



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Vale District Office  
100 Oregon Street  
Vale, Oregon 97918-9630  
<http://www.or.blm.gov/Vale/>

IN REPLY REFER TO:  
OR-030-2001-07  
1742

3/16/01

Dear Reader:

An Environmental Assessment (EA) Document has been prepared by the Vale District, Bureau of Land Management for herbicide treatment of 1,000 acres of the 2000 Jackson wildfire.

The end of the 15-day public comment period on the EA in which you will have an opportunity to comment on this proposal and the adequacy of the Environmental Assessment is March 30, 2001.

Comments, including names and addresses of respondents, will be available for public review at the identified administrative office during regular business hours (8:00 a.m. to 4:30 p.m), Monday through Friday, except holidays, and may be published as a part of the EA document or other related documents. Individual respondents may request confidentiality.

If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law.

All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be make available for public inspection in their entirety.

If have any questions concerning this project, please contact Randy Eyre at (541) 473-3144.

Sincerely,

*S/Tom Dabbs, acting*

Roy L. Masinton  
Field Manager  
Malheur Resource Area

**EA OR-030-2001-007**  
**Supplement to Jackson (N032) Fire Rehabilitation Plan**  
**Environmental Assessment OR-2000-010**

BLM OFFICE: Malheur Resource Area, Vale District

PROPOSED ACTION: Herbicide Treatment of 1000 acres of the area to be seeded by rangeland drills under Jackson Fire Rehabilitation Plan

CONFORMANCE WITH APPLICABLE LAND USE PLAN

This proposed action is subject to the following land use plans:

Name of Plan: Northern Malheur Management Framework Plan (MFP)(1983)  
Ironside Rangeland Program Summary (RPS)(1981)  
Northwest Area Noxious Weed Control Program Environmental Impact Statement (December 1985) and Supplement (March 1987)  
The Vale District 5 year Noxious Weed Control Program and Environmental Assessment (OR-030-89-19)  
Jackson Emergency Fire Rehabilitation Plan Environmental Assessment (OR-2000-010)

These plans have been reviewed to determine if the proposed action conforms with the land use plan's terms and conditions as required by 43 CFR 1610.5

PUPOSE AND NEED

The approved action for the Jackson Emergency Fire Rehabilitation (EFR) Plan and Environmental Assessment (EA) completed in 2000 included seeding of 22,000 acres with rangeland drills. The proposed action also included treatment of up to 4,000 of those acres with herbicides or disking to enhance seeding success. Approximately 21,000 of the 22,000 acres were seeded in the fall of 2000. Approximately 1,000 acres were not seeded due to contractors being unable to complete the work within the appropriate timeframes and conditions. The need for seeding the 1000 acres as identified in the Jackson EFR EA, pg. 2-3 still exists. Herbicide treatment as identified on page 5 of the Jackson EFR EA is needed to allow for a fall 2001 seeding. The purpose of the herbicide treatment would be to reduce the accumulation of annual plant material and decrease the seed bank of annual species to allow the establishment of perennial grass, forb and shrub species.

The specific objectives of the proposed action would be to reduce annual grasses and forbs and establish perennial shrub and herbaceous ground cover. The proposed action would replace the existing annual vegetation with desirable perennial grasses, forbs and shrubs. The project occurs within one of the highest priority areas within the Malheur Resource Area for restoration of cover for wildlife.

The establishment of perennial grasses, forbs and shrubs would reduce fire frequency of the area and associated suppression costs. Cheatgrass and medusa head rye remain a hazard longer than that of perennial grasses because they dry 4 to 6 weeks earlier than perennials and are susceptible to fire 1 to 2 months longer in the fall (Stewart and Hull, 1949). In Oregon, cheatgrass ranges were found to be 500 times more likely to burn than non cheatgrass ranges. In addition, cheatgrass fires spread very rapidly and may extend into nearby stands of native vegetation reducing the cover of native perennial grass, forb and shrub species.

### AFFECTED ENVIRONMENT

As identified on pages 8-11 of the Jackson EFR, EA.

### DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

#### Proposed Action

The proposed action is to treat 1000 acres (map 1) with herbicide in the spring of 2001. The area would be seeded during the fall, following the herbicide treatment. Following herbicide application and seeding, the area would be closed from livestock grazing for a minimum of two growing seasons.

The herbicide treatment would consist of glyphosate at 16 ounces per acre applied at the 2-3 leaf stage during the early spring. Recent work by The Nature Conservancy (1997) and Prineville District BLM (1995) has shown that herbicide treatments following fire enhances the establishment of desirable perennial species by further reducing the seed bank and competition of annual weedy species. Glyphosate prevents the plant from producing amino acids that are the building blocks of plant proteins. (Glyphosate Herbicide Information Profile is attached as Appendix 1, and a herbicide label on Accord and material safety data sheet is attached as Appendix 2).

