

SACRAMENTO WMA STRATEGIC PLAN

2010

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EXECUTIVE SUMMARY

The Sacramento Weed Management Area (WMA) was formed in 2000 by a diverse group of stakeholders, interest groups, and resource agencies in order to address the challenges of managing invasive weeds in Sacramento County. The Sacramento WMA faces the continuing challenges of expanding invasive weed populations, shrinking control budgets and a lack of understanding of the invasive weed issue by the general public. However, funding is available from the state WMA program and elsewhere, and the WMA should be positioned and ready to apply for and administer these funds when the opportunities arise. The WMA prepared a strategic plan in 2001, and this document serves as an update to the original strategic plan and expands on its scope by compiling background information, focusing goals and objectives, and pulling together regional collaborations not addressed in the original plan. This document provides the background information necessary to prioritize and implement key weed projects in Sacramento County, and also to establish regional collaborations with other WMAs to begin working on weed issues at a regional scale.

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Sacramento WMA Strategic Plan

INTRODUCTION, DOCUMENT ORGANIZATION AND GUIDING PRINCIPLES

The Sacramento Weed Management Area (WMA) was formed in 2000 by a diverse group of stakeholders, interest groups, and resource agencies in order to address the challenges of managing invasive weeds in Sacramento County. The Sacramento WMA faces the continuing challenges of expanding invasive weed populations, shrinking control budgets and a lack of understanding of the invasive weed issue by the general public. However, funding is available from the state WMA program and elsewhere, and the WMA should be positioned and ready to apply for and administer these funds when the opportunities arise. The WMA prepared a strategic plan in 2001, and this document serves as an update to the original strategic plan and expands on its scope by compiling background information, focusing goals and objectives, and pulling together regional collaborations not addressed in the original plan. This document provides the background information necessary to prioritize and implement key weed projects in Sacramento County, and also to establish regional collaborations with other WMAs to begin working on weed issues at a regional scale. This document introduces the vision, mission and goals of the organization, followed by a brief history and then the efforts undertaken by the WMA since 2006 to compile existing weed distribution information, develop a new priority weed list, and focus the actions of the group in a strategic manor matching the overall priorities and resources of the organization.

Vision and Mission

The Sacramento County WMA will reduce the introduction and spread of invasive weeds through coordination and cooperation between signatory groups. The WMA will focus on preventing introduction of new weeds and stopping the expansion of existing populations through control and education projects.

Goals

- Protect and enhance the native biodiversity of Sacramento County ecosystems.
- Maintain and increase the profitability and value of cropland and rangeland.
- Maximize the effectiveness of vegetation management activities and reduce the cost of roadside, park, and waterway maintenance.
- Enhance the recreation experience throughout the County.
- Reduce fire hazard and fire control costs in the County.
- Encourage research and coordination on effective weed management techniques.

Strategies for Accomplishing Goals

The following elements are designed to achieve the goals of the WMA:

- Education: Raising Awareness and Outreach
- Prevention: Exclusion and Early Detection
- Information Management: Survey, Inventory and Mapping
- Projects: Weed Management, Restoration, Monitoring and Research
- Administration: Project Funding, WMA Administration and Partnerships

The elements of the strategic plan and strategies for accomplishing goals are described after the Program Description.

PROGRAM DESCRIPTION

WMA History

The Sacramento WMA was created in 2000 after the California State Legislature designated the California Department of Agriculture (CDFA) as the lead agency to manage noxious weeds. Funds were allocated for 3 years to be used in eradicating noxious weeds through local weed management areas.

The first organizational meeting of what was to become SWAT was held February 16, 2000. Eighteen individuals attended that first meeting:

- Karen Fuller USDA Natural Resources Conservation Service
- John Ronkowski Sacramento Sac Co Transportation
- Beth Hendrickson Department of Water Resources
- Mary Maret Sacramento County Parks and Recreation Department
- Bryan Young Sacramento Regional Sanitation District
- John Simmons Sacramento County Public Works, Transportation
- Becky Waegell The Nature Conservancy, Cosumnes Preserve
- William Akin Sacramento County Airports, Maintenance
- Steve Guitierrez Sacramento County Public Works, Transportation
- Chris Davis USDA Natural Resources Conservation Service
- Steve Schoenig California Department of Food and Agriculture and Cal- IPC
- Mike Brady U.S. Fish and Wildlife Service
- Mike Huffman John Taylor Fertilizer
- Eva Butler Sacramento Splash
- Scott Miller Sacramento County Department of Water Resources
- Scott Johnson Wilbur Ellis

Originally called SWAT (Sacramento Weed Abatement Team), the group had 3 primary purposes:

1. To coordinate efforts of the participating partners in order that their weed control programs could be more successful;
2. To develop a plan to stop the introduction and spread of noxious and invasive weeds in the Sacramento County area;
3. To put the (strategic) plan into action by seeking funding from available grant sources and making the funding available to the cooperators.

