)		hatch Cover oth max (cm)	4 (25% to < 4	:50%)
Dead Standing Bio	omass	yes						
If yes, cove Mammal Species Activity (ca		Acmispon gla	ber/3		Average	e height (cm)	25	
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 1(See Argentine)-m surroundi Ant Protocol (ng buffer. S USGS 2015)	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	3 = Disturbance	fe	ral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	7 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign o	soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c			r			
		1 = No sign of c		ent, describe:				
		1 = No sign of c		ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	listurbance wit	hin maxinum:	extent or in adjac	ent 10 m buf	ffer.	
		1 = No sign of c		ent, describe:				
		7 = Disturbance		of area with				
	If sign of recent fire, year burned? 2003							
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
5	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of o	describe:					- 147 -	

MSP-Management Needs and Notes 2015	
(top 2 rows auto-fill from page 1)	
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4MTRP023	
Date: 4/23/2015	
VI. MANAGEMENT RECOMMENDATIONS	
continue to maintain post-burn and treat non-native grasses	
VII. MANAGEMENT ACTIONS IN LAST YEAR	
none	
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)	
NOTEO	
NOTES	

Bloomeria clevelandii (San Diego Goldenstar) Mission Trails Regional Park



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



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Bloomeria clevelandii			Common Nan	ne:	San Diego goldenstar		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_3OTLA006		
	CNDDB Elem. Occur. #:	em. Occur. #: n/a Translocated no						
Preserve:	Otay Lakes Cornerstone Lands						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Otay Lakes					Sam	ole Point #:	1
Surveyors:	Kim Roeland, Annabelle Bernabe					Affiliation	City of San	1 Diego
Date:	3/24/2015		Time Start:	11:00		Time Finish:	12:36	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	ⁱ categories d	lescribing
# Plants/Current		75000			estimate (extrap	olate partial ct)	uncert.	high
Mapped Extent:	Area of Current Mapped Extent:		308991	1	square meters		•	exact (GPS ma
	Species Found in Maximum Extent?	yes		•	suspected reason:		<u>,</u>	`
# Plants/Sampling							1	
Area	65		r	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		r
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering			Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	İ	[
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no]				
If yes:	Collector				Collection #			
,	Museum/Herbarium		· ·					
	Maccanin forbanan							i
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING				1		
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83	j	
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			r
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6357208.466		18074	172.481	Direction facing		Height	1.1 m
	Camera angle	5° down	Photo #	891-896	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			1 11010 //		1 110 10004.011			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate			Collect.# or NC if not collected
Bloomeria clevelandii		1		Plagiobotrys/0	Cryptantha sp.		3	
Eriogonum fasciculatum	1	10		Acmispon mic			2	
Acmispon glaber		5		Bromus madr			2	
Deinandra fasciculata		5		Cuscuta occio	lentalis		5	
Convolvulus simulans		2		Eryngium aris	tulatum		2	
Crassula connata		40		Isocoma menziesii			3	
Plantago erecta		5		Peritoma arborea			2	
Chlorogalum parviflorur	n	5						
Lasthenia gracilis		7						
Sisyrinchium bellum		3						
Erodium botrys		15						
Lepidium nitidum		5		bare ground			15	
Hedypnois cretica		1		rock			0	
Linanthus dianthiflorus		1		litter	-	I	2	
COVER: Total % Cover:	124	%Herb:	100	%Shrub:	20	%Tree:	0	1

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012)
SANDAG 20 Allian	012 Vegetation ice/Association:	Deinandra fasc	iculata Provisi	onal Alliance,	Deinandra fascic	ulata Associ	ation	
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1		hatch Cover	. ,	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass	yes			Т			
	er/species class	Acmispon/2			Average	e height (cm)	20	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):	•						
Non-native forbs	4 = Disturbance	fe	ral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign o	soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	6 = Disturba				
fuel modification	zone/fire break	1 = No sign of o			r			
		1 = No sign of o		ent, describe:				
illegal veg	etation clearing	1 = No sign of a	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	listurbance wit	hin maxinum:	extent or in adjac	ent 10 m buf	fer.	
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Eviden	ce of recent fire	1 = No sign of a	listurbance wit	hin maxinum				
lf s	sign of recent fire	e, year burned?		2003				
Trails	2 = Disturbance	e does not occu	within maxim		If trails are prese	ent, are they a	authorized?	yes
Type of trail use	hiking	no	biking	no	equestrian	no	dog	no
	service vehicles		other	no				
	illegal trail use?	2 = Disturbance	describe:				<u>dirt bik</u> es c	n main road
Other disturbance?	1 = No sign of o						- 152 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_3OTLA006
Date: 3/24/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat non-native forbs (<i>Erodium</i>) as necessary; continue to control access via fencing and locked gate.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access control with fencing and locked gate.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Black-tailed jackrabbit, flushed from vegetation north of photopoint on slope. Golden eagle seen flying east near
photopoint. Horned larks all over.
NOTES
Estimate for point 1 and 2 are the same; population is continuous across entire site. Estimate based on 3 mapped
polygons with exact count. Density calculated and the lowest density was used to extrapolate to the entire current mapped extent. Range of estimates: 75,000-210,000.
mapped extent. Range of estimates. 75,000-210,000.

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



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



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Bloomeria clevelandii			Common Nan	ne:	San Diego goldenstar		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BLCL_4MTRP023		
	CNDDB Elem. Occur. #:	n/a		Translocated?	no			
Preserve:	Otay Lakes Cornerstone Lands						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Otay Lakes					Sam	ble Point #:	2
Surveyors:	Kim Roeland, Annabelle Bernabe					Affiliation	City of Sar	n Diego
Date:	3/24/2015		Time Start:	12:54		Time Finish:	14:38	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	' categories c	lescribing
# Plants/Current	erbivory, disease & stunted growth within the sa	mpling area. F 75000			estimate (extrap	olate partial ct)	uncert.	hiah
Mapped Extent:	Area of Current Mapped Extent:	10000	308991	1	square meters		•	exact (GPS ma
	Species Found in Maximum Extent?	Ves		•	suspected reason:		<u>/ 01 0000000</u>	
# Plants/Sampling	•	,		iouna, known or			1	
Area	687		r	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	ļ	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected providually)?	20		1				
lfures	Collection (if not collected previously)?	no			0-11			
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6356421.867		1807	483.77	Direction facing		Height	1.1 m
	Camera angle	15° down	Photo #	897-901	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			FIIOLO #		T lie location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Bloomeria clevelandii		2		Hedypnois cre	etica		1	
Isocoma menziesii		5		Bromus madr	itensis		2	
Eriogonum fasciculatum	1	15		Bromus horde	eaceus		1	
Acmispon glaber		10		Sonchus sp.			1	
Lepidium nitidum		10		Cressa truxille	ensis		1	
Sisyrinchium bellum		7						
Crassula connata		20						
Deinandra fasciculata		7						
Cuscuta occidentalis		25						
Lasthenia gracilis		10						
Convolvulus simulans		2						
Erodium botrys		20		bare ground				
Plantago erecta		5		rock				
Chlorogalum parviflorum		2		litter		~~~		
COVER: Total % Cover:	146	%Herb:	116	%Shrub:	30	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	jo vegetatio habitat ass	on key (AE) essment c	COM 2012)
	012 Vegetation ice/Association:	Deinandra fasc	iculata Provisi	onal Alliance,	Deinandra fascicu	ulata Associa	ation	
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	TI	natch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)		
Dead Standing Bio	omass	yes			T			
		Acmispon/3; E	Eriogonum/2	iogonum/2 Average height (cm) 20				
Mammal Species Activity (ca								
				egetation des	truction, tracks, sc	at, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on page	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of t		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	Open Space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Stat	tion Photo #		
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign (altere	d hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (ι	urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (t · · ·			of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	6 = Disturba	soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum	extent or in adjace	ent 10 m buf	fer.	
		2 = Disturbance			dirt bike on main	access road		
		1 = No sign of c		hin maxinum				
lf s	sign of recent fire	e, year burned?		2003				
Trails	2 = Disturbance	e does not occu	r within maxim		If trails are prese	nt, are they a	authorized?	yes
Type of trail use	hiking	no	biking	no	equestrian	no	dog	no
	service vehicles		other	no				
	illegal trail use?	2 = Disturbance	describe:			dirt bik	e on main	access road
Other disturbance?	1 = No sign of o						- 157 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Bloomeria clevelandii MSP Occur ID. BLCL_4MTRP023
Date: 3/24/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat non-native forbs (Erodium) as necessary; continue to control access via fencing and locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access control with fencing and locked gate
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Black-tailed jackrabbit
NOTES
NOTES Estimate for point 1 and 2 are the same; population is continuous across entire site. Estimate based on 3 mapped
polygons with exact count. Density calculated and the lowest density was used to extrapolate to the entire current
mapped extent. Range of estimates: 75,000-210,000

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.



Brodiaea filifolia Thread-leaved Brodiaea



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	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Brodiaea filifolia			Common Name:		Thread-leaved brodiaea		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BRFI_6BMRA002		
	CNDDB Elem. Occur. #:							
Preserve:	Black Mountain Open Space Park						Mamt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	iment
Occurrence Name:	Black Mountain				<u> </u>		ble Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Carey Goldste	ein Joe DeW	/olf				City of Sar	Diego
Date:	4/24/2015	, 000 2011	Time Start:	14:05		Time Finish:	14:41	21090
			•				-	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	napped extent. See p. 4 for definitions o	r categories c	lescribing
# Plants/Current		10	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		31.36	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		•	suspected reason:		/	
# Plants/Sampling		1					1	
Area	2		T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	r	1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector			Collection #				
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:			
-	State Plane (ft)		accur. units.	meters	Datum	NAD03	1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90				IN.			
Locat. 1 CoordE, N	6296131.963		10226	513.962	Direction facing		Height	3.4 ft
,						S:\MSCP	Tieight	5. 4 II
	Camera angle	5° up	Photo #	327-332				
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page Collection #. o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Brodiaea filifolia		1						
Eriogonum fasciculatum	ı	15						
Malosma laurina		7						
Deinandra fasciculata		3						
Brassica nigra		7						
Avena sp.		20						
Brachypodium distachy	on	75						
Anagallis arvensis		3						
Sonchus oleraceus		1						
Convolvulus arvensis		4						
Calystegia macrostegia		1		1				
Dichelostemma capitati		1		bare ground			10	
Baccharis pilularis		1		rock			5	
Centaurea melitensis		1		litter			1	
COVER: Total % Cover:	140	%Herb:	117	%Shrub:	23	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSME (typically 10-m radius circ in the office or field, using "	cle) . Vegetatio 'Associated S	on alliance/as Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
	12 Vegetation e/Association:	Eriogonum faso	ciculatum Alliar	nce, Eriogonu	m fasciculatum A	ssociation		
Cover	classes (1-6)	Cryptogami	c Crust Cover:	1 (0%)	Т	hatch Cover	4 (25% to <	:50%)
	1	Thatch Depth A	verage (cm)	3	Thatch Dep	oth max (cm)	5	
Dead Standing Biom		yes			I			l
If yes, cover/ Mammal Species Activity (cate	-	Brassica nigra	a/2		Average	e height (cm)	40	
Feral pig activity		activity (rooting	wallowing ve	enetation des	truction tracks s	cat nia) dete	ected	
ground squirr. activity 1						cat, pig) dete		
gopher activity 1								
Sampling area represent				(If no. note d	ifferences on pag	ie 3)	1	
VI. THREATS ASSESSME							m extent (cumulative
extent over years of monito Record notes on page 3. So	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Act	ivity at, or Ad	ljacent to, Site	open space; ł	nigh school				
Argentine ant abundance at ba	ait station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank ea	ach as 1-6):			r	т			
Non-native forbs 4			eral pig activity		Ī			of disturbanc
Non-native grasses 7				1 = No sign o			· · · · ·	of disturbanc
Non-native woody pl. 1	-			1 = No sign (Î			of disturbanc
competitive native pl. 1 dumping/trash 1	-		urrent grazing istoric grazing	_	· · · ·			of disturbanc
encampments 1			oric agriculture	-		Compaction	T – NO SIGI	of disturbanc
			1	1 – 140 sigir (1			
fuel modification z	ľ							
road construction		1 = No sign of c 1 = No sign of c		ent, describe:				
				ent, describe:				
brush managemer		1 = No sign of c 1 = No sign of c		ent, describe:	extent or in adjac	ent 10 m bui	ter.	
Evidence		1 = No sign of c 1 = No sign of c						
	=	e, year burned?						
Trails 2	2 = Disturbance	e does not occu	r within maxim		If trails are prese	ent, are they	authorized?	yes
Type of trail use	hiking		biking		equestrian	no	dog	-
se	ervice vehicles	-	other					
ille	egal trail use?	1 = No sign of o						
Other disturbance?	I = No sign of a						- 163 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Brodiaea filifolia MSP Occur ID. BRFI_6BMRA002
Date: 4/24/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat BRDI using CBI-style protocols
VII. MANAGEMENT ACTIONS IN LAST YEAR
Repaired fence that was installed in 2013
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
CAGN heard calling continuously through survey - see CNDDB shapefile for location
NOTES

Brodiaea filifolia (Threadleaf Brodiaea) Black Mountain Ranch



Panorama from Northeastern end of population, facing Northeast, East, Southeast. Panorama location is 6296131.963 1933513.962 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Brodiaea orcuttii Orcutt's Brodiaea



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	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Brodiaea orcuttii			Common Name:		Orcutt's brodiaea		
	Existing MSP Occurrence?	yes		MSP Occurr. ID:		BROR_6CACA015		
	CNDDB Elem. Occur. #:	EO50		Translocated	no			
Preserve:	Carroll Canyon Vernal Pool Preserve						Mgmt Unit	MU6
Land Owner:	City of San Diego	Diego Land Mangr: City of San Diego Park and Recreation Department						
Occurrence Name:	Carroll Canyon Vernal Pool Preserve				<u> </u>		ole Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe	he				City of Sar	
Date:	4/2/2015		Time Start:	14:03		Time Finish:		. 2.090
				10 11 1				
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cie) & in current m	happed extent. See p. 4 for definitions o	r categories d	lescribing
# Plants/Current		1273	exact coun	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		503.97	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1					1	[
Area	4		ī	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	2 (>0% to <1	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If you:		110			Collection #			
If yes:	Collector		Collection #					
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)						1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90				•			
Locat. 1 CoordE, N	6282439.86		19076	33.765	Direction facing	E. SE. S. SW	Height	1.1 m
	Camera angle	40° down	Photo #	3062-3070		S:\MSCP		
Locat. 2 Coord E,N		40 00001	1 11010 #	3002-3070	Direction facing		Hoight	
Local. 2 Coold L,N					Ŭ		Height	
	Camera angle		Photo #		File location			
III ASSOCIATED S	PECIES If need more room, record additiona	l data and anv	notes on page	3				
		r data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Brodiaea orcuttii		1		Stylocline gna	aphaloides		1	
Dichelostemma capitat	um	1		Hypochaeris g	glabra		2	
Deinandra fasciculata		20		Stipa pulchra			1	
Crassula connata		15		Pseudognaph	alium stramineur	n	1	
Selaginella cinerascens	3	4		Festuca myur	OS		2	
Plantago erecta		3		Antirrhinum n	uttallianum		1	
Navarretia hamata		2						
Erodium botrys		5						
Zeltnera venusta		1						
Adenostoma fasciculatu	ım	7						
Salvia mellifera		5						
Daucus pusillus		2		bare ground			40	
Castilleja exserta		1		rock			10	
Logfia filaginoides COVER: Total % Cover:	76	1 %Herb:	64	litter %Shrub:	12	%Tree:	3	
	18	/011010.	04	,soniab.	12	/01100.	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
SANDAG 20 Alliar	012 Vegetation	Artemisia califo	rnica I Salvia r	nellifera) Ass	ociation; vernal po	pol		
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)	0	Thatch Dep	oth max (cm)	0	
Dead Standing Bio		yes			T			ſ
If yes, cove Mammal Species Activity (ca		Ademostoma	fasciculata/2		Average	e height (cm)	20	
		activity (rooting	u wallowing ve	egetation des	truction, tracks, so	cat pig) dete	ected	
ground squirr. activity						sat, pig) doto		
		gopher mounds						
Sampling area represe				(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10 See Argentine)-m surroundi Ant Protocol (ng buffer. S USGS 2015)	See page 4 f for setting u	or definitions of p bait, etc.		•	
Surrounding Land Use/A	clivity at, of AC		open space, r	esidential, mi	ring			
Argentine ant abundance at	bait station (1-4)	4 = ≥100 Arge	entine ants de	etected at bait stat	ion.		
Time start	2:05 PM	Temp start	70		Time end	3:47 PM	Temp end	70
Ant sample collected?	yes	Ant sample #		1	Ant Sta	tion Photo #	3090	
DISTURBANCES (Rank	each as 1-6):	1		[T			
Non-native forbs			eral pig activity		Ī			of disturbanc
Non-native grasses				1 = No sign o			Ŭ	of disturbanc
Non-native woody pl. competitive native pl.	ÿ		urrent grazing	1 = No sign of 1 = No sign of 1				of disturbanc
	1 = No sign of c		istoric grazing		i i i i i i i i i i i i i i i i i i i			of disturbanc
	1 = No sign of o		oric agriculture					
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin maxinum	extent or in adjac	ent 10 m but	ffer.	
	ORV activity	1 - 100 sign of 0	· · ·	ent, describe:				
		1 = No sign of o		hin maxinum				
	-	e, year burned?						
Trails	1 = No sign of c	disturbance with	in maxinum ex		If trails are prese	nt, are they	authorized?	yes
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
		1 = No sign of o	describe:					
Other disturbance?	3 = Disturbance	describe:	old road bed	currently cl	osed to public, c	aravel, not r	naintai n ed.	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Brodiaea orcuttii MSP Occur ID. BROR_6CACA015
Date: 4/2/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
Major vernal pool creation/restoration project underway at site; does not affect photopoint or sampling area.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



	MSP - Rare Plant C	Occurrence	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Brodiaea orcuttii		Common Name:		Orcutt's brodiaea			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BROR_6LORI018		
	CNDDB Elem. Occur. #:	EO63		Translocated	no			
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Manger:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	ame: Lopez Ridge					Sam	ole Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/2/2015		Time Start:	10:00		Time Finish:	12:15	
I. OCCURRENCE S	TATUS - Assess # plants in both species-spe	ecific samplin	a area (typicall	v 10-m radius cir	cle) & in current m	apped extent. See p. 4 for definitions of	^f categories d	lescribina
phenology & evidence of h	erbivory, disease & stunted growth within the sa				,			, , , , , , , , , , , , , , , , , , ,
# Plants/Current Mapped Extent:		1771	exact coun	t or estimate?	exact	Г	uncert.	medium
	Area of Current Mapped Extent:		1295.5	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling Area	133			exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10	I			ondot	uncorta	
	Phenology In Sampling Area (1-6):		1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
	· · · · · · · · · · · · · · · · · · ·	J	1 (0%)	-	ering & Fruiting	1 (0%)		. (,
	Evidence in Sampling Area (1-6):			Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map	-		2.00000	. (0,0)			. (0,0)
			<u> </u>]				
	Collection (if not collected previously)?	no		l	1			
If yes:	Collector				Collection #			
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT							
GPS Accuracy: +/-			accur. units:	motors	Datum:			
-	State Plane (ft)		accui, units.	meters	Datum.	NAD05	J	
Coordin's at Center of F	h				N:			
	Pentax Optio W90	I			I			
Locat. 1 CoordE, N	6278246.403		19155	522.734	Direction facing	SW W NW	Height	1.1 m
	Comera engle	10° down	Photo #			S:\MSCP	rioigin	
Locat. 2 Coord E,N	Camera angle	10 down	FIIOLO #	3030-3038			Hoight	
Local. 2 Coold L,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and anv	notes on page	3.				
			Collection #					Collect.# (if
species/substrate		Cover	(if collected)	species/substra			Cover	collected)
Adenostoma fasciculatu	ım	30		Antirrhinum n			1	(dead)
Pogogyne abramsii		5		Plantago erec			1	
Crassula connata		5		Logfia filagino			1	
Navarretia hamata		5		Dichelostemn			1	
Osmadenia tenella		1		Erodium botry			2	
Deinandra fasciculata		1		Hypochaeris g			5	
Zeltnera venusta		1		Festuca myur			20	
Castilleja exserta		1	alal	Bromus madr			5	
Allium haematochiton	oidoo	2	old	Juncus bufon			1	(BM to check)
Deschampsia danthonid	JILLES	1		Bromus horde			1	
Bloomeria clevelandii Brodiaea orcuttii		1		Hordeum mu			1	
Psilocarphus brevissim	us	1		Chlorogalum			1	
Muilla maritima		1		Helianthemur			1	
Selaginella cinerascens	3	20	(dead, see a	bare ground			2	
				rock			2	
COVER: Total % Cover:	124	%Herb:	94	litter %Shrub:	30	%Tree:	1	

MSP - Rare P	ant Habitat and	I Threats As	ssessment	t Form 2015		Pag	e 2
IV. HABITAT ASSESSMENT IN SA (typically 10-m radius circle). Veg in the office or field, using "Associat	etation alliance/as ed Species" data f	sociation can	be assigne See page 4	d using San Dieo for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
SANDAG 2012 Vegeta Alliance/Associa		asciculatum Alli	ance, Allianc	e level only; verna	Il pool		
Cover classes (1-4) Cryptogami	c Crust Cover:	3 (10% to <2	т	hatch Cover	1 (0%)	1
	Thatch Depth /	Average (cm) T		Thatch Dep	oth max (cm)		
Dead Standing Biomass	yes			Ι.			Ī
If yes, cover/species of Mammal Species Activity (categ. 1-4)	lass Adenostoma/	2		Average	height (cm)	40	l
Feral pig activity 1 = No fera	al pig activity (rooting	g, wallowing, v	egetation des	truction, tracks, so	cat, pig) dete	ected.	
ground squirr. activity 1 = No gro		-	-				
gopher activity 1 = No poo	ket gopher mounds	detected.					
Sampling area representative of n	napped occurrence?	yes	(If no, note c	lifferences on pag	e 3)		
VI. THREATS ASSESSMENT IN M extent over years of monitoring) plu page 5 for Overall Site Quality Scale	s 10-m surround	ing buffer. S					
Surrounding Land Use/Activity	at, or Adjacent to, Site	Open Space					
Argentine ant abundance at bait station	(1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.		
Time start 10:05	AM Temp star	^t 68F		Time end	11:30 AM	Temp end	73F
Ant sample collected? no	Ant sample #	<u> </u>		Ant Sta	tion Photo #	3061	
DISTURBANCES (Rank each as 1-	6):			7			
Non-native forbs 3 = Disturb		eral pig activity		T		¥	n of disturbanc
Non-native grasses 5 = Disturb			1 = No sign	1			n of disturbanc
Non-native woody pl. 1 = No sign			1 = No sign	1			of disturbanc
competitive native pl. 1 = No sign		current grazing	-	1 .			of disturbanc
dumping/trash 1 = No sig		nistoric grazing		1	compaction	1 = No sigr	of disturbanc
encampments 1 = No sig		oric agriculture 1	T – NO SIGIT	4			
fuel modification zone/fire b							
road construction/maintena	· · · · · · · · · · · · · · · · · · ·		ent, describe:				
illegal vegetation clea			ent, describe:				
brush management/restora ORV act	in dita d				eter or in adja	acent 10 m b	ouffer.
	T = NO sign Of		ent, describe:	Î.			
	t fire 1 = No sign of nt fire, year burned?		thin mapped				
	n of disturbance with			If trails are prese	nt, are thev	authorized?	
	king	biking		equestrian		dog	
service vehi		other					L
illegal trail u		describer		1			
Other disturbance? 1 = No sign			1			- 174 -	_

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Brodiaea orcuttii MSP Occur ID. BROR_6LORI018
Date: 4/2/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access using fence and locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access controlled with fence and locked gate
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Brodiaea orcuttii (Orcutt's Brodiaea) Lopez Ridge



Panorama from Eastern edge of population, facing Southwest, West, Northwest. Panorama location is 6278246.403 1915522.734 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.


Pop. Area 2003 - 2015 Max Area: 1,295.5 sq. m. Min Area: 25 sq. m.



Source: San GIS & City of San Diego Park & Rec Created by: Kim Roeland 2015



SanGIS

Space of the second		MSP - Rare Plant C	ccurrence	e Monitorii	ng Form 20 [°]	15	Page 1		
CHUDDE Elem Court # Year Translocated year Mar Translocated year Phone With Elem Regorde Park City of San Diego Park and Researdin Department Object San Diego Park and Researdin Department San Diego Park and Researdin Department Concurrence Name Marcon Trains Regorde Park - Oar Orget Time State San Diego Park and Researdin Department Concurrence Name Marcon Trains Regorde Park - Oar Orget Time State San Diego Park and Researdin Department Concurrence Name Marcon Trains Regorde Park And Researd Park And Researd Orget Park And Researd Park And Rese	Scientific Name:	Brodiaea orcuttii			Common Nan	ne:	Orcutt's brodiaea		
CMDD FEen Court is Series Tails Region Paris Land Many Chy of Sam Dags Paris A ord Resonanto Deparament Court not Name Maleon Tails Region Paris - Out Cost Sam Tails		Existing MSP Occurrence?	yes		MSP Occurr.	ID:	BROR 40ACR012		
Parame Mator Distor Distor <thdistor< th=""> <thdistor< th=""> <thdistor< th=""></thdistor<></thdistor<></thdistor<>					Translocated?	no	—		
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Social International Procession Status						Land Manor	City of San Diego Park and Recrea		
Surveyor: Interministry City of Sam Dags Oate: 44232015 The String 1145 The Printshill 1230 Oute: 44232015 The String 1145 The Printshill 1230 Oute: 1145 The Printshill 1230 Margod Edest: 16 eacl control of editarials eacl (GPS) or editarial eacl (GPS) or editarial Sordies Found in Matheman 20.5 or editarial eacl (GPS) or editarial eacl (GPS) or editarial Sordies Found in Matheman 10 eacl (GPS) or editarial eacl (GPS) or editarial eacl (GPS) or editarial Sordies Found in Matheman 10 eacl (GPS) Painting 110% Painti		, , , , , , , , , , , , , , , , , , ,	<i>.</i>			Luna mangr.			
Date 4232015 Three Starts 11.45 Three Firsts 13.20 L. OCCURENCE STATUS - Access # above grant back areas in forced and press (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. See #. 4fer defeature of attraces desining areas (pc.key to minista size) # neuron maged aster. Ne			`						
L OCCURRENCE STATUS - Access # plants whith genetics species standing mater (type): User makes careb, if an euronet maganed status, is on a fire definition of carebar and inclusions access at standing material field and inclusions a				Time Start:	11:45			-	l Diego
Magned Fatent Area of Current Mapped Extent yes Introduced on any segmed reason ounded (PP multiple) # Pluntds Sengles Found in Maximum Extent? yes If not segmed reason uncent ounded (PP multiple) # Pluntds Sengles Found in Maximum Extent? 10 trant torus in segmed reason uncent low Sample Area Radius (mode) 10 Fourering & Entiting 10%) Protecting (PE multiple) Protecting (PE multiple) for each (PP multiple) <						cle) & in current m	apped extent. See p. 4 for definitions o	f categories o	lescribing
Mapped Scott Area of Current Mapped Extern 205 unb lagare meters exact (GPS) or estor? # Photo.Senjie 10 exact current resupced reason			19	exact cour	t or estimate?	exact		uncert.	low
Species Found in Maximum Extent? yes if not norm an appoint reason uncent # Plants/Sampling 10 uncent	Mapped Extent:	Area of Current Mapped Extent:		20.5	units	square meters	exact (GPS) or estim?	exact (GPS ma
# Plands/Sampling 10 Nonething Provening Result or or semalar Result or or semalar Provening			ves		4			/	
Sample Area Radue (m) 10 Prevenge (275%) Fruing T (0%) Prevenge (275%) Fruing T (0%) Evidence in Sampling Area (1-8): Herbitrory (1 (0%) Disease (10%) Fruing T (0%) Sumpling Area (1-8): Herbitrory (1 (0%) Disease (10%) Fruing T (0%) Sampling Area (1-8): Herbitrory (1 (0%) Disease (10%) Disease (10%) Disease (10%) Image: Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Sampling Area (1-8): Herbitrory (1 (0%)) Colspan= Sampling Area (1-8): Herbitrory (1 (0%)) Discons (1 (0%) Colspan= Sampling Area (1-8): Herbitrory (1 (0%)) Colspan= Sampling Area (1-8): Herbitrory (1 (0%)) Fruing (10%) Colspan= Sampling Area (1-	# Plants/Sampling							1	
Phenology in Sampling Area (1.6): Vegetative Deat (1.0%) Flowering (2.075): Fruiting (1.0%) Evidence in Sampling Area within Current Napped Extent? Disasse (1.0%) Standed CortM (0%) Is Sampling Area within Current Napped Extent? yes Disasse (1.0%) Standed CortM (0%) Is Sampling Area within Current Napped Extent? yes Disasse (0%) Standed CortM (0%) GPS Accursely: 14 accur. units Inteless Datam: (NAD63) Corted: Standed CortM Standed CortM Standed CortM (1.0%) (0%) Corted: Standed CortM Standed CortM Standed CortM (1.0%) (1.0%) CortM at CortM cort Price E NoteCort Standed CortM (1.0%) (1.0%) CortM at CortM cort Price Standed CortM at CortM cortM Standed CortM (1.0%) (1.0%) CortM at CortM cort Price Standed CortM CortError & K NC AT mediate Standed CortM (2.0%) CortError & K NC AT (2.0%) CortError & K NC AT Mediate Standed CortM (2.0%) <td>Area</td> <td>19</td> <td></td> <td>r</td> <td>exact co</td> <td>ount or estimate?</td> <td>exact</td> <td>uncert.</td> <td>low</td>	Area	19		r	exact co	ount or estimate?	exact	uncert.	low
Prove 1 0%) Proveming 4: Fruiting 1 0%) (0%) Statume discrete discredi discredi discrete discrete discrete discrete discredi discrete		Sample Area Radius (m)	10		1	r	1		h
Evidence in Sampling Area (1-6): Herbinon (10%) Disease (10%) Standed Growth (10%) Is Sampling Area within Current Mapped Extent? accur. units meters Datum: NADB3 Image: Control (10%) Image: Control (10%) GPS Accurrey: 1 accur. units meters Datum: NADB3 Image: Control (10%) Image: Control (10%) GPS Accurrey: 1 accur. units meters Datum: NADB3 Image: Control (10%) Image		Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
Is Sampling Area within Current Mapped Extent Sampling Area within Sampling Are			Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	J	
NAME LOCATION & SITE PHOTOMONITORING GPS Accuracy: +i 1 GORD Accuracy: +i 1 Coordin's at Center of Piot: E Condent's up Pentax Optio W90 N Condent's up Pentax Optio W90 N Camera angle Itevel Photo 203-307 File toothon SMSCP SMSCP IN SMSCP IN SMSCP IN SMSCP IN SMSCP IN SMSCP SMSCP SMSCP IN SMSCP IN SMSCP IN SMSCP IN SMSCP IN SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP SMSCP		Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
GPS Accuracy. +i- L1 accur. units. meters Datum NAD83 Coordins at Center of Pot: E: N <td< td=""><td></td><td>Is Sampling Area within Current Map</td><td>ped Extent?</td><td>yes</td><td></td><td></td><td></td><td></td><td></td></td<>		Is Sampling Area within Current Map	ped Extent?	yes					
GPS Accuracy. +i- L1 accur. units. meters Datum NAD83 Coordins at Center of Pot: E: N <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
	II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING						
Coordin's at Center of Pic: E. N. N. N. Carrent atype: Pertiax Optio W90 1888177.768 Direction facing S. SW, W. Height 1.1 m. ConcortE. Amera angle iewel Photo # 363.307 Fiel location SMSCP United State and any rotes on page 3 Second Collect # or NC if or C i of Collect # or NC if Or C i of Collect # or NC if Or C i of Collect # or NC if Or C i of Collect # or NC if Or C i of Collect # or NC if Or C i of Collect # or NC if Or C i of Collect # or NC if Or C i of Collect # Or NC if Or C i of Collect # Or Or C i of Collect #	GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
Camera type. Pertax Optio W90 Image: Camera angle <	coord. system	State Plane (ft)				-		_	
Local: 1 CoordE.N amera angle Staf6339.88 Level Phote # Direction facing 303.307 S.W.W Height 1.1 m IL ASSOCIATED SUPCES Amera angle Phote # 303.307 File location S.W.W Height 1.1 m IL ASSOCIATED SUPCES If evel Phote # 303.307 File location S.W.W Height 1.1 m IL ASSOCIATED SUPCES If evel Phote # 303.307 File location S.W.W Height 1.1 m Second Sec	Coordin's at Center of P	Plot: E:				N:			
Incom Incom <th< td=""><td>Camera type:</td><td>Pentax Optio W90</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	Camera type:	Pentax Optio W90							
Camera angle evel Photo # 303.307 File location III. ASSOCIATED SPECIES. If need more room, necord additional data and any notes con page 3. Collection #, or NC if not species/substrate Collect # or NC if nor species/substrate Collect # or NC i	Locat. 1 CoordE, N	6316339.88		1888	177.768	Direction facing	S, SW, W	Height	1.1 m
III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3. Collection #, or NC if not species/substrate Collection #, or NC if not collectife Collectife or NC if not collectife or NC if not collectife Collectife or NC if not collectife or NC if not collectife or NC if not collectife or NC if not collectife or Collectife or NC if not collectife or NC if not collectife or NC if not collectife or NC if not collectife or Collectife or Collectife or NC if not collectife or Colectife or Collectife or Collectife or Collectif		Camera angle	level	Photo #	303-307	File location	S:\MSCP		
Species/substrate % core Collection or NC if not species/substrate Collection or NC if not species/substrate Collection of NC if not species/substrate Collection of NC if not species/substrate Collection of NC if not species/substrate Collection of NC if not species/substrate Collection of NC if not species/substrate Collection of NC collection Brodlaea or cuttii Minulus guttatus Minulus guttatus Image: Species/substrate Image: Species/species/species/species/species/species/species/species/species/sp									
species/substrate % Cover oteleded Brodiae arcuttii Imoulus gutaus Minulus gutaus Me Malosna laurina Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia mellifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia mellifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Imoulus gutaus Salvia heilifera	III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
Brodiaea orcuttii Minulus guttatus Important salicitation Important salicitation salicitation <td< td=""><td>species/substrate</td><td></td><td>% Cover</td><td></td><td></td><td>species/substrate</td><td></td><td>% Cover</td><td></td></td<>	species/substrate		% Cover			species/substrate		% Cover	
Adosma laurina Image: Spergula avensis	•								
Salvia mellifera Image: Cryptantha intermedia Image: Cryptantha intermedia Baccharis salicifolia Image: Cryptantha intermedia Image: Cryptantha intermedia Salix laevigata Image: Cryptantha intermedia Image: Cryptantha intermedia Salix laevigata Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Salix laevigata Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Salix laevigata Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Salix laevigata Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Salix laevigata Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Image: Cryptantha intermedia Districtions splicata Image: Cryptantha intermedia Image: Cryptantha intermedia <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Bacharis salicifolia Image: Carduus pycnocephalus Image: Carduus pycnoc									
Salix laevigata Image: S									
Ambrosia psilostachya Image: Logfia gallica Image: Logfia gal									
Distichlis spicata Image: Constraint of the spice	_								
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Erodium botrys Eriogonum fasciculatum Image: Calystegia macrostegia Image: Calys									
Bothriochloa barbinodis Calystegia macrostegia Image: Calystegia macrostegia Muhlenbergia rigens Deinandra fasciculata Image: Calystegia macrostegia Festuca perennis Eschscholzia californica pics 317-321 Hypochaeris glabra Stephanomeria sp. Image: Calystegia macrostegia pics 317-321 Hypochaeris glabra Stephanomeria sp. Image: Calystegia macrostegia Image: Calystegia macrostegia <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Muhlenbergia rigens Deinandra fasciculata image: constraint of the second									
Festuca perennis Image: Sechscholzia californica pics 317-321 Hypochaeris glabra Stephanomeria sp. Image: Sechscholzia californica pics 317-321 Hypochaeris glabra Stephanomeria sp. Image: Sechscholzia californica Image: Sechschol						-			
Hypochaeris glabra Stephanomeria sp. Image: Constant of the synthetic synth									pics 317-321
Centaurea melitensis Image: Sector Secto									
Bromus madritensis Image: Second second									
Bromus diandrus Image: Crassula connata									
Avena barbata Image: Cover Image: Cov						nata			
Medicago polymorpha Image: Constraint of the system of t									
Cyperus eragrostis Vicia villosa Image: Constraint of the second of the									nics 322-324
Acmispon americanus var. americanus bare ground bare ground Juncus bufonius rock 1 Antirrhinum nuttallianum 1 1 COVER: Total % Cover %Herb: %Shrub: %Tree:									
Juncus bufonius Image: Constant of the second sec		var americanus							
Antirrhinum nuttallianum ONE Netro Shruh: Sh									
COVER: Total % Cover: %Tree: %Tree: 170		1							
	COVER: Total % Cover:		%Herb:		%Shrub:		%Tree:	- 178 -	

MSP - Rare Plar	nt Habitat and	Threats As	ssessment	: Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.								
SANDAG 2012 Vegetation Alliance/Association	n Ephemeral stre n:	am						
Cover classes (1-6) Cryptogami	c Crust Cover:	1 (0%)	T	hatch Cover	1 (0%)		
	Thatch Depth A	Average (cm)	0	Thatch Dep	th max (cm)	0		
Dead Standing Biomass	no			т			r	
If yes, cover/species clas	s			Average	height (cm)	0		
Mammal Species Activity (categ. 1-4)								
Feral pig activity 1 = No feral p			egetation des	truction, tracks, so	at, pig) dete	cted.		
ground squirr. activity 1 = No groun	d squirrel burrows	detected.						
gopher activity 1 = No pocke	t gopher mounds	detected.						
Sampling area representative of map	ped occurrence?	yes	(If no, note d	lifferences on page	e 3)			
VI. THREATS ASSESSMENT IN MA extent over years of monitoring) plus 7 Record notes on page 3. See Argentin	I0-m surround	ing buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/Activity at, or A	Adjacent to, Site	open space						
Argentine ant abundance at bait station (1-	-4)							
Time start	Temp start			Time end		Temp end		
Ant sample collected?	Ant sample #			Ant Sta	tion Photo #			
DISTURBANCES (Rank each as 1-6):				-				
Non-native forbs	fe	eral pig activity	1 = No sign	altere	d hydrology	1 = No sign	of disturbanc	
Non-native grasses	_	trampling	1 = No sign		erosion	1 = No sign	of disturbanc	
Non-native woody pl.	_	vandalism	1 = No sign		urban runoff	1 = No sign	of disturbanc	
competitive native pl. 1 = No sign o	fe c	current grazing	1 = No sign	slope	e movement	1 = No sign	of disturbanc	
dumping/trash 1 = No sign o	fo r	istoric grazing	1 = No sign	soil	compaction	1 = No sign	of disturbanc	
encampments 1 = No sign o	f dhisto	oric agriculture	1 = No sign					
fuel modification zone/fire brea	k 1 = No sign of	9						
road construction/maintenanc	e 1 = No sign of	if pres	ent, describe:					
illegal vegetation clearin	^g 1 = No sign of	if pres	ent, describe:					
brush management/restoratio	n 1 = No sign of	disturbance wi	thin maxinum	extent or in adjace	ent 10 m buf	ffer.		
ORV activi	^{ty} 1 = No sign of		ent, describe:					
Evidence of recent fir			% of area with					
If sign of recent t	ire, year burned?		2003			ſ		
Trails 2 = Disturban	ce does not occu	r within maxim		If trails are prese	nt, are they a	authorized?	yes	
Type of trail use hikin	g yes	biking	yes	equestrian	yes	dog	yes	
service vehicle	s no	other	no					
illegal trail use	? 1 = No sign of	describe:						
Other disturbance? 1 = No sign o	f describe:					- 179 -		

		ment Needs and Notes 2	015
(top 2 rows au	uto-fill from page 1)		
Scientific Name:	Brodiaea orcuttii	MSP Occur ID.	BROR_40ACR012
Date:	4/23/2015		
VI. MANAGEMEN None.	IT RECOMMENDATIONS		
None.			
VII. MANAGEMEN	NT ACTIONS IN LAST YEAR		
None.			
VIII. CNDDB SPE	CIES DETECTED (list any plant or	animal species to add to the	e CNDDB)
NOTES			
% cover not collect	cted in 2015.		

