

VI. MANAGEMENT RECOMMENDATIONS

-species not found at this site for several years;
consider treating non-native grasses and forbs and removing
thatch

*Post Fire: monitor recovery of CSS and treat weeds/grasses
as needed

VII. MANAGEMENT ACTIONS IN LAST YEAR

-none

VIII. CNDDDB SPECIES DETECTED & NOTES

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

CAGN just south of photopoint - point taken

* Bernardo Fire burned this site completely
on 5/13/14. Wire cages @ translocation
sites intact. Photopoint re-taken on 5/23/14.
Burn edge also mapped. Will need to
monitor the site for recovery of CSS -
manage non-native forbs/grasses as needed

***Dudleya variegata* (Variegated Dudleya)** **Santa Luz East, Pre-Fire**



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 East, Post-Fire**



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, Pre-Fire



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

***Dudleya variegata* (Variegated Dudleya) Santa Luz West, Post-Fire**



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

Dudleya variegata - Santa Luz



Area 2014: 0 sq. m.

Pop. Area 2001 - 2014
Max Area: 617.05 sq. m.
Min Area: 0 sq. m.



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



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Eryngium aristulatum var. *parishii*
San Diego Button Celery



© City of San Diego, 2005

Scientific Name: Eryngium aristulatum var. parishii MSP Occurrence ID: TBD

Preserve: Spring Canyon Open Space Occurrence Name: Goat Mesa/Spring Canyon #1

Date: 4/24/14 Time Start: 9:55 Time Finish: 10:15

Surveyors & Affiliation/Agency: KR, SP, WR, BM

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

SANDAG 2012 Vegetation Alliance/Association: Simmondsia chinensis Alliance
Simmondsia chinensis - Bahiopsis lacinata Alliance

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. 0 cm Max: 0 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: wk/2 Ave. Height? 12 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 9:55 AM Temp. Start: 70° Time Finish: 10:15 AM Temp. Finish: 70°

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

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>5</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>0</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

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

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

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: ERMR

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs + fences + gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

Public Utilities Dept installed 3500 ft of fencing to limit extensive Border Patrol/OKV roads in the area

VIII. CNDDDB SPECIES DETECTED & NOTES

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

blacktailed jackrabbit @ photopoint
LBV in Spring Canyon on road to site

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



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

Eryngium aristulatum - Goat Mesa/Spring Cyn Obs. 1



Area 2014: 174 sq. m.

 Eryngium aristulatum

Pop. Area 2011 - 2014
Max Area: 174 sq. m.
Min Area: 49.2 sq. m.

0 3.75 7.5 15
 Meters

Source: San GIS & City of San Diego Park & Rec
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Scientific Name: *Eryngium aristulatum* var. *parishii* MSP Occurrence ID: TBD
 Common Name: San Diego button celery CNDDB EO#: EO89 Translocated? no
 Preserve: Spring Canyon Open Space Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Goat Mesa/Spring Canyon #2 Sample Point #: 2
 Surveyors & Affiliation: Kim Roeland, Sean Paves, Betty Miller, Wendy Rogers - City of San Diego
 Date: 4/24/14 Time Start: 10:25 AM Time Finish: 10:45 AM

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

Plants/Sampling Area: 310 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 1272 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 689 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 3 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6329894.64 N: 1781861.518 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W70
 Location 1 (see coordinates above) S, SW, W, NW, N 1.1m 10° down 1301-1304 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eryngium aristulatum</i>	7							
	<i>Ligularia fasciculatum</i>	3							
	<i>Dioscorea chinensis</i>	7							
	<i>Cylindropuntia prolifera</i>	1							
	<i>Brassica nigra</i>	1							
✓	<i>Pentaurea melitensis</i>	3							
✓	<i>Erodium</i> sp.	17							
✓	<i>Avena</i> sp.	3							
✓	<i>Bromus mollis</i> ssp. r.	3							
	<i>Staginella diemascens</i>	1							
✓	<i>Salicella tetragus</i>	1							
	<i>Stipa pulchra</i>	1							
						Bare Ground:	<u>35</u>		
						Litter:	<u>25</u>		
						Rock:	<u>10</u>		

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

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Eryngium aristulatum var. parishii MSP Occurrence ID: TBD

Preserve: Spring Canyon Open Space Occurrence Name: Goat Mesa/Spring Canyon #2

Date: 4/24/14 Time Start: 10:25 Time Finish: 10:45

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

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

SANDAG 2012 Vegetation Alliance/Association: Simmondsia chinensis Alliance
Simmondsia chinensis - Bahiopsis laciniata Association

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

Cryptogamic Crust Cover: 2 Thatch Cover: 2 Thatch Depth: Ave. 3 cm Max: 5 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass/4 Ave. Height? 13 cm

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

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

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

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

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

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

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>4</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>3</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>4</u>		

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

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

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: ERAR

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs + fences + gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

Public Utilities Dept installed 3500 ft of fencing to limit extensive Border Patrol/OKV roads in the area

VIII. CNDDDB SPECIES DETECTED & NOTES

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

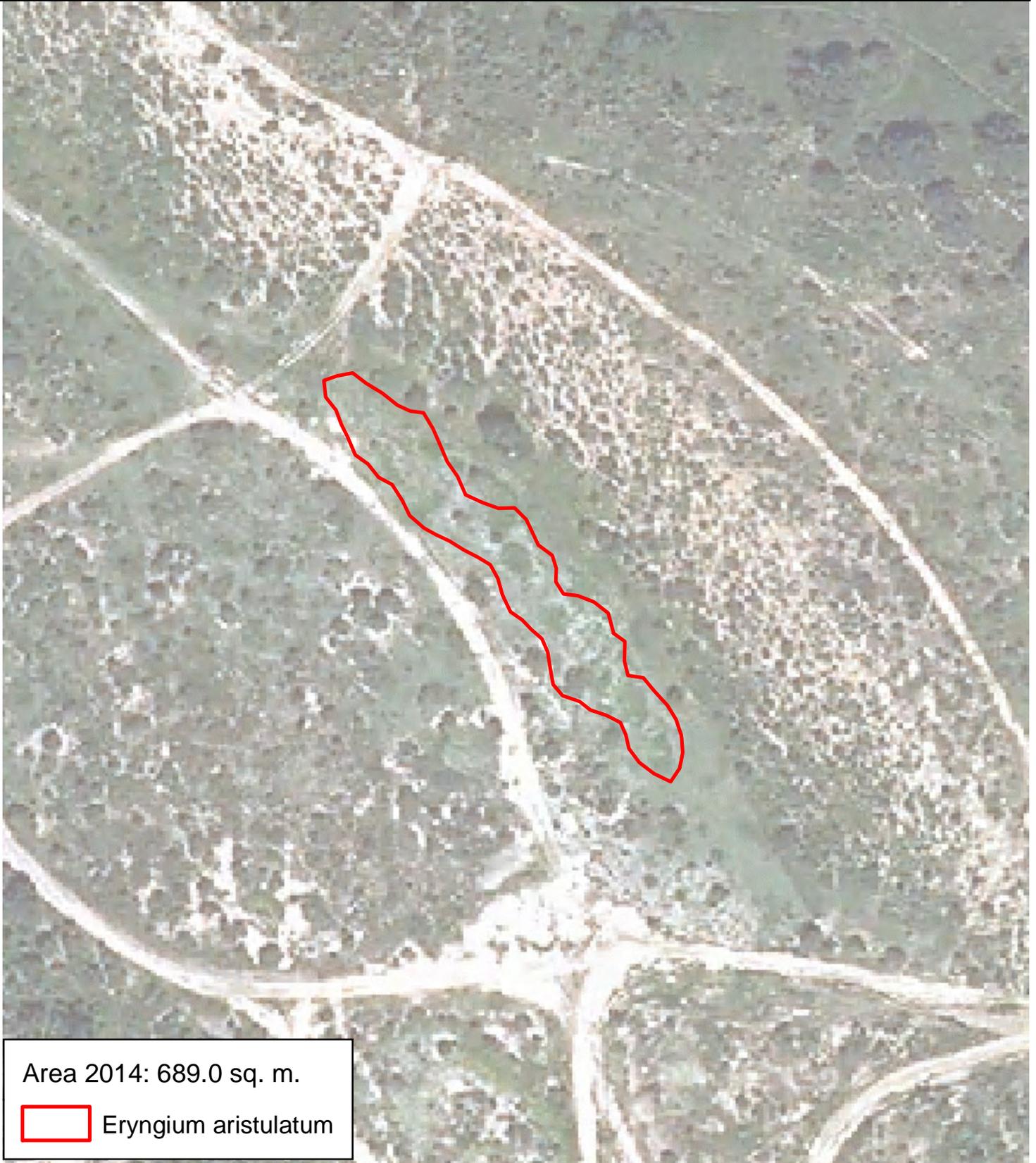
CAGN heard calling

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



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

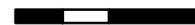
Eryngium aristulatum - Goat Mesa/Spring Cyn Obs. 2



Area 2014: 689.0 sq. m.

 Eryngium aristulatum

Pop. Area 2011 - 2014
Max Area: 689.0 sq. m.
Min Area: 424.56 sq. m.

0 5 10 20
 Meters

Source: San GIS & City of San Diego Park & Rec
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Scientific Name: *Eryngium aristulatum* var. *parishii* MSP Occurrence ID: TBD
 Common Name: San Diego button celery CNDDB EO#: EO18 Translocated? no
 Preserve: Otay Lakes Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Otay Lakes Sample Point #: 1
 Surveyors & Affiliation: Kim Roeland, Sean Pauer, Wendy Rogers, Betsy Miller - City of San Diego
 Date: 4/22/14 Time Start: 10:55 Time Finish: 11:50

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

Plants/Sampling Area: see below: ~100 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 5100 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 1875 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 5 Flowering: 1 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No About 100 w/in 10m of photo pt, but population is
 Species Found in Maximum Extent? Yes No contiguous
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6356775.9 N: 1807379.03 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) _____ NE, E, SE _____ 1.1m _____ 10° down _____ 54-58 _____ S/OS/MSCP
 Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____
 Location 2 [Coordinates] _____ Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eryngium aristulatum</i>	7			✓	<i>Cotula</i> sp.	1		
	<i>Amispon glaber</i>	2							
	<i>Isocoma menziesii</i>	1							
	<i>Eriogonum fasciculatum</i>	2							
✓	<i>Erodium</i> sp.	5							
✓	<i>Hypochaeris glabra</i>	1							
	<i>Deinandra fasciculata</i>	1							
	<i>Lasthenia coronaria</i>	1							
✓	<i>Salsola</i> sp.	1							
	<i>Chlorogalum parviflorum</i>	1							
	<i>Pudleya variegata</i>	1							
	<i>Cressa traxillensis</i>	1							
	<i>Microseris douglasii</i>	1							
						Bare Ground:	5		
✓	<i>Festuca</i> sp.	1				Litter:	1		
	<i>Calochortus splendens</i>	1				Rock:	5		

Total % Cover: 10 % Herb Cover: 10 % Shrub Cover: 1 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Eryngium aristulatum var. parishii MSP Occurrence ID: TBD

Preserve: Otay Lakes Occurrence Name: Otay Lakes

Date: 4/22/14 Time Start: 10:55 Time Finish: 11:50

Surveyors & Affiliation/Agency: BM, KR, WR, SP

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

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica-Eriogonum fasciculatum Alliance

Artemisia californica-Eriogonum fasciculatum - Opuntia littoralis/Dudleya (edulis) Association

Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 2 cm Max: 4 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass - 2 | Deinandra - 2 Ave. Height? 6 cm

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

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

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

Surrounding Land Use at Site (>Maximum Extent): open space ; lake / Reservoir

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

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

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>1</u>
Non-Native Grasses	<u>5</u>	Trampling	<u>1</u>	Erosion	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

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

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? 2003 Unknown Burn Year: _____

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

Type of Trail Use?

- Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: EPAR

Date: 4/22/14

VI. MANAGEMENT RECOMMENDATIONS

- continue to maintain access control - signs, gate, vehicle barriers
- Moderate cover non-native grasses and forbs -
treat as necessary

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained access control - signs, gate, vehicle barriers

VIII. CNDDDB SPECIES DETECTED & NOTES

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

Population did well despite dry year

Eryngium aristulatum* var. *parishii
(San Diego Button Celery)
Otay Lakes



Panorama from Northern edge of population, facing Northeast, East, Southeast.
Panorama location is 6356775.9 1807379.03 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Eryngium aristulatum - Otay Lakes



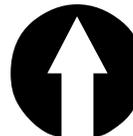
Area 2014: 1875 sq. m.