On February 20, 2001, the Sacramento County Board of Supervisors officially recognized the formation of SWAT. The original signatories to the MOU were:

- Sacramento County Agricultural Commissioner's Office
- Sacramento County Parks and Recreation Department
- Sacramento Regional County Sanitation District
- Sacramento Storm Water Utility District
- California Department of Food and Agriculture
- California Department of Transportation, District 3
- USDA Natural Resource Conservation Service, Elk Grove Service Center
- U.S. Bureau of Reclamation, Central California Area Office
- U.S. Fish & Wildlife Service
- John Taylor Fertilizer of Wilbur Ellis Company
- The Nature Conservancy, Cosumnes River Preserve

According to the Final Report on the SB 1740 (Legislative Year 2000) Funding Program (CDFA 2006):

The Sacramento WMA mapped areas in the county for target weeds using existing GPS equipment, inventorying and monitoring yellow starthistle (YST) infestations. The WMA, in cooperation with the El Dorado County WMA, conducted YST local eradication/control [on a] 100-acre portion of Merten Ranch. Also, the WMA participated in the "Adopt-an-Acre" program and provided tools and support for restoration of native plants in the Effie Yeaw Nature Center. The WMA also supported the efforts of the American River Parkway Foundation, the California Native Plant Society, and the Weed Warriors of the American River Parkway to remove exotic invasive species in the Parkway.

With SB1740 funding, the WMA initiated the following projects:

- Provided support (tools, supplies) to assist CNPS/Sacramento Weed Warriors (SWW) in beginning invasive plant removal along the American River Parkway. Since 2001, SWW has generated more than 23,000 volunteer hours and is an active partner with Sacramento County Parks and the American River Parkway Foundation in the ongoing Invasive Plant Management Project.
- Provided funding to conduct a yellow-starthistle control project (pilot control burns) on the American River Parkway led by Eva Butler.
- Printed a brochure of the top invasive weeds of the County.
- Provided funding for a pilot pampas grass mapping project, conducted by the SWW and CSU Sacramento Environmental Studies student interns.

Since 2000, individual members of the WMA have undertaken several invasive plant management projects:

- Cosumnes River Preserve: Collaborative perennial pepperweed research and control project (CalFED funded grant with UC Davis).
- Stone Lakes National Wildlife Refuge: Ongoing water hyacinth control.
- Sacramento County Parks: Lower American River Invasive Plant Management Project, ongoing since 2002 (10 invasive plant species are targeted for eradication).
- The Sacramento County Agriculture Department completed a special project to remove Japanese Dodder. Through contacts made at the WMA meetings, County Ag was able to train SMUD tree trimming crews on the detection and disposal of Japanese Dodder.
- SAFCA/Placer County RCD/multiple local agencies, Dry Creek Red Sesbania Project, 4th year underway.
- Sac Urban Creeks Council/SWW: Sacramento Area Creeks, Arundo Eradication and Coordination Project.

Individual members of the WMA Advisory Committee have been active in various local events, including participation in:

- CALIWAC / Cal-IPC Annual Weed Lobbying Day at the Capitol
- Community events – Earth Day exhibits at CSU Sacramento and community colleges
- Cal-IPC speakers bureau
- The Sacramento WMA display was set up at the Cal-IPC Symposium in 2006.

Current Status of Weed Work in Sacramento County

Many of the same groups who founded the WMA and who are mentioned in the CDFA 2006 excerpt above are still active in weed management in Sacramento County. In order to develop a list of priority projects and weed targets for the WMA, active groups were contacted and project descriptions and lists of weeds were gathered and compiled. The information collected is included in Appendix A. Where available, electronic weed maps were gathered and the information was compiled into a database housed at Sacramento County Agriculture Department. Figure 1 shows the location of active projects and weed data sets collected during the production of this document. The groups and their projects are described below. Links to the groups can be found on the Sacramento WMA website http://www.cal-ipc.org/WMA/Sacramento_WMA.php. The WMA prepared a brochure in 2003 which is also available on the WMA website. The brochure listed weeds of concern to the group at that time. The weeds in the brochure were used in the prioritization process described in the next section

Groups Active in Sacramento County Weed Management

Natomas Basin Conservancy

The Natomas Basin Conservancy produces a yearly monitoring report for their preserves, which includes a list of weeds of concern (ICF J&S 2008a). Yellow water primrose (*Ludwigia* sp.) is a species of high concern in their management area.

The Nature Conservancy, Cosumnes River Preserve

In 2001, the Cosumnes Preserve prepared a Weed Management Plan (TNC 2001). The species listed are prioritized and the plan contains methods to estimate staff time and budget necessary to implement the plan. Unfortunately, the plan has not been updated and is not currently being implemented by the Preserve.

Sacramento Valley Conservancy

The species of concern listed in Appendix A were provided in an conversation with Carol Witham who works on Conservancy lands under contract. The currently preserved areas in Sacramento County and other valuable open space resource areas are depicted on a "Twenty-First Century Open Space Vision" map available on the Sacramento Valley Conservancy website (Sacramento Valley Conservancy 2009).