Brodiaea orcuttii (Orcutt's Brodiaea) Mission Trails Regional Park- Oak Creek



Panorama from Southern end of population, facing South, Southwest, West. Panorama location is 6316339.88 1888177.768 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Scientific Name: Brodiaea orcuttii Common Name: Orcutt's brodiaea Existing MSP Occurrence? yes MSP Occurr. ID: BROR_2NOBD002			
Existing MSP Occurrence? yes MSP Occurr. ID: BROR_2NOBD002			
	BROR_2NOBD002		
CNDDB Elem. Occur. #: EO36 Translocated no			
Preserve: Rose Canyon Open Space Mg	/Igmt Unit	MU2	
Land Owner: City of San Diego Park and Recreation	on Deparl	tment	
Occurrence Name: Nobel Drive Sample	e Point #:	1	
Surveyors: Betsy Miller, Kim Roeland Affiliation Cit	City of San	n Diego	
Date: 4/17/2015 Time Start: 10:50 Time Finish:	11:23		
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of cat phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on p. 3.	ategories d	lescribing	
# Plants/Current 0 exact count or estimate? exact	uncert.	medium	
Mapped Extent: O Cude count of counter count Cude count Area of Current Mapped Extent: 0 units square meters exact (GPS) or	or estim?	exact (GPS ma	
Species Found in Maximum Extent? no if not found, known or suspected reason:		see notes	
# Plants/Sampling			
	uncert.	medium	
Sample Area Radius (m) 10			
	Fruiting	1 (0%)	
Dead 1 (0%) Flowering & Fruiting 1 (0%)			
Evidence in Sampling Area (1-6): Herbivory 1 (0%) Disease 1 (0%) Stunted (d Growth	1 (0%)	
Is Sampling Area within Current Mapped Extent? yes			
Collection (if not collected previously)? no			
If yes: Collector Collection #			
Museum/Herbarium			
II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING			
GPS Accuracy: +/- <1			
coord. system State Plane (ft)			
Coordin's at Center of Plot: E: N:			
Camera type: Pentax Optio W90			
Locat. 1 CoordE, N 6271105.37 1896318.834 Direction facing NW, W, SW, S S:WSCP	Height	1.1 m	
Camera angle 20° down Photo # 226-230 File location			
Locat. 2 Coord E,N Direction facing	Height		
Camera angle Photo # 221-225 File location			
III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3.			
species/substrate % Cover collected species/substrate % 0		Collect.# or NC if not collected	
Navarretia fossalis 1 Gastridium phleoides	1		
Eriogonum fasciculatum 5 Festuca myuros	2		
Deinandra fasciculata 10 Bromus hordeaceus	1		
Psilocarphus brevissimus 5 Sanicula arguta	1		
Croton setigerus 2			
Lythrum hyssopifolia 2			
Crassula connata 3			
Deschampsia danthonoides 2			
Holocarpha virgata elongata 2			
Castilleja exerta 1 (dead)			
Logfia gallica 1			
Erodium botrys 1			
Stipa pulchra 2 bare ground	35		
Bromus madritensis 5 rock Avena sp. 10 litter	1		
Avena sp. 10 litter COVER: Total % Cover: 58 %Herb: 53 %Shrub: 5 %Tree:	0	L	

MSP - Rare Plant	Habitat and	Threats As	sessment	: Form 2015		Page	e 2		
(typically 10-m radius circle). Vegetati in the office or field, using "Associated S	IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.								
SANDAG 2012 Vegetation Alliance/Association:	vernal pool								
Cover classes (1-6)	Cryptogamic	Cryptogamic Crust Cover: 1 (0%) Thatch Cover* 1 (0%)							
	Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)				
Dead Standing Biomass	yes			T			1		
If yes, cover/species class	Eriogonum fa	sciculatum/2		Average	height (cm)	30			
Mammal Species Activity (categ. 1-4) Feral pig activity 1 = No feral pig	a activity (reating		actation dos	truction tracks or	at nia) data	eted			
ground squirr. activity 1 = No ground			egetation des		ai, pig) dete	cieu.			
gopher activity 1 = No pocket									
Sampling area representative of mapp	• ·		(If no note d	lifferences on pag	e 3)	1			
VI. THREATS ASSESSMENT IN MAXI						m extent (cumulative		
extent over years of monitoring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•			
Record notes on page 3. See Argentine			for setting u	ip bait, etc.					
Surrounding Land Use/Activity at, or Ac	djacent to, Site	open space							
Argentine ant abundance at bait station (1-4)								
Time start	Temp start			Time end		Temp end			
Ant sample collected?	Ant sample #			Ant Sta	tion Photo #				
DISTURBANCES (Rank each as 1-6):	_			_					
Non-native forbs <u>3 = Disturbance</u>	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses 3 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl. 1 = No sign of o		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl. 1 = No sign of o	1	urrent grazing	-	1			of disturbanc		
dumping/trash 1 = No sign of o		istoric grazing	, v	İ	compaction	1 = No sign	of disturbanc		
encampments 1 = No sign of o	histo	pric agriculture	1 = No sign (1					
fuel modification zone/fire break	1 = No sign of c								
road construction/maintenance	U		ent, describe:						
illegal vegetation clearing			ent, describe:						
brush management/restoration	1 = No sign of c	disturbance wit	hin maxinum	extent or in adjac	ent 10 m buf	fer.			
ORV activity	T = NO SIGN OF C		ent, describe:						
Evidence of recent fire		disturbance wit	hin maxinum						
If sign of recent fire	e, year burned?]					
	disturbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?			
Type of trail use hiking		biking		equestrian		dog			
service vehicles		other							
illegal trail use?	1 = No sign of o	describe:							
Other disturbance? 1 = No sign of o	describe:					- 184 -	-		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Brodiaea orcuttii MSP Occur ID. BROR_2NOBD002
Date: 4/17/2015
VI. MANAGEMENT RECOMMENDATIONS Continue current management by Caltrans
Continue current management by Califaria
VII. MANAGEMENT ACTIONS IN LAST YEAR
Weeding by Caltrans
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
One plant detected in vegetative form, will need to return to verify the species. Individuals were mapped. Returned
to verify on 5/27/15 and no plants were seen.
*Active management of vernal pools extends to 5-m buffer around vernal pool fenced area; some of the sampling area extends out of the buffer but the form has been filled out focusing on the actively managed area.

Brodiaea orcuttii (Orcutt's Brodiaea) Nobel Drive



Panorama from Northern end of population, facing Northwest, West, Southwest, and South. Panorama location is 6271105.37 1896318.834 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.

Brodiaea orcuttii - Nobel Drive

Mapped indivduals in vegetative state - species not confirmed

Area 2015: 3.02 sq. m.



0

Brodiaea orcuttii

Pop. Area 2003 - 2015 Max Area: 22.28 sq. m. Min Area: 0 sq. m.



0

Source: San GIS & City of San Diego Park & Rec Created by: Annabelle Bernabe, 2015



very reasonable effort has been made to assure the accuracy of is map. However, neither the SanGIS participants nor San Diego ata Processing Corporation assume any liability arising from s use.

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Chloropyron maritimum ssp. *maritimum* Salt-marsh Bird's Beak



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	MSP - Rare Plant C	ccurrence	e Monitorir	ng Form 20 [°]	15	Page 1			
Scientific Name:	Chloropyron maritimum ssp. maritimum			Common Nan	ne:	Salt marsh bird's-beak			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	COMAM3_1DOBE007			
	CNDDB Elem. Occur. #: n/a Translocated no								
Preserve:	Flood Control Channel Southern Wildlife	Preserve					Mgmt Unit	MU1	
Land Owner:	City of San Diego				Land Manger:	City of San Diego Park and Recrea	ation Depar	tment	
Occurrence Name:	Dog Beach					Sam	ole Point #:	1	
Surveyors:	Betsy Miller, Kim Roeland					Affiliation	City of Sar	Diego	
Date:	5/22/2015		Time Start:	11:05		Time Finish:	11:30		
	FATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	^f categories c	lescribing	
# Plants/Current		17793			estimate (extrap	plate partial ct)	uncert.	medium	
Mapped Extent:	Area of Current Mapped Extent:		1977	1	square meters		4	exact (GPS ma	
	Species Found in Maximum Extent?	ves		-	suspected reason:		,		
# Plants/Sampling	•						1		
Area	2837		r	exact co	ount or estimate?	exact	uncert.	low	
	Sample Area Radius (m)	10		1		1			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	2 (>0% to <10%	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	yes						
	Collection (if not collected previously)?	20		1					
If you		no			0-11				
If yes:	Collector				Collection #				
	Museum/Herbarium								
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)						1		
Coordin's at Center of F					N:				
Camera type:	Pentax Optio W90								
Locat. 1 CoordE, N	6254606.503		1856070	6.178+A1	Direction facing	NE, N, NW	Height	1.1 m	
	Camera angle	0°	Photo #	603-608	File location	S:\MSCP			
Locat. 2 Coord E,N					Direction facing		Height		
							rioigiit		
	Camera angle		Photo #		File location				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.					
			Collection #, o	r NC if not				Collect.# or NC if	
species/substrate		% Cover	collected		species/substrate		% Cover	not collected	
Chloropyron maritimum		20							
Salicornia pacifica		30							
Frankenia salina		7							
Suaeda esteroa		1							
Jaumea carnosa		1							
Triglochin maritima		5							
Limonium perezii		1							
Limonium ramosissimu	Π	15							
Cuscuta pacifica		1							
Distichlis littoralis		15							
				hara marine '				Path/Trail	
<u> </u>				bare ground rock			30	r auw Hall	
				litter			0		
COVER: Total % Cover:	96	%Herb:	96	%Shrub:	0	%Tree:	0		

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.									
SANDAG 2 Alliar	012 Vegetation ce/Association:	on Sarcocornia pacifica (Salicornia depressa) Alliance, Sarcocornia pacifica-Frankenia salina n: Association							
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	ті	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)		Ļ	
Dead Standing Bio	omass	no			T				
	er/species class				Average	height (cm)		l į	
Mammal Species Activity (ca									
				egetation des	truction, tracks, so	at, pig) dete	cted.		
ground squirr. activity									
	1 = No pocket (
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on page	e 3)			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	Flood control	channel, ope	n water, beach/du	nes			
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #			
DISTURBANCES (Rank	each as 1-6):								
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign (altere	d hydrology	7 = Disturba	ance occurs ≥	
Non-native grasses	1 = No sign of		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc	
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc	
competitive native pl.	1 = No sign of	С	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc	
dumping/trash	1 = No sign of	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc	
encampments	1 = No sign of	histo	oric agriculture	1 = No sign of					
fuel modification	zone/fire break	1 = No sign of o							
road construction				ent, describe:					
	etation clearing			ent, describe:					
brush manageme	ent/restoration	1 = No sign of a	disturbance wit	thin maxinum	extent or in adjace	ent 10 m buf	fer.		
	ORV activity	1 = No sign of c	if prese	ent, describe:					
Eviden	ce of recent fire	1 = No sign of c	disturbance wit	thin maxinum					
lf s	sign of recent fire	e, year burned?			J				
Trails	5 = Disturbance	e occurs in 25%	to <50% of ar		If trails are prese	nt, are they	authorized?	yes	
Type of trail use	hiking	yes	biking	yes	equestrian	no	dog	yes	
	service vehicles	no	other	no					
	illegal trail use?	1 = No sign of c	describe:						
Other disturbance?	1 = No sign of	describe:					- 191 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Chloropyron maritimum ssp. maritimu MSP Occur ID. COMAM3_1DOBE007
Date: 5/22/2015
VI. MANAGEMENT RECOMMENDATIONS Repair broken fence near population; treat Limonium spp. with best management practices when available
VII. MANAGEMENT ACTIONS IN LAST YEAR
Fencing and signs around population to keep dogs/people on the trail
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Horned larks heard calling
NOTES Vegetatation type appears to have elements of both Sarcocornia pacifica (Salicornia depressa) Alliance, Sarcocornia
pacifica-Frankenia salina Association and Sarcocornia pacifica (Salicornia depressa) Alliance, Salicornia bigelovii
Provisional Association

Chloropyron maritimum ssp. maritimum (Salt Marsh Bird's Beak) Dog Beach



Panorama from Eastern end of population, facing Northeast, North, Northwest. Panorama location is 6254606.503 1856076.178 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.

Chloropyron maritimum - Dog Beach



Chloropyron maritimum

Photopoint

0

Pop. Area 2014-2015 Max Area:1,977 sq. m. Min Area: 223.57 sq. m



Source: San GIS & City of San Diego Park & Rec Created by: Kim Roeland, 2015



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

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- 194 -

Cylindropunita californica var. *californica* Snake Cholla



© City of San Diego, 2015

	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
CNDDB Elem. Occur. #	Cylindropuntia californica var. californica			Common Nar	ne:	Snake cholla		
	Existing MSP Occurrence?	no		MSP Occurr.	ID:			
	CNDDB Elem. Occur. #:	n/a		Translocated	no			
Preserve:	eserve: Balboa Park / Switzer Canyon Mgmt Unit MU2							MU2
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Balboa Golf Course					Sam	ole Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	Diego
Date:	5/12/2015		Time Start:	12:40		Time Finish:	13:30	
	TATUS - Assess # plants in both species-spe	ocific complin	a aroa (typicall	v 10-m radius cir	clo) & in current m	annod avtant. Soo n. 4 for definitions of	Catagorias d	loscribing
phenology & evidence of h	erbivory, disease & stunted growth within the sa						calegones c	lescribility
# Plants/Current Mapped Extent:		2	exact coun	t or estimate?	exact		uncert.	very low
mapped Extern.	Area of Current Mapped Extent:		81.61	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1				Γ.	1.	
Area	1	10	[exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)			1				
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)
			1 (0%)		ering & Fruiting		l	
	Evidence in Sampling Area (1-6):	-		Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING		r	r		n	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					1		
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90				r			
Locat. 1 CoordE, N	6287974.598	n	18451	59.527	Direction facing		Height	1.1 m
	Camera angle	Level	Photo #	74-81	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			1 11010 //					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, or collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Cylindropuntia californio	2	1	Concorca	Muhlenbergia			1	
Yucca schidigera		7		Deinandra fas	1		2	
Opuntia littoralis		1		Encelia califor			2	
Salvia mellifera		5		Stipa sp.	inica		1	
Artemisia californica		35		Marah macro	carous		1	
Isocoma menziesii		5		Mimulus aura	•		1	
Rhus integrifolia		10		Winnaido dara	niacus			
Malosma laurina		4						
Eriogonum fasciculatum	1	2						
Ceanothus verrucosus	·	3						
Adenostoma fasciculatu	IM	5						
Ferocactus viridescens		1		bare ground			20	
Pseudognaphalium stra	mineum	1		rock			7	
Pseudognaphalium biol		1		litter			3	
COVER: Total % Cover:	89	%Herb:	7	%Shrub:	75	%Tree:	7	

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using SANDAG 20 Allian	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. s sciculatum Alli	be assigned See page 4 ance, Adenos	d using San Dieg for definitions of stoma fasciculatur	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	er classes (1-6)		c Crust Cover:			hatch Cover	1 (0%)	
0000		Thatch Depth A		1 (0 /0)	1	oth max (cm)	1 (070)	
Dead Standing Bio	omass	yes	(i ei a'ge (ei)			(011)		L
		Unknown shru	ubs (Art cal a	nd Sal Mel?	Average	height (cm)	30	Ī
Mammal Species Activity (ca						- 3 - (-)		L
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					-
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)	-	
VI. THREATS ASSESSM extent over years of monit Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	Open Space;	golf				
Argentine ant abundance at	bait station (1-4)	2 = 1-50 Arge	ntine ants de	tected at bait stati	on.		
Time start	1:00 AM	Temp start	65F		Time end	1:25 AM	Temp end	65F
Ant sample collected?	yes	Ant sample #		4	Ant Sta	tion Photo #	82	
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	1 = No sign of o	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	n of disturbanc
Non-native grasses	1 = No sign of o		trampling	1 = No sign (erosion	1 = No sign	n of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	1 = No sign	n of disturbanc
competitive native pl.	1 = No sign of o	c	urrent grazing	1 = No sign (slop	e movement	1 = No sign	n of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign o	soil	compaction	1 = No sign	n of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	listurbance wit	hin maxinum	extent or in adjac	ent 10 m buf	fer.	
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Eviden	ce of recent fire	1 = No sign of c	listurbance wit	hin maxinum				
lfs	sign of recent fire	e, year burned?					1	
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
s	service vehicles		other					
i	illegal trail use?	1 = No sign of o	describe:					
Other disturbance?	1 = No sign of o	describe:					- 197 -	_

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Cylindropuntia californica var. californ MSP Occur ID.
Date: 5/12/2015
VI. MANAGEMENT RECOMMENDATIONS
none
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Cylindropuntia californica var. californica (Snake Cholla) Balboa Golf Course



Panorama from Northern edge of population, facing Northwest, North, Northeast. Panorama location is 6287974.598 1845159.527 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
CNDDB Elem. Occur. #		Common Name:		Snake cholla					
	no	MSP Occurr. ID:							
	n/a	n/a Translocated no							
Preserve:							Mamt Unit	MU3	
Land Owner:	City of San Diego Public Utilities Departn	nent			Land Mangr:	City of San Diego Public Utilities Department			
Occurrence Name:							ble Point #:	1	
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	mabe					City of Sar	n Diego	
Date:	4/21/2015		Time Start:	13:06		Time Finish:	-		
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing									
	IAIUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	r categories c	lescribing	
# Plants/Current		32	exact coun	t or estimate?	exact		uncert.	very low	
Mapped Extent:	Area of Current Mapped Extent:		1205.28	units	square meters	exact (GPS		exact (GPS ma	
	Species Found in Maximum Extent?	ves			suspected reason:		/		
# Plants/Sampling				, .			1		
Area	0		T	exact co	ount or estimate?	exact	uncert.	very low	
	Sample Area Radius (m)	10		1	h	1			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	no						
				1					
	· · · · ·	no]				
If yes:	Collector				Collection #				
	Museum/Herbarium								
	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83			
coord. system				2010111		1			
Coordin's at Center of F					N:				
	Pentax Optio W90								
	6323509.09	1779		31.202	Direction facing	E NE N	Height	1.1 m	
	2					S:\MSCP	rieigiit	1.1.111	
	Camera angle	Level	Photo #	3281-3294	File location				
Locat. 2 Coord E,N					Direction facing		Height		
	Camera angle		Photo #		File location				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	Collection #, or					Collect.# or NC if	
species/substrate		% Cover	collected		species/substrate		% Cover	not collected	
Artemisia californica		7		Bromus diand	Irus		2		
Simmondsia chinensis		3		Avena sp.			2		
Encelia californica		10		Silene or Anti	rrhinium		1	(dead)	
Ambrosia chenopodiifol	ia	3							
Cylindropuntia prolifera		2							
Deinandra fasciculata	1								
Erodium sp.		10	(dead)						
Bromus madritensis		15							
Salsola tragus		3							
Lepidium nitidum		1							
Brassica tournefortii		1							
Cistanthe maritima		1		bare ground			10		
Cryptantha sp.		1	(dead)	rock			2		
Centaurea melitensis		1		litter			1		
COVER: Total % Cover:	64	%Herb:	39	%Shrub:	25	%Tree:	0		

MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2									
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Simmondsia chinensis Alliance, Simmondsia chinensis-Bahiopsis laciniata Association									
SANDAG 2012 Alliance/As		Simmonusia ch	inensis Alliand	e, Simmonus		opsis laciniai)/T	
Cover cla	sses (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)		
	г	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l	
Dead Standing Biomass	S .	yes			т			1	
If yes, cover/species class unknown shrub/2 Average height (cm) 10							l		
Mammal Species Activity (categ. 1-4) Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.									
			-	egetation des	truction, tracks, so	cat, pig) dete	cted.		
ground squirr. activity $1 = N$									
gopher activity $1 = N$				(If we were d		- 2)	J		
Sampling area representativ					lifferences on pag		/		
VI. THREATS ASSESSMENT extent over years of monitoring Record notes on page 3. See <i>J</i>	g) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/Activity	y at, or Ad	jacent to, Site	open space						
Argentine ant abundance at bait s	station (1-4))							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		l	
DISTURBANCES (Rank each	as 1-6):				т				
Non-native forbs <u>4 = [</u>	Disturbance	fe	ral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses 4 = E	Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc	
Non-native woody pl. 1 = N				1 = No sign o	1			of disturbanc	
competitive native pl. 1 = N			urrent grazing		1			of disturbanc	
dumping/trash $1 = N$			istoric grazing		Ī	compaction	1 = No sign	of disturbanc	
encampments 1 = N	vo sign of (nisto	ric agriculture	1 = No sign of	1				
fuel modification zone	e/fire break	1 = No sign of c							
road construction/ma	H	<u> </u>		ent, describe:					
illegal vegetatio	F			ent, describe:					
brush management/re	D\/ a ativity				extent or in adjac	ent 10 m buf	fer.	L	
	· · · · ·	1 = No sign of c		ent, describe:					
		1 = No sign of o , year burned?	listurbance wit	nin maxinum					
		-			If trails are prese	ent, are they	authorized?		
Type of trail use $2 = L$		does not occu		20	1 1	-	1	yes	
	hiking te vehicles		biking other		equestrian	UU	dog	10	
		1 = No sign of c			<u> </u>				
Other disturber and	No sign of (describe:					- 202 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Cylindropuntia californica var. califorr MSP Occur ID.
Date: 4/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access at entrance with locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access controlled at entrance with locked gate
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Orange-throated whiptail - CNDDB point taken; Cistanthe maritima found all over in bloom
NOTES

Cylindropuntia californica var. californica (Snake Cholla) Otay Mesa



Panorama from Northern edge of population, facing East, Northeast, North. Panorama location is 6323509.09 1779631.20 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Cylindropuntia californica var. californica	ca Common Name:			Snake cholla			
	no MSP Occurr. ID:							
	n/a Translocated1no							
Preserve:	Spring Canyon						Mgmt Unit	MU3
Land Owner:	City of San Diego	Land Manager:	City of San Diego Public Utilities Department					
Occurrence Name:	Goat Mesa/Spring Canyon	Ŭ	Sam	ple Point #:	1			
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/21/2015		Time Start:	11:35		Time Finish: 12:25		
	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing							
	erbivory, disease & stunted growth within the se						calegones c	lescribing
# Plants/Current Mapped Extent:		57	exact cour	t or estimate?	exact		uncert.	very low
Mapped Extent.	Area of Current Mapped Extent:		2030.74	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1					1	
Area	0		Ī	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):		1 (0%)	Flowering			Fruiting	1 (0%)
			1 (0%)		ering & Fruiting]	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	no					
	Collection (if not collected previously)?	no						
If yes:	Collector	Collection #						
,	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING				1		
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83]	
coord. system	State Plane (ft)					1		
Coordin's at Center of F	Plot: E:				N:			0
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6330060.051	1781		287.695 Direction facing			Height	1.1 m
	Camera angle	5° up	Photo #	3257-3267	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #	File location		n		
			1 11010 //					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Simmondsia chinensis		10		Avena sp.	opeoleoroubolitate		1	
Ambrosia chenopodiifol	ia	5			20016		1	
Artemisia californica	14	3		Bromus hordeaceus			5	(dead)
		1	Plantago erecta					(dead)
Atriplex pacifica		7	Lepidium nitidum		um		1	(ueau)
Deinandra fasciculata		-	(dead)	Stipa pulchra Festuca sp.			1	(dead)
Selaginella cinerascens Salsola tragus		3	(ueau)	Encelia califor	mica		1	(ueau)
Logfia gallica	3			Thea				
Erodium sp.			(dead)					
Crassula connata Centaurea melitensis		5	(dead)				<u> </u>	
Brassica nigra		1		bare ground			30	
Bromus madritensis		3		rock			1	
Bromus diandrus		1		litter			2	
COVER: Total % Cover:	72	%Herb:	53	%Shrub:	19	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Simmondsia chinensis Alliance, Simmondsia chinensis-Bahiopsis lacinata Association									
	012 Vegetation ce/Association:		inensis Alliand	e, Simmonas	a chinensis-Banio	opsis lacinat	a Associatio	n	
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l	
Dead Standing Bio		yes			1			I	
If yes, cove Mammal Species Activity (ca		Stipa pulchra/	2		Average	e height (cm)	5	I	
		activity (rooting	. wallowing, ve	egetation des	truction, tracks, so	cat. pig) dete	ected.		
ground squirr. activity				-					
		gopher mounds		5					
Sampling area represe				(If no, note d	lifferences on pag	e 3)			
VI. THREATS ASSESSN extent over years of monit Record notes on page 3. \$	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space						
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #			
DISTURBANCES (Rank e	each as 1-6):			r	т				
Non-native forbs			ral pig activity		1			of disturbanc	
Non-native grasses				1 = No sign (of disturbanc	
Non-native woody pl.				1 = No sign (1			of disturbanc	
competitive native pl.			urrent grazing	-	1			of disturbanc	
	1 = No sign of of 1 = No sign of 0		istoric grazing pric agriculture		Ī	compaction	T = NO Sign		
fuel modification			-		1				
road construction				ent, describe:					
		1 = No sign of c		ent, describe:					
brush manageme					extent or in adjac	ent 10 m but	ffer.		
	ORV activity	1 = No sign of c		ent, describe:					
Eviden	ce of recent fire	1 = No sign of c	listurbance wit	thin maxinum					
lf s	ign of recent fire	e, year burned?							
Trails	2 = Disturbance	e does not occu	r within maxim		If trails are prese	ent, are they	authorized?	yes	
Type of trail use	hiking	no	biking	no	equestrian	no	dog	no	
	service vehicles	-	other	no					
i	illegal trail use?	1 = No sign of o	describe:						
Other disturbance?	1 = No sign of	describe:					- 207 -	-	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Clyindropuntia californica var. califorr MSP Occur ID.
Date: 4/21/2015
VI. MANAGEMENT RECOMMENDATIONS
maintain access control with fencing and locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
fencing installed by PUD along access road
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
BTJR - CNDDB point taken
NOTES

Cylindropuntia californica var. californica (Snake Cholla) Spring Canyon



Panorama from Northeastern edge of population, facing North, Northeast, East, Southeast. Panorama location is 6330060.051 1781287.695 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Deinandra conjugens Otay Tarplant



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MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1										
Scientific Name:	Deinandra conjugens	Common Name:			Otay tarplant					
	yes MS		MSP Occurr. ID:		DECO13_3DERA020					
	EO27/29 Translocated no			no						
Preserve:	Dennery Ranch						Mgmt Unit	MU3		
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department				
Occurrence Name:	Dennery Ranch	Sam	ple Point #:	1						
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	1 Diego		
Date:	4/7/2015		Time Start:	14:15		Time Finish:	14:55			
	TATUS - Assess # plants in both species-spe	ecific samplin	n area (typicall	v 10-m radius cir	cle) & in current m	annad avtant. See n. 4 for definitions of	f categories (lescribina		
phenology & evidence of h	erbivory, disease & stunted growth within the sa					apped extent. See p. 4 for deminions of	calegones d	lescribing		
# Plants/Current Mapped Extent:		5	exact coun	t or estimate?	exact		uncert.	very high		
mapped Extern.	Area of Current Mapped Extent:		70.8	units	square meters	exact (GPS) or estim?	exact (GPS ma		
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:					
# Plants/Sampling		1					1.			
Area		10	[exact co	ount or estimate?	exact	uncert.	medium		
	Sample Area Radius (m)			1]				
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)		
			1 (0%)		ering & Fruiting]			
	Evidence in Sampling Area (1-6):	,		Disease	1 (0%)	Stunt	ed Growth	1 (0%)		
	Is Sampling Area within Current Map	oped Extent?	yes							
	Collection (if not collected previously)?	no								
If yes:	Collector				Collection #					
, Museum/Herbarium										
	A LOCATION & SITE PHOTOMONIT	ORING			[1			
GPS Accuracy: +/-	<1	-	accur. units:	meters	Datum:	NAD83]			
coord. system	State Plane (ft)									
Coordin's at Center of F					N:			1		
	Pentax Optio W90									
Locat. 1 CoordE, N	6321437.419		17916	601.507	Direction facing	S, SE, E S:\MSCP	Height	1.1 m		
	Camera angle	5°up	Photo #	3118-3123	File location		<u> </u>	1		
Locat. 2 Coord E,N		1			Direction facing		Height			
	Camera angle		Photo #		File location					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page Collection #, o					Collect.# or NC if		
species/substrate		% Cover	collected		species/substrate		% Cover	not collected		
Deinandra conjugens		0.5		Eriogonum fas	sciculatum		1			
Bahiopsis laciniata		5		Bromus horde	eaceus		1			
Rosa minutifolia		3		Melilotus albu	s		2			
Artemisia californica		7		Anagallis arve	ensis		1			
Encelia californica		5		Medicago poly	ymorpha		1			
Deinandra fasciculata		10		Gutierrezia ca	lifornica		1			
Rhus integrifolia		3								
Simmondsia chinensis		3								
Glebionis coronaria		3								
Centaurea melitensis		2								
Festuca myuros		20								
Bromus madritensis		5		bare ground			1			
Convolvulus simulans		3	dead	rock			3			
Cylindropuntia prolifera COVER: Total % Cover:	77.5	1 %Herb:	40 5	litter %Shrub:	00	%Tree:	7			
JOVEN. TOTAL /0 COVEL.	11.5	/011010.	49.5	/0011100.	28	/011ee.	0	1		
MSP ·	MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2									
---	--	------------------	-------------------	----------------	---------------------	-----------------	--------------	---------------	--	--
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.										
	012 Vegetation ce/Association:	Simmondsia ch	inensis Allianc	e, Simmonds	ia chinensis-Bahi	opsis laciniat	a Associatio	n		
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)			
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l		
Dead Standing Biomass yes										
If yes, cover/species class Artemisia/2 Average height (cm) 100										
Mammal Species Activity (categ. 1-4)										
Feral pig activity	Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.									
ground squirr. activity	1 = No ground	squirrel burrows	detected.					l		
gopher activity	1 = No pocket g	gopher mounds	detected.							
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)				
VI. THREATS ASSESSM extent over years of moni Record notes on page 3. 3	toring) plus 10)-m surroundi	ng buffer. S	see page 4 f	or definitions of		•			
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space, r	esidential						
Argentine ant abundance at	bait station (1-4)								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		l		
DISTURBANCES (Rank	each as 1-6):				-					
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc		
dumping/trash	3 = Disturbance	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of	histo	oric agriculture	1 = No sign o						
fuel modification	zone/fire break	1 = No sign of c								
road construction				ent, describe:						
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:						
brush manageme	ent/restoration	6 = Disturbance	e occurs 50% t	o < 75% of a	rea within maxinu	m extent.				
	ORV activity	1 = No sign of c	if prese	ent, describe:						
Eviden	ce of recent fire	1 = No sign of c	listurbance wit	hin maxinum						
lf s	sign of recent fire	e, year burned?			J					
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	<u> </u>		
Type of trail use	hiking		biking		equestrian		dog			
s	service vehicles		other							
	illegal trail use?	1 = No sign of c	describe:							
Other disturbance?	1 = No sign of	describe:					- 213 -	-		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Deinandra conjugens MSP Occur ID.
Date: 4/7/2015
VI. MANAGEMENT RECOMMENDATIONS
continue to maintain fences/gates
VII. MANAGEMENT ACTIONS IN LAST YEAR
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Not all of the Deinandra were in bloom yet; most Deinandra found were D. fasciculata

Deinandra conjugens (Otay Tarplant) Dennery Ranch



Panorama from Southern edge of population, facing South, Southeast, East. Panorama location is 6321437.419 1791601.507 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Deinandra conjugens			Common Nar	ne:	Otay tarplant		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DECO13_3DREA021		
	CNDDB Elem. Occur. #:	EO27/29		Translocated	no			
Preserve:	Dennery Ranch	u					Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	-	
Occurrence Name:	Dennery Ranch East				<u> </u>	Sample Point #:		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe					City of Sar	
Date:	4/7/2015		Time Start:	10:40		Time Finish:		Ŭ.
			<i></i>	10 11 1				
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	napped extent. See p. 4 for definitions o	t categories d	lescribing
# Plants/Current		35000	exact cour	t or estimate?	estimate (extrap	olate partial ct)	uncert.	medium
Mapped Extent:	Area of Current Mapped Extent:		42393		square meters) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves	if not		suspected reason:		,	
# Plants/Sampling	•	1			•		1	
Area	4000		ľ	exact co	ount or estimate?	estimate (1ks,10ks)	uncert.	medium
	Sample Area Radius (m)	10		1		1		h
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
lfuce		110			0-11			
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)						1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90							
Locat. 1 CoordE, N	6323116.396		179275	6.721+A1	Direction facing	SW. S. SE	Height	1.1 m
	Camera angle	5°	Photo #			S:\MSCP		
		5° up	FIIOLO #	3105-3112			Lloight	
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
	PECIES If need more room, record additiona	l data and any	notos on pago	2				
		r data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected	[species/substrate		% Cover	not collected
Deinandra conjugens		15		Brachypodiun	n distachyon		2	
Simmondsia chinensis		5		Logfia sp.			3	(dead)
Peritoma arborea		2		Convolvulus s	simulans		1	
Eriogonum fasciculatum	1	3		Bloomeria cro	ocea		1	
Brassica nigra		2		Bromus dianc	Irus		1	
Ambrosia chenopodiifolia 1 F			Plantago sp.			1		
Festuca perennis		5						
Avena sp.		15						
Bromus hordeaceus		2						
Bromus madritensis		2						
Centaurea melitensis		10						
Stipa pulchra		1		bare ground			1	
Hedypnois cretica		3		rock			2	
Isocoma menziesii		3	-	litter		~~~	1	
COVER: Total % Cover:	78	%Herb:	65	%Shrub:	13	%Tree:	0	l

MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2										
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Simmondsia chinensis Alliance, Simmondsia chinensis-Bahiopsis lacinata Association										
SANDAG 2012 Vegetation Alliance/Association:	Simmondsia ch	inensis Allianc	e, Simmonds	ia chinensis-Bahiopsis la	cinata Associati	on				
Cover classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	Thatch C	over <u>1 (0%)</u>	1				
	Thatch Depth A	verage (cm)		Thatch Depth max	(cm)]				
Dead Standing Biomass	yes			1		T				
If yes, cover/species class	Brassica/2			Average height	(cm)]				
	Mammal Species Activity (categ. 1-4) Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.									
ground squirr. activity 1 = No ground			<u> </u>	,,,,, p.g/						
gopher activity 1 = No pocket g						_				
Sampling area representative of mapp	ed occurrence?	yes	(If no, note d	lifferences on page 3)						
extent over years of monitoring) plus 10	VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer . See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc.									
Surrounding Land Use/Activity at, or Ac	ljacent to, Site	open space								
Argentine ant abundance at bait station (1-4)	1 = No ants d	etected at ba	it station or in vicinity.						
Time start 10:42 AM	Temp start	65F		Time end 11:3	AM Temp end	70F				
Ant sample collected? no	Ant sample #			Ant Station Ph	oto # 3117	,				
DISTURBANCES (Rank each as 1-6):	1			1	· · · · · · · · · · · · · · · · · · ·					
Non-native forbs 4 = Disturbance		ral pig activity		-	ology 1 = No sig					
Non-native grasses 5 = Disturbance			1 = No sign (sion 1 = No sig					
Non-native woody pl. 1 = No sign of o competitive native pl. 1 = No sign of o			1 = No sign (unoff 1 = No sig					
dumping/trash 1 = No sign of d		urrent grazing istoric grazing	-	t i i i i i i i i i i i i i i i i i i i	ment <u>1 = No sig</u> ction 1 = No sig					
encampments 1 = No sign of o		oric agriculture		T						
fuel modification zone/fire break		-	0	·						
road construction/maintenance			ent, describe:							
illegal vegetation clearing			ent, describe:			1				
brush management/restoration	1 = No sign of o	disturbance wit	hin maxinum	extent or in adjacent 10	n buffer.					
ORV activity	T = NO SIGN OF C		ent, describe:							
Evidence of recent fire			hin maxinum							
	-			If trails are present, are t	hev authorized	,				
Trails 3 = Disturbance				1 .						
		biking		equestrian no	dog	no				
service vehicles illegal trail use?	-	other describe:		1						
Other disturbance? 1 = No sign of o			L		- 218					

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Deinandra conjugens MSP Occur ID. DECO13_3DREA021
Date: 4/7/2015
VI. MANAGEMENT RECOMMENDATIONS
treat non-native forbs and grasses; restrict access on unauthorized trail
VII. MANAGEMENT ACTIONS IN LAST YEAR
None
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Deinandra conjugens (Otay Tarplant) Dennery Ranch East



Panorama from Southern edge of population, facing Southwest, South, Southeast. Panorama location is 6323116.396 1792756.721 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant C	ccurrence	e Monitorii	ng Form 20 ⁻	15	Page 1		
Scientific Name:	Deinandra conjugens			Common Nan	ne:	Otay tarplant		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DECO13_3PRVA013		
	CNDDB Elem. Occur. #:	EO27/29		Translocated?	no			
Preserve:	Otay Lakes Cornerstone Lands						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities Department		
Occurrence Name:	Proctor Valley					Sam	ole Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	mabe				Affiliation	City of Sar	Diego
Date:	4/16/2015		Time Start:	13:55		Time Finish:	14:43	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	f categories c	lescribing
# Plants/Current		380		t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		1732.16		square meters	exact (GPS	4	exact (GPS ma
	Species Found in Maximum Extent?	ves			suspected reason:		/ 01 000000	
# Plants/Sampling		,					1	
Area	316		r	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		-		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	5 (50% to <75%)	Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected provided)?	20		1				
16	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)						1	
Coordin's at Center of F					N:			
	Pentax Optio W90							
Locat. 1 CoordE, N	6353224.493		18253	326.858	Direction facing	E, SE, S	Height	1.1 m
	Camera angle	5° down	Photo #	3211-3218	File location	S:\MSCP		
Locat. 2 Coord E,N		5 down	1 11010 #	3211-0210	Direction facing		Height	
200010 L,N					, , , , , , , , , , , , , , , , , , ,		rieigiit	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and anv	notes on page	3.				
			Collection #, o	r NC if not				Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Isocoma menziesii		2		Erodium sp.			1	
Acmispon glaber		2		Brachypodium			70	
Stipa sp.		7		Centaurea me	elitensis		1	
Deinandra fasciculata		5						
Sisyrinchium bellum		3						
Brassica nigra		1						
Brassica tournefortii		5						
Avena sp.		2						
Bromus madritensis		1						
Dichelostemma capitatu	ım	1						
Deinandra conjugens		2		-				
Chlorogalum parviflorur	n	1		bare ground			3	
Festuca perennis Salsola tragus		1		rock litter			2	
COVER: Total % Cover:	106	%Herb:	102	%Shrub:	4	%Tree:		

