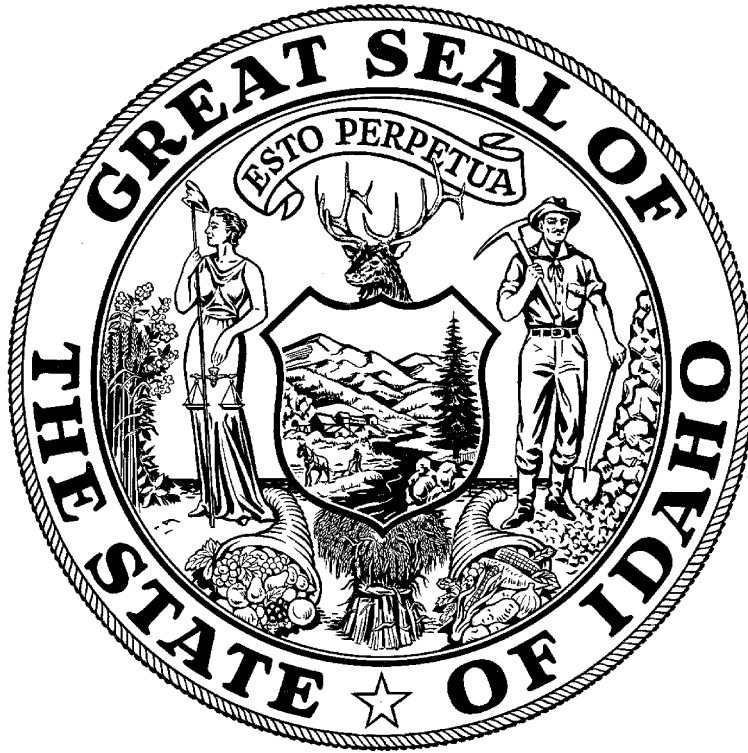




Idaho's Strategic Plan  
for Managing

# NOXIOUS AND INVASIVE WEEDS





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**Idaho's Strategic Plan  
for Managing Noxious and Invasive Weeds**

**October 2005**

## Table of Contents

Foreword.....	3
Acknowledgements.....	4
Introduction.....	5
Purpose.....	6
Background.....	6
Organization and Leadership.....	12
Coordination and Partnerships.....	13
Awareness and Education.....	14
Funding and Resources.....	15
Management of Noxious and Invasive Weeds.....	17
Assessments and Adaptive Planning.....	20
Research and Technology Development.....	21
Compliance and Enforcement.....	21
Implementation and Evaluation.....	22
List of Acronyms.....	24
Glossary of Terms.....	25
Figure 1. Schematic of Idaho State Early Detection and Rapid Response System.....	27
Figure 2. Invasive Species Alert System.....	28

## FOREWORD

# Idaho Weed Coordinating Committee

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August 2005

Idaho's first Strategic Plan for Managing Noxious Weeds (1999) was published as a result of the Governor's Weed Summit held in 1998. The Summit attracted individuals and groups from many different audiences in Idaho who shared a common concern – the impact of noxious weeds on Idaho's environment.

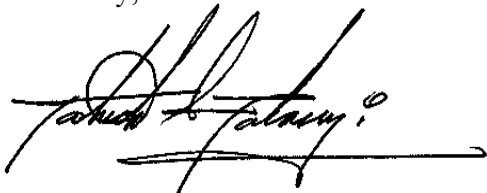
The Strategic Plan of 1999 set into motion a wide variety of efforts to bring cooperation and coordination to weed control efforts in the Gem State. Let me name three that have significance today in what our state is doing to combat weeds:

- Cooperative Weed Management Areas (CWMAs) were established
- The Idaho Weed Coordinating Committee (IWCC) was established
- The Idaho Weed Awareness Campaign (IWAC) was established

In 2004, I challenged the Idaho Weed Coordinating Committee, made up of representatives from county, state, and federal agencies together with representatives from industries and organizations, to update Idaho's Strategic Plan for Managing Noxious Weeds. The results of IWCC's investment of time, energy and resources are contained in this new 2005 Plan.

The Idaho State Department of Agriculture recognizes the efforts of many people who have contributed to the completion of the Plan. I am confident that as you read through this Plan you will recognize the accomplishments, cooperation and vision for weed control in Idaho.

Sincerely,



Patrick A. Takasugi  
Director  
Idaho State Department of Agriculture

Bureau of Land  
Management

Idaho Association  
of Counties

Idaho Association  
of Weed Control  
Superintendents

Idaho Department  
of Lands

Idaho Fish & Game

Idaho Department of  
Parks & Recreation

Idaho State  
Department  
of Agriculture

Idaho Transportation  
Department

Idaho Weed Control  
Association

National Park  
Service

Nez Perce Tribe

Office of the Governor

The Nature  
Conservancy of Idaho

University of Idaho  
College of Agricultural  
& Life Sciences

USDA Forest Service

USDA Natural  
Resources  
Conservation Service

## Acknowledgements

A special thanks to Tim Prather<sup>1</sup>, Leonard Lake<sup>2</sup>, Sandy Daniel<sup>3</sup>, Cynthia L. Coulter<sup>4</sup>, Claire Bronson<sup>5</sup>, the Idaho Weed Coordinating Committee and those who contributed to the development and rewrite of Idaho's Strategic Plan for Managing Noxious and Invasive Weeds. We also thank the staff at Idaho State Department of Agriculture who will make this plan and future updates available to the general public on their website at [www.agri.idaho.gov/](http://www.agri.idaho.gov/).



Frank Church Wilderness CWMA

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<sup>2</sup> Nez Perce National Forest, USDA Forest Service

<sup>3</sup> Eurasian Watermilfoil Task Force

<sup>4</sup> Idaho Department of Fish and Game, Idaho Conservation Data Center

<sup>5</sup> The Nature Conservancy

## Introduction

Idaho's Strategic Plan for Managing Noxious and Invasive Weeds identifies nine broad issues critical to building a strong and successful statewide noxious weed management program across all jurisdictional lands. Many of these issues were originally identified and discussed at the May, 1998, Governor's Idaho Weed Summit in Boise, Idaho:

### **Strategy I. Organization and Leadership**

- Objective I.A. Inclusive, Focused, and Consistent Weed Management Organizations.
- Objective I.B. Leadership and Support of CWMA's in Strengthening Local Efforts.

### **Strategy II. Coordination and Partnerships**

- Objective II.A. Effective and Consistent Coordination.
- Objective II.B. Develop and Expand Interest Group Partnerships.

### **Strategy III. Awareness and Education**

- Objective III.A. Expand Public Understanding of Impacts Associated with Noxious and Invasive Weeds.
- Objective III.B. Upgrade Weed Management Continuing Education.

### **Strategy IV. Funding and Resources**

- Objective IV.A. Obtain Adequate Funding.
- Objective IV.B. Use Existing Funds Wisely.
- Objective IV.C. Expand the Use of Cooperative Agreements and Resource Sharing.