California State Parks, Goldfields District

California State Parks Goldfields District manages Sacramento County lands in the Lake Natoma and Delta areas. The Delta properties they manage are Brannan Island and Delta Meadows. In the Lake Natoma area the weeds of concern are brooms, Arundo, and tree of heaven. In the Delta they are concerned with Arundo, pampass grass, English ivy, ornamental bamboo and vinca.

Sacramento Municipal Utility District (SMUD)

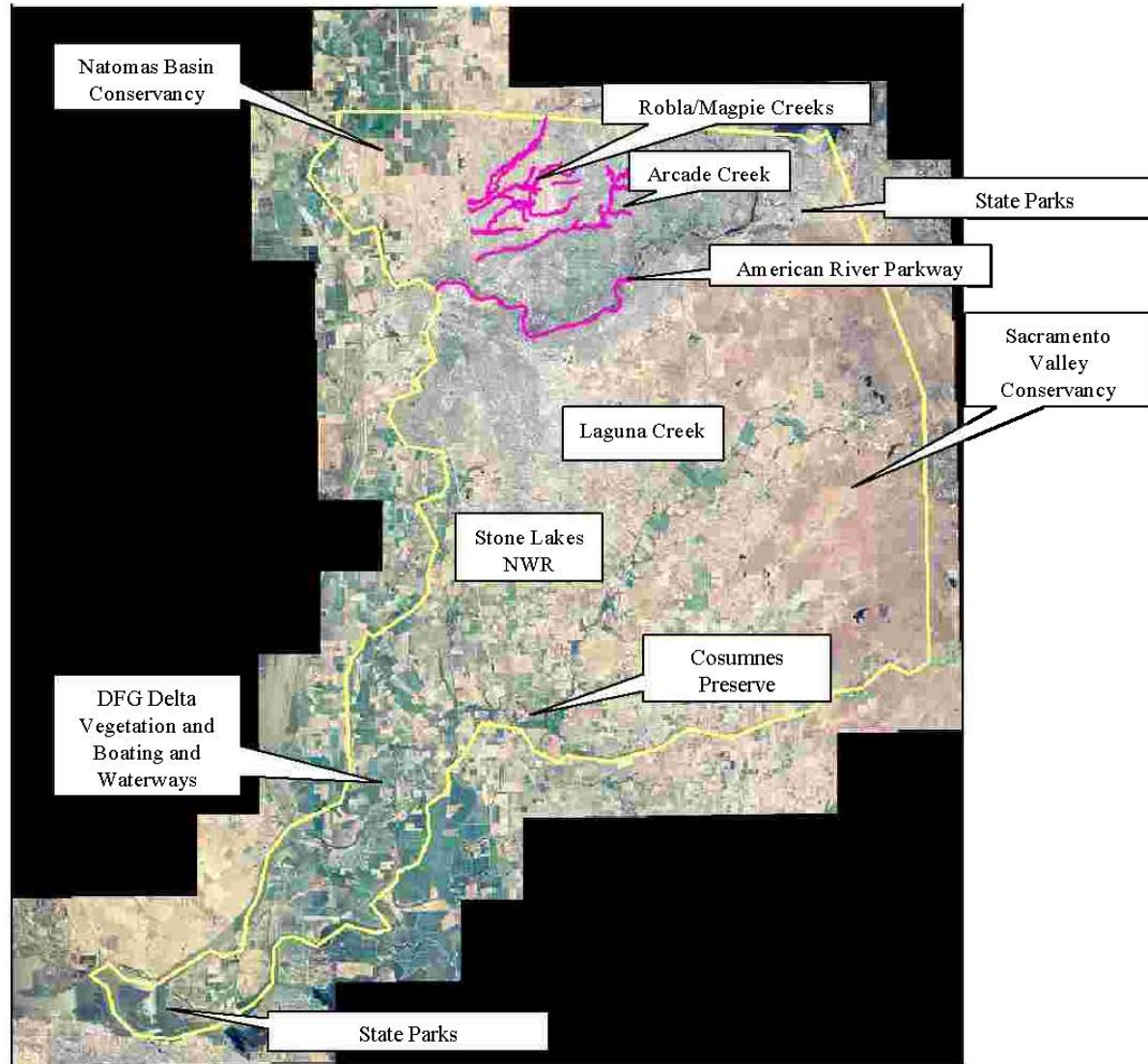
SMUD is an active participant in the WMA and is focused on tree removal under powerlines. They are concerned with weedy trees such as tree of heaven (*Ailanthus altissima*), privet (*Ligustrum* spp.), black locust (*Robinia pseudoacacia*), and weedy vines such as Himalaya berry (*Rubus discolor*).

