

**San Diego Association of Governments (SANDAG)  
 Memorandum of Understanding (MOU) #5004552  
 Strategic Removal of Invasive Weed Species  
 3rd Quarter Report - FY 2014-15: Report #2 for Project  
 January 01, 2015 – March 31, 2015**

**Project:** County of San Diego, Department of Agriculture, Weights & Measures – Strategic Removal of Invasive Weed Species

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**Project:**

Invasive plants are considered to be one of the biggest threats to endangered species and their habitats. A strategic plan for managing non-native invasive plant species in San Diego County was completed in 2012 through a SANDAG contract to the Conservation Biology Institute (CBI) (<http://sdmmp.com>). The Invasive Plant Strategic Plan (IPSP) is designed to develop a strategic approach towards the eradication and management of invasive plants in the San Diego region. The IPSP is meant to work in conjunction with the Management Strategic Plan for Conserved Lands in Western San Diego County (MSP) ([Management Strategic Plan](#)).

This Scope of Work (SOW) will require the contractor to focus on the management of invasive plants identified in Levels 1, 2, and 3 of the IPSP. The following tasks have been identified as necessary to implement this effort:

**Task 1 – Invasive Plant Species Coordinator:**

Level of Effort: (25%) of overall contract

- 1) First Year Work Plan approved by SANDAG/SDMMP. An updated version of the work plan has been submitted with this quarterly report and posted on the County of San Diego, Department of Agriculture, Weights & Measures (AWM) website ([San Diego Weed Management Area](#)). The updated version has additional *Limonium* information and appendices with the final California Environmental Quality Act Notice of Exemption (CEQA NOE), and County Right-of-Entry (ROE) forms.
- 2) The CEQA NOE was prepared and reviewed by AWM and County Department of Parks & Recreation, and was posted on February 17, 2015. The 30-day action period closed on March 17, 2015. Obtaining a CEQA NOE was important for the project because many property owners would not initiate the ROE process without the completed CEQA NOE.
- 3) New survey data from the California Invasive Plant Council (Cal-IPC) Wetland Recovery Project grant was added for target species. Significant new survey data for two sea lavender species (*Limonium duriusculum* and *L. ramosissimum*) was added, as well as minor updates for Eupatory, bridal broom, and yellow flag iris.
- 4) Property ownership/ROE database updated for all sites. This database tracks ROE status for all species and sites being treated. Work on ROE agreements consumed a significant amount of time this quarter. Table 1. shows the ROE status by species, and Table 2. shows the ROE status by entity. The possible statuses are: Completed, Pending, In Process, Rejected, and No Action (yet). Most species had ROE work initiated this quarter.

**Table 1. Summary of ROEs by species**

Scientific Name	Common Name	Sites	Total ROEs	ROE Statuses				
				Completed	Pending	In Process	Rejected	No action
<i>Ageratina adenophora</i>	Eupatory	3	5	1	2	0	1	1

Scientific Name	Common Name	Sites	Total ROEs	ROE Statuses				
				Completed	Pending	In Process	Rejected	No action
<i>Carrichtera annua</i>	Ward's weed	2	3	3	0	0	0	0
<i>Centaurea solstitialis</i>	Yellow starthistle	12	29	19	0	0	0	10
<i>Centaurea stoebe</i>	Spotted knapweed	1	2	2	0	0	0	0
<i>Elymus caput-medusae</i>	Medusahead	N/A	-	-	-	-	-	-
<i>Genista monspessulana</i>	French broom	2	2	0	2	0	0	0
<i>Hypericum canariense</i>	Canary Island St. John's wort	5	10	1	2	0	0	7
<i>Iris pseudacorus</i>	Yellow flag iris	N/A	-	-	-	-	-	-
<i>Limonium duriusculum*</i>	European sea lavender	3	3	1	1	1	0	0
<i>Limonium ramosissimum*</i>	Algerian sea lavender	10	8	1	5	0	0	2
<i>Lythrum salicaria</i>	Purple loosestrife	2	4	1	0	1 (group)	0	2
<i>Retama monosperma</i>	Bridal broom	3	5	3	1	1	0	0

A major focus of building capacity for Early Detection Rapid Response (EDRR) work has been obtaining access to large entities that manage lands with multiple EDRR sites or significant acreage where EDRR targets are likely to be found.

