

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Hines, OR 97738

Noxious Weed Management Program
Environmental Assessment
EA No. OR-020-98-05

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Noxious Weed Management Program
Environmental Assessment (EA)
EA No. OR-020-98-05

I. INTRODUCTION

The Burns District of the Bureau of Land Management (BLM) proposes to implement an integrated weed management program on the Three Rivers and Andrews Resource Areas. The area to be covered by this assessment covers approximately 3.7 million acres (Appendix A). These lands are located primarily in Harney County with portions in Grant, Lake, and Malheur Counties in southeastern Oregon.

The increase in noxious weeds and the impacts they are having on local lands and resources is causing concerns for land managers and the public. New invasions of noxious weeds and the spread of established infestations are threatening the productivity of public land. To date, noxious weeds have been located on approximately 30,000 acres of BLM land on the Burns District. Management of noxious weeds is important for maintaining healthy ecosystems.

II. PURPOSE OF AND NEED FOR THE PROPOSAL

A. Purpose and Need

The purpose of this proposal is to implement an integrated weed management program that would:

- Improve public awareness and reduce new infestations through education and prevention.
- Maintain healthy functioning ecosystems.
- Aid in the restoration of native plant communities that have been degraded or taken over by noxious weeds.
- Protect natural resource values.
- Maintain established noxious weed populations at levels that would not cause unacceptable environmental degradation.
- Eradicate new invading noxious weeds before they become established within the District.
- Reduce the risk of spread and invasion.
- Reduce negative economic impacts.
- Provide for human health and safety.
- Be economical to implement.

An integrated weed management plan is needed for several reasons:

- Federal law requires that the BLM manage noxious weeds (Federal Land Policy Act of 1976, Federal Noxious Weed Act of 1974).
- In the past several years, the District has seen a substantial increase in the number of visitors. This has contributed to an increased spread rate and the introduction of new species. This trend is expected to continue.
- Serious ecological impacts are beginning to occur in a number of areas.
- Large established sites are continuing to expand. Control methods for large sites would increase in cost and complexity as the sites expand.
- The existing District management plan (Noxious Weed Control Program EA, March 1993) is not adequate. It does not provide flexibility to deal with changing conditions such as new species, new control methods or changes in rates of spread, and it does not provide adequate strategies to deal with the varied conditions that are found on the District. Also, it is not a long-term strategy.
- Some species are expanding in spite of current control strategies.
- The counties, private landowners, the local tribe, and other agencies are very concerned about the increase and impacts of noxious weeds.
- The economic cost of managing noxious weeds would increase greatly the longer the situation is not adequately addressed.
- The current situation is generally still manageable.

B. Relationship to Other Plans

This EA is tiered to the Northwest Area Noxious Weed Control Program Environmental Impact Statement (EIS) as Supplemented (March 1987) and the Vegetation Treatment on BLM Lands in Thirteen Western States EIS (1991).

C. Conformance with Applicable Land Use Plans

This EA is in compliance with management direction established in the Three Rivers Resource Management Plan (RMP) (August 1992) and the Andrews Resource Area Management Framework Plan (MFP) (1982).

III. DESCRIPTION OF THE PROPOSED ACTION

To implement a long-term integrated noxious weed management program on public land within the Burns District is the proposed action. The project is designed to address the dynamic nature of noxious weeds such as increasing numbers of species, different plant physiologies for the various species, changing conditions of infestations, and changing technologies. The goals and strategies of this proposal are consistent with those identified in the recommended alternative for the Interior Columbia Basin Ecosystem Management Project (ICBEMP), Eastside Draft EIS. The proposed action would implement the seven goals identified in Partners Against Weeds (an Action Plan for the BLM), January 1996.

- Goal 1: Prevention and Detection
- Goal 2: Education and Awareness
- Goal 3: Inventory
- Goal 4: Planning
- Goal 5: Integrated Weed Management
- Goal 6: Coordination
- Goal 7: Monitoring, Evaluation, Research and Technology Transfer

Program Implementation

Goals 1 and 2: Implementation of Goals 1 and 2 are the foundation for a long-term successful weed management program. These goals are the priority for the integrated weed management program. They would be implemented in the following ways:

- Implementation of the District Weed Prevention Schedule (revised annually).
- Being a partner with County and State weed programs.
- Coordinating with County and State transportation departments.
- Implementation of the BLM and Oregon State education programs.
- Educating and working with contractors and public land users.
- Publishing news articles and participating in local activities such as the County Fair, Weed Awareness Fair, John Scharff Waterfowl Festival, etc.
- Educational signing at all major recreation sites.

Goal 3: Inventories would be conducted annually to identify new infestations, determine changes in rates of spread for established infestations, and which activities are the major contributors to spread.

Goal 4: Program planning would be done annually to determine weed management strategies for the District's annual program of work.

Goal 5: Goals 1 and 2 cannot mitigate new or established infestations; therefore, it is important that these goals and the other goals be combined with the treatment of noxious weeds. Because Goal 5 has direct impacts on the environment, it is the focus of this EA.

The proposed action would utilize four primary methods for weed control: Cultural, Physical (including prescribed fire), Biological, and Chemical (see Appendix B for a list of treatments that fall into these categories).

Cultural Treatments: These treatments include prevention, livestock management, wildlife management, and vegetating exposed soils.

Physical Treatments: Physical treatments include manual, mechanical, and burning treatments.

