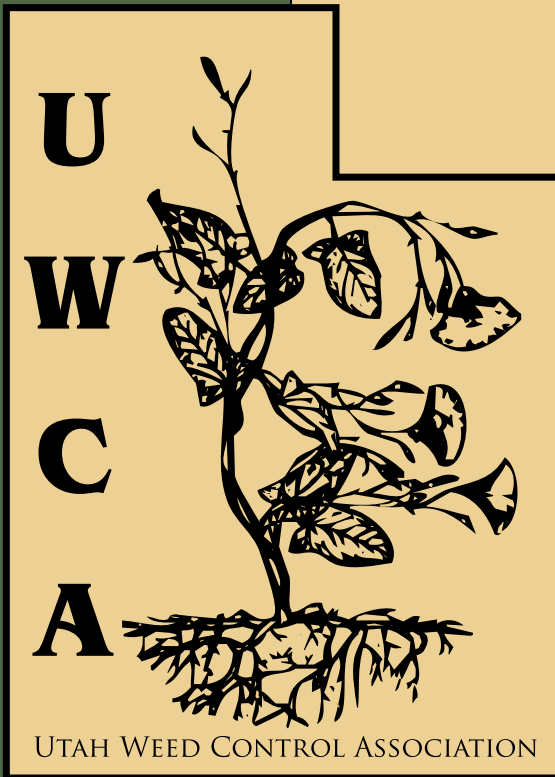


THE UTAH STRATEGIC PLAN FOR MANAGING NOXIOUS AND INVASIVE WEEDS



**Utah Weed Advisory Council and
The Utah Weed Control Association**

**In cooperation with:
State and Federal Agencies
Utah Weed Supervisor Association
Private Land Managers**

THE UTAH STRATEGIC PLAN FOR MANAGING NOXIOUS AND INVASIVE WEEDS

*“Appropriately manage existing and
invasive weeds in Utah.”*

February 2004

**Compiled and edited by:
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FORWARD AND ACKNOWLEDGMENTS

How this plan came about

At the request of the Commissioner of Agriculture and Food, the Utah Weed Control Association (UWCA) accepted the task of developing a statewide strategic plan for managing noxious and invasive weeds. A “Weed Summit” was held in Provo, Utah during February 2004 in an effort to bring together diverse people, organizations, and agencies that have an interest in weed management and control.

During the course of the Utah Weed Summit many suggestions and ideas were presented and an effort has been made to incorporate those recommendations into this strategic plan. Special thanks is extended to the membership of the Utah Weed Control Association and the County Weed Supervisors of Utah who gave up their regular annual meeting to participate in the Summit.

The authors of this strategic plan, extend special thanks to the states of Idaho, Montana, and Nevada for their cooperation and assistance in the development of the Utah Strategic Plan. We have borrowed heavily from the format and the text of the Strategic Plans previously developed for these states. We acknowledge that many of the problems related to management of invasive weed species are similar among the Intermountain States and look forward to expanding our activities with our neighboring states. We also recognize the tremendous efforts of Lori Johnson and Nathan Belliston for typing, layout, and design of this document.

Although Utah is not severely infested with all of the noxious weed species that are found in the western United States, the development of a collaborative and cooperative effort involving all agencies and organizations in the state will increase our ability to help stop the introduction and spread of invasive species on public and private land.

Traditionally weed management has been an issue related to agriculture and agricultural production. Introduced and aggressive weed species crowd out native vegetation, increase problems with erosion, decrease forage production on land that is used by domestic and wild animals and impact the public in many negative ways. Noxious and invasive weeds, however, are not just a problem for agriculture, they are everyone’s problem.



A Weed Summit was held in Provo, Utah, February 2004 to hear suggestions and ideas for the “Utah Strategic Plan for Managing Noxious and Invasive Weeds.”