**Table 2. Summary of ROEs by entity (public agencies or large landholders/programs)**

Entity	Type of agreement	Length of agreement	Status	Breadth of agreement	CEQA needed (requested)
County of San Diego*	Implicit (automatic: AWM is County of SD)	Continuous	Complete	All lands	Yes
City of San Diego	City ROE (Right of Entry)	3 Years	In process	Lake Murray	Yes
City of San Diego	TAP (Temp Access Permit)	1 Year	Complete	Lake Murray	Yes
Unified Port of San Diego	Unified Port of San Diego ROE	2 Years?	In process	Chula Vista NR	Yes
City of San Diego**	City of San Diego ROE	2 Years?	In process	All lands	Yes
California Department of Fish and Wildlife (CDFW)	CADFW ROE	2 Years?	Complete	North County estuaries	Yes
Sweetwater Authority	Sweetwater Authority ROE	2 years?	In process	Sweetwater Eupatory site	Yes
City of Carlsbad	AWM ROE	Continuous	Complete	Ward's Weed site	No
City of Carlsbad	AWM ROE	Continuous	In process	Sea Lavender site	No
San Eljio Lagoon Conservancy	Making determination	Pending determination	In process	N/A	N/A

(SELC)					
Caltrans	Making determination	Pending determination	In process	N/A	N/A
California Department of Parks & Recreation	Making determination	Pending determination	In process	N/A	N/A

\*Includes parks, open space, and roads.

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**Task 2 – AWM: Invasive Plant Level 1 Management.**

Level of Effort: (<10%) of overall contract

- No charges during this quarter.

**Task 3 – AWM: Invasive Plant Level 2 Management.**

Level of Effort: (>40%) of overall contract

The Department of Agriculture, Weights and Measures Integrated Pest Control Program (IPC) surveyed, treated, and manually removed five invasive weed species this quarter: yellow starthistle, Eupatory, Ward’s weed, European sea lavender, and Algerian sea lavender. Additional preparation work occurred for three bridal broom sites. IPC made optimal pesticide applications, and protected the natural environment by preventing off-site movement of pesticides. IPC utilized BMPs that prevented unintentional discharges to surface waters. For each site, IPC followed the following procedures:

1. Identified the pest species to be treated.
2. Reviewed site conditions, such as soil texture, slope, standing water, irrigation or storm drains.
3. Identified and avoided streamside management areas and surface waters to prevent drift and application of pesticides not labeled for aquatic use onto surface waters.
4. Identified most appropriate method of control based on integrated pest management methods, designed to minimize the scale and number of pesticide applications.
5. Applied the least persistent and toxic pesticide that effectively mitigates the target pest.

Table 3. summarizes the treatments performed by AWM this quarter.

**Table 3. Summary of AWM Treatments**

Scientific Name	Common Name	# of Sites Worked	Acres Surveyed	Acres Treated	Manual Removal
<i>Ageratina adenophora</i>	Eupatory	1	3	.57	0
<i>Carrichtera annua</i>	Ward's weed	3	30	4.92	6,555 plants
<i>Centaurea solstitialis</i>	Yellow starthistle	1	5	0	0
<i>Limonium duriusculum</i>	European sea lavender	1	.5	.07	3,000 plants
<i>Limonium ramosissimum</i>	Algerian sea lavender	1	14	3	500 plants

**Eupatory site #3** on the San Diego River was surveyed and treated along the portion owned by the San Diego River Foundation. The site had dense patches of plants totaling approximately 0.36 acres. IPC completed surveys in the area covering 7 acres. The site had not been treated previously. Treatments with an aquatic formulation of glyphosate were made.



**Photo of San Diego River Eupatory**



**European sea lavender site #2** at San Elijo Lagoon was surveyed and treated. The site is owned by California Department of Fish & Wildlife (CDFW). The site is 0.5 acres and was treated with Roundup Pro Custom. 20 plants were manually removed. There were scattered mature plants and many seedlings found this season. These treatments should help suppress the seed bank and control the plants. One day of survey and treatments occurred.