Biological Treatments: These treatments include using natural competitors including insects, arachnids, and pathogens.

Chemical Treatments: Treatments include the use of herbicides.

Control Method Determination

Selection of the appropriate method would be based on such factors as the growth characteristics of the target plants, size of the infestation, location of the infestation, accessibility of equipment, potential impacts to nontarget species, use of the area by people, effectiveness of the treatment on target species, and cost. Depending on a plant's characteristics, these methods may be used individually or in combination and may be utilized over successive years.

Due to the length of seed viability, annual germination of seeds from previous years, and the characteristics of certain plants, treatments could occur annually for a period of 10 years or more.

Because weed infestations vary annually due to new introductions, spread of existing infestations and the results of previous year treatments, site-specific reviews would be conducted annually prior to initiating weed management activities. See Appendix C for a list of sites proposed for treatment in 1998.

Use of Biological Controls

Biological controls would be utilized in accordance with the Oregon Department of Agriculture (ODA).

Use of Herbicides

Herbicides that may be used are those approved in the Vegetation Treatment on BLM Lands in Thirteen Western States EIS, 1991, or any that are approved through an amendment or other Agency approval process (see Appendix D for the current approved list of chemicals). Application would take place only in accordance with the manufacturer's label and by qualified/certified applicators. Methods of application could include wiping or wicking, backpack, vehicle with a hand gun or boom, aerial or other approved methods.

Priorities for Treatment

Annual inventories would be conducted on the District to locate new infestations and to monitor the spread of known infestations. This inventory would be the basis for determining treatment strategies. The following priorities would also be based on coordination with local, tribal, State and Federal governmental entities, private landowners, and with local multiagency weed management plans.

Priority 1: Eradication of new locations of weeds that are of known significant threat (as determined by the ODA and Harney County).

Priority 2: Eradication of small infestations of weeds that are of known significant threat in areas that have a high potential for spread such as roads/trails (including rights-of-way), recreation sites, rivers/streams, and mineral material sites or have a high potential for ecological or economic impact.

Priority 3: Containment of large weed populations.

Area of Treatment

The number of acres treated annually (approximately 1,000 to 3,000 acres) would be based on available funding, weather, and condition of the weeds. It is anticipated that the greatest number of acres would be treated in the early years of the plan and as the management plan is implemented the number of acres treated would go down. It is recognized that due to the nature of noxious weeds and the size of the land base involved, noxious weeds will never be permanently eradicated. The intent of this proposal is to manage weeds at a level where they are causing negligible ecological or economic impacts.

Special Management Areas

Wilderness Study Areas (WSAs): Noxious weeds discovered in WSAs would be treated with methods that are in accordance with the provisions of Chapter III.C.2 of the Bureau's Interim Management Policy for Lands under Wilderness Review.

Areas of Critical Environmental Concern (ACECs): Noxious weeds would be treated in ACECs if it is determined that the weeds pose a threat to the values in the ACEC or pose a significant threat to the resources outside of the ACEC. Treatment strategies would be in accordance with direction established in Resource Area management plans or specific ACEC management plans.

Wild and Scenic Rivers: Consideration for treatment of noxious weeds in Wild and Scenic River corridors would be the same as ACECs.

Goal 6: The District would coordinate weed management activities with local, State and Federal agencies, tribal governments, and private landowners. Coordination would include coordination for Goals 1 and 2, sharing of inventory and monitoring information, and developing annual treatment programs.

Goal 7: Monitoring would be conducted annually to determine the overall effectiveness of the program, effectiveness of treatments, and compliance with laws, regulations, and policies. The District would continue to participate in weed oriented research projects and provide for technology transfer as opportunities arise.

Mitigation Measures

1. When herbicide use is proposed adjacent to lakes or streams, buffer strips would be provided in accordance with the Record of Decision (ROD) for Vegetation Treatment on BLM Lands in Thirteen Western States, 1991 and in accordance with labeled use.
2. Recreation sites may be temporarily closed while herbicides are applied and would be posted to notify the public of any hazards that may be present.
3. Following successful weed control, if adequate desirable seed sources are not present to fill the voids left by the noxious weeds, seeding or transplanting of seedlings of desirable species (preferably native species) would take place to fill the voids.
4. All sites proposed for treatment would be reviewed for impacts to cultural resources.

5. Use of motorized equipment in special management areas where motorized travel is prohibited would not be permitted.
6. The local tribe would be consulted prior to treatments taking place in the Biscuitroot ACEC.
7. Treatments in WSAs would be analyzed and reviewed in accordance with direction described in the WSA interim management policy.
8. All sites proposed for treatment would be inventoried for Special Status species (Threatened, Endangered or Sensitive species). If any Special Status species are found, site-specific mitigation measures would be identified and implemented.
9. If Federally listed species occur within the treatment site, mitigation would be developed to eliminate effects on the species if possible. If treatment is necessary and effects may occur, then the Endangered Species Act (ESA) Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) would be conducted.

Additional mitigation measures can be found in the EIS, Vegetation Treatment on BLM Lands in Thirteen Western States (1991).

Monitoring

1. Treated sites would generally receive short and long-term monitoring to determine effectiveness of meeting treatment objectives, impacts on nontarget species, and to determine the need for follow-up treatments.
2. If Special Status species are located near or within areas of herbicide application, monitoring would be conducted to quantify impacts to the Special Status species.