Effie Yeaw Nature Center

Effie Yeaw Nature Center is located in the American River Parkway and offers educational tours to school groups and the general public. Effie Yeaw received State WMA funding in 2008 to reduce weeds and install native plants in portions of their natural area.

Figure 1. Sacramento County Active Weed Projects and Data Sets

**County-
Wide Data
Sets**
**CDFA A-
Rated
Weeds**
**CDFA
Purple
Loosestrife**
**Japanese
Dodder**
**CalFlora
Location
Database**



USFWS, Stone Lakes National Wildlife Refuge

The list of priority species for Stone Lakes comes from a phone conversation with staff in October 2008. Stone Lakes also worked with the Sacramento Yolo Mosquito and Vector Control District to eliminate populations of water hyacinth and yellow water primrose.

Sacramento Weed Warriors (SWW)

SWW is a volunteer stewardship project that is coordinated by the Sacramento Chapter of the California Native Plant Society (CNPS). SWW works throughout Sacramento County, focusing on the American River Parkway, and Robla, Arcade and Laguna Creeks. Their volunteer schedule is available: <http://www.sacvalleycnps.org/Projects/weedFiles/Swwhome/weedhome.html>

The Mission of the SWW is:

- to promote healthy ecosystems in parks and open space throughout the Sacramento metropolitan region
- to enhance the community's understanding of and appreciation for the unique values of Sacramento's natural resources
- to foster broad-based participation in environmental stewardship throughout Sacramento's diverse communities and age groups.

Sacramento County Agriculture Department, Japanese Dodder Program

In 2006, Sacramento County Agricultural Commissioner's Office became aware of a property infested with Japanese dodder (*Cuscuta japonica*). The infestation covered a mature almond tree growing along a fence line beside a freeway. The tree, along with the dodder, was eradicated in a cooperative effort with Caltrans. Japanese dodder is a parasitic plant with a wide variety of hosts. It is capable of damaging agriculture, the nursery industry and the environment. The plant is an aggressive opportunist and can grow up to 6 inches a day, weakening and even killing its host. Used by Southeast Asians as an herbal remedy for a variety of ailments, it is theorized Japanese dodder was smuggled into the U.S. and intentionally propagated. The plant may have been smuggled in airline passenger luggage or perhaps sent through the mail. Although it is illegal not to declare plant material carried into or mailed to the United States, it is impossible to fully enforce these regulations. Airline passengers are not screened by county inspectors for plant material. A Japanese dodder mapping and eradication program was funded by CDFA and initiated in 2007. Over 81 properties in Sacramento County were confirmed infested with Japanese dodder and populations there were eradicated. Infestation levels ranged from one shrub to entire trees and hedges. The cost, as of early 2009, to eradicate infested sites, survey neighborhoods, and conduct outreach has totaled \$161,411.

Areas of Sacramento County with Active Weed Management Programs

Dry and Robla Creeks

SAFCA has been coordinating a Dry Creek *Sesbania* removal program since 2004. In addition to work on red *Sesbania* (*Sesbania punicea*), there are a number of other highly invasive weeds infesting these two watersheds. The WMA also received funding in 2008 to initiate a control program on Robla Creek.

Arcade Creek

A Stream Corridor Management Plan was prepared in 2008 for Arcade Creek (ICF J&S 2008b). It lists the locations of several weed species of concern. Mapping was completed on this project, but weed removal has only been initiated on *Arundo* in this watershed. Other species of concern include red *Sesbania*, brooms and tamarisk.

American River Parkway

The Sacramento County Department of Parks and Recreation began mapping and developing a weed management plan for the American River Parkway in 1997. They have been managing 10 priority target weeds for the past six years and will plan to keep these weed targets under control for the foreseeable future with the cooperation of the American River Parkway Foundation. They have an active volunteer program with weed pulling work days focusing on red sesbania.

Laguna Creek

The Laguna Creek weed management program was recently funded with CDFA State WMA funds. It will focus on the mapping and management of the species listed in Appendix A. Yellow water primrose, water hyacinth (*Eichornia crassipes*), and Chinese tallow (*Sapium sebiferum*) are of particular concern in their watershed.

Strategic Plan Activities During 2008 and 2009

Prioritization of Weed Species in Sacramento County for WMA Work and Planning Projects

Starting in October 2008, weed mapping data sets for Sacramento County were gathered from the groups mentioned above and from other sources. Some of the sources used are listed in Figure 1. The electronic mapping data sets were converted to ArcView shapefiles, and later Google Earth kml files in order to make the data more accessible. Map data are available from the County Agriculture Department. Some of the data sets received were only available as paper maps, and those were scanned and also stored at the County Agriculture Department. A list of data sets obtained and maps showing the data sets are included in Appendix B.