 Eryngium aristulatum

Pop. Area 2013-2014
Max Area: 14081.55 sq. m.
Min Area: 1875.0 sq. m.

0 25 50 100
 Meters

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



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Monardella stoneana
Jennifer's Monardella



© City of San Diego, 2005

Scientific Name: Monardella stoneana MSP Occurrence ID: MOST_3MAVA002
 Common Name: Jennifer's monardella CNDDB EO#: EO6 Translocated? No
 Preserve: Marron Valley Mitigation Park Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Marron Valley Sample Point #: 1
 Surveyors & Affiliation: Joby Miller, Kim Redland, Wendy Rogers, Sean Paver - City of San Diego
 Date: 6/18/14 Time Start: 9:45 AM Time Finish: 10:30 AM

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

Plants/Sampling Area: 2 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: did not count due to safety concerns Exact Count Estimate (1,000s, 10,000s) Uncertainty? n/a
 Area of Current Mapped Extent: n/a units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 4 Flowering: 4 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 5
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No _____
 If not, why (if reason known or suspected)? _____
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector: _____ Collection Number: _____ Museum/Herbarium: _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates: E: 6409398.720 N: 1790116.116 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) _____ SE, S, SW _____ 1.1m _____ 5° up _____ 1783-1784 S/OS/MSCP
 Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____
 Location 2 [Coordinates] _____ Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Monardella stoneana</i>	1				<i>Eriophyllum confertiflorum</i>	1		
	<i>Brickellia californica</i>	3				<i>Ambrosia psilostachya</i>	1		
	<i>Zaccharis sarothroides</i>	7				<i>Pentagramma triangularis</i>	1		
	<i>Lonicera subspicata</i>	1				<i>Pseudonaphthalium biokettii</i>	1		
	<i>Artemisia californica</i>	1				<i>Pseudognaphalium leucotens</i>	1		
	<i>Ephedra</i> sp.	2				<i>Carduus pycnocephalus</i>	1		
	<i>Quercus cedrosensis</i>	5							
	<i>Quercus berberidifolia</i>	5							
	<i>Malosma laurina</i>	3							
✓	<i>Avena</i> sp.	3							
	<i>Budleya puberulenta</i>	1							
✓	<i>Bromus diandrus</i>	3							
✓	<i>Bromus maritimus</i>	1				Bare Ground:	7		
	<i>Eriogonum fasciculatum</i>	1				Litter:	5		
	<i>Stipa</i> sp.	1				Rock:	50		

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

Scientific Name: Monardella stoneana MSP Occurrence ID: MOST_3MAVA002

Preserve: Marron Valley Mitigation Park Occurrence Name: Marron Valley

Date: 6/18/14 Time Start: 9:45 Time Finish: 10:30

Surveyors & Affiliation/Agency: BM, KB, SP, WR

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

SANDAG 2012 Vegetation Alliance/Association: Baccharis sarothroides Provisional Alliance
Baccharis sarothroides Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 1 Thatch Cover: 2 Thatch Depth: Ave. 3 cm Max: 5 cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: non-native grasses/2 Ave. Height? 12 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 9:50 Temp. Start: 75° Time Finish: 10:20 Temp. Finish: 75°

Ant Sample Collected?: Yes No Ant Sample #: n/a Ant Station Photo #: 1787

Disturbances (rank each as 1-6):

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

Fuel Modification Zone/Fire Break 1
Road Construction/Maintenance 1
Vegetation Clearing 1
ORV: 1 If Observed, List Type(s) of ORV/Bike Activity: _____
Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2007 Unknown Burn Year: _____
Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

MSP - Management Needs and Notes

Occurrence ID: MOST-3MAVA 002

Species: Monardella Stoneana

Date: 06/18/14

VI. MANAGEMENT RECOMMENDATIONS

NONE

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintain gates for overall site

VIII. CNDDDB SPECIES DETECTED & NOTES

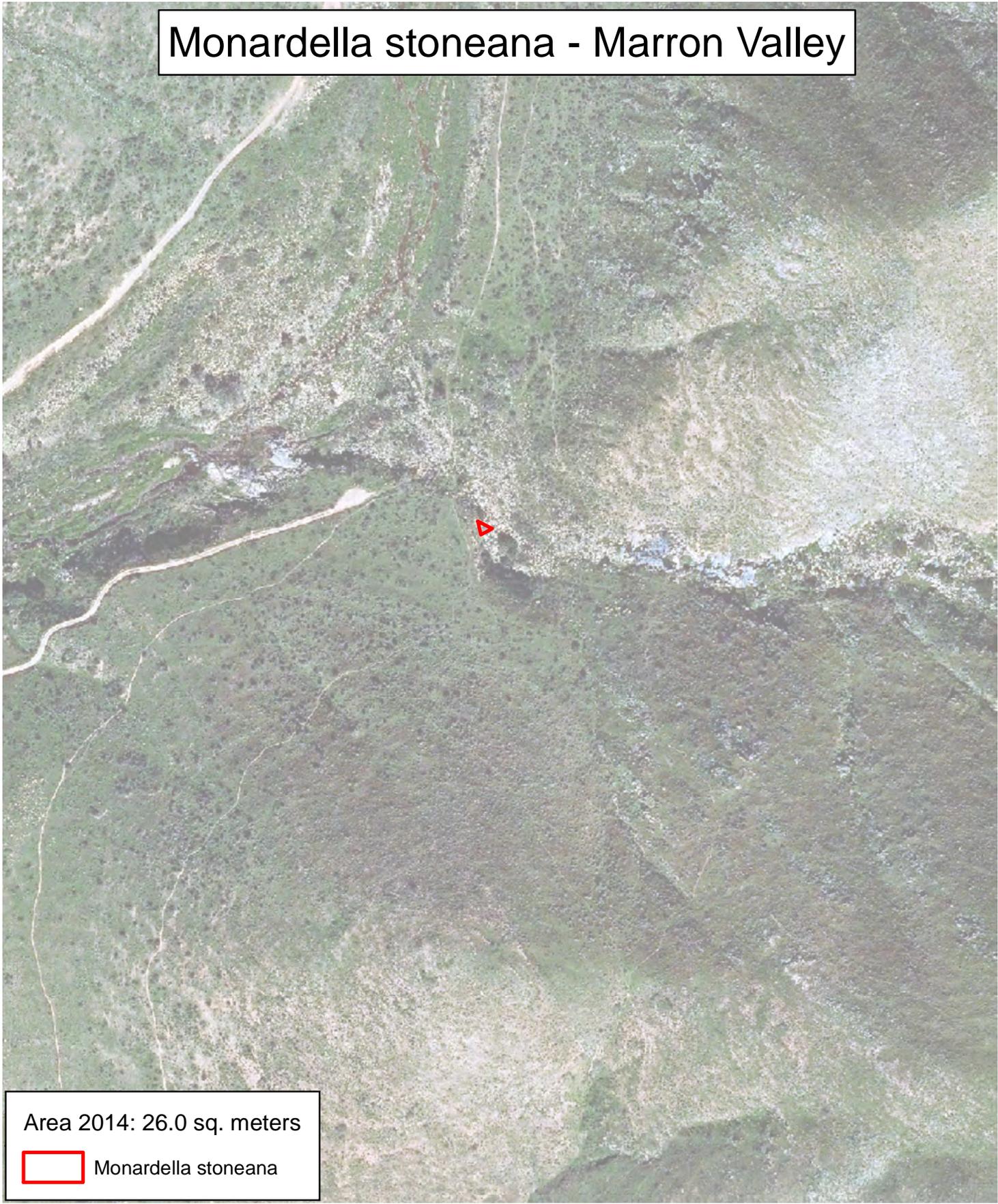
List any plant or animal species to add to the CNDDDB:

***Monardella stoneana* (Jennifer's Monardella) Marron Valley**



Panorama from Northern edge of population, facing Southeast, South, Southwest
Panorama location is 6409398.720 1790116.116 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella stoneana - Marron Valley

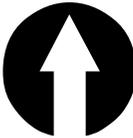


Area 2014: 26.0 sq. meters
 Monardella stoneana

Pop. Area 2003 - 2014
Max Area: 13959.5 sq. m.
Min Area: 26.0 sq. m.



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



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Scientific Name: Monardella stoneana MSP Occurrence ID: MOST_30TLA005
 Common Name: Jennifer's monardella CNDDDB EO#: EO5 Translocated? no
 Preserve: Otay Lakes Cornerstone Lands Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Otay Lakes Sample Point #: 1
 Surveyors & Affiliation: Kim Rodland, Betsy Miller, Sean Paver, Wendy Rogers - City of SD
 Date: 6/18/14 Time Start: 12:45 Time Finish: 1:10 Keith Green-SANDAG

Keith Green-SANDAG

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

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

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

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6357735.580 N: 1805911.58 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax optio W90
 Location 1 (see coordinates above) Direction (facing): NE, E, SE Height: 1.1m Camera Angle: 1° down Photo #: 1788-1790 File location: _____
 Location 2 [Coordinates] _____ Direction (facing) _____ Height _____ Camera Angle _____ Photo # _____ File location _____

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Monardella stoneana</i>	1			✓	<i>Bromus diandrus</i>	1		
	<i>Malosma laurina</i>	3				<i>Funastrum cyranchooides</i>	1		
	<i>Bahiopsis lacinata</i>	5				<i>var. hartwegii</i>			
	<i>Baccharis salicifolia</i>	1							
	<i>Eriogonum fasciculatum</i>	2							
	<i>Iva hayesiana</i>	35							
	<i>Heteromeles arbutifolia</i>	1							
	<i>Lonicera subspicata</i>	1							
	<i>Artemisia californica</i>	1							
✓	<i>Tamarisk sp.</i>	1							
✓	<i>Bromus madritensis</i>	5							
✓	<i>Avena sp.</i>	1							
✓	<i>Brachypodium distachyon</i>	1				Bare Ground:	10		
✓	<i>Brassica nigra</i>	1				Litter:	5		
✓	<i>Centaurea melitensis</i>	1				Rock:	15		

Total % Cover: 50 % Herb Cover: 40 % Shrub Cover: 10 % Tree Cover: 1

Scientific Name: <u>Monardella stoneana</u>	MSP Occurrence ID: <u>MOST_3OTLA005</u>	
Preserve: <u>Otay Lakes Cornerstone Lands</u>	Occurrence Name: <u>Otay Lakes</u>	
Date: <u>6/18/14</u>	Time Start: <u>12:45</u>	Time Finish: <u>1:10</u>
Surveyors & Affiliation/Agency: <u>BM, KR, SP, WR - City of SD ; KLG - SANDAG</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Iva hayesiana Special Stands;</u> <u>Iva hayesiana Special Stands</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>3</u> Thatch Depth: Ave. <u>2</u> cm Max: <u>5</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>unk: 2</u> Ave. Height? <u>50</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>Open Space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>1</u> Time Start: <u>12:45</u> Temp. Start: <u>80°F</u> Time Finish: <u>1:01</u> Temp. Finish: <u>80°F</u>		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: <u>N/A</u> Ant Station Photo #: <u>1791</u>		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>3</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>6</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>3</u> If Sign of Recent Fire: Year Burned? <u>2007</u> Unknown Burn Year: _____		
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Monardella stoneana* (Jennifer's Monardella) Otay Lakes**



Panorama from Northern edge of population, facing Northeast, East, Southeast.
Panorama location is 6357735.58 1805911.58 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella stoneana - Otay Lakes



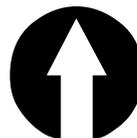
Area 2014: 2.0 sq. m

 Monardella stoneana

Pop. Area 2002 - 2014
Max Area: 7.98 sq. m.
Min Area: 0 sq. m.