IV. ALTERNATIVES TO THE PROPOSED ACTION

A. No Aerial Herbicide Application

This alternative would be the same as the proposed action except that no aerial herbicide application would be used. This alternative was not analyzed because it is not consistent with the EIS, Vegetation Treatment on BLM Lands in Thirteen Western States (1991) and some infestations have reached a scale where aerial application needs to be considered.

B. Use of Control Methods that do not include Chemicals

This alternative was considered but was not analyzed further. Monitoring has shown that nonchemical treatments have not been fully successful in eradicating or controlling many past and existing noxious weed infestations. The prevalence of current noxious weed infestations is so extensive that all control options need to be considered.

C. No Action

Under this alternative, no control measures would be implemented. This alternative was not analyzed because it was not considered viable. Federal law requires that noxious weeds be controlled on Federal land: Federal Noxious Weed Act of 1974 as amended and the Carlson-Foley-Act of 1968.

V. AFFECTED ENVIRONMENT

A detailed description of the public lands within the Three Rivers and Andrews Resource Areas can be found in the Three Rivers RMP (1992) and the Andrews MFP (1982). This section will highlight some of the key areas of concern.

A. Vegetation

The rangeland vegetation within the Burns District is typical of the potential natural vegetation found in the Intermountain Sagebrush Province as classified under the Bailey-Kuchler Ecosystems classification. Upland vegetation is dominated by sagebrush-bunchgrass communities, with small forested areas of juniper, ponderosa pine, and aspen. Water-associated hardwood trees, shrubs, forbs, and grasses exist in riparian zones along perennial streams, reservoirs, and springs.

On a broader scale, this vegetation can be broken out into several current potential vegetation groups, as described in the 1997 Draft ICBEMP EIS. Pertinent vegetation groups include dry shrub, riparian shrub, woodland, and cool shrub.

Some of the native vegetation has been converted to introduced species, mainly crested wheatgrass seedings, through rangeland rehabilitation projects.

Several noxious weed species are rapidly increasing. They pose significant threats to the integrity of the District's resources because of the rapidity with which they can overrun and replace desirable plant communities. Perennial pepperweed (*Lepidium latifolium*) is an extremely aggressive perennial. It has already become a major problem in parts of Harney County. It is expanding rapidly into many of the District's major waterways and wet meadow systems. Medusahead rye (*Taeniatherum caput-medusae*) is an annual which tends to establish and then dominate on heavy clay soil types. While it appears to not be as competitive on other soil types, the District currently has 15,000+ acres dominated by medusahead rye. Dalmation toadflax (*Linaria dalmatica*), another aggressive perennial, is exploding in the foothill ranges. In nearby Grant County, dalmation toadflax dominates hundreds of acres of rangeland. Several knapweed species are rapidly expanding and moving, particularly along road corridors. These include Russian knapweed (*Acroptilon repens*), a particularly aggressive and hard to control perennial, and diffuse and spotted knapweeds (*Centaurea diffusa* and *C. maculosa*), which appear to be responding well to the local climate. Bull thistle (*Cirsium vulgare*) and Scotch thistle (*Onopordum acanthium*), are asserting themselves into more and more landscapes, particularly woodlands. Canada thistle (*Cirsium arvense*) is becoming established on more water courses annually, including the Donner und Blitzen, a Wild and Scenic River. For a complete list of the noxious weed species currently known to occur on the Burns District, see Appendix E.

B. Water

There are no municipal watersheds within the District. As the District's riparian zones recover from past management impacts, these same riparian zones are being seriously threatened by noxious weeds. To date, the District has identified approximately 50 miles of stream where noxious weeds are displacing native vegetation and having a major impact on riparian areas. Many of the streams contain fish species that are species of concern. It is important that high quality riparian areas are available. Several of the weed infestations are at a point where they are still manageable if treated in the near future.

C. Recreation

The District has several recreation sites. Noxious weeds have been identified at nearly all of them. These areas are located along major travel corridors and pose a high potential for further spread and introduction. See Appendix F for a list of the major recreation sites. Motorized travel is a popular activity. Motorized vehicle travel is prohibited or restricted to designated roads only on 954,405 acres.

D. Special Management Areas

There are no lands designated as wilderness within the District. Districtwide, 26 areas have been designated as WSAs and 21 areas have been designated as ACECs. Current management direction for these areas is to maintain them in a natural condition and to allow natural processes to take place.

The District has one river designated as Wild and Scenic, the Donner und Blitzen. The river is being managed under the Donner und Blitzen National Wild and Scenic River Management Plan.

E. Special Status Plant and Animal Species

The District contains populations of several Special Status species. Lists of these species are on file in the Burns District Office.

F. Wildlife/Wild Horses/Livestock

The District contains a wide variety of wildlife species and several wild horse herds. The wildlife species are those commonly associated with the eastern Oregon environment such as mule deer, pronghorn antelope, jackrabbit, and coyote. Livestock grazing takes place throughout the District. Permitted livestock are primarily cattle with some sheep and domestic horses.

G. Rights-of-Way/Mineral Material Sites/Mineral Exploration

Several rights-of-way and more than 100 sources of sand, gravel, and rock aggregate are located across the District. Because these areas are often subject to ground-disturbing activities and frequent vehicle use, they are susceptible to new or expanding noxious weed infestations. In addition, many sites become disturbed during exploration activities. District inventories have identified numerous noxious weeds in these areas.

