

SAN DIEGO WEED MANAGEMENT AREA

2008 Supplemental Project Proposal Work Plan

July 15th 2008

Contract Lead Group (County, RCD, or Other) and contact information:

County of San Diego Department of Agriculture, Weights and Measures,
Contact: Bob Atkins, Title: Agricultural Commissioner/Sealer,
Phone: 858-694-2749, email: bob.atkins@sdcounty.ca.gov,
Mailing Address: 5555 Overland Ave. Suite 3101, San Diego, CA 92123

Project Manager (contact for reporting and invoicing) and contact information:

Dawn Nielsen, Title: Deputy Agricultural Commissioner/Deputy Sealer
Telephone: 858-694-2775, email address: dawn.nielsen@sdcounty.ca.gov,
Mailing address: 5555 Overland Ave. Suite 3101, San Diego CA 92123

WMA Group affiliated with:

San Diego Weed Management Area (A single County WMA Group)

All projects described in this work plan will be in one contract with:

County of San Diego, Department of Agriculture, Weights and Measures

WMA Structure and Partners:

The San Diego Weed Management Area (SDWMA), founded in 2001, implements and/or coordinates the eradication of targeted noxious weeds throughout San Diego County. The group is lead by the San Diego County Department of Agriculture, Weights and Measures (AWM). Regulatory agencies and environmental organizations participate in the SDWMA meetings. Through education and discussion the SDWMA Stakeholders worked together and agreed on a plan to control their priority weeds. The San Diego region has adopted a Multiple Species Conservation Plan (MSCP) that strives to balance the needs of people, wildlife, industry and infrastructure within the region. A system of open space preserves with linkages for wildlife now exists in part due to the MSCP. It has become clear that the MSCP lands are at risk from the invasion of noxious weeds.

Currently active partners include:

- County of San Diego Department of Agriculture
- San Diego County Farm Bureau
- USDA Natural Resources Conservation Service
- San Dieguito River Valley Conservancy
- University of California Cooperative Extension
- City of San Diego
- San Diego Association of Governments (SanDAG)
- California Native Plant Society
- California Department Of Fish and Game
- Santa Margarita-San Luis Rey Weed Management Area
- Camp Pendleton Marine Corps Base
- Carlsbad Watershed Network
- Cleveland National Forest
- Marine Corp Air Station – Miramar
- Sierra Club
- California Department of Transportation
- Mission Resource Conservation District
- San Diego Regional Water Quality Control Board
- San Dieguito River Park JPA
- The Friends of Los Peñasquitos Canyon
- US Fish & Wildlife Service

Past Performance of WMA and Partners in Weed Control: Control and mapping of perennial pepperweed has been an ongoing project of the SDWMA since 2001. At SDWMA meetings stakeholders discuss progress on current noxious weed eradication projects. The SDWMA has appointed a steering committee that determines which noxious weeds will be targeted. The current list of high priority weed species for the SDWMA include perennial pepperweed, yellow starthistle, purple loosestrife and spotted knapweed. Periodically, the SDWMA organizes community outreach meetings which focus on the impacts of noxious weeds and effective control strategies. As requested by the San Diego County Board of Supervisors, AWM is expanding its emphasis on education and outreach with the public and industry regarding invasive noxious weeds. The SDWMA has a new MOU as of March 2006 and a stakeholder database containing over 150 contacts.

Using funding from AB1168, SB1740 and a U.S. Forest Service pass through grant the SDWMA has undertaken the following projects:

- Mapped and treated all of the known perennial pepperweed infestations within San Diego County.
- Treated all of the yellow starthistle infestations within San Diego County.
- Eradicated four populations of perennial pepperweed and three of yellow starthistle.
- Entered GPS weed data into a GIS database and produced maps.
- Held yearly outreach workshop for land managers, stakeholders and the public.
- Printed and distributed a color poster on perennial pepperweed.

Other cooperative projects completed by the San Diego Weed Management Area:

- Treated 100 to 200 acres of perennial pepperweed each year during the last five years in the San Dieguito River Park using \$312,000 funding from the California Department of Parks and Recreation.
- Browsed 300 goats on a dense infestation of perennial pepperweed before treating it with herbicide.
- Mapped and treated all purple loosestrife infestations in the county.
- Presented noxious weed information at Native Plant Society meeting and other educational sessions.
- Designed and placed Invasive Weed Awareness Week displays in both the Natural History Museum and the San Diego County Administration Center.