0 2.5 5 10
 Meters

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



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Monardella viminea
Willowy Monardella



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Monardella viminea MSP Occurrence ID: MOLIV_6LOCA004
 Common Name: Willow monardella CNDDB EO#: EO1 Translocated? partial
 Preserve: Los Penasquitos Canyon Preserve Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Lopez Canyon- West Terrace Obs. #1 Sample Point #: 1
 Surveyors & Affiliation: Kim Ireland, Betty Miller, Inland Bios, Sara Mezzaris - City of San Diego
 Date: 6/12/14 Time Start: 1:25 pm Time Finish: 1:55 pm

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

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

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6275731.670 N: 1913221.28 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optia W90
 Location 1 (see coordinates above) S, SW, W 1.1m 5° down 1731-1735 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eriogonum fasciculatum</i>	7							
	<i>Archaris sarcocoides</i>	5							
	<i>Prunus ilicifolia</i>	5							
	<i>Brickellia californica</i>	2							
	<i>Cercocarpus minutiflorus</i>	7							
✓	<i>Helianthus scaberrimus</i>	1							
✓	<i>Bansica nigra</i>	5							
✓	<i>Pentstemon heterophyllus</i>	3							
✓	<i>Bromus madritensis</i>	5							
✓	<i>Erodium sp.</i>	1							
✓	<i>Bromus diandrus</i>	5							
						Bare Ground:	20		
						Litter:	5		
						Rock:	15		

Total % Cover: 60 % Herb Cover: 30 % Shrub Cover: 30 % Tree Cover: 0

Scientific Name: <u>Monardella <i>viminea</i></u>	MSP Occurrence ID: <u>MOLIV_6LOCA004</u>	
Preserve: <u>Los Penasquitos Canyon Preserve</u>	Occurrence Name: <u>Lopez Canyon- West Terrace Obs. #1</u>	
Date: <u>6/12/14</u>	Time Start: <u>1:25</u> Time Finish: <u>1:55</u>	
Surveyors & Affiliation/Agency: <u>RS, BA, RS, JM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Cercocarpus minutiflorus alliance; Cercocarpus minutiflorus provisional association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>3</u> cm Max: <u>5</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>non-native grass - 3</u> Ave. Height? <u>5</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space, residential</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>1</u> Time Start: <u>1:30 pm</u> Temp. Start: <u>75°</u> Time Finish: <u>1:53 pm</u> Temp. Finish: <u>75°</u>		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: <u>n/a</u> Ant Station Photo #: <u>1736</u>		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>3</u> Non-Native Grasses <u>4</u> Non-Native Woody Plants <u>1</u> Competitive Native Plants <u>1</u> Dumping/Trash <u>1</u> Encampments <u>1</u>	Feral Pig Activity <u>1</u> Trampling <u>1</u> Vandalism <u>1</u> Current Grazing <u>1</u> Historic Grazing <u>1</u> Historic Agriculture <u>1</u>	Altered Hydrology <u>6</u> Erosion <u>3</u> Urban Runoff <u>3</u> Slope Movement <u>1</u> Soil Compaction <u>1</u>
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV: <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

***Monardella viminea* (Willow Monardella)** **Lopez Canyon – West Terrace Observation # 1**



Panorama from Southern edge of population, facing South, Southwest, West.
Panorama location is 6275731.67 1913221.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Lopez Cyn West Terrace #1



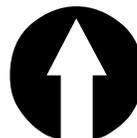
Area 2014: 0 sq. m.

 Monardella viminea

Pop. Area 2004 - 2014
Max Area: 1459.15 sq. m.
Min Area: 0 sq. m

0 4 8 16
 Meters

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



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Scientific Name: Monardella viminea MSP Occurrence ID: MOLIV_6LOCA004
 Common Name: Willow monardella CNDDB EO#: EO1 Translocated? partial
 Preserve: Los Penasquitos Canyon Preserve Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Lopez Canyon- East of Bridge Obs. #2 Sample Point #: 2
 Surveyors & Affiliation: Kim Roland, Betsy Miller, Roland Egan, Sara Meszaros - City of San Diego
 Date: 6/12/14 Time Start: 11:30 AM Time Finish: 12:00 noon

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

Plants/Sampling Area: 8 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 8 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 102.0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 4 Flowering: 5 Fruiting: 1 Dead: _____
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)? _____
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector: _____ Collection Number: _____ Museum/Herbarium: _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6278287.281 N: 1913733.66 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) NE, E, SE 1.1m 5° down 1762-1715 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 (Coordinates) Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Monardella viminea</u>	<u>2</u>							
	<u>Erigeron fasciculatus</u>	<u>12</u>							
	<u>Saccharis arctostyles</u>	<u>12</u>							
	<u>Opuntia sp.</u>	<u>3</u>							
	<u>Atriplex palmerii</u>	<u>5</u>							
	<u>Toxicodendron diversilobum</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Hirschfeldia incana</u>	<u>2</u>							
	<u>Trickellia californica</u>	<u>2</u>							
	<u>Cercocarpus minutiflorus</u>	<u>7</u>							
<input checked="" type="checkbox"/>	<u>Bromus madritensis</u>	<u>5</u>							
<input checked="" type="checkbox"/>	<u>Bromus diandrus</u>	<u>7</u>							
	<u>Salvia apiana</u>	<u>1</u>							
	<u>Prunus ilicifolia</u>	<u>2</u>							
<input checked="" type="checkbox"/>	<u>Centaurea melitensis</u>	<u>5</u>							
						Bare Ground:	<u>35</u>		
						Litter:	<u>10</u>		
						Rock:	<u>4</u>		

Total % Cover: 65 % Herb Cover: 30 % Shrub Cover: 35 % Tree Cover: 0

Scientific Name: Monardella viminea MSP Occurrence ID: MOLIV_6LOCA004

Preserve: Los Penasquitos Canyon Preserve Occurrence Name: Lopez Canyon- East of Bridge Obs. #2

Date: 6/12/14 Time Start: 11:30 Time Finish: 12:00

Surveyors & Affiliation/Agency: KR, BM, RS, SA

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

SANDAG 2012 Vegetation Alliance/Association: Artemisia californica - Eriogonum fasciculatum Alliance

Artemisia californica - Eriogonum fasciculatum - Opuntia littoralis / Dudleya (edulis) Association

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

Cryptogamic Crust Cover: 1 Thatch Cover: 2 Thatch Depth: Ave. 3 cm Max: 6 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Crotalaria sp/3 Ave. Height? 12 cm

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

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

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

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

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

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

Disturbances (rank each as 1-6):

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

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

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

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

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



Panorama from Southeastern edge of population, facing Northeast, East, Southeast.
Panorama location is 6278287.28 1913733.66 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Lopez Cyn West Terrace #2



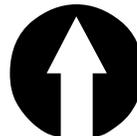
Area 2014: 102.0 sq. m.

 Monardella viminea

Pop. Area 2003 - 2014
Max Area: 435.77 sq. m.
Min Area: 1 sq. m

0 5 10 20
 Meters

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



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MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Monardella viminea MSP Occurrence ID: MOLIV_6LOCA004
 Common Name: Willow monardella CNDDB EO#: EO1 Translocated? no
 Preserve: Los Penasquitos Canyon Preserve Management Unit: 6
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Lopez Canyon- East of Bridge Obs. #3 Sample Point #: 3
 Surveyors & Affiliation: Kim Roeland, Baby Miller, Sara Messeras - City of San Diego
 Date: 6/12/14 Time Start: 9:50 AM Time Finish: 10:35 AM

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

Plants/Sampling Area: 2 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 2 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 11.0 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No _____
 If not, why (if reason known or suspected)? _____
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: _____
 Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6279603.640 N: _____ 1914641.49 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) SW, W, NW 1.1m 5° down 1674-1678 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Monardella viminea</i>	2			✓	<i>Foeniculum vulgare</i>	1		
	<i>Iva haysiana</i>	5							
	<i>Toxicodesmia diversilobum</i>	7							
	<i>Cercocarpus minutiflorus</i>	35							
	<i>Baccharis sarothroides</i>	7							
	<i>Eriogonum fasciculatum</i>	3							
	<i>Arenaria californica</i>	2							
✓	<i>Brassica nigra</i>	3							
✓	<i>Avena barbata</i>	5							
✓	<i>Festuca myuros</i>	7							
✓	<i>Bromus horridus</i>	2							
	<i>Pseudognaphalium beneolens</i>	1							
✓	<i>Bromus stenderus</i>	2				Bare Ground:			3
✓	<i>Brachypodium distachyon</i>	2				Litter:			5
✓	<i>Hordeum murinum</i>	1				Rock:			40

Total % Cover: 65 % Herb Cover: 25 % Shrub Cover: 40 % Tree Cover: 0

Scientific Name: Monardella viminea MSP Occurrence ID: MOLIV_6LOCA004
 Preserve: Los Penasquitos Canyon Preserve Occurrence Name: Lopez Canyon- East of Bridge Obs. #3
 Date: 6/12/14 Time Start: 9:50 Time Finish: 10:35
 Surveyors & Affiliation/Agency: KK, SM, SM

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

SANDAG 2012 Vegetation Alliance/Association: Cercocarpus montanus Alliance
Cercocarpus minutiflorus Provisional Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: non-native grasses/3 Ave. Height? 15 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

Argentine Ant Abundance at Bait Station (1-4): 2 Time Start: 9:55 AM Temp. Start: 75° Time Finish: 10:31 AM Temp. Finish: 75°
 Ant Sample Collected?: Yes No Ant Sample #: 6, 7 Ant Station Photo #: 1700-1702 * #6 on nearby book not cord

Disturbances (rank each as 1-6):

Non-Native Forbs	<u>3</u>	Feral Pig Activity	<u>1</u>	Altered Hydrology	<u>6</u>
Non-Native Grasses	<u>4</u>	Trampling	<u>1</u>	Erosion	<u>6</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>	Urban Runoff	<u>6</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>	Slope Movement	<u>1</u>
Dumping/Trash	<u>2</u>	Historic Grazing	<u>1</u>	Soil Compaction	<u>1</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>		

causing no water runoff currently in channel

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

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

***Monardella viminea* (Willowy Monardella)**

Lopez Canyon – East of Bridge Observation # 3



Panorama from Southwestern edge of population, facing Southwest, West, Northwest.
Panorama location is 6279603.64 1914641.49 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Lopez Canyon East #3



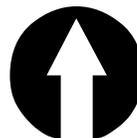
Area 2014: 11.0 sq. m.

 Monardella viminea

Pop. Area 2003 - 2014
Max Area: 290.5 sq. m.
Min Area: 1 sq. m



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



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Scientific Name: *Monardella viminea* MSP Occurrence ID: MOLIV_4SYCA001
 Common Name: Willow monardella CNDB EO#: EO1 Translocated? *no*
 Preserve: Sycamore Canyon Management Unit: 4
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Sycamore Canyon Sample Point #: 1
 Surveyors & Affiliation: *Kim Prebend, Boby Miller, Wendy Rogers - City of San Diego*
 Date: *6/16/14* Time Start: *10:05 AM* Time Finish: *10:40 AM*

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

Plants/Sampling Area: 13 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 85 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 419 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 4 Flowering: 5 Fruiting: 1 Dead: 2
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6334291.640 N: 1916600.963 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio K190
 Location 1 (see coordinates above) SE, S, SW 1.1m 5° down 1731-1740 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Monardella viminea</i>	10				<i>Selaginella cinerascens</i>	1		
	<i>Eriogonum fasciculatum</i>	10				<i>Elymus felisus</i>	1		
	<i>Allium angustifolium</i>	3							
	<i>Artemisia californica</i>	2							
	<i>Sida sp.</i>	7							
	<i>Calystegia macrostegia</i>	2							
	<i>Sida mellifera</i>	2							
✓	<i>Erodium sp. (dead)</i>	3							
	<i>Selaginella bigelovii</i>	2							
	<i>Stipa sp.</i>	1							
✓	<i>Brassica nigra</i>	1							
✓	<i>Bromus madritensis</i>	2							
✓	<i>Avena sp.</i>	1				Bare Ground:	15		
	<i>Hypochaeris glabra (dead)</i>	1				Litter:	7		
✓	<i>Bromus diandrus</i>	12				Rock:	25		

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

Scientific Name: Monardella viminea MSP Occurrence ID: MOLIV_4SYCA001
 Preserve: Sycamore Canyon Occurrence Name: Sycamore Canyon
 Date: 6/16/14 Time Start: 10:05 Time Finish: 10:40
 Surveyors & Affiliation/Agency: KR, BM, NR

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

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

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 4 cm Max: 10 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Avena sp - 2 / Bromus diandrus - 3 Ave. Height? 15 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

Argentine Ant Abundance at Bait Station (1-4): 1 Time Start: 10:15 AM Temp. Start: 75° Time Finish: 10:36 Temp. Finish: 75°
 Ant Sample Collected?: Yes No Ant Sample #: n/a Ant Station Photo #: 1741

Disturbances (rank each as 1-6):

Non-Native Forbs <u>3</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>4</u>	Trampling <u>1</u>	Erosion <u>4</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>6</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	

Fuel Modification Zone/Fire Break 1
 Road Construction/Maintenance 1
 Vegetation Clearing 1
 ORV: 1 If Observed, List Type(s) of ORV/Bike Activity: _____
 Evidence of Recent Fire 6 If Sign of Recent Fire: Year Burned? 2007 Unknown Burn Year: _____
 Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown
 Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