H. Fire

Annually, the District experiences numerous fires of varying size. Without rapid revegetation, these burned areas are susceptible to noxious weed infestations.

I. Visual Resources

The District's visual character consists generally of vast open vistas with mountains and large valleys. The vegetation consists mainly of grass/brush communities.

VI. ENVIRONMENTAL CONSEQUENCES

A complete listing of the consequences can be found in the EIS, Vegetation Treatment on BLM Lands for Thirteen Western States, 1991. No impacts have been identified which exceed those addressed in the EIS.

A. Vegetation

Mortality or severe injury and reduction and/or prevention of seed production would be the direct effect to targeted noxious weeds from all treatment methods.

Cultural treatments such as livestock grazing would reduce or limit the expansion of certain target species (pepperweed, Russian knapweed).

Physical treatments could impact nontarget species if mowing or discing is used. Manual control would only affect target species.

Biological treatments would generally only affect targeted species.

Some nontarget plants may be killed or injured as a result of herbicide exposure or burning. Most nontarget mortality and injury would occur from aerial application of herbicides and burning. Various plant groups and species are affected differently by different herbicides. For specific effects by the various chemicals that are approved for use see the EIS, Vegetation Treatment on BLM Lands in Thirteen Western States (1991).

Following the removal of noxious weeds, sites would revegetate naturally or would be seeded if native species are absent or not in close proximity to the area (see Mitigation Measures, Page 6, Number 1). In some cases, such as where multiple treatments are needed, it may take several years for the native vegetation to revegetate the site.

B. Water

Cultural, physical, and biological treatments should have negligible impacts on water quality.

By following the manufacturer's label on herbicides, following the project design and mitigation measures, no negative impacts on water resources or water quality are anticipated.

When herbicide application is used near or adjacent to surface water, some contamination could occur. The project design, along with mitigation measures, should minimize the risk of contamination (see Mitigation Measures, Page 6, Number 1). If Glyphosate (currently the only herbicide approved for use adjacent to water) were to enter the water it could have a minor affect on some aquatic species for a short period of time. Application techniques and timing would be chosen to minimize risk of water contamination. The risk of any negative impacts is considered to be very low.

Some herbicide residue could enter waterways through overland flow if a large rain event occurred shortly after application. The risk of negative impacts would be minimal because of rapid dilution. Water quality could also be degraded following the removal of noxious weeds and prior to revegetation of the site.

Removal of noxious weeds along waterways will contribute to improved biodiversity in the riparian vegetation which would provide high quality habitat for fish and wildlife.

No adverse impacts to floodplains have been identified.

C. Recreation

The recreating public could be inconvenienced by temporary closures of recreational facilities during and following chemical treatments. Recreationists would not be exposed to chemical treatments (see Section H, Human Health). Elimination and control of noxious weeds and promotion of native vegetation should serve to maintain a high quality experience for recreating visitors. It would also reduce weed spread to other recreation sites.

D. Special Management Areas

Through implementation of this integrated plan and following direction established in specific management plans for specially designated areas, and the interim direction established for management of WSAs, no negative impacts are anticipated (see Mitigation Measures, Page 7, Numbers 5 and 7). See Appendix G for a listing of the WSAs.

E. Special Status Plant and Animal Species

It has been determined that there would be a "no effect" consequence on listed species.

No direct negative impacts to Special Status plants are anticipated because treatments would be designed to avoid or minimize any impacts (see Mitigation Measures, Page 7, Numbers 8 and 9). In the long term, by reducing and controlling noxious weeds, Special Status species would benefit from improved ecological conditions.

Some Special Status animals may be impacted through short-term loss of food or cover sources following the elimination of noxious weed infestations. However, long-term, higher quality habitat would occur after treatment.

F. Wildlife/Wild Horses/Livestock

Most impacts to birds and mammals would result from the loss of nontarget vegetation if large areas are treated by fire or aerial application of herbicides. The impacts would be loss of cover and/or food. These impacts would not be extensive enough to affect populations because the acreage to be treated would not be large enough. Over the long term, the effects of weed control would be beneficial because they would help restore degraded habitats and plant communities and prevent additional areas from being degraded due to weed invasions.

Chemical treatments are generally applied in a form or at such low rates that they do not significantly affect herbivores. However, there is potential for bioaccumulation, or slow uptake into the food chain, with some herbicides. This would be minimized by use of the herbicides in accordance with the labels.

Controlling noxious weeds and encouraging native plant growth would provide higher quality habitat for many wildlife species, including migratory species as well as ensure future productivity and use of the land for wildlife, livestock, and wild horse grazing.

G. Rights-of-Way/Mineral Material Sources

There may be additional requirements on those entities that conduct activities in rights-of-way or are engaged in mineral exploration and development for prevention, treatment, and rehabilitation of noxious weed-infested sites.

H. Fire

Where fire is applied, most vegetation would be burned off. Some plants would be killed and others would resprout and recover in subsequent years. Target and nontarget species would be affected.

I. Visual Resources

Scenic quality would not be reduced or altered unless large acreages were burned or where total plant mortality occurred. Where individual plants or small groups of plants are treated, the effect would most likely not be noticeable to the casual public land user. Any visual impacts would be short lived (one or two years) as vegetation regrows following treatment.