Photo: Nathan Belliston, CCWD



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Department of Agriculture and Food

LEONARD M. BLACKHAM
Commissioner

KYLE R. STEPHENS
Deputy Commissioner

CLAIR A. ALLEN
Director, Plant Industry

Utah Commissioner of Agriculture and Food

30 June 2005

Leaders in weed management from across the state of Utah have spent the last year working with private citizens, local weed districts, conservations groups, and state and federal land management agencies to develop the Utah Strategic Plan for Managing Noxious and Invasive Weeds into one of the most comprehensive and well-defined state plans in the nation. This Plan outlines current weed programs and weed management budgets for all responsible parties across Utah, highlights strengths of current programs and identifies the needs for those programs.

Weeds are spreading across Utah's landscape at an alarming rate. I encourage you to do all that you can to help to implement this Plan and to help keep Utah as one of the leaders in the weed management effort in the nation.

I urge you to join me in supporting efforts to reduce weed populations and their spread in Utah. This serious threat to our native landscapes and ecosystems will only be stopped if we all take responsibility. Weeds are everyone's problem!

Thank you for your support of the Utah Strategic Plan for Managing Noxious and Invasive Weeds.

Sincerely,

A handwritten signature in black ink that reads "Leonard M. Blackham".

Leonard M. Blackham
Commissioner of Agriculture and Food





Utah Weed Control Association

4820 Old Main Hill
Logan, Utah 84323-4820

2 June 2004

Noxious Weeds are the largest environmental concern to Utah. Infestations of noxious weeds crowd out native vegetation, increase erosion, use precious water, and decrease the forage production that is used by domestic and wild animals. Noxious weeds are not just an agricultural problem. They are everyone's problem.

The Utah Strategic Plan for Managing Noxious and Invasive Weeds is the result of many hours of meetings and deliberations by a number of concerned citizens who represent a variety of organizations. These individuals have worked hard to develop a plan that has the clear goal of stopping the spread of noxious weeds and reducing the present population of those weeds that currently exist in Utah.

I would encourage everyone to read the plan and assist in completing the goals of the plan.

Everyone in Utah should:

1. Learn to identify the major noxious weeds.
2. Manage noxious weeds on the property they own or manage.
3. Support private and governmental efforts to manage the noxious weed population.
4. Be able to explain the impacts of noxious weeds to others.

The people of Utah now have the opportunity to reduce the infestations of noxious weeds. We also have the opportunity to believe that noxious weeds will not affect us or that the problem is someone else's problem. The Utah Strategic Plan for Managing Noxious and Invasive Weeds provides us with a plan and a goal to combat this environmental problem. If the plan is to succeed, all Utahans must join the battle.

The members of the Utah Weed Control Association are ready and willing to assist in the completion of the goals and objective of the Utah Strategic Plan for Managing Noxious and Invasive Weeds.

Sincerely,

Joel Merritt
President, Utah Weed Control Association





1860 North 100 East
North Logan, UT 84341

June 03, 2004

Dear Friends,

The State of Utah has seen a dramatic increase in noxious weed control and awareness in the last few years. Much of this is due to the efforts of Cooperative Weed Management Area's throughout the State. County Weed Departments are an integral part of each CWMA team as they tackle the growing problem of noxious weeds and their impacts. Much of the weed management success to date would not be possible without the partnerships made possible through CWMA's and their ability to pool resources and bring people together.

The Utah Strategic Plan for Managing Noxious and Invasive Weeds will offer a framework for all weed control groups to coordinate existing efforts, plan new programs, and implement weed control activities in a united effort. The Strategic Plan will increase support for a focused effort to implement an integrated weed management approach throughout the CWMA's, counties, and the state.

Noxious weeds are negatively affecting Utah's landscape, reducing productive rangelands and cropland, decreasing critical wildlife habitat, and increasing the economic cost associated with the annual fight to control these invasive plants. Noxious Weeds are everybody's problem, whether you are a recreationist, farmer, rancher, or an average citizen.

The Strategic Plan was developed as a guide for cooperative and coordinated noxious weed management across Utah's wide variety of utilized lands. The plan will offer landowners, private citizens, and state and federal government agencies the opportunity to strengthen partnerships and pool resources to make an investment in Utah's future.

Sincerely,

A handwritten signature in cursive script that reads "Bill Gilson".

