

### City of San Diego MSCP Rare Plant Monitoring: 2006 Summary Results

Species	Site Name	Population				Native		Non-Native		Management Recommendation	Field Data Sht (pg. #)	Photo (pg. #)	
		Area (m <sup>2</sup> ) <sup>1</sup>	Area (ft <sup>2</sup> ) <sup>1</sup>	# Individuals	% Cover	Number of Species <sup>2</sup>	Percent Cover <sup>2,3</sup>	Number of Species	% Cover <sup>3</sup>				
<b><i>Lotus nuttallianus</i></b> (Nuttall's Lotus)	Dune Triangle	1000 (Est)	10,764 (Est)	not provided	0.5%	7	27%	3	5%	Control invasives	75	76	
	Hospitality Point	5505 (Est)	59,258 (Est)	300 (Est)	7%	4	19%	9	16%	Control invasives	77	78	
	No Man's Land	35,466	381,762	150 (Est)	0.5%	3	9%	8	26%	Control invasives	79	80	
	South Shores	27,669	297,834	not found	NA	4	3%	3	37%	Control invasives	81	82	
		Note: Primary invasives at <i>L. nuttallianus</i> sites (all are in Mission Bay area) are Iceplant ( <i>Carpobrotus edulis</i> ), Storksbill/Filaree ( <i>Erodium sp.</i> ), and Non-Native Grasses. Note also that some former volunteers have informed staff they are discontinuing weed control work in Mission Bay due to City herbicide policies, thus more staff or contractor management of these sites may be necessary in coming years.											
<b><i>Monardella viminea</i></b> (Willow Mondardella)	Lopez Canyon Bridge 1	56 (Est)	600 (Est)	3 (Est)	1%	1	1%	3	27%	Control invasives; Cut back vegetation around Monardella; (Long-term) reduce stormwater run-off	83	84	
	Lopez Canyon Bridge 2	56 (Est)	600 (Est)	1	2%	2	16%	4	9%	"	85	86	
	Lopez Canyon West Terrace	56 (Est)	600 (Est)	1 (plus plantings)	1%	4	14%	5	8%	"	87	88	
	Otay Lakes	500 (Est)	5,382 (Est)	1	0.5%	6	25%	9	10%	Remove Tamarisk; Control & monitor illegal trails	89	90	
	Sycamore Canyon	15,970	171,904	22	1%	7	4%	6	59%	Control non-native grasses	91	92	
	Marron Valley	13,340	143,590	95	◆	◆	◆	◆	◆	Monitor and control non-native grasses as needed	NA	NA	



**Photo 36. *Lotus nuttallianus* (Nuttall's lotus)  
Dune Triangle**



Panorama from northwestern edge of population, facing northeast, east and southeast (photos merged using Canon PhotoStitch, v. 3.1).

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



**Scientific Name:** *Lotus nuttallianus*      **Common Name:** Nuttall's Lotus  
**Site Name:** Hospitality Point      **Management Unit #:** NA  
**Date:** ~~5/~~ May 13, 2006      **Management Regime:** WA  
**Surveyors and Affiliation/Agency:** Melanie Johnson, Lisa Markovchick - City of SD MSCP  
**Species Found?**  Yes  No      *Josh Garcia - City of SD Pl & Rec*  
 If not, why (if reason known or suspected)?  
**Total No. Individuals:** 300       Exact  Estimate (use orders of 10, 100 and 1000 for estimates)  
**Population/Subpopulation Area:** \_\_\_\_\_  Exact (based on GPS mapping)  Estimate  
 Units \_\_\_\_\_  
**Collection (if not collected previously)?**  Yes  No  
 If yes: \_\_\_\_\_  
 Collector \_\_\_\_\_ Collection Number \_\_\_\_\_ Museum/Herbarium \_\_\_\_\_

**I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION**  
**Accuracy of Coordinates/GPS Error:** +/- \_\_\_\_\_  meters  feet  
**Observation Location:** \_\_\_\_\_  State Plane (feet)  UTM

