

**Environmental Assessment  
Herbicide Treatment for South Fork John Day River  
Fire Complex, DOI-BLM-OR-P040-2014-0048-EA**

**October 2014**

**U.S. Department of the Interior, Bureau of Land Management, Prineville District  
3050 NE Third Street, Prineville OR 97754**

**Table of Contents**

<b>Chapter 1 Introduction .....</b>	<b>2</b>
Proposed action .....	2
Purpose and Need .....	2
Issues .....	3
<b>Chapter 2 Alternatives.....</b>	<b>7</b>
Alternative 1, No action .....	7
Alternative 2, Proposed action.....	7
Alternatives Considered but Eliminated .....	8
Conformance.....	8
<b>Chapter 3 Affected environment and environmental effects .....</b>	<b>9</b>
Introduction.....	9
How would big game habitat, particularly winter range, be affected by BLM treating noxious and invasive annual grasses with the herbicide imazapic? .....	9
Summary of effects .....	11
<b>Chapter 4 Public and other involvement.....</b>	<b>11</b>
<b>Appendix B References .....</b>	<b>13</b>
<b>Appendix C Project Design Features .....</b>	<b>14</b>
<b>Appendix D WSA Non-impairment Criteria Assessment.....</b>	<b>18</b>

## Chapter 1 Introduction

### Proposed action

The BLM proposes to apply the herbicide imazapic by aerial and ground-based methods in the fall of the year to populations of the noxious weed Medusahead rye (*Taeniatherum caput-medusae* (L.) Nevski), and the invasive non-native weeds cheatgrass (*Bromus tectorum* L.), and North Africa grass (*Ventenata dubia* (Leers.) Coss) on up to 15,000 acres of BLM administered lands affected by the South Fork John Day River Fire Complex. Imazapic would be applied at a rate of 0.0625-0.09375 pounds of active ingredient per acre per year, equivalent to 4-6 ounces per acre per year of Plateau (USDI 2010a, BASF 2011). Project design features are discussed further in Chapter 2. This project area is nine miles south of Dayville Oregon (Appendix A, Map).

The project area is within the Phillip W. Schneider Wildlife Area (PWSWA) which was established in 1972 to protect and enhance big game (mule deer, elk, big horn sheep, and pronghorn antelope) habitat, especially for winter range. The PWSWA includes 26,500 acres of Prineville BLM District administered public land and is part of the 119,442 acre Murderer's Creek Coordinated Resource Management Area (MCCRMA). Cooperating agencies in the MCCRMA include the BLM, the Oregon Department of Fish and Wildlife (ODF&W) (24,727 acres) and US Forest Service (64,515 acres).

### Purpose and Need

Post-wildfire conditions from the South Fork John Day River Fire Complex present potential for noxious and invasive non-native annual grass expansion. Much of the land burned is at risk of becoming or is already infested with Medusahead rye, cheatgrass and North Africa grass. Wildfires increase the potential for the expansion of these weeds and the conversion of rangelands to permanent non-native invasive annual grasses (Quigley and Arbelbide 1997) which reduces suitable wildlife habitat (Bodurtha et al. 1989) and increases the risk of additional fires (Evans 1967). Perennial grasslands and sagebrush steppe historically characterized vegetation found on BLM lands burned by this fire. Increased fire frequency in the presence of monocultures of cool season annual grasses reduces the percentage of composition of native vegetation and suitable forage availability for wildlife (Bodurtha et al. 1989).

There is a need to control noxious and invasive non-native annual grasses with an herbicide that is selective for annual grasses such as cheatgrass and Medusahead rye, retain existing native and desirable vegetation, create favorable conditions for increased densities and distribution of native and desirable species, and protect or enhance big game winter range in the PWSWA.

The purpose of the project is to control noxious and invasive non-native annual grasses using imazapic on BLM lands within the areas burned by the South Fork John Day River Fire Complex. The project is expected to move the area towards desired future conditions derived from current planning direction identified in the land use plan for the area, the John Day RMP (USDI 1985), including but not limited to the following:

- Improve and maintain vegetative condition to benefit livestock and wildlife. Manage upland habitat for diversity to provide for a variety of wildlife species. Page 12.

## Issues

Issues are analyzed in detail when:

- analysis is necessary for making a reasoned choice from among the alternatives (e.g., there a measureable difference between the alternatives with respect to the issue);
- the issue identifies a potentially significant environmental effect; or,
- public interest or a law/regulation dictate that effects should be displayed.

Only one issue meeting the above criteria was identified during internal (BLM) and external (public) scoping. It is the first one in the list below, regarding big game winter range.

Several other issues identified during scoping were considered but are not analyzed in detail in this EA; they too are listed below. In general, the issues have already been addressed in documents to which this EA tiers and a) there is not enough difference between the alternatives relative to the issue for an analysis to aid the decision-maker and b) because of required project design features (see Appendix C), there is negligible likelihood that detailed analysis of these issues would reveal a potentially significant effect to the human environment which hasn't already been disclosed in the documents to which this EA tiers.

How would **big game habitat particularly winter range** be affected by BLM treating annual grass with herbicide?

This issue is considered in detail in Chapter 3.

How would the application of imazapic affect **wild horses**?

The project area is within the 142,737 acre Murderer's Creek Wild Horse Management Area (HMA). The majority of the HMA is managed by the USFS. The project area makes up a small portion of the HMA and is one of the lower use areas for horses within the HMA. The only potential effects to horses would be to winter survival from disturbance (aircraft or other vehicles during spraying), or to health from ingestion of imazapic in treated areas. Disturbance during winter would not occur because vehicles (including aircraft) would not be present during the winter. Horse health would not be affected by imazapic spraying because "imazapic [is] an herbicide with no measured risk to wild horses," page 271 in the FEIS for Vegetation treatments using herbicides on BLM Lands in Oregon (USDI 2010a). The analysis from that FEIS regarding effects of imazapic on wild horses is incorporated by reference into this EA.

