

Appendix I
Boise & Sawtooth Forest-wide Integrated Weed
Management Prevention Plan

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The Boise and Sawtooth Invasive Plant Treatment EIS is focused on treatment of invasive/noxious weeds and to a lesser extent on restoration. This IWM Prevention Plan is provided as supplemental information to the overall program and is implemented depending upon priority and funding for each Forest. Forest Plan direction in the form of Standards and Guidelines (described below) are mandatory direction. This Plan is intended to be a living document, being updated as needed to be most effective.

Introduction

It has been well-established that the most effective method for managing noxious weeds is to prevent their invasion and expansion. Prevention is the most economical and ecologically sound method for weed management. However, no single element of Integrated Weed Management (IWM) operates independently. Within prevention are aspects of education, early detection, on-going monitoring, site restoration, general land use practices, and other elements of IWM. All elements of IWM are inter-connected in a variety of relationships. The challenge and the primary goal of IWM is to incorporate a variety of strategies in a coordinated, multi-disciplinary, ecological approach with the goal of maintaining or developing healthy plant communities that are relatively weed-resistant.

Prevention Aspects of Integrated Weed Management

The primary focus of this prevention plan is the prevention and education component of IWM. The goal is to increase public and agency personnel awareness about the noxious weed issue. To be most effective, the elements of IWM should not function independently. For example, prevention goes well beyond public education. The prevention aspects of other elements of IWM are highlighted below to illustrate the multi-disciplinary approach.

Inventory

- Continuing Inventory efforts provide the opportunity for repeated field visits and the detection of new invaders and new infestations of established species. Identification of weed-free areas provides baseline data on healthy, intact ecosystems.

Treatment

- Treatment practices restrict the encroachment of noxious weeds onto adjacent lands.
- Treatment practices limit the number of seeds produced and/or inhibit rhizomatous growth.

General Land Management Practices

- Minimizing soil disturbances by vehicles, machinery, wildlife, livestock, and recreation impacts is central to preventing weed establishment.

Monitoring/Evaluation

- Annual Monitoring efforts provide evaluation of effects of various treatments on weed populations and non-target resources and determine population trends such as expansion rates and habitat susceptibility.
- Adaptive strategies can be determined and implemented to maximize prevention efforts.

Partnerships/Coordination

- Information-sharing and a coordinated/cooperative approach within and outside the agency allow for a broad, regional perspective and rapid response to new infestations.
- The process of educating and motivating individuals to promote noxious weed management and prevention has positive, long-term, compounding effects.

Restoration

- Establishment of competitive, healthy plant communities in areas susceptible to invasion hinders the introduction or re-introduction of noxious weeds.

Prevention is one element of all the interrelated elements of Integrated Weed Management. A coordinated approach of a variety of tactics is the primary strategy of IWM.

Forest Plan Direction

Both the Boise and Sawtooth Forest Plans have robust direction regarding education and prevention practices for non-native plants (Table 1).

The Desired Condition is described as follows:

“Noxious weed infestations are primarily restricted to locations along roads, trails, river corridors, and airstrips. Existing noxious weed populations are not expanding in size. Weed species cover or densities are variable across the Forest. New noxious weed outbreaks may occur temporarily or continue to exist as a small nonexpanding population in areas of high susceptibility. Noxious weed populations in low susceptibility areas are small and scattered with low to moderate densities. New invader species to the forest are not becoming established. Native plants are dominant on disturbed or recently restored sites. Some areas of historic rehabilitation or vegetative manipulation are still dominated by non-native grasses or forbs.”

Table 1. To achieve that desired condition both Plans set out the following direction^a.