### **Strategy V. Management of Noxious And Invasive Weeds**

- Objective V.A. Prevention.
- Objective V.B. Weed Survey, Mapping, and Data Management.
- Objective V.C. Early Detection/Rapid Response System (EDRR).
- Objective V.D. Noxious and Invasive Weed Control.
- Objective V.E. Noxious and Invasive Weed Management Monitoring.
- Objective V.F. Rehabilitation.

### **Strategy VI. Assessments and Adaptive Planning**

- Objective VI.A. Integration of Noxious and Invasive Weeds into Land Management Activities.
- Objective VI.B. Provide Statewide Weed Management Program Direction.

### **Strategy VII. Research and Technology Development**

- Objective VII.A. Obtain Support for Accelerated Research and Technology Development.

### **Strategy VIII. Compliance and Enforcement**

- Objective VIII.A. Seek Voluntary Compliance with Weed Laws.
- Objective VIII.B. Fair and Consistent Enforcement of Noxious Weed Laws.

### **Strategy IX. Implementation and Evaluation**

## Purpose

The purpose of the strategic plan is threefold:

1. to heighten the awareness among all citizens of the impacts of noxious and invasive weeds on Idaho lands and waters;
2. to improve the effectiveness and efficiency of the various weed management programs at the local, regional, and state levels; and
3. to improve interagency collaboration in halting the spread of noxious and invasive weeds and restoring infested lands and waters to a healthy and resilient condition.

The strategic plan recommends the strengthening of community-based partnerships and relationships and the application of Integrated Weed Management practices. Integrated Weed Management is a holistic systems approach to weed management involving the best management techniques available to limit the impact and spread of targeted plant species. This approach typically includes strategies for (1) prevention, (2) early detection and rapid response, (3) survey and mapping, (4) control, (5) monitoring, (6) restoration, and (7) education.

This is considered the best approach to reducing the ecological, economic, and social impacts of noxious weeds on the State's human and natural resources. To implement Integrated Weed Management, the supporters and cooperators will unify resources, priorities and strategies of federal, state, and local agencies to halt or slow the spread of noxious weeds across Idaho.

## Background

### The Place

Idaho encompasses approximately 53.5 million surface acres. Nearly 62 percent (or 33.7 million acres) is federally owned and managed, primarily by the U.S. Department of the Interior Bureau of Land Management (11.9 million acres) and by the U.S. Department of Agriculture Forest Service (20.4 million acres). Most of the federal land is non-cultivated forest and rangeland. The State of Idaho owns and manages approximately 2.4 million acres, primarily forest and rangeland. The balance, 17.6 million acres, is in private or municipal ownership. The general land type of these 53.5 million acres of Idaho lands is as follows:

<u>Land Type</u>	<u>Acres (millions)</u>
Range	21.9
Forest	20.6
Agricultural	7.9
Urban	.5
Surface Water	.5
Wetlands	.3
Miscellaneous	1.8



## The Problem

A plant is usually considered a weed when it (1) interferes with beneficial uses of land or water, (2) displaces native or desirable plants, or (3) affects human and/or animal health. Weeds aggressively compete with surrounding desirable plants for moisture, nutrients, space, and sunlight.

Most weeds are non-native plants that have characteristics that make them troublesome, such as adaptation to a wide latitudinal range in the native habitat. Reproductive mechanisms that provide an advantage over native or desirable plants may include high seed production, the ability to reproduce without specialized pollinators, self-fertility, the ability to reproduce vegetatively, and/or the production of small seeds or seeds with appendages that facilitate transport.

These plants are considered to be invasive if they are able to move into and dominate native or managed systems and disrupt the ability of those systems to function normally. Invasive plants often initially establish after soil disturbance, particularly following human activities such as road construction, non-intensive farming, poorly managed grazing or logging, urban development, and high impact recreation.

Weeds are designated as noxious by state law or county ordinance because they cause, or can cause, negative economic and ecological impacts and because control is usually difficult and expensive. Idaho's Noxious Weed Law (Chapter 24, Title 22, Idaho Code) specifies responsibilities of landowners, counties, and state agencies concerning management of noxious weeds.

Weeds 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 easily adhere to people, animals, or equipment. Because society has become increasingly mobile, weed seeds can 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 horticultural and home garden plantings. Others have been inadvertently introduced through planting of contaminated crop seeds, through the feeding of weed-seed contaminated forage to livestock, or on vehicles, boats, or other machinery.

Noxious and invasive weeds are spreading at an alarming rate across the Western United States, and Idaho is no exception. Although the exact acreage is unknown, it is estimated that over eight million acres of Idaho lands are severely infested by one or more of the 36 State-designated noxious weeds. One worrisome rangeland weed, rush skeletonweed, occupied approximately 40 acres near Banks, Idaho in 1963. Today, it is found across four million acres and continues to spread. Yellow starthistle has increased from a few acres in 1955 to nearly 500,000 acres. Unfortunately, new weed species are regularly found across the state and a few troublesome weeds have likely escaped detection.

The negative impacts of weeds are well known and profound. Left unchecked, noxious and invasive 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 habitats for small birds and animals. In addition, many noxious weeds are poisonous or injurious to humans and/or animals. Aquatic weeds can obstruct irrigation, clog machinery, destroy fish and waterfowl habitat, contribute to flooding, and reduce or eliminate recreational use.

Medusahead rye and downy brome (cheatgrass) have had profound impacts on wildland ecosystems and have altered fire frequencies and intensities in the sagebrush country of southern Idaho. This can be seen at the Birds of Prey Wildlife Refuge near Kuna. Cheatgrass has replaced a significant portion of the native habitat, which has reduced ground squirrel and mice populations. Raptors have responded by leaving the refuge. At North Dakota's Theodore Roosevelt National Park, leafy spurge reduced available bison forage by 83 percent and deer and elk forage by 70 percent over two decades. In Montana, studies have shown that spotted knapweed reduced the forage capacity of elk ranges by 50-90 percent.

Musk thistle, Scotch thistle, and yellow starthistle cause physical discomfort or irritation to humans due to barbs and spines. Puncture vine, a common weed of urban roads and trails, can puncture bicycle tires, resulting in repair or replacement costs. In 1998, Eurasian watermilfoil contributed to three drownings in Green Lake, Washington.

## **The Cost**

The estimated annual loss of productivity caused by noxious weeds in 64 crops grown in the U.S. is \$7.4 billion. Based on information from private landowners, and federal, state, and county governments, an estimated total direct cost statewide for all Idaho lands may be \$300 million annually. The indirect costs to Idaho citizens from the negative impacts of aquatic and terrestrial noxious weeds on plant diversity, wildlife habitat, watershed health, recreation, tourism, human life, and property are unknown, but likely result in a total annual cost greatly exceeding the \$300 million estimate. If Eurasian watermilfoil becomes well established in just three of our recreational lakes (Coeur d'Alene Lake, Lake Pend Oreille, and Payette Lake), the minimal economic loss is estimated at \$1.7 million dollars per year.