How would the application of imazapic affect **anadromous fish**?

The Ecological Risk Assessment (BLM 2010) suggested that imazapic does not pose a risk to fish, except when directly sprayed over a stream at the maximum application rate (directly spraying over the channel will not occur due to the PDFs). Therefore, there is no probability of an impact to the fisheries or their habitat from the application of imazapic.

How would the application of imazapic affect **special status plants**?

One special status plant is known to occur in the area, the South Fork John Day milkvetch (*Astragalus diaphanus* var. *diurnus*), which is listed as Threatened by the Oregon Department of Agriculture. There would be no negative effect on this plant because BLM would not apply imazapic aerially within 300 feet or by ground-based application methods within 25 feet of populations of this plant (see Appendix C project design features). Therefore the issue is not considered in detail in this EA.

How would the application of imazapic affect **wilderness characteristics** in the Aldrich Mt. WSA?

The BLM would use the Minimum Requirements Decision Guide prior to project implementation to ensure there would be no effects on wilderness characteristics. Also, cross-country vehicle travel would not be permitted in the WSA during implementation. Therefore, there would not be any potentially significant effects to wilderness characteristics from the application of imazapic. Appendix D contains an assessment of the non-impairment criteria to ensure that aerially applying imazapic would not adversely impact wilderness values within any portion of the Aldrich Mountain WSA.

How would **visual resources** be affected by treatment of non-native annual grasses?

Given project design features such as “no off-road travel in the Aldrich Mountain WSA” and others, there would be no effect on visual resources; therefore the issue is not considered in detail in this EA.

How would herbicide treatments affect **human health**, including that of hunters, other recreationists, and tribal members?

There would be no potentially significant effects to human health because imazapic treatment areas would not be open to public entry for 12 hours following the application of imazapic (USDI 2010a). Furthermore, there would be no potentially significant effects to the human health of adjacent residents because imazapic would not be applied aerially within a ¼ mile of human residences or when wind speeds are above six miles per hour, and would not be applied using ground-based methods within 100 feet of private land and human residences or when wind speeds are above 10 miles per hour.

What would be the effect from application of imazapic on tribal members gathering **traditional cultural plants or root crops**?

As mutually agreed to in tribal consultation, maps of proposed treatment areas would be provided to the Confederated Tribes of the Warm Springs Reservation of Oregon, thereby preventing potentially significant effects to Tribal members gathering traditional plants and root crops. Effects would also be avoided by the measures described above in the human health issue and in Appendix C.

What effect would herbicide treatment have on **biological soil crusts**?

There is no evidence of adverse effects to microbial soil crusts from the application of imazapic (USDI 2010a); therefore the issue is not considered in detail in this EA.

How would **riparian areas** be affected by treatment of non-native annual grasses?

A riparian area is characterized by certain types of vegetation, soils, hydrology, and fauna and requires free or unbound water or conditions more moist than normally found in the area. Imazapic would not be applied within 25 feet of riparian areas (USDI 2010a), thus there would be no potentially significant effects to riparian vegetation (Table 3.2) and the issue is not considered further in this EA.

What would the effect be on **cultural or paleontological resources**?

Discoveries of cultural or paleontological resources during the ground-based application of imazapic would cause the application to be temporarily suspended until an assessment was completed by a cultural specialist. Work would not resume unless it could be done with no effect on these resources. There would be no effect on these resources; therefore the issue is not considered further in this EA.

How would **raptors** be affected by the alternatives?

There would be no potentially significant effects to raptors because wildlife project design features (Appendix C) would eliminate potentially significant effects of aerial and ground-based equipment to nesting, roosting, and brood rearing raptors and eagles.

How would imazapic application affect **non-target vegetation**?

There would be no potentially significant effects to non-target vegetation from the application of imazapic at the proposed rate of 0.0625-0.09375 pounds of active ingredient per acre per year in the fall according to the manufacturer's label (BASF 2011). At these low rates, imazapic is selective for these grasses, leaving native and non-invasive perennial herbaceous species (USDI 2010a).

How would **domestic water** sources be affected by the proposed action?

There are no domestic water sources in the project area; therefore there would be no effect on them.

A more detailed discussion of the reasons for not analyzing in detail some of the above issues is on pages 11-14 of the Brown Road, Razorback, and Hancock Complex Post-Fire Herbicide EA DOI-BLM-OR-P0000-2012-0011-EA (USDI 2012). That EA analyzed effects of the same action (spraying imazapic) in a different but similar area. That discussion is incorporated by reference into this current EA.

## **Chapter 2 Alternatives**

This chapter describes a no action alternative that would result in no management action to address the invasive grasses and an action alternative developed to meet the Purpose and Need described in Chapter 1. The alternatives are summarized in Table 1. While the alternatives are separate for analysis purposes, the BLM's decision on this project may include parts of both alternatives. The project area includes 15,000 acres (Appendix A, Map).

Regardless of alternative selected, the BLM will continue to emphasize prevention of noxious and invasive weeds by recognizing the role of land use actions including recreation, livestock grazing, fuels treatment, timber harvest and others. The BLM will continue to monitor weeds in this project area and in other areas, and adjust management based on what methods prove most effective and have the least impact on other resources and uses and on adjacent landowners. Herbicides are one method of controlling weeds, but the BLM will continue to consider all available tools, including manual (hand pulling) and mechanical methods, biological control (insect predators), and prescribed grazing (e.g., with goats).