**II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT**  
**Vegetation Community:** Dune  
**Landowner/Manager:** City of San Diego Park & Rec Dev. Parks (Michael Ruiz, Sr. Ranger)  
**Overall Site Quality\*\***  Very Good-Excellent  Fair to Good  Poor  Very Poor  
**Surrounding land use:** Developed Park, Bay  
**Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):**  
Non-natives  
**Management Recommendation/s:**  
Control non-natives in within population  
grass-specific herbicide

**III. ASSOCIATED SPECIES**

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

Form: Tree=T, Shrub=S, Herb/Graminoid=H; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted); Use \* to indicate non-native species

Form	Species	Cover	Coll.	Form	Species	Cover	Coll.
H	<i>Lotus nuttallianus</i>	7		H	<i>Malva parviflora</i> *	1	
H	<i>Comissina cheiranthifolia</i>	15		H	<i>Erodium sp.</i> *	3	
H	<del>Lotus</del> <i>Abronia umbellata</i>	2		T	<i>Washingtonia filifera</i> *	1	
H	<i>Ambrosia chamissonis</i>	1		H	<del>Bermuda grass</del> <i>Cynodon dactylon</i> *	1	✓
H	<i>Bromus diandrus</i> *	5	✓	H	<del>Vulpia</del> <i>Vulpia sp.</i> *	1	✓
H	<i>Melilotus indica</i> *	1		H	<i>Bromus madriensis</i> *	1	
H	<i>Heterotheca grandiflora</i>	1		H	<del>Hordeum</del> <i>Hordeum sp.</i> *	2	✓

**IV. SITE PHOTOMONITORING**  
**Camera type:** Canon Powershot A15      Pic #'s 29-32  
6256577.2      1855504.8      SW, W, NW      ~ 42"      Slightly down  
 Location [State Plane (ft)]      Direction (facing)      Height (Use Tripod)      Camera Angle      File location/s  
 \_\_\_\_\_  
 Location [State Plane (ft)]      Direction (facing)      Height (Use Tripod)      Camera Angle      File location/s

**V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES**  
**Adaptive Management Experiment Recommendations:** \_\_\_\_\_  
**Other Field Notes/Comments:** \_\_\_\_\_

**Photo 37. *Lotus nuttallianus* (Nuttall's lotus)  
Hospitality Point**



Panorama facing southwest, west and northwest (photos merged using Canon PhotoStitch, v. 3.1).

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

**Scientific Name:** *Lotus nuttallianus*      **Common Name:** Nuttall's Lotus  
**Site Name:** No Men's Land (Msn Bay #1)      **Management Unit #:**  
**Date:** June 1, 2006      **Management Regime:**  
**Surveyors and Affiliation/Agency:** Melanie Johnson - City of SD MSCP; Josh Garcia, City of SD Ph & Rec

**Species Found?**  Yes  No      If not, why (if reason known or suspected)?  
**Total No. Individuals:** ~100<sup>200</sup>  Exact  Estimate (use orders of 10, 100 and 1000 for estimates)  
**Population/Subpopulation Area:** \_\_\_\_\_  Exact (based on GPS mapping)  Estimate  
 Units \_\_\_\_\_  
**Collection (if not collected previously)?**  Yes  No  Collected Previously  
 If yes: \_\_\_\_\_  
 Collector \_\_\_\_\_      Collection Number \_\_\_\_\_      Museum/Herbarium \_\_\_\_\_

## I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

**Accuracy of Coordinates/GPS Error:** +/- \_\_\_\_\_  meters  feet  
**Observation Location:** \_\_\_\_\_  State Plane (feet)  UTM

## II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

**Vegetation Community:** Sand Dunes w/ Baccharis Scrub intermixed  
**Landowner/Manager:** City of San Diego Ph & Rec (Developed Parks)  
**Overall Site Quality\*\***  Very Good-Excellent  Fair to Good  Poor  Very Poor  
**Surrounding land use:** \_\_\_\_\_