The SDWMA maintains a collaborative partnership with the Santa Margarita/San Luis Rey Weed Management Area (SM/SLR WMA) and the Carlsbad Watershed Network (CWN). Joint community/stakeholder meetings are held and coordination among groups allows for the efficient treatment of target noxious and invasive weeds throughout the county. Both the SM/SLR WMA and the CWN implement large scale invasive weed eradication programs in riparian areas of northern San Diego County that address significant fire, flood, habitat, and water quality impacts of these noxious weeds. Treated plants include arundo, tamarisk, cape ivy, purple loosestrife, perennial pepperweed and yellow starthistle. SM/SLR WMA has completed over \$4 million dollars of invasive plant control and restoration projects and has an additional \$1.3 million dollars for on-the-ground work over the next three years.

General In-kind contributions: As projected by SDWMA partners over the period of this proposed grant (calendar year 2009).

Projected 2009 amount	Agency & Description of In-Kind Contribution planned for 2009
\$33,000	Carlsbad Watershed Network to treat perennial pepperweed & purple loosestrife
\$15,000	Anza Borrego Desert State Park to treat pepperweed growing in the park
\$1,300	City of San Diego to control perennial pepperweed in Mission Trails Park & Rose Canyon
\$51,000	Camp Pendleton Marine Corps Base to control perennial pepperweed and yellow starthistle
\$10,000	San Dieguito River Park (JPA) to control perennial pepperweed
\$46,000	San Dieguito River Valley Conservancy to control perennial pepperweed
\$4,000	Santa Margarita/San Luis Rey Weed Management Area to remove perennial pepperweed along two north San Diego County watersheds
\$43,000	USDA Natural Resources Conservation Service, Wildlife Habitat Incentives Program, total grant is for \$147,000 to control pepperweed & Tamarisk on 96 acres in the San Dieguito River Park
\$203,300	Total In-Kind Contributions projected for 2009

Proposed Projects

Project Title 1: Perennial Pepperweed (Lepidium latifolium) Eradication from San Diego County

Project 1 budget: \$37,484

Project Goal: Continue to control perennial pepperweed infestations throughout San Diego County with integrated pest control methods and the assistance of SDWMA Stakeholders. It is projected that 75% of the total proposed supplemental funding from CDFA will be used on the perennial pepperweed eradication project.

What are the project's long-term benefits and/or region-wide significance: Perennial pepperweed has proven to be one of the most aggressive and difficult to control noxious weeds found in San Diego County. This weed takes over agricultural fields, alters soil chemistry and smothers native wildlands. The largest infestation (approx. 350 acres) in the county lies within the San Dieguito River Park which provides recreation for county residents and habitat for wildlife that includes several endangered species. The total known acreage of perennial pepperweed infestation in San Diego County is 639 acres; left untreated these 30 dispersed locations would no doubt eventually spread throughout all of the county's wetlands and riparian areas. Eradicating this aggressive invader as quickly as possible will improve the quality of life for residents, protect the astounding biodiversity of the county, and save incalculable dollars by avoiding the cost of a control effort that might begin at some later point. Four outlier infestations of pepperweed are believed to be eradicated although; these sites continue to be surveyed to be sure no plants reappear.

Priority Topic Area Being Addressed: This project addresses priority area #1, the **Eradication** of all infestations of perennial pepperweed (a "B" rated noxious weed) from San Diego County. Eradication of perennial pepperweed is necessary in order to maintain functional ecosystems. Priority area #3, **Regional Collaboration** of numerous stakeholders to eradicate perennial pepperweed from San Diego County. A map showing the locations of all pepperweed infestations within the county is included as an attachment. Priority area #4, **High Value Site** the San Dieguito River Park is home to three endangered species: Least Bell's vireo, Southwestern willow flycatcher and the Arroyo southwestern toad. Saving these wildland/habitat areas from noxious weed invasion is critical to securing the future of our endangered species. A map showing the largest pepperweed infestation within the county which is located within the San Dieguito River Park is attached.

Project Objectives and Methods – list milestones and performance measures: Perennial pepperweed detection and control in San Diego County has been funded in the past by CDFA and will continue to be conducted on private and public lands with an award of supplemental funding. County of San Diego Department of Agriculture, Weights and Measures will lead this effort through the San Diego Weed Management Area. SDWMA stakeholders with their own funding will help control pepperweed populations where possible. Periodic SDWMA meetings facilitate the coordination of multiple stakeholders working toward a common goal. Prevention of seed production and proper decontamination of equipment to prevent movement of seed are items of discussion at SDWMA meetings. Chemical treatments will be the primary control method. Grazing or mechanical control measures may be used as well, where sites are suitable.

