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^2)[1]	Area (ft^2)[1]	# Indiv-iduals	% Cover	Number of Species[2]	Percent Cover[2,3]	Number of Species	% Cover[3]			
Acanthomintha ilicifolia (San Diego Thornmint)	Black Mountain	112 (Est)	1,200 (Est)	36	0.5%	20	20%	6	48%	Control invasives	8	9-10
	Mission Trails	112 (Est)	1,200 (Est)	107	0.5%	13	13%	9	21%	Control invasives	11	12
	Penasquitos Canyon - North	59	636	98	1%	1	1%	3	9%	Control invasives	13	14
	Penasquitos Canyon - South	1	16	49	2%	2	2%	2	7%	Control invasives	15	16-17
	Sabre Springs - South	112 (Est)	1,200 (Est)	196	1%	3	4%	9	9%	Control invasives	18	19
	Sabre Springs - East	55	590	21	1%	2	2%	8	23%	Control invasives	20	21
	Sabre Springs - West	56 (Est)	600 (Est)	86	2%	3	12%	8	14%	Control invasives	22	23
		Note: Primary invasives at all *A. ilicifolia* sites are Mustard *(Brassica nigra)*, Tocolote *(Centaurea melitensis)* , and Non-Native Grasses.										
Ambrosia pumila (San Diego Ambrosia)	Mission Trails	10,801	116,266	150,000 (Est)	2%	11	13%	12	63%	Experiment with invasives control (esp. NNG); Monitor for type conversion	24	25

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

Scientific Name: Acanthomintha ilicifolia Common Name: San Diego Thorn Mint
Site Name: Black Mountain (West) Management Unit #: TBD
Date: May 19, 2006 Management Regime: TBD
Surveyors and Affiliation/Agency: Melanie Johnson, City of SD MSCP; Mike Kelly, vol/CRW

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

Total No. Individuals: 36 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

Collection (if not collected previously)? ☐ Yes ☑ No (collected previously - Meredith Osborne)
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: Non-Native Grassland in CSS matrix

Landowner/Manager: City of SD PR & Rec - Lori Charette Gerbac, Sr. Ranger

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

Surrounding land use: (caveat: no ~~phy~~ signs of physical disturbance)

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

Management Recommendation/s:
Invasives control

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	~~Hordeum~~ Brachypodium distachyon *	40		H	Centaurea melitensis *	1	
H	Bloomeria crocea	1		H	Calystegia macrostegia	1	
H	Brassica nigra *	4		S	Lotus scoparius	1	
H	Avena fatua *	1		S	Rhus integrifolia	1	
H	Sonchus oleraceus *	1		H	Calochortus splendens	1	
S	Isomeris arborea	1		H	Allium sp.	1	
H	Astragalus sp.	1		H	Dichelostemma capitatum	1	

~~Cerastium~~ sp., Cont. →

IV. SITE PHOTOMONITORING

Camera type: Canon Powershot A75

Location [State Plane (ft)]	Direction (facing)	Height (Use Tripod)	Camera Angle	File location/s
117 09 13.400 W 33 00 19.224 N	~~N~~ WE, E, SE, S	53"	Slightly Down (5-10°)	53-56
	N, NE, E, SE, S	52"	"	

V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES

Adaptive Management Experiment Recommendations: _____

Other Field Notes/Comments: Several snails noted on Brassica nigra & Hordeum

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

Continue on back if needed.

Trudgen & Keighery Vegetation Condition Scale

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

Plants, cont;

Form	Species	Cover
S -	Cneoridium dumosum	1
S -	Artemisia californica	1
S -	Salvia mellifera	1
S -	Malosma laurina	1
H -	Plantago erecta	
H -	Plantago ovata	1
H -	Zigadenus ~~sp.~~ venenosus	1
H -	~~Rip~~ Anagallis arvensis *	1
S	Opuntia littoralis	1
S -	Eriogonum fasciculatum	1

Muhlenbergia

H ~~Muhlenbergia~~ 1% microsperma

H Bothriochloa barbinodis 1%

Photo 1. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Black Mountain Park

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

Photo 2. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Black Mountain Park

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

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

Scientific Name: Acanthomintha ilicifolia — Common Name: San Diego Thornmint
Site Name: Mission Trails — Management Unit #: TBD
Date: 5/26/02 — Management Regime: TBD
Surveyors and Affiliation/Agency: Melanie Johnson, Keith Greer (City of SD MSCP)