MSP - Management Needs and Notes

Occurrence ID: MOLIV-4SYCAP01 Species: Monardella ^{virinea} ~~st~~

Date: 06/16/14 Page 3

VI. MANAGEMENT RECOMMENDATIONS

implement erosion control measures upon adoption of NRMP

VII. MANAGEMENT ACTIONS IN LAST YEAR

included erosion control measures in draft Mission Trails Regional Park Natural Resource Management Plan

VIII. CNDDDB SPECIES DETECTED & NOTES

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

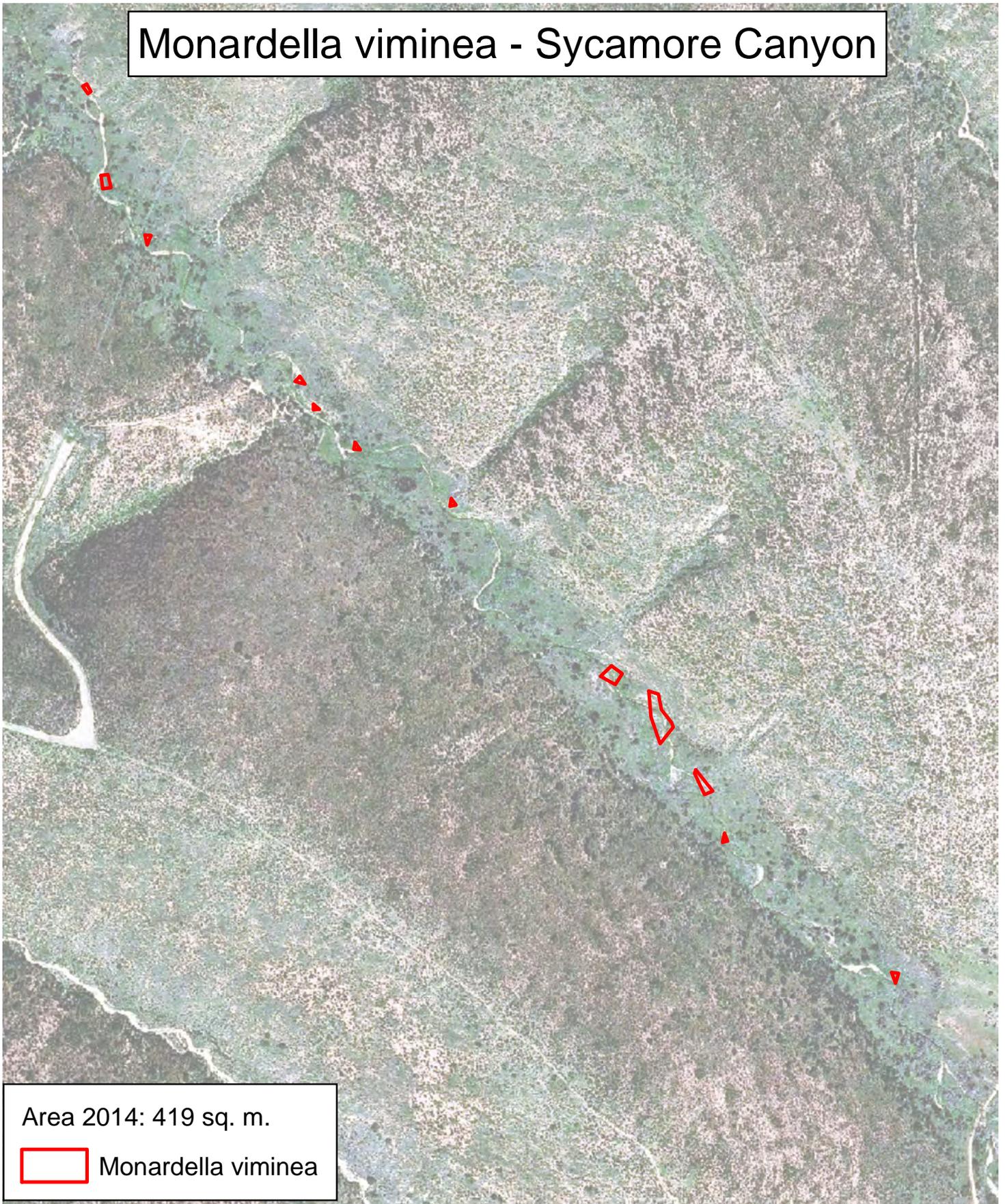
morning dusky wing
European honey bee
sweet bee

***Monardella viminea* (Willow Monardella) Sycamore Canyon**



Panorama from Southern end of population, facing Southeast, South, Southwest.
Panorama location is 6334297.64 1916600.96 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Monardella viminea - Sycamore Canyon

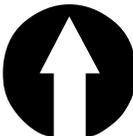


Area 2014: 419 sq. m.
 Monardella viminea

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



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



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Navarretia fossalis
Spreading Navarretia



© City of San Diego, 2003

Scientific Name: Navarretia fossalis MSP Occurrence ID: TBD

Preserve: Carroll Canyon Occurrence Name: Carroll Canyon

Date: 4/21/14 Time Start: 10:50 Time Finish: 11:15

Surveyors & Affiliation/Agency: KR, SM, BM

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

SANDAG 2012 Vegetation Alliance/Association: Acaenostoma fasciculatum Alliance / Acaenostoma fasciculatum Southern Maritime Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
 Cryptogamic Crust Cover: 3 Thatch Cover: 2 Thatch Depth: Ave. 2 cm Max: 3 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Dinandra fasciculata / 3 Ave. Height? 12 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

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

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

Disturbances (rank each as 1-6):

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

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

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

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: NAFO

Page 3

Date: 4/21/14

VI. MANAGEMENT RECOMMENDATIONS

Ø competition from weeds due to dry year

VII. MANAGEMENT ACTIONS IN LAST YEAR

*continued to maintain access control
quarterly trash removal*

VIII. CNDDB SPECIES DETECTED & NOTES

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

Multiple horizontal lines for listing species.

***Navarretia fossalis* (Spreading Navarretia) Carroll Canyon**



Panorama from Northern edge of population, facing South, Southwest, West, Northwest.
Panorama location is 6282852.270 1907450.808 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Carroll Canyon

Area 2014: 0 sq. m.

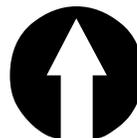


Navarretia fossalis

Pop. Area 2012-2014
Max Area: 4.37 sq. m.
Min Area: 0 sq. m

0 2.5 5 10
Meters

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



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SanGIS

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: <u>Navarretia fossalis</u>	MSP Occurrence ID: <u>TBD</u>	
Preserve: <u>Spring Canyon Open Space</u>	Occurrence Name: <u>Goat Mesa/Spring Canyon #1</u>	
Date: <u>4/28/14</u>	Time Start: <u>9:55</u> Time Finish: <u>10:15</u>	
Surveyors & Affiliation/Agency: <u>KR, SP, WR, BM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Simmondsia chinensis Alliance</u> <u>Simmondsia chinensis - Bahiopsis lacinata Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>1</u> Thatch Cover: <u>1</u> Thatch Depth: Ave. <u>0</u> cm Max: <u>0</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>wak/2</u> Ave. Height? <u>12</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>1</u> Time Start: <u>9:55 am</u> Temp. Start: <u>70°</u> Time Finish: <u>10:15 am</u> Temp. Finish: <u>70°</u>		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>5</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>3</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>0</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>2</u>	If Observed, List Type(s) of ORV/Bike Activity: <u>Border Patrol/ORY</u>	
Evidence of Recent Fire <u>1</u>	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____	
Trails <u>2</u>	If Trails are Present, are They Authorized? <input checked="" type="checkbox"/> Yes / No / Unknown	
Type of Trail Use?	<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input checked="" type="checkbox"/> Service Vehicles	
Overall Site Quality (see page 5): <input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: NAFO

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs + fences + gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

Public Utilities Dept installed 3500 ft of fencing to limit extensive Border Patrol/OLV roads in the area

VIII. CNDDDB SPECIES DETECTED & NOTES

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

*blacktailed jack rabbit @ photo point
LBV in Spring Canyon on road to site*

***Navarretia fossalis* (Spreading Navarretia) Goat Mesa/Spring Canyon**



Panorama from Southeastern edge of population, facing South, West, North.
Panorama location is 6330499.71 1781402.49 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Goat Mesa/Spring Canyon



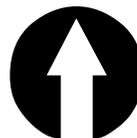
Area 2014: 0 sq. m.

 Navarretia fossalis

Pop. Area 2003-2014
Max Area: 1930.4 sq. m.
Min Area: 0 sq. m

0 4.75 9.5 19
 Meters

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



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Scientific Name: *Navamnetia fossalis* MSP Occurrence ID: TBD
 Common Name: *Spreading Navamnetia* CNDDDB EO#: EO90 Translocated? *no*
 Preserve: Rose Canyon Open Space Management Unit: *2*
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Nobel Drive Sample Point #: *1*
 Surveyors & Affiliation: *Kim Roeland, Beth Miller, Sara Messias - City of San Diego*
 Date: *4/21/14* Time Start: *2:30 pm* Time Finish: *3:10 pm*

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

Plants/Sampling Area: *1* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *1* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *2* *m²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *1* Flowering: *1* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *7*
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No *low rainfall*
 If not, why (if reason known or suspected)?

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

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates; E: *6271105.37* N: *1896318.834* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax W90*
 Location 1 (see coordinates above) Direction (facing) *NW, W, SW, S* Height *1.1m* Camera Angle *20° down* Photo # *1239-1244* File location *S/OS/MSCP*
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Navamnetia fossalis</i>	<i><1</i>							
	<i>Coteln setigerus</i>	<i>1</i>							
	<i>Deinandra fasciculata</i>	<i>7</i>							
	<i>Apiastrum angustifolium</i>	<i><1</i>							
<input checked="" type="checkbox"/>	<i>Bromus horolaceus</i>	<i>1</i>							
	<i>Ptilothraupis brevissimus</i>	<i>10</i>							
<input checked="" type="checkbox"/>	<i>Hypochaeris glabra</i>	<i>3</i>							
<input checked="" type="checkbox"/>	<i>Cotula coronopifolia</i>	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Erodium sp.</i>	<i>5</i>							
<input checked="" type="checkbox"/>	<i>Argemone arvensis</i>	<i>1</i>							
	<i>Marcus dubius</i>	<i>1</i>							
	<i>Juncus bufonius</i>	<i>1</i>							
	<i>Ptilothraupis tenellus</i>	<i>1</i>				Bare Ground:	<i>30</i>		
	<i>Eriogonum fasciculatum</i>	<i>5</i>				Litter:	<i>40</i>		
						Rock:	<i>10</i>		

Total % Cover: *25* % Herb Cover: *20* % Shrub Cover: *5* % Tree Cover: *0*

Scientific Name: Brodiaea orcuttii MSP Occurrence ID: BROR_2NOBD 002

Preserve: Rose Canyon Open Space Occurrence Name: Nobel Drive

Date: 4/21/14 Time Start: 2:30 Time Finish: 3:10

Surveyors & Affiliation/Agency: KR, BVA, SM

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

SANDAG 2012 Vegetation Alliance/Association: Eriogonum fasciculatum Alliance/Eriogonum fasciculatum Association

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

Cryptogamic Crust Cover: 1 Thatch Cover: 2 Thatch Depth: Ave. 2 cm Max: 2 cm

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

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

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

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

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

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

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

Disturbances (rank each as 1-5):

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

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 5 non-native species removal for restoration project

ORV/Mountain Bike Activity 2 If Observed, List Type(s) of ORV/Bike Activity: legal mtn bike use

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

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

Type of Trail Use? Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: BOROR

Page 3

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

continue habitat enhancement efforts

VII. MANAGEMENT ACTIONS IN LAST YEAR

habitat enhancement (weeding + vernal pool recontouring) by SANDAG EMP grant (2007-2008), City (2009), and CalTrans mitigation project (2013-2014)

VIII. CNDDDB SPECIES DETECTED & NOTES

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

Blank lined area for listing species.

