City of San Diego MSCP Rare Plant Monitoring: 2009 Summary Results

		Population				Native		Non-Native				
Species	Site Name	Area (m^2)[1]	Area (ft^2)[1]	# Individuals	Percent cover	Number of Species[2]	Percent Cover[2,3]	Number of Species	Percent Cover[3]	Management Recommendation's	Field Data Sht (pg.#)	Photo number
	Torrey Highlands	391	4207	750	10%	13	28%	2	3%	Monitor trail, fence if expanding	214	70
Lotus nuttallianus (Nuttall's Lotus)	Mission Bay Mariner's Point	200.0	2152.0	†	Presence/absence only	†	†	†	†	None	222	73
	Mission Bay Dune Triangle	50.7	546.0	0	0%	4	14%	5	23%	Weeding	218	71
	Mission Bay Hospitality Point	5505.0	59258.0	500	4%	3	13%	4	5%	None	220	72
	No Man's Land (Mission Bay Site #1)	35465.7	381762.0	1500	3%	4	15%	6	38%	Weed removal	224	74
	SD River Rip Rap (Mission Bay Site #3)	107724.3	115973.5	100	Presence/absence only	†	†	†	†	None	226	75
	South Shores (Mission Bay Site #6)	27668.8	297834.0	50	1%	3	5%	5	89%	Weeding	228	76
		Note: Presence/absence only surveys conducted at Mariner's Point and San Diego River Rip Rap.										
Monardella stoneana (Jennifer's Monardella)	Marron Valley	13340.0	142539.0	95	2%	15	34%	7	23%	Area fire management plan was prepared in 2006/2007	232	77
Monardella viminea (Willowy Mondardella)	Lopez Canyon West Terrace #1	1459.2	15700.0	1	1%	11	29%	1	20%	Focused weed removal-mustard, grasses	238	78
	Lopez Canyon East of Bridge #2	404.0	4347.0	5	1%	12	15%	4	14%	None	240	79
	Lopez Canyon East of Bridge #3	1650.0	17754.0	3	0%	7	12%	4	4%	Erosion control	242	80
	Marron Valley (Monardella stoneana)	13340.0	143539.0	95	200%	15	34%	7	23%	Area fire management plan was prepared in 2006/2007	228	76
	Otay Lakes	0.0	0.0	0	0%	22	57%	8	22%	None	244	81
	Sycamore Canyon	15970.4	171842.0	43	5%	14	17%	9	75%	Weed if possible given remote location	248	82
Navarretia fossalis (Spreading Navarretia)	Carroll Canyon	1866.5	20090.3	118	1%	16	58%	4	4%	Continue annual maintenance and fence repair as needed	254	83
	Goat Mesa (Spring Canyon)	293.0	3150.0	0	0%	7	14%	9	39.0%	Maintain perimeter fernce, weed	258	84
	Nobel Drive	15781.0	169867.3	87	1%	12	20%	9	21%	Continue to maintain fences	260	85
	Otay Lakes	2.7	30.0	53	0.5%	9	80%	7	31%	Vehicle barriers installed 2008	264	86
	Robinhood Ridge	71.5	770.0	50	1%	11	28%	5	19%	Weeding in upland areas	266	87
Pinus torreyana* ssp. *torreyana (Torrey Pine)	Crest Canyon Obs. 1	†	†	†	†	†	†	†	†	†	†	†
	Crest Canyon Obs. 2	†	†	†	†	†	†	†	†	†	†	†
Pogogyne abramsii (San Diego Mesa Mint)	Carroll Canyon	173.0	1865.9	250	7%	19	25%	5	9%	Continue annual maintenance and fence repair as necessary	270	88
	Del Mar Mesa Obs. 1	50.0	538.0	500	1%	21	26%	5	8%	Remove old rebar and chicken wire around reval pool	274	89
	Del Mar Mesa Obs. 2	304.5	3278.0	800	2%	15	27%	6	21%	Continue to restrict access via fencing	278	90
	General Dynamics West	42.0	452.5	300	5%	13	22%	5	32%	Upland weeding, maintain access restrictions	282	91
	Lopez Canyon	419.0	4509.0	5000	10%	16	96%	7	22%	Maintain access restrictions via fencing	286	92
Pogogyne nudiuscula (Otay Mesa Mint)	Robinhood Ridge	71.5	770.0	120	4	10	29	6	21	Weeding in upland areas	292	93
Rosa minutifolia (Small-leaved Rose)	Dennery Ranch	250.0	2690.0	13	2%	8	21%	9	45%	Weed control	296	94
† No data collected												