## **Roles and Responsibilities**

Idaho contains a complex mosaic of ownership and uses, which produces a set of unique challenges for building coordinated, consistent, and effective noxious weed management programs. Currently, there are not enough dedicated resources to effectively manage noxious weed problems in Idaho. The independent actions of concerned individuals and agencies have been effective locally, but success at the state level has been less efficient in the control and management of weeds.

## Federal Lands

The federal government, principally the Forest Service (FS) and the Bureau of Land Management (BLM), has a major role in the success or failure of weed management statewide. There are a host of laws that address the control and management of noxious weeds and invasive species on federal lands, with the principal statute being the Federal Noxious Weed Act (7 U.S.C., Sections 2801-2813). Other Federal Acts which also address noxious weeds include the 1990 Food, Agriculture, Conservation, and Trade Act, Executive Order 11987, and the Noxious Weed Control Act of 2003.

There are 94 species officially designated as Federal Noxious Weeds, although several plants not on the federal list are on state noxious weed lists. Both the FS and BLM have recently drafted weed management strategies: the BLM's *Partners Against Weeds* (1/96) and FS's *Stemming The Invasive Tide* (9/98). Both agencies, along with several other federal and state agencies and many other societies, federations, associations, councils, and private companies are participants in the *Pulling Together National Strategy for Invasive Plant Management*.

Since 1994, the U.S. Department of Agriculture (USDA), through the FS, and the U.S. Department of the Interior (USDI), principally through the BLM, have greatly increased the emphasis and resources given to combating the spread of noxious weeds on federal lands. Today, noxious weed management is a priority for most FS and BLM field offices, although targeted funding continues to be chronically short.

The federal agencies have also organized several task forces and coordinating committees. Among the more active groups is the Federal Interdepartmental Committee for the Management of Noxious and Exotic Weeds.

## Non-Federal Lands

Idaho's Noxious Weed Law establishes the duties and powers of landowners and citizens in controlling noxious weeds, the duties and powers of counties in administering weed law on non-federal lands, and the role of advisory committees at the state and county level.

Through their Boards of County Commissioners, Idaho counties are required to "...establish and maintain a coordinated program for control of noxious weeds in the county; employ a county weed superintendent..." and provide operational and educational funds for the County Weed Superintendent. The law also identifies required qualifications and duties of the County Weed Superintendent, the process for carrying out a grassroots weed control program, and local enforcement provisions for non-federal lands. It addresses general auditing and accounting requirements for funds which are raised through property taxes in addition to state and federal grants. The law also allows counties to designate weeds as locally noxious even though they may not be on the state list.

The duty of enforcing Idaho's Noxious Weed Law is the responsibility of the Director of the Idaho State Department of Agriculture (ISDA). This duty includes but is not limited to: (1) determining which weeds are noxious and compiling and publishing a list of such; (2) making

and publishing rules and regulations to carry out the provisions of Idaho's Noxious Weed Law; (3) employing a statewide weed coordinator; and (4) publishing a list of items capable of disseminating noxious weeds and designating treatment of such articles.

There are other actions the ISDA Director may take to carry out an effective program. These actions include: training and educating of county weed authorities and specialists; cooperating and entering into agreements with, and accepting funds from, other state and federal agencies; and taking any appropriate action necessary to control or quarantine noxious weed infestations.

State agencies that own and manage lands in Idaho include the Idaho Department of Lands (IDL), Idaho Department of Fish and Game (IDFG), Idaho Transportation Department (ITD), and Idaho Department of Parks and Recreation (IDPR). Implementation of Integrated Weed Management on these lands is critical to maintaining sustainable resources, productive fish and wildlife habitat, and public recreation.

### **Tribal Lands**

There are five tribes with reservations within the State of Idaho: Nez Perce, Coeur d'Alene, Kootenai, Shoshone-Bannock, and Shoshone-Paiute. Noxious weed management on Indian-owned lands within each reservation falls under the jurisdiction of the respective tribal governments and the Bureau of Indian Affairs (BIA). Tribal and individual Indian-owned lands are subject to federal laws and regulations, but not state laws regarding noxious weeds. Funding from the BIA places high priority on projects that exhibit collaboration with adjacent landowners and managers. Tribes are encouraged to participate in local collaborative weed management efforts to maximize the benefits of the limited financial resources available to tribes for noxious weed management.

### **Private Lands**

Idaho's private landowners manage weeds on several levels. Almost all Idahoans do something with regard to weed management on their property. However, this effort is often judged somewhere between "nothing" and "over-kill" by neighbors. This discrepancy in measurement often results in conflict, as the impact of weeds on one person's land may adversely affect other landowners. This is simply the result of most weeds' abilities to disperse. Private landowners need to have reason to believe that their combined neighborhood goals for weed management can result in success for everyone involved.

Weeds are of great concern to Idaho's agricultural industry. Various crop, livestock-producer, seed-grower, and water-users associations distribute educational materials on weed management and provide training and educational materials for their members.

Organizations such as The Nature Conservancy, which is both a landowner and manager of several Idaho properties, are strong supporters and implementors of integrated weed management programs.

## Other Weed Management Organizations

There are a number of organizations involved in the management of noxious weeds across Idaho. Some are regional or statewide organizations such as the Idaho Weed Control Association (IWCA), the Idaho Association of Weed Control Superintendents (IAWCS), and the Western Weed Coordinating Committee (WWCC). Other organizations focus their efforts on specific noxious weeds in the state, such as the Hawkweed Action Committee, Eurasian Watermilfoil Task Force, Purple Loosestrife Task Force, Rush Skeletonweed Task Force, and Leafy Spurge Task Force.

Cooperative Weed Management Areas (CWMA) have been widely recognized as a model for organizing an effective weed management program at the local level. They bring together all interested and concerned parties in a geographic area for the purpose of combining expertise, energy, and resources to deal with their common weed problems. CWMA's do not diminish or supersede functions of any subdivision of federal, state, or county government such as National Forests, Weed Districts, or Soil and Water Conservation Districts. Rather, they integrate individual efforts into an effective weed program. After the boundaries of the CWMA have been tentatively established, and after sufficient public meetings have been held to help local citizens understand the goals of the CWMA, Integrated Weed Management planning and execution are instituted. These include inventory of weed infestations, the development of management objectives and priorities, prevention practices, and control and monitoring strategies.



Selkirk CWMA

# Strategic Plan: 2005

## Strategy I. Organization and Leadership

### Objective I.A. Inclusive, Focused, and Consistent Weed Management Organizations.

**Issue:** Many CWMAAs have struggled with funding and organizational structure. CWMAAs operate at different levels of integration and effectiveness.