***Navarretia fossalis* (Spreading Navarretia) Nobel Drive**



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

Navarretia fossalis - Nobel Drive

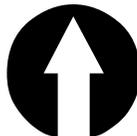


Area 2014: 2 sq. m.
 Navarretia fossalis

Pop. Area 2012 - 2014
Max Area: 11.262 sq. m.
Min Area: 0 sq. m



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



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SanGIS

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Navarretia fossalis MSP Occurrence ID: TBD
 Common Name: Spreading navarretia CNDB EO#: none Translocated? No
 Preserve: Otay Lakes Management Unit: MU3
 Land Owner: City of San Diego Land Manager: City of San Diego PUD
 Occurrence Name: Otay Lakes Sample Point #: 1
 Surveyors & Affiliation: Kim Ireland, Sean Faver, Betty Miller, Wendy Rogers - City of San Diego
 Date: 4/22/14 Time Start: 9:05 AM Time Finish: 12:30 PM

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

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

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 6355504.7 N: 1807021.28 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax W90
 Location 1 (see coordinates above) NW, N 1.1m 10° down 1268-1271 S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Eriogonum fasciculatum</i>	10							
	<i>Amisopogon glaber</i>	1							
	<i>Blagayntha cinerascens</i>	1							
✓	<i>Erodium</i> sp.	15							
	<i>Eryngium aristulatum</i>	5							
	<i>Lupinus filagooides</i>	1							
	<i>Alouca dubia</i>	1							
✓	<i>Hypochaeris glabra</i>	1							
✓	<i>Sonchus oleraceus</i>	1							
	<i>Leathenia californica</i>	1							
	<i>Miconia douglasii</i> ssp. f.	1							
	<i>Trichostema lanceolatum</i>	1							
					Bare Ground: <u>45</u>				
					Litter: <u>30</u>				
					Rock: <u>15</u>				

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

Scientific Name:	Navarretia fossalis	MSP Occurrence ID:	TBD
Preserve:	Otay Lakes	Occurrence Name:	Otay Lakes
Date:	4/22/14	Time Start:	12:05
		Time Finish:	12:30
Surveyors & Affiliation/Agency:	KR, SP, SM, WR		
IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.			
SANDAG 2012 Vegetation Alliance/Association: <u>Erigeron fasciculatum Alliance</u> <u>Erigeron fasciculatum Association</u>			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: <u>2</u> Thatch Cover: <u>3</u> Thatch Depth: Ave. <u>4</u> cm Max: <u>7</u> cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>wet grass/4</u> Ave. Height? <u>12</u> cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>2</u>			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.			
Surrounding Land Use at Site (>Maximum Extent): <u>open space</u>			
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____			
Disturbances (rank each as 1-6):			
Non-Native Forbs	<u>4</u>	Feral Pig Activity	<u>1</u>
Non-Native Grasses	<u>2</u>	Trampling	<u>1</u>
Non-Native Woody Plants	<u>1</u>	Vandalism	<u>1</u>
Competitive Native Plants	<u>1</u>	Current Grazing	<u>1</u>
Dumping/Trash	<u>1</u>	Historic Grazing	<u>6</u>
Encampments	<u>1</u>	Historic Agriculture	<u>1</u>
Altered Hydrology	<u>1</u>	Erosion	<u>1</u>
Urban Runoff	<u>1</u>	Slope Movement	<u>1</u>
Soil Compaction	<u>1</u>		
Fuel Modification Zone/Fire Break	<u>1</u>		
Road Construction/Maintenance	<u>1</u>		
Vegetation Clearing	<u>1</u>		
ORV/Mountain Bike Activity	<u>1</u>	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire	<u>6</u>	If Sign of Recent Fire: Year Burned? <u>2003</u> Unknown Burn Year: _____	
Trails	<u>1</u>	If Trails are Present, are They Authorized? Yes / No / Unknown	
Type of Trail Use?	<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5):	<input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain access control - signs, gates, vehicle barriers

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained access control - signs, gates, vehicle barriers

VIII. CNDDDB SPECIES DETECTED & NOTES

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

artificial BuOw burrows

#30 - S - in use

- N - burrow not in use - perching on rock pile

#31 - S - no use - cobwebs on burrow

- N - in use

#32 - S - in use

- N no use

#33 - N+S in use - has camera set up

#34 - N+S - no use

- N partially dug out - needs repair

#35 - flushed owl from burrow - flew to artificial burrows in valley

#36 - in use

#37 - may be in use

#38 - not in use (N+S)

#39 - evidence of recent digging @ bucket top in use by kangaroo rat

#40 - not in use

***Navarretia fossalis* (Spreading Navarretia) Otay Lakes**



Panorama from Northwestern edge of population, facing Northwest, West.
Panorama location is 6355504.70 1807021.28 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Otay Lakes



Area 2014: 0 sq. m.
 Navarretia fossalis

Pop. Area 2008-2014
Max Area: 3.04 sq. m.
Min Area: 0 sq. m



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



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SanGIS

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Navarretia fossalis MSP Occurrence ID: TBD
 Common Name: Spreading navarretia CNDDB EO#: EO50 Translocated? no
 Preserve: Dennery Canyon Open Space Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Robinhood Ridge Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers, Sean Pava - city SD
 Date: 4/24/14 Time Start: 2:41 pm Time Finish: 3:17

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

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

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates: E: 6329438.23 N: 1790979.82 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing) S, SW, W Height 1.1m Camera Angle Level Photo # 1320-1323 File location S/OS/MSCP
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Pogogyne nudiscula</u>	<u>1</u>							
	<u>Eryngium anistulatum</u>	<u>5</u>							
	<u>Bitoucarphus brevissimus</u>	<u>1</u>							
	<u>Artemisia californica</u>	<u>10</u>							
	<u>Ferocactus viridescens</u>	<u>2</u>							
	<u>Cylindropuntia prolifera</u>	<u>2</u>							
	<u>Bahiopsis lacinata</u>	<u>2</u>							
	<u>Chenopodium murale</u>	<u>1</u>							
	<u>Eriogonum fasciculatum</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Anagallis arvensis</u>	<u>1</u>							
	<u>Lepidium sp.</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Festuca perennis</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Erodium sp</u>	<u>1</u>							
						Bare Ground:	<u>60</u>		
						Litter:	<u>5</u>		
						Rock:	<u>5</u>		

Total % Cover: 20 % Herb Cover: 5 % Shrub Cover: 15 % Tree Cover: 0

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Navarretia fossalis MSP Occurrence ID: TBD

Preserve: Dennery Canyon Open Space Occurrence Name: Robinhood Ridge

Date: 4/24/14 Time Start: 2:41 Time Finish: 3:17

Surveyors & Affiliation/Agency: BM, KR, SP, WR

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

SANDAG 2012 Vegetation Alliance/Association: Bahipis lacinata Alliance / Bahipis lacinata - Artemisia californica - Eriogonum fasciculatum Association

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

Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 2 cm Max: 2 cm

Dead Standing Biomass? Yes No If Yes, Species/Cover Class: Bromus sp.; 2 Ave. Height? 5 cm

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

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

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

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

Argentine Ant Abundance at Bait Station (1-4): 2 Time Start: 2:41 Temp. Start: 65 F Time Finish: 3:17 Temp. Finish: 65 F

Ant Sample Collected?: Yes No Ant Sample #: N/A Ant Station Photo #: 1324

Disturbances (rank each as 1-6):

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

Fuel Modification Zone/Fire Break 1

Road Construction/Maintenance 1

Vegetation Clearing 1

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

Evidence of Recent Fire 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

Trails 1 If Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use?

- Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: NAFO

Page 3

Date: 4/24/14

VI. MANAGEMENT RECOMMENDATIONS

treat non-native grasses and forbs

VII. MANAGEMENT ACTIONS IN LAST YEAR

9

VIII. CNDDDB SPECIES DETECTED & NOTES

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

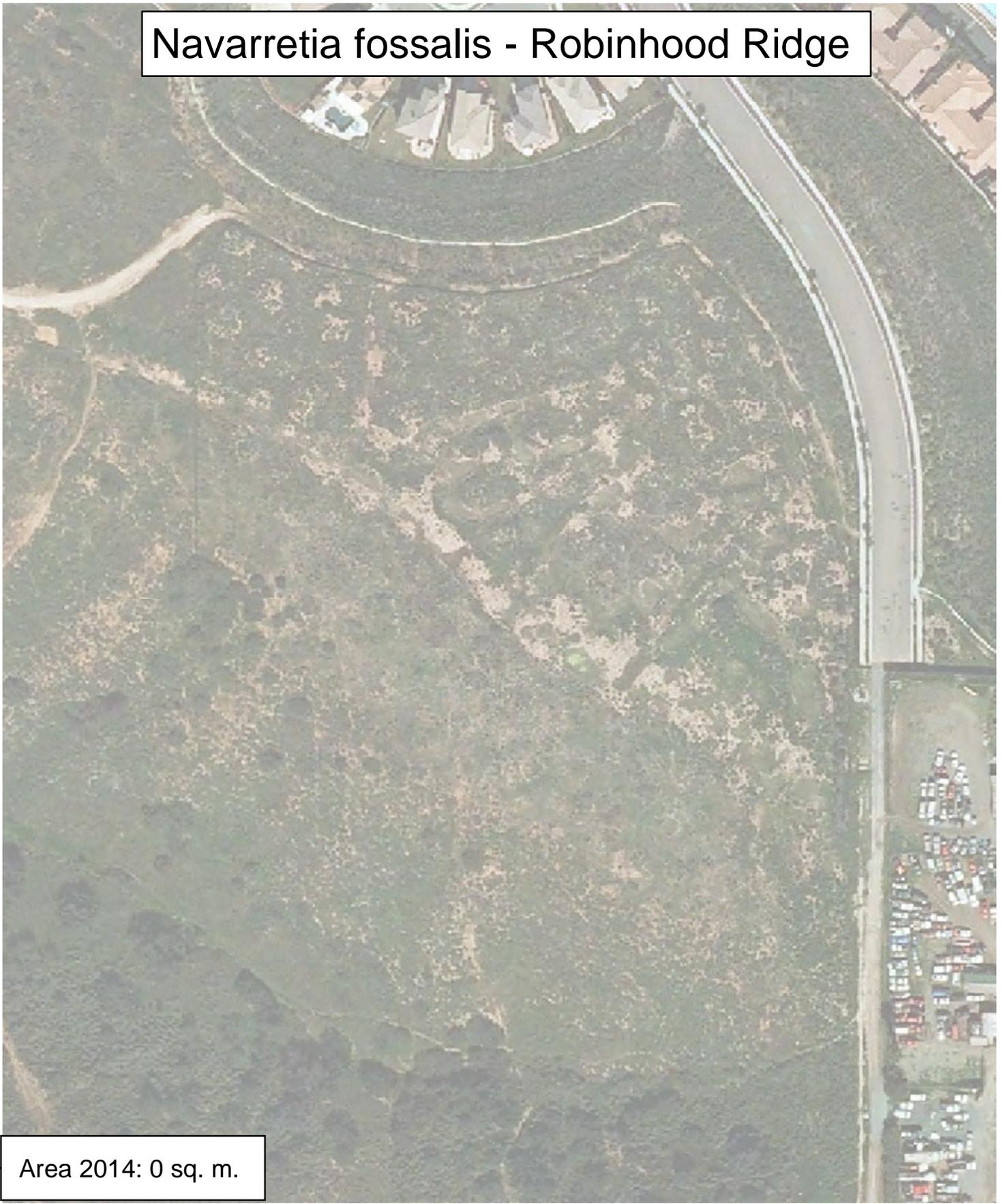
while on site, biologists hand-pulled Anagallis and Festuca w/in vernal pool

***Navarretia fossalis* (Spreading Navarretia) Robinhood Ridge**



Panorama from Northwestern edge of population, facing South, Southwest, West
Panorama location is 6329438.23 1790979.82 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Navarretia fossalis - Robinhood Ridge

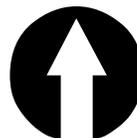


Area 2014: 0 sq. m.

Pop. Area 2011-2014
Max Area: 0 sq. m.
Min Area: 0 sq. m.