Bill Gilson, Chairman
Utah Weed Supervisors Association



EXECUTIVE SUMMARY

The purpose of the Utah Strategic Plan for Managing Noxious and Invasive Weeds is to strengthen, support, and coordinate private, county, state, and federal weed management efforts in Utah. The Strategic Plan is designed to promote the implementation of comprehensive, economical, and ecologically-based integrated weed management programs. The objective was to create a plan with the magnitude, complexity, and thoughtfulness of a comprehensive plan with reasonable and achievable objectives. These objectives will:

1. Provide guidelines for private, county, state, cities, municipalities, and federal land managers to develop goals and plans consistent with state and national strategies;
2. Provide a method of prioritizing management strategies and allocating limited resources based upon prioritized objectives;

and

3. Prioritize Noxious Weed funding based on compatibility and compliance with the state plan.

This plan is a dynamic document and should be evaluated and revised as needed.



The Utah State Capital building in Salt Lake City.

Photo: Jim Belliston



I. INTRODUCTION

Background and Impact

Utah is the 12th largest state in the United States with a land area of approximately 82,144 square miles. Nearly 70% of the land in Utah is federally owned and managed. The primary land managers are the United States Department of the Interior’s Bureau of Land Management and the Forest Service of the United States Department of Agriculture. Most of the federal land is non-cultivated forest and rangeland, although a large portion is dedicated to National Parks and National Monuments. The State of Utah also owns and manages about 21% of the land in Utah, which is forest, rangeland, and State Parks. Of the remaining privately held land, much is involved in agriculture, commercial property, and individual residences.

A weed is simply a plant out of place. A plant is usually considered a weed when it interferes with beneficial uses of land or water, displaces desirable or native plants, or affects human and animal health. Weeds aggressively compete for moisture, nutrients, space and sunlight with surrounding desirable plants. Most troublesome weeds are “exotics” or non-native species that exhibit aggressive invasive behavior, are highly adaptive, have high reproductive abilities, and are persistent. They typically invade where human activities have caused disturbances such as road construction, non-intensive farming, poorly managed grazing or logging, urban development, and high impact recreation. Large natural disturbances such as drought, fires, and floods may also play a role in the spread of invasive plants.

“Noxious weeds” are designated by state law or county ordinance because they cause, or can cause, extraordinary negative economic and ecological impacts. Control is usually difficult and expensive, so emphasis is on education, prevention, and keeping population infestations at manageable levels.

Weeds are typically spread by dispersal of seeds or plant parts in a variety of ways. Wind, water, animals, machinery and people carry seed and plant parts from one location to another. Many weeds produce abundant seeds with barbs, hooks or other attaching devices that facilitate easy adherence to people, animals, or equipment. Because society has become increasingly mobile, weed seeds can and do travel great distances quickly. Weeds usually become established and advance along highways, roads, trails, and river corridors. Some noxious weeds, such as purple loosestrife, have been spread through ill-advised horticultural and home



Dyer’s Woad was originally from Europe.

Photo: Nathan Belliston, CCWD



In Utah, dyer’s woad infests millions of acres in the mountains and valleys.

Photo: Nathan Belliston, CCWD



Purple Loosestrife was likely introduced into Utah as an ornamental.

Photo: USU Extension

garden plantings. Others have been inadvertently introduced through planting of contaminated crop seeds, the feeding of weed seed contaminated forage to livestock, or on vehicles, boats, or other machinery.

Noxious weeds are spreading at an alarming rate across the Western United States and Utah is no exception. Although the exact acreage is unknown, 100% of Utah's counties (29 of 29) are severely infested by at least one of the state-designated 18 noxious weeds. In our neighboring state of Idaho, yellow starthistle has increased from a few acres in 1955 to nearly 500,000 acres. Left unchecked, noxious weeds can spread at a surprising rate of 14% per year. In addition, new weeds are regularly being found throughout the state. It is also likely that some potentially dangerous weeds have, so far, escaped detection.

The negative impacts of weeds are well known and profound. Noxious weeds can create monocultures that eliminate diverse plant communities. Watersheds dominated by noxious weeds tend to be less efficient in absorbing and storing water resulting in increased soil erosion.