Management Direction for Non-native Plants		
Type	Number	Direction Description
Goals	NPGO01	Manage noxious weeds with an Integrated Weed Management approach that uses prevention, education, eradication, containment, and control treatment strategies in a coordinated effort that includes potentially affected resources, users, funding sources, and activities.
	NPGO02	Prevent new infestations of undesirable non-native plants or noxious weed species, with emphasis on areas of high susceptibility where those species have a strong probability for establishment and spread.
	NPGO03	Promote and participate in establishment of Coordinated Weed Management Areas. Support the State of Idaho Weed Management Strategy.
	NPGO04	Re-establish vegetation that is compatible with desired long-term vegetative conditions, Forest-wide management direction, and management area priorities.
	NPGO05	Work to reduce the risk of establishing new noxious weed populations by minimizing weed seed transport and reducing favorable establishment conditions on disturbed sites.
	See also Goals for TEPC Species (03, 04, 05, 06) and Botanical Resources (01, 04, 06).	
Objectives	NPOB01	Maintain, and use current field data to update, the Forest-wide database and map library of current status of noxious weed infestations, treatment activities, and locations of newly established infestations.
	NPOB02	Designate Coordinated Weed Management Areas on Sawtooth National Forest System lands.
	NPOB03	Develop strategic noxious weed management plans for Coordinated Weed Management Areas. Cooperate on a regular basis with federal agencies, tribal governments, the State of Idaho, county weed organizations, state and local highway departments, and private individuals in establishing Coordinated Weed Management Area strategic priorities, and locating and treating noxious weed species.
Objectives	NPOB04	Coordinate with the Idaho Department of Transportation and county officials to assist and promote cooperative efforts to reduce introduction and spread of noxious weeds.
	NPOB05	Cooperatively work with holders of special use authorizations to identify and manage noxious weed infestations within areas of use to prevent further expansion or reduce existing densities.
	NPOB06	Emphasize prevention of noxious weed establishment through education and cooperation with recreation user groups such as all-terrain vehicle (ATV), motorcycle, and stock user groups.
	NPOB07	Use Burned Area Emergency Rehabilitation or other appropriate procedures to reduce the risk of noxious weed expansion in wildland fire areas, especially those identified in the Forest-wide database and map library as being highly susceptible to invasion.
	NPOB08	Develop a Forest Noxious Weed Management Plan in coordination with county, state, and federal agencies, including FWS and/or NMFS, within 3 years of signing the ROD for Forest Plan revision.
	<i>See also Objectives 21 for TEPC Species and 08, 13, and 14 for Botanical Resources.</i>	
Standards	NPST01	Only certified noxious weed-free hay, straw, or feed is allowed on National Forest System lands.

Management Direction for Non-native Plants		
Type	Number	Direction Description
	NPST02	All seed used on National Forest System lands will be certified to be free of seeds from noxious weeds listed on the current <i>All States Noxious Weeds List</i> .
	NPST03	To prevent invasion/expansion of noxious weeds, the following provisions will be included in all special use authorizations, timber sale contracts, service contracts, or operating plans where land-disturbing activities are associated with the authorized land use (additional direction may be found in timber sale and service contract provisions and in Forest Service handbooks): Revegetate areas, as designated by the Forest Service, where the soil has been exposed by ground-disturbing activity. Implement other measures, as designated by the Forest Service, to supplement the influence of re-vegetation in preventing the invasion or expansion of noxious weeds. Potential areas would include: construction and development sites, underground utility corridors, skid trails, landings, firebreaks, slides, slumps, temporary roads, cut and fill slopes, and travelways of specified roads. Earth-disturbing equipment used on National Forest System lands--such as cats, graders, and front-loaders--shall be cleaned to remove all visible plant parts, dirt, and material that may carry noxious weed seeds. Cleaning shall occur prior to entry onto the project area and again upon leaving the project area, if the project area has noxious weed infestations. This also applies to fire suppression earth-disturbing equipment contracted after a WFDSS has been completed. (Modified as part of 2012 Forest Plan amendment for WCS.)
	NPST04	Contractors, with the exception of fire suppression prior to completion of WFDSS, shall be required to clean earth-disturbing, construction, and road maintenance equipment, of all sizes, to remove all plant parts, dirt, and material that may carry noxious weed seeds, prior to entry onto the Forest, or movement from one Forest project area to another. (Modified as part of 2012 Forest Plan amendment for WCS.)
	NPST05	During WFDSS development, identify noxious weed control and mitigation measures. Ensure their implementation through direction in the Letter of Delegation and the Incident Overhead Team briefing. (Modified as part of 2012 Forest Plan amendment for WCS.)
	NPST06	Materials such as hay, straw, or mulch that are used for rehabilitation and reclamation activities shall be free of noxious weed seed, and shall comply with the 1995 weed-free forage special order against use of non-certified hay, straw, or mulch. Materials that are not covered under a weed seed free certification, and that have the potential to contain noxious weed seed, shall be inspected and determined to be free of weed seed before purchase and use.
Standards	NPST07	Source sites for gravel and borrow materials shall be inspected for noxious weeds before materials are processed, used, or transported from the source site into the project area or onto the National Forest.
	NPST08	Gravel or borrow material source sites with noxious weed species present shall not be used, unless effective treatment or other mitigation measures are implemented.
	NPST09	The Forest shall comply with the intent and direction established in the above provisions or clauses in a manner similar to that required of contractors or permittees.
	NPST10	Projects that may contribute to the spread or establishment of noxious weeds shall include measures to reduce the potential for spread and establishment of noxious weed infestations.
	NPST11	Integrated Weed Management shall be used to maintain or restore habitats for sensitive plants and other native species of concern where they are threatened by noxious weeds or non-native invasive plants.
	NPST12	Implement the Forest Noxious Weed Management Plan upon completion.
Guidelines	NPGU01	Noxious weeds and undesirable non-native plants should be eradicated. Where it is not practical to eradicate existing infestations, infestations should be managed to prevent seed production and spread.
	NPGU02	Clean borrow and gravel sources on Forest should be maintained as noxious weed free through an inspection and treatment program. Off-Forest inspections and treatments should be coordinated with county weed agents.