### **Alternative 1, No action**

Under the no action alternative, imazapic would not be applied to control noxious and invasive non-native annual grasses on BLM administered lands within the project area.

### **Alternative 2, Proposed action**

Under this alternative, the herbicide imazapic would be applied to populations of the noxious weed Medusahead rye and the invasive non-native grasses cheatgrass and North Africa grass on up to 15,000 acres of BLM administered lands in the project area (see attached map). Ground based and aerial methods would be used to apply imazapic at a rate of 0.0625-0.09375 pounds of active ingredient per acre, equivalent to 4-6 ounces per acre per year of Plateau (USDI 2010a, BASF 2011). The treatment would be repeated annually for up to three years if necessary to control these non-native annual grasses.

Ground application would include high and low boom, 50 and 20 inches above the ground, respectively, as well as vehicle and backpack application methods. Aerial application would include fixed and/or rotor-wing aircraft.

Only aerial application would be utilized on the 1,950 ac. in the Aldrich Mt. WSA.

All project design features included in Appendix C are considered part of Alternative 2.

## **Alternatives Considered but Eliminated**

The following alternative methods of control were considered but not analyzed in detail:

Apply currently approved herbicides (glyphosate, 2, 4-D, dicamba and picloram; approved in the 1994 Prineville District Integrated Weed Management Plan Decision Record). Of the three different species of problematic annual grasses populating the project area, only Medusahead rye could be controlled using one of these four herbicides: glyphosate. The application of glyphosate is limited to ground based application methods due to the broad spectrum of its effects (USDI 1994); that is, it kills most vegetation to which it is applied, not just the target annual grasses. The inaccessibility of portions of the project area, and restriction of glyphosate application to ground based application methods limits the Prineville BLM District's ability to control even Medusahead rye. Medusahead rye, cheatgrass and North Africa grass cannot be effectively treated using non-herbicide methods such as hand pulling or mowing given the spatial extent of infestation (USDI 2010a) and limitations in access to proposed treatment areas via ground-based transportation. Cultural practices such as tilling are not practical due to rock soils and topography. Biological control agents to effectively control these species have been identified and are being researched, but are not yet proven to be effective.

## **Conformance**

The proposed action would be in conformance with the BLM's 1985 John Day RMP and the laws, executive orders, and manual direction listed below.

- BLM John Day RMP, as amended by the 2001 John Day River Management Plan ROD (USDI 2001), page 11, "Continue to implement the existing Integrated Weed Management Program to prevent the spread of noxious weeds and to prevent the development of monocultures that eliminate the diversity of habitat required by many wildlife species."
- Executive Order 12372, Intergovernmental Review. Coordination and consultation is ongoing with affected tribes, federal, and local agencies.
- Executive Order 13112, Invasive Species. To prevent the introduction of invasive species and provide for their control, and to minimize the economic, ecological and human health impacts that invasive species cause.
- Clean Water Act. All proposed treatments are in compliance with this Act (33 U.S.C. 1251 - 1376; Chapter 758; P.L. 845, June 30, 1948; 62 Stat. 1155). Long-term effects are considered beneficial to water quality.
- BLM Manuals 6330 Management of BLM Wilderness Study Areas, 6320.
- BLM Handbooks H-1742-1 Burned Area Emergency Stabilization and Rehabilitation and H-9011-1 Chemical Pest Control.

## **Chapter 3 Affected environment and environmental effects**

### **Introduction**

This EA is tiered to and incorporates by reference those portions of the 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS which are germane to this project and are summarized in this paragraph. The environmental effects to noxious weeds, invasive annual grasses, and native and non-invasive vegetation from the application of imazapic were analyzed in the FEIS (USDI 2010a pages 57-81, 131-151). In summary, the Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS found that: Imazapic is the most effective method for controlling invasive annual grasses; possesses no risk to terrestrial, aquatic, and special status plants from wind erosion, surface runoff, or off-site drift; and possesses a low risk to terrestrial, aquatic, and special status plants from direct spray when applied at the proposed rate of 0.0625-0.09375 pounds of active ingredient per acre per year.

### **How would big game habitat, particularly winter range, be affected by BLM treating noxious and invasive annual grasses with the herbicide imazapic?**

#### **Affected environment**

Big game depend on native vegetation for forage during critical winter periods. The 15,000 acre project area is within the PWSWA which is identified as critical big game winter habitat. Some animals migrate from areas up to one hundred miles away to winter at PWSWA. The 2014 fires burned 20,243 of the 26,500 acres and 11,204 of 22,951 acres managed by the BLM and ODF&W, respectively. The fire removed shrub cover and increased the potential site dominance and spread of annual grasses on the 15,000 acres proposed for treatment. The other 5,243 acres of BLM that burned have low annual grass and a good complement of native vegetation. There are 3,002 acres of private or Forest Service lands within the PWSWA. The majority of Forest Service lands are timbered and thus not at as much risk of annual grass effects. The private lands are small scattered parcels and few of them burned in the fire. Private lands in higher elevations have timber and are thus not impacted by annual grasses, whereas the condition of lower elevation lands has the potential for annual grasses. The entire PWSWA is 52,453 acres. With no treatment and current trends, annual grasses will continue to dominate the recently burned areas and spread into other areas at a rate of 12 percent per year (USDI 2010a). Annual grasses are adapted to green up earlier than native grasses and shrubs and thus compete for water and nutrients. Annual grasses are less palatable and provide far less nutrients to wintering wildlife than native forbs, grasses, and shrubs. As annual grass cover increases, fires are more common and more intense, further compounding the problem.