Noxious weeds can diminish forage production for all classes of herbivores and reduce habitat for small birds and animals. In addition, many noxious weeds are poisonous or injurious to animals. Aquatic weeds can obstruct irrigation systems, clog machinery, destroy fish habitat, contribute to flooding, and reduce recreational use.



Medusahead can reduce rangeland grazing capacity by up to 90 percent.

Photo: Nathan Belliston, CCWD

Medusahead and downy brome (cheatgrass) have had profound impacts on wildland ecosystems and have altered fire frequencies and intensities in the sagebrush country of the Intermountain West. At North Dakota's Theodore Roosevelt National Park, leafy spurge reduced bison forage by eighty-three percent and deer and elk forage by seventy.

In Montana, forage capacity of elk ranges was reduced forty percent by spotted knapweed.

Musk thistle, scotch thistle, yellow starthistle, and several other Utah noxious weeds can cause physical discomfort or irritation to humans due to barbs, spines, and prickles. Puncturevine, a common weed of urban roads and trails, can puncture bicycle tires and result in substantial repair or replacement costs.



The Cost

Weeds compete with crops and reduce the quality of food, feed, and fiber. During the 1950's, agricultural producers lost about \$5.1 billion per year to reduced crop yield and quality and to the cost of weed control. This value doubled by 1979. During the 1980's, farmers spent over \$3 billion annually for chemical weed control and about \$2.6 billion for cultural, ecological, and biological methods of control. At that time, about 17% of crop value was being lost due to weed interference and money spent on weed control.

In the agricultural sector, losses and control costs associated with weeds in 46 major crops, pasture, hay and range, and animal health were estimated to be more than \$15 billion per year. In non-crop sectors including golf, turf and ornamentals, highway rights-of-way, industrial sites, aquatic sites, forestry, and other sites, losses and control costs totaled about \$5 billion per year. (Value of losses was not available for most non-crop sites, but estimates of control costs were determined.)

The importance of herbicides in modern weed management is underscored by estimates that losses in the agricultural sector would increase about 500% from \$4.1 billion to \$20 billion per year without the use of herbicides. Since introduced species account for about 65% of the total weed flora in the United States, their total economic impact on the U.S. economy equals or exceeds \$13 billion per year. (From "Invasive Plants - Changing the Landscape of America" fact book, Federal Interagency Committee for the Management of Noxious and Exotic Weeds, 1998)

Weeds compete with crops for moisture, nutrients, sunlight, and space, resulting in significant crop losses. Natural weed populations in most fields are high enough to cause devastating yield losses if not controlled. Loss figures of 50 percent to 90 percent are common for crops grown in natural weed infestations. Weeds are different from other pests that pose problems in crop production because they are relatively constant while outbreaks of insects and disease pathogens are sporadic.



An alfalfa field infested with dandelion and quackgrass.

Photo: Nathan Belliston, CCWD



For most crops, it is critical that fields are kept weed-free during the first four to six weeks after planting to prevent serious yield losses. In Utah, the value of yield losses in crops due to weeds varies annually as the price of the commodity fluctuates. However the percentage yield loss of some significant crops in the state has been estimated as:

Crop	% Yield Loss in Utah
Hay	11
Corn	13
Wheat	13
Barley	12
Potatoes	7
Onions	16
Oats	16
Dry Beans	14

The impact of noxious weeds is not restricted to cropland. An estimate of the impact of noxious weeds on rangeland productivity was compiled in an Environmental Impact Study prepared by the Bureau of Land Management in December 1985. A summary of the impact of noxious weeds on the productivity of the rangeland follows:

Weed	% Reduction in Grazing
Dyer's Woad	38
Canada Thistle	42
Dalmatian Toadflax	46
Hoary Cress (whitetop)	55
Leafy Spurge	59
Yellow Starthistle	65
Spotted Knapweed	80
Medusahead	90



Weeds are everyone's problem. They impact crops, human health, rights-of-way, wildlands, other plants, animals, and recreation.

Russian thistle clogs a railroad right-of-way and nearby road.