The list of priority weeds was developed using several criteria. First, the CalFlora database was queried for Sacramento County. CalFlora is a compilation of herbarium records for plants throughout California, and it is possible to narrow a search by county and to select only non-native plant species. The CalFlora database returned 464 non-native plants in Sacramento County, and 151 of those were classified as "invasive". To further refine this list, the Cal-IPC rank was added for the 151 "invasive" plants: 20 were ranked as HIGH, 48 as MODERATE, and 40 as LIMITED. Definitions of Cal-IPC ranks are included in Appendix A.

Since the list in Appendix C is based on herbarium records and some non-specific locations, it contains some plants which no longer occur in Sacramento County or which may have been mapped in a broad region, but do not actually occur here. For example, hydrilla (*Hydrilla verticillata*), is the subject of an active eradication program at CDFA and the program coordinator is certain it does not occur in our county. Some of the other species on this list, such as yellow starthistle and fennel, are too widely distributed at this time to be the subject of eradication projects, but are worthy of control efforts in high quality habitat areas. Additionally, some of our most troublesome weeds did not appear on this list (Chinese tallow and stinkwort).

In order to develop the priority weed list in Table 1 additional criteria were necessary. Those included:

1. Weeds listed by CDFA or Cal-IPC as high priorities (A, B, Q or Cal-IPC High or Moderate)
2. Groups in Sacramento currently working on the problem (Appendix A) or concerned with the spread of a particular species.
3. Survey of surrounding WMAs and experts for development of the "watch list"

Table 1 contains the list of priority weeds for the Sacramento WMA and a watch list of plants either currently of limited distribution but with a potential to spread, or plants occurring in nearby counties or regions which could be introduced into the county.

Table 1. Sacramento WMA High Priority and Watch List Weeds

Scientific Name	Common Name	Cal-IPC Rank ¹ /CDFA ²	Notes
HIGH PRIORITY WEEDS			
<i>Acroptilon repens</i>	Russian knapweed	MOD/B	Few locations along roadsides and fields in Natomas Area
<i>Arundo donax</i>	Giant reed	HIGH/B	Priority for management in riparian areas
<i>Centaurea solstitialis</i>	Yellow starthistle	HIGH/C	Management in high quality habitat and recreation areas
<i>Cuscuta japonica</i>	Japanese dodder	--/A	Active eradication program in place.
<i>Cytisus scoparius</i>	Scotch broom	HIGH/C	Not much of this, keep on priority list, abundant in upstream watersheds
<i>Dittrichia graveolens</i>	Stinkwort	MOD*/NL	Project priority. This weed is the subject of a mapping and eradication program started in 2009.
<i>Eichornia crassipes</i>	Water hyacinth	HIGH/C	Priority in Delta waterways, still actively sold.
<i>Genista monspessulana</i>	French broom	HIGH/C	Scattered locations, sometimes sold in nursery trade
<i>Lepidium latifolium</i>	Perennial pepperweed	HIGH/B	Heavy infestations in the southern part of the County, spreading along roadsides and through contaminated materials.
<i>Ludwigia spp.</i>	Water primrose	HIGH/NL	Project priority. Eradication target for mosquito and vector control work. Spreading in agricultural ditches and Laguna Creek.
<i>Sapium sebiferum</i>	Chinese tallow	MOD/NL	Starting to naturalize in the American River Parkway, Dry Creek and other riparian areas.
<i>Sesbania punicea</i>	Red sesbania	HIGH/B	Project priority. Target of active eradication program in Dry Creek, abundant in Steelhead, Robla and Arcade creeks.
<i>Spartium junceum</i>	Spanish broom	HIGH/C	Scattered locations, sometimes sold in nursery trade
WATCH LIST OR CONCERN IN HIGH QUALITY HABITAT			
<i>Ailanthus altissima</i>	Tree of Heaven	MOD/C	Concern in natural areas
<i>Centaurea calcitrapa</i>	Purple starthistle	MOD/B	A few recorded locations, more abundant in Solano County
<i>Centaurea sulphurea</i>	Sicilian starthistle	--/B	Expanding outside known location in Folsom
<i>Chondrilla juncea</i>	Skeleton weed	MOD/A	Not a priority for mapping and control in Sacramento or foothill counties according to CDFG, weed of concern for counties around Sacramento
<i>Cynara cardunculus</i>	Artichoke thistle	MOD/B	In southern Delta, could expand north
<i>Glyceria declinata</i>	Manna grass	MOD/NL	Invading vernal pools

Table 1. Sacramento WMA High Priority and Watch List Weeds

Scientific Name	Common Name	Cal-IPC Rank ¹ /CDFA ²	Notes
<i>Lythrum salicaria</i>	Purple loosestrife	HIGH/B	Not much in County, CDFA program was in place
<i>Robinia pseudoacacia</i>	Black locust	LIMITED/NL	Concern in riparian areas
<i>Rubus (armeriacus) discolor</i>	Himalaya blackberry	HIGH/NL	Concern in high-value habitats
<i>Taeniatherum caput-medusae</i>	Medusahead	HIGH/C	Widespread, keep on list?
<i>Tamarisk</i> sp.	Tamarisk	HIGH – VAR/NL	Only a few populations on American River Parkway, eradicated?
<i>Tribulus terrestris</i>	Puncture vine	NL/C	Concern to bikers