Species Found? ☑ Yes ☐ No — If not, why (if reason known or suspected)? Janet Franklin, Lauren Hiel (SDSU)

Total No. Individuals: 107 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

Accuracy of Coordinates/GPS Error: +/- _____ ☐ meters ☒ feet

Observation Location: _____ _____ ☒ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Coastal Sage Scrub Opening

Landowner/Manager: City of SD Pk & Rec (Tracy Walker, Sr. Ranger)

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

Surrounding land use: Open Space Park - Parking area ~500' to West

Disturbances and/or threats (be specific, include extent of disturbance or percent cover of disturbance if possible):
Non-natives (Brassica, NNG, Sonchus)

Management Recommendation/s:
Control non-natives

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.
H	Deinandra fasciculata	3	
S	Salvia mellifera	1	
S	Malosma laurina	1	
S	Lotus scoparius	1	
S	Rhus integrifolia	1	
H	Brachypodium distachyon *	15	✓
S	Isocoma menziessii	1	
H	Brassica nigra *	1	

Form	Species	Cover	Coll.
H	Acanthomintha ilicifolia	<1	
H	Erodium ~~aspera~~ sp. *	<1	
H	Sonchus asper *	1	
H	Bromus madritensis ssp rubens	<1	*
H	Ferocactus viridescens	<1	
H	Filago gallica *	<1	
H	Sinchus oleareaceus *	1	
H	Nasella pulchra	<1	✓
H	Anagallis arvensis *	<1	

IV. SITE PHOTOMONITORING

Camera type: Canon Powershot A75

Location [State Plane (ft)]	Direction (facing)	Height	Camera Angle	Photo #	File location/s
~ 6308602.49 1881111.61 (guesstimate from aerial)	N, NE, E, SE, S	52"	Down ~10°	1-5	

V. OTHER FIELD NOTES

Other Field Notes/Comments: ~80% cover of last years D. fasciculata
Evidence of rabbits in area

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

Continue on back if needed.

Modified Trudgen & Keighery Vegetation Condition Scale

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

Form	Sp.	Cover	Coll
S	Isomeris arboreus	1	
S	~~Malocathh~~ Malocathamnus fasciculatus	1	
~~S~~ H	Calochortus splendens	<1	
H	Centaurea melitensis *	<1	
H	~~Comacium~~ Daucus pusillus	<1	✓
H	Conyza canadensis	<1	✓
~~H~~	~~Polypogon~~		

Photo 3. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Mission Trails Park

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

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

✓

Scientific Name: Acanthomintha ilicifolia *Common Name:* San Diego Thornmint
Site Name: Penasquitos Canyon - N trail Subpop *Management Unit #:* TBD
Date: May 14 2006 *Management Regime:* TBD
Surveyors and Affiliation/Agency: Keith Greer, Melanie Johnson Rocks - City of SD MSCP; Mike Kelly, CRW

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

Total No. Individuals: 98 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

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

16
59
23
98

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: NN Grassland ~~up~~ in Coastal Sage Scrub matrix
Landowner/Manager: City of SD Pk & Rec Open Space - Gina Washington, Sr. Ranger
Overall Site Quality** ☐ Very Good-Excellent ☐ Fair to Good ☑ Poor ☐ Very Poor
Surrounding land use: (but no observable physical disturbance)

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

Management Recommendation/s:

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	Acanthomintha ilicifolia	1					
H	~~Hordeum~~ Brachypodium distachyon *	7	✓				
H	Centaurea melitensis *	1					
H	Sonchus asper *	1					
H	Deinandra fasciculata	1					

IV. SITE PHOTOMONITORING

Camera type: _____

Location [State Plane (ft)]		Direction (facing)	Height (Use Tripod)	Camera Angle	File location/s
6276496.2	1918576.0	SE, S, SW	43"	Down ~5-10°	
6276496.17	1918576.5	observation area			

V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES

Adaptive Management Experiment Recommendations: _____

Other Field Notes/Comments: _____

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

Continue on back if needed.

Photo 4. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Penasquitos Canyon – North Subpopulation

Panorama from northern edge of subpopulation, facing southeast, south and southwest (photos merged using Canon PhotoStitch, v. 3.1).