Photo: Nathan Belliston, CCWD



II. ORGANIZATION AND LEADERSHIP

History and Legal Authority

In 1971, the Utah Legislature passed the Utah Noxious Weed Act, Title 4, Chapter 17 into law. After enactment of the law, the Department of Agriculture adopted rules and regulations (R68) to guide implementation of this law.

The noxious weed law is administered by the Utah Department of Agriculture and Food. The enforcement of the law is basically the responsibility of the individual counties, county weed boards, and the county weed supervisor.

The Commissioner of Agriculture and Food has the following powers and duties:

1. Investigate and designates noxious weeds on a statewide basis
2. Annually update and publish a list of statewide noxious weeds
3. Assist in inter-county noxious weed enforcement activities
4. Ensure county compliance with the state noxious weed law
5. Assists counties that fail to comply in successfully implementing provisions in the noxious weed law
6. Provides educational and information material to the public concerning prevention and control of weeds
7. Compiles and publishes a list of contamination sources and weed vectors and designates treatments to prevent noxious weed and seed dissemination
8. Regulates the flow of contaminated items into the state and between counties in order to prevent dissemination of noxious weeds or seeds

The day-to-day duties of the department are carried out by the staff of the Division of Plant Industry.

The law also created a State Weed Committee composed of five members representing the Department of Agriculture and Food, the Agricultural Experiment Station, Extension Service, Association of Counties, and private agricultural industry. Responsibilities of the committee are: 1) Confer and advise on matters pertaining to the planning, implementation, and administration of the state noxious weed program; 2) Recommend names for membership on the committee; 3) Serve as members of the executive committee of the Utah Weed Control Association.



The Utah Department of Agriculture and Food.

Photo: Nathan Belliston, CCWD



The law provides authority to local county officials to conduct a complete weed control program in each county. It gives the counties authority to enforce the control of noxious weeds infesting lands within the state and to prevent the spread of noxious weeds by regulating the movement of articles contaminated with noxious weeds.

Organization and Cooperation

The following page illustrates the collaboration and cooperation of various entities involved with weed management in Utah.



The best weed management practices utilize a well organized and cooperative program.

Photo: Jerry Hobson, UICWMA



III.

OUR MISSION:

“Appropriately manage existing and invasive weeds in Utah.”

Through:

- A. Education and Research
- B. Mapping and Monitoring
- C. Prevention, Early Detection and Rapid Response
- D. Control - Integrated Weed Management
- E. Restoration
- F. Regulation and Enforcement
- G. Funding

IV.

UTAH PRIORITIES

Weeds are here, more are coming: handling the issue of invasive plants in Utah is an ongoing effort. Non-native plants will be part of the landscape throughout our future. However, there are strategies and tools that can be implemented to reduce our susceptibility to new invasions and empower all of us to reduce the effects of weeds. The development of an invasive species program can be based on the application of Dr. Steve Dewey’s Biological Wildfire Model (Dewey, 1995) as applied to weeds. The key elements are:



As with wildfires, it doesn’t take long for a small problem to spread to a large one if left uncontrolled.

Photos: Nathan Belliston, CCWD



1. Prevention
2. Early Detection and Rapid Response
3. Management of Established Populations
 - a. Identify the perimeter
 - b. Eradicate satellite populations
 - c. Contain and suppress main population
4. Revegetation or Restoration
5. Protect Defensible Spaces

The reality of weed management is that our budgets and resources limit our ability to tackle the problem. This requires us to set priorities and explore creative ways of improving our effectiveness. During the 2004 UWCA Weed Summit, discussions in the breakout groups continually highlighted certain aspects of the Biological Wildfire Model for emphasis in developing this Strategic Weed Plan. These key Utah priority items were:

- A. Education and Research
- B. Mapping and Monitoring
- C. Prevention, Early Detection, and Rapid Response
- D. Control - Integrated Weed Management
- E. Restoration
- F. Regulation and Enforcement
- G. Funding

A. Education and Research

Raising public awareness through education may be the most important activity in the effort to stop the spread and introduction of noxious weed species.