1. Cal-IPC rank definitions included in Appendix A.
 2. CDFA listed noxious weeds are classified as follows:
A = Eradication, containment, rejection, or other holding action at the state-county level. Quarantine interceptions to be rejected or treated at any point in the state.
B = Eradication, containment, control or other holding action at the discretion of the agricultural commissioner.
C = State endorsed holding action and eradication only when found in a nursery; action to retard spread outside of nurseries at the discretion of the commissioner; reject only when found in a cropseed for planting or at the discretion of the agricultural commissioner.
Q = Temporary “A” action outside of nurseries at the state-county level pending determination of a permanent rating.
NL = Not listed on either list as indicated.

The priority weed list in Table 1 has a variety of uses. It serves to focus the efforts of the WMA and to alert cooperators to weeds which are particularly invasive in natural areas. It will also be a focus for funding efforts. The Watch List portion contains species which are not yet widespread, but should be the focus of early detection efforts.

Compiled List of Priority Weed Projects in Sacramento County

The priority weed projects discussed in this section were based on the following criteria.

1. Project addresses a high priority weed
2. Project occurs in a high quality natural area (see reference to Sacramento Valley Conservancy for natural area locations)
3. Groups are currently working on or would like to initiate work on the species or area of concern (Appendix A)

Priority projects already ongoing in the WMA area include:

- American River Parkway weed management projects
- Dry Creek red sesbania maintenance
- Robla Creek red sesbania control
- Arcade Creek mapping and weed management
- Stinkwort (*Dittrichia graveolens*) regional assessment and coordination of control along County roadways
- Laguna Creek mapping and priority weed management

Additional species-based projects could include:

- Perennial pepperweed (*Lepidium latifolium*) containment line to stop movement into northern Sacramento County
- Regional red sesbania control and management
- Yellow water primrose (*Ludwigia* sp.) control research and coordination
- Sicilian starthistle (*Centaurea sulphurea*) control of spread in Folsom area
- Mapping and control of Russian knapweed (*Acroptilon repens*)
- Purple starthistle (*Centaurea calcitrapa*) stop spread into the Delta from Contra Costa and Solano counties

Additional location based projects could include:

- Coordination of weed management throughout the grazing areas of eastern Sacramento County
- Mather Regional Park, maintain high quality vernal pool habitat through control of stinkwort and other invasive plants

Regional WMA Meeting Held in November 2009

Collaboration with surrounding WMAs began in 2006 at the State WMA meeting in Woodland hosted by CDFA. Before the meeting WMA representatives contacted surrounding WMAs in order to determine their key issues and whether they matched with the Sacramento WMA issues. Most WMAs were interested in regional collaboration and they did share some of Sacramento's issues. Interestingly, one of the issues mentioned was purple loosestrife (*Lythrum salicaria*), which is at low levels in Sacramento County, but could spread significantly if not addressed. WMA representatives also attended the State WMA meeting in 2009 and the surrounding WMAs and others were interested in a regional meeting which was held on November 4, 2009 at the Sacramento Ag Commissioner's office. A summary of the meeting topics discussed is included in Appendix D.

The meeting was attended by 49 individuals, representing 15 Agriculture Departments and WMAs, State and Federal agencies, utilities, non-profit organizations, local land managers, ranchers, academics and consultants. Some of the issues addressed at the meeting included:

- Funding needs for continuing and future programs
- Status of Federal funding through the ARRA Stimulus program
- Challenges of working on weeds regionally, such as coordinating roadside work with Caltrans
- Updates on on-going projects funded by CDFA through state WMA funds
- Success stories on long-term weed eradication programs

PROGRAM ELEMENTS FOR FUTURE WMA PLANNING AND ACTIVITIES

The WMA has a broad mission and limited resources to address the myriad of issues related to invasive weeds. In order to focus our efforts, the activity areas of the WMA are broken down into the following 5 elements, and each element has objectives and actions attached to it.

- Education: Raising Awareness and Outreach
- Prevention: Exclusion and Early Detection
- Information Management: Survey, Inventory and Mapping
- Projects: Weed Management, Restoration, Monitoring and Research
- Administration: Project Funding, WMA Administration and Partnerships

The WMA will work as a group to decide the order and timelines associated with each proposed action. These elements were developed by the WMA and after reviewing a number of other WMA strategic plans (see list following references section). This list was then used as the subject of a prioritization exercise with WMA members described after the program elements are introduced.

Education: Raising Awareness and Outreach

Objectives

- Raise awareness of invasive plant issues in Sacramento County.

Actions

- Continue to meet quarterly as a WMA and share information
- Attend one or more outreach events yearly as a WMA and distribute information
- Participate in Cal-IPC speakers bureau
- Distribute WMA brochures to WMA signatory groups
- Prepare updated WMA brochure in English and Spanish
- Develop an outreach and education strategy linked to prevention, exclusion and early detection.