Task 1: Perennial pepperweed has proven to be a very resilient plant but progress has been made. In most infestations, the density of the pepperweed has been reduced and four sites are thought to be eradicated. Growth stage of the target plants will be monitored to ensure that application timing is optimum. Treatments will consist of herbicide applications while plants are actively growing. Local research has found combination treatments of Telar/Garlon or Habitat/Aquamaster have provided improved control of the pepperweed in comparison to the use of a single herbicide so; combinations will be used where possible. Many SDWMA Stakeholders with perennial pepperweed infestations within their jurisdiction or project boundaries will help eradicate the plant from San Diego County. County Pest Management crews will treat remaining pepperweed infestations. Supplemental funding from CDFA for perennial pepperweed control will allow AWM to monitor sites and ensure that all treatments are strategically focused toward eradication throughout the county. A GPS will be used to map the infested areas for comparison to older GPS data of the sites.

Task 2: To survey and treat the largest infestation in the county of perennial pepperweed located in the San Dieguito River Park. Treating this large infestation has required the collaboration of several stakeholders and contractors to complete the work in a timely manner. Pepperweed infestations treated repeatedly over the last five years have shown a noticeable decrease in the percent pepperweed cover. Reduced amounts of herbicide are now

required for retreatment in these areas. These sparsely infested areas still need to be surveyed annually and any plants found treated. The majority of the treatment efforts in the river park over the last five years have been funded by a grant from the Calif. Department of Parks and Recreation. This \$312,000 grant is now depleted.

In 2006 the USDA Natural Resources Conservation Service (NRCS) awarded \$147,000 to the SDWMA for control of perennial pepperweed and tamarisk within a 96 acre plot inside the San Dieguito River Park. All of the funding from the NRCS must be expended on work within the 96 acre plot. Work began in 2007 and will continue through 2009.

Performance measures: To track eradication success, measurement of the percent cover of the weed inside random quadrats or counting individual plants where feasible will be done. Photo points at representative control sites are established and periodic photographs will be taken. A GPS will be used in the infested area to refine previous mapping and to compare area of infestation with previous data.

Project Title 2: Yellow Starthistle (*Centaurea solstitialis*) Eradication from San Diego County

Project 2: \$12,495

Project Goal: Continue to control all yellow starthistle (YST) plants growing within San Diego County through integrated weed management techniques and with the assistance of SDWMA Stakeholders. It is projected that 25% of the total proposed supplemental funding from CDFA will be used on the yellow starthistle eradication project.

What are the project's long-term benefits and/or region-wide significance: Yellow starthistle (YST) is known to occur in a dozen locations within the county and totals less than 77 acres. We believe three of the YST infestations have been eradicated, although annual survey continues in those areas. YST is a serious weed problem in much of California and eradication is a realistic goal in San Diego County.

Priority Topic Area Being Addressed: This project addresses Priority topic area #1 complete **Eradication** of yellow starthistle (a "C" rated noxious weed) from San Diego County. This project supports a **Regional Collaboration** with numerous stakeholders working together to eradicate YST. A number of the YST infestations have been found along state highways where the weeds are moved by vehicles and maintenance operations. The SDWMA has been able to bring together transportation agencies to work toward controlling weeds along roads. A map showing the YST infestations within the county is attached.

Project Objectives and Methods – list milestones and performance measures: Yellow Starthistle detection and control in San Diego County has been funded in the past by CDFA and will continue to be conducted on private and public lands with an award of supplemental funding. The County of San Diego Department of Agriculture, Weights and Measures will lead this effort through the San Diego Weed Management Area. SDWMA stakeholders with their own funding will control YST populations on Camp Pendleton and in Fallbrook. Periodic SDWMA meetings facilitate the coordination of multiple stakeholders working toward a common goal. Treatment of all YST infestations will be scheduled to prevent seed production. Chemical control will include the use of Milestone, Transline, or Roundup Herbicides. Grazing and mechanical control measures may be used as well, where sites are suitable.

Task 1: Survey the areas around the known infestations and monitor growth stages of the starthistle for proper timing of herbicide applications using county staff.

Task 2: Collect GPS locations of any new yellow Starthistle infestations found.

Task 3: Use county staff, student worker and/or contractor to treat YST infestations

Performance measures:

To track eradication success, estimates of the percent cover of weeds or counting individual plants when feasible will be done on site and logged. Periodic photographs will be taken. A GPS will be used to delimit the infested areas to refine previous mapping and to compare area of infestation with previous data.