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

Scientific Name: Acanthomintha ilicifolia Common Name: San Diego Thornmint
Site Name: Penasquitos Canyon - South Trail Subpop. Management Unit #: TBD
Date: May 19, 2006 Management Regime: TBD
Surveyors and Affiliation/Agency: M. Johnson, City of SD MSCP, Mike Kelly, Kim Volunteers

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

Total No. Individuals: 49 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

Collection (if not collected previously)? ☐ Yes ☐ No (Previously collected)
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: Non-Native Grassland w/in CSS matrix

Landowner/Manager: City of San Diego Park & Rec open Space (Gina Washington, Sr. Ranger)

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

Surrounding land use: (no signs of physical disturbance)

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

Management Recommendation/s: Control NNG

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	Acanthomintha ilicifolia	2					
H	~~Hordeum~~ Brachypodium distachyon*	5					
H	Centaurea melitensis*	1					
H	Deinandra fasciculata	1					
H	Psilocarphus brevissimus	1					

IV. SITE PHOTOMONITORING

Camera type: 6276540.64 1918463.72 - observation area

Location [State Plane (ft)]		Direction (facing)	Height (Use Tripod)	Camera Angle	File location/s
6276506.2	1918575.9	E, SE, S, SW	45"	Down ~20°	48-49
6276506.2	1918575.9	E, SE, S	36"	Slightly Down (5-10°)	50-52

V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES

Adaptive Management Experiment Recommendations: _____

Other Field Notes/Comments: Western Subpop is near Rhus integrifolia bush

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

Continue on back if needed.

Photo 5. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Penasquitos Canyon – South Subpopulation

Panorama from northern edge of subpopulation, facing east, southeast, south and southwest (photos merged using Canon PhotoStitch, v. 3.1).

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

Scientific Name: Acanthomintha illicifolia	Common Name: San Diego Thornmint
Site Name: Sabre Springs-W Flat ~~Subpop~~	Management Unit #: NA
Date: May 19, 2006	Management Regime: NA
Surveyors and Affiliation/Agency: M. Johnson, K. Greer (city); M. Kelly; Kim	

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

Total No. Individuals: 86 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

Collection (if not collected previously)? ☐ Yes ☑ No (collected by M. Kelly 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: Opening in Southern Mixed Chaparral

Landowner/Manager: City of San Diego Pk & Rec Open Space Div.

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):	Management Recommendation/s:
Non-natives	Control non-natives in area

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit. 13 13

*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	Sonchus asper *	5		H	Erodium sp *	1	
H	Acanthomintha illicifolia	2		H	~~Pimpernel~~ Anagallis arvensis *	1	
H	Deinandra fasciculata	10		H	Brassica nigra *	1	
H	Avena barbata *	1		H	Bromus diandrus *	1	✓
H	Centaurea melitensis *	3		H	~~Erodium~~ Geranium carolinianum	1	✓
H	~~Bromus hordeum~~ Brachypodium	1	*				
H	~~Gallium~~ Apiastrum angustifolium	1	✓				

IV. SITE PHOTOMONITORING

Camera type: S, SW, W

Location [State Plane (ft)]	Direction (facing)	Height (Use Tripod)	Camera Angle	File location/s
~~6303165~~	~~N, NE, E~~	50"	~~Very~~ Mostly level	
6303277.8 1923560.88			slightly down	

V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES

Adaptive Management Experiment Recommendations: _____

Other Field Notes/Comments: _____

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

Continue on back if needed.

Photo 6. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Penasquitos Canyon - Southwest Subpopulation

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

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

Scientific Name: Acanthomintha ilicifolia — Common Name: San Diego Thornmint
Site Name: Sabre Springs - Southern Subpop — Management Unit #: TBD
Date: May 19 2006 — Management Regime: TBD
Surveyors and Affiliation/Agency: Melanie Johnson Rocks, City of San Diego MSCP

Species Found? ☑ Yes ☐ No — If not, why (if reason known or suspected)? Keith Greer, " ; Mike Kelly, CRN

Total No. Individuals: 196 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

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

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: 6303165.74 1923485.4 ☑ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community: Grassland opening in Southern Mixed Chaparral

Landowner/Manager: City of San Diego Park & Rec open Space

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):

Management Recommendation/s:
Control non-natives

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	Deinandra fasciculata	2		H	Anagallis arvensis *	1	
H	Hpiastrum angustifolium	1		H	Erodium sp. *	1	
H	Avena fatua *	1		H	Euphorbia peplus *	1	
S	Adolphia californica	1		H	Phalaris minor *	1	
H	Acanthomintha ilicifolia	1		H	Sonchus asper *	1	
H	Brassica nigra *	1					
H	Bromus madritensis *	1					
H	Brachypodium sp. *	1					