J. Cultural

Ground-disturbing treatments or burning could potentially disturb or destroy unidentified cultural resources on or near the ground surface. Other control methods would not have any significant impact on cultural resources. Cultural resource inventories of the affected area would precede management actions that could damage cultural resources or impact culturally significant plants (see Mitigation Measures, Page 6, Number 4 and Page 7, Number 6). Treatment of noxious weeds would maintain and enhance traditional (American Indian) plant collection areas over the long term.

K. Human Health

The analysis of the potential human health effects through the use of chemical herbicides to control noxious weeds was accomplished using the methodology of risk assessment generally accepted by the scientific community.

Potential occupational and environmental human health impacts of the proposed action were fully analyzed in the SEIS (see Appendixes E1-E5) and considered in the ROD for the SEIS. A summary of the Worst-Case Analysis was completed; the highest risk of cancer under operational conditions would be to the worker exposed for 40 years at the maximum exposure from ground application with a probability of exposure on the order of 2 out of 10,000 workers exposed. Effects of herbicides on humans can also be found in Chapter 9 of Oregon Pesticide Applicators Manual (OPAM) and in the Material Safety Data Sheets.

The greatest health risk is to workers applying the herbicides. To ensure pesticides are applied safely and effectively, anyone handling and applying herbicides on public land within the Burns District would be certified and licensed by the ODA or the U.S. Department of Interior in the proper methods of handling and applying herbicides.

By following the manufacturer's label and procedures in OPAM, no unacceptable effects to humans are anticipated (also see Mitigation Measures, Page 6, Number 3).

With the exception of burning, none of the other control methods are expected to have any risk or impact to human health. Smoke from burning could have short-term impacts on people that are sensitive to smoke. Fires that take place outside of prescribed parameters could pose a threat to humans and property. No unacceptable impacts to humans are anticipated from prescribed burns that take place under prescribed conditions.

L. Air Quality

Air quality impacts would be of short duration during burning or aerial application. Burning would temporarily reduce air quality until the gases and particulates that make up smoke are dissipated. Air quality would be impacted during application until the spray settles out.

M. American Indian Concerns

Conflicts with native concerns should be minimal. Concerns could arise if there are repeated treatments in areas where tribal members gather plants or if treatments occur during collection periods.

N. Hazardous Wastes

No hazardous waste sites have been identified on the District. Herbicides are considered a hazardous material. By following the label for application and disposal, no unacceptable impacts are anticipated.

O. Prime Farmlands

There are no prime or unique farmlands on the District.

P. Cumulative Impacts

The cumulative effects of the proposed action would result in 1) a higher education and awareness level of the current noxious weed problem, 2) a better inventory, 3) a reduction in new weed infestations, 4) containment and reduction of large infestations, and 5) improved ecosystem health for uplands and riparian areas throughout the District.

If herbicides are applied improperly, there is potential for negative cumulative impacts from the use of chemicals when considered with private, State, tribal, and other Federal applications within and outside the District. Coordination with other applicators and the use of certified personnel would minimize long-term cumulative impacts on human health risks.

The application of biological, physical, and cultural methods would have no significant negative cumulative impacts.