## Effects

The effects analysis uses the entire PWSWA big game winter range as the analysis area, and assumes the loss of big game winter range would be proportional to the acres projected to become infested with Medusahead rye, cheatgrass, and North Africa grass. The analysis assumes that burned areas dominated by annual grass and treated with Imazapic would recolonize with native forbs, grasses, and shrubs at a rate of 20 percent per year. The analysis also assumes that private and Forest Service lands are not, nor would they be, invaded and that treated acres would not be reinvaded by annual grass. The potential for reinvasion or lower success rates would be higher if BLM or ODFW treated without the other agency treating due to the interspersed ownership pattern.

Under Alternative 1 (no action), assuming that 12 percent per year of the suitable big game winter range becomes infested with annual grass and/or burns, and that the area burned in 2014 does not recover, within 15 years there would be less than 486 acres (< 2%) of big game habitat (land not containing or dominated by annual grass) on BLM managed land in the PWSWA and 16,621 acres (32%) on all ownerships in the wildlife area.

Under Alternative 2 (proposed action), the BLM's annual treatment of grasses yearly for up to three years would retain currently existing native vegetation and allow shrubs and native vegetation to recolonize burned areas. It is assumed that after three years of treatment annual grasses would be reduced or eliminated on 80 percent of the treatment area. Within 15 years, assuming a rate of recovery of 20 percent per year of native vegetation, 14,341 acres of big game winter range would be recovered on BLM managed land. The recovered acres plus the 11,050 acres on BLM managed land currently not affected would result in a total of 25,391 acres of suitable habitat for wintering big game on BLM managed land in the PWSWA.

Regardless of the alternative BLM selects, the ODF&W is planning to spray imazapic on the 11,204 acres of the state managed lands within the PWSWA that burned. These actions would further increase available big game wintering habitat by 10,711 acres within 15 years. For analysis purposes it is assumed that all private and Forest Service lands provide habitat and would not have invasion of annual grasses. Alternative 1 would result in a cumulative habitat of 16,621 acres (32%) after factoring invasion of untreated lands and the recovery of ODFW treated lands. Alternative 2 would result in a total of 50,851 acres (97%) of habitat after factoring invasion and restoration. These effects are included in the Table 1.

## Summary of effects

Table 1. Summary of effects.

Resource	Indicator	Ownership	Now	15 years from now					
				Alt 1			Alt 2		
				Invaded	Restored	Total	Invaded	Restored	Total
Suitable big game winter range in PWSWA	Acres with native forb, grass, shrub cover not dominated by annual grasses	BLM – 26,500	11,050	25,564	0	486	0	14,341	25,391
		All - 52,453 cumulative effects	25,799	19,889	10,711	16,621	0	25,052	50,851

Alternative 1 would allow annual grass spread and dominance to occur unchecked and would continue to limit the amount and distribution of forage for wintering big game which would result in a reduction in big game wintering habitat. Alternative 2 would limit the future spread and dominance of annual grasses, allow for desirable species to persist or re-establish on the majority of the PWSWA, and increase the amount of big game wintering habitat. Due to these expected effects Alternative 2 would provide far more forage than Alternative 1 for wintering big game in 15 years.

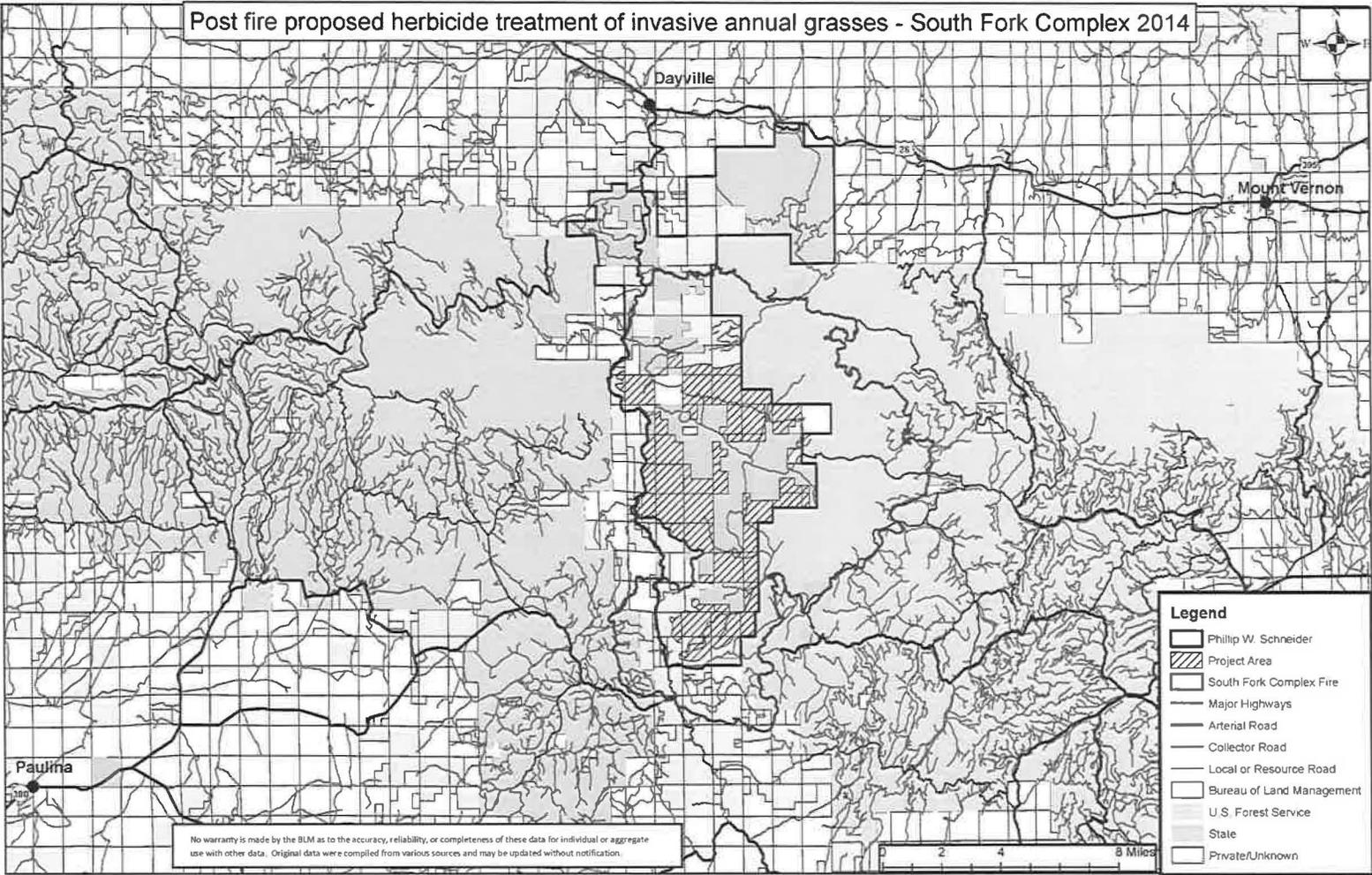
## Chapter 4 Public and other involvement