Prevention: Exclusion and Early Detection

The most effective strategy for slowing the spread of weed infestations is preventing their introduction. This can be accomplished through screening at borders and inspection of commodities shipped into an area. Secondly, once a new weed is introduced it is critical to detect it and stop its spread. This section discusses exclusion followed by early detection and rapid response. The WMA is particularly interested in restricting the sale and spread of invasive horticultural plants and this was determined to be the highest priority for the WMA. Restricting the sale of horticultural plants can be seen as either a decrease in the pathways of introduction (no new plants introduced into the County through horticulture) or in early detection (after plants are introduced and begin to spread they are detected and eradicated).

Pathways of Introduction and Exclusion

Significant pathways of introduction in Sacramento County are:

- Transportation and utility corridors (roads and railroads)
- Maintenance practices along transportation and utility corridors
- River corridors
- Gravel and fill used for building and maintenance projects
- Human intentional introductions for horticulture, medicinal and other uses
- Contaminated construction and maintenance equipment

A list of mining operations in Sacramento County is included in Appendix E. A description of inspection procedures used by the County Agriculture Department is included in Appendix F.

Objectives

- Encourage use of Best Management Practices (BMPs) to decrease spread of weeds
- Support use of aggressive inspection and screening procedures

Actions

- Develop BMPs for different introduction pathways and create handouts or brochures
- Distribute BMP information to groups managing the pathways mentioned above
- Invite County Ag to present about screening procedures in County at WMA meeting

Early Detection and Rapid Response (EDRR)

If a new highly invasive weed species is detected in Sacramento County there should be a primary point of contact and a plan in place for rapid response. Sacramento County has developed a "watch list" of species which should be reported to the County Agriculture Department if observed (Table 1). As other Early Detection Networks develop around the state, the WMA will add species of concern to the watch list as necessary.

How to submit weed or other invasive pest samples for identification

All weed samples should be taken to the Sacramento County Ag Commissioner's Office (CAC), 4137 Branch Center Road, for submission to the CDFA Plant Pest Diagnostic Center (PPDC).

Identifications by the lab are considered official and may be used as legal proof if a weed pest must be abated. Samples should be submitted with either an address or detailed site description of where the plant was found, date and time of collection, collector's name, estimate of acreage or area involved, circumstances of the find (i.e. "found in incoming hay shipment") should also be included. Samples may be fresh or dry. The CAC office will write up the necessary form, deliver the sample to the PPDC lab and provide the requester with lab identification results. There is no charge for submitting samples. Seed samples may also be submitted.

Objectives

- Sacramento WMA members will participate in the development of an EDRR plan for the County.

Actions

- Develop preliminary EDRR action plan
- Create outreach materials for education about EDRR planning
- Coordinate efforts with Bay Area Early Detection Network (BAEDN)

Information Management: Survey, Inventory and Mapping

Objectives

- Develop and maintain information on priority weed locations in Sacramento County.

Actions

- Continue to collect weed data sets from WMA members and others
- Upgrade the available weed data to a more user-friendly format such as Google Earth
- Encourage WMA member organizations to create unique data sets and store them with other WMA map data.

Projects: Weed Management, Restoration, Monitoring and Research

Objectives

- Lead the County as an information source for effective weed management

Actions

- Support research designed to address weed questions applicable to Sacramento County
- Support research on effective restoration techniques
- Encourage the use of sustainable and effective restoration techniques

Administration: Project Funding, WMA Administration and Partnerships

Background on Funding and Staffing Sources to Implement Priority Projects

The Sacramento County Agriculture Department is currently contributing staff time to administer WMA activities. Activities include: scheduling and staffing quarterly meetings, serving as the point of contact and institutional memory for the WMA, serving as the fiscal agent for the WMA, administering the WMA grants from CDFA. The estimate for staff time is 200 hours per year.

Other groups contributing staff time to the WMA include: SMUD, Sacramento County Parks and Recreation Department, NRCS, CDFG, CDFA, TNC, and CalTrans.

In order for the WMA to continue to survive and thrive in coming years it will be important to secure funding to implement the priority projects described in this document. Some of the options for additional funding and staffing for the WMA include:

- Grants from foundations
- Federal government programs through NRCS on private land
- In-kind contributions from WMA partners and others
- WMA funding programs through CDFA
- Research funds to work on priority projects
- Federal money from BLM or other agencies
- What are other potential funding sources?

Objectives

- Secure additional funding for WMA administration and projects.