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

Many non-natives

Management Recommendation/s:

Control non-native/invasives

## III. ASSOCIATED SPECIES

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

Form: Tree=T, Shrub=S, Herb/Graminoid=H; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted); Use \* to indicate non-native species

Form	Species	Cover	Coll.	Form	Species	Cover	Coll.
H	<i>Lotus nuttallianus</i>	<1		H	<del><i>Coryza(?)</i></del>		<input checked="" type="checkbox"/>
S	<i>Camissonia cheiranthos</i>	7		H	<del><i>R. (...)</i></del>		<input checked="" type="checkbox"/>
H	<i>Erodium</i> sp (dried) *	5	<input checked="" type="checkbox"/>	T	<i>Acacia</i> sp *	1	
H	<i>Carpobrotus edulis</i> *	15		H	<i>Bromus diandrus</i> *	<1	
H	<i>Centaurea melitensis</i> *	2		H	<i>Chrysanthemum coronarium</i> *	1	
	<i>Heliotropium</i>	1		S	<i>Nicotiana glauca</i> *	<1	
	<i>Brassica nigra</i> *	<1		H	<i>Heteromeca grandiflora</i>	1	<input checked="" type="checkbox"/>
	<i>Baccharis sarothroides</i>	1		H	(c.f. <i>Brassica turkestanii</i> ) *	2	<input checked="" type="checkbox"/>

## IV. SITE PHOTOMONITORING

**Camera type:** Canon Powershot A75  
 Location [State Plane (ft)] \_\_\_\_\_      Direction (facing) SE, S, SW, W, WW° 41'      Height \_\_\_\_\_      Camera Angle 5° down      Photo # 29-33      File location/s \_\_\_\_\_  
 Location [State Plane (ft)] \_\_\_\_\_      Direction (facing) \_\_\_\_\_      Height \_\_\_\_\_      Camera Angle \_\_\_\_\_      Photo # \_\_\_\_\_      File location/s \_\_\_\_\_

## V. OTHER FIELD NOTES

**Other Field Notes/Comments:** Photo point on top of small hill/dune just N of Acacias (eastern portion of site)

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

**Photo 38. *Lotus nuttallianus* (Nuttall's lotus)  
No Man's Land**



Panorama facing southeast, south, southwest, west, and northwest (photos merged using Canon PhotoStitch, v. 3.1).

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



Scientific Name: Lotus nuttallianus Common Name: Nuttall's Lotus  
 Site Name: South Shores (Mission Bay Side) Management Unit #: TBD  
 Date: June 1, 2006 Management Regime: TBD  
 Surveyors and Affiliation/Agency: Melanie Johnson, City of SD MSCP,  
 Species Found?  Yes  No Late? Inceptant? Josh Garcia, City of SD Park & Rec  
 If not, why (if reason known or suspected)?  
 Total No. Individuals: 0  Exact  Estimate (use orders of 10, 100 and 1000 for estimates)  
 Population/Subpopulation Area: \_\_\_\_\_  Exact (based on GPS mapping)  Estimate  
 Units  
 Collection (if not collected previously)?  Yes  No  Collected Previously  
 If yes: \_\_\_\_\_  
 Collector \_\_\_\_\_ Collection Number \_\_\_\_\_ Museum/Herbarium \_\_\_\_\_

**I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION**  
 Accuracy of Coordinates/GPS Error: +/- \_\_\_\_\_  meters  feet  
 Observation Location: \_\_\_\_\_  State Plane (feet)  UTM

**II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT**  
 Vegetation Community: Inceptant / Dunes  
 Landowner/Manager: City of San Diego Park & Rec (Developed Parks)  
 Overall Site Quality\*\*  Very Good-Excellent  Fair to Good  Poor  Very Poor  
 Surrounding land use: Developed Park / Roads / Bay  
 Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible): Invasives  
 Management Recommendation/s: Control Invasives (Risk?)