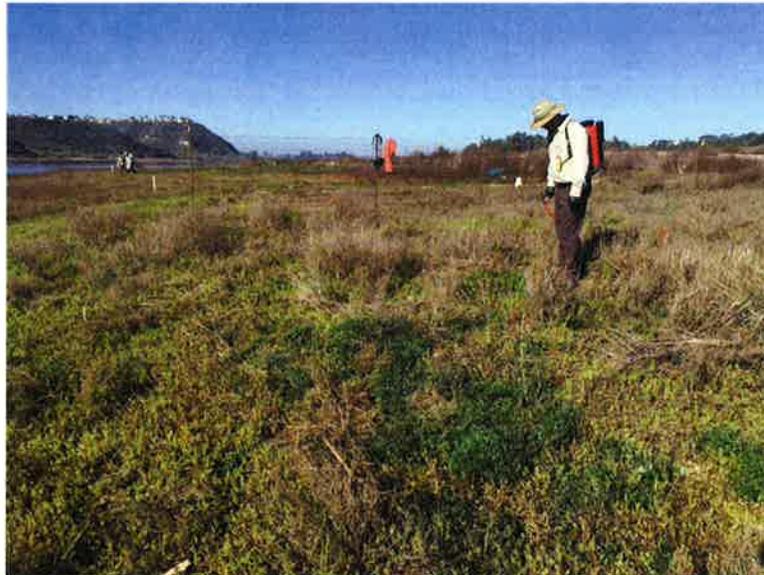




**Photos of San Elijo Lagoon European sea lavender**

**Algerian sea lavender site #4** at Batiquitos Lagoon was surveyed and treated. This site is owned by CDFW. About 7 acres were surveyed along the north and east portions of the site. The island and south shore were not accessible due to low tides. Plants were scattered to dense patches. Most were mature plants, but a few seedlings were observed.





**Photos of Batiquitos Lagoon Algerian sea lavender**

**Yellow starthistle site #5** at the Sycamore Landfill and Radio towers was surveyed. This site is close to the coast so early surveys were completed due to the warmer than normal conditions. IPC staff surveyed 6 acres and no plants were observed.

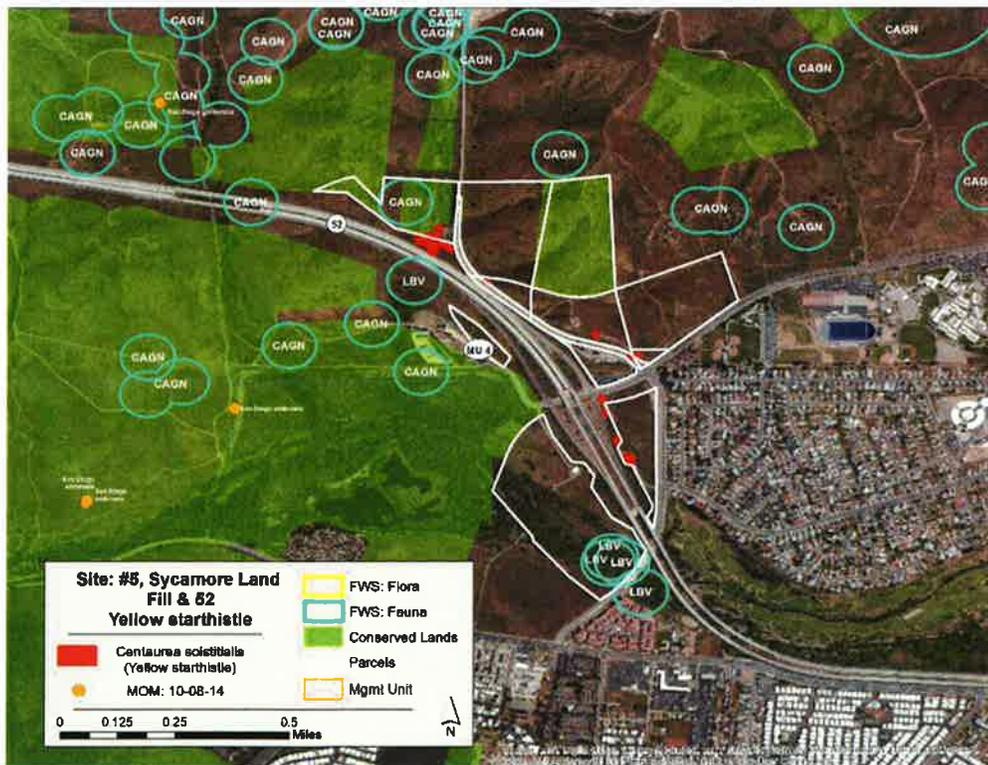


Table 4. summarizes work done for level 2 management weeds this quarter.