IV. SITE PHOTOMONITORING

Camera type: Canon Powershot A75

Location [State Plane (ft)]		Direction (facing)	Height	Camera Angle	Photo #	File location/s
6303165.74	1923485.4	SE S SW	50"	Slightly Down ~5°	40-42	E:Monitoring

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 7. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Sabre Springs – Southern Subpopulation

Panorama from northwestern edge of subpopulation, facing southeast, south and southwest (photos merged using Canon PhotoStitch, v. 3.1).

V

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

Scientific Name: Acanthomintha illicifolia Common Name: San Diego Thornmint
Site Name: Sabre Springs - Eastern Subpop (Control) Management Unit #: NA
Date: May 19 2006 Management Regime: NA
Surveyors and Affiliation/Agency: Melanie Johnson, City of SD MSCP, Mike Kelly - CRN (vol)

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

Total No. Individuals: ~~#~~ 21 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

Collection (if not collected previously)? ☐ Yes ☑ No (collected previously by M. Kelly)
If yes: _____ Collector _____ Collection Number _____ Museum/Herbarium

I. OBSERVATION AREA/MANAGEMENT UNIT LOCATION

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

Observation Location: see below ☒ State Plane (feet) ☐ UTM

II. GENERAL HABITAT DESCRIPTION AND THREATS ASSESSMENT

Vegetation Community:

Landowner/Manager: City of SD Pk & Rec Open Space Div. (Gina Washington - Sr. Ringe)

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

Surrounding land use: (but no "clear disturbance")

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 area

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	~~S~~ Acanthomintha illicifolia	1		H	Brassica nigra *	1	
	Sonchus asper *	12		H	~~Adilus~~ Euphorbia peplis *	1	✓
H	Centaurium melitensis *	5		H	Deinandra fasciculata	1	
H	~~Scarlet pimpernel~~ Anagallis arvensis *	1		S	Adolphia californica	1	
H	Bromus hordeaceous *	1	✓				
H	~~Hordeum~~ Brachypodium distachya *	1	✓				
H	~~Bromus hordeum~~ *	1	✓				

IV. SITE PHOTOMONITORING

Brachypodium distachya / Photos 33-36

Camera type: NW, N, NE, E

Location [State Plane (ft)]	Direction (facing)	Height (Use Tripod)	Camera Angle	File location/s
6303390.7 1923506.3	~~N, NW~~, W	43"	Slightly Down (~5°)	
6303376.55 1923491.6	observation area			

V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES

Adaptive Management Experiment Recommendations: Lots of last year's Deinandra fasciculata (~20% cover)

Other Field Notes/Comments: Robust multi-stemmed plant (pattern of rainfall good - ?)

Deer x rabbits frequent plot, no evidence of herbivory

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

Continue on back if needed.

Photo 8. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Sabre Springs – Eastern Subpopulation

Panorama from northern edge of subpopulation, facing southeast, south and southwest (photos merged using Canon PhotoStitch, v. 3.1).

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

Scientific Name: Acanthomintha illicifolia	Common Name: San Diego Thornmint
Site Name: Sabre Springs-W Flat ~~Subpop~~	Management Unit #: NA
Date: May 19, 2006	Management Regime: NA
Surveyors and Affiliation/Agency: M. Johnson, K. Greer (city); M. Kelly; Kim	

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

Total No. Individuals: 86 ☑ Exact ☐ Estimate (use orders of 10, 100 and 1000 for estimates)

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

Collection (if not collected previously)? ☐ Yes ☑ No (collected by M. Kelly 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: Opening in Southern Mixed Chaparral

Landowner/Manager: City of San Diego Pk & Rec Open Space Div.