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

Scientific Name: Lotus nuttalianus — Common Name: Nuttall's Lotus

Site Name: Mission Bay Dune Triangle — Management Unit #: TBD

Date: 5/27/09 — Management Regime: TBD

Surveyors and Affiliation/Agency: Bobby Miller City of San Diego Park + Recreation
Fanie Gaudette City of San Diego Park + Recreation

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

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

Population/Subpopulation Area: 50.74 m2 (Units) ☑ Exact (based on GPS mapping) ☐ Estimate
2008 GPS data

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

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 6266528.39 1858616.164 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: coastal dunes

Landowner/Manager: City of San Diego Park + Recreation

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

Surrounding land use: open space, transportation

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

high cover non-natives

Management Recommendation/s:

weeding

III. ASSOCIATED SPECIES

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

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

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
* Chrysanthemum coronarium	1			* Brassica sp.	1		
Erioganum fasciculatum	1						
* Melilotus indica	15						
Isocoma menzeiii	5						
Encelia californica	7						
* Bromus diandrus	1						
* Mesembryanthemus crystalianum	5						
Heliotropum curassavicum	1						

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix S560

Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s
6266528.39 1858616.164	E, S, SW, W	1.1 m	10° down	854-858	S/os/MSCP

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

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

Continue on back if needed.

Photo 71. *Lotus nuttallianus (*Nuttall's Lotus*)*
Mission Bay – Dune Triangle

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

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

Scientific Name: Lotus nuttalianus — Common Name: Nuttall's Lotus

Site Name: Hospitality Point — Management Unit #: TBD

Date: 5/27/09 — Management Regime: TBD

Surveyors and Affiliation/Agency: Betsy Miller City of San Diego Park + Recreation
Jeanie Gaudette City of San Diego Park + Recreation

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

Total No. Individuals: 500 ☐ Exact ☑ Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 550S m2 (Units) ☑ Exact (based on GPS mapping) ☐ Estimate
2006 EFS data

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

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 6256896.06 1557539.66 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: coastal dune

Landowner/Manager: City of San Diego Park + Recreation

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

Surrounding land use: water, active recreation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
area is fenced, weeded
May 2009

Management Recommendation/s:
none

III. ASSOCIATED SPECIES

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

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

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
Lotus nuttalianus	2						
Heterotheca grandiflora	1						
Camissonia chiranthifolia	10						
* Bromus diandrus	1						
* Erodium sp.	1						
Ambrosia chamissonis	2						
* Washintonia filifera	2						
* Cynodon dactylon	1						

IV. SITE PHOTOMONITORING

Camera type: Nikon Coalpix 5560

Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s
6256896.06 1557539.66	SW, W, NW	1.1m	~down 5°	859-861	S/os/MSCP

V. OTHER FIELD NOTES

Other Field Notes/Comments: Bromus cover low b/c recently removed, resulting in high cover bare ground

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

Continue on back if needed.

Photo 72. *Lotus nuttallianus* (Nuttall's Lotus) Mission Bay – Hospitality Point Site # 2

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

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

Scientific Name: Lotus nuttallianus
Common Name: Nuttalls Lotus
Site Name: Mariners Point
Management Unit #: TBD
Date: 5/27/09
Management Regime: TBD
Surveyors and Affiliation/Agency: Betsy Miller City of San Diego Park + Recreation
Jeanie Gaudette City of San Diego Park + Recreation

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

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

Population/Subpopulation Area: ~~[illegible]~~ 200 m2 (Units) ☐ Exact (based on GPS mapping) ☑ Estimate

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 1859631.8 6255570.10 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: coastal dunes

Landowner/Manager: City of San Diego Park + Recreation

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

Surrounding land use: active recreation, water

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

III. ASSOCIATED SPECIES

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

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

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
presence/absence only							

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix S560

Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
1859631.8	6255570.10	SE, S, SW	1.1m	down 0°	866-869	s/us/ancr

V. OTHER FIELD NOTES

Other Field Notes/Comments: excellent site quality, non-native species virtually absent

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

Continue on back if needed.