**Actions:**

- Maintain CWMAAs.
- Focus on strengthening internal relationships and organizational effectiveness of CWMAAs.
- Continue to work towards integration of programs across jurisdictional boundaries through common goals, objectives, and management priorities.
- Continue to encourage natural resource agencies and organizations, working with county officials, to provide resources and support towards the operation of CWMAAs.
- In areas with a high percentage of federally-owned lands, encourage the FS or BLM to provide leadership and skills toward the formation and management of CWMAAs.
- Strengthen the regional coordination and communication between CWMAAs.

### Objective I.B. Leadership and Support of CWMAAs in Strengthening Local Efforts.

**Issue:** There are many organizations whose members possess leadership skills and technical expertise that should be utilized to build and strengthen grassroots weed management efforts.

**Actions:**

- Identify and organize individuals with leadership skills who are available and can be utilized by cooperators across the state. These individuals would provide leadership and assistance in the formation of CWMAAs.
- Encourage land managers to increase their involvement with and support for CWMAAs, while retaining individual mission and management objectives.

**Accomplishments:**

Over the past five years, 31 community-based weed management organizations, referred to as Cooperative Weed Management Areas (CWMAAs), have been established across Idaho. These organizations have greatly improved the coordination of weed management actions. Several CWMAAs coordinate among neighboring states and two Canadian provinces.

The Idaho Weed Coordinating Committee (IWCC) was also established and has become an important element in interagency coordination.

A guide to CWMAA creation and management was developed with ISDA and USDA Forest Service.

## **Strategy II. Coordination and Partnerships**

### **Objective II.A. Effective and Consistent Coordination.**

**Issue:** As the weed problem becomes more widespread and acute, the need for effective coordination is critical. Scarce resources cannot be wasted by duplication of effort or by the failure to apply control measures across ownership and jurisdictional boundaries.

**Actions:**

- The Idaho Weed Coordinating Committee (IWCC), and various agencies and organizations will strive to reduce institutional, jurisdictional, and political barriers that inhibit effective on-the-ground weed management.
- Maintain the IWCC through renewal of a Memorandum of Understanding, updated every five years, so that the IWCC can continue to coordinate interagency statewide weed management programs of organizations and agencies with responsibility or interest in noxious and invasive weed management.
- The IWCC will also seek to strengthen and promote the fundamental strategic and tactical elements of an effective statewide interagency program.
- The IWCC will provide a forum to identify statewide management priorities and improve integration and interagency focus on weed management issues.
- Strengthen relationships and interactions among IWCC, IWCA, Invasive Species Council (ISC), IAWCS, etc.
- Develop working relationships and networks with other western states through such groups as WWCC.
- Through IWCA, strengthen outreach to county commissioners, state legislators, and Idaho's congressional delegation.

### **Objective II.B. Develop and Expand Interest Group Partnerships.**

**Issue:** Interest groups, which may have substantial expertise and resources, are not often included in noxious weed management efforts, particularly at the local level.

**Actions:**

- Continue to seek involvement from clubs and organizations such as garden clubs, native plant societies, conservation groups, land developers, hunting and fishing clubs, outdoor recreation, and foundation groups.
- Strengthen relationships and communication with organizations representing the horticultural industry, water users, and conservation interests in Idaho.
- Establish partnerships with 4-H clubs through the University of Idaho Extension System, Future Farmers of America, Scouts, and elementary and secondary schools.

## Strategy III. Awareness and Education

### Objective III.A. Expand Public Understanding of Impacts Associated With Noxious and Invasive Weeds.

**Issue:** The public, state agency personnel, and legislators require continuing education on how invasive weeds spread in the environment, and the long-term consequences to Idaho's environment, economy, and outstanding natural resources.

**Actions:**

- The IWAC must continue to focus its efforts to educate teachers and students.
- Continue a statewide media program by coordinating television spots, ad campaigns, and public service announcements.
- Solicit involvement of Idahoans in public ad campaigns.
- Continue to tailor messages and issues to local areas.
- Develop and disseminate information about the nature, characteristics, and impacts of noxious weeds on the environment, economy, and quality of life in Idaho, including potential impacts to threatened and endangered species, water quality, and wildfire.
- Through public awareness, emphasize the need for prevention practices to reduce personal risk of spreading weeds. Focus on the risk of transporting noxious weed seed, the need to clean equipment, avoiding the use of gravel, fill or topsoil contaminated with weed seed, and maintaining a weed-free condition in heavy use areas, such as parking areas and campgrounds.
- Collaborate with Master Gardeners and University of Idaho Extension faculty to provide weed identification training to citizens and landowners. Encourage and support integrating the weed awareness program into county extension faculty programs.
- Continue efforts to create effective informational materials and distribute them across the state. Create briefing packages and presentations for national, state, and local officials.
- Seek cooperation from county, state, and federal land management agencies to highlight local weed management achievements through public recognition.

**Accomplishments:**

The Idaho Weed Awareness Campaign (IWAC) was founded in the fall of 2001. During its first three years, the IWAC has reached a majority of Idahoans and citizens in neighboring states. The IWAC established a pilot education program in Idaho schools, created a website (<http://www.idahoweedawareness.org/>), and a hotline telephone number (1-866-IDWEEDS).



## Objective III.B. Upgrade Weed Management Continuing Education.

**Issue:** As a result of constant development of new tools and techniques, and changes in weed management personnel, there is a need to provide frequent training.

**Actions:**

- Current training needs will be assessed by the IWCC, IWCA, IAWCS, and other interested groups. Following an assessment, and with support of the University of Idaho Extension educators, these groups will provide recommendations for changes in curricula.
- Develop ad hoc Training Teams that can respond to specific local requests for assistance and training. Topics could include organizing a CWMA; developing integrated weed management plans; budgeting and recordkeeping; mapping, monitoring, and assessment; managing biological-control agents; and land restoration techniques.
- Post a schedule of available technical and professional training for weed management in Idaho and in adjacent states.
- Continue to support the annual Idaho Weed Conference as a forum for technical and professional continuing education in the field of weed management.
- Use awards and recognition for weed professionals and landowners as incentives to build and maintain an effective weed management program.

**Accomplishments:**

A website ([www.uidaho.edu/weeds](http://www.uidaho.edu/weeds)) has been developed as a resource on biology and management of noxious weeds. Sixteen bulletins detailing biology and management of noxious and invasive weeds in Idaho have been created or revised since 2001, and 120 weed-related pamphlets have been published since 2000 as a result of CWMA activity. At least 90 workshops have been held yearly since 2001 across the state through activities of CWMA's and UI cooperative extension faculty.

## Strategy IV. Funding and Resources

### Objective IV.A. Obtain Adequate Funding.

**Issue:** Funding for all phases of weed management is inadequate in relation to the severity of the weed problem and its impacts on Idaho. The current rate of spread of invasive weeds and introduction of new invaders outstrips our funding ability to contain them.

**Actions:**

- Investigate and promote the procurement of additional revenue sources and promote legislative support to expand weed management activities.
- Encourage counties to finance an effective weed program under the direction of qualified, full-time weed superintendents, as local tax resources allow.
- Investigate the potential for long-term (multi-year) funding through existing grants and cost-share programs.