### Tribes, government agencies, organizations and individuals

The BLM requested input on this project on September 3, 2014 when it mailed scoping letters to 48 individuals and groups, including grazing permittees and owners of adjacent/intermingled private lands. Comments from the scoping period were considered in the design of alternatives and analysis of effects. During scoping the BLM also contacted the to the Confederated Tribes of the Warm Springs Reservation of Oregon and Burns Paiute Tribe, and the Confederated Tribes of the Umatilla to request their input regarding effects on historic properties and cultural resources, including any traditional cultural properties or sacred sites.

### BLM preparers and reviewers

Sarah Canham – Botanist  
 James Eisner – Fisheries Biologist  
 Homer “Chip” Faver – Field Manager  
 Terry Holtzapple - Archaeologist  
 Monte Kuk – Wildlife Biologist  
 Heidi Mottl – Recreation Specialist  
 Teal Purrington – Planning and Environmental Coordinator  
 Justin Rodgers – Rangeland Management Specialist



## Appendix B References

- BASF. 2011. Plateau Herbicide Label. Research Triangle Park, North Carolina.
- Bodurtha, Timothy S., James P. Peek and Jerry L. Lauer. 1989. Mule deer habitat use related to succession in a bunchgrass community. *Journal of Wildlife Management*. 53(2): 314-319.
- Evans, Gary Richard. 1967. Ecology of *Aristida longiseta* in northcentral Idaho. Moscow, ID: University of Idaho. 69 p. Thesis.
- Quigley, Thomas M and Sylvia J. Arbelbide. 1997. An Assessment of Ecosystem Components in the Interior Columbia Basin And Portions of the Klamath and Great Basins PNW-GTR-405. US Department of Agriculture, Pacific Northwest Research Station. Portland OR.
- U.S. Department of the Interior, Bureau of Land Management. 1985. John Day Resource Management Plan Record of Decision, p. 11. Available at <http://www.blm.gov/or/districts/prineville/plans/prinevillermph>
- U.S. Department of the Interior, Bureau of Land Management. 1994. Prineville District Integrated Weed Management Plan. Available at <http://www.blm.gov/or/districts/prineville/plans/activityplans.php>
- U.S. Department of the Interior, Bureau of Land Management. 2001. John Day River Management Plan Record of Decision, p. 11. Available at [http://www.blm.gov/or/plans/files/JohnDay\\_ROD.pdf](http://www.blm.gov/or/plans/files/JohnDay_ROD.pdf)
- U.S. Department of the Interior, Bureau of Land Management. 2010a. Vegetation Treatments Using Herbicides on BLM Lands in Oregon Environmental Impact Statement. Available at <http://www.blm.gov/or/plans/vegtreatmentseis/documents.php>
- U.S. Department of the Interior, Bureau of Land Management. 2010b. Vegetation Treatments Using Herbicides on BLM Lands in Oregon Record of Decision. Available at <http://www.blm.gov/or/plans/vegtreatmentseis/documents.php>
- U.S. Department of the Interior, Bureau of Land Management. 2012. Brown Road, Razorback, and Hancock Complex Post-Fire Herbicide EA DOI-BLM-OR-P0000-2012-0011-EA. Available at <http://www.blm.gov/or/districts/prineville/plans/nepa-details.php?id=2292>

## Appendix C Project Design Features

Implementation of the proposed action would follow all relevant direction from the Record of Decision for Vegetation Treatments Using Herbicides on BLM Lands in Oregon (USDI 2010b), which included a number of project design features (pages 33-45), only a few of which are listed below. The analysis in this current EA assumes the application of all relevant direction from USDI 2010b, not just the few examples listed below.

The list below also includes additional project design features that are unique to this project. Implementation of the proposed action would follow all direction listed below.

