

## **Cooperative Weed Management in the Upper Arkansas River Basin**

Partners in the Upper Arkansas Cooperative Weed Management Area (CWMA) have worked together on weed management on a watershed basis since 1998. This includes strategic planning, targeted invasive weed mapping and management, education, and fund raising. The following describes the development of the Upper Arkansas Cooperative Weed Management Area and keys to its success.

### **The Beginning**

#### **Developing a Plan**

In the West, the patchwork of ownership between federal, state, municipal and private land requires cooperation if weed management is to be carried out on a watershed basis.

In 1998, the Sangre de Cristo Resource Conservation and Development (RC&D) Council sponsored a planning meeting to initiate coordinated weed management in the upper Arkansas River basin. The RC&D Council is a non-profit organization with a membership of local governments and conservation districts within nine counties in the Arkansas River headwaters.

The RC&D Council formed a steering committee whose purpose was to devise and carry out a strategic weed management plan for the upper Arkansas River basin. The committee consisted of county weed managers (there were only two at the time), CSU Cooperative Extension directors who were given weed management responsibilities by their counties, representatives from the US Forest Service, Bureau of Land Management, Natural Resources Conservation Service, and private landowners.

The steering committee developed an agenda and made arrangements for a day of planning. The committee brought together people with an interest in or responsibility for weed management in the eight-county-region to develop a strategic weed management plan. During a one-day workshop, a facilitator helped the group develop a draft strategic weed management plan and discuss what type of organization would implement the plan.

The invitation list included local government officials, state and federal agency personnel, conservation district boards, and environmental organizations. Fifty-seven people attended the inaugural strategic planning session. Participants represented local government (counties and municipalities), state parks, Colorado Division of Wildlife, CSU Cooperative Extension, weed advisory boards, conservation districts, state department of corrections, Federal Bureau of Prisons, national parks, USDA Natural Resources Conservation Service, USDA Forest Service, Colorado State Land Board, and military reservations.

Participants completed an analysis of the challenges and opportunities to invasive weed management. Challenges included limited funding, environmental concerns, an uninformed public, lack of information about the location and extent of invasive species, little political support, and no coordination across jurisdictional boundaries.

The group identified the following opportunities: Governments at the local, state, and federal level were all concerned about the problem. Enforcement authority existed in state law and weed control organizations were in existence in every county. Technical information and expertise was available. There was concern from the knowledgeable public and a cooperative weed management area offered new opportunities.

At the end of the planning day, those in attendance were invited to join the steering committee who would now meet to determine a plan of action to reach the goals and objectives in the strategic plan. The steering committee was open to anyone who was interested and remains so to this day.

Each person who attended the strategic planning session received a letter thanking them for their participation, a draft of the strategic plan for their review and comment, and a list of the initial steering committee members. Each person was also again invited to participate on the steering committee.

### **Weed Inventory**

Based on the Strategic Weed Management Plan, the steering committee focused the first year on developing a regional invasive weed inventory. College students were hired with grant funds to inventory targeted noxious weeds, primarily along travel corridors and known areas of infestation. The Bureau of Land Management (BLM) hired and supervised the students as seasonal employees and coordinated the inventory mapping with the weed coordinator or CSU Cooperative Extension personnel in each county. Weed mapping data was collected from hand drawn maps and via Global Positioning System (GPS) units and input into a Geographic Information System (GIS) database at BLM. This database is still in use and is updated each year. The regional weed inventory GIS database is a tremendous resource for the Upper Arkansas CWMA.

The inventory mapping alerted weed management officials of weed infestations in specific areas. This caused action to be taken. Without a weed inventory map, weed management would not have occurred in those areas.

### **Integrated Weed Management**

The steering committee initially identified six species of invasive weeds for management. However, there was not adequate spray equipment in the region to manage the weeds on a watershed basis. The group cooperatively purchased a skid sprayer and two backpack sprayers for each county. The Cooperative also held private pesticide applicator training in several locations to qualify landowners to spray noxious weeds. The Upper Arkansas CWMA encouraged integrated weed management to include biological, chemical, mechanical, or cultural control depending on the species and weed management goals.

## **Capacity Building**

### **The County Weed Manager**

County governments are charged with the responsibility for invasive weed management in Colorado. When cooperative weed management began in the upper Arkansas River basin, only two counties had weed managers. One of the managers was part-time and the other served two counties. Several counties assigned their Cooperative Extension agents responsibility for weed management. Through the efforts of the Upper Arkansas CWMA, county commissioners were educated about the importance of invasive weed management and the consequences of doing nothing.

Steering committee members facilitated discussions between counties to share a county weed manager. This arrangement provided a county weed manager to three additional counties with six counties within the Upper Arkansas CWMA sharing three weed managers.

Today, the specifics of these arrangements are different in each county. Some counties hired a full time weed manager and provide services to the adjoining county for a fee. In another situation where two of the counties share a weed manager, the weed program is contracted to the conservation district. The conservation district then coordinates the weed program including hiring the shared weed manager. The weed managers still work in cooperation with CSU Cooperative Extension personnel who provide local contact information and invasive weed education.

Key to any successful county weed management program is employing at least a part-time weed manager. The county weed manager maintains the invasive weed inventory, has a working knowledge of the location of weed infestations and land ownership, and provides a central point of contact for weed management within the county. Without at least a part-time weed manager, a comprehensive weed management program is difficult to establish and maintain.

### **County Weed Boards**

Each county or counties with a shared weed manager have a weed board as required by state law. These boards are advisors to the county weed department. They provide direction and determine the invasive species of concern in their county. The board is comprised of local land owners and interested persons from within the county and is appointed by county commissioners. The Upper Arkansas CWMA helps and encourages county weed departments and weed boards to cooperate on common weed problems that cross county boundaries.