Management Direction for Non-native Plants		
Type	Number	Direction Description
	NPGU03	Identify areas with extensive noxious weed infestations where precautionary actions are necessary when planning and implementing management activities. In areas of extensive weed infestations, designated wash sites should be established as part of project planning. Wash sites should be located: (1) where they are easily accessible and useable, (2) on gravelly or well-drained soils, (3) where wash water runoff will not carry seeds away from site, (4) where wash water runoff will not directly enter streams, and (5) where they may be used repeatedly for several projects or activities within the area.
	NPGU04	Where feasible and practical, weed-free locations should be selected for incident camps, staging, cargo loading, drop points, helibases, and parking areas.
	NPGU05	Noxious weed management should determine the presence, location, and amount of noxious weed infestations. Management strategies should also identify: Methods and frequency for treating infestations, Treatment procedures and restrictions, Reporting requirements, and Follow-up or monitoring requirements.
	NPGU06	The Forest-wide database and map library of noxious weed infestations and susceptibility should be used in the development of site-specific Integrated Weed Management approaches and strategies used in Coordinated Weed Management Areas.
See also <i>Guidelines for TEPC Species (07); Wildlife Resources (05, 06); Botanical Resources (02, 03); Fire Management (01, 05); and Facilities and Roads (02).</i>		

^a The direction in both Forest Plans is identical. For that reason, only the Sawtooth Forest Plan direction is shown here.

Forest User Group’s Education and Prevention Practices

Forest access and recreation are two of the primary means of introduction and continuing spread of weed infestations. Some of the most common areas in which weed infestations become established on the Forest are along Forest roads, trail systems, boat launches, and in and around designated and dispersed camps. To reverse this trend, a well-planned, comprehensive education program targeted at Forest users is necessary.

The lists below outline education measures and prevention practices targeted at particular user groups. The intention is to have representatives of the various user groups and other stakeholders implement measures to reach their constituents. These lists should not be considered a finalized plan. They are provided as examples of the extensive variety of education options available for development and implementation.

All Users

Action Items:

- General noxious weed information and specific management actions posted at strategic locations such as trailheads, roads, boat launches, information kiosks, and forest portals.
- Make a variety of weed materials (brochures, identification cards, etc.) available to users at Boise and Sawtooth offices.
- Establish network of volunteer groups, individuals, outfitters, and landowners for treatment, inventory, and logistical support.

Specific Prevention Practices:

- Clean all equipment and transportation aids before traveling into the Forest and after leaving.

Water Recreation Users

Action Items:

- Post general noxious weed information and specific management actions at all launch sites.
- Noxious weed information included when purchasing fishing licenses.
- Encourage users to clean boots and equipment before traveling to a new area.
- Provide “Interpretation and Education” (I&E) materials to river-based outfitters and guides.
- Provide I&E materials to recreation associations (Western Whitewater, Idaho Whitewater Association, etc.).

Specific Prevention Practices:

- Clean all boats, trailers, vehicles, and equipment before and after using water systems.
- Know how to identify noxious weeds and where to report observations of infestations.
- Interstate boat transport to comply with the Idaho Boat Inspection Program
- Boaters to comply with Idaho State Invasive Species sticker requirement.

Motorized/Mechanized Road and Trail Users

Action Items:

- Post general noxious weed information and specific management actions at all trailheads and portals.
- In weed-infested areas, post weed awareness messages and prevention practices at roadsides.
- Include I&E materials on travel plan maps.
- Provide I&E materials to and coordinate implementation of prevention practices with local and regional recreation associations.

Specific Prevention Practices:

- Inspect and clean motorized and mechanized trail vehicles of weeds and their seeds before and after using Forest roads and trails.