Action Items:

1. Government and Elected Officials
 - a. Weed tours
 - b. Nominate and send a state representative to National Weed Awareness Week
2. Landowners and managers
 - a. Weed tours
 - b. Inserts for SCD or NRCS or FSA
 - c. Bumper stickers
 - d. License plate holders
 - e. Develop a process to work with the railroads
 - f. Develop a process to encourage involvement of tribal lands
 - g. Educate nursery owners and managers on issues related to exotic and invasive species
3. Recreational users
 - a. Include information in hunting and fishing proclamation
 - b. Educate the naturalists at federal parks about the impact of invasive species
4. Schools K-12
 - a. Weed curriculum (ag in the classroom)
 - b. National Science Teachers



Educating the general public is vital to the control of noxious weeds.

*Photo: Steve Dewey,
USU Extension*



Joel Merritt, Cache County Weed Supervisor, educating USU students during a field trip in North Logan, Utah.

Photo: Nathan Belliston, CCWD

- c. Junior Master Gardener program
- d. Essay contests — awards at local and state levels (UWCA)
- e. Presentation of essays, posters, senior projects at UWCA meeting
- f. Weed awareness days; e.g. Burdock Days, Scotch Thistle Days
- 5. General Public
 - a. Publications
 - b. Radio & TV ads
 - c. Billboards
 - d. Create a model weed display for state and county fairs
 - e. Include weed info/brochures with licenses and permits (e.g. building permits)
- 6. All of the above:
 - a. Develop an active website, include a virtual tour of weeds, calendar of events, on-line UWCA registration, contact list of weed people and agencies, post educational materials and contacts, link to other websites.
 - b. Create an education committee for UWCA
 - c. Develop a marketing strategy for the weeds program, including identification of a spokesperson for UWCA and creating a package of success stories, ongoing research efforts, new invaders, etc.
- 7. Research priorities
 - a. Field practitioners report new or increasing weed problems to appropriate state researchers for initiation of new projects.

B. Mapping and Monitoring

Inventory, Mapping, and Monitoring

The objective of a weed survey and mapping is to:

- a. Identify and record locations of noxious and invasive weeds in Utah
- b. Accurately calculate the total number of acres for priority weeds
- c. Determine how fast noxious weeds are spreading by comparing weed inventories over time
- d. Identify boundaries of newly invading species



Surveys also provide information on weed biology and ecology, help predict high risk sites for invasion, and raise public awareness. This information is critical to identify boundaries of newly invading species, develop effective integrated management plans with specific control actions, assess economic and social impacts of weeds, evaluate successes, and track the status of weed management efforts across the state and over time.

The need for an updated weed inventory does not preclude treatment while the inventory is being conducted. Mapping and inventory will be used as tools to help prioritize treatment sites where funding is limited.

Additional useful weed-related information, in map form, would be the boundaries of CWMA's within the state of Utah and data regarding partners and contact information.

Currently, some local weed inventories exist for several areas and land ownerships throughout the state, however, data is not centrally located or in a consistent format that facilitates data sharing.

There seems to be strong support among the UWCA membership to adopt NAWMA standards for mapping, monitoring, and reporting data. This would facilitate data sharing. There is strong support for a central clearinghouse of statewide information as long as local county weed supervisors with GIS/computer resource capabilities maintained local control of their data. AGRC (Automated Geographic Referencing Center) is a likely repository for statewide data.

Action Items:

1. State noxious weed map: Develop a Utah map of weeds in counties. Initial map will record presence/absence of species and estimate acres in the following categories: 1-50, 51-100, 101-500, 501-1000, >1000
2. State CWMA map: Develop a Utah map of existing CWMA's and Weed Demonstration Groups
3. Statewide adoption of NAWMA guidelines for inventory, mapping, and monitoring. Required data fields include: collection date, genus & species, infested area, gross infestation area, canopy cover, land ownership, data source, country, state, and county, and specific location (legal or GPS)
4. Create a Central data clearing house:
 - a. Identify a focal point
 - b. Create a uniform color code for weeds for map display (statewide and suggest a national map)
 - c. Develop minimum metadata standards in concert with AGRC



The use of GPS and GIS technology helps weed departments track weed populations for more efficient control.