### General

- Do not apply herbicides when winds exceed >10 mph (>6 mph for aerial applications), or when a serious rainfall event is imminent.
- Prepare an operational and spill contingency plan in advance of treatment.
- Conduct a pretreatment survey before applying herbicides.
- Follow herbicide product label for use and storage.
- Have licensed or certified applicators or State-licensed “trainees” apply herbicides, or they can be applied by BLM employees under the direct supervision of a BLM-certified applicator.
- Review, understand, and conform to the “Environmental Hazards” section on the herbicide product label. This section warns of known herbicide risks to the environment and provides practical ways to avoid harm to organisms or to the environment.
- Comply with herbicide-free buffer zones to ensure that drift will not affect crops or nearby residents/ landowners.
- Keep a copy of Material Safety Data Sheets (MSDSs) at work sites. MSDSs are available for review at <http://www.cdms.net/>.
- Keep records of each application, including the active ingredient, formulation, application rate, date, time, and location.
- Make helicopter applications at a target airspeed of 40 to 50 miles per hour (mph), and at about 30 to 45 feet above ground.
- Consider site characteristics, environmental conditions, and application equipment in order to minimize damage to non-target vegetation.
- Use drift reduction agents, as appropriate, to reduce the drift hazard to non-target species.
- Turn off application equipment at the completion of spray runs and during turns to start another spray run.
- Clean OHVs to remove plant material.
- Minimize treatments in areas where herbicide runoff is likely, such as steep slopes when heavy rainfall is expected.

### **Paleontological and Cultural Resources**

- Any new discoveries of cultural or paleontological resources by applicators during the application of imazapic would cause the application to be temporarily relocated until an assessment of the cultural or paleontological resources was performed by a cultural specialist.
- The Confederated Tribes of the Warm Springs Reservation of Oregon would be provided with maps of treatment locations and application dates. Access to treatment areas would not change due to proposed herbicide treatment.
- Consult with tribes to locate any areas of vegetation that are of significance to the tribe and that might be affected by herbicide treatments; work with tribes to minimize impacts to these resources.

### **Riparian Areas and Fisheries**

- Aerial application – 100 foot no spray buffer.
- Ground based application – 25 foot no spray buffer.
- Review hydrogeologic maps of proposed treatment areas. Note depths to groundwater and areas of shallow groundwater and areas of surface water and groundwater interaction. Minimize treating areas with high risk for groundwater contamination.
- Conduct mixing and loading operations in an area where an accidental spill would not contaminate an aquatic body.
- Do not rinse spray tanks in or near water bodies.
- For treatment of aquatic vegetation, 1) treat only that portion of the aquatic system necessary to meet vegetation management objectives, 2) use the appropriate application method to minimize the potential for injury to desirable vegetation and aquatic organisms, and 3) follow water use restrictions presented on the herbicide label.

## **Wildlife**

- No ground-based motorized vehicles, aircraft or equipment disturbance would be allowed within ½ mile line of sight or ¼ mile non-line of sight of Bald Eagle nests from January 1 to August 31.
- No ground-based motorized vehicles, aircraft, or equipment disturbance would be allowed within ¼ mile of Bald Eagle roosts from November 1 to April 30.
- No ground-based motorized vehicles, aircraft, or equipment would be allowed within ½ mile line of sight or ¼ mile non-line of sight of any raptor nest February 1 through August 31.

## **Human Health and Safety and Recreation**

- Treatment areas would not be open to public entry for 12 hours following application of imazapic.
- Imazapic would not be applied within ¼ mile of human residences aerially or within 100 feet by ground based methods.
- ODFW and BLM-authorized hunting and fishing outfitter guides would be notified in advance, and provided maps, of proposed treatment areas.
- Public notifications of treatment locations, dates, and times would be posted at the following locations:
  - Phillip W. Schneider Wildlife Area information kiosks.
  - Dayville merchants.
  - Road entrances to the project area.
  - Prineville BLM web page at <http://www.blm.gov/or/districts/prineville/index.php>
- Use protective equipment as directed by the herbicide product label.
- Store herbicides in secure, herbicide-approved storage.
- Notify local emergency personnel of proposed treatments.
- Contain and clean up spills and request help as needed.
- Secure containers during transport.
- Dispose of unwanted herbicides promptly and correctly.
- To minimize fears based on lack of information, provide public educational information on the need for vegetation treatments and the use of herbicides in an integrated vegetation management program for projects proposing local use of herbicides.

### **Range**

- After treatments, livestock grazing would not be permitted the remainder of the calendar year and through the growing season of the next year, unless the BLM determines that reintroducing livestock grazing would not result in negative impacts to native and desirable non-native perennial grasses within treatment areas, in which case grazing may be allowed to re-commence.
- Notify permittees of the herbicide treatment project to avoid potential conflicts and safety concerns during implementation of the treatment. Notify permittees of livestock grazing, feeding, or slaughter restrictions, if necessary (USDI 2010b).

### **Vegetation**

- Based on the application rates proposed (considered to be within typical application rates) ground based application of Imazapic would not occur within 25 feet of identified populations of threatened, endangered, or sensitive plants associated with aquatic habitats (USDI 2010b).
- Based on the application rates proposed (considered to be within typical application rates) aerial application of Imazapic would not occur within 100 feet (helicopter) or 300 feet (fixed wing) of identified populations of threatened, endangered, or sensitive plants associated with terrestrial habitats (USDI 2010b).

### **Wilderness Study Area**

- A minimum requirements analysis would be completed prior to the application of imazapic in the WSA.
- Cross-country vehicle travel would not occur in the WSA.

## **Appendix D WSA Non-impairment Criteria Assessment**

### **Aldrich Mountain WSA (OR-2-103)**

#### **Existing uses and facilities**

There are no facilities within the project area. The existing uses are primarily hunting and antler gathering.