Horsepackers /Backpackers

Action Items:

- Enforce Intermountain Region weed free hay closure (04-00-97).
- Post general noxious weed information and specific management actions at all trailheads and portals.
- Include I&E materials on travel plan maps.
- Enforce weed seed free feed regulation.
- Provide I&E materials to and coordinate implementation of prevention practices with recreation associations such as Backcountry Horseman and other regional recreational groups.
- Coordinate with State agencies and their education efforts to increase compliance with the certified weed-seed free feed regulation.
- Make I&E materials available at outdoor and feed/stock supply retailers.
- Develop and provide I&E package to hunting and pack-trip outfitters.

Specific Prevention Practices:

- Avoid traveling through and camping on weed infestations.

- Pack and saddle stock users should feed stock only weed-free feed for several days before initiating use of National Forest System lands.
- Inspect, brush, and clean animals, especially hooves, legs, manes, and tails, before entering public land.
- Tie or hold stock in ways that minimize soil disturbance and avoid loss of native vegetation.
- Brush and clean pets before and after using Forest System lands. Keep pets from traveling through noxious weed infestations.
- Clean boots and equipment before traveling to or camping at a new area.

Forest Resource Users (firewood, mushrooms, etc.)

Action Items:

- Include noxious weed I&E and prevention practices on woodcutting/mushroom picking maps.
- Provide noxious weed information and prevention practices to users at time of permit purchase.

Specific Prevention Practices:

- Avoid traveling through weed infestations.
- Inspect and clean vehicles of weeds and their seeds before and after using Forest roads and trails.
- Clean boots and equipment before traveling to a new area.

Hunters

Action Items:

- Incorporate noxious weed information into Hunter Education courses, IDFG Check Stations, and during hunting license purchase.
- Make I&E materials available at outdoor supply retailers.
- Coordinate prevention measures with the Idaho Department of Fish and Game.

Specific Prevention Practices:

- Avoid traveling through weed infestations.
- Inspect and clean vehicles of weeds and their seeds before and after using Forest roads and trails.
- Clean boots and equipment before traveling to or camping at a new area.
- Know prevention practices for motorized/mechanized/stock users as applicable.

Other Audiences

The following is a list of prevention and education measures targeted to a more general audience. While these efforts may not specifically address Forest Service personnel and Forest users, they are included in this prevention plan because of their inherent value. Other audiences (children, community, and volunteer groups) may benefit from noxious weed prevention and education.

Action Items:

- Initiation of Cooperative Weed Management Areas (CWMAs) to coordinate management efforts with state and federal initiatives.

- Completion of display board depicting species identification, the impacts of noxious weeds, and the Salmon-Challis National Forest Prevention Plan for use at County Fairs, conferences, annual meetings, and in Forest Service offices.
- Post prevention practices and I&E materials at trailheads and developed recreation facilities, provide information to user groups, and have education material available at Forest offices and on the website.
- Survey of noxious weed I&E materials by Student Conservation Association crew.
- Variety of programs in local school systems.
- Coordinate prevention efforts with other agencies. Continue work with federal, state, county, and other interested partners to develop additional educational materials.
- Discuss weed prevention practices at permittee and cooperator meetings, and at contractor pre-work sessions, where applicable.
- Design of a web page for noxious weed management on the Forest.
- Television and/or radio segments dealing with weed prevention.
- Newspaper articles and layouts dealing with weed prevention.
- Development of multi-media program(s) for presentation to interested parties.

Internal Education and Prevention Practices

Internal education refers to the process of training employees and representatives of the agency in the various elements of IWM. Agency personnel, both permanent and seasonal, must be informed about the conditions under which weeds become established, how weeds are spread, and the effects weeds have on all resources. Implementing this knowledge can minimize weed spread because of resulting altered land management activities. Personnel should be encouraged to incorporate weed prevention and control messages into their day-to-day work priorities and appropriate public information materials.

Some particular messages to be communicated through the process of internal education are as follows:

- Prevention is part of every employee, contractor, and volunteer's job.
- Weeds can be spread by many land management activities and are detrimental to many activities on public lands.
- Integrating preventive measures into daily and authorized activities can improve the health of the land at little cost.
- Integrating prevention messages into informational materials will raise awareness at little additional cost.
- Weeds are spreading at an alarming rate--ignoring them is not an option.
- Working with partners in the weed control effort is vital to helping improve the health of the land.
- Using pilot projects and demonstration areas, education and outreach efforts will help illustrate the nature of the problem and options for dealing with it.

The objectives of the prevention and control measures are to reduce the risk of spreading noxious weeds, prevent the establishment of new invaders, integrate weed management into all resource programs, and build awareness within the agency. A challenge to managers is to ensure that the strategies outlined are being implemented on the ground by all agency personnel.