- Encourage and support: (1) increases in agency budgets specifically targeted for managing weeds on state and federal lands; and (2) budget increases or legislative initiatives to accelerate funding for research and technology transfer.
- Encourage and work with federal, state, and county agencies to: (1) allocate greater resources to weed management; (2) create more field positions dedicated to weed management; and (3) provide cooperative funding for urgently needed expertise (e.g., biological-control coordinators, GIS specialists, etc.).
- Ensure fiscal accountability of public funds.

### **Objective IV.B. Use Existing Funds Wisely.**

**Issue:** Funds used for management of noxious and invasive weeds must be used efficiently after strategic assessment of the needs within the state.

**Actions:**

- Continue to improve the ISDA Cost-Share Program to encourage local officials and weed managers to sustain effective programs.
- Continue to improve and promote applicable cost-share criteria.
- Continue the external review of cost-share applications using representatives from IWCC, IWCA, and IAWCS.
- Incorporate strategic objectives and priorities into the cost-share program.
- ISDA cost-share program administration procedures will include periodic field reviews of projects and programs to ensure quality control. Consider incorporating interagency representation with respect to program reviews.
- Continue to support funding for non-crop weed research at the universities.

### **Objective IV.C. Expand The Use of Cooperative Agreements and Resource Sharing.**

**Issue:** Because of limited resources, most counties and agency field offices are unable to acquire and maintain effective weed control or mapping equipment. Computers, software, and trained seasonal workers are necessary to sustain an effective management program.

**Actions:**

- Facilitate and encourage the development of cooperative or participation agreements for sharing skills, resources, and funds. This could include sharing of personnel, equipment, computer technology, herbicides, biological-control agents, inventory and monitoring data, and educational materials. Cooperators could also share skills of available experts and technicians, plus jointly sponsor training and informational meetings.
- Cooperatively work to eliminate agency and organizational barriers that decrease the efficient sharing of skills and resources.

## Strategy V. Management of Noxious and Invasive Weeds

### Objective V.A. Prevention.

**Issue:** Weed Management tends to focus on established weed infestations. An important component of successful noxious and invasive weed management is to prevent the introduction, establishment, and spread of weeds into areas that are currently not infested. A systematic approach to prevention is necessary for an effective statewide strategy.

#### Actions:

- Adopt Best Management Practices and encourage the use of practices that will protect areas that are currently not infested, prevent the introduction and spread of weeds, and restore and/or maintain resilient plant communities.
- Formulate minimum inspection protocols and quarantine standards for material sites (e.g., gravel and sand pits, stockpiles, landscape material, etc.).
- Continue to work for widespread adoption of noxious weed-free hay, seed, and mulch on all lands.
- Adopt recommended protocols for the nursery trade (e.g., St. Louis Protocols).
- Create a set of recommendations for exchanging invasive horticultural plants for non-invasive horticultural plants or encourage the use of native plants for landscaping.
- Identify and manage Strategic Prevention Zones, that is, geographic areas that are relatively weed-free.
- Encourage CWMA's to develop prevention practices and guidelines for local and regional management plans.
- Encourage and provide incentives to integrate rehabilitation practices into weed control.
- Work with planning authorities to minimize weed encroachment on areas slated for development.

### Objective V.B. Weed Survey, Mapping, and Data Management.

**Issue:** Weed survey (inventory) and mapping are critical elements of a strategic weed management program at all levels. Weed mapping will continue to advance as technology is applied to improve effectiveness. Integrated up-to-date inventories displaying the distribution and severity of weed infestations across broad geographic areas are available in only a few areas of the state. Knowing where weeds are located across all ownerships is paramount to: (1) raising public awareness; (2) generating support and funds for quality programs; (3) developing effective Integrated Weed Management plans with specific control actions; and (4) assessing the economic and social impact of weeds.

#### Accomplishments:

A website housing mapping data was created as a collaboration between ISDA and IDL. There have been wide adoptions of GPS and computer technologies by CWMA's for mapping noxious and invasive weeds.

New invading plant species reported to the Lambert Erickson Weed Diagnostic Laboratory are posted on the weed web site [www.uidaho.edu/weeds](http://www.uidaho.edu/weeds).

**Actions:**

- Agree on and maintain a set of interagency minimum mapping standards.
- Communicate and distribute the minimum standards and protocols.
- Periodically review compatibility of agency systems.
- Continue to work towards a systematic protocol to inventory weeds across broad geographic areas.
- Encourage the development and maintenance of CWMA interagency weed inventory databases at the local community level.
- Clarify roles, reporting procedures, and statewide clearinghouse concepts.
- Agree on the level of detail needed for a statewide database.
- Develop and maintain a statewide weed database for all lands across Idaho.

**Objective V.C. Early Detection/Rapid Response System (EDRR).**

**Issue:** Early detection of new invading weeds integrated with rapid assessment and response is a critical element of Integrated Weed Management. The number of plant species with invasive potential that could enter North America exceeds 3,000. The earlier in the invasion cycle we find and treat weeds, the lower the treatment costs and the more feasible it is to eradicate them. A systems approach to EDRR is currently lacking for Idaho. In order to be effective, an EDRR system must work at multiple scales, including local, state, regional, national, and even international actions. Therefore, coordination and communication are critical elements of an EDRR system, in addition to identification, rapid assessment, and rapid response functions. Response to new infestations should involve landowners, counties, CWMAs, and state and federal agencies.

**Actions:**

- Develop, implement, and maintain an EDRR system across Idaho with the capability to integrate with regional (multi-state) and national systems (Figure 1).
- As a minimum, the Idaho EDRR system should encompass five basic elements:
  - 1) Early detection and identification.
  - 2) Rapid assessment for plant species that could enter Idaho from adjacent states and for plant species new to Idaho.
  - 3) Risk assessment of pathways for entry into Idaho; identifying areas at risk to invasion based on: (a) disturbance levels, (b) potential for movement, and (c) plant communities susceptible to invasion. This assessment would help establish location and time table for scheduled detection surveys of areas at high risk to invasion.
  - 4) Rapid response for control and follow-up.
  - 5) Immediate communication and reporting.
- Through an EDRR plan, outline the network, centers, and components of the system in Idaho.
- Establish EDRR funding.
- Publish an alert list of new invasive weed species (Figure 2).
- Establish an email system that alerts land managers to documented cases of new invasive weed infestations to Idaho and includes photographs and biological data.
- Establish a clearinghouse for vital information on new invasive weeds in Idaho.

- Develop consistent standards and definitions for eradication of new invasive weeds.
- Review Integrated Weed Management plans and recommend use of EDRR and monitoring of newly detected weeds.