Following the spray treatment, the area would be seeded with a mixture of adaptive perennial grasses, forbs and shrubs as identified in the Jackson EFR, EA pages 3-6.

### DESCRIPTION OF OTHER ALTERNATIVES

Alternative A.(NO ACTION) - Under this alternative, the herbicide treatment and seeding would not be conducted.

Alternative B. (Disk and Seed) - Under this alternative the area would be seeded in the spring of 2001 without seedbed treatment. The herbicide treatment would not be used.

ENVIRONMENTAL IMPACTS in addition to those identified in the Jackson EFR EA

### PROPOSED ACTION:

It has been reported by Torrel et al. (1961) that fire enhances the effectiveness of herbicide treatments within medusa head rye stands by removing some of the plant litter, destroying some of the seed, and placing the remaining seed in contact with mineral soil where it can germinate and subsequently be controlled by herbicides. The Vale District 5 year Noxious Weed Control Program and Environmental Assessment No. OR-030-89-19, tiered to the Northwest Area Noxious Weed Control Program Environmental Impact Statement (December 1985) and Supplement (March 1987), addresses the environmental and human impacts of the proposed herbicide treatment. There would be no changes in the implementation of this programmatic EA in regards to the proposed action. The use of glyphosate at 16 fl ounces per acre should not permanently adversely impact remnant perennial grasses and shrubs. The herbicide treatment will improve the chance of establishment of seeded perennial vegetative species.

Alternative A.(NO ACTION)- The vegetation condition of the area would continue to be the same as the present. Weedy annual species would continue to increase and occupy the site and provide a seed source into surrounding areas. Productivity on the site has declined to the degree that no action is uneconomical over the long term. Little or no potential for site improvement is possible with no action. The potential for recurring wildland fires would continue to exist.

Alternative B. Seeding with no seedbed treatment- Chances for seeding establishment would be greatly reduced due to germination of highly competitive winter annual species such as cheatgrass and medusahead rye that currently exist on the site.

## DESCRIPTION OF MITIGATION MEASURES AND RESIDUAL IMPACTS

The design features and mitigation measures for herbicide application as described in the EA (OR-030-89-19 as amended in 1994) titled “The Vale District 5 Year Noxious Weed Control Program” will be strictly followed. All herbicides will be applied in accordance with EPA label requirements.

Monitoring pretreatment and post-treatment will be done yearly within the project area.

## LITERATURE CITED

Stewart, G., and A.C. Hull. 1949. Cheatgrass (Bromus tectorum) - An Ecological Intruder in Southern Idaho. Ecology. 30 (1): 58-74.

Torrel et al. 1961. The Medusahead Rye Problem in Idaho. Weeds. 9:124-131.

USDI-BLM. 1995. Prineville District. Murderer’s Creek Medusahead Rye Control (Wilderness Portion) E A. No. OR-054-4-83.

Young, J.A. 1976. Estimating Potential Downy Brome Competition after Wildfires. JRM. 29(4): 322-325.

PERSONS/AGENCIES CONSULTED

Alkali allotment permittees  
Oregon Department of Fish and Wildlife

BLM STAFF SPECIALISTS

Al Bammann - Wildlife Biologist/T&E Animals  
Diane Pritchard - Archeologist  
Bob Alward - Outdoor Recreation Planner  
Jean Findley - Botanist  
Jerry Erstrom - District Weed Coordinator  
Lynne Silva - Malhuer Resource Area Weed Coordinator  
Shaney Rockefeller - Soil/Water/Air  
Roy Masinton - Field Manager  
Randy Eyre - Rangeland Management Specialist

FINDING OF NO SIGNIFICANT IMPACTS

On the basis of the information contained in this addendum and EA (OR-030-2000-010), it is my determination that the proposed alternative and potential environmental and human consequences and mitigation measures does not constitute a major Federal action affecting the quality of the environment. Therefore, an EIS is not necessary and will not be prepared. I have determined that the proposed action is in conformance with the applicable land use plans.

*s/Roy Masinton*

*3/13/01*

\_\_\_\_\_  
Authorized Official

\_\_\_\_\_  
Date

DECISION/RATIONALE

Based upon the analysis in this addendum and EA OR -030-2000-10, the proposed action would have little adverse long term impacts. The short term impacts that may occur as a result of the herbicide application and seeding include: loss of vegetation, increased wind and water erosion. These impacts will be offset by the long term benefits of the proposed project. Seeding of perennial plants will reduce the potential frequency of wildland fires and continual propagation and spreading of annual weedy species. Other long term benefits of the project include improved rangeland health and species diversity, and improved wildlife habitat and livestock forage.