**III. ASSOCIATED SPECIES**  
 List dominant, subdominant and invasive species in/near target species observation area/management unit.  
 Form: Tree=T, Shrub=S, Herb/Graminoid=H; 'Cover' = % cover of species; Note if collected by checking 'Coll.' column; if submitted to herbarium, note collection number (submit to SDNHM unless otherwise noted); Use \* to indicate non-native species

Form	Species	Cover	Coll.	Form	Species	Cover	Coll.
A	<u>Carpobrotus edulis*</u>	<u>30</u>					
H	<u>Chrysanthemum coronarium*</u>	<u>3</u>					
H	<u><del>Lotus</del> (cf. Brassica tournefortii)*</u>	<u>3</u>	<input checked="" type="checkbox"/>				
M	<u>Coryza canadensis</u>	<u>1</u>					
M	<u>Edodium sp. (dried)*</u>	<u>1</u>					
S	<u>Baccharis sarothroides</u>	<u>1</u>					
H	<u>Heliotropium curassavicum</u>	<u>&lt;1</u>					
S	<u>Isoloma menziesii</u>	<u>&lt;1</u>					

**IV. SITE PHOTOMONITORING**  
 Camera type: Canon Powershot A75 ✓  
 Location [State Plane (ft)]: \_\_\_\_\_ Direction (facing): S, SW, NW, N Height: 54" Camera Angle: Down 10-15° Photo #: 3842 File location/s: \_\_\_\_\_  
 Location [State Plane (ft)]: \_\_\_\_\_ Direction (facing): \_\_\_\_\_ Height: \_\_\_\_\_ Camera Angle: \_\_\_\_\_ Photo #: \_\_\_\_\_ File location/s: \_\_\_\_\_

**V. OTHER FIELD NOTES**  
 Other Field Notes/Comments: Photo point is ~30-40' west from sign along Sea World Drive saying "13' 10"  
(at edge of hill, by Isocoma bush)

\*\* Use Trudgen & Keighery Vegetation Condition Scale Descriptions (see back of form or instructions)  
 Continue on back if needed.

**Photo 39. *Lotus nuttallianus* (Nuttall's lotus)  
South Shores**



Panorama facing south, southwest, west, northwest, and north (photos merged using Canon PhotoStitch, v. 3.1).

## **Acknowledgments**

The following staff assisted in the preparation of this report:

Melanie Johnson Rocks, Biologist III  
Keith Greer, Deputy Planning Director  
Lisa Markovchick-Nicholls, MSCP Intern