MSP - Ra	are Plant	Habitat and	Threats As	sessment	: Form 2015		Page	e 2		
V. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) n the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012, Vegetation Nasella pulchra Alliance, Nasella pulchra Association										
Alliance/As	ssociation:			[
Cover clas	sses (1-6)	Cryptogamic	Crust Cover:	1 (0%)	Т	hatch Cover	5 (50% to <	:75%)		
		Thatch Depth A	verage (cm)	5	Thatch Dep	th max (cm)	10			
Dead Standing Biomass	s j	yes			,			,		
If yes, cover/spe	ecies class	Unknown shru	ıb (Acmispon	glaber?)/2	Average	height (cm)	20			
Mammal Species Activity (categ.	1-4)									
Feral pig activity 1 = N	No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	at, pig) dete	cted.			
ground squirr. activity 1 = N	No ground s	quirrel burrows	detected.							
gopher activity 1 = N	No pocket g	opher mounds	detected.							
Sampling area representativ	/e of mappe	ed occurrence?	yes	(If no, note d	ifferences on page	e 3)				
VI. THREATS ASSESSMENT extent over years of monitoring Record notes on page 3. See A	g) plus 10 -	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•			
Surrounding Land Use/Activity	y at, or Adj	jacent to, Site	open space							
Argentine ant abundance at bait s	station (1-4)		1 = No ants de	etected at bai	it station or in vicir	nity.				
Time start	1:55 PM	Temp start	73		Time end	2:47 PM	Temp end	73		
Ant sample collected? no		Ant sample #	n/a		Ant Sta	tion Photo #	3220			
DISTURBANCES (Rank each	as 1-6):				_					
Non-native forbs 3 = E	Disturbance	fe	ral pig activity	1 = No sign o	altere	d hydrology	1 = No sign	of disturbanc		
Non-native grasses 5 = D	Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc		
Non-native woody pl. 1 = N	No sign of (vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc		
competitive native pl. 1 = N	No sign of (с	urrent grazing	1 = No sign o	slope	e movement	1 = No sign	of disturbanc		
dumping/trash 1 = N	No sign of (h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	of disturbanc		
encampments 1 = N	No sign of (histo	ric agriculture	1 = No sign o						
fuel modification zone	/fire break	1 = No sign of c								
road construction/ma	aintenance	1 = No sign of o	if prese	ent, describe:						
illegal vegetatio	on clearing	1 = No sign of o	if prese	ent, describe:						
brush management/re	estoration	1 = No sign of c	listurbance wit	hin maxinum	extent or in adjace	ent 10 m buf	fer.			
OF	RV activity	3 = Disturbance	if prese		single set of vehi			t to ranger sta		
		7 = Disturbance		of area with						
If sign o	of recent fire	e, year burned?		2007			-			
Trails 1 = N	No sign of d	listurbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?			
Type of trail use	hiking		biking		equestrian		dog			
servic	e vehicles		other							
	l troil upo2	1 = No sign of o	describe:		-					
Other disturbance? $1 = N$	No sign of (describe:					- 223 -			

MSP-Management Ne	eeds and Notes 2015
(top 2 rows auto-fill from page 1)	
Scientific Name: Deinandra conjugens	MSP Occur ID. DECO13_3PRVA013
Date: 4/16/2015	
VI. MANAGEMENT RECOMMENDATIONS Treat BRDI using CBI methods if funding is available.	
Theat birds in damage of the moust in running is available.	
VII. MANAGEMENT ACTIONS IN LAST YEAR	
None.	
VIII. CNDDB SPECIES DETECTED (list any plant or animal s	species to add to the CNDDB)
NOTES	

Deinandra conjugens (Otay Tarplant) Proctor Valley



Panorama from Southeastern edge of population, facing East, Southeast, South. Panorama location is 6353224.49 1825326.86 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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Dicranostegia orcuttiana Orcutt's Bird's Beak



© City of San Diego, 2005

	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Dicranostegia orcuttiana			Common Nar	ne:	Orcutt's birds-beak		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	COOR7_30RVA001		
	CNDDB Elem. Occur. #:	EO6		Translocated	no			
Preserve:	Otay Valley Regional Park						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Otay River Valley				<u> </u>		ble Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe					City of Sar	Diego
Date:	5/12/2015		Time Start:	10:15		Time Finish:	11:29	2.090
							-	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	r categories c	lescribing
# Plants/Current		8038	exact coun	t or estimate?	exact		uncert.	high
Mapped Extent:	Area of Current Mapped Extent:		621.01	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		•	suspected reason:		/	
# Plants/Sampling		1					1	
Area	513		т	exact co	ount or estimate?	exact	uncert.	medium
	Sample Area Radius (m)	10		1	·	<u>.</u>		h
	Phenology In Sampling Area (1-6):	Vegetative	5 (50% to <7	Flowering	4 (25% to <50%)	Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector				Collection #			
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)		doodi. dinto.	motoro	Datam	111,000	1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90	I			14.			
Locat. 1 CoordE, N	6316896.838		170/3	306.621	Direction facing		Height	1.1 m
,	2	10.150.1				S:\MSCP	rieigiit	1.1.111
	Camera angle	10-15° down	Photo #	464-471	File location			
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
				0				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected	· · · • · · · · · · · · · · · ·	species/substrate		% Cover	not collected
Dicranostegia orcuttiana	а	5		Dudleya pulve	erulenta		1	
Baccharis sarothroides		10		Pseudognaph	alium californicu	n	1	
Rhus integrifolia		15		Galium nuttal	lii		1	
Malosma laurina		5		Eriastrum sap	phirinum		1	
Baccharis pilularis		2		Festuca myur	os		1	
Baccharis salicifolia		2		Bromus madr	itensis		1	
Isocoma menziesii		1		Selaginella cinerascens 1				
Artemisia californica		1		unk dead flow	/er		1	
Heteromeles arbutifolia		1						
Mimulus aurantiacus		2						
Rhamnus crocea		1						
Eriogonum fasciculatum	1	1		bare ground			30	road
Toxicodendron diversilo		1		rock			2	excluding rd
Salix lasiolepis	Γ	3		litter			2	
COVER: Total % Cover:	58	%Herb:	13	%Shrub:	42	%Tree:	3	

MSP -	MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2									
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation										
Allian	ce/Association:						1			
Cove	er classes (1-6)	Cryptogami	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)			
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)				
Dead Standing Bio	omass	yes			_					
If yes, cove	er/species class	Rhanmus cro	cea/2		Average	e height (cm)	100			
Mammal Species Activity (ca	ateg. 1-4)				-					
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, se	cat, pig) dete	cted.			
ground squirr. activity	1 = No ground	squirrel burrows	detected.				-			
gopher activity	1 = No pocket	gopher mounds	detected.							
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)	-			
VI. THREATS ASSESSM							•			
extent over years of monit Record notes on page 3.	• • •		-			inreal asse	ssment car	egones.		
Surrounding Land Use/A	ctivity at or Ac	liacent to Site	Open Space	-						
			opon opuoo							
Argentine ant abundance at	bait station (1-4)	2 = 1-50 Arge	ntine ants de	tected at bait stat	ion.				
Time start	10:20 AM	Temp start	73F		Time end	10:58 AM	Temp end	73F		
Ant sample collected?	yes	Ant sample #		3	Ant Sta	ition Photo #	3472			
DISTURBANCES (Rank	each as 1-6):									
Non-native forbs	1 = No sign of o	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc		
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc		
competitive native pl.	1 = No sign of o	c	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc		
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign o	soil	compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o						
fuel modification	zone/fire break	1 = No sign of o								
road construction	on/maintenance	1 = No sign of o	if prese	ent, describe:						
illegal veg	etation clearing	1 = No sign of o	if prese	ent, describe:						
brush manageme		-	-	thin maxinum	extent or in adjac	ent 10 m buf	fer.			
	ORV activity	1 = No sign of o	if prese	ent, describe:	<u>,</u>					
Eviden		1 = No sign of o								
		e, year burned?								
Trails	5 = Disturbance	e occurs in 25%	to <50% of an		If trails are prese	ent, are they a	authorized?	ves		
Type of trail use	hiking		biking		equestrian		dog			
	service vehicles		other			-		-		
	illegal trail use?	-	al a la suite a c		1					
Other disturbance?				<u>I</u>						
	1 = No sign of c	describe:	1				- 229 -	-		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dicranostegia orcuttiana MSP Occur ID. COOR7_30RVA001
Date: 5/12/2015
VI. MANAGEMENT RECOMMENDATIONS
Fix peeler log fence that has been broken
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access controlled with fencing
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
YBCH detected near photopoint advertising; Orange throated whiptail also detected near photopoint; 2-stripe garter
snake seen near photopoint. On the walk in, we also detected LBVI, YEWA, and YBCH - CNDDB point taken
NOTES Uncertainty = high and medium, this is because the plants were growing at very high densities, in some areas it was
easy to distinguish separate stems but in other areas it was clumped so it was very difficult to separate individual
plants for the exact count; surveyors did the best they could to get the exact count

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



Panorama from Southwestern end of population, facing North, Northeast, East. Panorama location is 6316896.838 1794306.621 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Dudleya brevifolia Short-Leaved Dudleya



© City of San Diego, 2005

	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Dudleya brevifolia			Common Nar	ne:	Short-leaved dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DUBLB2_6CMPR001		
	CNDDB Elem. Occur. #:	EO8		Translocated	no			
Preserve:	Carmel Mountain Preserve						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Carmel Mountain Preserve					Sam	ole Point #:	1
								San Diego; (2)
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe, Melar	, i		ay (2)		SANDAG	
Date:	4/28/2015		Time Start:	11:54		Time Finish:	12:44	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	^r categories o	lescribing
# Plants/Current	erbivory, disease & stunted growth within the sa							
Mapped Extent:		3118		t or estimate?			uncert.	
	Area of Current Mapped Extent:		213.8	4	square meters	exact (GPS) or estim?	exact (GPS ma
# Dianta (O ana lina	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling Area	0			exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10					•	
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		-	1 (0%)	-	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory		Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map				. (0,0)	1		. (0,0)
	······································			1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector				Collection #			1
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT	ORING					[
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83	J	
_	State Plane (ft)							
Coordin's at Center of F					N:			
	Pentax Optio W90 6264079.979							
Locat. 1 CoordE, N	0204079.979		192066	1.488+A1	Direction facing	SW, W, NW, N S:\MSCP	Height	1.1 m
	Camera angle	10° down	Photo #	363-371	File location		1	1
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any						0
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Eriogonum fasciculatun	n	5		Allium sp.			1	dead
Adenostoma fasciculatu	Jm	1		Selaginella bi	gelovii		1	
Artemisia californica		2		Festuca myur			2	
Heteromeles arbutifolia		2		Osmadenia te			1	
Deinandra fasciculata		5						
		1						
Gnaphalium palustre Crassula connata								
Ferocactus viridescens		3						
Selaginella cinerascens		1						
	,	5						
Erodium cicutarium		5						
Bromus madritensis		5		bare ground			30	
Avena sp. Bromus diandrus		2		rock			30	
Logfia gallica		1		litter			1	
COVER: Total % Cover:	41	%Herb:	30	%Shrub:	11	%Tree:	0	

MSP - F	Rare Plant	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
IV. HABITAT ASSESSMEN (typically 10-m radius circl in the office or field, using "A	l e) . Vegetation	on alliance/ass pecies" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment ca	COM 2012) ategories.
SANDAG 2012 Alliance/	2 Vegetation /Association:	bicolor Associa	tion				iculatum-Ayi	occocus
Cover c	classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
	Г	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bioma	ass	yes			т			
	-	Allium sp. (de	ad)		Average	e height (cm)	10	
Mammal Species Activity (categ. 1-4) Eeral pig activity (recting wallowing vegetation destruction tracks scat. pig) detected								
Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected. ground squirr. activity 1 = No ground squirrel burrows detected.								
gopher activity 1 =								
Sampling area representa				(If no note d	lifferences on pag	e 3)	1	
VI. THREATS ASSESSME							m extent (rumulative
extent over years of monitor Record notes on page 3. Set	ing) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activ	Ū		, 					
	,,	, ,,						
Argentine ant abundance at bai	it station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank eac	ch as 1-6):				-			
Non-native forbs 3 =	= Disturbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 4 =	= Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl. 1 =				1 = No sign (1			of disturbanc
competitive native pl. 1 =			urrent grazing	-	1			of disturbanc
dumping/trash 1 =			istoric grazing		Ī	compaction	1 = No sign	of disturbanc
encampments 1 =	= No sign of e	nisto	oric agriculture	1 = No sign (1			
fuel modification zo	ne/fire break	1 = No sign of c						
road construction/r		0		ent, describe:				
	r	1 = No sign of c		ent, describe:				
brush management					extent or in adjac	ent 10 m buf	fer.	
	-	1 = No sign of c $1 = No sign of c$		ent, describe:				
		 i = No sign of c e, year burned? 		in maxinum				
		e does not occu	within maxim		If trails are prese	ent, are they a	authorized?	yes
Type of trail use	hiking		biking	ves	equestrian	ves	dog	5
sen	vice vehicles	-	other		equeoulon.	<i>,</i>		<i>,</i>
		1 = No sign of c		<u>,</u>				
Othern disturb are a 2	= No sign of (describe:					- 235 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya brevifolia MSP Occur ID.
Date: 4/28/2015
VI. MANAGEMENT RECOMMENDATIONS
VII. MANAGEMENT ACTIONS IN LAST YEAR Fencing added to limit off trail access via Chaparral Lands Conservancy grant; fence posts currently installed, cable
to be installed shortly
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES Habitat type for sampling area keys out to Adenostoma fasciculatum Alliance; Adenostoma fasciculatum-(Eriogonum
fasciculatum I Artemisia californica I Salvia mellifera) Association but a survey of the greater area results in the
Adenostoma fasciculatum-Xylococcus bicolor Alliance; Adenostoma fasciculatum-Xyloccocus bicolor Association
type as shown in Section IV

Dudleya brevifolia (Short-Leaved Dudleya) Carmel Mountain Subpopulation # 1



Panorama from Northwestern edge of population, Southwest, West, Northwest, North. Panorama location is 6264079.979 1920661.488 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Scientific Name: Dudleya brevifolia Common Name: Short-leaved dudleya Existing MSP Occurrence? yes MSP Occurr. ID: DUBLB2_6CMPR001 Common Name: Camel Mountain Preserve MSP Occurr. ID: DUBLB2_6CMPR001 Camel Mountain Preserve Camel Mountain Preserve Mgmt Unit MU6 Land Owner: City of San Diego Land Mangr: City of San Diego Park and Recreation Department Occurrence Name: Carmel Mountain Preserve Sample Point #
CNDDB Elem. Occur. #: E08 Translocated no Preserve: Carmel Mountain Preserve Mgmt Unit Land Owner: City of San Diego Land Mangr: City of San Diego Park and Recreation Department Occurrence Name: Carmel Mountain Preserve Sample Point #:
Preserve: Carmel Mountain Preserve Mgmt Unit MU6 Land Owner: City of San Diego Land Mangr: City of San Diego Park and Recreation Department Occurrence Name: Carmel Mountain Preserve Sample Point #.[
Land Owner: City of San Diego Land Mangr: City of San Diego Park and Recreation Department Occurrence Name: Carmel Mountain Preserve Sample Point # (1) City of San Diego; (2) Surveyors: Betsy Miller, Kim Roeland, Annabelle Bernabe, Melanie Fontana (1); Katherine Day (2) Affiliation SANDAG Date: 4/28/2015 Time Start: 8:40 Time Finish: 9:42 I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing # Plants/Current 1053 exact count or estimate? exact (GPS in p. 4) # Plants/Current 1053 exact count or estimate? exact (GPS in estim?) # Plants/Sampling Area of Current Mapped Extent: 237.87 units Maguere meters exact (GPS in estim)? # Plants/Sampling Area 38 exact count or estimate? exact (GPS in estim)? # Plants/Sampling Area (1-6): Herbiovry 1(0%) Flowering & Fruiting 1 (0%) Flowering & Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbiovry 1(0%) Evidence in Sampling Area (1-6): Herbiovry 1(0%) Disease 1 (0%) Stunted Growth 6 (275%) If yes: Collection (finot
Occurrence Name: Carmel Mountain Preserve Sample Point # Surveyors: Betsy Miller, Kim Roeland, Annabelle Bernabe, Melanie Fontana (1): Katherine Day (2) Affiliation SANDAG Date: 4/28/2015 Time Start: 8/40 Time Finish: 9/42 I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on p. 3. # Plants/Current Mapped Extent: 9/42 Area of Current Mapped Extent: 1053 exact count or estimate? exact uncert. low Species Found in Maximum Extent? yes if not found, known or suspected reason: exact (GPS) or estim? exact (GPS) or estim? exact (GPS m # Plants/Sampling Area (1-6): Vegetative 10%) Flowering § (£75%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Vegetative 10%) Disease 1 (0%) Stunted Growth § (£75%) If yes: Collection (if not collected previously)? no found found found If yes: Collection (if not collected previously)? no found found found found
Surveyors: Betsy Miller, Kim Roeland, Annabelle Bernabe, Melanie Fontana (1); Katherine Day (2) Affiliation (SANDAG Date: 4/28/2015 Time Finish: 9:42 I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area. Record any notes on p. 3. # Finish: 9:42 # Plants/Current 1053 exact count or estimate? exact uncert. low # Plants/Current 1053 exact count or estimate? exact (GPS) or estim? exact (GPS) or estim? # Plants/Sampling Area of Current Mapped Extent: 237.87 units square meters exact (GPS) or estim? for exact (GPS) or estim? for exact (GPS) or estim? for exact (GPS) or estim? fore cont or estimate? fore cont
Surveyors: Betsy Miller, Kim Roeland, Annabelle Bernabe, Melanie Fontana (1): Katherine Day (2) Affiliation SANDAG Date: 4/28/2015 Time Start: 8/40 Time Finish: 9/42 I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area. Record any notes on p. 3. # Plants/Current 0/53 exact count or estimate? exact uncert. low ## Plants/Current 1053 exact count or estimate? exact uncert. low Area of Current Mapped Extent: 237.87 units square meters exact (GPS) or estimate? exact (GPS) or estimate? ## Plants/Current Area af Current Mapped Extent: 237.87 units square meters exact (GPS) or estimate? Species Found in Maximum Extent? yes if not found, known or suspected reason: exact count or estimate? exact uncert. very low Sampling Area (1-6): Vegetative 1 (0%) Flowering 6 (275%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 1 (0%) Disease 1 (0%) Stunted Growth 6 (275%) Is uncert. very low If yes: Collector Collector Collector # Collector # In 0%) Is acur. units: meters Datum:
Date: 4/28/2015 Time Start: 8:40 Time Finish: 9:42 I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (vpically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing phenology & evidence of herbivory. disease & stunded growth within the sampling area. Record any notes on p. 3. # Plants/Current 1053 exact count or estimate? exact uncert. Mapped Extent: 237.87 units square meters exact (GPS) or estim? exact (GPS) or estim? # Plants/Sampling Area 38 exact count or estimate? exact uncert. very low Sample Area 38 exact count or estimate? exact uncert. very low Sample Area 38 exact count or estimate? exact uncert. very low Sample Area 10% 10 Flowering 6 (275%) Flowering 8 Fruiting 1 (0%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Vegetative 0 0 0 0 6 (275%) Is sampling Area within Current Mapped Extent? yes Collection (f not collected previously)? no 0 0 0<
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area. Record any notes on p. 3. # Plants/Current Mapped Extent: 1053 exact count or estimate? exact uncert. low # Plants/Current Mapped Extent: 1053 exact count or estimate? exact uncert. low # Plants/Current Mapped Extent: 237.87 units square meters exact (GPS) or estim? exact (GPS) or estim? exact (GPS) or estim? exact (GPS m # Plants/Sampling Area 38 exact count or estimate? exact uncert. low Benology In Sampling Area (1-6): Vegetative 1 (0%) 10 Flowering 6 (275%) Fruiting 1 (0%) Flowering 6 (275%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Vegetative 1 (0%) 1 (0%) Disease 1 (0%) Stunted Growth 6 (275%) If yes: Collector Museum/Herbarium no collector # collector # It sampling Area LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- <1
phenology & evidence of herbivory, disease & stunded growth within the sampling area. Record any notes on p. 3. # Plants/Current 1053 exact count or estimate? exact uncert. low Mapped Extent: 237.87 units square meters exact (GPS) or estim? exact (GPS) or estim? exact (GPS) or estim? exact (GPS) # Plants/Sampling Species Found in Maximum Extent? yes if not found, known or suspected reason: exact count or estimate? exact uncert. very low Sample Area Radius (m) 10 Phenology In Sampling Area (1-6): Vegetative 1 (0%) Flowering & Fruiting 1 (0%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 1 (0%) Disease 1 (0%) Stunted Growth 6 (275%) If yes: Collector Collector Collector Collector Collector Museum/Herbarium In or In or In or In or In or If yes: Collector Collector Collector Collector Growth 6 (275%) If yes: Collector In or In or In or In or If yes: Collector Collector Collector Collector <td< td=""></td<>
Plants/Current Mapped Extent: 1053 exact count or estimate? exact uncert. low Area of Current Mapped Extent: 237.87 units square meters exact (GPS) or estim? exact (GPS m Species Found in Maximum Extent? yes if not found, known or suspected reason. uncert. very low # Plants/Sampling Area 38 exact count or estimate? exact uncert. very low Sample Area Radius (m) 10 Phenology In Sampling Area (1-6): Vegetative 1 (0%) Flowering 6 (275%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 1 (0%) Dead 1 (0%) Disease 1 (0%) Stunted Growth 6 (275%) If yes: Collection (if not collected previously)? no Collection # 0 0 If yes: Collector Collection # Collection # 0 0 0 If yes: Collector Collector Collection # 0 0 0 If yes: Collector Collector Collector # 0 0 0 If yes: Collector State Plane (ft) accur. units:
Mapped Extent: Area of Current Mapped Extent: 237.87 units square meters exact (GPS) or estim? exact (GPS m Species Found in Maximum Extent? yes if not found, known or suspected reason: exact count or estimate? exact uncert. very low # Plants/Sampling Area 38 exact count or estimate? exact uncert. very low Sample Area Radius (m) 10 Phenology In Sampling Area (1-6): Vegetative 1 (0%) Flowering 6 (275%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Vegetative 1 (0%) Flowering 8 Fruiting 1 (0%) Disease 1 (0%) Stunted Growth 6 (275%) Is sampling Area within Current Mapped Extent? yes Collection (if not collected previously)? no ft yes: Collector Collector Collection # Collection # II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- c1 accur. units: meters Datum: NAD83
Species Found in Maximum Extent? yes if not found, known or suspected reason: # Plants/Sampling Area 38 exact count or estimate? uncert. very low Sample Area Radius (m) 10 Flowering 6 (≥75%) Fruiting 1 (0%) Phenology In Sampling Area (1-6): Vegetative 1 (0%) Flowering 6 (≥75%) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 1 (0%) Disease 1 (0%) Stunted Growth 6 (≥75%) Is Sampling Area within Current Mapped Extent? yes in on Collection # Collection (if not collected previously)? no Collection # In on If yes: Collector Collection # Collection # In on II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- accur. units: meters Datum: NAD83
Plants/Sampling 38 exact count or estimate? uncert. very low Sample Area 38 exact count or estimate? exact uncert. very low Sample Area Radius (m) 10 10 Flowering 6 (≥75%) Fruiting 1 (0%) Phenology In Sampling Area (1-6): Vegetative 10%) Flowering & Fruiting 1 (0%) Flowering & fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 10%) Disease 10%) Stunted Growth 6 (≥75%) Is Sampling Area within Current Mapped Extent? yes Ollection # Collection # Collection # If yes: Collector Collector Collection # Collection # Collection # II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- <1
Area 38 exact count or estimate? exact uncert. very low Sample Area Radius (m) 10 Flowering (c) (275%) Fruiting 1 (0%) Phenology In Sampling Area (1-6): Dead 1 (0%) Flowering (c) (c) (c) Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 1 (0%) Disease 1 (0%) Disease Stunted Growth 6 (c) (c) Is Sampling Area within Current Mapped Extent? yes Collection (if not collected previously)? no Collection #
Phenology In Sampling Area (1-6): Vegetative 1 (0%) Dead 1 (0%) Evidence in Sampling Area (1-6): Herbivory Is Sampling Area within Current Mapped Extent? yes Collection (if not collected previously)? no If yes: Collector Museum/Herbarium Collection # II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- state Plane (ft) accur. units:
Dead 1 (0%) Flowering & Fruiting 1 (0%) Evidence in Sampling Area (1-6): Herbivory 1 (0%) Is Sampling Area within Current Mapped Extent? Disease Collection (if not collected previously)? no If yes: Collector Museum/Herbarium Collection # II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- state Plane (ft)
Evidence in Sampling Area (1-6): Herbivory 1 (0%) Disease 1 (0%) Stunted Growth 6 (≥75%) Is Sampling Area within Current Mapped Extent? yes Disease 1 (0%) Disease 1 (0%) Stunted Growth 6 (≥75%) Collection (if not collected previously)? no Image: Collector for the collected previously)? No Image: Collection # Image: Collector for the collected previously)? Image: Collector for the collected previously for the collected previously for the collected previously. Image: Collected previously for the collected previously for the collected previously. Image: Collected previously for the collected previously. Image: Collected previously for the collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Collected previously. Image: Coll
Is Sampling Area within Current Mapped Extent? yes Collection (if not collected previously)? no If yes: Collector Museum/Herbarium II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- <1 accur. units: meters Datum: NAD83 Coord. system State Plane (ft)
Collection (if not collected previously)? no If yes: Collector Museum/Herbarium Collection # II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- <1
If yes: Collector Museum/Herbarium II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- coord. system State Plane (ft) State Plane (ft)
If yes: Collector Museum/Herbarium II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- coord. system State Plane (ft) State Plane (ft)
II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/- <1
II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING GPS Accuracy: +/-<1
GPS Accuracy: +/- <1 accur. units: meters Datum: NAD83 coord. system State Plane (ft)
GPS Accuracy: +/- <1 accur. units: meters Datum: NAD83 coord. system State Plane (ft)
coord. system State Plane (ft)
Camera type: Pentax Optio W90
Locat. 1 CoordE, N 6265696.736 1920365.462 Direction facing N, NE, E, SE Height 1.1 m
Camera angle 10° down Photo # 345-350 File location S:MSCP
Camera angle Photo # File location
III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3.
Collection #, or NC if not Collect.# or NC
species/substrate % Cover collected species/substrate % Cover not collected
Dudleya brevifolia 1 Psilocarphus tenellus 1
Adenostoma fasciculatum 10 Festuca myuros 2
Eriogonum fasciculatum 2 Malosma laurina 2
Xylococcus bicolor 5 Plantago erecta 1
Salvia mellifera 3 Logfia gallica 1
Acmispon glaber 1 Gnaphalium palustre 1
Deinandra fasciculata 2
Navarretia hamata 1
Psilocarphus brevissimus 1
Crassula connata 3
Selaginella cinerascens 5
Cardionema ramosissimum 1 bare ground 50
Stylocline gnaphaloides 1 rock 3 Chorizanthe polygonoides 1 litter 1
Chorizanthe polygonoides 1 litter 1 COVER: Total % Cover: 45 %Herb: 23 %Shrub: 22 %Tree: 0

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Pag	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using SANDAG 2	rcle). Vegetati Associated S	on alliance/ass Species" data f Adenostoma fa	sociation can rom page 1. s sciculatum-Xy	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	ce/Association: er classes (1-6)	bicolor Associa Cryptogamic	c Crust Cover:	2 (>0% to <1	T	hatch Cover	1 (0%)	
		Thatch Depth A			1	oth max (cm)		
Dead Standing Bio	omass	no				ar max (only		L
	er/species class				Average	height (cm)		
Mammal Species Activity (ca								L
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.				_	
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)	-	
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.		
Time start	8:43 AM	Temp start	70F		Time end	9:42 AM	Temp end	77F
Ant sample collected?	no	Ant sample #			Ant Sta	tion Photo #	3351	
DISTURBANCES (Rank	each as 1-6):	_			_			
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	c	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc
dumping/trash	3 = Disturbance	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum	extent or in adjace	ent 10 m but	fer.	
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Eviden	ce of recent fire	1 = No sign of c	disturbance wit	hin maxinum				
lf s	sign of recent fir	e, year burned?			J			
Trails	5 = Disturbance	e occurs in 25%	to <50% of ar		If trails are prese	nt, are they	authorized?	no
Type of trail use	hiking	no	biking	no	equestrian	no	dog	no
	service vehicles		other	no				
	illegal trail use?	5 = Disturbance	describe:		trail cl	losed and in	n process c	of restoration
Other disturbance?	1 = No sign of o						- 240 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya brevifolia MSP Occur ID. DUBLB2_6CMPR001
Date: 4/28/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to maintain access control with fencing, and native plantings to rehabilitate trail
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access controlled with fencing, brushing, and native plantings
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Northern harrier (male) flying overhead (no CNDDD record needed unless nesting is confirmed)
Noteo
NOTES Broken glass scattered at site, has been there for at least 1 year; disturbance not new

Dudleya 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



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Dudleya brevifolia		Common Name:		Short-leaved dudleya			
Existing MSP Occurrence?		/es		MSP Occurr. ID:		DUBLB2_6CMPR001		
CNDDB Elem. Occur. #:			EO8 Translocated no					
Preserve: Carmel Mountain Preserve							Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name: Carmel Mountain Preserve						Sample Point #: 3		
								San Diego; (2)
Surveyors:		mabe, Melanie Fontana (1); Katherine Day (2)				SANDAG		
Date: 4/28/2015 Time Start: 9:55 Time Finish:						11:36		
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	f categories o	lescribing
# Plants/Current		18860			estimate (extrap	olate partial ct)	uncert	medium
Mapped Extent:	Area of Current Mapped Extent:	10000	1203.7	1	square meters		4	exact (GPS ma
	Species Found in Maximum Extent?	ves		4	suspected reason:			
# Plants/Sampling		1	1				1	[
Area	1254		т	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		r
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no]				
If yes:	Collector	110			Collection #			
					Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				-		-	
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6265588.551		1920725.098 Direction		Direction facing	SE, S, SW, W, NW+A1	Height	1.1 m
	Camera angle	10° down	Photo #	352-362	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing	g Height		
	Camera angle		Photo #		File location			
			1 11010 #		The location			
III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3.								
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Dudleya brevifolia		1		Ferocactus vi			1	
	1	2					1	
Eriogonum fasciculatum		2		Mimulus aurantiacus			2	
Xylococcus bicolor		2		Crassula connata			1	
Adenostoma fasciculatum		1		Calochortus splendens			1	
Malosma laurina		2					1	
Salvia mellifera		5			Unk snapdragon (dead) Pentagramma triangularis		1	
Rhus integrifolia Deinandra fasciculata		2		rentagramme	a thangularis			
Navarretia hamata		1						
Selaginella cinerascens		2						
Festuca myuros		5						
Bromus madritensis		2		bare ground			20	
Chorizanthe polygonoid	es	1		rock			30	
Stipa pulchra		1		litter	1		1	
COVER: Total % Cover:	37	%Herb:	21	%Shrub:	16	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Adenostoma fasciculatum Alliance, Adenostoma fasciculatum-(Eriogonum fasciculatum I								
SANDAG 2 Alliar	012 Vegetation ce/Association:	Adenostoma fa: Artemisia califo	sciculatum Alli rnica I Salvia r	ance, Adenos nellifera) Ass	stoma fasciculatu ociation	m-(Eriogonui	n fasciculatu	ım l
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio		no			I			
If yes, cove Mammal Species Activity (ca	er/species class				Average	e height (cm)		
		activity (rooting	ı. wallowing. ve	egetation des	truction, tracks, s	cat. pig) dete	cted.	
ground squirr. activity								
	-	gopher mounds						
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)	-	
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10 See Argentine)-m surroundi Ant Protocol (I	ng buffer. S USGS 2015)	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	Open Space					
Argentine ant abundance at	bait station (1-4)				-		
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank	each as 1-6):	1			т		r	
Non-native forbs	Ŭ	1	eral pig activity		T			of disturbanc
Non-native grasses				1 = No sign (of disturbanc
Non-native woody pl.				1 = No sign (v	of disturbanc
competitive native pl.	1 = No sign of of 1 = No sign of 0		urrent grazing		Î Î		-	of disturbanc
	1 = No sign of c		istoric grazing pric agriculture		Î	rcompaction	T – NO SIGI	of disturbanc
fuel modification		, []	-	i ito olgi i	1			
		1 = No sign of o		ent, describe:				
		1 = No sign of o		ent, describe:				
brush manageme					extent or in adjac	cent 10 m but	ffer.	
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Eviden		1 = No sign of c		hin maxinum				
lf s	sign of recent fire	e, year burned?						
Trails	5 = Disturbance	e occurs in 25%	to <50% of ar		If trails are prese	ent, are they	authorized?	no
Type of trail use	hiking	no	biking	no	equestrian	no	dog	no
	service vehicles		other	no				
	illegal trail use?	5 = Disturbance	describe:		t	trail closed a	and under r	ehabilitation
Other disturbance?	1 = No sign of	describe:					- 245 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya brevifolia MSP Occur ID. DUBLB2_6CMPR001
Date: 4/28/2015
VI. MANAGEMENT RECOMMENDATIONS
continue to maintain access control with fencing and other trail closure techniques
VII. MANAGEMENT ACTIONS IN LAST YEAR
access controlled with fencing, trail brushing, and native plantings
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Dudleya brevifolia (Short-Leaved Dudleya) Carmel Mountain Subpopulation # 3



Panorama from Southwestern edge of population, Southeast, South, Southwest, West, Northwest. Panorama location is 6265588.551 1920725.098 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.


	MSP - Rare Plant C	ocurrence	e Monitorii	ng Form 20	15	Page 1		
Scientific Name:	Dudleya brevifolia			Common Nar	ne:	Short-leaved dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DUBLB2_7CRCA003		
	CNDDB Elem. Occur. #:			Translocated				
Preserve:	Crest Canyon Preserve			4	ļ		Mgmt Unit	MU7
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Crest Canyon North						ble Point #:	1
							(1) City of	San Diego; (2)
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe, Joe D)		SANDAG	
Date:	4/28/2015		Time Start:	3:00		Time Finish:	3:51	
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on p. 3.								lescribing
# Plants/Current Mapped Extent:		4480	exact cour	nt or estimate?	exact		uncert.	low
Mapped Extent.	Area of Current Mapped Extent:		134.4	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1	_				1	
Area			T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	[
	Phenology In Sampling Area (1-6):	Vegetative		Ĩ	2 (>0% to <10%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	6 (≥75%)
	Is Sampling Area within Current Map	ped Extent?	yes]				
	Collection (if not collected previously)?	no]				
If yes:	Collector			1	Collection #			
	Museum/Herbarium							
	Museunin leibanum							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90		-					
Locat. 1 CoordE, N	6253917.074		1928	311.12	Direction facing		Height	1.1 m
	Camera angle	10° down	Photo #	372-387	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
,	Comera angle		Dhoto #		Ĭ			
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Dudleya brevifolia		2		Crassula coni			7	
Eriogonum fasciculatun	n	10		Bromus madr				
Baccharis pilularis	•	1		Festuca myur			4	
Rhus integrifolia		3		Logfia filagino			1	
Adenostoma fasciculati	Im	5		Navarretia ha			1	
Carpobrotus spp.		7		Spergularia b			1	
Artemisia californica		3		Stylocline gna			1	
Xylococcus bicolor		1		Styloomie grie	ipilaioia68			
		1						
Mimulus aurantiacus		۱ ۸						
Salvia mellifera		۱ ۸						
Solanum xanti Gnaphalium palustre		1		hare ground			3	
Plantago erecta		7		bare ground rock			5	
Selaginella cinerascens	3	15		litter			3	
COVER: Total % Cover:	76	%Herb:	51	%Shrub:	25	%Tree:	0	

MSP - Rare Pla	int Habitat and	Threats As	ssessment	: Form 2015	Page 2				
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) n the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Adenostoma fasciculatum Alliance, Adenostoma fasciculatum-(Eriogonum fasciculatum I									
SANDAG 2012 Vegetat Alliance/Associati	on Adenostoma fa on: Artemisia califo	sciculatum Alli ornica I Salvia i	ance, Adenos nellifera) Ass	stoma fasciculatum-(Eriogonu ociation	m fasciculatum I				
Cover classes (1	.6) Cryptogami	c Crust Cover:	4 (25% to <5	Thatch Cove	r 1 (0%)				
	Thatch Depth /	Average (cm)		Thatch Depth max (cm)				
Dead Standing Biomass	yes			T					
If yes, cover/species cla	ss Carpobrotus	spp./3		Average height (cm)4				
Mammal Species Activity (categ. 1-4)									
Feral pig activity 1 = No feral	pig activity (rooting	g, wallowing, vo	egetation des	truction, tracks, scat, pig) det	ected.				
ground squirr. activity 1 = No grou	nd squirrel burrows	s detected.			l				
gopher activity 1 = No pock	et gopher mounds	detected.							
Sampling area representative of ma	apped occurrence?	yes	(If no, note d	lifferences on page 3)					
VI. THREATS ASSESSMENT IN MA extent over years of monitoring) plus Record notes on page 3. See Argent	10-m surround	ing buffer. S	See page 4 f	or definitions of threat asse	•				
Surrounding Land Use/Activity at, or	Adjacent to, Site	open space, r	esidential						
Argentine ant abundance at bait station (1-4)	2 = 1-50 Arge	ntine ants de	tected at bait station.					
Time start 3:01	AM Temp star	75F		Time end 3:45 AM	1 Temp end 75F				
Ant sample collected? yes	Ant sample #	:	2	Ant Station Photo #	¢ 3388				
DISTURBANCES (Rank each as 1-6):			7					
Non-native forbs 3 = Disturba	nce fe	eral pig activity	1 = No sign	altered hydrology	1 = No sign of disturbanc				
Non-native grasses 3 = Disturba	nce	trampling	1 = No sign	erosior	n 1 = No sign of disturbanc				
Non-native woody pl. 3 = Disturba	nce	vandalism	1 = No sign	urban runof	f 1 = No sign of disturbanc				
competitive native pl. 1 = No sign	of c c	current grazing	1 = No sign	slope movemen	t 1 = No sign of disturbanc				
dumping/trash 1 = No sign	of c ł	nistoric grazing	1 = No sign	soil compactior	1 = No sign of disturbanc				
encampments 1 = No sign	of e histe	oric agriculture	1 = No sign						
fuel modification zone/fire bre	ak 1 = No sign of	9							
road construction/maintenar	ice 1 = No sign of	if prese	ent, describe:						
illegal vegetation clear	ing 1 = No sign of	if prese	ent, describe:						
brush management/restorat	on $1 = No sign of$	- disturbance wi	thin maxinum	extent or in adjacent 10 m bu	iffer.				
ORV acti	^{ity} 1 = No sign of		ent, describe:						
Evidence of recent	^{ire} 1 = No sign of	disturbance wit	thin maxinum						
	fire, year burned?								
Trails 1 = No sign	of disturbance with	nin maxinum ex		If trails are present, are they	authorized?				
Type of trail use hik	ng	biking		equestrian	dog				
service vehic	les	other							
illegal trail us	e? 1 = No sign of	describe:							
Other disturbance? 1 = No sign	of describe:				- 250 -				

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya brevifolia MSP Occur ID. DUBLB2_7CRCA003
Date: 4/28/2015
VI. MANAGEMENT RECOMMENDATIONS
continue to manage access and monitor for trampling by adjacent homeowner
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Dudleya 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.