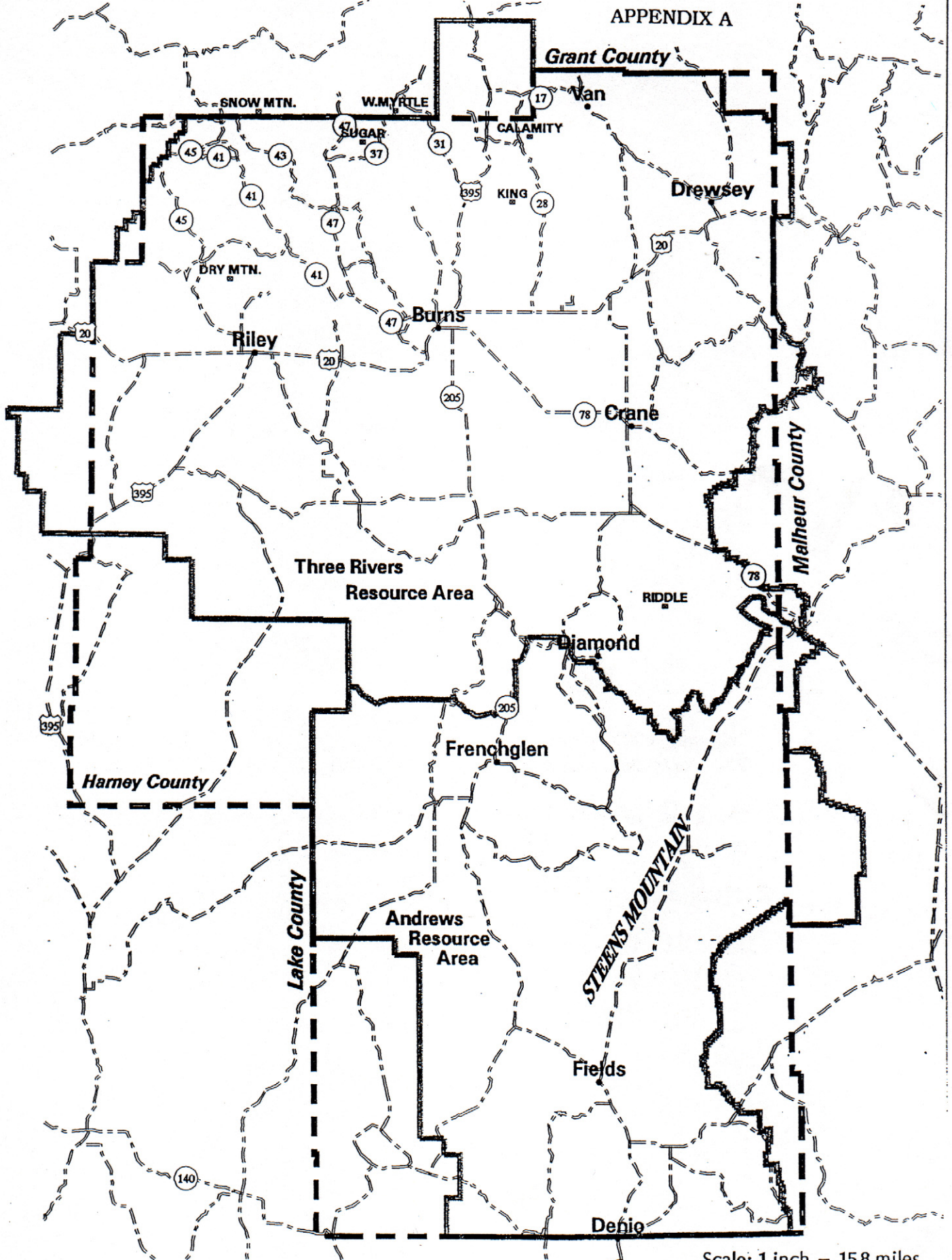
VII. CONSULTATION AND COORDINATION

A. Agencies and Individuals Consulted



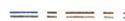
Burns Paiute Tribe	Native Plant Society
City of Burns	The Nature Conservancy
City of Hines	Oregon Dept. of Agriculture
Conservation District	Oregon Dept. of Fish and Wildlife
Harney County Court	Oregon Dept. of Transportation
Harney County Soil and Water	USFS-Burns Ranger District
Malheur National Wildlife Refuge	USFS-Snow Mountain Ranger District

B. Participating BLM Employees

Jim Buchanan, Range Conservationist
Terri Geisler, Geologist
Rick Hall, Botanist
Rudy Hefter, Natural Resource Specialist
Brian Lampman, Fish Biologist
Fred McDonald, Recreation Specialist
Scott Moore, Outdoor Recreation Planner
Jon Reponen, Natural Resource Specialist
Lesley Richman, Range Conservationist, Project Leader
Guy Sheeter, Wildlife Biologist
Fred Taylor, Wildlife Biologist
Nora Taylor, Botanist
Scott Thomas, Archaeologist
Dave Vickstrom, Recreation Specialist



Burns District BLM
Vicinity Map

-  Resource Area Boundaries
-  Harney County
-  Major Roads

Scale: 1 inch = 15.8 miles

No warranty made by the BLM for use of the data for purposes not intended by the BLM.

Date: 02-DEC-1997
SKELPLOTS/vwood.aml
Burns BLM GIS, Kelly Hazen



APPENDIX B*

Cultural

Prevention

1. Develop available preventive measures, such as quarantine and closure, to reduce the spread of the infestation.
2. Determine whether or not policy and laws allow for the use of all preventive measures, including local quarantine and closure.
3. If past management activities have allowed the introduction and spread of noxious weeds, determine how to change management after selecting a treatment method.

Livestock Manipulation

1. Determine whether or not changes in livestock grazing would affect the target weeds.
 - a. Reduced grazing may allow for increased competition from beneficial vegetation or just allow for more seeds to be disseminated.
 - b. Increased grazing may reduce beneficial vegetation or may be used to reduce seed source.
2. Determine whether or not changes in movement or type of livestock is necessary to reduce or contain the infestation due to movement of seeds on or in the animals.
3. Determine whether or not containing livestock in a weed-free area prior to introduction to the area would prevent new infestations.

Wildlife Manipulation

1. Determine whether or not wildlife or wildlife feeding programs can be managed to reduce weed infestations.
2. Determine feasibility of changes in wildlife movement that would reduce or contain the infestation due to movement of seeds on or in the animals.

Soil Disturbance Activities

1. Revegetate all bare soil following disturbance.
2. Select plant species that would reduce the spread of noxious weeds.
3. Defer soil disturbance if possible until weeds are controlled or under management.

Rock Sources

1. Develop rock source management plans.
2. Keep utilization of rock source confined to existing contaminated roads.
3. Keep new or "clean" rock stockpiles separate from contaminated stockpiles.
4. Obtain rock from uncontaminated sources.

Public Use

1. Determine most feasible land use to reduce and prevent infestations.
2. Determine whether or not specific public awareness programs could reduce the infestation or control the spread of weeds.
3. Determine whether or not exclusion is a possibility and how it would affect the weed infestation.

Physical Control

Manual Control

1. Determine whether or not hoeing or "grubbing" would reduce (or increase) the infestation.
2. Determine whether or not hand pulling the weeds reduces the seed source.

Mechanical Control

1. Evaluate terrain to allow for mowing and determine whether or not it is an acceptable option for control of the spread of seeds.
2. Evaluate cultivation and other conventional farming practices options that could be utilized cost effectively.
- 3.

Control by Burning

1. Determine whether or not policy and laws allow controlled burning and address regulations regarding smoke management.
2. Determine whether or not the terrain and vegetative cover allow for a controlled burn program.
3. Evaluate a controlled burn program to reduce the infestation.
4. Determine long-term effect of burning on nontarget species.