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



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Pogogyne abramsii
San Diego Mesa Mint



© City of San Diego, 2005

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: <u>Pogogyne abramsii</u>		MSP Occurrence ID: <u>TBD</u>							
Common Name: <u>San Diego mesa-mint</u>		CNDDDB EO#: <u>EO50</u> Translocated? <u>no</u>							
Preserve: <u>Carroll Canyon</u>		Management Unit: <u>MU6</u>							
Land Owner: <u>City of San Diego</u>		Land Manager: <u>City of San Diego PRD</u>							
Occurrence Name: <u>Carroll Canyon</u>		Sample Point #: <u>1</u>							
Surveyors & Affiliation: <u>Kim Roeland, Betsy Miller, Sara Muszars - City of San Diego</u>									
Date: <u>4/21/14</u>		Time Start: <u>11:15 AM</u> Time Finish: <u>11:50 PM</u>							
<p>I. OCCURRENCE STATUS - Assess # plants in both the species-specific sampling area (typically 10-m radius circle) & in the current mapped extent. See page 4 for definitions of categories describing phenology & evidence of herbivory, disease & stunted growth within the sampling area. Record any notes on page 3.</p>									
# Plants/Sampling Area: <u>u/100 see below</u>		<input type="checkbox"/> Exact <input checked="" type="checkbox"/> Estimate (extrapolate partial count) Uncertainty? <u>low</u>							
# Plants/Current Mapped Extent: <u>432</u>		<input checked="" type="checkbox"/> Exact Count <input type="checkbox"/> Estimate (1,000s, 10,000s) Uncertainty? <u>low</u>							
Area of Current Mapped Extent: <u>107</u> m ² units		<input checked="" type="checkbox"/> Exact (GPS mapping) <input type="checkbox"/> Estimate							
Phenology in Current Mapped Extent (Categories 1-5): Vegetative: <u>4</u> Flowering: <u>1</u> Fruiting: <u>0</u> Dead: <u>0</u>									
Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: <u>0</u> Disease: <u>0</u> Stunted Growth: <u>0</u>									
Is Sampling Area within Current Mapped Extent? <input type="checkbox"/> Yes <input type="checkbox"/> No <u>about 100 w/in 10 m of photo pt, but contiguous population</u>									
Species Found in Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
If not, why (if reason known or suspected)?									
Collection (if not collected previously)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Collected Previously									
If yes: Collector _____		Collection Number _____							
		Museum/Herbarium _____							
II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING									
GPS Accuracy: +/- <u><1</u> <input checked="" type="checkbox"/> meters <input type="checkbox"/> feet Datum: _____									
Coordinates; E: <u>6282860.426</u> N: <u>1907341.599</u> <input checked="" type="checkbox"/> State Plane (ft) <input type="checkbox"/> UTM (m) <input type="checkbox"/> Lat-Long (dec deg)									
Camera type: <u>Pentax W90</u>									
Location 1 (see coordinates above)		<u>N, NE, E</u>	<u>1.1m</u>						
		Direction (facing)	Height						
		<u>15° down</u>	<u>1218-1226</u>						
		Camera Angle	Photo #						
			File location						
Location 2 [Coordinates]		Direction (facing)	Height						
		Camera Angle	Photo #						
			File location						
III. ASSOCIATED SPECIES IN SAMPLING AREA <i>If need more room, record additional data and any notes on page 3.</i>									
Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Pogogyne abramsii</u>	<u>5</u>							
	<u>Eriogonum aristulatum</u>	<u>7</u>							
	<u>Chlorogalum parviflorum</u>	<u>1</u>							
	<u>Deinandra fasciculata</u>	<u>3</u>							
	<u>Psilocarphus tenellus</u>	<u>1</u>							
	<u>Navaretia humata</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Hypochaeris glabra</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Conchus super</u>	<u>1</u>							
	<u>Adenostoma fasciculatum</u>	<u>5</u>							
<input checked="" type="checkbox"/>	<u>Erodium sp.</u>	<u>1</u>							
	<u>Zibocarpus brevissimus</u>	<u>1</u>							
	<u>Flagiobothrys sp.</u>	<u>1</u>							
	<u>Silaginella cinerascens (dead) see photo</u>								
						Bare Ground:	<u>55</u>		
						Litter:	<u>25</u>		
						Rock:	<u>15</u>		
Total % Cover: <u>15</u>		% Herb Cover: <u>8</u>		% Shrub Cover: <u>7</u>		% Tree Cover: <u>0</u>			

Scientific Name: <u>Pogogyne abramsii</u>	MSP Occurrence ID: <u>TBD</u>	
Preserve: <u>Carroll Canyon</u>	Occurrence Name: <u>Carroll Canyon</u>	
Date: <u>4/21/14</u>	Time Start: <u>11:15</u>	Time Finish: <u>11:50</u>
Surveyors & Affiliation/Agency: <u>SR, BM, SM</u>		
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>		
SANDAG 2012 Vegetation Alliance/Association: <u>Adenostoma fasciculatum Alliance</u> <u>Adenostoma fasciculatum Southern Maritime Association</u>		
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)		
Cryptogamic Crust Cover: <u>2</u> Thatch Cover: <u>2</u> Thatch Depth: Ave. <u>1</u> cm Max: <u>2</u> cm		
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <u>Periantha fasciculata</u> / <u>7</u> Ave. Height? <u>7</u> cm		
Mammal Species Activity Categories (1-4): Feral Pig Activity: <u>1</u> Ground Squirrel Activity: <u>1</u> Gopher Activity: <u>1</u>		
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.		
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>		
Surrounding Land Use at Site (>Maximum Extent): <u>open space, mining, residential</u>		
Argentine Ant Abundance at Bait Station (1-4): <u>n/a</u> Time Start: _____ Temp. Start: _____ Time Finish: _____ Temp. Finish: _____		
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: _____ Ant Station Photo #: _____		
Disturbances (rank each as 1-6):		
Non-Native Forbs <u>2</u>	Feral Pig Activity <u>1</u>	Altered Hydrology <u>1</u>
Non-Native Grasses <u>1</u>	Trampling <u>1</u>	Erosion <u>1</u>
Non-Native Woody Plants <u>1</u>	Vandalism <u>1</u>	Urban Runoff <u>1</u>
Competitive Native Plants <u>1</u>	Current Grazing <u>1</u>	Slope Movement <u>1</u>
Dumping/Trash <u>1</u>	Historic Grazing <u>unk</u>	Soil Compaction <u>1</u>
Encampments <u>1</u>	Historic Agriculture <u>1</u>	
Fuel Modification Zone/Fire Break <u>1</u>		
Road Construction/Maintenance <u>1</u>		
Vegetation Clearing <u>1</u>		
ORV/Mountain Bike Activity <u>1</u> If Observed, List Type(s) of ORV/Bike Activity: _____		
Evidence of Recent Fire <u>1</u> If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____		
Trails <u>1</u> If Trails are Present, are They Authorized? Yes / No / Unknown		
Type of Trail Use?		
<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5): <input checked="" type="checkbox"/> Very Good-Excellent <input type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: POTAB

Date: 4/21/14

VI. MANAGEMENT RECOMMENDATIONS

continue maintenance control + trash collection

VII. MANAGEMENT ACTIONS IN LAST YEAR

continued to maintain fences for access control

quarterly trash pick-up

a major restoration project for vernal pool mitigation is underway @ Preserve by San Diego Unified School

District - is not within or adjacent to this sample/max extent

VIII. CNDDDB SPECIES DETECTED & NOTES

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

this site is the only monitored City site owned by PR not open to the public

***Pogogyne abramsii* (San Diego Mesa Mint) Carroll Canyon**



Panorama from Northern edge of population, facing North, Northeast, East.
Panorama location is 6282860.43 1907341.59 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Pogogyne abramsii - Carroll Canyon

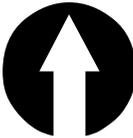


Area 2014: 107 sq. m.
 Pogogyne abramsii

Pop. Area 2012-2014
Max Area: 387.36 sq. m.
Min Area: 107 sq. m.



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



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Scientific Name: *Pogogyne abramsii* MSP Occurrence ID: TBD
 Common Name: San Diego mesa-mint CNDDDB EO#: EO19 Translocated? *no*
 Preserve: *Las Peñasquitas Canyon Preserve* Management Unit: *6*
 Land Owner: City of San Diego Land Manager: City of San Diego Env. Services
 Occurrence Name: Lopez Ridge Sample Point #: *1*
 Surveyors & Affiliation: *Deby Miller, Kim Zoeland, Sara Muszars - City of San Diego*
 Date: *4/21/14* Time Start: *12:40 pm* Time Finish: *2:00 pm*

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

Plants/Sampling Area: (see below) *50* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *1043* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *265* *m²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *5* Flowering: *2* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *1*
 Is Sampling Area within Current Mapped Extent? Yes No *~ 50 @ sampling area contiguous with current mapped extent population*
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates; E: *6278246.403* N: *1915522.734* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax K190*
 Location 1 (see coordinates above) SW, W, NW 1.1m 10° down S/OS/MSCP
 Direction (facing) Height Camera Angle Photo # File location
1227-1232
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Pogogyne abramsii</i>	5				<i>Psilographus tenellus</i>	1		
	<i>Boottia orcutia</i>	1				<i>Psilographus brevissimus</i>	1		
	<i>Blomeeria clelandii</i>	1			<input checked="" type="checkbox"/>	<i>Erodium sp.</i>	5		
	<i>Laotheria californica</i>	1				<i>Lupinus bicolor</i>	1		
	<i>Allium hexostachyon</i>	3			<input checked="" type="checkbox"/>	<i>Avena sp.</i>	2		
	<i>Adenostoma fasciculatum</i>	7				<i>Stipa pulchra</i>	1		
	<i>Opuntia littoralis</i>	3			<input checked="" type="checkbox"/>	<i>Bromus madritensis ssp. r.</i>	1		
	<i>Selaginella cinerascens</i>	3			<input checked="" type="checkbox"/>	<i>Bromus hordeaceus</i>	1		
	<i>Artemisia glabra</i>	1			<input checked="" type="checkbox"/>	<i>Hordeum murinum</i>	4		
	<i>Pseudognaphalium bioretii</i>	1				<i>Plantago erecta</i>	<1		
	<i>Malosma laurina</i>	2			<input checked="" type="checkbox"/>	<i>Sanchus oleraceus</i>	1		
	<i>Penstemon fasciculatum</i>	3							
	<i>Chorizanthe parvifolia</i>	1							
<input checked="" type="checkbox"/>	<i>Hypochaeris glabra</i>	3				Bare Ground:	20		
	<i>Navarretia tomentosa</i>	1				Litter:	7		
						Rock:	25		

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

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name: Pogogyne abramsii MSP Occurrence ID: TBD
 Preserve: Los Peñasquitos Canyon Preserve Occurrence Name: Lopez Ridge
 Date: 4/21/14 Time Start: 12:40 Time Finish: 2:00
 Surveyors & Affiliation/Agency: SM, BYM

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

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

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

Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 5 cm Max: 8 cm
 Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk grass/4; 2 Ave. Height? 6 cm
 Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
 Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

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

Disturbances (rank each as 1-6):

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

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

site not open to public

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

MSP - Management Needs and Notes

Occurrence ID:

TBD

Species:

POAB

Page 3
Date: 4/21/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain fences/signs
continue trash pick-up

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained fences/signs
trash removal

VIII. CNDDDB SPECIES DETECTED & NOTES

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

Lined area for listing species detected and 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 abramsii - Lopez Ridge



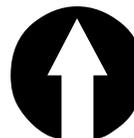
Area 2014: 265.0 sq. m.

 Pogogyne abramsii

Pop. Area 2012 - 2014
Max Area: 452.6 sq. m.
Min Area: 265.0 sq. m.