#### **Discussion of scenery characteristics, vistas, key viewing areas, and visitor use areas**

Primary scenery points are from BLM and State lands within the PWSWA. The WSA is also partially visible from the Aldrich Mountain look out and surrounding area on Forest Service lands.

Vegetative communities within the WSA range from forested habitats in drainages and higher elevations and shrub steppe and grasslands in lower elevations with the majority of the area currently dominated by western juniper trees.

#### **Describe the physical, biological, cultural, and environmental impacts to the site or WSA**

In 2014 portions of the WSA burned in a wildfire. The majority of the area that burned was south on south aspects that had Medusahead rye coming in and competing with the existing bunch grasses and shrubs. The project proposes to spray a pre-emergent herbicide that will kill annual grasses shortly after they germinate.

#### **Discuss how the proposed project will (or will not) conform to the non-impairment criteria**

The proposed activity is temporary, does not create surface disturbance, nor involve permanent facilities. The project will have no long term negative effects to wilderness characteristics or values. In fact, the project is expected to improve the naturalness of the WSA by reducing the amount of non-native species and allowing native species to increase.

**Discuss how the project will (or will not) meet the conditions of being substantially unnoticeable**

The project will involve over flight with a helicopter to aerially apply the herbicide. This has been determined to be the minimum tool for application. Based on past treatments in other areas there is at least an 80% chance the treatments will be successful. The only expected short term impact would be light gray appearance of the dead annual grass. Due to variations in application intensity there may be color variations in linear fashions within the WSA. Both the gray appearance and the color variations will be short term and as native species expand and regrow will provide a natural appearance.

Without treatment it is expected that dense mats of annual grasses will develop and result in color variations as well as increased fire potential throughout the unit.

**Will the addition of this proposal produce an aggregate negative effect upon the area's wilderness characteristics and values that would constrain Congress's decision to designate the area as wilderness, considering the condition of the area at the time the Secretary sent the recommendation to the President?**

No

**Will the addition of this proposal reduce or improve the overall wilderness quality of the WSA or a portion of the WSA?**

It is expected that there will be a short term impact to the visual quality of the WSA in the sprayed areas due to the advent of large amounts of dead annual grass seedlings that will appear gray; however this will be a short term impact. The net result of the project will be that native grasses will be allowed to reestablish thus hiding the visual effect of the dead annual grasses and improving both the naturalness of the WSA as well as the visual qualities. Annual grass killed by the herbicide typically is no taller than 1 – 2 inches thus it will decompose and be broken down readily.

## **Finding of No Significant Impact**

*Herbicide Treatment for South Fork John Day River Fire Complex EA  
DOI-BLM-OR-P040-2014-0048-EA*

US Department of the Interior, Bureau of Land Management  
Prineville Field Office, Oregon

### **Introduction**

The Bureau of Land Management (BLM) has completed an Environmental Assessment (EA), No. DOI-BLM-OR-P000-2014-0048-EA that analyzes the effects of one action alternative proposing to apply the herbicide imazapic to control the noxious and invasive annual grasses Medusahead rye (*Taeniatherum caput-medusae*), cheatgrass (*Bromus tectorum*), and North Africa grass (*Ventenata dubia*) on 15,000 acres affected by the South Fork Fire of 2014. The EA is incorporated by reference in this Finding of No Significant Impact (FONSI).

The Council on Environmental Quality (CEQ) regulations state that the significance of impacts must be determined in terms of both context and intensity (40 CFR 1508.27).

### **Context**

The proposed action is set within the context of a comprehensive post-fire emergency stabilization and rehabilitation plan. Other actions covered by that plan include drill seeding of native and non-invasive perennial grasses and forbs; grazing rest and deferment; and fence and sign replacement. These actions are considered in the cumulative effects section of the current EA. Applications of glyphosate, 2, 4-D, dicamba, and picloram to control broadleaf noxious weeds such as thistles have also taken place in the project area under the existing Prineville District Integrated Weed Management Plan (USDI 1994). Recently, the herbicide imazapic has since been approved for use in Oregon to control Medusahead rye, cheatgrass, and North Africa grass (2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon Record of Decision (ROD)). The current EA analyzes the site-specific use of imazapic, which is much more effective than glyphosate at controlling these grasses.

### **Intensity**

I have considered the potential intensity and severity of the impacts anticipated from implementation of a Decision on this EA relative to each of the ten areas suggested for consideration by the CEQ. With regard to each:

1. **Would any of the alternatives have significant beneficial or adverse impacts (40 CFR 1508.27(b)(1))?** No.

**Rationale:**

The proposed action would impact resources as described in the EA. Project design features to reduce impacts were incorporated in the design of the proposed action. These project design features are outlined in Appendix C of the EA and the environmental effects are discussed in Chapter 3. None of the environmental effects discussed in detail in the EA exceed those analyzed in the 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon.

2. **Would any of the alternatives have significant adverse impacts on public health and safety (40 CFR 1508.27(b)(2))?** No.

**Rationale:**

No impacts on public health and safety would result from the Proposed Action due to project design features outlined in the EA. Approaches to mitigating impacts on public health and safety were analyzed in detail and adopted in the ROD for 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS, and include no-treatment buffers surrounding private land and residential structures, post-application closures, and extensive outreach to notify the public of proposed treatments. The proposed action in the current EA adopted the relevant mitigation from that ROD (see Appendix C in EA).