	MSP - Rare Plant C	ccurrenc	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Dudleya brevifolia		Common Name: Sho			Short-leaved dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DUBLB2_7CRCA003		
	CNDDB Elem. Occur. #:	EO1		Translocated?	no			
Preserve:	Crest Canyon Preserve						Mgmt Unit	MU7
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department		
Occurrence Name:	Crest Canyon South					Sam	ole Point #:	1
								San Diego; (2)
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe (1); Ka					SANDAG)	
Date:	4/28/2015		Time Start:	16:00		Time Finish:	16:27	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions o	f categories o	lescribing
# Plants/Current	erbivory, disease & stunted growth within the sa	42			overt		upport	vonulow
Mapped Extent:		42		nt or estimate?		overt (CBS	4	very low
	Area of Current Mapped Extent:	VOC	9.92	4	square meters	exact (GF3		exact (GPS ma
# Plants/Sampling	Species Found in Maximum Extent?	yes			suspected reason:		1	
Area			7	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		7		-		
	Phenology In Sampling Area (1-6):	Vegetative	6 (≥75%)	Flowering	2 (>0% to <10%)	Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	6 (≥75%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?			1				
lfuce		yes			Collection #			
If yes:	Collector				Collection #			T
	Museum/Herbarium]
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F					N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6253843.223		1927	609.02	Direction facing	NW, N, NE	Height	1.1 m
	Camera angle	5° down	Photo #	89-93	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
			Dhata #					I
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
		°(0	Collection #, o				0/ O	Collect.# or NC if not collected
species/substrate		% Cover	collected	[species/substrate		% Cover	The conected
Dudleya brevifolia				Selaginella ci	nerascens		2	
Adenostoma fasciculatu		15		Stipa pulchra			1	
Eriogonum fasciculatun	n	5		Xylococcus bi			1	
Salvia mellifera		2		Ceanothus ve			3	
Rhus integrifolia		2		Crassula conr			-	
Hesperoyucca whipplei		1		Festuca myur	05		0.5	
Malosma laurina Deinandra fasciculata		2						
		2						
Dudleya lanceolata								
Cheoridium dumosum		2						
Chlorogalum parviflorur Mimulus aurantiacus	11	3		bare ground			20	
Gnaphalium palustre		1		rock			50	
Stylocline gnaphaloides	3	1		litter			1	
COVER: Total % Cover:	49.5	%Herb:	16.5	%Shrub:	31	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
	le). Vegetation Associated S	on alliance/ass pecies" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Die	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
Cover	classes (1-6)		c Crust Cover:	3 (10% to <2		hatch Cover		
	ſ	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Biom	ass	yes			ī			1
		Adenostoma f	asciculata		Average	e height (cm)	50	
Mammal Species Activity (cate	-							
Feral pig activity 1				egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity 1	= No ground s	squirrel burrows	detected.					
gopher activity 1	= No pocket g	gopher mounds	detected.					
Sampling area representa	ative of mappe	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSME extent over years of monitor Record notes on page 3. Se	ring) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Acti	vity at, or Ad	ljacent to, Site	Open Space					
Argentine ant abundance at ba	it station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank ea	ch as 1-6):							
Non-native forbs 1	= No sign of e	fe	ral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 1	= No sign of (trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl. 1	= No sign of e		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl. 1	= No sign of e	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash 1	= No sign of o	h	istoric grazing	1 = No sign o	soil	compaction	1 = No sign	of disturbanc
encampments 1	= No sign of e	histo	oric agriculture	1 = No sign o				
fuel modification zo	one/fire break	1 = No sign of c						
road construction/		, , , , , , , , , , , , , , , , , , ,	-	ent, describe:				
		1 = No sign of c		ent, describe:				
brush management	t/restoration	1 = No sign of c	listurbance wit	hin maxinum:	extent or in adjac	ent 10 m buf	fer.	
		1 = No sign of c		ent, describe:				
	-	1 = No sign of c		hin maxinum				
lf sig	n of recent fire	e, year burned?					I	
Trails 2	= Disturbance	e does not occu	r within maxim		If trails are prese	ent, are they a	authorized?	yes
Type of trail use	hiking	yes	biking	no	equestrian	no	dog	yes
ser	vice vehicles	no	other	no				
ille	egal trail use?	1 = No sign of c	describe:					
Other disturbance? 1	= No sign of	describe:					- 255 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya brevifolia MSP Occur ID. DUBLB2_7CRCA003
Date: 4/28/2015
VI. MANAGEMENT RECOMMENDATIONS
continue to direct traffic on trail with fencing to prevent trampling of population
VII. MANAGEMENT ACTIONS IN LAST YEAR
fencing used to control access and prevent trampling
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Dudleya 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 variegata Variegated Dudleya



© City of San Diego, 2004

	MSP - Rare Plant C	ccurrence)	e Monitoriı	ng Form 20 [°]	15	Page 1		
Scientific Name:	Dudleya variegata			Common Nan	ne:	Variegated dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr.	D:	DUVA_6BMRA020		
	CNDDB Elem. Occur. #:	EO51		Translocated	no			
Preserve:	Black Mountain Open Space Park						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego		
Occurrence Name:	Black Mountain Ranch					Sample Point #: 1		
Surveyors:	Betsy Miller, Kim Roeland, Joe DeWolf						City of Sar	Diego
Date:	5/8/2015		Time Start:	13:39		Time Finish:	14:15	- 5 -
		oifio compline		u 10 m radius air	ala) 6 in autománi	enned extent. See n. 4 fex definitions of		loooriking
phenology & evidence of h	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa	ampling area. F	ecord any note	y 10-m radius cir es on p. 3.	cie) & in current m	apped extent. See p. 4 for definitions of	categories c	lescribing
# Plants/Current Mapped Extent:		0	exact coun	t or estimate?	exact		uncert.	very low
Mapped Extent.	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	no	if not	found, known or	suspected reason:		not fou	nd since 2001
# Plants/Sampling		1					1	[
Area	0		ſ	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flowe	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	no					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
1 900.								
	Museum/Herbarium							
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of P	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6291985.772		19396	628.716	Direction facing	E, SE, S	Height	1.1 m
	Camera angle	10° up	Photo #	53-58	File location	S:\MSCP		
Locat. 2 Coord E,N	e enviewe envigee				Direction facing		Height	
,							rieigin	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
			Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Salvia apiana		12		Stipa pulchra			40	
Artemisia californica		7		Bromus horde			2	
Baccharis pilularis		3		Brachypodium	n distachyon		50	
Eriogonum fasciculatum	1	1		Avena sp.			1	
Deinandra fasciculata		5		Brassica nigra			2	
Dichelostemma capitatu	ım	2		Cynara cardu	nculus		2	
Isocoma menziesii		1						
Calystegia macrostegia		2						
Chlorogalum parviflorun	n	2						
Sisyrinchium bellum		1						
Calochortus splendens		1						
Sonchus asper		1		bare ground			5	
Bloomeria crocea Pseudognaphalium calit	fornicum	1	1	rock litter			2	
COVER: Total % Cover:	137	%Herb:	113		24	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	sessment	t Form 2015		Page	e 2	
(typically 10-m radius cir	IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.								
SANDAG 20					nisia californica As				
Cove	r classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	ТІ	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)			
Dead Standing Bior	mass	yes			1			r	
	-	Cynara cardu	nculus/2		Average	height (cm)	15		
Mammal Species Activity (cat									
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	at, pig) dete	cted.		
ground squirr. activity	1 = No ground	squirrel burrows	detected.						
gopher activity	1 = No pocket g	gopher mounds	detected.						
Sampling area represer	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on page	e 3)			
VI. THREATS ASSESSM extent over years of monito Record notes on page 3. S	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/Ac	tivity at, or Ad	ljacent to, Site	open space						
Argentine ant abundance at b	pait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #			
DISTURBANCES (Rank e	ach as 1-6):								
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	d hydrology	1 = No sign	of disturbanc	
Non-native grasses	6 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc	
Non-native woody pl.	1 = No sign of e		vandalism	1 = No sign (d I	urban runoff	1 = No sign	of disturbanc	
competitive native pl.	1 = No sign of (С	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc	
dumping/trash	1 = No sign of (h	istoric grazing	7 = Disturba	ı soil	compaction	1 = No sign	of disturbanc	
encampments	1 = No sign of (histo	oric agriculture	1 = No sign (
fuel modification z	zone/fire break	1 = No sign of c							
road construction	n/maintenance	1 = No sign of c	if prese	ent, describe:					
illegal vege	etation clearing	1 = No sign of a	if prese	ent, describe:					
brush manageme	nt/restoration	1 = No sign of a	disturbance wit	hin maxinum	extent or in adjace	ent 10 m buf	fer.		
	ORV activity	1 = No sign of a		ent, describe:					
Evidenc	e of recent fire	1 = No sign of c	disturbance wit	hin maxinum					
If si	gn of recent fire	e, year burned?							
Trails .	1 = No sign of c	disturbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
Se	ervice vehicles		other						
	legal trail use?	1 = No sign of o	والمحمد والمحمد						
Other disturbance?	1 = No sign of (describe:					- 261 -	-	

MSP-Management Needs and Notes 2015	
(top 2 rows auto-fill from page 1)	
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_6BMRA020	
Date: 5/8/2015	
VI. MANAGEMENT RECOMMENDATIONS	
treat for BRDI; spot treat for CYCA	
VII. MANAGEMENT ACTIONS IN LAST YEAR	
none	
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)	
NOTES	

Dudleya variegata (Variegated Dudleya) Black Mountain East



Panorama from Southeastern edge of population, facing East, Southeast, South. Panorama location is 6291985.772 1939628.716 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Dudleya variegata			Common Nan	ne:	Variegated dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr. ID: DUVA_		DUVA_4EAEL012		
	CNDDB Elem. Occur. #:	EO22		Translocated?	no			
Preserve:	Mission Trails Regional Park						Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department		
Occurrence Name:	East Elliott - Creek					Sample Point #: 2		
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	rtz				Affiliation	City of Sar	Diego
Date:	5/6/2015		Time Start:	9:51		Time Finish:	10:12	
I. OCCURRENCE S	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa	ecific sampling	g area (typicall	y 10-m radius cir	cle) & in current m	apped extent. See p. 4 for definitions of	categories c	lescribing
# Plants/Current	erbivory, disease & sturited growth within the sa	nnpiing area. P		nt or estimate?	ovact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		0	1		evact (GPS	1	exact (GPS ma
	Species Found in Maximum Extent?	VAS		4	square meters suspected reason:			low rainfal
# Plants/Sampling		yes			suspected reason.		1	
Area	0		r	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If you:	Collector (in not collected previously)?	110			Collection #			
If yes:					Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6316378.38		18970	097.063	Direction facing	SW, W, NW, N	Height	1.1 m
	Camera angle	10° up	Photo #	3402-3406	File location	S:\MSCP		
Locat. 2 Coord E,N	Ť				Direction facing		Height	
	Camera angle		Photo #		File location		0	
			FIIOLO #		T IIE IOCALION			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Eriogonum fasciculatum	1	7		Erodium sp.			10	
Isocoma menziesii		10		Bromus madr	itensis		12	
Rhamnus crocea		2		Festuca myur	os		10	
Salvia mellifera		15		Bromus horde	aceus		3	
Rhus integrifolia		1		Gastridium ph	leoides		2	
Salvia apiana		3		Brachypodium	n distachyon		5	
Artemisia californica		1		Avena sp.			4	
Deinandra fasciculata		12		Bothriochloa b	parbinodis		1	
Stipa pulchra		20		Calystegia ma	crostegia		1	
Selaginella cinerascens		2						
Dichelostemma capitatu	ım	1						
Acmispon glaber		1		bare ground			40	
Lepidium sp.		1		rock			25	
Logfia gallica COVER: Total % Cover:	127	3 %Herb:	87	litter %Shrub:	40	%Tree:	1	
		,			40	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0	

MSP -	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMEI (typically 10-m radius circ in the office or field, using "/	:le) . Vegetation Associated S	on alliance/ass species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012)
	2 Vegetation e/Association:	Salvia mellifera	Alliance, Salv	ia mellifera-E	riogonum fascicu	latum Associ	ation	
Cover	classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
]	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		I
Dead Standing Biom		yes Acmispon glal	her/2		Average	e height (cm)	20	
Mammal Species Activity (cate	-		061/2		Avelage	e neight (cm)	20	l
Feral pig activity 1	= No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity 1	= No ground s	squirrel burrows	detected.				-	
gopher activity 1	= No pocket <u>c</u>	gopher mounds	detected.					
Sampling area represent	ative of mappe	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSME extent over years of monitor Record notes on page 3. Se	ring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of			
Surrounding Land Use/Acti	ivity at, or Ad	ljacent to, Site	open space					
Argentine ant abundance at ba	ait station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank ea	ich as 1-6):	[r			
Non-native forbs 4			ral pig activity					of disturbanc
Non-native grasses 5				1 = No sign o				of disturbanc
Non-native woody pl. 1				1 = No sign (of disturbanc
competitive native pl. 1			urrent grazing	-				of disturbanc
dumping/trash 1 encampments 1	-		istoric grazing pric agriculture	-		compaction	T = NO Sign	of disturbanc
			-		l			
fuel modification zo	ľ							
road construction/ illegal veget		1 = No sign of c 1 = No sign of c	-	ent, describe:				
brush managemen	r			ent, describe:	outont or in adias	ant 10 m hui	Hor	
	ORV activity	1 = No sign of c 1 = No sign of c	if prese	ent, describe:			iei.	<u> </u>
Evidence		7 = Disturbance						
	-	e, year burned?		2003				
Trails 3	= Disturbance	e present in >0%	‰ to <10% of a		If trails are prese	ent, are they a	authorized?	no
Type of trail use	hiking		biking		equestrian	no	dog	
	rvice vehicles		other	no				
ille	egal trail use?	3 = Disturbance	describe:					
Other disturbance?	= No sign of						- 266 -	

MSP-Management Needs and Notes 2015	
(top 2 rows auto-fill from page 1) Scientific Name: Dudleya variegata Date: 5/6/2015	
VI. MANAGEMENT RECOMMENDATIONS Illegal trail will be closed as part of the on-going NRMP/Master Plan Update process.	
inegal trait will be closed as part of the on-going futfill invasier r fait opdate process.	
VII. MANAGEMENT ACTIONS IN LAST YEAR	
Increased enforcement in East Elliott.	
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)	
NOTES	
	_

Dudleya variegata (Variegated Dudleya) East Elliott - Creek



Panorama from Northwestern edge of population, facing Southwest, West, Northwest, North. Panorama location is 6316378.38 1897097.063 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Dudleya variegata		Common Name:		Variegated dudleya			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DUVA_4EAEL012		
	CNDDB Elem. Occur. #:	EO22		Translocated	no			
Preserve:	Mission Trails Regional Park						Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	- v	
Occurrence Name:	East Elliott - Hilltop				<u> </u>		ole Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	rtz					City of Sar	
Date:	5/6/2015		Time Start:	11:05		Time Finish:		
				10 11 1				
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	t categories d	lescribing
# Plants/Current		44	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		46.16	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves	if not		suspected reason:		,	
# Plants/Sampling		1	L		•		1	
Area	7		т	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If you:		110			Collection #			
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)						1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90				· · · ·			
Locat. 1 CoordE, N	6316264.126		1897	663.71	Direction facing	SE. S. SW	Height	1.1 m
	Camera angle	10° up	Photo #	3411-3416		S:\MSCP		
Locat. 2 Coord E,N		10 up	FIIOLO #	3411-3410			Hoight	
Local. 2 Coold E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
	PECIES If need more room, record additiona	l data and any	notes on page	3				
		r data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected	[species/substrate		% Cover	not collected
Dudleya variegata		1		Stephanomer	ia diegensis		1	
Adenostoma fasciculatu	ım	22		Stipa sp.			3	
Salvia mellifera		12		Festuca myur	'OS		4	
Malosma laurina		7		Bromus madr	itensis		2	
Quercus berberidifolia		5		Navarretia ha	mata		2	
Rhus integrifolia		3		Daucus pusill	us		1	
Deinandra fasciculata		7		Porophyllum gracile			1	
Opuntia sp.		1		Stylocline gnaphaloides			1	
Cryptantha sp.		2 Dichondra occidentalis		cidentalis		1		
Centaurea melitensis		2		Xylococcus bi	color		3	
Acmispon glaber		1		Brassica sp.			1	
Lepidium sp.		1		bare ground			55	
Crassula connata		1		rock			25	
Chlorogalum parviflorur COVER: Total % Cover:	n 86	1 %Herb:		litter %Shrub:		%Tree:	5	
GOVER. TOTAL % COVEL.	00	/onerD.	32	/03111uD.	54	%Tree.	0	

MSP -	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMI (typically 10-m radius cir in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	o vegetatio habitat ass	on key (AE) sessment ca	COM 2012) ategories.
Allian	ce/Association:	bicolor-Quercus	s (berberidifolia	a I xacutidens) Association			
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)		
Dead Standing Bio	mass	yes			т			r
	-	Eriogonum fas	sciculatum/2;	Helianthem	Average	height (cm)	25	
Mammal Species Activity (ca	ateg. 1-4)							
				egetation des	truction, tracks, so	at, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on page	e 3)		
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. S	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Ad	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	1 = No sign of o	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	2 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	, v		vandalism	1 = No sign o	t			of disturbanc
competitive native pl.			urrent grazing		t ·			of disturbanc
dumping/trash			istoric grazing			compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	pric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum:	extent or in adjace	ent 10 m buf	fer.	
		1 = No sign of c		ent, describe:				
		7 = Disturbance		of area with				
	-	e, year burned?		2003			!	
	3 = Disturbance	e present in >0%	% to <10% of a		If trails are prese	nt, are they a	authorized?	no
Type of trail use	hiking	yes	biking	yes	equestrian	no	dog	yes
s	service vehicles	no	other		ted trail was close	d in 2014 -	urroptly roca	ivoina littla ta
i	illegal trail use?	3 = Disturbance	describe:	no use	ieu itali was ciose	[:] u III ∠∪ 14, Cl	Jirenily rece	
Other disturbance?	1 = No sign of o	describe:					- 271 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_4EAEL012
Date: 5/6/2015
VI. MANAGEMENT RECOMMENDATIONS
Maintain trail closure and increased enforcement
VII. MANAGEMENT ACTIONS IN LAST YEAR
Closed illegal trail, increased enforcement
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Black tailed jack rabbit @ clump of eucalyptus near Miramar border
NOTES

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.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Dudleya variegata			Common Nar	ne:	Variegated dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DUVA_4EAEL012		
	CNDDB Elem. Occur. #:	EO22		Translocated	no			
Preserve:	Mission Trails Regional Park			•	•		Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego	-	
Occurrence Name:	East Elliott - Slope					Sam	ole Point #:	3
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	rtz				Affiliation City of San Diego		
Date:	5/6/2015		Time Start:	10:22		Time Finish:	10:43	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	categories c	lescribing
phenology & evidence of h # Plants/Current	erbivory, disease & stunted growth within the sa		-	•			Γ.	
Mapped Extent:		0		t or estimate?			uncert.	
	Area of Current Mapped Extent:		0	4	meters		•	exact (GPS ma
# Dianta (Canadian	Species Found in Maximum Extent?	no	if not	found, known oi	suspected reason:		lo	w rainfall year
# Plants/Sampling Area	0			exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10						
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):			Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map	-				1		
	···· · · · · · · · · · · · · ·			1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F					N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6345780.586		18964	166.988	Direction facing	W, NW, N, NE	Height	1.1 m
	Camera angle	10° up	Photo #	3407-3410	File location	S:\MSCP		
Locat. 2 Coord E,N		10 00	1 11010 #		Direction facing		Height	
					Ĭ		rioigiit	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, or collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Eriogonum fasciculatum	1	17			000000000000000000000000000000000000000			
Acmispon glaber		10						
Isocoma menziesii		7						
Ferocactus viridescens		1						
Deinandra fasciculata		22						
Erodium sp.		12						
		3						
Stipa sp. Brachypodium distachyon		30						
Avena sp.		1						
Gastridium phleoides		1						
Bromus diandrus		2						
Lepidium sp.		1		bare ground			50	
p.a.a		· ·		rock			20	
				litter		1	2	
COVER: Total % Cover:	108	%Herb:	73	%Shrub:	35	%Tree:	0	

V. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within spocles-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office of rickly using / Association In the office of rickly using / Association SANDAG 2012 Vegetation In the office of rickly using / Association Freq part of the office of rickly using / Association In the office of rickly using / Association Cover classes (1-6) Cryptogamic Crust Cover. 1 (0%) Thatch Depth Average (cm) 0 Dead Standing Biomass Tratch Depth Average (cm) 0 Thatch Depth max (cm) 0 Yes Cover classes (1-6) Cryptogamic Crust Cover. 1 (0%) Thatch Depth max (cm) 0 Dead Standing Biomass Task (cover, yes) 0 Thatch Depth max (cm) 0 ground squire. activity 1 = ko ground squire burrows detected. average height (cm) 20 ground squire. activity 1 = ko ground squire mounds detected. asampling area representative of mapped occurrence? yes (if no, nota differences on page 3) VI: THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threads within the occurrence's maximum extent (cumulative extent over years of monitoring) publis 10-m surrounding buffer. See page 4 for difficutions of threat assessment categories. Record notice of mothoring) publis 10-m surrounding buffer. See page 4 fo	MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
Allance/Association Tatch Depth Average (cm) 0 Thatch Cover 1 (0%) Thatch Depth max (cm) 0 Dead Standing Blomass yes 1 Thatch Depth Average (cm) 0 Mammal Species Ackivity (categ. 1-4) Average height (cm) 20 Mammal Species Ackivity (categ. 1-4) Average height (cm) 20 Feral pig activity 1 = No ground squire burrows detected. 20 ground squire 1 = No ground squire burrows detected. 20 Sampling area representative of mapped occurrence? yes (If no. note differences on page 3) VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over yease of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait. etc. Surrounding Land Use/Activity at, or Adjacent to. Site open space Ant sample collected? Ant sample # Ant station Photo # Non-native forbs { = Disturbance feral pig activity 1 = No sign of disturbance urban runnt 1 = No sign of disturbance Non-native protes 1 = No sign of instoric agring 1 = No sign of disturbance solge movement 1 = No sign of disturbance	(typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
Thatch Depth Average (cm) D Dead Standing Biomass yes If yes, cover/species class Acmispon glaber/3 Average height (cm) 20 Mammal Species Achivity (create, 1-4) Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected. ground squirr. activity 1 = No ground squirrel burrows detected. gopher activity 1 = No pocket gopher mounds detected. ground squirr. activity 1 = No ground squirrel burrows detected. gopher activity 1 = No pocket gopher mounds detected. Sampling area representative of mapped occurrence? yes (If no, note differences on page 3) VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over yeas of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc. Surrounding Land Use/Activity at, or Adjacent to, Site open space Argentine ant abundance at bait station (1-4) Time end Temp start Ant sample 4 Ant sample 4 Non-native forbs 4 = Disturbance feral pig activity 1 = No sign of activity 1 = No sign of activity 1 = No sign of disturbance Non-native native of the sign of the sign of the sign of courrent grazing 1 = No sign of disturbance if present, de			Eriogonum faso	ciculatum Alliar	nce, Eriogonu	ım fasciculatum A	ssociation		
Dead Standing Blomass yes If yes, cover/species class Acmispon glaber/3 Average height (cm) 20 Mammel Species Activity (categ. 1-4) Feral pig activity (coting, wallowing, vegetation destruction, tracks, scat, pig) detected. good squirr. activity 1 = No ground squirrel burrows detected. ground squirr. activity 1 = No ground squirrel burrows detected. goother activity (1 = No good squirrel burrows detected. ground squirres Sampling area representative of mapped occurrence? yes (If no, note differences on page 3) VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10 ms urrounding buffer. See page 4 of definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc. Surrounding Land Use/Activity at, or Adjacent to, Site open space Argentine ant abundance at bait station (1-4) Time start Time end Ant sample # Ant sample # Non-native grasses 5 = Disturbance transping 1 = No sign of urban runoff 1 = No sign of durping/transh 1 = No sign of urban runoff 1 = No sign of fuel modification zone/tire break 1 = No sign of fuel modification zone/tire break 1 = No sign	Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
If yes, cover/species dass Acmispon glaber/3 Average height (cm) 20 Mammal Species Activity (categ. 1-4) Feral pig activity (categ. 1-4) Feral pig activity (ateg. 1-4) Feral pig activity 1 = No ground squirel burrows detected. ground squire: activity 1 = No pocket gopher mounds detected. Sampling area representative of mapped occurrence? yes (if no. note differences on page 3) VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc. Surrounding Land Use/Activity at, or Adjacent to, Site Open space Argentine ant abundance at bait station (1-4) Time start			Thatch Depth A	verage (cm)	0	Thatch Dep	oth max (cm)	0	
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ground squirr. activity 1 = No ground squirrel burrows detected. gopher activity 1 = No pocket gopher mounds detected. Sampling area representative of mapped occurrence? yes (if no, note differences on page 3) VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc. Surrounding Land Use/Activity at, or Adjacent to, Site or me start			activity (rooting	u wallowing, ve	egetation des	truction, tracks, se	cat, pig) dete	cted.	
gopher activity 1 = No pocket gopher mounds detected. Sampling area representative of mapped occurrence? yes (If no, note differences on page 3) VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USSS 2015) for setting up bait, etc. Surrounding Land Use/Activity at, or Adjacent to, Site open space Argentine ant abundance at bait station (1-4) Time start Temp start Ant sample collected? Ant sample # Non-native grasses 5 = Disturbanc Non-native grasses 5 = Disturbanc Non-native grasses 5 = Disturbanc dumping/trash 1 = No sign of dumping/trash 1 = No sign of file and construction/maintenance 1 = No sign of file and diffication zone/fire break 1 1 = No sign of file and diffication zone/fire break 1 1 = No sign of file and offication zone/fire break 1 1 = No sign of file and offication zone/fire break 1 1 = No sign of file and construction/maintenance 1 1 = No sign of file andiffication z					<u> </u>	,,			
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Time start Temp start Temp start Time end Temp end Ant sample collected? Ant sample # Ant Station Photo # DISTURBANCES (Rank each as 1-6): Feral pig activity 1 = No sign altered hydrology 1 = No sign of disturbanc Non-native forbs 4 = Disturbanc feral pig activity 1 = No sign altered hydrology 1 = No sign of disturbanc Non-native grasses 5 = Disturbanc trampling 1 = No sign erosion 1 = No sign of disturbanc Non-native woody pl. 1 = No sign of vandalism 1 = No sign slope movement 1 = No sign of disturbanc competitive native pl. 1 = No sign of current grazing 1 = No sign solid compaction 1 = No sign of disturbanc fuel modification zone/fire break 1 = No sign of if present, describe: 1 = No sign of disturbanc illegal vegetation clearing 1 = No sign of if present, describe: 1 = No sign of disturbanc fi sign of cecent fire 7 = No sign of if present, describe: 1 = No sign of 1 = No sign of fi sign of cecent fire 7 = Disturbance within maxinum exitent or in adjacent 10 m buffer. 1 = No sign of 1 = No sign of <t< td=""><td>Surrounding Land Use/A</td><td>ctivity at, or Ac</td><td>ljacent to, Site</td><td>open space</td><td></td><td></td><td></td><td></td><td></td></t<>	Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
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DISTURBANCES (Rank each as 1-6): Non-native forbs 4 = Disturbano Non-native grasses 5 = Disturbano Non-native woody pl. 1 = No sign of 1 = No sign of vandalism 1 = No sign of urban runoff 1 = No sign of urban runoff 1 = No sign of urban runoff 1 = No sign of current grazing 1 = No sign of current grazing 1 = No sign of current grazing 1 = No sign of historic grazing 1 = No sign of sole dumping/trash 1 = No sign of encampments 1 = No sign of fuel modification zone/fire break 1 = No sign of 1 = No sign of if present, describe: illegal vegetation clearing 1 = No sign of 1 = No sign of if present, describe: 0RV activity 1 = No sign of 1 = No sign of if present, describe: 1 = No sign of if present, describe: 0RV activity 1 = No sign of 1 = No sign of if present, describe: 2 = Disturbance occures ≥75% of area with	Time start		Temp start			Time end		Temp end	
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competitive native pl. 1 = No sign of disturbance current grazing 1 = No sign of disturbance dumping/trash 1 = No sign of disturbance historic grazing 1 = No sign of disturbance encampments 1 = No sign of disturbance historic agriculture 1 = No sign of disturbance fuel modification zone/fire break 1 = No sign of disturbance if present, describe: if present, describe: illegal vegetation clearing 1 = No sign of disturbance occurs if present, describe: if present, describe: 0RV activity 1 = No sign of disturbance occurs ≥75% of area with 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Trails 1 = No sign of disturbance within maxinum ex if trails are present, are they authorized? Type of trail use hiking biking equestrian dog service vehicles other illegal trail use? 1 = No sign of describe: illegal trail use?	Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
dumping/trash 1 = No sign of encampments 1 = No sign		-			Ť	1			
encampments 1 = No sign of o historic agriculture 1 = No sign of o fuel modification zone/fire break 1 = No sign of o if present, describe: road construction/maintenance 1 = No sign of o if present, describe: illegal vegetation clearing 1 = No sign of o if present, describe: brush management/restoration 1 = No sign of o if present, describe: ORV activity 1 = No sign of o if present, describe: Evidence of recent fire 7 = Disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking biking biking equestrian dog		-		• •	Ť	1			
fuel modification zone/fire break 1 = No sign of q illegal vegetation clearing 1 = No sign of q if present, describe: 1 = No sign of q brush management/restoration 1 = No sign of q ORV activity 1 = No sign of q if present, describe: 1 = No sign of q Drush management/restoration 1 = No sign of q ORV activity 1 = No sign of q if present, describe: 1 = No sign of q Evidence of recent fire 7 = Disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking biking equestrian dog dog		-				Ī	l compaction	1 = No sign	of disturbanc
road construction/maintenance 1 = No sign of o if present, describe: illegal vegetation clearing 1 = No sign of o if present, describe: brush management/restoration 1 = No sign of disturbance within maxinum extent or in adjacent 10 m buffer. ORV activity 1 = No sign of disturbance occurs ≥75% of area with If sign of recent fire 7 = Disturbance occurs ≥75% of area with If sign of disturbance within maxinum ex If trails are present, are they authorized? Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? 000 Type of trail use hiking illegal trail use? 1 = No sign of describe:	encampments	T = NO sign of 0	nisto	nic agriculture	1 = No sign (1			
illegal vegetation clearing 1 = No sign of c if present, describe: brush management/restoration 1 = No sign of disturbance within maxinum extent or in adjacent 10 m buffer. ORV activity 1 = No sign of c if present, describe: Evidence of recent fire 7 = Disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking biking other illegal trail use? 1 = No sign of describe:	fuel modification	zone/fire break	1 = No sign of c						
brush management/restoration ORV activity Evidence of recent fire I = No sign of disturbance within maxinum extent or in adjacent 10 m buffer. 1 = No sign of disturbance within maxinum extent or in adjacent 10 m buffer. 1 = No sign of disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum extent or in adjacent 10 m buffer. 7 = Disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum extent or in adjacent 10 m buffer. 7 = Disturbance occurs ≥75% of area with If trails are present, are they authorized? Type of trail use hiking biking equestrian dog 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 =					ent, describe:				
ORV activity 1 = No sign of different, describe: Evidence of recent fire 7 = Disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking Bervice vehicles other illegal trail use? 1 = No sign of describe:									
Evidence of recent fire 7 = Disturbance occurs ≥75% of area with If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking biking equestrian service vehicles other illegal trail use? 1 = No sign of describe:	brush manageme	ORV activity	1 = No sign of o	disturbance wit			ent 10 m but	fer.	
If sign of recent fire, year burned? 2003 Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking biking equestrian service vehicles other illegal trail use? 1 = No sign of describe:	Eviden								
Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized? Type of trail use hiking biking equestrian service vehicles other illegal trail use? 1 = No sign of describe:						I			
Type of trail use hiking biking equestrian service vehicles other illegal trail use? 1 = No sign of c		-	-		2003	4	ent, are they	authorized?	
service vehicles illegal trail use? 1 = No sign of c describe:		1 - 100 sight of 0				1	, are arey		
illegal trail use? 1 = No sign of c describe:		· ·		_		equestian		uog	
			1 - No aign of	al a a avila a .		1			
		1 = No sign of o	T – NO SIGITOT					- 276 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_4EAEL012
Date: 5/6/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Dudleya variegata			Common Nar	ne:	Variegated dudleya		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	DUVA_3GOME003		
	CNDDB Elem. Occur. #:			Translocated	no			
Preserve:	Spring Canyon						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D		
Occurrence Name:	Goat Mesa/Spring Canyon				<u> </u>	Sample Point #: 1		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	mabe				Affiliation City of San Diego		
Date:	4/21/2015		Time Start: 9:25			Time Finish:	10:15	2.090
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcle) & in current m	napped extent. See p. 4 for definitions o	^r categories o	lescribing
# Plants/Current		68	exact coun	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		89.96	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		4	suspected reason:		/	
# Plants/Sampling		1					1	
Area	25		т	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	r	1		·
	Phenology In Sampling Area (1-6):	Vegetative	2 (>0% to <1	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				1				
	Collection (if not collected previously)?	no]			
If yes:	Collector			Collection #				
	Museum/Herbarium							J
IL SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)		accur. units.	meters	Datam	14.000	J	
Coordin's at Center of F	h				N:			
	Pentax Optio W90	l			14.			
Locat. 1 CoordE, N	6330814.789		17823	236.114	Direction facing	SE S SW	Height	1.1 m
,	2					S:\MSCP	rieigin	1.1.111
	Camera angle	Level	Photo #	3231-3241	File location			
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected	· · · • · · · · · · · · · · · ·	species/substrate		% Cover	not collected
Dudleya variegata		1		Lepidium nitio	lum		1	
Simmondsia chinensis		7		Erodium sp.			5	(dead)
Artemisia californica		3		Lasthenia gra	cilis		1	(dead)
Eriogonum fasciculatum	1	5		Bromus madr	itensis		1	
Ferocactus viridescens		2		Centaurea me	elitensis		1	
Cylindropuntia prolifera		1		Salsola tragu	5		1	
Ambrosia chenopodiifol	ia	1		Cryptantha sp.			1	(dead)
Deinandra fasciculata		15 Plantago erecta		ta		1		
Mirabilis laevis		1		Logfia gallica			1	
Stipa pulchra		1						
Selaginella cinerascens	3	2	(dead)					
Logfia filaginoides		1	,	bare ground			20	
Chlorogalum parviflorur	n	1		rock			5	
Crassula connata	Γ	7		litter			1	
COVER: Total % Cover:	61	%Herb:	42	%Shrub:	19	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	sessment	: Form 2015		Pag	e 2
IV. HABITAT ASSESSMEI (typically 10-m radius circ in the office or field, using "/	le) . Vegetation Associated S	on alliance/ass species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE sessment c	COM 2012) ategories.
	2 Vegetation e/Association:	Simmondsia ch	inensis Allianc	e, Simmonds	ia chinensis-Bahi	opsis lacinia	ta Associatio	วท
Cover	classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
	r	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		İ
Dead Standing Biom	ass	no			T			T
If yes, cover/ Mammal Species Activity (cate	species class				Average	e height (cm)		l
Feral pig activity 1		activity (rooting	u wallowing, ve	egetation des	truction tracks so	cat, pig) dete	cted	
ground squirr. activity 1						oat, p.g/ aoto		
gopher activity 1								1
Sampling area represent				(If no, note d	lifferences on pag	e 3)		
VI. THREATS ASSESSME	NT IN MAXI	MUM EXTEN	r - Assess th	reats within	the occurrence	's maximu	m extent (cumulative
extent over years of monitor Record notes on page 3. Se						threat asse	ssment cat	egories.
Surrounding Land Use/Acti	vity at, or Ad	ljacent to, Site	open space					
Argentine ant abundance at ba	ait station (1-4))	1 = No ants d	etected at ba	it station or in vici	nity.		
Time start	9:26 AM	Temp start	70F		Time end	10:13 AM	Temp end	68F
Ant sample collected? n	0	Ant sample #			Ant Sta	ition Photo #	3242	
DISTURBANCES (Rank ea	ich as 1-6):	•						
Non-native forbs 3	= Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sigr	n of disturbanc
Non-native grasses 3	= Disturbance		trampling	1 = No sign o		erosion	1 = No sigr	n of disturbanc
Non-native woody pl. 1				1 = No sign (1			n of disturbanc
competitive native pl. 1			urrent grazing	-	1			n of disturbanc
dumping/trash 1	-		istoric grazing		l	compaction	1 = No sigr	n of disturbanc
encampments 1		nisto	oric agriculture	1 = No sign (1			
fuel modification zo	one/fire break	1 = No sign of o						
road construction				ent, describe:				
		1 = No sign of o		ent, describe:				r
brush managemen						ent 10 m but	fer.	
	-	I = INO SIGN OF C		ent, describe:				
	=	1 = No sign of c		hin maxinum				
		e, year burned?			If trails are proce	at are they	outhorizod 2	
Type of trail use		e does not occu			If trails are prese	-]	yes
	hiking		biking		equestrian	no	dog	no
	rvice vehicles		other describe:	no				
Other disturber and		1 = No sign of o						
Other disturbance? 1	= No sign of	describe:					- 281 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_3GOME003
Date: 4/21/2015
VI. MANAGEMENT RECOMMENDATIONS Continue to maintain access control with fencing and locked gates
VII. MANAGEMENT ACTIONS IN LAST YEAR
PUD installed fencing along access road to control ORV
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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 1782236.11 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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| | MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1 | | | | | | | |
|-------------------------------------|---|----------------|---------------------------|----------------------|---------------------|---|----------------|-------------------------------------|
| Scientific Name: | Dudleya variegata | | | Common Nan | ne: | Variegated dudleya | | |
| | Existing MSP Occurrence? | yes | yes MSP Occurr. ID: | | | DUVA_3MAVA004 | | |
| | CNDDB Elem. Occur. #: n/a Translocated no | | | | | | | |
| Preserve: | Marron Valley Mitigation Bank | | | • | | | Mgmt Unit | MU3 |
| Land Owner: | City of San Diego | | | | Land Mangr: | City of San Diego Public Utilities D | | |
| Occurrence Name: | Marron Valley | | | | | | ole Point #: | 1 |
| Surveyors: | Kim Roeland, Betsy Miller, Annabelle Be | mabe, Danie | l Schwartz | | | | City of Sar | n Diego |
| Date: | 4/1/2015 | , | Time Start: | 13:15 | | Time Finish: | , í | |
| | TATUS - Assess # plants in both species-spe | noific complia | | u 10 m radius air | ala) 9 in automátic | anned extent. See n. 4 for definitions of | f antonovina a | lagarihing |
| | erbivory, disease & stunted growth within the sa | | | | | apped extern. See p. 4 for definitions of | calegones c | lescribility |
| # Plants/Current
Mapped Extent: | | 2801 | exact coun | t or estimate? | exact | | uncert. | low |
| Mapped Extent. | Area of Current Mapped Extent: | | 496.3 | units | square meters | exact (GPS |) or estim? | exact (GPS ma |
| | Species Found in Maximum Extent? | yes | if not | found, known or | suspected reason: | | | |
| # Plants/Sampling | | [| | | | | 1 | |
| Area | 202 | | 1 | exact co | ount or estimate? | exact | uncert. | low |
| | Sample Area Radius (m) | 10 | | 1 | | | | |
| | Phenology In Sampling Area (1-6): | - | 3 (10% to <2 | - | 5 (50% to <75% | | Fruiting | 1 (0%) |
| | | | 1 (0%) | | ering & Fruiting | | J | |
| | Evidence in Sampling Area (1-6): | = | · · · | Disease | 1 (0%) | Stunt | ed Growth | 1 (0%) |
| | Is Sampling Area within Current Map | ped Extent? | yes | | | | | |
| | Collection (if not collected previously)? | yes | | | | | | |
| If yes: | Collector | | | | Collection # | | | |
| | Museum/Herbarium | | | | | | | |
| | | | | | | | | |
| II. SAMPLING AREA | LOCATION & SITE PHOTOMONIT | ORING | | r | | | r | |
| GPS Accuracy: +/- | <1 | | accur. units: | meters | Datum: | NAD83 | | |
| coord. system | State Plane (ft) | | | | | 1 | | |
| Coordin's at Center of F | Plot: E: | | | | N: | | 1 | r |
| Camera type: | Pentax Optio W90 | | | | | | | |
| Locat. 1 CoordE, N | 6407136.242 | | 1787 | 954.48 | Direction facing | | Height | 1.1 m |
| | Camera angle | Level | Photo # | 3016-3020 | File location | S:\MSCP | | |
| Locat. 2 Coord E,N | | | | | Direction facing | | Height | |
| | Camera angle | | Photo # | | File location | | | |
| | | | 1 11010 # | | | | | |
| III. ASSOCIATED SI | PECIES If need more room, record additiona | l data and any | notes on page | 3. | | | | |
| species/substrate | | % Cover | Collection #, o collected | | species/substrate | | % Cover | Collect.# or NC if
not collected |
| Dudleya variegata | | 2 | | Calochortus s | • | | 1 | |
| Crassula connata | | 6 | | Hypochaeris g | | | 3 | |
| Selaginella cinerascens | | 7 | | Lasthenia cor | | | 1 | |
| Plantago erecta | | 4 | | Osmadenia te | | | 2 | |
| Lepidium nitidum | | 2 | | | inclia | | 1 | |
| Silene gallica | | 3 | | Melica sp. | | | 1 | |
| Erodium botrys | | 20 | | oryptantina op. | | 1 | | |
| Lamarckia aurea | | 20 | | Gastridium phleoides | | | | |
| Bromus madritensis ssr | ruhens | 30 | | | | | | |
| Bromus hordeaceus | . 100010 | 30 | | | | | | |
| | | 4 | | | | | | |
| Allium sp.
Bloomeria clevelandii | | 3 | | bare ground | | | 10 | |
| Festuca myuros | | 4 | | rock | | | 5 | |
| Avena sp. | | 7 | | litter | | | 3 | |
| COVER: Total % Cover: | 104 | %Herb: | 104 | %Shrub: | 0 | %Tree: | 0 | |

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2
	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4 t	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	er classes (1-6)	Cryptogamic	c Crust Cover:	4 (25% to <5 3		hatch Cover oth max (cm)		:25%)
Dead Standing Bio		yes		0	Ī			
	er/species class	Bromus madr	itensis/3		Average	e height (cm)	10	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	3 = <10 mound	s observed with	in sampling ar	ea.				
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open spce					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):	_			_			
Non-native forbs	5 = Disturbance	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	5 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of	h	istoric grazing	7 = Disturbai	soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c						
	on/maintenance			ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum	extent or in adjac	ent 10 m buf	ffer.	
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Eviden	ce of recent fire			of area with				
	sign of recent fire			2003				
Trails	1 = No sian of a	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
5	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of	describe:					- 286 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_3MAVA004
Date: 4/1/2015
VI. MANAGEMENT RECOMMENDATIONS
control of non-native grasses and forbs around areas of high density; protect soil crust when possible; continue to maintain access control via signs and gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
None
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Gopher activity was not recent.
2,801 is the exact count for the drainage that is monitored every year.
Total for additional dranages (estimate) is 3,530.
Mediterranean California Naturalized Annual and Perennial Grasslands Semi-Natural Stands is best result using the
veg key. This site doesn't meet the criteria for Selaginella bigelovii Alliance but the description very closely fits with this site.