Actions

- Identify grant writers inside and outside Sacramento County government who can work with WMA members
- Work with grant writer and WMA members to find additional funding sources
- Survey other WMAs to identify potential funding sources

Partnerships, Current and Future Opportunities

Objective

- Pull in additional partnerships for the WMA

Actions

- Develop a list of groups which should be involved in the WMA or need to learn about the WMA
- Coordinate land management groups to more effectively manage weeds
- Implement an education and outreach plan

PRIORITIZING THE PROGRAM ELEMENTS WITH WMA MEMBERS AND FUTURE ACTION PLAN

During the WMA meeting on August 13, 2009, members were given 10 stickers to use in prioritizing potential WMA actions. All the proposed action items in the previous list were written on large sheets of paper and the number of stickers were counted at the end of the exercise. The list of responses in Appendix G is in order from highest ranked action item to lowest or those which did not receive votes. Discussion about the items on the list is also noted where it occurred. Additionally, the portion of the strategic plan the action item originated from is noted after its title.

Two items were added to the list which were not previously included in the strategic plan. They were: (1) Hold field meeting once per year, and (2) develop a list of prohibited horticultural plants. These two items scored highly and are discussed below.

The highest priority action items from the WMA meeting were:

- Develop list of prohibited horticultural plants
- Develop an outreach and education strategy linked to prevention, exclusion and early detection
- Develop a preliminary Early Detection Rapid Response (EDRR) action plan
- Upgrade the available weed data to a more user-friendly format such as Google Earth
- Work with grant writer and WMA members to find additional funding sources
- Coordinate land management groups to more effectively manage weeds
- Hold one field meeting per year
- Coordinate efforts with Bay Area Early Detection Network (BAEDN)

In developing future action plans, the WMA should re-visit the results of the strategic planning process and refine specific goals through WMA discussion and feedback. The County Agriculture Department administrator will be the leader in developing and implementing yearly action plans, with the input and support of WMA members. There is interest from surrounding WMAs in developing a regional collaboration project, and some of the issues faced by various WMAs were discussed at the November 2009 regional WMA meeting.

NEXT STEPS FOR THE WMA

The Sacramento WMA is composed of a diverse group of agencies, organizations and individuals who are all focused on the goal of preventing introductions and managing weeds in Sacramento County. At this time in the development of the WMA each group is focused on its separate mission and projects and the WMA serves as a clearing house for information and expertise. The WMA is also the pass-through organization for administering grants from CDFA and other organizations. This Strategic Plan provides background information and resources, and will be useful for development of future action plans. It also provided an opportunity for collaboration with other WMAs in the region, collaborations which will be useful in detecting new introductions and managing weeds at a regional scale.

REFERENCES AND WEBSITES

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- ICF Jones & Stokes. 2008a. Biological Effectiveness Monitoring for the Natomas Basin Habitat Conservation Plan Area 2007 Annual Survey Results. Available: <http://www.natomasbasin.org/images/stories/pdf/NBC080812bmppublic.pdf>
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- Sacramento Valley Conservancy. 2009. 21st Century Vision Map. Available: <http://www.sacramentovalleyconservancy.org/vision-map.asp>
- The Nature Conservancy. 2001. Weed management plan for the Cosumnes River Preserve, Galt, California, 2001 – 2005. Available: <http://www.invasive.org/gist/products/plans/CRP-Plan.doc>

WMA Strategic Plans used in developing this document:

Mendocino Coast

<http://www.alt2is.com/mcwma/index.shtml>

http://www.mcwma.org/documents/MCWMA-SP/MCWMA-STP_2007_01_19.html Strategic Plan

Mojave WMA

<http://www.mojavewma.org/index.php>

<http://www.mojavewma.org/documents.php> Long Range Plan

Monterey County

<http://www.co.monterey.ca.us/ag/weeds.htm>

<http://www.co.monterey.ca.us/ag/pdfs/Weeds/Archives%20-%20WMA/SP080722%20-%20WMA%20Strategic%20Plan.pdf> Strategic Plan

San Francisco

<http://sfwma.org/>

Santa Barbara County

<http://www.countyofsb.org/agcomm/wma/index.htm>

<http://www.countyofsb.org/agcomm/wma/SPlan.htm> Strategic plan

Ventura County

<http://www.vcwma.org/>

<http://www.vcwma.org/pdfs/Ventura%20WMA%20Strategic%20Plan.pdf> Strategic plan

List of Acronyms

BAEDN	Bay Area Early Detection Network
BMP	Best Management Practice
CAC	County Agriculture Commissioner's Office
CalFlora	CalFlora website: http://calflora.org/
Cal-IPC	California Invasive Plant Council
CDFA	California Department of Food and Agriculture
PPDC	CDFA Plant Pest Diagnostic Center
CDFG	California Department of Fish and Game
CNPS	California Native Plant Society
EDRR	Early Detection Rapid Response
FedEx	Federal Express
NRCS	Natural Resource Conservation Service
PG&E	Pacific Gas and Electric Company
SAFCA	Sacramento Area Flood Control Agency
SMUD	Sacramento Municipal Utility District
SWAT	Sacrament Weed Action Team
SWW	Sacramento Weed Warriors
UPS	United Parcel Service
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WMA	Weed Management Area