Biological Control

Natural Competition

1. Determine whether or not there are naturally occurring agents within the ecosystem which can reduce the infestation.
2. Determine which elements affect natural occurring control agents.
 - a. Determine whether or not these elements can be modified to reduce the negative effect on these agents.
 - b. Determine whether or not these elements can be enhanced to increase the effectiveness of these agents on the weed infestation.

Introduced Competition

1. Determine whether or not biological control agents can be introduced into the ecosystem to reduce the amount of infestation.
2. Determine which introduced biological agents provide an acceptable control method for this infestation.
3. Evaluate if the biological control agent has been tested for adverse affects against all nontarget species within the treatment area.
4. Determine whether or not the introduced biological agent can survive in the environment of the treatment area.
5. Determine whether or not policy and laws allow for the introduction of biological control agents.

6. Determine whether or not policy and laws allow for introduction and grazing of livestock as a biological control agent.

Chemical Control

Fertilization

1. Determine whether or not chemical fertilization would reduce the amount of weeds by increasing competition of beneficial plant species.
2. Determine whether or not increased nitrogen (or other nutrients) would reduce weeds due to direct effect (e.g., Curlycup gumweed).

Pesticides

1. Evaluate the acceptability of herbicides (or other pesticides) to control the infestation.
2. Determine whether or not pesticides are labeled for:
 - a. Use on the target weed.
 - b. Use on the infested site (consider nontarget plants, soil type, groundwater location, topography, climate, State labeling, etc.).
 - c. Determine the most effective application techniques.
3. Determine the most effective and cost-efficient types of conventional application equipment.
4. Determine whether or not properly trained personnel are available to apply the pesticides.

* This list is taken from the "Noxious Weed Strategy for Oregon/Washington" (1994), Appendix 4.

APPENDIX C

ANNUAL TREATMENT LIST - FY98

ANDREWS RESOURCE AREA HERBICIDE TREATMENT AREAS (Nonaerial)

1.	Tum Tum Lake RNA	20 acres
2.	Steens Mountain Loop Road	47 miles
3.	Fish Lake Toadflax	.5 acres
4.	Page Springs Medusahead	1 acre
5.	P-Hill Mediterranean Sage	70 acres
6.	Mann Lake	10 acres
7.	Williams Creek Floodplain	20 acres
8.	Page Springs Campground	2 acres
9.	Material Sites	10 acres
10.	Anadarko Mine Site Drill Pad	½ to 1½ acres
11.	County Road from Folly Farm to Fields	55 miles*
12.	County Road from Roaring Springs to Fields	35 miles*
13.	County Road from Fields to Denio	24 miles*
14.	County Road from Denio to Wrench Ranch	15 miles*
15.	County Road from Trout Creek Junction to Burns District Boundary near Whitehorse Ranch	17 miles*
16.	County Road from Cottonwood Ranch to Hamilton Place	4 miles*
17.	County Road from Mormon Place at Hwy 205 to Rock Creek Reservoir	20 miles*
18.	Jack Mountain Road Pepperweed	<.5 acres
19.	Moon Hill Road	22 miles

* Treatment in these areas would be done by the County.

THREE RIVERS RESOURCE AREA HERBICIDE TREATMENT AREAS (Nonaerial)

1.	Bartlett Mountain Fire Medusahead and Thistles	30 acres
2.	Chickahominy Recreation Area	50 acres
3.	Stinkingwater Access Road	A=16 miles; B=22 miles
4.	Warm Springs Reservoir Road	18 miles
5.	Foster Flat Road	23 miles
6.	Muddy Creek White Top	2 acres
7.	Eriogonum Cusickii Knapweed Area	50 acres
8.	Smyth Creek Medusahead	4 acres
9.	Second Flat Knapweed Patch	4 acres
10.	Miscellaneous County Roads	230 miles*
11.	Miscellaneous State Hwy Rights-of-Way	141 miles
12.	Materials Sites	10 acres
13.	Clay Flat	10 acres
14.	Clausnitzer's Medusahead Plots	1 acre
15.	Skull Creek Road Medusahead	.1 acre
16.	Spite Field Scotch Thistle	2 acres
17.	Little Stinkingwater Halogeton Site	2 acres
18.	Poison Springs Pepperweed	.25 acre
19.	Eagle Picher Mine Road	10 acres

No aerial treatments are proposed for FY98.

* Treatment in these areas would be done by the County.

MANUAL TREATMENT AREAS

- 1. (A) Blitzen River Knapweed (2 acres)
- 2. (A) Arizona Creek Star Thistle (40 acres)
- 3. (A) County Road Star Thistle (Kueny Ranch) (2 acres)
- 4. (A) P-hill Mediterranean Sage (70 acres)
- 5. (A) South Loop Reservoir Thistles (5 acres)
- 6. (A) Krumbo Reservoir Road Scotch Thistle (2 acres)
- 7. (A) Roaring Springs PVT (6 Mile Lake area)

- 1. (A and 3R) Miscellaneous Material Sites (20 acres)

- 1. (3R) Cooler Allotment Mediterranean Sage (40 acres)
- 2. (3R) Silvies Valley Diffuse Knapweed (5 acres)
- 3. (3R) Kingsbury Gulch Mediterranean Sage (160 acres)
- 4. (3R) Prather Creek Toadflax and Thistles (20 acres)
- 5. (3R) Miscellaneous Logging Site Landings (20 acres)
- 6. (3R) Upper Mountain Creek Thistles (Silvies) (2 acres)
- 7. (3R) Wolf Creek Reservoir Thistles (5 acres)