0 3.256.5 13
 Meters

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



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Pogogyne nudiuscula
Otay Mesa Mint



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Scientific Name: *Pogogyne nudiuscula* MSP Occurrence ID: TBD
 Common Name: Otay Mesa mint CNDDDB EO#: EO8 Translocated? *no*
 Preserve: Denner Canyon Open Space Management Unit: *3*
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Robinhood Ridge Sample Point #: *1*
 Surveyors & Affiliation: *Betsy Miller, Kim Poeland, Wendy Rogers, Sean Paver - City of SD*
 Date: *4/24/14* Time Start: *2:41 pm* Time Finish: *3:17 pm*

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

Plants/Sampling Area: *9* Exact Estimate (extrapolate partial count) Uncertainty? *low*
 # Plants/Current Mapped Extent: *see above* Exact Count Estimate (1,000s, 10,000s) Uncertainty? *low*
 Area of Current Mapped Extent: *13* *M²* units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: *5* Flowering: *5* Fruiting: *1* Dead: *1*
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: *1* Disease: *1* Stunted Growth: *1*
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- *<1* meters feet Datum: _____
 Coordinates: E: *632938.23* N: *1790979.82* State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: *Pentax optio W90*
 Location 1 (see coordinates above) Direction (facing) *S, SW, W* Height *1.1m* Camera Angle *Level* Photo # *1320-1323* File location *S/OS/MSCP*
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<i>Pogogyne nudiuscula</i>	<i>1</i>							
	<i>Eryngium aristulatum</i>	<i>5</i>							
	<i>Psilocalappus brevissimus</i>	<i>1</i>							
	<i>Artemisia californica</i>	<i>10</i>							
	<i>Ferocactus viridescens</i>	<i>2</i>							
	<i>Cylindropuntia prolifera</i>	<i>2</i>							
	<i>Bah.opsis</i> & <i>lacinata</i>	<i>2</i>							
	<i>Chenopodium murale</i>	<i>1</i>							
	<i>Eriogonum fasciculatum</i>	<i>1</i>							
	<i>Anagalis arvensis</i>	<i>1</i>							
	<i>Lepidium</i> sp.	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Festuca perennis</i>	<i>1</i>							
<input checked="" type="checkbox"/>	<i>Erodium</i> sp.	<i>1</i>							
						Bare Ground:	<i>60</i>		
						Litter:	<i>5</i>		
						Rock:	<i>5</i>		

Total % Cover: *20* % Herb Cover: *5* % Shrub Cover: *15* % Tree Cover: *0*

MSP - Rare Plant Habitat and Threats Assessment Form

Scientific Name:	Pogogyne nudiuscula	MSP Occurrence ID:	TBD
Preserve:	Denner Canyon Open Space	Occurrence Name:	Robinhood Ridge
Date:	4/24/14	Time Start:	2:41
Time Finish: 3:17			
Surveyors & Affiliation/Agency: BM, KR, SP, WR			
<p>IV. HABITAT ASSESSMENT IN SAMPLING AREA - Assess habitat covariates within species-specific sampling area (typically 10-m radius circle). Vegetation alliance/association can be assigned using San Diego vegetation key (AECOM 2012) in the office or field, using "Associated Species" data from page 1. See page 4 for definitions of habitat assessment categories. Record any notes on page 3.</p>			
SANDAG 2012 Vegetation Alliance/Association: <i>Bahiopsis laciniata</i> Alliance; <i>Bahiopsis laciniata</i> - <i>Artemisia californica</i> - <i>Eriogonum fasciculatum</i> Association			
Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)			
Cryptogamic Crust Cover: 2 Thatch Cover: 3 Thatch Depth: Ave. 2 cm Max: 2 cm			
Dead Standing Biomass? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Species/Cover Class: <i>Bromus sp.</i> ; 2 Ave. Height? 5 cm			
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1 - no active, possibly old			
Sampling Area Representative of Maximum Extent? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Note Differences on Page 3.			
<p>V. THREATS ASSESSMENT IN MAXIMUM EXTENT - Assess threats within the occurrence's maximum extent (cumulative extent over years of monitoring) plus 10-m surrounding buffer. See page 4 for definitions of threat assessment categories & page 5 for Overall Site Quality Scale. Record notes on page 3.</p>			
Surrounding Land Use at Site (>Maximum Extent): open space, commercial, residential			
Argentine Ant Abundance at Bait Station (1-4): 2 Time Start: 2:41 Temp. Start: 65°F Time Finish: 3:17pm Temp. Finish: 65°F			
Ant Sample Collected?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Ant Sample #: N/A Ant Station Photo #: 1324			
Disturbances (rank each as 1-6):			
Non-Native Forbs	3	Feral Pig Activity	1
Non-Native Grasses	3	Trampling	1
Non-Native Woody Plants	1	Vandalism	1
Competitive Native Plants	1	Current Grazing	1
Dumping/Trash	1	Historic Grazing	1
Encampments	1	Historic Agriculture	1
Altered Hydrology	1	Erosion	1
Urban Runoff	1	Slope Movement	1
Soil Compaction	1		
Fuel Modification Zone/Fire Break	1		
Road Construction/Maintenance	1		
Vegetation Clearing	1		
ORV/Mountain Bike Activity	1	If Observed, List Type(s) of ORV/Bike Activity: _____	
Evidence of Recent Fire	1	If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____	
Trails	1	If Trails are Present, are They Authorized? Yes / No / Unknown	
Type of Trail Use?	<input type="checkbox"/> Hiking <input type="checkbox"/> Biking <input type="checkbox"/> Equestrian <input type="checkbox"/> Dog <input type="checkbox"/> Motorcycle <input type="checkbox"/> ORV <input type="checkbox"/> Service Vehicles		
Overall Site Quality (see page 5):	<input type="checkbox"/> Very Good-Excellent <input checked="" type="checkbox"/> Fair to Good <input type="checkbox"/> Poor <input type="checkbox"/> Very Poor		

MSP - Management Needs and Notes

Occurrence ID: TBD

Species: *PONU*

Page 3

Date: *4/24/14*

VI. MANAGEMENT RECOMMENDATIONS

treat non-native grasses and forbs

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained access control fencing

VIII. CNDDDB SPECIES DETECTED & NOTES

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

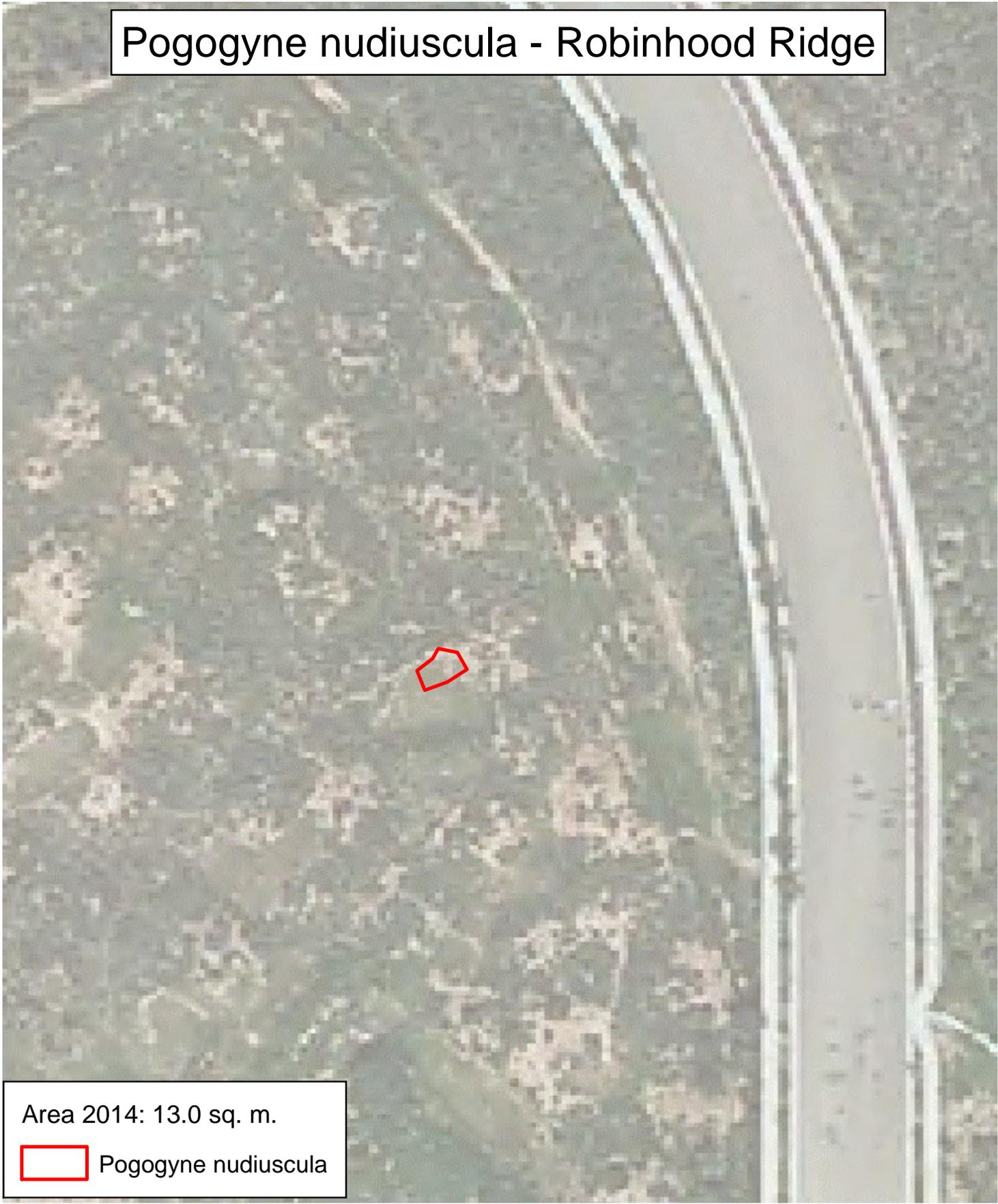
*while on site, hand pulled Anagalis and
Festuca w/in vernal pool.*

***Pogogyne nudiuscula* (Otay Mesa Mint) Robinhood Ridge**



Panorama from Southwestern edge of population, facing South, Southwest, West.
Panorama location is 632938.23 1790979.82 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Pogogyne nudiuscula - Robinhood Ridge

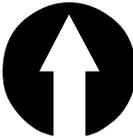


Area 2014: 13.0 sq. m.
 Pogogyne nudiuscula

Pop. Area 2012-2014
Max Area: 28.58
Min Area: 13.0



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



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405

Rosa minutifolia
Baja Rose



© Stan Shebs, 2007

MSP - Rare Plant Occurrence Monitoring Form

Scientific Name: Rosa minutifolia MSP Occurrence ID: ROM180_3DENC001
 Common Name: Baja Rose CNDDDB EO#: EO1 Translocated? partial
 Preserve: Dennerly Ranch Management Unit: 3
 Land Owner: City of San Diego Land Manager: City of San Diego PRD
 Occurrence Name: Dennerly Ranch Sample Point #: 1
 Surveyors & Affiliation: Betsy Miller, Kim Roeland, Wendy Rogers - City of San Diego
 Date: 5/13/14 Time Start: 11:13am Time Finish: 11:40am

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

Plants/Sampling Area: 9 Exact Estimate (extrapolate partial count) Uncertainty? low
 # Plants/Current Mapped Extent: 9 Exact Count Estimate (1,000s, 10,000s) Uncertainty? low
 Area of Current Mapped Extent: 249.7 m² units Exact (GPS mapping) Estimate
 Phenology in Current Mapped Extent (Categories 1-5): Vegetative: 1 Flowering: 5 Fruiting: 1 Dead: 1
 Evidence in Current Mapped Extent (Categories 1-5) of: Herbivory: 1 Disease: 1 Stunted Growth: 1
 Is Sampling Area within Current Mapped Extent? Yes No
 Species Found in Maximum Extent? Yes No
 If not, why (if reason known or suspected)?
 Collection (if not collected previously)? Yes No Collected Previously
 If yes: Collector _____ Collection Number _____ Museum/Herbarium _____

II. SAMPLING AREA LOCATION & SITE PHOTOMONITORING

GPS Accuracy: +/- <1 meters feet Datum: _____
 Coordinates; E: 0321437.419 N: 1791601.507 State Plane (ft) UTM (m) Lat-Long (dec deg)
 Camera type: Pentax Optio W90
 Location 1 (see coordinates above) Direction (facing): S, SE, E Height: 1.1m Camera Angle: 5° up Photo #: 1525-1528 File location: _____
 Location 2 [Coordinates] Direction (facing) Height Camera Angle Photo # File location

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

Invasive?	Species/Substrate	% Cover	Coll?	Coll. #	Invasive?	Species/Substrate	%	Coll?	Coll. #
	<u>Rosa minutifolia</u>	<u>3</u>							
	<u>Artemisia californica</u>	<u>20</u>							
	<u>Sium chinensis</u>	<u>7</u>							
	<u>Bahioopsis lacinata</u>	<u>7</u>							
	<u>Eruelia californica</u>	<u>2</u>							
	<u>Rhus integrifolia</u>	<u>3</u>							
	<u>Eriogonum fasciculatum</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Centaurea melitensis</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Erodium sp.</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Festuca myuros</u>	<u>1</u>							
	<u>Helianthemum slopanium</u>	<u>2</u>							
<input checked="" type="checkbox"/>	<u>Anagallis arvensis</u>	<u>1</u>							
<input checked="" type="checkbox"/>	<u>Lactuca serriola</u>	<u>1</u>							
	<u>Ambrosia chenopodiifolia</u>	<u>1</u>							
						Bare Ground:	<u>25</u>		
						Litter:	<u>5</u>		
						Rock:	<u>20</u>		

Total % Cover: 55 % Herb Cover: 5 % Shrub Cover: 50 % Tree Cover: 0

Scientific Name: Rosa minutifolia MSP Occurrence ID: ROMI80_3DENC001

Preserve: Dennery Ranch Occurrence Name: Dennery Ranch

Date: 5/13/14 Time Start: 11:13 Time Finish: 11:40

Surveyors & Affiliation/Agency: BM, KR, WR

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

SANDAG 2012 Vegetation Alliance/Association: Simmondsia chinensis Alliance
Simmondsia chinensis - Bahiopsis lacinata Association

Cover Classes: 1 (0%); 2 (>0 - <10%); 3 (10 to <25%); 4 (25 to <50%); 5 (>50%)
Cryptogamic Crust Cover: 1 Thatch Cover: 1 Thatch Depth: Ave. n/a cm Max: n/a cm
Dead Standing Biomass? Yes No If Yes, Species/Cover Class: unk shrub: 2 Ave. Height? 70 cm
Mammal Species Activity Categories (1-4): Feral Pig Activity: 1 Ground Squirrel Activity: 1 Gopher Activity: 1
Sampling Area Representative of Maximum Extent? Yes No If No, Note Differences on Page 3.