## **Objective V.D. Noxious and Invasive Weed Control.**

**Issue:** Noxious and invasive weeds must be managed to reduce economic and environmental harm.

### **Actions:**

- Utilize techniques for management of well-established noxious and invasive weeds to include legal use of herbicides, grazing, biological control, and other emerging technologies.
- Utilize the Idaho Weed Conference as a forum for exchanging effective methods for management of noxious and invasive weeds.
- Develop and share effective weed control techniques.
- Prioritize weeds on a local, county, and CWMA basis to focus control efforts on the most urgent threats.
- Utilize the most effective tactics to contain established weeds.
- Minimize undesirable side effects of treatments.

## **Objective V.E. Noxious and Invasive Weed Management Monitoring.**

**Issue:** Additional accessible and reliable information regarding the success or failure of weed management practices is needed to improve management. Baseline information must be in place in order to evaluate success or failure. Because success will depend on stated objectives and priorities in strategic weed management plans, it is imperative that useful information be available to assess accomplishments and trends.

### **Actions:**

- Work towards the use of documented data sets at the CWMA level to generate summaries and accomplishments.
- Develop a statewide tracking system for eradicated noxious or invasive weeds.
- Develop a systematic approach to periodically re-inventory designated areas to determine weed population trends;
  - 1) effectiveness of decisions, priorities, and management strategies;
  - 2) effectiveness of treatment actions; and
  - 3) distribution of potential invaders in adjacent states.

## **Objective V.F. Rehabilitation.**

**Issue:** One of the best defenses against invasion is the presence of healthy native or desirable plant communities that can outcompete weed species. Therefore, restoration or rehabilitation of weed infested areas can minimize the need for future weed control efforts.

### **Actions:**

- Restore or rehabilitate disturbed areas whenever possible to minimize the threat of weed invasions.
- Improve accessibility of native and desirable plant stock for plantings.
- Increase the knowledge base of effective restoration techniques.
- Work to decrease the costs of restoration efforts.

## **Strategy VI. Assessments and Adaptive Planning**

### **Objective VI.A. Integration of Noxious and Invasive Weeds Into Land Management Activities.**

**Issue:** Although considerable progress has recently occurred, weed management is viewed as a distinct activity or program rather than an integral part of natural resource management such as outdoor recreation, grazing, timber, fire, wildlife, wilderness, transportation, and urban area management.

### **Actions:**

- Encourage weed management supporters to work through their individual agencies, units of government, and CWMAs to ensure weed risk assessments are included in existing and proposed projects that have the potential to disturb susceptible habitats.
- Review existing risk assessments and recommend minimum standards for risk assessments that could be utilized by federal, state, and local land management agencies.
- Encourage land managers to integrate reasonable weed management and prevention measures into land use, resource development, and restoration plans, particularly involving habitat-disturbing or site-altering activities.
- Incorporate the concept of Invasive Species Pathways into weed analyses.
- Implement a training program to encourage the integration of effective weed management practices as a part of disturbance mitigation.

### **Objective VI.B. Provide Statewide Weed Management Program Direction.**

**Issue:** Statewide priorities and weed management direction are important management elements that complement and strengthen local programs.

**Actions:**

- Evaluate predictive models and tools that can be used at the local level to assess the susceptibility of habitats vulnerable to specific invasive weeds and to predict the spread of weeds across the landscape.
- Clarify the criteria and process used to designate noxious weeds. Use an adaptive approach with an objective rating system to determine if weeds should be added or removed from the noxious weed list. Link the designation procedure to the EDRR system to ensure consistency between listing of noxious weeds and the ability of landowners to act on listings.
- Formulate statewide invasive weed priorities and objectives that target management actions and focus interagency resources, with emphasis on new invasive plants having the potential for eradication.

## **Strategy VII. Research and Technology Development**

### **Objective VII.A. Obtain Support For Accelerated Research and Technology Development.**

**Issue:** Innovations for management are needed to improve the effectiveness for controlling noxious and invasive weeds.

**Actions:**

- Continue to identify research needs and issues with respect to invasive weed management that are important to Idaho. Communicate those needs to researchers.
- Pursue funding for basic and applied research.
- Utilize and support the University of Idaho Center for Research on Invasive Species and Small Populations (CRISSP).
- Encourage congressional representatives and state legislators to increase research and technology development funding.

## **Strategy VIII. Compliance and Enforcement**

### **Objective VIII.A. Seek Voluntary Compliance With Weed Laws.**

**Issue:** Compliance of landowners and managers with existing state and federal weed laws is inconsistent from property to property and from area to area.

**Actions:**

- Encourage the development of CWMA's across the state and the application of Integrated Weed Management plans. Active CWMA's sponsor events that educate landowners and managers so that they: (1) are aware of the ecological and economic consequence of not controlling noxious weeds; (2) have and/or understand the use of the tools or methods to

effectively manage weeds; (3) fully understand their responsibility under the law to control noxious weeds; and (4) have the necessary resources to do so.

- Develop incentive programs for landowners to gain understanding and compliance with Idaho Noxious Weed Law. Examples may include Landowner Certificates (or awards) for implementation of Best Management Practices, restoration efforts, maintaining weed-free healthy lands, and weed-free organic farms.
- Develop incentive programs that will encourage gardeners and landscapers to use native and non-invasive exotic plants.
- Distribute brochures to incoming landowners and absentee landowners about their responsibilities for weed management.

## **Objective VIII.B. Fair and Consistent Enforcement of Noxious Weed Laws.**

**Issue:** A large segment of the public is unaware of the impacts of noxious weeds, and few landowners and jurisdictions have effective plans for managing weeds. Therefore, there is little public interest, and usually little public pressure on managers and control authorities, to enforce weed laws. Typically, there are few consequences to managers and control authorities when they fail to do so.

### **Actions:**

- Through implementation of the strategic plan, use CWMA's to gain peer group acceptance of necessary compliance, educate landowners and managers in their responsibility under existing laws, and then apply fair and consistent enforcement of state and federal laws.
- Continue to move towards the use of community-based consensus, through CWMA's or other organizational structures for realistic weed management objectives and priorities, rather than the use of Special Management Zones.
- Provide input on revision of Idaho's Noxious Weed Law and the creation of effective rules as needed.
- Incorporate the Plant Pest Act of 2000 into the strategic use of Idaho's Noxious Weed Law.

## **Strategy IX. Implementation and Evaluation**

**Issue:** This plan is meant to provide a strategic framework for the many weed management activities taking place in Idaho. Much of Idaho's weed work occurs at a local level in a decentralized manner, with responsibilities spread out among private interests and local, state, and federal agencies. There is no single entity in Idaho charged with carrying out the recommendations in this plan. Rather, successful implementation depends on effective coordination, cooperation, and communication among the many groups addressing the weed issue.



Annual operating plans are created each year by County Weed Superintendents, CWMAs, and state and federal agencies. These plans are the blueprints of on-the-ground work that is supported by this strategic plan. Action items that address multi-jurisdictional or statewide issues are implemented by collaborative groups such as IWCC, IWCA, IAWCS, IWAC, and the ISC.