PESTICIDE USE PROPOSALS (PUPs) and AMENDMENTS FOR FY98:

New PUPs:

- 1) Fish Lake Toadflax
- 2) P Hill Mediterranean Sage
- 3) District Materials Sites
- 4) Skull Creek Road Medusahead
- 5) Spite Field Scotch Thistle
- 6) Little Stinkingwater Halogeton
- 7) Poison Springs Pepperweed

PUP Amendments:

- 1) OR-95-020-005
- 2) OR-94-020-001
- 3) OR-95-020-003
- 4) OR-95-020-001
- 5) OR-95-020-004
- 6) OR-93-020-001
- 7) OR-93-020-004
- 8) OR-91-020-003

APPENDIX D

Herbicides Approved for Use ROD, EIS, Vegetation Treatment on BLM Lands in Thirteen Western States

Atrazine
Bromacil
Bromacil + Diuron
Chlorsulfuron
Clopyralid
2,4-D*
Dicamba*
Dicamba + 2,4-D*
Diuron
Glyphosate*
Glyphosate + 2,4-D*
Hexazinone
Imazapyr
Mefluidide
Metsulfuron Methyl
Picloram*
Picloram + 2,4-D*
Simazine
Sulfometuron Methyl
Tebuthiuron
Triclopyr

* Chemicals currently approved for noxious weed control in Oregon.

APPENDIX E

NOXIOUS WEED SPECIES of BURNS BLM DISTRICT

(12/97)

<u>Family</u>	<u>Scientific name</u>	<u>Common name</u>
Apiaceae	<i>Conium maculatum</i>	poison hemlock
Asteraceae	<i>Centaurea diffusa</i>	diffuse knapweed
	<i>Centaurea maculosa</i>	spotted knapweed
	<i>Centaurea repens</i>	Russian knapweed
	<i>Centaurea solstitialis</i>	yellow starthistle
	<i>Cirsium arvense</i>	Canada thistle
	<i>Cirsium vulgare</i>	bull thistle
	<i>Lactuca pulchella</i>	blue-flowered lettuce
	<i>Onopordum acanthium</i>	scotch thistle
	<i>Senecio jacobaea</i>	tansy ragwort
Boraginaceae	<i>Cynoglossum officinale</i>	hound's tongue
Chenopodiaceae	<i>Halopteron glomeratus</i>	halogeton
	<i>Kochia scoparia</i>	kochia
Convolvulaceae	<i>Convolvulus arvensis</i>	bindweed
Cuscutaceae	<i>Cuscuta spp.</i>	dodder
Brassicaceae	<i>Cardaria spp.</i>	whitetop
	<i>Isatis tinctoria</i>	dyer's woad
	<i>Lepidium latifolium</i>	perennial pepperweed
Hypericaceae	<i>Hypericum perforatum</i>	St. John's wort
Lamiaceae	<i>Salvia aethiops</i>	Mediterranean sage
Poaceae	<i>Taeniatherum caput-medusae</i>	medusahead rye
Scrophulariaceae	<i>Linaria dalmatica</i>	dalmation toadflax
	<i>Linaria vulgaris</i>	yellow toadflax
Solanaceae	<i>Hyoscyamus niger</i> *	black henbane
	<i>Solanum rostratum</i>	buffalo burr
Tamaricaceae	<i>Tamarix parviflora</i> *	salt cedar
Zygophyllaceae	<i>Tribulus terrestris</i>	puncturevine

* Not on State list of "B" designated weeds.

APPENDIX F

MAJOR RECREATION SITES

Chickahominy Recreation Site

Moon Reservoir

Warm Springs Reservoir

Page Springs Campground

Fish Lake Campground

Jackman Park Campground

South Steens Campground

Mann Lake

APPENDIX G

WSA Summary in the Burns District

	<u>WSA Name</u>	<u>Number</u>	<u>Acres</u>
1.	Hawk Mountain	1-146-A	24,222*
2.	Malheur River/Bluebucket	2-14	5,529
3.	Stonehouse	2-23L	22,685
4.	Lower Stonehouse	2-23M	7,373
5.	Sheepshead Mountain	2-72C	21,678
6.	Wildcat Canyon	2-72D	8,544
7.	Heath Lake	2-72F	21,197
8.	Table Mountain	2-72I	39,886
9.	West Peak	2-72J	8,598
10.	East Alvord	2-73A	22,161
11.	Winter Range	2-73H	15,517
12.	Alvord Desert	2-74	97,758
13.	Mahogany Ridge	2-77	27,053
14.	Red Mountain	2-78	15,659
15.	Pueblo Mountain	2-81	73,552
16.	Rincon	2-82	105,235
17.	Alvord Peak	2-83	16,707
18.	Basque Hills	2-84	78,336
19.	High Steens	2-85F	69,945
20.	South Fork of the Donner and Blitzen River	2-85G	36,449
21.	Home Creek	2-85H	26,121
22.	Blitzen River	2-86E	59,751
23.	Little Blitzen Gorge	2-86F	9,232
24.	Bridge Creek	2-87	14,731
25.	Willow Creek	3-152	2,424
26.	Disaster Peak	3-153	<u>3,671</u>
	TOTAL		834,014

* Acreages are approximate