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.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Dudleya variegata		Common Name:			Variegated dudleya		
	Existing MSP Occurrence?	yes MSP Occurr. ID:			DUVA_4MERO014			
	CNDDB Elem. Occur. #:	n/a		Translocated?	no			
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego		
Occurrence Name:	Mercy Road					Sam	ole Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Joe DeWolf					Affiliation	City of Sar	n Diego
Date:	5/8/2015		Time Start:	15:00		Time Finish:	15:25	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	^r categories c	lescribing
phenology & evidence of h # Plants/Current	erbivory, disease & stunted growth within the sa						[
Mapped Extent:		53		t or estimate?			uncert.	
	Area of Current Mapped Extent:		129.5	•	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling Area	48			exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10	ľ				1	
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Ū	1 (0%)		ering & Fruiting	1 (0%)	Ĵ	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map				. (0,0)			. (0,0)
			. (.,.,	1				
	Collection (if not collected previously)?	no			l	<u> </u>		
If yes:	Collector	r Collection #						
	Museum/Herbarium	um						
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)						1	
Coordin's at Center of F	· · ·				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6294507.443		1984	420.89	Direction facing	SW, W, NW	Height	1.1 m
	Camera angle	10 ° up	Photo #	59-63	File location	S:\MSCP		
Locat. 2 Coord E.N					Direction facing		Height	
	2		Dia ta #				rioigin	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Dudleya variegata		2		Selaginella cir	nerascens		10	
Eriogonum fasciculatum	1	3		Brachypodium	n distachyon		20	
Isocoma menziesii		7		Logfia gallica			1	
Adolphia californica		2		Erodium botry	'S		2	
Rhus integrifolia		3		Centaurea me	Centaurea melitensis		1	
Corethrogyne filaginifoli	a	2		Bromus madr	itensis		1	
Acmispon glaber		3		Plantago erecta 1				
Chlorogalum parviflorur	n	3		Sisyrinchium bellum 1				
Deinandra fasciculata		4		Ferocactus vi	ridescens		1	
Hypochaeris glabra		2						
Stipa pulchra		27						
Peritoma arborea		1		bare ground			25	
Lomatium dasycarpum		15		rock			40	
Daucus pusillus		1	-	litter			2	
COVER: Total % Cover:	113	%Herb:	93	%Shrub:	20	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMI (typically 10-m radius ci in the office or field, using	r cle) . Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
SANDAG 20 Allian	012 Vegetation ce/Association:	Artemisia califo fasciculatum - 0	rnica - Eriogor Opuntia littorali	num fascicula is/Dudleya (e	tum Alliance, Arte dulis) Association	emisia califori	nica - Eriogo	num
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	4 (25% to <5	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l
Dead Standing Bio	mass	no			т			1
	er/species class				Average	e height (cm)		ı
Mammal Species Activity (ca		e optivity (rooting		actation day	truction trocks a	aat nig) data	atad	
ground squirr. activity				egetation des	truction, tracks, so	cal, pig) dele	clea.	
		gopher mounds						
Sampling area represe				(If no note d	lifferences on pag	19 3)	1	
VI. THREATS ASSESSM			<i>.</i>				m oxtont (cumulative
extent over years of monit Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of			
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		l
DISTURBANCES (Rank e	each as 1-6):	1		r	т		r	
Non-native forbs			eral pig activity		T			of disturbanc
Non-native grasses				1 = No sign (T			of disturbanc
Non-native woody pl.				1 = No sign (1			of disturbanc
competitive native pl.	-		urrent grazing		1			of disturbanc
dumping/trash			istoric grazing		Ī	I compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	nisic	oric agriculture	T = NO SIGN (1			
fuel modification	zone/fire break	1 = No sign of o						
road constructio				ent, describe:				
		1 = No sign of o		ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit		extent or in adjac	ent 10 m buf	fer.	L
		1 = No sign of o		ent, describe:				
		1 = No sign of c		thin maxinum				
	-	e, year burned?						
		disturbance with			If trails are prese	int, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	ervice vehicles		other					
		1 = No sign of c	describe:					
Other disturbance?	1 = No sign of	describe:					- 291 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_4MERO014
Date: 5/8/2015
VI. MANAGEMENT RECOMMENDATIONS none
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
CAGN calling upslope
NOTES
Originally the veg keyed out to Isocoma menziesii Alliance, Isocoma menziesii Provisional Association but this didn't fit the site well because the site lacks the proximity to salt marsh which is noted in the description for Iso-men Alliance, Association

Dudleya variegata (Variegated Dudleya) Mercy Road



Panorama from Northwestern edge of population, facing Southwest, West, Northwest. Panorama location is 6294507.443 1924420.89 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Dudleya variegata	Common Name:			Variegated dudleya			
	Existing MSP Occurrence?	yes MSP Occurr. ID: D			DUVA_4MTRP015			
	CNDDB Elem. Occur. #:			Translocated	no			
Preserve:	Mission Trails Regional Park			ļ	ļ		Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego	0	
Occurrence Name:								1
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	rtz					City of Sar	Diego
Date:	5/6/2015		Time Start: 14:50 Time Finish:				15:04	2.090
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	categories d	lescribing
# Plants/Current		7	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		2.78	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		1	suspected reason:		/	
# Plants/Sampling	•	1		, .			1	
Area	7		T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	·	1		h
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				1				
	· · · · ·	no]			
If yes:	Collector				Collection #			
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
-	State Plane (ft)		accur: units.	meters	Datam.	IN 1200	J	
Coordin's at Center of F					N:			
	Pentax Optio W90	l						
Locat. 1 CoordE, N	6309627.305		18797	05.912	Direction facing	NW N NE	Height	1.1 m
	2	10.0				S:\MSCP	rieigiit	1.1.111
	Camera angle	10 ° up	Photo #	435-438				
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page Collection #. o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Dudleya variegata		1		Erodium sp.			10	
Eriogonum fasciculatum	1	8		Bromus madr	itensis		1	
Artemisia californica		2		Centaurea me	elitensis		1	
Peritoma arborea		2		Chlorogalum	parviflorum		1	
Bahiopsis laciniata		1						
Ferocactus viridescens		1						
Deinandra fasciculata		9						
Stipa sp.		2						
Selaginella cinerascens		10						
Logifa gallica		2						
Avena sp.		1						
Brachypodium distachy	on	9		bare ground			60	
Lepidium sp.		1		rock			30	
Crassula connata		1		litter			1	
COVER: Total % Cover:	63	%Herb:	49	%Shrub:	14	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
IV. HABITAT ASSESSMI (typically 10-m radius cin in the office or field, using SANDAG 20 Allian	r cle) . Vegetati "Associated S	on alliance/as Species" data f Bahiopsis lacin	sociation can rom page 1. S	be assigned See page 4	d using San Die	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
Cove	er classes (1-6)	Cryptogami	c Crust Cover:	3 (10% to <2	Т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	mass	yes			,			
If yes, cove	r/species class	Acmispon gla	ber/2		Average	e height (cm)	12	
Mammal Species Activity (ca	nteg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket g	gopher mounds	detected.	1				
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)		
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. S	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Ad	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank e	each as 1-6):	_			_			
Non-native forbs	2 = Disturbance	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	2 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	c	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign o	soil	l compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of o						
road constructio	n/maintenance	1 = No sign of o	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of o	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of a	disturbance wit	thin maxinum	extent or in adjac	ent 10 m buf	fer.	
	ORV activity	1 = No sign of o	if prese	ent, describe:				
Evidence	ce of recent fire	7 = Disturbance	e occurs ≥75%	6 of area with				
lf s	ign of recent fire	e, year burned?	unknown	1				
Trails	2 = Disturbance	e does not occu	r within maxim		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking	yes	biking	yes	equestrian	no	dog	yes
s	ervice vehicles	yes	other	no				
i	llegal trail use?	1 = No sign of o	describe:					
Other disturbance?	1 = No sign of	describe:					- 296 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1) Scientific Name: Dudleya variegata MSP Occur ID. DUVA_4MTRP015
Date: 5/6/2015
VI. MANAGEMENT RECOMMENDATIONS None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Dudleya variegata			Common Nar	ne:	Variegated dudleya		
	Existing MSP Occurrence?	yes MSP Occurr. ID: [DUVA_4MTRP015			
	CNDDB Elem. Occur. #:	n/a		Translocated				
Preserve:	Mission Trails Regional Park				ļ		Mgmt Unit	MU4
Land Owner:	City of San Diego				Land Mangr:	City of San Diego	0	
Occurrence Name:								2
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	irtz					City of Sar	
Date:	5/6/2015							Ŭ.
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions of	r categories c	lescribing
# Plants/Current		343	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		232	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		•	suspected reason:		,	
# Plants/Sampling	•	1					1	
Area	59		ľ	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1	<u> </u>	1		h
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If you:	Collector	110			Collection #			
If yes:					Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
_	State Plane (ft)						1	
Coordin's at Center of F	h				N:			
	Pentax Optio W90							
Locat. 1 CoordE, N	6309229.821		18801	126.563	Direction facing	W. NW. N	Height	1.1 m
	Camera angle	10 ° up	Photo #		-	S:\MSCP		
Locat. 2 Coord E,N		10 up	1 11010 #	5410-5422	Direction facing		Hoight	
Local. 2 Coold L,N					Ŭ		Height	
	Camera angle		Photo #		File location			
III ASSOCIATED S	PECIES If need more room, record additiona	l data and anv	notes on page	3				
		r data and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Dudleya variegata		1		Bromus madr	itensis		3	
Eriogonum fasciculatum	1	7		Osmadenia te	enella		1	
Rhus integrifolia		1		Dichelostemn	na capitatum		1	
Ferocactus viridescens		1		Avena sp.			2	
Acmispon glaber		2		Chlorogalum	parviflorum		1	
Malosma laurina		5						
Artemisia californica		2						
Stipa sp.		3						
Deinandra fasciculata		3						
Logfia gallica		3						
Erodium sp.		10						
Selaginella cinerascens	3	7		bare ground			20	
Brassica nigra		2		rock			20	
Brachypodium distachy COVER: Total % Cover:	on 75		57	litter %Shrub:	18	%Tree:	2	
			51	-	10	1	· · ·	1

MSP	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati rAssociated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	o vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
SANDAG 2 Alliar	012 Vegetation nce/Association:	Artemisia califo fasciculatum-O	rnia-Eriogonur puntia littoralis	n fasciculatur /Dudleya (ed	m Alliance, Artemi ulis) Association	sia californic	a-Eriogonur	n
Cov	er classes (1-6)	Cryptogamic	c Crust Cover:	3 (10% to <2	T	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)	0	Thatch Dep	th max (cm)	0	
Dead Standing Bio	omass	yes			т			ſ
	er/species class	Acmispon gla	ber/3		Average	height (cm)	15	
Mammal Species Activity (ca		activity (reating		actation dos	truction, tracks, so	nat nia) data	eted	
ground squirr. activity				egetation des		ai, pig) dete	cieu.	
				sampling are	a but not within sa	ampling area		
Sampling area represe					lifferences on page		1	
VI. THREATS ASSESSM			B.			•	m extent (cumulative
extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):	l			7			
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	d hydrology	1 = No sign	of disturbanc
Non-native grasses	4 = Disturbance			1 = No sign (İ	erosion	1 = No sign	of disturbanc
Non-native woody pl.				1 = No sign	1			of disturbanc
competitive native pl.	-		urrent grazing		1			of disturbanc
	1 = No sign of c		istoric grazing oric agriculture		1	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	nisic	nc agriculture	T = NO SIGN (1			
fuel modification	zone/fire break	1 = No sign of o						
	on/maintenance			ent, describe:				
	jetation clearing		-	ent, describe:				
brush managem	ent/restoration ORV activity				extent or in adjace	ent 10 m buf	fer.	
Duidon		1 - 100 sign of 0	1	ent, describe:				
Eviden	ce of recent fire	7 = Disturbance	e occurs ≥75%	6 of area with				
Trails	sign of recent fire				If trails are prese	nt are thou	authorizoda	
Type of trail use		disturbance with			ו ו	nt, are they a]	
	ПКШУ		biking		equestrian		dog	
	service vehicles illegal trail use?		other describe:					
	_							
Other disturbance?	1 = No sign of o	describe:					- 301 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1) Scientific Name: Dudleya variegata Date: 5/6/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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



Panorama from Northeastern edge of population, facing West, Northwest, North. Panorama location is 6309229.821 1880126.564 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1										
Scientific Name:	Dudleya variegata			Common Nar	ne:	Variegated dudleya				
	Existing MSP Occurrence?	ves		MSP Occurr. ID:		DUVA 4MTRP015				
	CNDDB Elem. Occur. #:	n/a		Translocated	no					
Preserve:	Mission Trails Regional Park			•	•		Mgmt Unit	MU4		
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea				
Occurrence Name:	Mission Trails Regional Park						ble Point #:	3		
Surveyors:	Kim Roeland, Betsy Miller, Daniel Schwa	rtz					City of Sar			
Date:	5/6/2015	-	Time Start:	14:20		Time Finish:	-			
	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing									
	erbivory, disease & stunted growth within the sa				cie) & in current m	apped extent. See p. 4 for definitions of	categories d	lescribing		
# Plants/Current Mapped Extent:		100	exact coun	t or estimate?	exact		uncert.	low		
Mapped Extent.	Area of Current Mapped Extent:		44.7	units	square meters	exact (GPS) or estim?	exact (GPS ma		
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:					
# Plants/Sampling		1					1			
Area			ľ	exact co	ount or estimate?	exact	uncert.	low		
	Sample Area Radius (m)	10		1		1				
	Phenology In Sampling Area (1-6):	Vegetative		Flowering			Fruiting	1 (0%)		
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	J			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)		
	Is Sampling Area within Current Map	ped Extent?	yes							
	Collection (if not collected previously)?	no								
If yes:	Collector				Collection #					
,	Museum/Herbarium									
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING								
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83				
coord. system	State Plane (ft)									
Coordin's at Center of F	Plot: E:				N:					
Camera type:	Pentax Optio W90									
Locat. 1 CoordE, N	6309578.773		18804	26.963	Direction facing		Height	1.1 m		
	Camera angle	10 ° up	Photo #	423-434	File location	S:\MSCP				
Locat. 2 Coord E,N					Direction facing		Height			
	Camera angle		Photo #		File location					
			1 11010 #		The location					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.						
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected		
Dudleya variegata		2	Concelea	Selaginella ci			10			
Malosma laurina		5		Festuca myur			7			
Artemisia californica		2		Avena sp.	03		2			
Acmispon glaber		3		Bromus diand	Inte		1			
		3		Lepidium sp.	iius		1			
Eriogonum fasciculatum		4		Bromus madr	itonoio		1			
Opuntia sp.		2			alium californicu	m	1			
Galium angustifolium Dichelostemma capitati	1		i seudogridpi							
Chlorogalum parviflorur		1								
Crassula connata	11	2								
		2								
Stipa sp. Brachypodium distachy	on	25		bare ground			15			
Erodium sp.		7		rock			20			
Logfia gallica		2		litter			1			
COVER: Total % Cover:	82	%Herb:	65	%Shrub:	17	%Tree:	0			

MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2								e 2		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.										
SANDAG 2012 Alliance/	SANDAG 2012 Vegetation Artemisia californica-Eriogonum fasciculatum Alliance, Artemisia californica-Eriogonum Alliance/Association: fasciculatum-Opuntia littoralis/Dudleya (edulis) Association									
Cover c	classes (1-6)	Cryptogamic	c Crust Cover:	3 (10% to <2	т	hatch Cover	1 (0%)			
	r	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)				
Dead Standing Bioma	ass	yes			T			r		
	-	Acmispon glal	ber/3		Average	e height (cm)	20			
Mammal Species Activity (cate	g. 1-4)									
Feral pig activity 1 =	= No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, s	cat, pig) dete	cted.			
ground squirr. activity 1 =	= No ground s	squirrel burrows	detected.							
gopher activity 1 =	= No pocket g	gopher mounds	detected.	I						
Sampling area representa	ative of mappe	ed occurrence?	yes	(If no, note d	lifferences on pag	je 3)				
VI. THREATS ASSESSMEN extent over years of monitoring Record notes on page 3. See	ing) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of					
Surrounding Land Use/Activ	Surrounding Land Use/Activity at, or Adjacent to, Site open space									
Argentine ant abundance at bai	it station (1-4))								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #				
DISTURBANCES (Rank eac	ch as 1-6):									
Non-native forbs 3 =	= Disturbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses 4 =	= Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc		
Non-native woody pl. 1	= No sign of (vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl. 1 =	= No sign of (с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc		
dumping/trash 1 =	= No sign of o	h	istoric grazing	1 = No sign (soi	l compaction	1 = No sign	of disturbanc		
encampments 1 =	= No sign of (histo	ric agriculture	1 = No sign o						
fuel modification zo	ne/fire break	1 = No sign of o								
road construction/r			•	ent, describe:						
illegal vegeta	ation clearing	1 = No sign of o	if prese	ent, describe:						
brush management	/restoration	1 = No sign of c	listurbance wit	thin maxinum	extent or in adjac	ent 10 m buf	fer.			
		1 = No sign of o		ent, describe:						
Evidence	of recent fire	7 = Disturbance	e occurs ≥75%	6 of area with						
lf sigr	n of recent fire	e, year burned?		2003						
Trails 2 -	= Disturbance	e does not occur	within maxim		If trails are prese	ent, are they	authorized?			
Type of trail use	hiking		biking		equestrian	yes	dog	yes		
ser	vice vehicles	yes	other	no						
illeg	gal trail use?	1 = No sign of o								
Othern disturb are a 2	= No sign of (-			- 306 -			

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1) Scientific Name: Dudleya variegata Date: 5/6/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1										
Scientific Name:	Dudleya variegata			Common Nar	ne:	Variegated dudleya				
Existing MSP Occurrence? yes				MSP Occurr.	ID:	DUVA_4MTRP015				
	CNDDB Elem. Occur. #:	n/a Translocated no								
Preserve:	Rancho Mission Park						Mgmt Unit	MU4		
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	-			
Occurrence Name:	Navajo/Mission Gorge (Margerum Ave)				<u> </u>		ole Point #:	1		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe Jason	Allen				City of Sar			
Date:	5/19/2015	,		2:08pm		Time Finish:				
	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing									
	erbivory, disease & stunted growth within the sa				rcle) & in current m	napped extent. See p. 4 for definitions o	t categories d	lescribing		
# Plants/Current		1007	exact cour	t or estimate?	exact		uncert.	low		
Mapped Extent:	Area of Current Mapped Extent:		322.76	units	square meters	exact (GPS) or estim?	exact (GPS ma		
	Species Found in Maximum Extent?	ves	if not	•	suspected reason:		,			
# Plants/Sampling	•	1	I		•		1			
Area	251		T	exact co	ount or estimate?	exact	uncert.	low		
	Sample Area Radius (m)	10		1		1		<u> </u>		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)		
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)				
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)		
	Is Sampling Area within Current Map	ped Extent?	yes							
	Collection (if not collected previously)?	no		1						
lfaree		110			0-11					
If yes:	Collector				Collection #					
	Museum/Herbarium									
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING								
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83				
	State Plane (ft)						1			
Coordin's at Center of F	h				N:					
	Pentax Optio W90				•					
Locat. 1 CoordE, N	6316074.804		18736	618.075	Direction facing	NE. E. SE	Height	1.1 m		
	Camera angle	10 ° up	Photo #	3524-3531	File location	S:\MSCP				
Locat. 2 Coord E,N		10 up	1 11010 #	3324-3331	Direction facing		Hoight			
Local. 2 Coold L,N					Ŭ		Height			
	Camera angle		Photo #		File location					
III ASSOCIATED S	PECIES If need more room, record additiona	l data and anv	notes on page	3						
		r data and any	Collection #, o					Collect.# or NC if		
species/substrate		% Cover	collected	[species/substrate		% Cover	not collected		
Dudleya variegata		1		Festuca myur	OS		1			
Rhus integrifolia		2		Baccharis pilu	ılaris		1			
Mimulus aurantiacus		20		Brachypodiun	n distachyon		50			
Baccharis sarothroides		20		Unk grass (Pl	nalaris or Elymus)	1			
Artemisia californica		1								
Eriogonum fasciculatum		2								
Salvia mellifera		1								
Isocoma menziesii		1								
Sisyrinchium bellum		2								
Anagallis arvensis		2								
Bromus madritensis		1								
Brassica nigra		1		bare ground			1			
Stipa pulchra		2		rock			1			
Deinandra fasciculata COVER: Total % Cover:	110	1 %Herb:	62	litter %Shrub:	48	%Tree:	0			
	1	/011010.	02	,soniab.	40	/01100.	0			

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Pag	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Baccharis sarothroides Provisional Alliance, Baccharis sarothroides Association									
Allian	ice/Association:								
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)			
Dead Standing Bio	omass	yes							
If yes, cove	er/species class	Baccharis sp.	/2; Artemisia	californica/2	Average	height (cm)	80		
Mammal Species Activity (categ. 1-4)									
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.		
ground squirr. activity	1 = No ground	squirrel burrows	detected.						
gopher activity	1 = No pocket	gopher mounds	detected.						
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3. 3	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/Activity at, or Adjacent to, Site open space									
Argentine ant abundance at	bait station (1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.			
Time start	2:10 AM	Temp start	70F		Time end	2:52 AM	Temp end	70F	
Ant sample collected?	no	Ant sample #			Ant Sta	tion Photo #	3532		
DISTURBANCES (Rank	each as 1-6):	_			_				
Non-native forbs	3 = Disturbance	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses	6 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc	
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc	
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc	
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc	
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of o							
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:					
illegal veg	etation clearing	1 = No sign of a	if prese	ent, describe:					
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum	Brush piled up ne	ear brow dito	h within BM	Z but not withi	
	ORV activity	1 = No sign of o	if prese	ent, describe:					
Eviden	ce of recent fire	1 = No sign of c	disturbance wit	hin maxinum					
lf s	sign of recent fire	e, year burned?							
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
s	service vehicles		other						
	illegal trail use?	1 = No sign of c	describe:						
Other disturbance?	1 = No sign of o	describe:					- 311 -	-	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1) Scientific Name: Dudleya variegata Date: 5/19/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat non-natives occurring along the edge of the maximum extent (e.g. fennel). Use fusilade to treat non-native grasses within current mapped extent.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Dudleya variegata (Variegated Dudleya) Navajo/Mission Gorge



Panorama from Northwestern edge of population, facing Northeast, East, Southeast. Panorama location is 6313074.339 1873618.051 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.

Dudleya variegata - Navajo/Mission Gorge (Rancho Mission Canyon)



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1										
Scientific Name:	Dudleya variegata			Common Name:		Variegated dudleya				
	Existing MSP Occurrence?	? yes MSP Occurr. ID:		ID:	DUVA_3OTLA005					
	CNDDB Elem. Occur. #:	#: n/a Translocated no								
Preserve:	Otay Lakes Cornerstone Lands				•		Mgmt Unit	MU3		
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment			
Occurrence Name:	Otay Lakes						ble Point #:	1		
Surveyors:	Besy Miller, Kim Roeland, Annabelle Ber	nabe					City of Sar	n Diego		
Date:	4/16/2015		Time Start:	11:30		Time Finish:	-			
I. OCCURRENCE S	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing									
phenology & evidence of h	erbivory, disease & stunted growth within the sa				,		5	Ū.		
# Plants/Current Mapped Extent:		0	exact coun	t or estimate?	exact		uncert.	very low		
	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma		
		no	if not	found, known or	suspected reason:					
# Plants/Sampling Area		1		overter	ount or estimate?	overt	uncort	vondow		
Alea		10	ſ			exact	uncert.	very low		
	Sample Area Radius (m)			Flowering	1 (09/)]	Fruiting	1 (00()		
	Phenology In Sampling Area (1-6):	-	1 (0%)			1 (0%)	Fruiting	1 (0%)		
			1 (0%)		ering & Fruiting		1	4 (00()		
	Evidence in Sampling Area (1-6):	Herbivory		Disease	1 (0%)	Stunt	ed Growth	1 (0%)		
	Is Sampling Area within Current Map	ped Extent?	no							
	Collection (if not collected previously)?	no								
If yes:	Collector				Collection #					
	Museum/Herbarium									
		00000								
	A LOCATION & SITE PHOTOMONIT				D.t.u	14500				
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83	J			
	State Plane (ft)									
Coordin's at Center of F					N:					
Locat. 1 CoordE, N	Pentax Optio W90 6356396.908		1007							
	000000.000		18071	39.545	Direction facing	N, NE, E, SE S:\MSCP	Height	1.1 m		
	Camera angle	10 ° up	Photo #	3186-3196	File location		[
Locat. 2 Coord E,N		1		1	Direction facing		Height			
	Camera angle	Photo #		File location		1				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and anv	notes on page	3.						
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Collection #, o	r NC if not				Collect.# or NC if		
species/substrate		% Cover	collected		species/substrate			not collected		
Eriogonum fasciculatum	1	5		Hypochaeris g			2			
Bloomeria clevelandii		1		Sonchus olera	aceus		1			
Isocoma menziesii		2								
Acmispon glaber		1								
Deinandra fasciculata		25								
Chlorogalum parviflorur	n	3								
Cuscuta occidentalis		3								
Lasthenia coronaria		1								
Crassula connata		15								
Lepidium nitidum		5								
Calochortus splendens		1								
Erodium botrys		7		bare ground			30			
		1								
COVER: Total % Cover:	74	/ %Herb:	66	%Shrub:	8	%Tree:	0			
Crassula connata Lepidium nitidum Calochortus splendens		5		bare ground rock litter			30 1 1			
COVER: Total % Cover:	74	%Herb:	66	%Shrub:	8	%Tree:	0			

MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2									
 IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Deinandra fasciculata Provisional Alliance, Deinandra fasciculata Association 									
	012 Vegetation ce/Association:			onai Alliance,					
Cove	er classes (1-6)	Cryptogamie	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)			
Dead Standing Bio		yes			1			ſ	
If yes, cove Mammal Species Activity (ca	er/species class	Acmispon/2			Average	e height (cm)	30		
		activity (rooting	a. wallowing. ve	egetation des	truction, tracks, so	cat. pig) dete	cted.		
ground squirr. activity				<u> </u>					
		gopher mounds							
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note c	lifferences on pag	e 3)			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ing buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space						
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #			
DISTURBANCES (Rank	each as 1-6):	1		r	7		r		
Non-native forbs			eral pig activity		1			of disturbanc	
Non-native grasses				1 = No sign	1			of disturbanc	
Non-native woody pl.	, i i i i i i i i i i i i i i i i i i i			1 = No sign	1			of disturbanc	
competitive native pl.	4 = Disturbance 1 = No sign of e		urrent grazing		1			of disturbanc	
	1 = No sign of c		oric agriculture		1	compaction	1 – 140 Sign		
fuel modification			1		ı 				
road construction	on/maintenance	1 = No sign of o	if prese	ent, describe:					
illegal veg	etation clearing	1 = No sign of o	if prese	ent, describe:					
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	thin maxinum	extent or in adjac	ent 10 m buf	fer.		
	ORV activity	T = NO SIGN OF C		ent, describe:	Î.				
		1 = No sign of o		thin maxinum					
	-	e, year burned?			J		I		
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
	service vehicles		other						
	illegal trail use?	1 = No sign of o	describe:						
Other disturbance?	1 = No sign of o	describe:					- 316 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_30TLA005
Date: 4/16/2015
VI. MANAGEMENT RECOMMENDATIONS
Maintain access control with locked gate and fencing/signs
VII. MANAGEMENT ACTIONS IN LAST YEAR
New sign installed near Otay Lakes Road
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
Horned larks seen and heard near the photopoint
NOTES

Dudleya variegata (Variegated Dudleya) Otay Lakes



Panorama from Northeastern edge of the population, facing North, Northeast, East, Southeast. Panorama location is 6356396.91 1807139.55 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Dudleya variegata			Common Name:		Variegated dudleya			
	Existing MSP Occurrence? yes			MSP Occurr. ID:		DUVA_6SALU024			
	CNDDB Elem. Occur. #:	n/a		Translocated	yes				
Preserve:	Black Mountain Open Space Park						Mgmt Unit	MU6	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	ment	
Occurrence Name:	Santa Luz					Sam	ole Point #:	1	
Surveyors:	Betsy Miller, Kim Roeland					Affiliation	City of Sar	Diego	
Date:	5/8/2015		Time Start:	10:40		Time Finish:	11:02	-	
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing									
phenology & evidence of h	erbivory, disease & stunted growth within the sa	ampling area. F	Record any note	es on p. 3.			categories e	cscribing	
# Plants/Current Mapped Extent:		0	exact coun	t or estimate?	exact	1	uncert.	very low	
	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma	
	Species Found in Maximum Extent?	no	if not	found, known or	suspected reason:	ırn in May 2014, but not seen in	recent ye	ars before fire	
# Plants/Sampling		1					l		
Area			ľ	exact co	ount or estimate?	exact	uncert.	very low	
	Sample Area Radius (m)		4 (00()		4 (00()]		4 (00)	
	Phenology In Sampling Area (1-6):	Ū	1 (0%)	Flowering			Fruiting	1 (0%)	
			1 (0%)		ering & Fruiting				
	Evidence in Sampling Area (1-6):	-		Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	no						
	Collection (if not collected previously)?	no							
If yes:	Collector				Collection #				
	Museum/Herbarium								
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING		1		I	1		
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)								
Coordin's at Center of F					N:		1		
	Pentax Optio W90								
Locat. 1 CoordE, N	6289735.966	1	19402	293.565	Direction facing	SW, W, NW S:\MSCP	Height	1.1 m	
	Camera angle	10 ° up	Photo #	448-452	File location				
Locat. 2 Coord E,N	6289735.966		19402	293.565	Direction facing	East	Height		
	Camera angle	10 ° up	Photo #	439-447	File location				
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any						Collect.# or NC if	
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	not collected	
Deinandra fasciculata		35		Malacothamn	us sp.		1		
Stipa pulchra		5		Calystegia ma	acrostegia		2		
Brassica nigra		20							
Erodium botrys		20							
Erodium cicutarium		5							
Logfia gallica		2							
Brachypodium distachyon		25							
Bromus madritensis		2							
Hordeum murinum		1							
Festuca myuros		1							
Bromus hordeaceus		2							
Malosma laurina		1		bare ground			35		
Artemisia californica		1		rock			17		
Chlorogalum parviflorur		3		litter	-	o/=	1		
COVER: Total % Cover:	126	%Herb:	123	%Shrub:	3	%Tree:	0		
MSP	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2	
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IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Nasella pulchra Alliance, Nasella pulchra Association									
	012 Vegetation ice/Association:	Nasella pulchra	Alliance, Nas	ella pulchra P	Association				
Cov	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)			
Dead Standing Bio	omass	yes			7			,	
If yes, cove	er/species class	burned unkno	wn shrub/2		Average	height (cm)	17		
Mammal Species Activity (ca	ateg. 1-4)								
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	at, pig) dete	cted.		
ground squirr. activity	1 = No ground	squirrel burrows	detected.						
gopher activity	1 = No pocket	gopher mounds	detected.						
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note c	lifferences on page	e 3)			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space						
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #			
DISTURBANCES (Rank	each as 1-6):	1			-				
Non-native forbs	5 = Disturbance	fe	ral pig activity	1 = No sign	altere	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses	5 = Disturbance		trampling	1 = No sign		erosion	1 = No sign	of disturbanc	
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign		urban runoff	1 = No sign	of disturbanc	
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign	1			of disturbanc	
dumping/trash	1 = No sign of o	h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	of disturbanc	
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign					
fuel modification	zone/fire break	1 = No sign of o							
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:					
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:					
brush manageme	ent/restoration	1 = No sign of c	listurbance wit	hin maxinum	extent or in adjace	ent 10 m buf	fer.		
	ORV activity	1 = No sign of c	if prese	ent, describe:					
		7 = Disturbance		of area with					
lfs	If sign of recent fire, year burned? 2014								
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
	service vehicles		other						
	illegal trail use?	1 = No sign of c	describe:						
Other disturbance?	1 = No sign of o	describe:					- 321 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Dudleya variegata MSP Occur ID. DUVA_6SALU024
Date: 5/8/2015
VI. MANAGEMENT RECOMMENDATIONS
none
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES Veg key: recently burned so the recovering habitat may be different than the original habitat. Shrub layer
underrepresented because of slower recovery from fire. 2014 pre-fire it was Artemisia californica Alliance, Artemisia
californica Association.

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.