### **Partnerships: Financial and Other Support**

Building partnerships, both within the county and on a regional and statewide basis, is another key to a successful invasive species management program.

Each of the Upper Arkansas CWMA partners contributes funding, technical assistance, and equipment, per their particular budget, to implement a comprehensive weed management program in their jurisdiction.

Partners collaborate on training and workshops, share and coordinate resources, and work toward common goals. For example, a county weed manager routinely provides training for US Forest Service, Colorado State Parks and Colorado Department of Transportation personnel in weed identification. With designated funding from the Department of Transportation, counties provide weed control along state highways. A coordinated tamarisk eradication program was established with start-up funding provided by the National Fish and Wildlife Foundation. Tamarisk eradication is targeted to specific tributaries that may contain private, state, and federal land. Eradication on private lands is being accomplished in part with financial assistance from the Natural Resources Conservation Service's Wildlife Habitat Incentive Program. Tamarisk eradication on military reservations is funded through the US Fish and Wildlife Service. The Bureau of Land Management is managing an aggressive tamarisk eradication program on public land. The Colorado Board of Land Commissioners provides funding for weed management on State Trust Lands, while research activities are being funded through Environmental Protection Agency and herbicide manufacturer BASF.

While the RC&D Council is often the grant applicant, funding proposal development is coordinated with the steering committee along with critical reporting and financial management. Through building local, state, and federal partnerships, the Upper Arkansas CWMA is able to leverage resources and be more effective in their weed management efforts. A coordinated approach has helped this group of like-minded individuals to set common goals, acquire funding and carry out tested and proven weed management on a watershed basis.

### **Formal Agreements**

The first year of cooperative weed management the Forest Service and BLM had an intergovernmental agreement to provide funding to counties to help manage invasive weeds. Most of the cooperating counties contain significant amounts of public land. A team from Forest Service, BLM, and CSU Cooperative Extension made appointments with the county commissioners in every participating county to explain the need for invasive weed management. The new cooperative weed management initiative offered financial assistance through the federal cooperative agreement. Most counties signed the intergovernmental agreement.

The agreement expired after several years and cooperative weed management continued on an informal basis. The Upper Arkansas CWMA then researched a number of weed management agreements from cooperative weed management groups in other states. From these agreements, a "Standard Operating Procedures and Agreement for Managing Noxious Weeds" was drafted, sent out for review, and finalized. The agreement serves as an educational tool regarding the purpose and operating procedures of the Upper Arkansas CWMA. It also provides a basis for an entity to participate.

## **Education**

At the end of the first weed management season the Upper Arkansas CWMA sponsored a regional educational meeting to focus attention on regional weed management issues and provide a progress report on the strategic weed management plan. Participants represented local, state, federal, and private land managers.

The annual regional educational meeting continues to be held in the fall to highlight the activities and progress of the Upper Arkansas CWMA; provide information on state and federal weed management issues and legislation; share the results of weed management research; and provide practical information on weed management. Continuing education credits are also offered for Certified Pesticide Applicators. Fifty-five people attended the first annual educational meeting. Attendance has grown to around 70 people.

The Upper Arkansas CWMA developed two publications targeting landowners in the upper Arkansas River basin. The first was a brochure that explained about the Upper Arkansas CWMA and included photos and management strategies for targeted invasive species in the area. These were designed to be used by weed managers working with land owners on management of specific weed species.

The second publication was an eight-page newspaper insert. This was distributed through every major newspaper in the eight-county region, a circulation of about 115,000. The insert highlighted the cost of invasive species, problem weeds in the area, weed management options, the landowner's role, and a weed management success story. This publication was well received.

The Upper Arkansas CWMA purchases a variety of educational materials including pamphlets, booklets, and calendars on various aspects of invasive weed management.

Weed management tours or workshops are held annually in each county or between two counties. Upper Arkansas CWMA partners are invited to participate and often provide technical expertise.

## **Leadership**

The Upper Arkansas CWMA developed a strategic plan with input from a broad range of people with an interest in or responsibility for weed management. The plan includes those aspects key to a successful program: education, political support, financial support, and methods to accomplish weed management.

The Upper Arkansas CWMA partners have demonstrated a commitment to carry out their strategic plan through their leadership and a commitment to getting things done. The partners each contribute their strengths and talents to accomplish group goals. The Upper Arkansas CWMA is fortunate to have steering committee members who hold leadership positions in weed management at the local, state, and national level.

## **Steps to a Cooperative Invasive Weed Management Program**

- Pull together a steering committee, from a cross section of entities, who want to take action.
- Develop a strategic invasive weed management plan, with a broad range of input.
- Develop and maintain a centralized invasive weed inventory in a GIS format.
- Target specific species for management.
- Educate officials at all levels who are responsible for invasive weed management.
- Create partnerships both within a county and on a regional and statewide basis.
- Establish, at minimum, a part-time noxious weed manager in each county.
- Contribute funding and technical assistance from each jurisdiction.
- Support specific regional activities or projects.
- Develop an educational program to include an annual event that brings all the partners together.

## **Keys to a Successful Cooperative Invasive Species Program**

- Involvement of people with mutual goals who want to get something done.
- Willingness to take individual action and responsibility to implement group effort.
- Leadership.
- Technical expertise.
- Open participation.
- Central communication and coordination.
- Each partner's strengths and talents are utilized.
- Identify a neutral organization to manage regional funding.
- Meetings have an agenda, a clear purpose, and are facilitated.
- Successes are recognized and celebrated.
- Laugh a lot and have fun!