3. **Would any of the alternatives have significant adverse impacts on unique geographic characteristics (cultural or historic resources, park lands, prime and unique farmlands, wetlands, wild and scenic rivers, designated wilderness or wilderness study areas, or ecologically critical areas (ACECs, RNAs, significant caves)) (40 CFR 1508.27(b)(3))?** No.

**Rationale:**

Any resource of concern identified to be at risk from the project activities would be protected from damage or disturbance by the project design features that are part of the proposed action, such as no-treatment buffers, timing of application relative to appropriate environmental conditions, and method of application (e.g., ground-based application within 25-100 feet of riparian areas). There would therefore be no effects on park lands, prime farm lands, wetlands, wild and scenic rivers, or ecologically critical areas due to these protective measures. Appendix D of the EA contains the rationale for the determination that the proposed action would not impair wilderness characteristics and values within the Aldrich Mountain WSA.

4. **Would any of the alternatives have highly controversial effects (40 CFR 1508.27(b)(4))?** No.

**Rationale:**

There are no effects which are expected to be highly controversial.

**5. Would any of the alternatives have highly uncertain effects or involve unique or unknown risks (40 CFR 1508.27(b)(5)? No.**

**Rationale:**

There are no known unique or unusual risks associated with the proposed action. Similar actions using imazapic to control Medusahead rye, cheatgrass, and North Africa grass on rangelands in Oregon with similar plant composition have been successfully implemented (Johnson and Davies 2012, Elseroad and Rudd 2011, Smith et al 2011, Butler et al 2010). Uncertainty and risks associated with the application of imazapic to control invasive annual grasses are addressed in risk assessments and analysis in the 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS to which the current EA is tiered.

**6. Would any of the alternatives establish a precedent for future actions with significant impacts (40 CFR 1508.27(b)(6)? No.**

**Rationale:**

Use of imazapic to control invasive annual grasses and noxious weeds has occurred on BLM districts located in other states (USDI, 2010), as well as on private lands in Oregon (Smith et al 2011). This management activity does not commit the BLM to pursuing further actions, and as such would not establish a precedent or decision for future actions with potentially significant environmental effects.

**7. Are any of the alternatives related to other actions with potentially significant cumulative impacts (40 CFR 1508.27(b)(7)? No.**

**Rationale:**

The actions considered in the proposed action were evaluated by the BLM interdisciplinary team within the context of past, present, and reasonably foreseeable future actions. Significant cumulative effects are not predicted based on analysis of the effects of the proposed action described in Chapter 3 of the current EA and the analysis in the 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS.

**8. Would any of the alternatives have significant adverse impacts on scientific, cultural, or historic resources, including those listed or eligible for listing on the National Register of Historic Resources (40 CFR 1508.27(b)(8)?**

**Rationale:**

The proposed action would not adversely affect scientific, cultural, or historic resources, including those eligible for listing in the National Register of Historic Places. Known cultural or paleontological sites would be avoided, and BLM would relocate project implementation to avoid any impacts to known or newly discovered cultural or paleontological sites.

**9. Would any of the alternatives have significant adverse impacts on threatened or endangered species or their critical habitat (40 CFR 1508.27(b)(9)? No.**

**Rationale:**

Mid-Columbia Steelhead are the only known threatened or endangered species in the project area. The proposed action would neither adversely nor significantly affect

threatened or endangered species or their critical habitat, as described in Chapter 3 of the EA. Mitigations to reduce impacts to special status species have been incorporated into the design of the proposed action. These project design features are outlined in Appendix C of the EA.

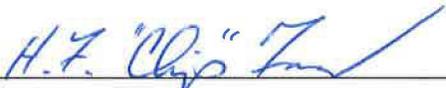
**10. Would any of the alternatives have effects that threaten to violate federal, state, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(IO)? No.**

**Rationale:**

The project would not violate any known federal, state, local or tribal law or requirement imposed for the protection of the environment. The BLM contacted tribal representatives during preparation of the EA and solicited input regarding tribal interests.

**Finding**

On the basis of the information contained in the EA, the consideration of intensity factors described above, all other information available to me, it is my determination that: (1) the alternatives are in conformance with the 1985 John Day Resource Management Plan (as amended in 2001 by the John Day River Management Plan ROD); and (2) neither alternative would constitute a major federal action having a significant effect on the human environment. Therefore, neither an EIS nor a supplement to the 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon FEIS or the John Day River Management Plan FEIS are necessary.



H.F. "Chip" Favey  
Field Manager, Central Oregon Resource Area

10-7-14  
Date

## References

- Johnson, D.D., Davies, K.W. 2012. Revegetating sagebrush rangelands invaded by medusahead. Oregon State University, Oregon Beef Council Report [online]. BEEF094. Available: <http://beefcattle.ans.oregonstate.edu/documents/BEEF094-RevegetatingSagebrush.pdf>
- Elseroad, A.C. Rudd, N.T. 2011. Can Imazapic Increase Native Species Abundance in Cheatgrass (*Bromus tectorum*) Invaded Native Plant Communities?. *Rangeland Ecology & Management*: November 2011, Vol. 64, No. 6, pp. 641-648.
- Smith, B.S., Sheley, R.L., Bingham, B.S. 2011. A working ranch with an effective medusahead management program. Eastern Oregon Agricultural Research Center. DVD.
- Butler, M. Brummer, F. Simmons, R. 2010. Restoring Central Oregon Rangeland from *Ventemata* and Medusahead to a Sustainable Bunchgrass Environment – Warm Springs and Ashwood. Central Oregon Agricultural Research Center Annual Report.
- U.S. Department of the Interior, Bureau of Land Management. White River Field Office. 2010. Pad Fire Emergency Stabilization and Rehabilitation Monitoring Summary.