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Eryngium aristulatum var. *parishii* San Diego Button Celery



© City of San Diego, 2005

	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Eryngium aristulatum var. parishii			Common Nan	ne:	San Diego button celery			
	Existing MSP Occurrence?	no		MSP Occurr. ID:					
	CNDDB Elem. Occur. #:	n/a		Translocated	no				
Preserve:	Spring Canyon Open Space						Mgmt Unit	MU3	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment		
Occurrence Name:	Goat Mesa/Spring Canyon					Sam	ple Point #:	1	
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego	
Date:	4/21/2015		Time Start:	10:30am		Time Finish:	10:53am		
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	f categories c	lescribing	
# Plants/Current		488		it or estimate?	exact		uncert.	low	
Mapped Extent:	Area of Current Mapped Extent:		84.6	units	square meters	exact (GPS) or estim?	exact (GPS ma	
		yes			suspected reason:		/		
# Plants/Sampling	•	1					٦		
Area	101		r	exact co	ount or estimate?	exact	uncert.	low	
	Sample Area Radius (m)	10		1		-			
	Phenology In Sampling Area (1-6):	Vegetative	6 (≥75%)	Flowering	2 (>0% to <10%)	Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	J		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	yes						
	Collection (if not collected previously)?	no		1					
If yes:	Collector	110			Collection #				
li yes.					Collection #				
	Museum/Herbarium								
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)								
Coordin's at Center of F	Plot: E:				N:				
Camera type:	Pentax Optio W90								
Locat. 1 CoordE, N	6330499.213		17814	102.689	Direction facing		Height	1.1 m	
	Camera angle	10 ° up	Photo #	3243-3248	File location	S:\MSCP			
Locat. 2 Coord E,N	Ť				Direction facing		Height		
	Camera angle		Photo #		File location				
			FIIOLO #		T lie location				
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.					
anacias/aubstrata		% Cover	Collection #, o collected		anagios/substrata		% Covor	Collect.# or NC if not collected	
species/substrate		% Cover	collected		species/substrate		% Cover	The conected	
Eryngium aristulatum Simmondsia chinensis		2							
Deinandra fasciculata		10							
Erodium botrys		15							
Bromus madritensis		1							
Centaurea melitensis		1							
Lepidium nitidum		2							
Festuca sp.		1							
Psilocarphus brevissim	S	1							
				haro arcund			20		
				bare ground rock			20		
				litter			1		
COVER: Total % Cover:	38	%Herb:	33	%Shrub:	5	%Tree:	0		

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.									
	012 Vegetation ce/Association:	vernal pool; Sin	nmondsia chin	ensis Alliance	e, Simmondsia chi	nensis-Bahio	opsis lacinia	ta Assocation	
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	natch Cover	1 (0%)		
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)			
Dead Standing Bio	omass	no			т				
If yes, cove	er/species class				Average	height (cm)			
Mammal Species Activity (ca	ateg. 1-4)								
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, sc	at, pig) dete	cted.		
ground squirr. activity	1 = No ground	squirrel burrows	detected.						
gopher activity	1 = No pocket g	gopher mounds	detected.						
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note c	lifferences on page	e 3)			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space						
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Stat	tion Photo #			
DISTURBANCES (Rank	each as 1-6):				_				
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign	altere	d hydrology	1 = No sign	of disturbanc	
Non-native grasses	3 = Disturbance		trampling	1 = No sign		erosion	1 = No sign	of disturbanc	
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign	ι ι	urban runoff	1 = No sign	of disturbanc	
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign	slope	e movement	1 = No sign	of disturbanc	
dumping/trash	1 = No sign of	h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	of disturbanc	
encampments	1 = No sign of	histo	oric agriculture	1 = No sign					
fuel modification	zone/fire break	1 = No sign of c							
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:					
illegal veg	etation clearing	1 = No sign of o	if prese	ent, describe:					
brush manageme	ent/restoration	1 = No sign of a	disturbance wit	hin maxinum	extent or in adjace	ent 10 m buf	fer.		
	ORV activity	1 = No sign of c		ent, describe:					
Eviden	ce of recent fire	1 = No sign of c	disturbance wit	hin maxinum					
lf s	sign of recent fire	e, year burned?					_		
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
s	service vehicles		other						
	illegal trail use?	1 = No sign of o	describe:						
Other disturbance?	1 = No sign of	describe:		-			- 329 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Eryngium aristulatum var. parishii MSP Occur ID.
Date: 4/21/2015
VI. MANAGEMENT RECOMMENDATIONS Continue to control access with fencing and locked gates
VII. MANAGEMENT ACTIONS IN LAST YEAR
PUD installed fencing along access/service road to control ORV activity
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB) BUOW burrows at site look unoccupied; old pellet seen near photopoint
NOTES

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



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Eryngium aristulatum var. parishii			Common Nan	ne:	San Diego button celery		
	Existing MSP Occurrence?	no		MSP Occurr. ID:				
	CNDDB Elem. Occur. #:	n/a		Translocated	no			
Preserve:	Spring Canyon Open Space			•			Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Goat Mesa/Spring Canyon					Sample Point #: 2		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	Diego
Date:	4/21/2015		Time Start:	11:05		Time Finish:	11:30	
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on p. 3.								lescribing
# Plants/Current		760		nt or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:	700	496.4	1	square meters	evact (GPS	1	exact (GPS ma
	Species Found in Maximum Extent?	VAS		•	suspected reason:) or estime	
# Plants/Sampling		yc3		Iounu, known or	suspected reason.		1	
Area	46		7	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		,				
	Phenology In Sampling Area (1-6):	Vegetative	5 (50% to <7	Flowering	3 (10% to <25%))	Fruiting	1 (0%)
		Dead	1 (0%)	Flowe	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
		[1				
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)						-	
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	632984.64		17818	361.518	Direction facing	S, W, N	Height	1.1 m
	Camera angle	10 ° down	Photo #	3249-3256	File location	S:\MSCP		
Locat. 2 Coord E,N		ļ			Direction facing		Height	
2000.0.2000.0.2,00			Diata #				rioigiit	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
		~ 0	Collection #, o				~ ~	Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Eryngium aristulatum		2						
Simmondsia chinensis		20						
Cylindropuntia prolifera		2						
Artemisia californica		5						
Deinandra fasciculata	•	5						
Ambrosia chenopodiifol	la	1						
Bahiopsis laciniata		1						
Centaura melitensis		1	(1					
Erodium sp.			(dead)					
Bromus madritensis		20						
Bromus hordeaceus		1		hara mare '			45	
Avena sp. Erodium botrys		2	(alive)	bare ground rock			15	
Festuca perennis		1	(3	litter			1	
COVER: Total % Cover:	82	%Herb:	53	%Shrub:	29	%Tree:	0	

MSP	 Rare Plant 	Habitat and	Threats As	sessment	t Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Simmondsia chinensis Alliance, Simmondsia chinensis-Bahiopsis laciniata Association									
	012 Vegetation ice/Association:	Simmondsia ch	inensis Allianc	e, Simmonds	sia chinensis-Bahi	opsis lacinial	a Associatio	n	
Cov	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	3 (10% to <	25%)	
		Thatch Depth A	verage (cm)	3	Thatch Dep	oth max (cm)	5		
Dead Standing Bio		no			T				
If yes, cove Mammal Species Activity (ca	er/species class				Average	e height (cm)			
		activity (rooting	ı. wallowing, ve	egetation des	truction, tracks, so	cat. pig) dete	cted.		
ground squirr. activity				<u> </u>					
	1 = No pocket								
Sampling area represe				(If no, note d	lifferences on pag	e 3)			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•		
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space						
Argentine ant abundance at	bait station (1-4)							
Time start		Temp start			Time end		Temp end		
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #			
DISTURBANCES (Rank	each as 1-6):	1			7				
Non-native forbs	4 = Disturbance	fe	eral pig activity		1	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses			trampling	1 = No sign	1			of disturbanc	
Non-native woody pl.				1 = No sign	1			of disturbanc	
competitive native pl.	-		urrent grazing		1			of disturbanc	
	1 = No sign of c 1 = No sign of c		istoric grazing		1	compaction	T = NO SIGN	of disturbanc	
fuel modification				r – No sign	1				
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:					
	etation clearing			ent, describe:					
brush manageme				hin maxinum	extent or in adjac	ent 10 m buf	fer.		
	ORV activity	1 = No sign of c		ent, describe:					
Eviden	ce of recent fire	1 = No sign of o	disturbance wit	hin maxinum					
lfs	sign of recent fir	e, year burned?							
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?		
Type of trail use	hiking		biking		equestrian		dog		
	service vehicles		other						
	illegal trail use?		describe:						
Other disturbance?	1 = No sign of o	describe:					- 334 -		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Eryngium aristulatum var. parishii MSP Occur ID.
Date: 4/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access with fencing
VII. MANAGEMENT ACTIONS IN LAST YEAR
PUD installed fencing along access/service road to control ORV activity
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



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	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1							
Scientific Name:	Eryngium aristulatum var. parishii			Common Nan	ne:	San Diego button celery		
	Existing MSP Occurrence?	no		MSP Occurr.	ID:			
	CNDDB Elem. Occur. #:	n/a		Translocated?	no			
Preserve:	Otay Lakes				•		Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Otay Lakes					Sample Point #: 1		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	1 Diego
Date:	4/16/2015		Time Start:	11:50		Time Finish:		
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	f categories c	lescribing
# Plants/Current		5055			estimate (extrap	olate partial ct)	uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		9075.87		square meters		_	exact (GPS ma
	Species Found in Maximum Extent?	ves			suspected reason:		<u>,</u>	
# Plants/Sampling		1	1				1	
Area	111		T	exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10		1	r	<u>.</u>		h
	Phenology In Sampling Area (1-6):	Vegetative	4 (25% to <5	Flowering	3 (10% to <25%)	Fruiting	1 (0%)
		Dead	1 (0%)	Flowe	ering & Fruiting	1 (0%)]	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector	110			Collection #			
li yes.					Collection #			
	Museum/Herbarium							1
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6356775.9		1807	379.03	Direction facing	N, E, SE	Height	1.1 m
	Camera angle	10 ° up	Photo #	3197-3209	File location	S:\MSCP		
Locat. 2 Coord E,N				•	Direction facing		Height	
,	Comora ongle		Dhoto #		Ŭ			<u></u>
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
		°(0	Collection #, o				0/ 0	Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Eryngium aristulatum		5		Acmispon gla	ber		1	
Deinandra fasciculata		30						
Cressa truxillensis		3						
Salsola tragus		2						
Erodium botrys		10						
Chlorogalum parviflorur	n	3						
Bromus madritensis		1						
Hypochaeris glabra		1						
Bloomeria clevelandii		1					<u> </u>	
Crassula connata		. 7					<u> </u>	
Hordeum murinum		1		hara mere '				
Unk grass Bromus hordeaceus		1		bare ground rock			30	
Eriogonum fasciculatum	1	1		litter			2	
COVER: Total % Cover:	68	%Herb:	66	%Shrub:	2	%Tree:	0	

MSP - Ra	are Plant	Habitat and	Threats As	sessment	Form 2015		Pag	e 2		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Deinandra fasciculata Provisional Alliance, Deinandra fasciculata Association										
	Association:									
Cover cla	asses (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	Tł	natch Cover	1 (0%)			
		Thatch Depth A	verage (cm)		Thatch Dept	th max (cm)				
Dead Standing Biomas	ss	yes			-			•		
If yes, cover/sp	ecies class	Acmispon gla	ber/2		Average	height (cm)	10			
Mammal Species Activity (categ.	. 1-4)				-					
Feral pig activity 1 =	No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, sc	at, pig) dete	cted.			
ground squirr. activity 1 =	No ground s	squirrel burrows	detected.							
gopher activity 3 =	<10 mounds	s observed with	in sampling ar	ea.						
Sampling area representati	ive of mappe	ed occurrence?	yes	(If no, note d	lifferences on page	e 3)				
VI. THREATS ASSESSMENT extent over years of monitorin Record notes on page 3. See	ng) plus 10	-m surroundi	ng buffer. S	See page 4 f	or definitions of t					
Surrounding Land Use/Activit	ty at, or Ad	ljacent to, Site	Open Space							
Argentine ant abundance at bait	station (1-4))	1 = No ants d	etected at ba	it station or in vicin	ity.				
Time start	11:50 AM	Temp start	75F		Time end	12:31 PM	Temp end	73F		
Ant sample collected? no		Ant sample #			Ant Stat	tion Photo #	3210			
DISTURBANCES (Rank each	h as 1-6):									
Non-native forbs 4 =	Disturbance	fe	ral pig activity	1 = No sign (altere	d hydrology	1 = No sign	of disturbanc		
Non-native grasses 3 =	Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl. 1 =	No sign of e		vandalism	1 = No sign (. ι	urban runoff	1 = No sign	of disturbanc		
competitive native pl. 1 =	No sign of e	с	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc		
dumping/trash 1 =	No sign of e	h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	of disturbanc		
encampments 1 =	No sign of e	histo	oric agriculture	1 = No sign (
fuel modification zone	e/fire break	1 = No sign of c								
road construction/ma	aintenance	1 = No sign of c	if prese	ent, describe:						
illegal vegetati	ion clearing	1 = No sign of c	if prese	ent, describe:						
brush management/r					extent or in adjace	ent 10 m buf	fer.			
C	ORV activity	1 = No sign of c	if prese	ent, describe:			-			
		1 = No sign of c								
	-	e, year burned?			İ					
Trails 1 =	No sign of a	disturbance with	in maxinum ex		If trails are preser	nt, are they a	authorized?			
Type of trail use	hiking		biking		equestrian		dog			
servi	ce vehicles		other							
	al trail usa 2	1 = No sign of c	describe:							
Other disturbance?	No sign of (describe:					- 339 -			

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Eryngium aristulatum var. parishii MSP Occur ID.
Date: 4/16/2015
VI. MANAGEMENT RECOMMENDATIONS
Maintain access control with locked gate and fencing and signs
VII. MANAGEMENT ACTIONS IN LAST YEAR
New sign installed at Otay Lakes Road; access controlled with locked gate and fencing and signs
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB) HOLA singing near photopoint
NOTES
Used density:175 plants / π *r2 or 175 plant/314 m2 to calculate number of plants in current mapped extent

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.



Erysimum ammophilum Coast wallflower



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MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Erysimum ammophilum			Common Nar	ne:	Coast wallflower		
	Existing MSP Occurrence?	yes		MSP Occurr. ID:		ERAM4_7CRCA002		
	CNDDB Elem. Occur. #:	n/a		Translocated	no			
Preserve:	Crest Canyon Preserve			•	•		Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Crest Canyon						ble Point #:	1
Surveyors:	Betsy Miller, Kim Roeland						City of Sar	n Diego
Date:	3/11/2015		Time Start:	9:10		Time Finish:	10:50	
	TATUS - Assess # plants in both species-spe	oific complia		. 10 m radius ai	ala) 9 in automátic	anned extent. See n. 4 fer definitions a	(a a ta ma ria a	lagarihing
	erbivory, disease & stunted growth within the se					apped extent. See p. 4 for deminuons of	calegones	lescribing
# Plants/Current Mapped Extent:		42	exact cour	t or estimate?	exact		uncert.	low
Mapped Extern.	Area of Current Mapped Extent:		204.54	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1					l .	
Area	24	40	I	exact co	ount or estimate?	exact	uncert.	IOW
	Sample Area Radius (m)	10		1		-		
	Phenology In Sampling Area (1-6):	Vegetative		-	5 (50% to <75%)		Fruiting	5 (50% to <75%
			1 (0%)		ering & Fruiting]	
	Evidence in Sampling Area (1-6):	-		Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING		r	r		n	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system State Plane (ft)					1			
Coordin's at Center of F	Plot: E:				N:		1	1
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N					Direction facing		Height	1.1 m
	Camera angle		Photo #	734-739	File location	S:\MSCP		-
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any						
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Erysimum ammophilum	1	2		Ehrharta caly	cina		1	
Eschscholzia californica		2		Bromus madr			3	
Pinus torreyana		3		Dichelostemn			1	
Eriogonum fasciculatum	1	5		Acmispon stri			1	
Malosma laurina		3		Stylocline gna	-		1	
Rhamnus crocea		1		Selaginella bi			2	
Artemisia californica		25		Polypodium c			3	
Encelia californica		1		Plantago erec			1	
			1					
Marah macrocarpus Mirabilis laevis		4		Linanthus dia			1	
Corethrogyne filaginifoli	а	1		Galium angus			1	
Phacelia minor	~	2		Dodecatheon			1	
Senecio californicus				Dudleya eduli			1	
Crypthantha sp.		3		Crassula con			1	
Caulanthus heterophyllu	JS	1		bare ground	~~~		20	
Camissoniopsis bistorta		1		rock			0	
Lupinus truncatus		1		litter		1	7	
COVER: Total % Cover:	78	%Herb:	35	%Shrub:	40	%Tree:	3	

MSP - Rare Plant Habitat and Threats Assessment Form 2015							Page	e 2		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.										
SANDAG 2012 Vegetation Artemisia californica - Eriogonum fasciculatum Alliance, Artemisia californica - Eriogonum Alliance/Association: fasciculatum - Opuntia littoralis/Dudleya (edulis) Association										
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	:10%)		
		Thatch Depth Average (cm) 7			Thatch Dep	oth max (cm)	15			
Dead Standing Bio		yes			T			1		
		unk shrub/2; E	Ehrharta calci	na dead fro	Average	e height (cm)	20			
Mammal Species Activity (ca	Mammal Species Activity (categ. 1-4)									
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.			
ground squirr. activity	1 = No ground	squirrel burrows	detected.							
gopher activity	1 = No pocket	gopher mounds	detected.							
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	je 3)				
VI. THREATS ASSESSM extent over years of monit Record notes on page 3.	toring) plus 1(See Argentine)-m surroundi Ant Protocol (ng buffer. S USGS 2015)	See page 4 f for setting ι	or definitions of					
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space; r	esidential						
Argentine ant abundance at	bait station (1-4)								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #				
DISTURBANCES (Rank	each as 1-6):				-					
Non-native forbs	1 = No sign of o	fe	ral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses	3 = Disturbance		trampling	1 = No sign (erosion	2 = Disturba	ance does not		
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc		
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign (soil	l compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of o								
road construction				ent, describe:						
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:						
brush manageme	ent/restoration	4 = Disturbance	e occurs in 10%	% to <25% of	area within maxin	um extent.				
	ORV activity	1 = No sign of o	if prese	ent, describe:						
Eviden		1 = No sign of c		hin maxinum						
If sign of recent fire, year burned?										
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?			
Type of trail use	hiking		biking		equestrian		dog			
	service vehicles		other							
i	illegal trail use?	3 = Disturbance	describe:		verv	slight foot	baths begin	ining to form		
Other disturbance?							- 345 -			

MSP-Management Needs and Notes 2015							
(top 2 rows auto-fill from page 1)							
Scientific Name: Erysimum ammophilum MSP Occur ID. ERAM4_7CRCA002							
Date: 3/11/2015							
VI. MANAGEMENT RECOMMENDATIONS							
1. Continue to treat Ehrharta with herbicide - last treatment very successful							
VII. MANAGEMENT ACTIONS IN LAST YEAR							
Herbicide treatment of Ehrharta and other invasives from 2013 - present under SANDAG contract/grant							
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)							
NOTES							
Threats Assessment: Erosion = natural; Restoration = herbicide treatment of Ehrharta							

Erysimum ammophilum (Coast Wallflower) Crest Canyon



Panorama from Northern edge of population, facing Southwest, West, Northwest. Panorama location is 6253583.239 1932214.379 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Erysimum ammophilum	Common Name:		Coast wallflower					
	yes	MSP Occurr. ID:		ERAM4 6DEMA001					
	n/a Translocated no								
Preserve:	North City West Open Space				Mgmt Unit MU6				
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	-		
Occurrence Name: Overlook Park - Gully						ble Point #:	3		
Surveyors:	Kim Roeland, Betsy Miller						City of Sar		
Date:	3/16/2015		Time Start: 8:20				-	•	
Date: 3/16/2015 Time Start: 8:20 Time Finish: 9:30 I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing									
	erbivory, disease & stunted growth within the sa				cie) & in current m	apped extent. See p. 4 for definitions of	categories c	lescribing	
# Plants/Current Mapped Extent:		218	exact coun	t or estimate?	exact		uncert.	medium	
Mapped Extent.	Area of Current Mapped Extent:		222.2	units	square meters	exact (GPS) or estim?	exact (GPS ma	
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:				
# Plants/Sampling		1	-				1		
Area	36		T	exact co	ount or estimate?	exact	uncert.	low	
	Sample Area Radius (m)	10		1		1			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	6 (≥75%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	yes						
	Collection (if not collected previously)?	no]					
If yes:	Collector				Collection #				
ii yoo.									
	Museum/Herbarium								
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)								
Coordin's at Center of F	Plot: E:				N:				
Camera type:	Pentax Optio W90								
Locat. 1 CoordE, N	6258825.981		19317	7194.94	Direction facing	W, SW, S	Height	1.1 m	
	Camera angle	up 5 degrees	Photo #	¢ 784-786	File location	S:\MSCP			
Locat. 2 Coord E,N		<u> - </u>			Direction facing		Height		
,									
	Camera angle	Photo #		File location		1			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.					
			Collection #, o	r NC if not				Collect.# or NC if	
species/substrate		% Cover	collected		species/substrate		% Cover	not collected	
Erysimum ammophilum		10		Scrophularia			1		
Artemisia californica		50		Pterostegia drymarioides			1		
Malosma laurina		5		Agoseris retrorsa			1		
Baccharis pilularis		5		Cryptantha sp.			3		
Marah marcocarpus		30		unk green car	pet		3		
Croton californicus		3							
Salvia apiana		3							
Ambrosia psilostachya		3							
Rhus integrifolia		1							
Eucrypta chrysanthemif		3							
Chenopodium californic	cum	2							
Mirabilis laevis	1		bare ground			5			
Bromus madritensis Opuntia littoralis	1		rock litter			0			
COVER: Total % Cover:	127	%Herb:	62	%Shrub:	65	%Tree:	0		

MSP - F	Rare Plant	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.								
	2 Vegetation Association:	Salvia apiana A	Iliance, Salvia	apiana-Arter	nisia californica A	ssociation		
Cover	classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
	r	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l
Dead Standing Bioma	ass	yes			T			i -
If yes, cover/s	-	Art cal/3			Average	e height (cm)	40	l
Mammal Species Activity (cate	g. 1-4)							
Feral pig activity 1	= No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, se	cat, pig) dete	cted.	
ground squirr. activity 1	= No ground s	squirrel burrows	detected.					l
gopher activity 1	= No pocket <u>c</u>	gopher mounds	detected.				ļ	
Sampling area representa	ative of mappe	ed occurrence?	yes	(If no, note d	lifferences on pag	je 3)		
VI. THREATS ASSESSME extent over years of monitor Record notes on page 3. Se	ring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Activ	vity at, or Ad	ljacent to, Site	Residential; o	pen space				
Argentine ant abundance at ba	it station (1-4))						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ation Photo #		
DISTURBANCES (Rank eac	ch as 1-6):	l			T			
Non-native forbs 1	= No sign of o	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses 3	= Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl. 1	= No sign of o		vandalism	1 = No sign (urban runoff	2 = Disturba	ance does not
competitive native pl. 1	= No sign of o	С	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash 1	= No sign of o	h	istoric grazing	1 = No sign (soi	l compaction	1 = No sign	of disturbanc
encampments 1	= No sign of e	histo	oric agriculture	1 = No sign o				
fuel modification zo	one/fire break	1 = No sign of c						
road construction/		.		ent, describe:				
illegal vegeta	ation clearing	1 = No sign of c	if prese	ent, describe:				
brush management	t/restoration	2 = Disturbance	e does not occ	ur within max	imum extent but i	s detected w	ithin the surr	ounding 10 m
	ORV activity	1 = No sign of o	if prese	ent, describe:				
		1 = No sign of c		thin maxinum				
If sign of recent fire, year burned?								
Trails 2	= Disturbance	e does not occu	r within maxim		If trails are prese	ent, are they	authorized?	unknown
Type of trail use	hiking	yes	biking	no	equestrian	no	dog	yes
	vice vehicles		other	no				
ille	gal trail use?	2 = Disturbance	describe:		some	social trails	throughout	open space
Other disturbence?	= No sian of a	describe:					- 350 -	· ·

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Erysimum ammophilum MSP Occur ID. ERAM4_6DEMA001
Date: 3/16/2015
VI. MANAGEMENT RECOMMENDATIONS
Be careful in return visits to avoid cutting trail. Consider doing this point only in high rainfall or alternate years to minimize damage to habitat.
VII. MANAGEMENT ACTIONS IN LAST YEAR
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

Erysimum ammophilum (Coast Wallflower) North City West Observation #3



Panorama from Northern edge of population, facing West, Southwest, South. Panorama location is 6258825.981 19317194.938 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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Monardella stoneana Jennifer's Monardella



© City of San Diego, 2005

MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1										
Scientific Name:	1		Common Name:		Jennifer's monardella					
Scientific Name: Monardella stoneana Existing MSP Occurrence?		yes		MSP Occurr. ID:		MOST 3MAVA002				
	EO6		Translocated ino							
						Mgmt Unit	MU3			
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities Department				
Occurrence Name:	Marron Valley Sample Point #:							1		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	mabe					City of Sar	n Diego		
Date:	6/2/2015		Time Start:	10:10		Time Finish:	11:00			
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing										
	erbivory, disease & stunted growth within the sa				rcle) & in current m	apped extent. See p. 4 for definitions of	categories o	describing		
# Plants/Current		4	exact cour	t or estimate?	exact		uncert.	very low		
Mapped Extent:	Area of Current Mapped Extent:		53	units	square meters	exact (GPS) or estim?	exact (GPS ma		
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:					
# Plants/Sampling			•				1			
Area	3		T	exact co	ount or estimate?	exact	uncert.	very low		
	Sample Area Radius (m)	10		1		1				
	Phenology In Sampling Area (1-6):	Vegetative	2 (>0% to <1	Flowering			Fruiting	1 (0%)		
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)				
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunte	ed Growth	1 (0%)		
	Is Sampling Area within Current Map	ped Extent?	yes							
	Collection (if not collected previously)?	no								
If yes:	Collector				Collection #					
1 900.										
	Museum/Herbarium									
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING								
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83				
coord. system	State Plane (ft)									
Coordin's at Center of F					N:					
	Pentax Optio W90									
Locat. 1 CoordE, N	6409398.72		17901	16.116	Direction facing	SE. S. SW	Height	1.1 m		
	Camera angle	5°up	Photo #	3980-3989	File location	S:\MSCP				
Locat. 2 Coord E,N		5 up	FIIOLO #	3900-3969			Hoight			
Local: 2 Coold L,N					Direction facing		Height			
	Camera angle		Photo #		File location					
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and anv	notes on page	3						
			Collection #, o					Collect.# or NC if		
species/substrate		% Cover	collected		species/substrate		% Cover	not collected		
Monardella stoneana		1		Galium angus	stifolium		1			
Baccharis sarothroides		7		Bahiopsis laciniata			1			
Artemisia californica		3		Hedynopsis c	retica		1			
Quercus cedrosensis		10		Brassica tournefortii			3	yes		
Eriogonum fasciculatum	1	5		Lepidium sp.			3			
Hesperoyucca whipplei		1		Brassica nigra			2			
Malosma laurina		2		Bromus madritensis			5			
Mirabilis laevis		3		Avena sp.			5			
Brickellia californica		2		Bromus diandrus			7			
Salvia apiana		1		Festuca perennis			1			
Gutierrezia californica		1		Brachypodiun		1				
Ephedra sp.		2		Pterostegia d	,		1			
Pellaea mucronata		1			Cirsium occidentale		1			
Selaginella bigelovii		3			Pentagramma triangularis		1			
Pseudognaphalium bicc	blor	2		Aspidotis cali	fornica		1			
Erodium cicutarium		1		bare ground			5			
Erodium botrys Eriophyllum confertiflorum		2		rock litter			20	1		
COVER: Total % Cover:	82	%Herb:	44	%Shrub:	38	%Tree:	٥			
							- 356 -	1		
MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2		
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IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.										
SANDAG 2 Alliar	012 Vegetation ice/Association:	seasonal strear	n bed							
Cov	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	4 (25% to <	:50%)		
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)				
Dead Standing Bio	omass	yes			т			1		
If yes, cove	er/species class	Unknown/2; P	seudognaph	alium/2	Average	height (cm)	30			
Mammal Species Activity (ca	ateg. 1-4)									
				egetation des	truction, tracks, so	at, pig) dete	cted.			
ground squirr. activity	1 = No ground	squirrel burrows	detected.							
gopher activity	1 = No pocket	gopher mounds	detected.							
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on page	e 3)				
VI. THREATS ASSESS	IENT IN MAXI	IMUM EXTEN	T - Assess the	reats within	the occurrence	's maximu	m extent (cumulative		
extent over years of moni						threat asse	ssment cat	egories.		
Record notes on page 3.	See Argentine	Ant Protocol (0565 2015)	for setting L	ip dait, etc.					
Surrounding Land Use/A	ctivity at, or Ac	djacent to, Site	open space							
Argentine ant abundance at	bait station (1-4)								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #				
DISTURBANCES (Rank	each as 1-6):									
Non-native forbs		fe	eral pig activity	1 = No sign (altere	d hydrology	1 = No sign	of disturbanc		
Non-native grasses	4 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl.	1 = No sign of o	c	urrent grazing	1 = No sign (slope	e movement	1 = No sign	of disturbanc		
dumping/trash	3 = Disturbance	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of o]							
road construction	on/maintenance	1 = No sign of o	if prese	ent, describe:						
		1 = No sign of c		ent, describe:						
brush manageme					ovtont or in adiao	opt 10 m but	for			
5	ORV activity	1 = No sign of c		ent, describe:						
Eviden	ce of recent fire	1 = No sign of c 1 = No sign of c								
		e, year burned?			Ī					
Trails				2003	If trails are prese	nt, are they a	authorized?			
Type of trail use	hiking	disturbance with	biking		equestrian		dog			
	service vehicles		other				9			
	illegal trail use?		describer		1					
	_									
Other disturbance?	1 = No sign of c	describe:					- 357 -			

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Monardella stoneana MSP Occur ID. MOST_3MAVA002
Date: 6/2/2015
VI. MANAGEMENT RECOMMENDATIONS
none
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Survey up the canyon not performed because we did not have Border Patrol for security. Surveyed just around the
photopoint.

Monardella stoneana (Jennifer's Monardella) Marron Valley



Panorama from Northern edge of population, facing Southeast, South, Southwest Panorama location is 6409398.728 1790116.116 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Scientific Varient Monte of a biologic of the science of the science of the	MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
CMODE Elem. Orour. # [E05 Transloated [0] Martine [MU] Preserve Oby Stan Dego Land Mange City of San Dego Public Utilites Degartment 1 Occurrence Name Oby San Dego Public Utilites Degartment Sample Point # 1 Orcurrence Name Oby San Dego Public Utilites Degartment 1 Sample Point # 1 Occurrence Name Oby San Dego Public Utilites Degartment Attestical Optic Sample Point # 1 Occurrence Name Oby San Dego Public Utilites Degartment Imme Bare Imme Bare 1 3 1	Scientific Name:	Monardella stoneana			Common Nar	ne:	Jennifer's monardella			
Preserve: Oty Uakes Convertions Lands Mgm Udte		Existing MSP Occurrence?	yes		MSP Occurr.	ID:	MOST_30TLA005			
Land Xumer Opp of San Dego Land Marry End Marry Sample Public Usities U-public Visities		CNDDB Elem. Occur. #:	EO5		Translocated	no				
Occurrence Name Oty Lakes Sample Point # Sample Poi	Preserve:	Otay Lakes Cornerstone Lands				-		Mgmt Unit	MU3	
Surveyors: Batry Miler, Kin Roeland, Annabele Bernate Inter Start 13:00 Time Start 13:00 Time First, 13:00 Date: 02/2015 Time Start 13:00 Time Start 13:00 Time First, 13:00 COCURTERCE STATUS - Access # parks # hoth receives exork: parking and protein or rest in anth / A re arrent maged anter. Size / A for disclose or discusses or anthe control or estimate? park or anthe contro estimate? park or anthe control o	Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment		
Date: 92/2015 Time Start 13.00 Time Finite 13.20 1. OCCURENCE STATUS - Assess parates in plane in our parates specific anymany area. 0 aurent magned status. See p. 4for definitions of compaces develoking anymany area in plane anymany area. 0 aurent magned status. See p. 4for definitions of compaces develoking anymany area in plane anymany area. 0 aurent magned status. See p. 4for definitions of compaces develoking anymany area in plane anymany area. 0 aurent magned status. See p. 4for definitions of compace develoking anymany area in plane anymany area. 0 aurent magned status. See p. 4for definitions of compace develoking anymany area. 0 aurent magned status. See p. 4for definitions of compace develoking anymany area in plane anymany area. 0 aurent magned status. See p. 4for definitions of compace develoking anymany area. 0 aurent flane and the pla	Occurrence Name:	Otay Lakes					Sample Point #: 1			
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alminity: q existence of healows, desize # alminite query gase. Record arg index or g. 3.	L OCCURRENCE S	TATUS - Assess # plants in both species-spe	ecific samplin	n area (typicall	v 10-m radius cir	cle)& in current m	anned extent. See n 4 for definitions of	f categories (describina	
Mapped Extent O Badat Count or estimate / socid Under, Very W Area of Current Mapped Extent: 0 0 intil square meters exact (CPX) or estimate?	phenology & evidence of h	erbivory, disease & stunted growth within the sa							looonoing	
Area of Current Mapped Extent			0	exact cour	t or estimate?	exact	1	uncert.	very low	
# Plants/Sampling o exact count or estimate? oncert, very low Sample Area Radus (m) Sample Area Radus (m) Fouring 1 (0%) Fouring 1 (0%) Phenology in Sampling Area (1-6): Vegetative 1 (0%) Fouring 2 Fruiting 1 (0%) Fouring 1 (0%) Evidence in Sampling Area (1-6): Vegetative 1 (0%) Fouring 2 Fruiting 1 (0%) Fouring 2 Fruiting 1 (0%) Evidence in Sampling Area within Current Mapped Extent() no Collection # Collection # Collection (find collected previously)? no Collection # Collection # GPS Accuracy, +1 E1 accur. units (meters) Datum: NADBS Collection # Coordin a to Centra angle 11 dospi1.58 Datum: NADBS In Mapped Area (1-6) In Mapped Area (1-6) Control = KN Control = K E N In Mapped Area (1-6) In		Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma	
Area 0 exact count or estimate? exact uncert, very low Sample Area Radus (m) Fouring 1 (0%) Fouring 1 (0%) <td></td> <td>Species Found in Maximum Extent?</td> <td>no</td> <td>if not</td> <td>found, known or</td> <td>suspected reason:</td> <td></td> <td>declining f</td> <td>or many years</td>		Species Found in Maximum Extent?	no	if not	found, known or	suspected reason:		declining f	or many years	
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Local: Contention Flowering & Fruiting 1 (0%) Stunted Growth 1 (0%) Lissampling Area within Current Mapped Externt no Disease 1 (0%) Stunted Growth 1 (0%) I'ges: Collection (fi not collector previously)? no Collector # Collector # I'ges: Collector fi Collector # Collector # Collector # Collector # I. SAMPLING AREA LOCATION & SITE PHOTOMONTORING Collector # Collector # Collector # Collector # Collector # NAD83 Collector # C		• • • • •		4 (00()		4 (00()]	F . 11	4 (00()	
Evidence in Sampling Area (1-6): Herbivory 1(0%) Disease 1(0%) Stunted Growth 1(0%) Collection (If not collected previously)? no		Phenology in Sampling Area (1-6):	-		-		4 (00)	Fruiting	1 (0%)	
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Collection (if not collected previously)? If yes: no Collector Collector Collector Collector Collector Collector Collector Collector Control & SITE PHOTOMONTORING Control & Colspan="2">N Control & State Plane (ft) N Control & Colspan="2">N Control & Colspan="2">N Control & Colspan="2">Control & Colspan="2">N Control & Colspan="2">Control & Colspan="2">Control & Colspan="2">Control & Colspan="2">N Control & Colspan="2">Control & Colspan="2" Control & Colspan="2			,		Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
<th colsect="" region<="" td=""><td></td><td>Is Sampling Area within Current Map</td><td>ped Extent?</td><td>no</td><td></td><td></td><td></td><td></td><td></td></th>	<td></td> <td>Is Sampling Area within Current Map</td> <td>ped Extent?</td> <td>no</td> <td></td> <td></td> <td></td> <td></td> <td></td>		Is Sampling Area within Current Map	ped Extent?	no					
Museum/Herbanum II. SAMPLING ARE & LOCATION & SITE PHOTOMONITORING GPS Accuracy: 4: 1 accur. units meters Datum: NAD83 Coordin's at Center of Plot: E: N N Coordin's at Center of Plot: E: N Camera type Pentax Optio W90 Mission (Control of the Control f the Contro of the Control of the Control of the Control of the		Collection (if not collected previously)?	no							
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Camera angle 1° down Photo # 4009-4016 File location Locat. 2 Coord E,N	Locat. 1 CoordE, N	6357735.58		1805	911.58	Direction facing		Height	1.1 m	
Camera angle Photo # File location III. ASSOCIATED SPECIES If need more room, record additional data and any notes on page 3. Collection #, or NC if not collected species/substrate Collection #, or NC if not collected species/substrate % Cover Collect # or NC if not collected Malosma laurina 1 Melilotus sp. 1 1 IVa hayesiana 30 Lonicera subspicata 1 1 Eriogonum fasciculatum 3 Acmispon glaber 1 1 Bahiopsis laciniata 3 Antirrhinum nuttallianum 1 1 Artemisia californica 1 Silene gallica 1 1 Tamarix sp. 1 Avena sp. 10 1 Heteromeles arbutifolia 1 Bromus madritensis 10 1 Centaurea melitensis 1 Bromus diandrus 3 3 Sonchus sp. 1 Brachypodium distachyon 3 3 Deinandra fasciculata 1 Festuca perennis 2		Camera angle	1° down	Photo #	4009-4016	File location	SIMSCP		1	
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	Sonchus sp.		1		Brachypodiun	n distachyon		3		
Pseudognaphalium californicum 1	Deinandra fasciculata		1		Festuca perer	nnis		2		
	Pseudognaphalium cali	fornicum	1							
Brassica nigra 10 bare ground 2	· · · · ·		10		-			2		
Anagallis arvensis 1 rock 20 Stanbasensis 1 Iiter 1		ia	1					20		
Stephanomeria diegensis 1 litter 1	COVER: Total % Cover:	SIS 91	1 %Herb:	<u>4</u> 0		Δ1	%Tree:	1		
	COVER: Total % Cover:	91	%Herb:	49	%Shrub:	41	%Tree:	1		

MSP -	 Rare Plant 	Habitat and	Threats As	sessment	: Form 2015		Page	e 2		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.										
SANDAG 20 Allian	012 Vegetation ce/Association:	seasonal strear	n bed							
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)			
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		l		
Dead Standing Bio	mass	yes			т			i -		
	er/species class	unknown/2			Average	e height (cm)	20	l		
Mammal Species Activity (ca										
				egetation des	truction, tracks, so	cat, pig) dete	cted.			
ground squirr. activity	1 = No ground	squirrel burrows	detected.					l		
gopher activity	1 = No pocket g	gopher mounds	detected.							
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)				
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. S	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•			
Surrounding Land Use/Ad	ctivity at, or Ad	ljacent to, Site	open space							
Argentine ant abundance at	bait station (1-4)								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #				
DISTURBANCES (Rank	each as 1-6):	1								
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl.	3 = Disturbance		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl.		с	urrent grazing	1 = No sign (1			of disturbanc		
dumping/trash	1 = No sign of e		istoric grazing	-	Ī	compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of e	histo	oric agriculture	1 = No sign	4					
fuel modification	zone/fire break	1 = No sign of o								
road construction				ent, describe:						
	etation clearing			ent, describe:						
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin maxinum:	extent or in adjac	ent 10 m buf	fer.			
	ORV activity	1 = No sign of o	1	ent, describe:						
	ce of recent fire			of area with						
	sign of recent fire	e, year burned?		2003	4					
Trails	1 = No sign of c	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?			
Type of trail use	hiking		biking		equestrian		dog			
s	service vehicles		other							
i	illegal trail use?		describe:							
Other disturbance?	1 = No sign of (describe:					- 362 -	-		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Monardella stoneana MSP Occur ID. MOST_30TLA005
Date: 6/2/2015
VI. MANAGEMENT RECOMMENDATIONS
None.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



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Monardella viminea Willowy Monardella



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	Occurrence Monitoring Form 2015			Page 1				
Scientific Name:	Monardella viminea			Common Nar	ne:	Willowy monardella		
	Existing MSP Occurrence?	no		MSP Occurr.	ID:			
	CNDDB Elem. Occur. #:	n/a		Translocated	yes			
Preserve:	Mira Mesa Open Space						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Flanders Canyon						ole Point #:	
Surveyors:	Betsy Miller, Kim Roeland (1); Kris Presto	on (2)	1	1				San Diego. (2) S
Date:	6/11/2015		Time Start:	13:40		Time Finish:	14:26	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions o	f categories o	lescribing
# Plants/Current	erbivory, disease & stunted growth within the sa							
Mapped Extent:		86		t or estimate?			uncert.	
	Area of Current Mapped Extent:		361.5	4	square meters	exact (GPS) or estim?	exact (GPS ma
# Planta/Compling		yes	if not	found, known or	suspected reason:			
# Plants/Sampling Area	41			exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		_			-	
	Phenology In Sampling Area (1-6):	Vegetative	5 (50% to <7	Flowering	5 (50% to <75%))	Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes		<u> </u>	•		
		- [1				
	Collection (if not collected previously)?	no]			
If yes:	Collector				Collection #			
	Museum/Herbarium							
	A LOCATION & SITE PHOTOMONIT							
GPS Accuracy: +/-			accur. units:	meters	Datum:			
2	State Plane (ft)		uoour. unito.	motoro	Dutum	111200	1	
Coordin's at Center of F					N:			
	Pentax Optio W90							
	6278683.235		19084	149.893	Direction facing	W-NW-N	Height	1.1 m
	Comora ongle	5 8 days				S:\MSCP	rioigitt	
	Camera angle	5° down	Photo #	72-76			Lisiaht	
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
	PECIES If need more room, record additiona	I data and any	notos on pago	2				
		i dala and any	Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Monardella viminea		5						
Eriogonum fasciculatum	1	35						
Baccharis sarothroides		17						
Acmispon glaber		7						
Pseudognaphalium ben	leolens	3						
Lepidium sp.		1						
Brachypodium distachy	on	1						
Festuca myuros		2						
Bromus madritensis		2						
Foeniculum vulgare		2						
Artemisia californica		1						
Brassica sp.		1						
Salvia mellifera		2						
				bare ground			10	
				rock litter			50 2	
COVER: Total % Cover:	79	%Herb:	12	%Shrub:	67	%Tree:	0	