Photo 73. *Lotus nuttallianus* (Nuttall's Lotus) Mariners Point

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

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

Scientific Name: Lotus nuttalianus	Common Name: Nuttalls Lotus
Site Name: Mission Bay Site 1: No Man's Land	Management Unit #: TBD
Date: 5/27/09	Management Regime: TBD
Surveyors and Affiliation/Agency: Betsy Miller City of San Diego Park + Recreation	
Jennie Gaudette City of San Diego Park + Recreation	

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

Total No. Individuals: 1500 ☐ Exact ☑ Estimate (use orders of 10, 100 and 1000 for estimates)

Population/Subpopulation Area: 35467.01 m2 (Units) ☑ Exact (based on GPS mapping) ☐ Estimate 2004 GPS data

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

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 6267668.046 1859784.459 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: beach sand dunes

Landowner/Manager: City of San Diego Park + Recreation

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

Surrounding land use: open space, active recreation, transportation

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):	Management Recommendation/s:
high cover invasives – Brassica + Chrysanthemum	weed removal

III. ASSOCIATED SPECIES

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

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

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
Lotus nuttalianus	3			* Acacia sp.	1		
* Bromus diandrus	5			Baccharis sarathroides	1		
Heliotropum curassavicum	2			* Brassica sp.	20		
* Bromus madritensis ~~sp~~ rubens	2						
* Erodium sp.	7						
Heterotheca grandiflora	2						
* Chrysanthemum coronarium	3						
Camissonia cheiranthifolia	10						

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix 5560

Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s
6267668.046 1859784.459	SE, S, SW, W	1.1m	50 down	847-849	s/os/msep

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

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

Continue on back if needed.

Photo 74. *Lotus nuttallianus* (Nuttall's Lotus) Mission Bay – No Man's Land Site # 1

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

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

Scientific Name: Lotus Nutallianus
Common Name: Nuttalls lotus
Site Name: Mission Bay Site 3 : Rip Rap
Management Unit #: TBD
Date: 5/27/09
Management Regime: TBD
Surveyors and Affiliation/Agency: Toby Miller City of San Diego Park + Recreation
Janie Gaudette City of San Diego Park and Recreation

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

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

Population/Subpopulation Area: 10774 m² (Units) ☑ Exact (based on GPS mapping) ☐ Estimate
2008 GIS data

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 6258823.558 1857305.759 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: rip rap along San Diego River
Landowner/Manager: City of San Diego Park + Recreation
Overall Site Quality** ☐ Very Good-Excellent ☐ Fair to Good ☐ Poor ☑ Very Poor
Surrounding land use: parking lot, river

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

III. ASSOCIATED SPECIES

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

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

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
PRESENCE/ABSENCE ONLY							

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix S560

Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s
6258823.59 1857305.76	SW, W, NW	1.1m	flat	862-865	s/os/mscp

V. OTHER FIELD NOTES

Other Field Notes/Comments: high cover Pennisetum sp. + Brassica

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

Continue on back if needed.

Photo 75. *Lotus nuttallianus* (Nuttall's Lotus) Mission Bay – San Diego River Rip Rap Site # 3

Panorama from Southern edge of population, facing Southwest, West, Northwest.
Panorama location is 6258823.56 1857305.76 NAD83 State Plane California Zone 6 (feet)
Photos merged using ArcSoft Panorama Maker 4.

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

Scientific Name: Lotus nuttallianus Common Name: Nuttalls Lotus
Site Name: Mission Bay Site 6: South Shores Management Unit #: TBD
Date: 5/27/09 Management Regime: TBD
Surveyors and Affiliation/Agency: Betty Miller City of San Diego Park+Recreation
Leanne Candelle City of San Diego Park+Recreation

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

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

Population/Subpopulation Area: 27669.79 m2 (Units) ☑ Exact (based on GPS mapping) ☐ Estimate
2004 GPS mapping

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 6266803.802 1859450.236 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: beach sand dunes

Landowner/Manager: City of San Diego Park+Recreation

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

Surrounding land use: open space, active recreation, transportation

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

Management Recommendation/s: weeding

III. ASSOCIATED SPECIES

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

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

Species	Cover	Coll?	Coll. #	Species	Cover	Coll?	Coll. #
* Chrysanthemum coronarium	35						
* Carpobrotus edulis	45						
* Bromus madritensis ssp. rubens	1						
Baccharis sarothroides	3						
Isocoma menziesii	1						
* Brassica sp.	5						
* Melilotus indica	3						
Lepidium sp.	1						

IV. SITE PHOTOMONITORING

Camera type: Nikon Coolpix 5560

Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s
6266803.802 1859450.2365	SW, W, NW	1.1 m	10° down	850-853	s/os/inser

V. OTHER FIELD NOTES

Other Field Notes/Comments: _____

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

Continue on back if needed.

Photo 76. *Lotus nuttallianus* (Nuttall's Lotus) Mission Bay – South Shores Site # 6

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

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