**Actions:**

- The ISDA weed coordinator should continue to require that cost-share recipients provide annual reports and operating plans that meet the highest standards of Integrated Weed Management.
- ISDA should continue the practice of submitting cost-share proposals to an independent outside review by weed experts.
- Increase communication and collaboration among local, regional, and statewide weed management entities.
- Continue to hold an annual weed summit for interested members of IWCC, IWCA, IAWCS, ISC, CWMAs, and other stakeholders.
- Communicate the strategies outlined in this plan to weed managers statewide in order to improve our efforts as a whole.
- IWCC will summarize the annual accomplishments resulting from the statewide application of the Strategic Plan.



Clearwater Basin CWMA

## List of Acronyms

BIA – Bureau of Indian Affairs  
BLM – Bureau of Land Management  
CRISSP – Center for Research on Invasive Species and Small Populations  
CWMA – Cooperative Weed Management Area  
EDRR – Early Detection Rapid Response  
FS – Forest Service  
IAWCS – Idaho Association of Weed Control Superintendents  
IDAPA – Idaho Administrative Procedure Act  
IDFG – Idaho Department of Fish and Game  
IDL – Idaho Department of Lands  
IDPR – Idaho Department of Parks and Recreation  
ISC – Invasive Species Council  
ISDA – Idaho State Department of Agriculture  
ITD – Idaho Transportation Department  
IWAC – Idaho Weed Awareness Campaign  
IWCA – Idaho Weed Control Association  
IWCC – Idaho Weed Coordinating Committee  
USDA – United States Department of Agriculture  
USDI – United States Department of the Interior  
WWCC – Western Weed Coordinating Committee



Lower Weiser CWMA

## Glossary of Terms

### **Agency:**

- (a) In the case of the federal government: any authority which exercises administrative control over defined areas of federal lands within the state of Idaho;
- (b) In the case of the state of Idaho: any department, board, commission, or institution;
- (c) In the case of local government: cities, counties and any legal subdivisions thereof, drainage districts, irrigation districts, canal companies, highway districts, or any special taxing district (Section 22-2402, Idaho Code).

**Best Management Practices:** Use of effective control tactics that minimize negative impacts to the resources and organisms residing in or near the area where control tactics are employed.

**Control:** Any efforts aimed at reduction of biomass of the invasive plant species or the prevention of viable seed production or proliferation of vegetative structures that produce new plants of an invasive plant species or colony. Categories of control efforts include:

**Biological Control:** Organisms that reduce the population of an invasive plant species in a self-sustaining manner and function in a density-dependent relationship between the organism(s) and the target invasive plant. Organisms include insects, mites, and fungi.

**Chemical Control:** The use of any herbicide or other plant protection product for control of an invasive plant species.

**Cultural Control:** Modifications to management or production of an area that inhibit invasive plant species. Examples include: timing of grazing, plant competition, manipulating fire return frequency, timing of mowing, and changes to watering pattern.

**Mechanical Control:** The use of mechanical implements or tools in the removal of invasive plants. Methods may include digging, disking, or mowing.

**Cooperative Weed Management Area (CWMA):** A distinguishable hydrologic, vegetative or geographic zone based upon geography, weed infestations, climate, or human-use patterns. Cooperative weed management areas may be composed of a portion of a county, a county, portions of several counties, or portions of one (1) or more states (Section 22-2402, Idaho Code).

**Early Detection and Rapid Response (EDRR):** Finding invasive plant species during the initial stages of colonization and then responding within the same season to initiate eradication of the invasive plant species.

**Eradication:** The complete elimination of a plant species' organs that are capable of producing new plants from an area with defensible borders where the borders reduce the likelihood of reintroduction of the target plant species.

**GIS:** Geographic Information System

**GPS:** Global Positioning System

**Herbicides:** A chemical that is used to control a plant; one of many pesticides.

**Integrated Weed Management:** The use of all available strategies to manage weed populations in a manner that is economically and environmentally sound. Such strategies include cultural, mechanical, chemical, and biological methods.

**Invasive plant species:** A plant that has or is likely to spread into native flora or managed plant systems, develops a self-sustaining population, and becomes dominant or disruptive to those systems.

**ISDA Cost-Share Program:** A funding program developed to establish weed control “seed money” to help create and/or maintain structured weed control programs in all geographic areas in Idaho and administered by the Idaho State Department of Agriculture.

**Native species:** A species that occurs at a place within its historically known natural range and that forms part of the natural biodiversity of a place.

**Noxious weed:**

- (a) Any plant having the potential to cause injury to public health, crops, livestock, land, or other property; and which is designated as Noxious by the director of Idaho State Department of Agriculture (Section 22-2402, Idaho Code).
- (b) Any weed listed on the Idaho State Noxious Weed List (IDAPA 02.06.22).

**Prevention:**

- (a) Any action that reduces the potential for the introduction or establishment of a plant species in areas not currently infested with that species (Section 22-2402, Idaho Code).
- (b) To deter the spread of invasive, non-native weeds.

**Quarantine:** The regulation of the production, movement, or existence of plants, plant products, animals, animal products, or any other article or material, or the normal activity of persons, to prevent or limit introduction or spread of noxious weeds (Section 22-2402, Idaho Code).

**Rehabilitation:** Altering a degraded habitat in order to improve ecological function.

**Restoration:** The return of an ecosystem to a close approximation of its condition prior to disturbance.

**Strategic Prevention Plan:** A plan that directs management actions to protect specific areas from the introduction of invasive plants reducing the risk of new weed infestations.