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):	Management Recommendation/s:
Non-natives	Control non-natives in area

III. ASSOCIATED SPECIES

List dominant, subdominant and invasive species in/near target species observation area/management unit. 13 13

*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	Sonchus asper *	5		H	Erodium sp *	1	
H	Acanthomintha illicifolia	2		H	~~Pimpernel~~ Anagallis arvensis *	1	
H	Deinandra fasciculata	10		H	Brassica nigra *	1	
H	Avena barbata *	1		H	Bromus diandrus *	1	✓
H	Centaurea melitensis *	3		H	~~Erodium~~ Geranium carolinianum	1	✓
H	~~Bromus hordeum~~ Brachypodium	1	*				
H	~~Gallium~~ Apiastrum angustifolium	1	✓				

IV. SITE PHOTOMONITORING

Camera type: S, SW, W

Location [State Plane (ft)]	Direction (facing)	Height (Use Tripod)	Camera Angle	File location/s
~~6303165~~	~~N, NE, E~~	50"	~~Very~~ Mostly level	
6303277.8 1923560.88			slightly down	

V. ADAPTIVE MANAGEMENT RECOMMENDATIONS/FIELD NOTES

Adaptive Management Experiment Recommendations: _____

Other Field Notes/Comments: _____

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

Continue on back if needed.

Photo 9. *Acanthomintha ilicifolia* (San Diego Thorn-mint) Sabre Springs – Western Subpopulation

Panorama from northern edge of subpopulation, facing south, southwest and west (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
Arctostaphylos glandulosa ssp. *crassifolia* (Del Mar Manzanita)	First	Crest Canyon	14-Apr 20-Apr	MJR, JG MJR, JG	Photo, Habitat Assessment
		Carmel Mountain	28-Apr	MJR, JG, KG	Photo, Habitat Assessment
Navarretia fossalis (Spreading Navarretia)	First	Carroll Canyon	18-May	MJR, JG, LMN	Photo, Habitat Assessment
		Nobel Drive	18-May	MJR, JG, LMN	Photo, Habitat Assessment
		Robinhood Ridge	16-May	MJR, BM, LMN	Photo, Habitat Assessment
Orcuttia californica (California Orcutt Grass)	First	Robinhood Ridge	16-May	MJR, BM, LMN	Photo, Habitat Assessment
Pogogyne nudiuscula (Otay Mesa Mint)	First	Robinhood Ridge	16-May	MJR, BM, LMN	Photo, Habitat Assessment
Acanthomintha illicifolia (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	Census, Photo, Habitat Assessment, Quantitative
		Penasquitos Cyn	19-May	MJR, KG, MK	Census, Photo, Habitat Assessment, Quantitative
		Sabre Springs	19-May	MJR, KG, MK	Census, Photo, Habitat Assessment, Quantitative
Ambrosia pumila (San Diego Ambrosia)	First	Mission Trails Regional Park	8-Jun	MJR, LMN	Photo, Habitat Assessment
Dudleya variegata (Variegated Dudleya)	Second	Black Mtn Pk - E (BMR)	10-May	MJR, BM	Photo, Habitat Assessment
		Black Mountain Pk - W (BMR)	19-May	MJR, MK	Photo, Habitat Assessment
		East Elliot	26-May 1-Jun	KG, MJR, BM MJR, JG	Photo, Habitat Assessment
		Goat Mesa	16-May	MJR, BM, LMN	Photo, Habitat Assessment
		Marron Valley	2-May	MJR	Photo, Habitat Assessment
		Mercy Road	10-May	MJR, BM	Photo, Habitat Assessment
		Mission Trails^	26-May	MJR, KG, JF, LH	Photo, Habitat Assessment
		Otay Lakes^	24-May	MJR, LMN	Photo, Habitat Assessment
		Santa Luz (BMR)	10-May	MJR, BM	Photo, Habitat Assessment
Dudleya blochmaniae subsp. *brevifolia* (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	Photo, Habitat Assessment
		Skeleton Canyon	2-Jun	KG, MJR, LH	Photo, Habitat Assessment

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
Lotus nuttallianus (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
Monardella viminea (Willowy Monardella)	Second	Lopez Canyon	14-Jun	MJR, LMN, MKl	Quantitative, Photo, Habitat Assessment
		Marron Valley	30-Jun	MJR, BM, PS	Quantitative
		Sycamore Canyon^	20-Jun	KG, LMN	Quantitative, Photo, Habitat Assessment
		Otay Lakes^	12-Jul	MJR, PS, LMN	Habitat Assessment, Photo
Deinandra conjugens (Otay Tarplant)	First	Proctor Valley^	16-Jun	MJR, PS	Photo, Habitat Assessment
Cordylanthus orcuttianus (Orcutt's Bird's Beak)	First	Otay River Valley	7-Jul	MJR, JG	Quantitative, Photo, Habitat Assessment

^ Survey site is located in Oct 2003 fire-affected area

City Staff, Planning Department
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