Photo: Jerry Caldwell, TCWD



It is expected that development of the initial weed and CWMA maps can be accomplished in one year or less from the publication of this document. Adoption of the NAWMA standards and identification of a clearinghouse may need to be presented for a vote to the UWCA membership, at the very least its executive board, as well as UDAF and the State Weed Advisory Council. Development of the database and providing data to the clearinghouse may take up to 2 years initially due to the wide variation in quality and format of data.

C. Prevention, Early Detection and Rapid Response

A key item that was repeatedly emphasized in the UWCA weed summit breakout sessions was the need to improve our early detection and rapid response capabilities within the state. Economic analysis and historical examples clearly demonstrate that prevention and early action pay off.

Our ability to detect and document early invasions is dependent upon improving the way we collect and disseminate information about newly-invading plants in Utah. The development of cooperative weed management areas and a statewide mapping and inventory effort will improve our ability to communicate across boundaries about new invaders in addition to ongoing control efforts of other priority weeds. This includes identifying vectors or pathways for invasive species, understanding which invasive species pose the greatest threat and warrant the most focused attention, and using the pooled strength of partnerships to cooperatively eradicate and monitor invasions. This could partially

be accomplished by setting aside a discussion period at the annual UWCA meeting for discussion of new invaders and concerns and developing action plans as necessary for particular species.

Prevention

The key to prevention is raising public awareness through education. This may stop importation and use of noxious species as well as increase the public's ability to identify and report noxious species to local agencies or weed management groups for immediate action.



Preventing weeds from gaining a foothold is the best possible option in the fight against weeds.

Photo: © Peak Media



Action Items

1. Track invasive species in neighboring counties and states and share information via partnerships and county weed supervisor networks
2. Develop guidelines, educational materials (public, highway and construction companies, nurseries, railroads, etc.)
3. Regulate known pathways for invasive species, e.g. federal agencies requiring rinsing of equipment, requirements for rinsing boats/watercraft when transporting between water bodies, weed-free seed and forage programs
4. Encourage development of weed invasion risk analysis in federal and statewide planning efforts. Influence project and land planning teams to include an analysis of what potential new invaders are likely to occur and identify where, based on ecological conditions, the most susceptible areas for future invaders are. (e.g. SAGEMAP project includes this sort of risk assessment) This information can be shared to help focus CWMA activities and help counties and partners set priorities.

Early Detection

Preventive actions — addressing new invaders early, before they become significant, ecosystem-altering or economically devastating issues — are the cheapest first line of defense.

Action Items:

1. Establish a “watch out” list for state and for counties of potential new invaders
2. Establish a mechanism for reporting new invasions
3. Encourage routine and systematic surveys as part of all weed programs
4. Map invasive species and high risk areas
5. FICMNEW has an invaders database that could be utilized as a communication and reporting device
6. Provide resources to land managers for proper identification

Rapid Response

Rapid response towards newly discovered invasives will require action on plants not yet on the State Noxious Weed list. Although a plant may not be on the State Noxious Weed list does not preclude this kind of action, but does make setting priorities somewhat more complicated.

Action Items:

1. A coordinated “decision support system” between county weed boards and CWMA’s or other partner groups can help in priority setting
2. “Weed Alerts” distributed through communication networks, mailings, and websites



An “early detection” report on the Utahweed.org website led to state-wide awareness of myrtle spurge.

Photos: Nathan Belliston, CCWD



Photo: Joel Merritt



Photo: Tim Higgs



Photo: Nathan Belliston



Photo: Bill Gilson



Photo: Bill Gilson

Integrated Weed Mgt. incorporates the best and most successful methods of weed control

D. Control - Integrated Weed Management

This statewide strategic plan promotes an integrated approach, where “prevention is the best method” of weed management. Consider each of the following action items when developing an integrated weed management plan.

1. Weed reproduction and dispersal
2. Weed ecology
3. Allelopathy
4. Plant competition
5. Biological weed control
6. Chemical weed control
7. Preventive weed control
8. Cultural weed control
9. Mechanical (physical) weed control
10. Integrated pest management
11. Books
12. Websites
13. People

E. Restoration

After invasion by an aggressive weed species and subsequent successful control/management activities, the objective is to return the site to a desirable species composition, if possible. The goal of the vegetation manager is to explore and understand the underlying order of the vegetation in the target site.