**Strategic Prevention Zones:** Geographic areas that are relatively weed free.

**Figure 1. Schematic of Idaho State Early Detection and Rapid Response System**

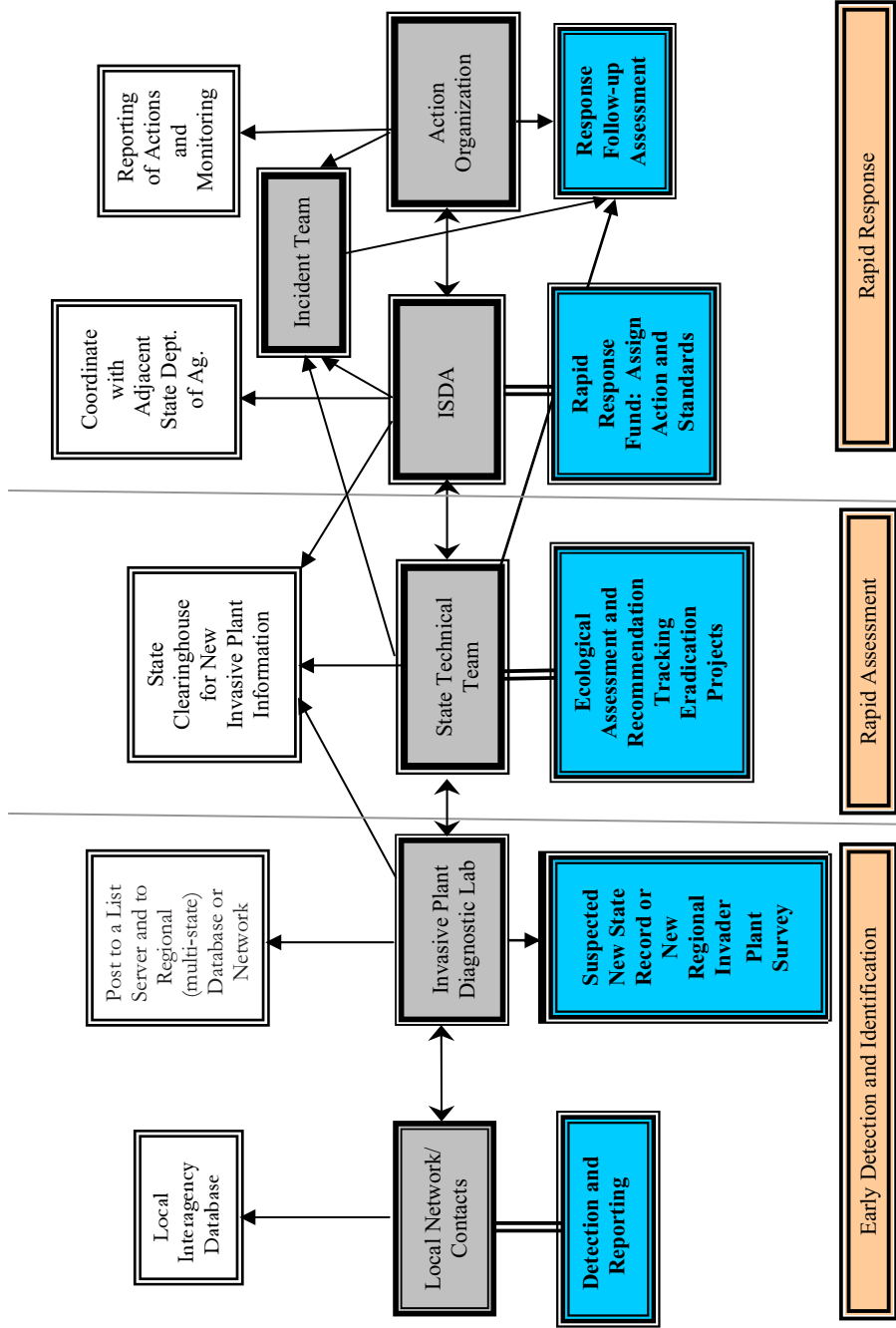
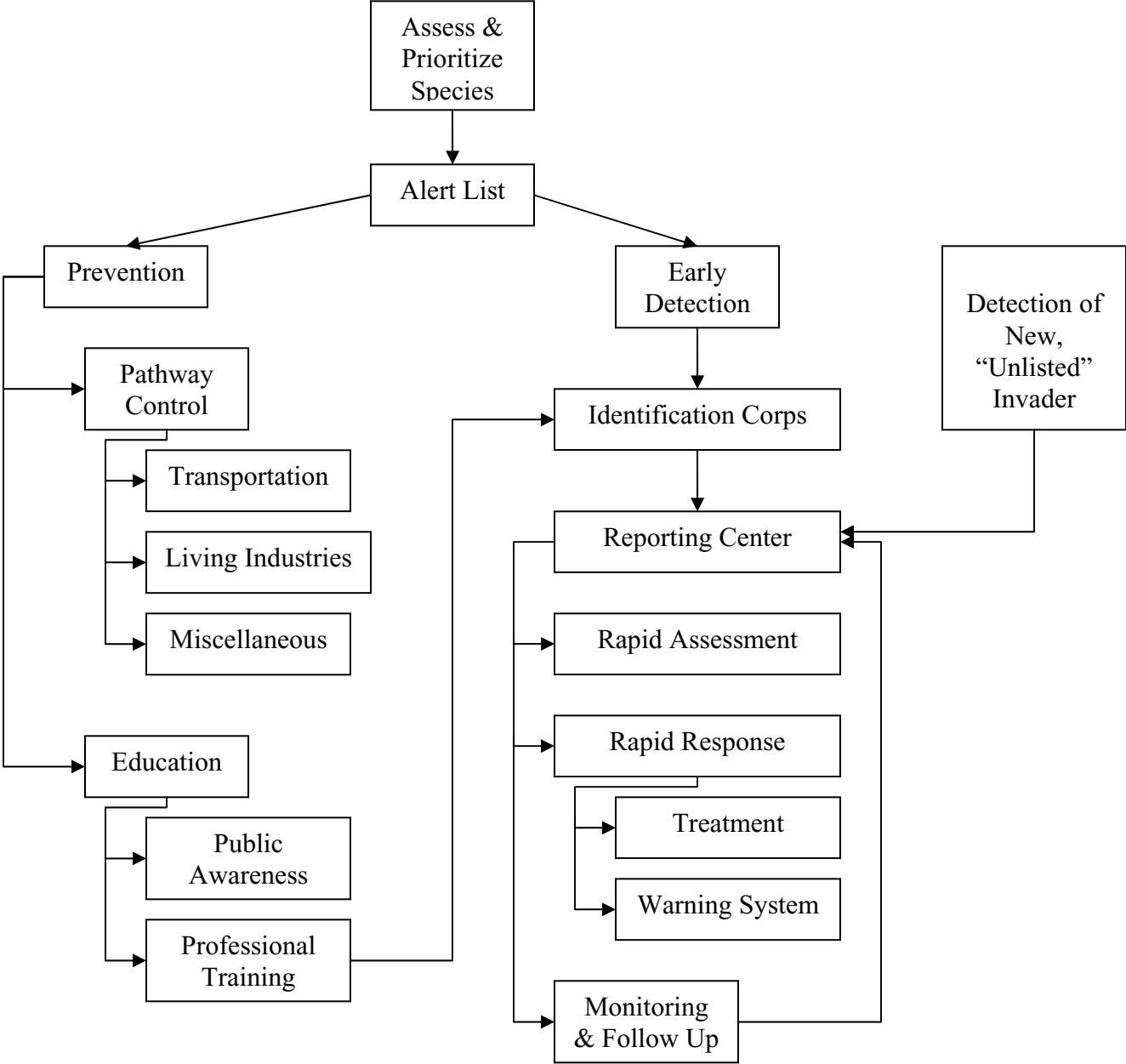


Figure 1: A schematic of a potential Early Detection and Rapid Response (EDRR) system for the state of Idaho. Rapid Assessment would be a shared responsibility of a State Technical Team comprised of the Idaho State Department of Agriculture's Noxious Weed Coordinator, County Weed Superintendents, federal and state agency botanists, food and fiber producers, and University of Idaho personnel. The incident teams within the Rapid Response section potentially would consist of a representative of the State Technical Team, ISDA, and county/CWMA personnel.

**Figure 2. Invasive Species Alert System**



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Conservancy**



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