MSP - Rare Plar	nt Habitat and	Threats As	sessment	Form 2015		Page	e 2			
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Salvia mellifera Alliance, Salvia mellifera-Eriogonum fasciculatum Association										
SANDAG 2012 Vegetation Alliance/Association		a Alliance, Salvi	ia mellifera-E	riogonum fascicu	latum Associ	ation				
Cover classes (1-6	6) Cryptogami	c Crust Cover:	1 (0%)	т	hatch Cover	2 (>0% to <	:10%)			
	Thatch Depth A	Average (cm)	1	Thatch Dep	oth max (cm)	2				
Dead Standing Biomass If yes, cover/species clas	yes Baccharic car	othroidos/2		Average	e height (cm)	30				
Mammal Species Activity (categ. 1-4)	S Dacchans Sal	othioldes/2		Average	e neight (cm)					
Feral pig activity 1 = No feral p	ig activity (rooting	g, wallowing, ve	egetation des	truction, tracks, s	cat, pig) dete	cted.				
ground squirr. activity 1 = No groun	d squirrel burrows	detected.								
gopher activity 1 = No pocke	t gopher mounds	detected.								
Sampling area representative of map	ped occurrence?	yes	(If no, note d	lifferences on pag	ge 3)					
VI. THREATS ASSESSMENT IN MA						•				
extent over years of monitoring) plus Record notes on page 3. See Argentin					threat asse	ssment cat	egories.			
Surrounding Land Use/Activity at, or A	Adjacent to, Site	open space, ti	ransportation	, industrial						
Argentine ant abundance at bait station (1	-4)									
Time start	Temp start	:		Time end		Temp end				
Ant sample collected?	Ant sample #			Ant Sta	ation Photo #					
DISTURBANCES (Rank each as 1-6).				1						
Non-native forbs 3 = Disturban		eral pig activity	×	t	ed hydrology	4 = Disturba	ance occurs ir			
Non-native grasses 3 = Disturban	C	trampling	1 = No sign o		erosion	1 = No sign	of disturbanc			
Non-native woody pl. 1 = No sign o			1 = No sign (1			of disturbanc			
competitive native pl. $1 = No sign o$		current grazing		1		_	of disturbanc			
dumping/trash 1 = No sign o encampments 1 = No sign o		nistoric grazing pric agriculture		1	rcompaction	T – NO SIGI				
		 1	1 No olgin	1						
fuel modification zone/fire brea	ŭ									
road construction/maintenanc illegal vegetation clearin			ent, describe:							
brush management/restoratio			ent, describe:	ovtont or in adias	oont 10 m but	for				
ORV activi	$\frac{1}{1} = No sign of 0$	if prese	ent, describe:			lei.				
Evidence of recent fin										
	ire, year burned?									
Trails 1 = No sign o	f disturbance with	nin maxinum ex		If trails are prese	ent, are they	authorized?				
Type of trail use hikin	g	biking		equestrian		dog				
service vehicle		other								
illegal trail use	? 1 = No sign of	describe:								
Other disturbance?		small fire out	tside max ex ts under brid	xtent burned no	rth slope; re	ported hon - 369 -	neless			

(top 2 rows auto-fill from page 1)
Scientific Name: Monardella viminea MSP Occur ID.
Date: 6/11/2015
VI. MANAGEMENT RECOMMENDATIONS
none
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
many seedlings observed; pollinators detected: fiery skipper

Monardella viminea (Willowy Monardella) Flanders Canyon



Panorama from Southern edge of population, facing West, Northwest, North. Panorama location is 6278683.235 1908449.893 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Monardella viminea			Common Nar	ne:	Willowy monardella		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	MOLIV_6LOCA004		
	CNDDB Elem. Occur. #:	EO1		Translocated	no			
Preserve:	Los Penasquitos Canyon Preserve			•	•		Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	-	•
Occurrence Name:	Lopez Canyon - West Terrace						ble Point #:	1
								San Diego, (2)
Surveyors:	Betsy Miller, Kim Roeland, Daniel Schwa	rtz (1); Kris	Preston (2)			Affiliation SDMMP		
Date:	6/11/2015		Time Start:	11:45		Time Finish:	12:09	
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing							describing	
phenology & evidence of h # Plants/Current	erbivory, disease & stunted growth within the sa	mpling area. F	Record any note	es on p. 3.	[[1
Mapped Extent:		0	exact cour	t or estimate?	exact		-	very low
	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	no	if not	found, known or	suspected reason:			
# Plants/Sampling Area	0			exact co	ount or estimate?	exact	uncert.	very low
	Sample Area Radius (m)	10	Ī					
	,	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		-	1 (0%)	-	ering & Fruiting	1 (0%)		. (0,0)
	Evidence in Sampling Area (1-6):			Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map			Disease	1 (0 70)	Stuni	eu Orowin	1 (0 70)
			yes	1				
	Collection (if not collected previously)?	no			1			
If yes:	Collector				Collection #			r
	Museum/Herbarium							
								-
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING		1	1		1	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				r	Г		
Coordin's at Center of F	Plot: E:				N:			1
	Pentax Optio W90							
Locat. 1 CoordE, N	6275731.67	r	1913	221.28	Direction facing	S, SW, W S:\MSCP	Height	1.1 m
	Camera angle	5° down	Photo #	4060-4066	File location	SIMSCP		•
Locat. 2 Coord E,N				-	Direction facing		Height	
	Camera angle		Photo #		File location			
			1 11010 #	ł	The location	<u>.</u>		
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected	r NC if not	species/substrate		% Cover	Collect.# or NC if not collected
Eriogonum fasciculatun	2	7		Erodium sp.	opeolooiouboliule			(dead)
Baccharis sarothroides	1	5		Centaurea me	alitansis		1	(dead)
				Erodium cicut			1	
Brickellia californica 2 Prunus ilicifolia 10			Brachypodiun			3		
Prunus ilicifolia							1	
Cercocarpus minutiflorus 2 Phalaris aquatica Lonicera subspicata 1 Avena sp.			1					
		1		Avena sp.				(dood)
Artemisia palmeri		1		Phacelia sp.			2	(dead)
Rhamnus crocea		1		Salvia apiana			1	
Toxicodendron diversilo	DDUIII	1		Cyperus erag			1	
Opuntia littoralis		2		Foeniculum v	-		1	
Hirschfeldia incana		7		Bromus horde	eaceus		5	
Glebionis coronaria Bromus madritensis		2 10		bare ground rock			2	
Bromus diandrus		30		litter			5	
COVER: Total % Cover:	101	%Herb:	69	%Shrub:	32	%Tree:	0	

MSP ·	MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2									
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.										
SANDAG 20 Allian	012 Vegetation ace/Association:	Artemisia califo fasciculatum-O	rnica-Eriogonu puntia littoralis	ım fasciculatı /Dudleya (edi	um Alliance, Arten ulis) Association	nisia californi	ca-Eriogonu	im		
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	3 (10% to <	:25%)		
		Thatch Depth A	verage (cm)	4	Thatch Dep	oth max (cm)	4			
Dead Standing Bio	omass	yes			T			1		
_	er/species class	unknown/2			Average	e height (cm)	20			
Mammal Species Activity (ca										
				egetation des	truction, tracks, so	cat, pig) dete	cted.			
ground squirr. activity	1 = No ground	squirrel burrows	detected.							
gopher activity	1 = No pocket	gopher mounds	detected.							
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)				
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10 See Argentine)-m surroundi Ant Protocol (ng buffer. S USGS 2015)	See page 4 f	or definitions of		•			
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space							
Argentine ant abundance at	bait station (1-4			gentine ants	detected at bait st	ation.				
Time start	11:45 AM	Temp start	68F		Time end	12:07 PM	Temp end	68F		
Ant sample collected?	yes	Ant sample #		7	Ant Sta	tion Photo #	4071			
DISTURBANCES (Rank	each as 1-6):	1								
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	5 = Disturb	ance occurs in		
Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	7 = Disturb	ance occurs ≥		
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (· · · · ·			of disturbanc		
	1 = No sign of o		istoric grazing	1 = No sign o	soil	compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o						
fuel modification	zone/fire break	1 = No sign of o			r					
		1 = No sign of c		ent, describe:						
		1 = No sign of c	a	ent, describe:						
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum:	extent or in adjac	ent 10 m buf	fer.			
		1 = No sign of o		ent, describe:						
		1 = No sign of o		hin maxinum						
	-	e, year burned?		_			I			
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?			
Type of trail use	hiking		biking		equestrian		dog			
5	service vehicles		other							
	illegal trail use?		describe:							
Other disturbance?	1 = No sign of o	describe:					- 374 -	. –		

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Monardella viminea MSP Occur ID. MOLIV_6LOCA004
Date: 6/11/2015
VI. MANAGEMENT RECOMMENDATIONS Treat non-native grasses and forbs; consider managing for urban runoff based on results from hydrology study pending.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Altered Hydrology = 6 for the Ajax installed within the sampling area. Ajax was installed with grant funding in 2004 t
slow erosion around Monardella population.

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.



	MSP - Rare Plant C	Occurrence Monitoring Form 2015			Page 1			
Scientific Name:	Monardella viminea			Common Nar	ne:	Willowy monardella		
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	MOLIV_6LOCA004		
	CNDDB Elem. Occur. #:	EO1		Translocated	no			
Preserve:	Los Penasquitos Canyon Preserve			•			Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	, v	
Occurrence Name:	Lopez Canyon - East of Bridge Site 2				g.		ple Point #:	2
							(1) City of	San Diego, (2)
Surveyors:	Betsy Miller, Kim Roeland, Daniel Schwa	rtz (1); Kris I				Affiliation		1
Date:	6/11/2015		Time Start:	10:45		Time Finish:	11:20	
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories de								lescribing
# Plants/Current	erbivory, disease & stunted growth within the sa							
Mapped Extent:		9		nt or estimate?			-	very low
	Area of Current Mapped Extent:		131.4	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known o	r suspected reason:			
# Plants/Sampling Area	6			exact o	ount or estimate?	exact	uncert	very low
7.004	Sample Area Radius (m)	10	Ī	exact of		oxuot		voryion
	Phenology In Sampling Area (1-6):	Vegetative		Flowering	6 (>75%)]	Fruiting	1 (0%)
	Therology in Sampling Area (1-0).	-	1 (0%)		ering & Fruiting			1 (070)
						Oturet		4 (00()
	Evidence in Sampling Area (1-6):			Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
	Museunin Cibanum							l
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				-			
Coordin's at Center of F					N:			
	Pentax Optio W90				•			
Locat. 1 CoordE, N	6278255.527		191371	8.712+A1	Direction facing	NE E SE	Height	1.1 m
	Comoro onglo	5 ° dawa				S:\MSCP	rioigiit	
	Camera angle	5° down	Photo #	4050-5054	File location			
Locat. 2 Coord E,N					Direction facing		Height	ļ
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page Collection #, o					Collect.# or NC if
species/substrate		% Cover	collected		species/substrate		% Cover	not collected
Monardella viminea		2		Hirschfeldia in	ncana		20	
Baccharis sarothroides		7		Festuca myur	os		2	
Eriogonum fasciculatum	1	10		Heterotheca	grandiflora		1	
Opuntia littoralis		2		Erodium cicut	tarium		1	
Cercocarpus minutifloru	IS	2	(edge)	Sonchus asp	er		1	
Brickellia californica			(edge)	Lactuca serrio			1	
Artemisia palmeri			(edge)	Centaurea mo	elitensis		1	
Artemisia californica		1	,	Bromus diano			2	
Salvia mellifera		1		Phacelia dista			1	
Prunus ilicifolia		1		Erigeron cana			1	
	mineum	4					4	
Pseudognaphalium stra Pseudognaphalium ben		1		Deinandra fas Hypocharis gl			1	
Pseudognaphalium cali		1		Salvia apiana			1	
Schismus barbatus		3						
Cryptantha or Phacelia	sp.	15	(dead)	bare ground			5	
Bromus madritensis		2		rock			2	
Glebionis coronaria		2		litter		~~~	2	
COVER: Total % Cover:	89	%Herb:	57	%Shrub:	31	%Tree:	0	1

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	Form 2015		Page	e 2
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Artemisia californica-Eriogonum fasciculatum Alliance, Artemisia californica-Eriogonum								
Alliar	ice/Association:	fasciculatum-O	puntia littoralis	/Dudleya (ed	ulis) Association			
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass	yes			_			
If yes, cove	er/species class	unknown/2			Average	height (cm)	10	
Mammal Species Activity (ca	ateg. 1-4)				-			
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	5 = Disturbance	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	4 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign (urban runoff	7 = Disturba	ance occurs ≥
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of c						
		1 = No sign of o		ent, describe:				
illegal veg	etation clearing	1 = No sign of a	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum	extent or in adjac	ent 10 m but	fer.	
	ORV activity	1 = No sign of a	if prese	ent, describe:				
Eviden	ce of recent fire	1 = No sign of o	disturbance wit	hin maxinum				
lf s	sign of recent fire	e, year burned?			J			
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?		describe:		•			
Other disturbance?	1 = No sign of o	describe:					- 379 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Monardella viminea MSP Occur ID. MOLIV_6LOCA004
Date: 6/11/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat non-native grasses and forbs; consider implementing strategies to address urban runoff following pending hydrology study
VII. MANAGEMENT ACTIONS IN LAST YEAR
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
CAGN loud scolding chasing another bird, fledglings seen
NOTES

Monardella viminea (Willowy Monardella) Lopez Canyon – East of Bridge Observation # 2



Panorama from Southeastern edge of population, facing Northeast, East, Southeast. Panorama location is 6278255.527 1913718.712 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



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MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Monardella viminea	Common N			Name: Willowy monardella				
	Existing MSP Occurrence? yes			MSP Occurr. ID:		MOLIV_6LOCA004			
	CNDDB Elem. Occur. #:	EO1		Translocated	no				
Preserve:	Los Penasquitos Canyon Preserve			•	*		Mgmt Unit	MU6	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment	
Occurrence Name:	Lopez Canyon - East of Bridge Site 3						ble Point #:		
								San Diego. (2)	
Surveyors:							SDMMP		
Date:	6/11/2015		Time Start:	10:00		Time Finish:	10:28		
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	f categories o	lescribing	
# Plants/Current	erbivory, disease & stunted growth within the sa				avaat		uncert	vendeur	
Mapped Extent:		4	•	t or estimate?		aveat (CDC		very low	
	Area of Current Mapped Extent:		9.9	4	square meters	exact (GPS) or estim?	exact (GPS ma	
# Plants/Sampling	Species Found in Maximum Extent?	yes	if not	found, known o	suspected reason:				
Area	4		_	exact c	ount or estimate?	exact	uncert.	very low	
	Sample Area Radius (m)	10		_					
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83			
	State Plane (ft)		doodi. dinto.	motoro	Dutum	111200	1		
Coordin's at Center of F					N:				
	Pentax Optio W90								
Locat. 1 CoordE, N	6279603.64		101/	641.49	Direction facing	SW W NW	Height	1.1 m	
,						S:\MSCP	Theight	1.110	
	Camera angle	5° down	Photo #	4038-4041	File location				
Locat. 2 Coord E,N					Direction facing		Height		
	Camera angle		Photo #	File location					
	PECIES If need more room, record additiona	I data and any	notos on pago	2					
III. ACCOUNTED O		i data and any	Collection #, o					Collect.# or NC if	
species/substrate		% Cover	collected		species/substrate		% Cover	not collected	
Monardella viminea		2		Hedypnois cr	etica		1		
Cercocarpus minutifloru	IS	20		Bromus madr	itensis		1		
Baccharis sarothroides		15		Bromus diano	Irus		1		
Artemisia californica		1		Avena sp.			2		
Eriogonum fasciculatum	n	1		Bromus horde	eaceus		1		
Toxicodendron diversilo	bbum	10		Glebionis cor	onaria		1		
Salvia mellifera		1		Sonchus asp	er		1		
Solanum parishii		1		Pseudognaph	Pseudognaphalium stramineum		1		
Rhus integrifolia		1		Xanthium stru	Xanthium strumarium		1		
Galium angustifolium		1		Carduus pycr	Carduus pycnocephalus		1		
Acmispon glaber		1		Festuca pere	nnis		1		
Foeniculum vulgare		1		Iva hayesiana	Iva hayesiana				
Calystegia macrostegia		2		Lactuca serrio	bla		1		
Ricinus communis		1		Pseudognaph	alium californicur	n	1		
Pseudognaphalium ben	neolens	2							
Euphorbia peplus		1		bare ground			2		
Brassica nigra		3		rock			40		
Brachypodium distachy COVER: Total % Cover:	on 94	15 %Herb:	40	litter %Shrub:	54	%Tree:	2		

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned	d using San Dieg	jo vegetatio	on key (AE	COM 2012)
SANDAG 2 Alliar	012 Vegetation ice/Association:	seasonal strear	n bed					
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	тı	natch Cover	2 (>0% to <	(10%)
		Thatch Depth A	verage (cm)	1	Thatch Dep	th max (cm)	2	l
Dead Standing Bio	omass	no			T			I
	er/species class				Average	height (cm)		l
Mammal Species Activity (ca								
				egetation des	truction, tracks, so	at, pig) dete	cted.	
ground squirr. activity	-	•						I
		gopher mounds				•	J	
Sampling area represe				1 ·	lifferences on page			
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Stat	tion Photo #		
DISTURBANCES (Rank	each as 1-6):			r	7			
Non-native forbs	3 = Disturbance	fe	ral pig activity	1 = No sign (altere	d hydrology	4 = Disturba	ance occurs ir
Non-native grasses	4 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.				1 = No sign (1			ance occurs ≥
competitive native pl.	-		urrent grazing		1			of disturbanc
	1 = No sign of c		istoric grazing		Ī	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign (1			
fuel modification	zone/fire break	1 = No sign of o						
		1 = No sign of o		ent, describe:				
		1 = No sign of o		ent, describe:				
brush manageme	ent/restoration ORV activity			thin maxinum	extent or in adjace	ent 10 m buf	fer.	
Eviden		1 - 100 sign of 0		ent, describe:				
		1 = No sign of o e, year burned?	disturbance wit	thin maxinum				
Trails					If trails are prese	nt are they :	authorized?	
Type of trail use	1 - 100 sight of 0	disturbance with			1 r	in, are they a		
	hiking		biking		equestrian		dog	<u> </u>
	service vehicles illegal trail use?		other describe:		1			
Other disturbance?				<u> </u>			204	
	1 = No sign of						- 384 -	•

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Monardella viminea MSP Occur ID. MOLIV_6LOCA004
Date: 6/11/2015
VI. MANAGEMENT RECOMMENDATIONS
Treat non-native grasses and forbs; consider implementing strategies to address urban runoff following pending hydrology study
VII. MANAGEMENT ACTIONS IN LAST YEAR
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
CAGN heard calling: 10:03 - 10:15 am
NOTES
Ehrharta grass found outside 10 m radius - working with experts to confirm ID

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 Cyn East Terrace # 3



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Monardella viminea			Common Name:		Willowy monardella			
	Existing MSP Occurrence?	yes	MSP Occurr. ID:			MOLIV 4SYCA001			
	CNDDB Elem. Occur. #:		Translocated no						
Preserve:	Sycamore Canyon					Mgmt Unit MU4			
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department			
Occurrence Name:	Sycamore Canyon					,	ble Point #:	1	
								San Diego, (2)	
Sur loveroi	Retay Miller Kim Reeland Appehalle Re	maha (1); Ca	vial Crafta Vi	ataria Marahall	(0)	Sycamore Canyon Affiliation Goodan Ranch			
Surveyors: Date:	Betsy Miller, Kim Roeland, Annabelle Be 6/4/2015	mabe (1); Ca		9:50	(2)	Time Finish:	10:50		
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing								•	
phenology & evidence of h # Plants/Current	nerbivory, disease & stunted growth within the sa								
Mapped Extent:		90 exact count or estimate? exact			exact			very low	
	Area of Current Mapped Extent:		170.8	units	square meters	exact (GPS) or estim?	exact (GPS ma	
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:				
# Plants/Sampling Area				exact co	ount or estimate?	exact	uncert.	very low	
	Sample Area Radius (m)	10	Ī				1		
	Phenology In Sampling Area (1-6):	Vegetative	6 (≥75%)	Flowering	1 (0%)		Fruiting	1 (0%)	
		-	1 (0%)		ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):			Disease			ed Growth	1 (0%)	
	Is Sampling Area within Current Map	,	. ,					. (0,0)	
			,	1					
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING					1		
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83			
coord. system	State Plane (ft)								
Coordin's at Center of F	Plot: E:				N:				
Camera type:	Pentax Optio W90		1						
Locat. 1 CoordE, N	6334282.342	1	19166	610.357	Direction facing		Height	1.1 m	
	Camera angle	5° down	Photo #	4029-4035	File location	S:\MSCP			
Locat. 2 Coord E,N		-		-	Direction facing		Height		
	Camera angle		Photo #		File location				
			•						
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any							
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected	
Monardella viminea		1		Centaurea me	litensis		1		
Eriogonum fasciculatur	n	10		Erodium cicut	arium		2		
Salvia apiana		5		Erodium botrys			2		
Artemisia californica		3		Deinandra fasciculata			1		
Galium angustifolium		1		Festuca myur	os		3		
Selaginella bigelovii		2		Malosma lauri	na		2		
Stephanomeria diegens	sis	1		Avena sp.			2		
Eschscholzia californica	а	1		Bromus diandrus			5	(edge)	
Logfia sp.		1		Bromus horde	aceus		1		
Prunus ilicifolia		10		Sisymbrium in	io		3		
Lepidium sp.		5		Selaginella cinerascens			2		
Oxalis californica		1		Festuca perer	nis		1		
Salvia mellifera		1		Hypochaeris o			1		
Chamaesyce albomarg	inata	1		Heteromeles a			1		
Stipa pulchra		1							
Calystegia macrostegia		1		bare ground			20		
Brassica nigra		5		rock 5					
Bromus madritensis COVER: Total % Cover:	79	2 %Herb:	45	litter %Shrub:	34	%Tree:	1		
	13	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	40	,	- 54	701100.	0	1	

MSP - Rar	e Plant Habit	at and	Threats As	sessment	Form 2015		Page	e 2	
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Alliance/Association bed; Salvia mellifera Alliance, Salvia mellifera-Eriogonum fasciculatum Alliance/Association									
Cover clas	ses (1-6) Cry	otogamic	Crust Cover:	2 (>0% to <1	т	hatch Cover	2 (>0% to <	:10%)	
	Thatch	Depth Av	verage (cm)	2	Thatch Dep	oth max (cm)	5		
Dead Standing Biomass	yes								
If yes, cover/spec Mammal Species Activity (categ. 1		wn/2			Average	height (cm)	10		
Feral pig activity 1 = No		(rooting.	wallowing, ve	egetation dest	truction, tracks, so	cat. pig) dete	cted.		
ground squirr. activity 1 = No				<u>.</u>					
gopher activity 1 = No									
Sampling area representative				(If no, note d	ifferences on pag	e 3)			
extent over years of monitoring)	VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer . See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc.								
Surrounding Land Use/Activity	at, or Adjacent	to, Site	open space						
Argentine ant abundance at bait sta	ation (1-4)	:	2 = 1-50 Arge	ntine ants de	tected at bait stati	on.			
Time start	10:20 AM Te	mp start	65F		Time end	10:48 AM	Temp end	65F	
Ant sample collected? yes	Ant s	ample #		6	Ant Sta	tion Photo #	4036		
DISTURBANCES (Rank each a	as 1-6):				r				
Non-native forbs 4 = Di	sturbance	fer	al pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc	
Non-native grasses 4 = Di	sturbance		trampling	1 = No sign o	,	erosion	1 = No sign	of disturbanc	
Non-native woody pl. 1 = No				1 = No sign o			_	of disturbanc	
competitive native pl. $1 = Nc$			Irrent grazing		-			of disturbanc	
dumping/trash $1 = N_0$	-		storic grazing		SOIL	compaction	1 = No sign	of disturbanc	
encampments $1 = Nc$	o sign of c	nistoi	ric agriculture	T = No sign o	l				
fuel modification zone/f	ire break 1 = No	sign of c							
road construction/main		-	if prese	ent, describe:					
	clearing 1 = No		•	ent, describe:					
brush management/res	Storation $1 = No$	sign of d			extent or in adjac	ent 10 m buf	fer.		
	V activity $1 = No$			ent, describe:					
	ecent fire 7 = Dis recent fire, year l		occurs ≥75%						
				2003	If trails are prese	nt. are they :	authorized?		
Type of trail use	o sign of disturba hiking	nce withi	n maxınum ex biking		equestrian	.,	dog		
	vehicles		other		oquosuidii		uog		
	trail upo2	sign of c	describe:						
Other disturbance? $1 = N_0$		escribe:					- 389 -		

MSP-Management Needs and Notes 2015	
(top 2 rows auto-fill from page 1)	_
Scientific Name: Monardella viminea MSP Occur ID. MOLIV_4SYCA001	
Date: 6/4/2015	
Date. 014/2013	
VI. MANAGEMENT RECOMMENDATIONS	
None	
VII. MANAGEMENT ACTIONS IN LAST YEAR	_
None	
	_
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)	
NOTES	

Monardella viminea (Willowy Monardella) Sycamore Canyon



Panorama from Southern end of population, facing Southeast, South, Southwest. Panorama location is 6334282.342 1916610.357 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.


Navarretia fossalis Spreading Navarretia



© City of San Diego, 2013

	MSP - Rare Plant C	ccurrenco	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Navarretia fossalis			Common Nan	ne:	Spreading navarretia		
	Existing MSP Occurrence?	no		MSP Occurr.	ID:			
	CNDDB Elem. Occur. #:			Translocated	no			
Preserve:	Carroll Canyon						Mgmt Unit	MU6
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	tion Depar	tment
Occurrence Name:	Carroll Canyon					Sam	ble Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/2/2015		Time Start:	14:45		Time Finish:	15:07	
	TATUS - Assess # plants in both species-spe	cific samplin	n area (typicall	v 10-m radius cir	cle) & in current m	anned extent. See n. 4 for definitions of	categories (lescribina
phenology & evidence of h	erbivory, disease & stunted growth within the sa	ampling area. F	Record any note	es on p. 3.			calegones c	leachbillig
# Plants/Current Mapped Extent:		0	exact cour	t or estimate?	exact	1	uncert.	low
	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	no	if not	found, known or	suspected reason:	low rainfall, not detected in	majority c	f recent years
# Plants/Sampling		1						
Area	0		Ī	exact co	ount or estimate?	exact	uncert.	IOW
	Sample Area Radius (m)]	4 (00()			4 (00)
	Phenology In Sampling Area (1-6):		1 (0%)	Flowering			Fruiting	1 (0%)
			1 (0%)		ering & Fruiting			
	Evidence in Sampling Area (1-6):			Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING		1			-	
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				[I		
Coordin's at Center of F	Plot: E:				N:		r	[
	Pentax Optio W90		r		[
Locat. 1 CoordE, N	6282852.217		190745	0.732+A1	Direction facing	S, SW, W, NW S:\MSCP	Height	1.1 m
	Camera angle	15° down	Photo #	3071-3079	File location	5.1WISCP		
Locat. 2 Coord E,N		r			Direction facing		Height	
	Camera angle		Photo #		File location			
		•	•					
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any						
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Pogogyne abramsii		3		Apiastrum and	qustifolium		1	
Eryngium aristulatum		6		Festuca myur			1	
Brodiaea orcuttii		1		-	itensis ssp. ruber	IS	1	
Navarretia hamata		1				-		
Deinandra fasciculata		17						
Cuscuta occidentalis		2						
Crassula connata		2						
Chlorogalum parviflorur	n	1						
Psilocarphus tenellus		1						
Sonchus oleraceus		1						
Deschampsia danthonio	pides	1						
Psilocarphus brevissim		1		bare ground			50	
Adenostoma fasciculatu		25		rock			7	
Antirrhinum nuttallianun		1		litter			3	
COVER: Total % Cover:	66	%Herb:	41	%Shrub:	25	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
(typically 10-m radius ci in the office or field, using	IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Adenostoma fasciculata Alliance; vernal pool							
SANDAG 20 Alliar	012 Vegetation ice/Association:	Adenostoma fa	sciculata Alliar	nce; vernal po	bol			
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass	no			т			r
	er/species class				Average	e height (cm)	0	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.				1	
gopher activity	1 = No pocket g	gopher mounds	detected.				J	
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space, r	esidential, mi	ning			
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):				T			
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of	h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of o	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	hin maxinum	extent or in adjac	ent 10 m buf	ffer.	
	ORV activity	1 = No sign of c			single set of vehi			t to ranger sta
		1 = No sign of c		hin maxinum	ļ			
lf s	sign of recent fire	e, year burned?			J			
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of	describe:		-			- 395 -	

MSP-Management Needs and Notes 2015	
(top 2 rows auto-fill from page 1)	
Scientific Name: Navarretia fossalis MSP Occur ID.	
Date: 4/2/2015	
VI. MANAGEMENT RECOMMENDATIONS	
None.	
VII. MANAGEMENT ACTIONS IN LAST YEAR	
None.	
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)	
NOTES	

Navarretia fossalis (Spreading Navarretia) Carroll Canyon



Panorama from Northern edge of population, facing South, Southwest, West, Northwest. Panorama location is 6282852.217 1907450.732 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



	MSP - Rare Plant C	ccurrence	e Monitorii	ng Form 20 [°]	15	Page 1		
Scientific Name:	Navarretia fossalis			Common Nan	ne:	Spreading navarretia		
	Existing MSP Occurrence?	no		MSP Occurr.	D:			
	CNDDB Elem. Occur. #:	n/a		Translocated	no			
Preserve:	Spring Canyon Open Space						Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Public Utilities D	epartment	
Occurrence Name:	Goat Mesa/Spring Canyon					Sample Point #: 1		
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego
Date:	4/21/2015		Time Start:	10:30am		Time Finish:	10:53am	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				cle) & in current m	apped extent. See p. 4 for definitions o	[;] categories c	lescribing
# Plants/Current		0		nt or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		0	1	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	ves		4	suspected reason:			
# Plants/Sampling		1		·	•		1	
Area	0		ľ	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)	İ	
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If yes:	Collector				Collection #			
				Concetion #				
	Museum/Herbarium							
II. SAMPLING ARE	II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING							
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)							
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6330499.713		1781	402.49	Direction facing	S, W, N	Height	1.1 m
	Camera angle	10 ° up	Photo #	3243-3248	File location	S:\MSCP		
Locat. 2 Coord E,N	Ť				Direction facing		Height	
	Comora onglo		Photo #		File location		0	
	Camera angle		FIIOLO #		T IIE IOCALION			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		anagiog/gubatrata			Collect.# or NC if not collected
		2	collected		species/substrate		% Cover	The conected
Eryngium aristulatum Simmondsia chinensis		5	ļ					ļ
Deinandra fasciculata		10						
Erodium botrys		10						
Bromus madritensis		10						
Centaurea melitensis		1						
Lepidium nitidum		2						
Festuca sp.		1						
Psilocarphus brevissim	201	1						
		· · ·						
 				bare ground			20	
				rock			1	
	_			litter			1	
COVER: Total % Cover:	38	%Herb:	33	%Shrub:	5	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	: Form 2015		Page	e 2
	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg	go vegetatio habitat ass	on key (AE) sessment c	COM 2012) ategories.
	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass	no						
If yes, cove	er/species class				Average	height (cm)		
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket	gopher mounds	detected.					
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	ifferences on pag	e 3)		
extent over years of moni	VI. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer . See page 4 for definitions of threat assessment categories. Record notes on page 3. See Argentine Ant Protocol (USGS 2015) for setting up bait, etc.							
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		
DISTURBANCES (Rank	each as 1-6):							
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign o	altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign o	slop	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of o	h	istoric grazing	7 = Disturba	soil	compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	oric agriculture	1 = No sign o				
fuel modification	zone/fire break	1 = No sign of c			r			
		1 = No sign of o		ent, describe:				
		1 = No sign of c		ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin maxinum	extent or in adjac	ent 10 m buf	ffer.	
	ORV activity	1 = No sign of c	if prese	ent, describe:				
Eviden	ce of recent fire	1 = No sign of c	disturbance wit	hin maxinum				
lf s	If sign of recent fire, year burned?							
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
5	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of o	_					- 400 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Navarretia fossalis MSP Occur ID.
Date: 4/21/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access with fencing and locked gates
VII. MANAGEMENT ACTIONS IN LAST YEAR
PUD installed fencing along access/service road to control ORV activity
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
BUOW burrows at site look unoccupied; old pellet seen near photopoint
NOTEO
NOTES

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.



	MSP - Rare Plant C	ocurrence	e Monitoriı	ng Form 20	15	Page 1		
Scientific Name:	Navarretia fossalis	Common Name:			ne:	Spreading navarretia		
	Existing MSP Occurrence?	no		MSP Occurr. ID:				
	CNDDB Elem. Occur. #:	n/a		Translocated	ves			
Preserve:	Rose Canyon Open Space			•			Mgmt Unit	MU2
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea		
Occurrence Name:	Nobel Drive						ole Point #:	
Surveyors:	Kim Roeland, Betsy Miller						City of Sar	n Diego
Date:	4/17/2015 and 5/27/2015		Time Start:	10:50		Time Finish:	11:30	
	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa				rcie) & in current m	happed extent. See p. 4 for definitions of	r categories o	iescribing
# Plants/Current		8	exact coun	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		8.72	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known o	r suspected reason:	toration did not succeed? Not o	letected for	or many years.
# Plants/Sampling		1	•				1	
Area	2		ī	exact c	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		-		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	5 (50% to <75%)	Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If yes:	Collector	110			Collection #			
ii yes.					Collection #			
	Museum/Herbarium]
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				-			
Coordin's at Center of F	h				N:			
Camera type:	Pentax Optio W90				<u>.</u>			
Locat. 1 CoordE, N	6271105.47		18963	367.536	Direction facing	SW, S, SE	Height	1.1 m
	Camera angle	level	Photo #	226-230	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
					Ŭ		ricigit	
	Camera angle		Photo #	221-225	File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and anv	notes on page	3.				
			Collection #, or NC if	-				Collect.# or NC if
species/substrate		% Cover		species/substra	ate		% Cover	not collected
Navarretia fossalis		1		Gastridium pl	nleoides		1	
Eriogonum fasciculatum	n	5		Festuca myu	ros		2	
Deinandra fasciculata		10		Bromus horde	eaceus		1	
Psilocarphus brevissim	us	5		Sanicula argu	ıta		1	
Croton setigerus		2		Castilleja exs	erta		1	(dead)
Lythrum hyssopifolia		2						
Crassula connata		3						
Deschampsia danthono	pides	2						
Holocarpha virgata elor		2						
Brodiaea orcuttii	<u> </u>	1						
Logfia gallica		1						
Erodium botrys		1						
Stipa pulchra		2		bare ground			35	
Bromus madritensis		5		rock			1	
Avena sp.		10		litter			0	
COVER: Total % Cover:	58	%Herb:	53	%Shrub:	5	%Tree:	0	

MSP	 Rare Plant 	Habitat and	Threats As	ssessment	t Form 2015		Page	e 2
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories.								
SANDAG 2 Alliar	012 Vegetation ice/Association:	vernal pool						
Cov	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	natch Cover*	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio		yes			1			1
If yes, cove Mammal Species Activity (ca	er/species class	Eriogonum fa	sciculatum/2		Average	e height (cm)	30	
	Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.							
ground squirr. activity				<u> </u>				
	1 = No pocket	·						
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	je 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):	1			7			
Non-native forbs			eral pig activity	1 = No sign (alter	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance			1 = No sign (1	erosion	1 = No sign	of disturbanc
Non-native woody pl.	-			1 = No sign o	1			of disturbanc
competitive native pl.			urrent grazing	-	1		_	of disturbanc
	1 = No sign of o		istoric grazing		1	l compaction	1 = No sign	of disturbanc
encampments	1 = No sign of o	histo	pric agriculture	1 = No sign o	4			
fuel modification	zone/fire break	1 = No sign of c						
	on/maintenance	U		ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	thin maxinum	extent or in adjac	ent 10 m buf	fer.	
	ORV activity	1 = No sign of a		ent, describe:				
Eviden	ce of recent fire	1 = No sign of c	disturbance wit	thin maxinum				
lfs	sign of recent fire	e, year burned?						
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of o	describe:					- 405 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Navarretia fossalis MSP Occur ID.
Date: 4/17/2015 and 5/27/2015
VI. MANAGEMENT RECOMMENDATIONS Continue current management by Caltrans
VII. MANAGEMENT ACTIONS IN LAST YEAR
Weeding by Caltrans
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Flowering Navarretia appeared dry - possibly not going to produce fruit before the plant is dead.
*Active management of vernal pools extends to 5-m buffer around vernal pool fenced area; some of the sampling area extends out of the buffer but the form has been filled out focusing on the actively managed area.
2 plants seen on 4/17/15 but when the site was revisited on 5/27/15, 8 individuals were counted.

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.



	MSP - Rare Plant C	ccurrence	e Monitoriı	ng Form 20 [°]	15	Page 1		
Scientific Name:	Navarretia fossalis			Common Nan	ne:	Spreading navarretia		
	Existing MSP Occurrence?	no		MSP Occurr. ID:				
	CNDDB Elem. Occur. #:			Translocated?	no			
Preserve:	Otay Lakes Cornerstone Lands	-		Mgmt Unit	MU3			
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	-	•
Occurrence Name:	Otay Lakes Cornerstone Lands				g.		ole Point #:	
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	mabe					City of Sar	n Diego
Date:	4/16/2015		Time Start:	10:30		Time Finish:	11:20	2.090
phenology & evidence of h	TATUS - Assess # plants in both species-spe erbivory, disease & stunted growth within the sa	ecific sampling ampling area. F	g area (typicali Record any note	y 10-m radius cir es on p. 3.	cie) & in current m	apped extent. See p. 4 for definitions of	categories d	lescribing
# Plants/Current		0	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent:	Area of Current Mapped Extent:		0	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	no	if not found, known or suspected reason: tOra		toration did not succeed? Not detected for many years			
# Plants/Sampling			•					
Area			T	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
	Collection (if not collected previously)?	no		1				
If yes:	Collector				Collection #			
ii yos.					Oblicetion #			
	Museum/Herbarium							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system State Plane (ft)								
Coordin's at Center of Plot: E:					N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6355504.7		1807	021.28	Direction facing	NW, W	Height	1.1 m
	Camera angle	level	Photo #	3175-3183	File location	S:\MSCP		
Locat. 2 Coord E.N					Direction facing		Height	
			Dhata #				g	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
			Collection #, or NC if					Collect.# or NC if
species/substrate		% Cover	not collected	species/substra	te		% Cover	not collected
Eriogonum fasciculatun	n	5		Bromus horde	eaceus		2	
Malosma laurina		2		Bromus madr	itensis		2	
Deinandra fasciculata		25		Festuca myur	OS		10	
Eryngium aristulatum		5		Gastridium ph	leoides		1	
Brodiaea terrestris		2		Crassula conr	nata		10	
Deschampsia danthono	pides	2		Selaginella cir	nerascens		2	dry
Cryptantha sp.		3		Trichostema I	anceolatum		1	
Microseris douglasii		1		Artemisia cali	fornica		2	
Acmispon glaber		1		Crypsis schoe	enoides		2	
Bloomeria clevelandii		1		Salsola tragus	Salsola tragus		1	
Cuscuta occidentalis		1		Sonchus olera			1	
Lasthenia coronaria		3		Plantago erec	ta		1	
Lepidium nitidum		2		Psilocarphus			1	
Calochortus splendens		1		Anagallis arve	ensis		1	
Stipa pulchra		1		bare ground			35	
Hypochaeris glabra		3		rock			5	
Erodium botrys		15		litter		1	25	
COVER: Total % Cover:	110	%Herb:	103	%Shrub:	7	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	sessment	Form 2015		Pag	e 2
(typically 10-m radius cin in the office or field, using	IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Artemisia californica-Eriogonum fasciculatum Alliance, Artemisia californica-Eriogonum							
SANDAG 20 Allian	012 Vegetation ce/Association:	Artemisia califo fascicuatum-Ma	rnica-Eriogonu alosma laurina	Association	Im Alliance, Artem	nsia californi	ica-Eriogoni	im
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio		yes			I			ſ
If yes, cove Mammal Species Activity (ca	-	Acmispon gla	ber/2		Average	height (cm)	30	
		activity (rooting	u wallowing, ve	egetation des	truction, tracks, so	cat, pig) dete	ected.	
ground squirr. activity				<u> </u>		, p. 3/		
		gopher mounds						
Sampling area represent	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)	-	
VI. THREATS ASSESSM extent over years of monit Record notes on page 3. §	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/Ad	ctivity at, or Ac	ljacent to, Site	open space					
Argentine ant abundance at I	bait station (1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.		
Time start	10:30 AM	Temp start	70F		Time end	11:15 AM	Temp end	73F
Ant sample collected?	no	Ant sample #			Ant Sta	tion Photo #	3185	
DISTURBANCES (Rank e	each as 1-6):	1			т			
Non-native forbs			eral pig activity		1			of disturbanc
Non-native grasses				1 = No sign (İ		· · · · ·	of disturbanc
Non-native woody pl.				1 = No sign (1			of disturbanc
competitive native pl. dumping/trash			urrent grazing istoric grazing		1		-	of disturbanc
encampments			oric agriculture		Ī	compaction	1 – 1 1 0 Sigi	
fuel modification			1		1			
road constructio	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal vege	etation clearing	1 = No sign of o	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	disturbance wit	hin maxinum	extent or in adjac	ent 10 m but	ffer.	
	ORV activity	1 - 100 sign of 0		ent, describe:				
		1 = No sign of o		hin maxinum				
[-	e, year burned?						
Trails Type of trail use	T - NO SIGIT OF	disturbance with			If trails are prese	ni, are they	1	
	hiking		biking		equestrian		dog	
	ervice vehicles llegal trail use?		other describe:					
l i	nogar train use !	1 = No sign of c						
Other disturbance?	1 = No sign of	describe:					- 410 -	-

	ent Needs and Notes 2015
(top 2 rows auto-fill from page 1)	
Scientific Name: Navarretia fossalis	MSP Occur ID.
Date: 4/16/2015	
VI. MANAGEMENT RECOMMENDATIONS	
Continue to maintain access control with fencing, locked g	gate, and signs
VII. MANAGEMENT ACTIONS IN LAST YEAR	
New sign installed near Otay Lakes Road	
VIII. CNDDB SPECIES DETECTED (list any plant or	animal species to add to the CNDDB)
, <u>,</u>	
NOTES	

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.



MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Navarretia fossalis		Common Name:		Spreading navarretia			
	Existing MSP Occurrence?	no		MSP Occurr. ID:				
	CNDDB Elem. Occur. #:			Translocated	yes			
Preserve:	Dennery Canyon Open Space				•		Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Ribinhood Ridge						ble Point #:	1
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	Diego
Date:	4/7/2015		Time Start: 9:35			Time Finish:	10:00	
	TATUS - Assess # plants in both species-spe				cle) & in current m	apped extent. See p. 4 for definitions of	^r categories c	lescribing
phenology & evidence of h # Plants/Current	erbivory, disease & stunted growth within the sa							
Mapped Extent:		0		t or estimate?			uncert.	
	Area of Current Mapped Extent:		0	-	square meters		•	exact (GPS ma
	Species Found in Maximum Extent?	no	if not	found, known or	suspected reason:	storation did not succeed? Not c	letected fo	or many years.
# Plants/Sampling Area	0			exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10	Ī					
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	1 (0%)		Fruiting	1 (0%)
		Dead	1 (0%)	-	ering & Fruiting	1 (0%)		, <i>i</i>
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease			ed Growth	1 (0%)
	Is Sampling Area within Current Map	-				<u>.</u>		
		r	<u> </u>	1				
	Collection (if not collected previously)?	no		l	1			
If yes:	Collector			Collection #				
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)				-		-	
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6329438.23		1790	979.82	Direction facing		Height	1.1 m
	Camera angle	level	Photo #	3091-3104	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Comora onglo		Photo #		File location		0	
	Camera angle		FIIOLO #		T lie location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Eryngium aristulatum		15		Chenopodium	•		4	
Pogogyne nudiuscula		4		Sonchus aspe			2	
Psilocarphus brevissimi	201	4		Bromus horde			2	
Deschampsia danthonio		1		Matricaria dise			1	
Artemisia californica	Jues	20		Anagallis arve			1	
Cylindropuntia prolifera		3					1	
Ferocactus viridescens		2		Festuca perennis Mesembryanthemum nodiflorum		m	2	
Deinandra fasciculata		15		Centaurea me			1	
Bahiopsis laciniata		2		Sentadi ca inc				
Eriogonum fasciculatum	1	5						
Bromus madritensis	1	7						
Phalaris minor		3		bare ground			35	
Erodium cicutarium		10		rock			25	
Festuca myuros		1		litter			5	
COVER: Total % Cover:	106	%Herb:	74	%Shrub:	32	%Tree:	0	

MSP ·	 Rare Plant 	Habitat and	Threats As	sessment	t Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	o vegetatio habitat ass	on key (AE) essment c	COM 2012) ategories.
SANDAG 2 Alliar	012 Vegetation ce/Association:	Bahiopsis lacin Association, ve	iata Alliance, E rnal pool	Bahiopsis laci	niata - Artemisia c	alifornica - E	riogonum fa	sciculatum
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)		l
Dead Standing Bio	omass	no			т			í
_	er/species class				Average	height (cm)		l
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	i, wallowing, ve	egetation des	truction, tracks, so	at, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					ļ
gopher activity	1 = No pocket g	gopher mounds	detected.					
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on page	e 3)		
VI. THREATS ASSESSM extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•	
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	Open Space					
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #		l
DISTURBANCES (Rank	each as 1-6):				_			
Non-native forbs	4 = Disturbance	fe	ral pig activity	1 = No sign	altere	d hydrology	1 = No sign	of disturbanc
Non-native grasses	4 = Disturbance		trampling	1 = No sign	9	erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign	<u>م</u> ۱	urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of	c	urrent grazing	1 = No sign	slope	e movement	1 = No sign	of disturbanc
dumping/trash	1 = No sign of	h	istoric grazing	1 = No sign	soil	compaction	1 = No sign	of disturbanc
encampments	2 = Disturbance	histo	oric agriculture	1 = No sign				
fuel modification	zone/fire break	1 = No sign of c						
road construction	on/maintenance	1 = No sign of c	if prese	ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of o	listurbance wit	hin maxinum	extent or in adjace	ent 10 m buf	fer.	
	ORV activity	1 = No sign of c		ent, describe:				
Eviden	ce of recent fire	1 = No sign of o	disturbance wit	hin maxinum				
		e, year burned?			1			
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	nt, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?	1 = No sign of o	al a a avila a c		•			
Other disturbance?	1 = No sign of	describe:					- 415 -	

(top 2 rows auto-fill from page 1)
Scientific Name: Navarretia fossalis MSP Occur ID.
Date: 4/7/2015
VI. MANAGEMENT RECOMMENDATIONS
Fix gate and replace lock; post and remove encampment.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



Pogogyne abramsii San Diego Mesa Mint



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	MSP - Rare Plant Oc	currence l	Monitoring	Form 201	5	Page 1		
Scientific Name:	Pogogyne abramsii				Common Name:	San Diego mesa mint		
	Existing MSP Occurrence?	no			MSP Occurr. ID:			
	CNDDB Elem. Occur. #:	EO6		Translocated?	no			
Preserve:	Carroll Canyon Vernal Pool Preserve	•					Mgmt Unit	
	City of San Diego				Land Manor	City of San Diego Park and Recrea		ment
	Carroll Canyon Vernal Pool Preserve						ble Point #:	1
	Kim Roeland, Betsy Miller, Annabelle Ber	nahe				· · · · · · · · · · · · · · · · · · ·	City of Sar	Diego
Date:	4/2/2015		Time Start:	15:09		Time Finish:	15:40	
I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of of								
	IAIUS - Assess # plants in both species-sp nerbivory, disease & stunted growth within the s				rcle) & in current r	napped extent. See p. 4 for definitions of	of categories	describing
# Plants/Current		1966	exact cour	t or estimate?	exact		uncert.	medium
Mapped Extent:	Area of Current Mapped Extent:		165.89	units	square meters	exact (GPS) or estim?	exact (GPS
	Species Found in Maximum Extent?	ves			suspected reason:		/	· · · ·
# Plants/Sampling	· · · · · · · · · · · · · · · · · · ·	1					ì	
Area	1966			exact co	ount or estimate?	exact	uncert.	medium
	Sample Area Radius (m)	10						
	Phenology In Sampling Area (1-6):	Vegetative	2 (>0% to <1	Flowering	5 (50% to <75%))	Fruiting	1 (0%)
		Dead	1 (0%)	Flowe	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	oped Extent?	yes					
	Collection (if not collected providually)?			[
15	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
	Museum/Herbarium							
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)						-	
Coordin's at Center of P	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6282860.426		19073	841.599	Direction facing	N, NE, E	Height	1.1 m
	Camera angle	15° down	Photo #	3080-3088	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
					•		rieigin	Į
	Camera angle		Photo #		File location			
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.				
			Collection #					Collect.# (if collected)
species/substrate		Cover	(if collected)		species/substrate		Cover	(II collected)
Pogogyne abramsii		12		Hypochaeris			2	
Eryngium aristulatum		2		Chlorogalum	•		1	
Lasthenia gracilis		1		Apiastrum ar	•		1	
Crassula connata		2 Eriophyllum confertiflorum			1			
Logfia filaginoides		2		Salvia mellife	era		2	
Deinandra fasciculata	a	17						
Navarretia hamata		2						
Plantago erecta		1						
Cuscuta occidentalis		4						
Adenostoma fascicul		10						
Antirrhinum nuttallian	um	2						
Sonchus oleraceus		1		bare ground			40	
Brodiaea orcuttii Festuca myuros		2		rock litter			17 3	
COVER: Total % Cover:	66	%Herb:	53	%Shrub:	13	%Tree:	0	

MSP	 Rare Plant 	Habitat and	Threats As	ssessment	: Form 2015		Page	e 2
IV. HABITAT ASSESSM (typically 10-m radius ci in the office or field, using	rcle). Vegetati "Associated S	on alliance/ass Species" data f	sociation can rom page 1. S	be assigned See page 4	d using San Die for definitions of	go vegetatio	on key (AE	COM 2012)
SANDAG 2 Alliar	012 Vegetation	Adenostoma fa	sciculata Alliar	nce; vernal po	bol			
	er classes (1-4)	Cryptogamic	c Crust Cover:	2 (>0% to <1	т	hatch Cover	1 (0%)	
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)		
Dead Standing Bio	omass	yes			T			,
If yes, cove	er/species class	Adenostoma f	asciculatum/	2	Average	e height (cm)	15	
Mammal Species Activity (ca	ateg. 1-4)							
Feral pig activity	1 = No feral pig	activity (rooting	, wallowing, ve	egetation des	truction, tracks, s	cat, pig) dete	cted.	
ground squirr. activity	1 = No ground	squirrel burrows	detected.					
gopher activity	1 = No pocket g	gopher mounds	detected.	1				
Sampling area represe	entative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	je 3)		
VI. THREATS ASSESSM extent over years of moni page 5 for Overall Site Qu	toring) plus 10)-m surroundi	ng buffer. S					
Surrounding Land Use	•	at, or Ijacent to, Site	open space, r	esidential, mi	ning			
Argentine ant abundance at	bait station (1-4)						
Time start		Temp start			Time end		Temp end	
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #		
DISTURBANCES (Rank	each as 1-6):	1						
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc
Non-native grasses	3 = Disturbance		trampling	1 = No sign o		erosion	1 = No sign	of disturbanc
Non-native woody pl.	1 = No sign of o		vandalism	1 = No sign o		urban runoff	1 = No sign	of disturbanc
competitive native pl.	1 = No sign of o	с	urrent grazing	1 = No sign (1 .			of disturbanc
dumping/trash	1 = No sign of e	h	istoric grazing	1 = No sign o	soi	l compaction	1 = No sign	of disturbanc
encampments	1 = No sign of	histo	oric agriculture	1 = No sign of				
fuel modification	zone/fire break	3 = Disturbance						
	on/maintenance			ent, describe:				
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:				
brush manageme	ent/restoration	1 = No sign of c	disturbance wit	thin mapped of	occurrence perime	eter or in adja	acent 10 m t	ouffer.
	ORV activity	T = NO SIGN OF C		ent, describe:				
	ce of recent fire			thin mapped of				
l lf s	sign of recent fire	e, year burned?			J		i	
Trails	1 = No sign of o	disturbance with	in mapped occ		If trails are prese	ent, are they a	authorized?	
Type of trail use	hiking		biking		equestrian		dog	
	service vehicles		other					
	illegal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of	describe:					- 421 -	

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Pogogyne abramsii MSP Occur ID.
Date: 4/2/2015
VI. MANAGEMENT RECOMMENDATIONS
none
VII. MANAGEMENT ACTIONS IN LAST YEAR
none
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
l

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.



	MSP - Rare Plant C	Occurrence	e Monitorii	ng Form 20	15	Page 1		
Scientific Name:	Pogogyne abramsii			Common Name:		San Diego mesa mint		
	Existing MSP Occurrence?	no		MSP Occurr.	ID:			
	CNDDB Elem. Occur. #: EO6			Translocated no				
Descence		LOU		Tansiocaleu	110		N 4	MUC
Preserve:	Los Penasquitos Canyon Preserve						Mgmt Unit	
Land Owner:	City of San Diego				Land Manger:	City of San Diego Park and Recrea		tment
Occurrence Name:	Lopez Ridge					Sam	ble Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe		1			City of Sar	n Diego
Date:	4/2/2015		Time Start:	10:00		Time Finish: 11:45		
I. OCCURRENCE S	TATUS - Assess # plants in both species-spe	ecific samplin	g area (typicall	y 10-m radius cir	cle) & in current m	apped extent. See p. 4 for definitions of	categories d	lescribing
phenology & evidence of h	erbivory, disease & stunted growth within the sa						-	
# Plants/Current Mapped Extent:		4500	0 exact count or estimate? estimate (extrapola		olate partial ct)	uncert.	medium	
	Area of Current Mapped Extent:		394	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	found, known or	suspected reason:			
# Plants/Sampling		1					İ	
Area			T	exact co	ount or estimate?	exact	uncert.	medium
	Sample Area Radius (m)	10		1	r	1		
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	ped Extent?	yes					
				-				
	Collection (if not collected previously)?	no			I			
If yes:	Collector				Collection #			r
	Museum/Herbarium							
II. SAMPLING ARE	A LOCATION & SITE PHOTOMONIT	ORING			[1	[
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					1		
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90							
Locat. 1 CoordE, N	6278246.403		19155	522.734	Direction facing	SW, W, NW	Height	1.1 m
	Camera angle	10° down	Photo #	3030-3038	File location	S:\MSCP		
Locat. 2 Coord E.N		io domi	1 11010 #	0000 0000			Hoight	
LOCAL 2 COOIU E,IN					Direction facing		Height	
	Camera angle		Photo #		File location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page Collection #	3.				Collect.# (if
species/substrate		Cover	(if collected)	species/substra	te		Cover	collected)
Adenostoma fasciculatu	ım	30		Antirrhinum n	uttallianum		1	(dead)
Pogogyne abramsii		5		Plantago erec	ta		1	
Crassula connata		5		Logfia filagino	ides		1	
Navarretia hamata		5		Dichelostemn			1	
Osmadenia tenella		1		Erodium botry			2	
Deinandra fasciculata							5	
		1		Hypochaeris o				
Zeltnera venusta		1		Festuca myur			20	
Castilleja exserta		1		Bromus madr			5	
Allium haematochiton	um haematochiton 2 old		old	Juncus bufon			1	
Deschampsia danthonio	bides	1		Bromus horde	eaceus		1	
Bloomeria clevelandii		1		Hordeum mur	inum		1	
Brodiaea orcuttii		1		Lepidium nitid	lum		1	
Psilocarphus brevissim	us	1						
Muilla maritima		1	(-l				-	
Selaginella cinerascens		20	(dead, see a	bare ground			2	
Chlorogalum parviflorur Helianthemum scopariu		1		rock litter			2	
COVER: Total % Cover:	124	%Herb:	94	%Shrub:	30	%Tree:	0	

MSP -	Rare Plant	Habitat and	Threats As	ssessment	: Form 2015		Pag	e 2
IV. HABITAT ASSESSME (typically 10-m radius cir in the office or field, using	cle) . Vegetati "Associated S	on alliance/ass Species" data fi	sociation can rom page 1. S	be assigned See page 4	d using San Dieg for definitions of	go vegetatio habitat ass	on key (AE	COM 2012)
	12 Vegetation ce/Association:	Adenostoma fa	sciculatum Alli	ance, Allianc	e level only; verna	I pool		
Cove	r classes (1-4)	Cryptogamic	c Crust Cover:	3 (10% to <2	т	hatch Cover	1 (0%)	1
		Thatch Depth A	verage (cm)		Thatch Dep	th max (cm)		
Dead Standing Bior		yes			Ţ			T
If yes, cover Mammal Species Activity (car	•	Adenostoma/2	2		Average	height (cm)	40	l
Feral pig activity		activity (rooting	ı. wallowing, ve	egetation des	truction, tracks, so	cat. pig) dete	cted.	
ground squirr. activity				<u> </u>		, բ.ց,		
gopher activity		-						1
Sampling area represer				(If no, note d	lifferences on pag	e 3)		
VI. THREATS ASSESSM extent over years of monitor page 5 for Overall Site Qua	oring) plus 10)-m surroundi	ing buffer. S					
Surrounding Land Use/	•	at, or Ijacent to, Site	Open Space					
Argentine ant abundance at b	pait station (1-4)	1 = No ants d	etected at ba	it station or in vicir	nity.		
Time start	10:05 AM	Temp start	68F		Time end	11:30 AM	Temp end	73F
Ant sample collected?	no	Ant sample #			Ant Sta	tion Photo #	3061	
DISTURBANCES (Rank e	ach as 1-6):				т			
Non-native forbs ;			eral pig activity		T			n of disturbanc
Non-native grasses				1 = No sign	Ī			n of disturbanc
Non-native woody pl.	-			1 = No sign	Ť			n of disturbanc
competitive native pl.			urrent grazing		1 .		-	of disturbanc
dumping/trash			istoric grazing		Ī	compaction	1 = No sign	n of disturbanc
encampments	1 = NO SIGN OF (nisto	oric agriculture	1 = No sign (1			
fuel modification z	zone/fire break	1 = No sign of c						
road construction				ent, describe:				
		1 = No sign of c	a	ent, describe:				
brush manageme	nt/restoration ORV activity			hin mapped	occurrence perime	eter or in adja	acent 10 m t	ouffer.
	-	T = NO Sign Of C		ent, describe:				
	-	1 = No sign of c		hin mapped				
r	-	e, year burned?				nt and the	outborie do	
Trails Type of trail use		disturbance with			If trails are prese	ni, are they a		
	hiking		biking		equestrian		dog	L
	ervice vehicles		other					
г	legal trail use?	1 = No sign of c	describe:					
Other disturbance?	1 = No sign of	describe:					- 426 -	-

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Pogogyne abramsii MSP Occur ID.
Date: 4/2/2015
VI. MANAGEMENT RECOMMENDATIONS
Continue to control access using fence and locked gate
VII. MANAGEMENT ACTIONS IN LAST YEAR
Access controlled with fence and locked gate
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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 nudiuscula Otay Mesa Mint



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MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1									
Scientific Name:	Pogogyne nudiuscula	Common Name:			ne:	Otay mesa mint			
	Existing MSP Occurrence?	no		MSP Occurr.	ID:				
	CNDDB Elem. Occur. #:	N/A		Translocated?	yes				
Preserve:	Dennery Canyon Open Space				-		Mgmt Unit	MU3	
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recreation Department			
Occurrence Name:	Robinhood Ridge					Sample Point #:			
Surveyors:	Kim Roeland, Betsy Miller, Annabelle Be	rnabe				Affiliation	City of Sar	n Diego	
Date:	4/7/2015		Time Start:	9:35		Time Finish:	10:00		
	I. OCCURRENCE STATUS - Assess # plants in both species-specific sampling area (typically 10-m radius circle) & in current mapped extent. See p. 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on p. 3.								
# Plants/Current									
Mapped Extent:	Area of Ourrant Mannad Extent	44		t or estimate?		event (CDC	uncert.		
	Area of Current Mapped Extent:		61.13		square meters	exact (GPS) or estim?	exact (GPS ma	
# Plants/Sampling	Species Found in Maximum Extent?	yes	if not	tound, known or	suspected reason:				
Area	44		_	exact co	ount or estimate?	exact	uncert.	low	
	Sample Area Radius (m)	10		_		_			
	Phenology In Sampling Area (1-6):	Vegetative	1 (0%)	Flowering	6 (≥75%)		Fruiting	1 (0%)	
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)			
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)	
	Is Sampling Area within Current Map	ped Extent?	yes						
		[1					
	Collection (if not collected previously)?	no]				
If yes:	Collector				Collection #				
	Museum/Herbarium								
II. SAMPLING AREA	A LOCATION & SITE PHOTOMONIT	ORING							
GPS Accuracy: +/-			accur. units:	meters	Datum:	NAD83			
	State Plane (ft)						1		
Coordin's at Center of F					N:				
	Pentax Optio W90								
Locat. 1 CoordE, N	6329438.23		1790	979.82	Direction facing	S, SW, W	Height	1.1 m	
	Camera angle	level	Photo #	3091-3104	File location	S:\MSCP			
Locat. 2 Coord E,N					Direction facing		Height		
					Ŭ		rioigiit		
	Camera angle		Photo #		File location				
III. ASSOCIATED SI	PECIES If need more room, record additiona	l data and any	notes on page	3.					
			Collection #, o					Collect.# or NC if	
species/substrate		% Cover	collected		species/substrate			not collected	
Eryngium aristulatum		15		Chenopodium			4		
Pogogyne nudiuscula		4		Sonchus aspe			2		
Psilocarphus brevissimu		4		Bromus horde			2		
Deschampsia danthonio	Dides	1		Matricaria dise			1		
Artemisia californica		20		Anagallis arve			1		
Cylindropuntia prolifera		3		Festuca perer			1		
Ferocactus viridescens		2			hemum nodifloru		2		
Deinandra fasciculata		15		Centaurea me	511(01)515		1		
Bahiopsis laciniata		2							
Eriogonum fasciculatum	1	5							
Bromus madritensis Phalaris minor		7		hare ground			35		
Erodium cicutarium		3 10		bare ground rock			25		
Festuca myuros		1		litter			5		
COVER: Total % Cover:	106	%Herb:	74	%Shrub:	32	%Tree:	0		

MSP -	MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2									
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Bahiopsis laciniata Alliance, Bahiopsis laciniata - Artemisia californica - Eriogonum fasciculatum										
SANDAG 20 Allian	12 Vegetation ce/Association:	Association; ve	rnal pool		niala - Artemisia c	allomica - E	nogonum ia	Isciculatum		
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)			
	ł	Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)				
Dead Standing Bio	mass	no			T			ſ		
If yes, cover/species class Average height (cm) Mammal Species Activity (categ. 1-4) Average height (cm)										
Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.										
ground squirr. activity				egetation des		bat, pig) dete	cieu.			
gopher activity										
Sampling area represe				(If no, note d	lifferences on pag	e 3)				
VI. THREATS ASSESSM						-	m extent (rumulative		
extent over years of monit	oring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of					
Record notes on page 3. S	-			for setting L	ip dait, etc.					
Surrounding Land Use/Ac	tivity at, or Ad	ljacent to, Site	Open space							
Argentine ant abundance at l	pait station (1-4))								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	tion Photo #				
DISTURBANCES (Rank e	ach as 1-6):	1								
Non-native forbs	4 = Disturbance	fe	eral pig activity	1 = No sign	altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses	4 = Disturbance		trampling	1 = No sign		erosion	1 = No sign	of disturbanc		
Non-native woody pl.				1 = No sign	1		_	of disturbanc		
competitive native pl.			urrent grazing		1			of disturbanc		
dumping/trash			istoric grazing		Ī	compaction	1 = NO sign	of disturbanc		
encampments	2 = Disturbance	nisic	oric agriculture	T = NO SIGN	1					
fuel modification	zone/fire break	1 = No sign of o								
road constructio				ent, describe:						
		1 = No sign of o		ent, describe:						
brush manageme	ORV activity					ent 10 m buf	fer.			
Evidenc	-	I = NO SIGN OF C		ent, describe:						
	Evidence of recent fire 1 = No sign of disturbance within maxinum If sign of recent fire, year burned?									
Trails 1 = No sign of disturbance within maxinum ex If trails are present, are they authorized?										
Type of trail use	1 = No sign of c hiking	uisturbance with	in maxinum ex biking		equestrian	, .]	dog			
	ervice vehicles		other		equestindi		uug			
	llogal trail uso?	1 = No sign of o	al a a avila a .		<u>I</u>					
Other disturbance?	1 = No sign of (describe:		<u> </u>			- 433 -			

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Pogogyne nudiuscula MSP Occur ID.
Date: 4/7/2015
VI. MANAGEMENT RECOMMENDATIONS
Fix gate and replace lock; post and remove encampment.
VII. MANAGEMENT ACTIONS IN LAST YEAR
None.
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES

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.



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Rosa minutifolia Baja Rose



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MSP - Rare Plant Occurrence Monitoring Form 2015 Page 1								
Scientific Name:	Rosa minutifolia		Common Name:		Small-leaved rose			
	Existing MSP Occurrence?	yes		MSP Occurr.	ID:	ROMI80_3DENC001		
	CNDDB Elem. Occur. #:			Translocated	no	_		
Preserve:	Dennery Ranch			•	•		Mgmt Unit	MU3
Land Owner:	City of San Diego				Land Mangr:	City of San Diego Park and Recrea	ation Depar	tment
Occurrence Name:	Dennery Ranch						ble Point #:	1
Surveyors:	Betsy Miller, Kim Roeland, Annabelle Be	rnabe					City of Sar	Diego
Date:	4/7/2015		Time Start:	2:18		Time Finish:	2:55	
	TATUS - Assess # plants in both species-spe			. 10 m radius air	rolo) 8 in automátic	anned extent. See n. 4 for definitions of	l antonorian e	loooriking
	erbivory, disease & stunted growth within the sa				cie) & in current in	apped extern. See p. 4 for definitions of	calegones c	lescribility
# Plants/Current Mapped Extent:		9	exact cour	t or estimate?	exact		uncert.	low
Mapped Extent.	Area of Current Mapped Extent:		134.49	units	square meters	exact (GPS) or estim?	exact (GPS ma
	Species Found in Maximum Extent?	yes	if not	- found, known or	suspected reason:			
# Plants/Sampling		1					1	
Area	4		ī	exact co	ount or estimate?	exact	uncert.	low
	Sample Area Radius (m)	10		1		1		
	Phenology In Sampling Area (1-6):	Ū.	1 (0%)	Flowering			Fruiting	6 (≥75%)
		Dead	1 (0%)	Flow	ering & Fruiting	1 (0%)		
	Evidence in Sampling Area (1-6):	Herbivory	1 (0%)	Disease	1 (0%)	Stunt	ed Growth	1 (0%)
	Is Sampling Area within Current Map	oped Extent?	yes]				
	Collection (if not collected previously)?	no						
If yes:	Collector				Collection #			
,	Museum/Herbarium							
	Museunin Cibanum							
II. SAMPLING AREA	LOCATION & SITE PHOTOMONIT	ORING						
GPS Accuracy: +/-	<1		accur. units:	meters	Datum:	NAD83		
coord. system	State Plane (ft)					1		
Coordin's at Center of F	Plot: E:				N:			
Camera type:	Pentax Optio W90		r					
Locat. 1 CoordE, N	6321424.15	T	17916	627.975	Direction facing		Height	1.1 m
	Camera angle	5° up	Photo #	3015-3112	File location	S:\MSCP		
Locat. 2 Coord E,N					Direction facing		Height	
	Camera angle		Photo #		File location			
			1 11010 #		The location			
III. ASSOCIATED S	PECIES If need more room, record additiona	l data and any	notes on page	3.				
species/substrate		% Cover	Collection #, o collected		species/substrate		% Cover	Collect.# or NC if not collected
Deinandra conjugens		0.5	Conceled	Eriogonum fa			1	
Bahiopsis laciniata		5		Bromus horde			1	
Rosa minutifolia		3		Melilotus albu			2	
Artemisia californica		7		Anagallis arve			1	
Encelia californica		5					1	
Deinandra fasciculata		10		Medicago polymorpha Gutierrezia californica			1	
Rhus integrifolia		3		Gullenezia ca	aniornica			
Simmondsia chinensis		3						
Glebionis coronaria		3						
Centaurea melitensis		2						
		20						
Festuca myuros Bromus madritensis		20		bare ground			1	
Convolvulus simulans		-	dead	rock			3	
Cylindropuntia prolifera		1		litter			7	
COVER: Total % Cover:		%Herb:	49.5	%Shrub:	28	%Tree:	0	

MSP - Rare Plant Habitat and Threats Assessment Form 2015 Page 2										
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. SANDAG 2012 Vegetation Simmondsia chinensis Alliance, Simmondsia chinensis-Bahiopsis laciniata Association										
	012 Vegetation ce/Association:	Simmondsia ch	inensis Allianc	e, Simmonds	ia chinensis-Bahi	opsis lacinia	a Associatio	n		
Cove	er classes (1-6)	Cryptogamic	c Crust Cover:	1 (0%)	т	hatch Cover	1 (0%)			
		Thatch Depth A	verage (cm)		Thatch Dep	oth max (cm)				
Dead Standing Bio	omass	yes			т					
If yes, cove	er/species class	Artemisia/2			Average	e height (cm)	100			
Mammal Species Activity (ca	ateg. 1-4)									
Feral pig activity 1 = No feral pig activity (rooting, wallowing, vegetation destruction, tracks, scat, pig) detected.										
ground squirr. activity	1 = No ground	squirrel burrows	detected.							
gopher activity	1 = No pocket g	gopher mounds	detected.							
Sampling area represe	ntative of mapp	ed occurrence?	yes	(If no, note d	lifferences on pag	e 3)				
VI. THREATS ASSESSN extent over years of moni Record notes on page 3.	toring) plus 10)-m surroundi	ng buffer. S	See page 4 f	or definitions of		•			
Surrounding Land Use/A	ctivity at, or Ac	ljacent to, Site	open space; r	esidential						
Argentine ant abundance at	bait station (1-4)								
Time start		Temp start			Time end		Temp end			
Ant sample collected?		Ant sample #			Ant Sta	ition Photo #				
DISTURBANCES (Rank	each as 1-6):				-					
Non-native forbs	3 = Disturbance	fe	eral pig activity	1 = No sign (altere	ed hydrology	1 = No sign	of disturbanc		
Non-native grasses	5 = Disturbance		trampling	1 = No sign (erosion	1 = No sign	of disturbanc		
Non-native woody pl.	1 = No sign of		vandalism	1 = No sign (urban runoff	1 = No sign	of disturbanc		
competitive native pl.	1 = No sign of	с	urrent grazing	1 = No sign (slop	e movement	1 = No sign	of disturbanc		
dumping/trash	3 = Disturbance	h	istoric grazing	1 = No sign (soil	compaction	1 = No sign	of disturbanc		
encampments	1 = No sign of	histo	oric agriculture	1 = No sign (
fuel modification	zone/fire break	1 = No sign of c								
road construction				ent, describe:						
illegal veg	etation clearing	1 = No sign of c	if prese	ent, describe:						
brush manageme	ent/restoration	6 = Disturbance	e occurs 50% t	o < 75% of a	rea within maxinu	m extent.				
	ORV activity	1 = No sign of o	if prese	ent, describe:						
Eviden	Evidence of recent fire 1 = No sign of disturbance within maxinum									
lf s	sign of recent fire	e, year burned?								
Trails	1 = No sign of o	disturbance with	in maxinum ex		If trails are prese	ent, are they	authorized?			
Type of trail use	hiking		biking		equestrian		dog			
	service vehicles		other							
	illegal trail use?	1 = No sign of c	describe:							
Other disturbance?	1 = No sign of	describe:		-			- 439 -			

MSP-Management Needs and Notes 2015
(top 2 rows auto-fill from page 1)
Scientific Name: Rosa minutifolia MSP Occur ID. ROMI80_3DENC001
Date: 4/7/2015
VI. MANAGEMENT RECOMMENDATIONS
None
VII. MANAGEMENT ACTIONS IN LAST YEAR
None
VIII. CNDDB SPECIES DETECTED (list any plant or animal species to add to the CNDDB)
NOTES
Translocation is partial

Rosa minutifolia (Baja Rose) Dennery Ranch



Panorama from Southern edge of population, facing South, Southeast, East. Panorama location is 6321424.15 1791627.98 NAD83 State Plane California Zone 6 (feet) Photos merged using ArcSoft Panorama Maker 4.



Acknowledgments

The following staff assisted in the preparation of this report:

Betsy Miller, Senior Planner Kim Roeland, Biologist III Annabelle Bernabe, Open Space Intern Daniel Schwartz, Open Space Intern

APPENDIX A

CITY OF SAN DIEGO RARE PLANT MONITORING: 2015 MONITORING DATES AND STAFF

City of San Diego MSCP Plant Monitoring: Priorities, Sites and Survey Dates

Species	Risk Group (SDSU '06)	Risk Group (Ogden '96)	Site	Survey Date	Staff	Methodology
Acanthomintha ilicifolia (San Diego Thorn-mint)	First	Second	Blk Mtn Park West	17-Mar	BYM, KR, DS	GPS, Photo, Habitat Assessment
			Dennery Canyon East	30-Mar	KR , DS	GPS, Photo, Habitat Assessment
			Mission Trails Regional Park	10-Mar	BYM, KR, DS, AB	GPS, Photo, Habitat Assessment
			Otay Lakes	24-Mar	KR, AB	GPS, Photo, Habitat Assessment
			Penasquitos Canyon	10-Mar	BYM, KR, AB	GPS, Photo, Habitat Assessment
Acmispon prostratus			Sabre Springs/Poway	20-Mar	BYM, KR, MF	GPS, Photo, Habitat Assessment
(Nuttall's lotus)	First	First	Dune Triangle	21-May	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Hospitality Point (Site 2) Mariner's Point	21-May	BYM, KR, AB, KD	GPS, Photo, Habitat Assessment
			(Site 4)	22-May	BYM, KR	Presence/Absence, Photo
			No Man's Land (Site 1)	21-May	BYM, KR, AB, KG, KD, RS	GPS, Photo, Habitat Assessment
			Rip Rap (Site 3)	3-Jun	AB, RG	GPS, Photo, Habitat Assessment
Ambrosia pumila			South Shores (Site 6)	21-May	BYM, KR, AB, KG, KD, RS	GPS, Photo, Habitat Assessment
(San Diego Ambrosia) Bloomeria clevelandii	First	Second	Mission Trails Regional Park	19-May	BYM, KR, AB, JA	GPS, Photo, Habitat Assessment
(San Diego Goldenstar)	Second	Second	East Elliott	14-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Lopez Ridge	2-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Marron Valley	1-Apr	BYM, KR, DS, AB	Photo, Habitat Assessment
			Mission Trails Regional Park	23-Apr	BYM, KR	GPS, Photo, Habitat Assessment
Brodiaea filifolia			Otay Lakes	24-Mar	KR, AB	GPS, Photo, Habitat Assessment
(Thread-leaved Brodiaea)	Fourth	None	Black Mountain	24-Apr	BYM, KR, CG, JD	GPS, Photo, Habitat Assessment
Brodiaea orcuttii (Orcutt's Brodiaea)	Third	Second	Carroll Canyon	2-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Lopez Ridge	2-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Nobel Drive	17-Apr	BYM, KR	GPS, Photo, Habitat Assessment

City of San Diego MSCP Plant Monitoring: Priorities, Sites and Survey Dates

Species	Risk Group (SDSU '06)	Risk Group (Ogden '96)	Site	Survey Date	Staff	Methodology
Brodiaea orcuttii (Orcutt's Brodiaea)			Oak Creek	23-Apr	BYM, KR	GPS, Photo, Habitat Assessment
Chloropyron maritimum ssp. maritimum (Salt-marsh Bird's Beak)	Second	First	Dog Beach	22-May	BYM, KR	GPS, Photo, Habitat Assessment
Cylindropuntia californica (Snake Cholla)	Second	Third	Otay Mesa	21-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Spring Canyon	21-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Balboa Golf Course	12-May	BYM, KR, AB	GPS, Photo, Habitat Assessment
Deinandra conjugens (Otay Tarplant)	First	First	Dennery Ranch	7-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Dennery Ranch East	7-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Proctor Valley	16-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
Dicranostegia orcuttiana (Orcutt's Bird's Beak) Dudley brevifolia	First	First	Otay River Valley	12-May	BYM, KR, AB	GPS, Photo, Habitat Assessment
(Short Leaf Dudleya)	First	First	Carmel Mountain	28-Apr	BYM, KR, AB, MF, KD	GPS, Photo, Habitat Assessment
			Crest Canyon	28-Apr	BYM, KR, AB, JD, KD	GPS, Photo, Habitat Assessment
Dudleya variegata (Variegated Dudleya)	Second	First	Blk Mtn Park East	8-May	BYM, KR, JD	GPS, Photo, Habitat Assessment
			East Elliott	6-May	BYM, KR, DS	GPS, Photo, Habitat Assessment
			Goat Mesa/ Spring Canyon	21-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Marron Valley	1-Apr	BYM, KR, DS, AB	GPS, Photo, Habitat Assessment
			Mercy Road	8-May	BYM, KR, JD	GPS, Photo, Habitat Assessment
			Mission Trails Regional Park	6-May	BYM, KR, DS	GPS, Photo, Habitat Assessment
			Navajo/Margarum/ Mission Gorge	19-May	BYM, KR, AB, JA	GPS, Photo, Habitat Assessment
			Otay Lakes	16-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
Emerican in the La			Santa Luz	8-May	BYM, KR	GPS, Photo, Habitat Assessment
Eryngium aristulatum var. parishii (San Diego Button Celery)	Second	None	Goat Mesa/Spring Canyon (J16-18)	21-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment
			Otay Lakes	16-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessment

City of San Diego MSCP Plant Monitoring: Priorities, Sites and Survey Dates

Species	Risk Group (SDSU '06)	Risk Group (Ogden '96)	Site	Survey Date	Staff	Methodology
Erysimum ammophilum						
(Coast Wallflower)	Fourth	None	Crest Canyon	11-Mar	BYM, KR	GPS, Photo, Habitat Assessmen
			North City West OS	16-Mar	BYM, KR	GPS, Photo, Habitat Assessmen
Monardella stoneana			,			
(Jennifer's Monardella)	Second	First	Marron Valley	2-Jun	BYM, KR, AB	GPS, Photo, Habitat Assessmen
					, ,	,
			Otay Lakes	2-Jun	BYM, KR, AB	GPS, Photo, Habitat Assessmer
Monardella viminea			,			
(Willowy Monardella)			Lopez Canyon	11-Jun	BYM, KR, DS, KP	GPS, Photo, Habitat Assessmer
			· · · · · · · · · · · · · · · · · · ·			,,
			Sycamore Canyon	4-Jun	BYM, KR, AB, CC, VM	GPS, Photo, Habitat Assessmen
			Flanders Canyon	11-Jun	BYM, KR, KP	GPS, Photo, Habitat Assessmer
Navarretia fossalis			Thandors Californ	11 buil	2111, 111, 111	
(Spreading Navarretia)	First	None	Carroll Canyon	2-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessmen
	1100	rione	· · · ·	*	2111, 111, 112	
			Goat Mesa/Spring Canyon (J16-18)	21-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessmen
			(310 10)	^	D I WI, HIL, HI	GI S, I noto, Hushar I issessing
			Nobel Drive	4/17/2015 & 5/21/2015	BYM, KR	GPS, Photo, Habitat Assessme
			Nobel Drive	5/21/2015	BTW, KK	OI 5, I noto, Habitat Assessmen
			Otay Lakes	16 Apr	BYM, KR, AB	GPS, Photo, Habitat Assessme
			Otay Lakes	16-Apr	D I M, KK, AD	GFS, FIIOlO, Habitat Assessmen
			Dahinhaad Didaa	7 4	DVM VD AD	GPS, Photo, Habitat Assessmen
Pogogyne abramsii			Robinhood Ridge	7-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessmen
(San Diego Mesa Mint)	Second	None	Correll Conver	2 4	DVM VD AD	CDC Dhote Habitat Assessment
	Second	None	Carroll Canyon	2-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessmen
			1 D:1	2.4		CDG DL & H L'AA
			Lopez Ridge	2-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessme
Pogogyne nudiuscula						
(Otay Mesa Mint)	First	None	Robinhood Ridge	7-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessmen
Rosa minutifolia				_		
(Baja Rose)	First	Third	Dennery Ranch	7-Apr	BYM, KR, AB	GPS, Photo, Habitat Assessme

Survey Staff

BYM = Betsy Miller, Senior Planner

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