Action Items:

1. Obtain a knowledge of the system
2. Properly identify the problem weed
3. Plant with the crop (end result) in mind
4. Develop a plan for each situation
5. Evaluate yearly success

F. Regulation and Enforcement

The noxious weed law is administered by the Utah Department of Agriculture and Food. The enforcement of the law is basically the responsibility of the individual counties, county weed boards, and the county weed supervisor.

The law provides authority to local county officials to conduct a complete weed control program in each county. It gives the counties authority to enforce the control of noxious weeds infesting lands within the state and to prevent the spread of noxious weeds by regulating the movement of articles contaminated with noxious weeds.



Each county is to establish a county weed control board with three to five appointed members. If the county has a county council, a county commissioner or a county executive is also appointed to the board. This representative shall act as a coordinator between the county and the weed board.

Two members of the board shall be farmers or ranchers whose primary source of income is derived from production agriculture. Members are appointed to a four year term and can be removed for cause.

The county extension agent, the Utah Department of Agriculture and Food compliance specialist, and the county weed supervisor serve as ex-officio members of the board. Others may also be invited to be ex-officio members of the board.

The county weed control board is responsible for the formulation and implementation of a county-wide coordinated noxious weed control program designed to prevent and control noxious weeds within its county. The county weed control board also has the following responsibilities: 1) To cooperate with other county weed control boards; 2) Direct the work of the county weed supervisor; 3) Post a general notice of noxious weeds within the county by May 1 of each year; 4) Serve notice to landowners requiring prompt attention to control noxious weeds or have their property declared a public nuisance; and 5) Conduct noxious weed hearings.

County weed control supervisors are employed by the county to detect and treat noxious weeds and to direct the weed control program for the county weed board. Other responsibilities include: 1) Examine all land under the jurisdiction of the county weed control board to determine compliance with the law; 2) Compile data on infested areas; 3) Consult and advise on matters pertaining to methods of weed control and prevention; 4) Render assistance and direction for control and prevention; 5) Investigate violations and enforce noxious weed controls; and 6) Perform any other duties required by the county weed control board.

During the 2004 UWCA Weed Summit, several issues and action items were identified with regard to regulation and enforcement.



Regulation and enforcement can help weed control agencies prevent weeds from getting out of control.

Photo: USU Extension



Action Items:

1. Compliance with the Utah Noxious Weed Law is inconsistent from property to property and from one land management area to another.
 - a. Develop and utilize Cooperative Weed Management Areas in Utah. Foster the actions of CWMA's to communicate and equally implement the Noxious Weed Law from county to county
 - b. Cooperatively review the Utah Noxious Weed Law and other related policies and laws (1) Seed Law; (2) Nursery Law; (3) Weed Free Feed and Forage

The review of these laws and policies will be accomplished with a cooperative effort between such entities as the Utah Weed Control Association, Utah Department of Agriculture and Food, Utah Weed Supervisors Association, USU Extension, and others.

The review will consider the policies and laws to insure that they are 1) Current and up-to-date; 2) Enforceable; 3) Supportive and equal; 4) Properly categorize weed species; and 5) Show avenues of funding to equal county costs for enforcement.

2. County and State Weed Boards need to be more diverse and increase their power to make the public landowners & land managers aware of the impacts of noxious weeds and their responsibilities to manage them.
 - a. Educate County Weed Boards and managers through Cooperative Weed Management Area programs, regarding their responsibilities under the existing State and Federal Laws. Compliance will be primarily sought through education and awareness

G. Funding

Finances are almost always a limiting resource. Finding new funding sources or redirecting existing funds should be a high priority for weed management organizations.



Action Items:

1. Develop a standard format for requesting funds from UDAF for CWMA's
2. Seek extramural funding from all sources to support weed management activities

Weed-free environments should be the goal of every citizen.

Photo: Janet Valle, USFS

APPENDIX X

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*“Appropriately manage existing and
invasive weeds in Utah.”*



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