**City of San Diego MSCP Rare Plant Monitoring:  
2006 Field Dates and Staff**

Species	Risk Group (SDSU 3/06)	Site	Survey Date	Field Staff	Methodology
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> (Del Mar Manzanita)	First	Crest Canyon	14-Apr	MJR, JG	Photo, Habitat Assessment
		Crest Canyon	20-Apr	MJR, JG	
		Carmel Mountain	28-Apr	MJR, JG, KG	
<i>Navarretia fossalis</i> (Spreading Navarretia)	First	Carroll Canyon	18-May	MJR, JG, LMN	Photo, Habitat Assessment
		Nobel Drive	18-May	MJR, JG, LMN	
		Robinhood Ridge	16-May	MJR, BM, LMN	
<i>Orcuttia californica</i> (California Orcutt Grass)	First	Robinhood Ridge	16-May	MJR, BM, LMN	Photo, Habitat Assessment
<i>Pogogyne nudiuscula</i> (Otay Mesa Mint)	First	Robinhood Ridge	16-May	MJR, BM, LMN	Photo, Habitat Assessment
<i>Acanthomintha illicifolia</i> (San Diego Thorn-mint)		Black Mountain Pk W (BMR)	19-May	MJR, KG, MK	Census, Photo, Habitat Assessment, Quantitative
		Mission Trails ^	26-May	MJR, KG, JF, LH	
		Penasquitos Cyn	19-May	MJR, KG, MK	
		Sabre Springs	19-May	MJR, KG, MK	
		Sabre Springs	19-May	MJR, KG, MK	
<i>Ambrosia pumila</i> (San Diego Ambrosia)	First	Mission Trails Regional Park	8-Jun	MJR, LMN	Photo, Habitat Assessment
<i>Dudleya variegata</i> (Variegated Dudleya)	Second	Black Mtn Pk - E (BMR)	10-May	MJR, BM	Photo, Habitat Assessment
		Black Mountain Pk W (BMR)	19-May	MJR, MK	
		East Elliot	26-May	KG, MJR, BM	
		East Elliot	1-Jun	MJR, JG	
		Goat Mesa	16-May	MJR, BM, LMN	
		Marron Valley	2-May	MJR	
		Mercy Road	10-May	MJR, BM	
		Mission Trails ^	26-May	MJR, KG, JF, LH	
		Otay Lakes ^	24-May	MJR, LMN	
		Santa Luz (BMR)	10-May	MJR, BM	
<i>Dudleya blochmaniae</i> subsp. <i>brevifolia</i> (Short-Leaf Dudleya)	First	Carmel Mountain	2-Jun	KG, MJR, BM, LH	Photo, Habitat Assessment, Quantitative @ Pop 3
		Crest Canyon	2-Jun	KG, MJR, LH	
		Skeleton Canyon	2-Jun	KG, MJR, LH	

## City of San Diego MSCP Rare Plant Monitoring: 2006 Field Dates and Staff

Species	Risk Group (SDSU 3/06)	Site	Survey Date	Field Staff	Methodology
<i>Lotus nuttallianus</i> (Nuttall's lotus)	First	Hospitality Pt	18-May	MJR, JG, LMN	Photo, Habitat Assessment
		No Men's Land	1-Jun	MJR, JG	Photo, Habitat Assessment
		South Shores	1-Jun	MJR, JG	Photo, Habitat Assessment
		Dunes Triangle	1-Jun	MJR, JG	Photo, Habitat Assessment
<i>Monardella viminea</i> (Willowly Monardella)	Second	Lopez Canyon	14-Jun	MJR, LMN, MKI	Quantitative, Photo, Habitat Assessment
		Marron Valley	30-Jun	MJR, BM, PS	Quantitative
		Sycamore Canyon <sup>^</sup>	20-Jun	KG, LMN	Quantitative, Photo, Habitat Assessment
		Otay Lakes <sup>^</sup>	12-Jul	MJR, PS, LMN	Habitat Assessment, Photo
<i>Deinandra conjugens</i> (Otay Tarplant)	First	Proctor Valley <sup>^</sup>	16-Jun	MJR, PS	Photo, Habitat Assessment
<i>Cordylanthus orcuttianus</i> (Orcutt's Bird's Beak)	First	Otay River Valley	7-Jul	MJR, JG	Quantitative, Photo, Habitat Assessment

<sup>^</sup> Survey site is located in Oct 2003 fire-affected area

### City Staff, Planning Department

KG = Keith Greer, Planning Deputy Director  
MJR = Melanie Johnson Rocks, MSCP Biologist  
BM = Betsy Miller, MSCP Planner  
LMN = Lisa Markovchick-Nicholls, MSCP Intern  
MKI = Michael Klein, Information Systems Analyst II

### City Staff, Park and Recreation Department

J. Garcia = Joshua Garcia, Open Space Natural Resources Manager

### City Staff, Water Department

PS = Paul Schlitt, Water Operations Biologist

### Volunteer (Non-Staff) Monitors:

MK = Mike Kelly, Conservation Resources Network  
JF = Dr. Janet Franklin, MSCP Monitoring Plan Revision Grant Lead, SDSU  
LH = Lauren Hierl, MSCP Monitoring Plan Revision Grant Staff, SDSU