**Table 4. Summary of Work for Level 2 Management Weeds.**

Scientific Name	Common Name	Sites	Status	Tentative next treatment
<i>Ageratina adenophora</i>	Eupatory	3	-Sweetwater, pending ROE. -Balboa Park, pending ROE. -San Diego River Foundation, treated. -San Diego River (Fenton) ROE, rejected.	Fall
<i>Carrichtera annua</i>	Ward's weed	3	-La Costa Greens HOA, treated. -City of Carlsbad, treated. -Center of Natural Land Management (CNLM), treated.	Summer: Treat 2-3 times
<i>Centaurea solstitialis</i>	Yellow starthistle	14	5 sites were treated with CDFA funding, Environmental Mitigation Program funding will treat more sites in the next quarter.	Summer: Treat 2-3 times
<i>Centaurea stoebe</i>	Spotted knapweed	1	No work, plants still developing.	Summer: Treat 2-3 times
<i>Elymus caputmedusae</i>	Medusahead	3	No work, still assessing.	Treat 2 times
<i>Genista monspessulana</i>	French broom	2	No work, waiting on City SD ROE.	Treat 1 time
<i>Hypericum canariense</i>	Canary Island St. John's wort	6	No work, waiting on City SD ROE, scheduling, other ROEs.	Start 2-3 sites
<i>Iris pseudacorus</i>	Yellow flag iris	(4-6)	No work, still assessing.	Fall
<i>Limonium duriusculum</i>	European sea lavender	3	-San Elijo Lagoon, treated. -Del Mar, Crest Reserve (pulled by city park ranger). -Forester Creek (part pulled by San Diego River Park Foundation/California Native Plant Society volunteers).	Fall
<i>Limonium ramosissimum</i>	Algerian sea lavender	5	-Batiquitos Lagoon, treated. -La Costa, ROE pending. -Mission Bay Park, pulled by city park ranger. -Forester Creek (part pulled by SDRF/CNPS volunteers). -Tierrasanta, Canyonlands, part pulled. -J Street Marsh, ROE in process. Chula Vista Nature Reserve, ROE in process.	Summer
<i>Lythrum salicaria</i>	Purple loosestrife	2	-Lotus Pond, 1 of 3 ROEs obtained. -Escondido Creek, ROE/MOU SELC requested.	Summer or Fall
<i>Retama monosperma</i>	Bridal broom	3	-Olive Hill Rd, ROEs obtained, work scheduled. -Dinwiddie, ROE needed. -Highway 76 & 15, ROE pending.	Summer

**Task 4 – AWM: Invasive Plant Level 3 Management.**

Level of Effort: (<20%) of overall contract

- No charges during this quarter.

**Task 5 – Coordinator: Tracking and Updating Invasive Species for Priority Removal.**

Level of Effort: (5%) of overall contract

- No charges during this quarter.

**Work Anticipated for 4th Quarter Period, April 1, 2015 – June 30, 2015:**

**Task 1 – Invasive Plant Species Coordinator:**

- Update work plan if needed.
- Coordinate ROE work with AWM, update database.
- Monitor and coordinate with AWM during implementation.
- Survey sites as needed.

**Task 2 – AWM: Invasive Plant Level 1 Management.**

- Survey, map, and treat any reported sightings of target Level 1 plants.
- Supervision of staff, provide training, guidance, and preparation for field work.
- Collect GIS points of targeted weeds, if found.

**Task 3 – AWM: Invasive Plant Level 2 Management.**

- Supervision of staff, provide training, guidance, and preparation for field work.
- Coordinate and finalize tracking methods for work completed.
- Initiate and continue work outlined in work plan.
- Obtain signed ROEs.
- Collect GIS points of targeted weeds.

**Task 4 – AWM: Invasive Plant Level 3 Management.**

- No work planned.

**Task 5 – Coordinator: Tracking and Updating Invasive Species for Priority Removal.**

- Continue coordination with Department of Defense, California Department of Parks and Recreation, and Weed Management Area.
- Continue to aggregate data and track new prospective EDRR target species.
- A presentation will be made at the monthly San Diego Management and Monitoring Program meeting on August 26, 2015 by Jason Giessow.