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

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

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

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

Disturbances (rank each as 1-6):

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

Fuel Modification Zone/Fire Break 6
Road Construction/Maintenance 1
Vegetation Clearing 6 veg clearing b/c point is in break management zone

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

Evidence of Recent Fire: 1 If Sign of Recent Fire: Year Burned? _____ Unknown Burn Year: _____

Trails: 1 If Trails are Present, are They Authorized? Yes / No / Unknown

Type of Trail Use?
 Hiking Biking Equestrian Dog Motorcycle ORV Service Vehicles

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

MSP - Management Needs and Notes

Occurrence ID: ROM180-3DENCP01 Species: Rosa Minutifolia

Page 3
Date: 5/13/14

VI. MANAGEMENT RECOMMENDATIONS

continue to maintain fences/gates

VII. MANAGEMENT ACTIONS IN LAST YEAR

maintained fences/gates

VIII. CNDDDB SPECIES DETECTED & NOTES

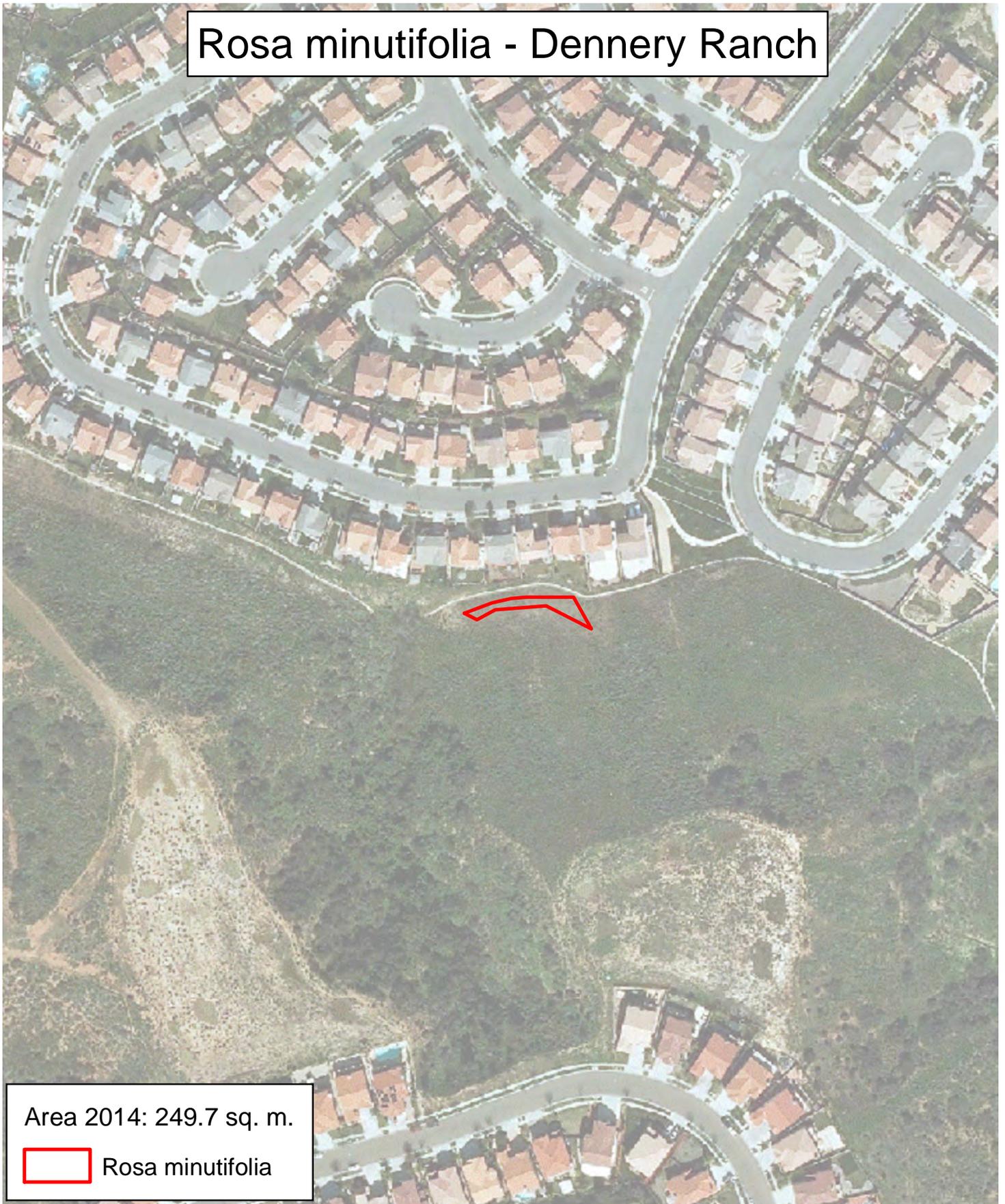
List any plant or animal species to add to the CNDDDB:

***Rosa minutifolia* (Baja Rose) Dennery Ranch**



Panorama from Southern edge of population, facing South, Southeast, East.
Panorama location is 6321430.819 1791621.817 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

Rosa minutifolia - Dennery Ranch



Pop. Area 2003 - 2014
Max Area: 249.7 sq. m.
Min Area: 3.1 sq. m



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



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Acknowledgments

The following staff assisted in the preparation of this report:

Betsy Miller, Senior Planner

Kim Roeland, Biologist III

Wendy Rogers, Open Space Intern

Sara Meszaros, Open Space Intern

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APPENDIX A

**CITY OF SAN DIEGO RARE PLANT MONITORING:
2014 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
<i>Acanthomintha ilicifolia</i> (San Diego Thorn-mint)	First	Second	Blk Mtn Park West	16-Apr	BYM, KR	GPS, Photo, Habitat Assessment
			Dennerly Canyon East	24-Apr	BYM, KR, WR, SP	GPS, Photo, Habitat Assessment
			Mission Trails Regional Park	17-Apr	KR, WR	GPS, Photo, Habitat Assessment
			Otay Lakes	22-Apr	BYM, KR, WR, SP	GPS, Photo, Habitat Assessment
			Penasquitos Canyon	16-Apr	BYM, KR, GW	GPS, Photo, Habitat Assessment
			Sabre Springs/Poway	16-Apr	BYM, KR, LW	GPS, Photo, Habitat Assessment
<i>Acmispon [Lotus] nuttallianus</i> (Nuttall's lotus)	First	First	Dune Triangle	16-May	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Hospitality Point (Site 2)	16-May	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Mariner's Point (Site 4)	16-May	BYM, KR, SM	Presence/Absence, Photo
			No Man's Land (Site 1)	27-May	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Rip Rap (Site 3)	16-May	BYM, KR, SM	GPS, Photo, Habitat Assessment
			South Shores (Site 6)	16-May	BYM, KR, SM, RSC, EH	GPS, Photo, Habitat Assessment
<i>Ambrosia pumila</i> (San Diego Ambrosia)	First	Second	Mission Trails Regional Park	4-Jun	BYM, KR	GPS, Photo, Habitat Assessment
<i>Bloomeria [Muilla] clevelandii</i> (San Diego Goldenstar)	Second	Second	East Elliott	25-Apr	BYM, KR, RS	GPS, Photo, Habitat Assessment
			Lopez Ridge	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Marron Valley	22-Apr	BYM, KR, SP, WR	Photo, Habitat Assessment
			Mission Trails Regional Park	6-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Otay Lakes	22-Apr	BYM, KR, WR, SP	GPS, Photo, Habitat Assessment
<i>Brodiaea filifolia</i> (Thread-leaved Brodiaea)	Fourth	None	Black Mountain	8-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
<i>Brodiaea orcuttii</i> (Orcutt's Brodiaea)	Third	Second	Carroll Canyon	21-Apr	BYM, KR, SM	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
			Lopez Ridge	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Nobel Drive	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
			USIU/Alliant/ Scripps Ranch	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> (Salt-marsh Bird's Beak)	Second	First	Dog Beach	16-May	BYM, KR, SM	GPS, Photo, Habitat Assessment
<i>Cylindropuntia [Opuntia] californica</i> [var. <i>serpentina</i>] (Snake Cholla)	Second	Third	Otay Mesa	24-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Spring Canyon	24-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
<i>Deinandra [Hemizonia] conjugens</i> (Otay Tarplant)	First	First	Dennery Ranch	13-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Dennery Ranch East	13-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Proctor Valley	13-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
<i>Dicranostegia orcuttiana</i> [<i>Cordylanthus orcuttianus</i>] (Orcutt's Bird's Beak)	First	First	Otay River Valley	29-May	KR, SM, WR	GPS, Photo, Habitat Assessment
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> (Short Leaf Dudleya)	First	First	Carmel Mountain	30-Apr	BYM, KR, SM, GW	GPS, Photo, Habitat Assessment
			Crest Canyon	30-Apr	BYM, KR, SM, SMC	GPS, Photo, Habitat Assessment
<i>Dudleya variegata</i> (Variegated Dudleya)	Second	First	Blk Mtn Park East	8-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			East Elliott	6-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Goat Mesa/ Spring Canyon	24-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Marron Valley	22-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Mercy Road	8-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Mission Trails Regional Park	6-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Navajo/Margarum/ Mission Gorge	6-May	BYM, KR, WR	GPS, Photo, Habitat Assessment
			Otay Lakes	22-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Santa Luz	8-May	BYM, KR, WR	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
<i>Eryngium aristulatum</i> var. <i>parishii</i> (San Diego Button Celery)	Second	None	Goat Mesa/Spring Canyon (J16-18)	24-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Otay Lakes	22-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
<i>Monardella stoneana</i> (Jennifer's Monardella) and <i>Monardella viminea</i> (Willow Monardella)	Second	First	Marron Valley	18-May	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Otay Lakes	18-Jun	BYM, KR, SP, WR, KG	GPS, Photo, Habitat Assessment
			Lopez Canyon	12-Jun	BYM, KR, RS, SM	GPS, Photo, Habitat Assessment
			Sycamore Canyon	16-Jun	BYM, KR, WR	GPS, Photo, Habitat Assessment
<i>Navarretia fossalis</i> (Spreading Navarretia)	First	None	Carroll Canyon	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Goat Mesa/Spring Canyon (J16-18)	24-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Nobel Drive	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Otay Lakes	22-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
			Robinhood Ridge	24-Apr	BYM, KR, SP, WR	GPS, Photo, Habitat Assessment
<i>Pogogyne abramsii</i> (San Diego Mesa Mint)	Second	None	Carroll Canyon	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
			Lopez Ridge	21-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
<i>Pogogyne nudiuscula</i> (Otay Mesa Mint)	First	None	Robinhood Ridge	24-Apr	BYM, KR, SM	GPS, Photo, Habitat Assessment
<i>Rosa minutifolia</i> (Baja Rose)	First	Third	Dennergy Ranch	13-May	BYM, KR, WR	GPS, Photo, Habitat Assessment

Survey Staff

BYM = Betsy Miller, Senior Planner

KR = Kim Roeland, Biologist III

WR = Wendy Rogers, Management Intern

SM = Sara Meszaros, Management Intern

SP = Sean Paver, Biologist III

KG = Keith Greer, Senior Regional Planner (SANDAG)

SMC = Sara McCutcheon, Environmental Planning Intern (SANDAG)

GW = Gina Washington, Senior Park Ranger

LW = Lisa Wilson, Senior Park Ranger

RS = Roland Sosa, Biologist III

RSC = Rebecca Schwartz, Conservation Program Manager (San Diego Audobon)

EH = Emma Hobscheid, Conservation Intern (San Diego Audobon)