My decision is to implement the proposed action and mitigation measures as described in this addendum and EA OR -030-2000-10.

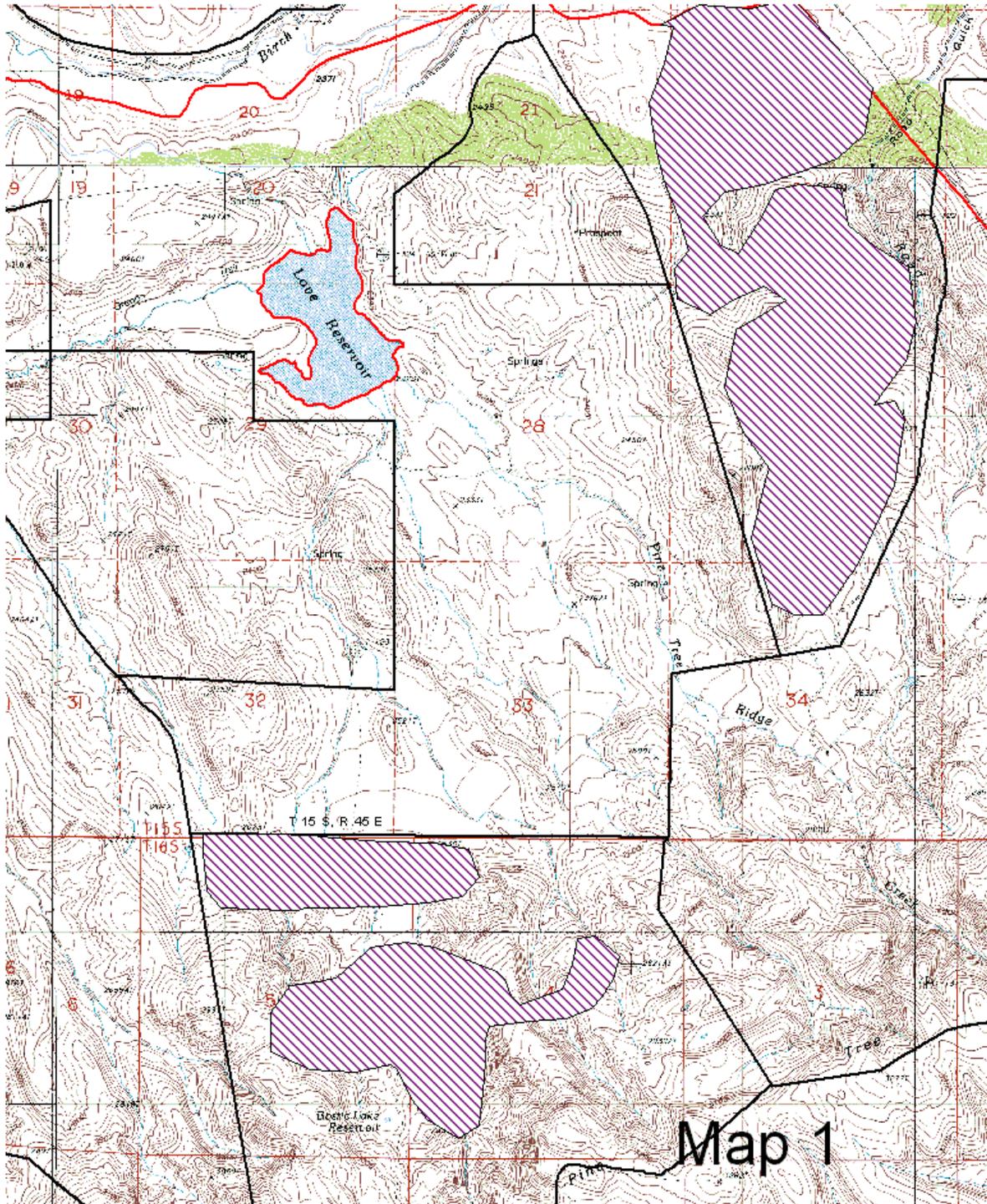
1. The design features and mitigation measures for herbicide application as described in the Environmental Assessment (EA No. OR-030-89-19 as amended in 1994) titled "The Vale District 5 Year Noxious Weed Control Program" will be strictly followed. All herbicides will only be applied in accordance with EPA standards.
2. No livestock grazing will occur for two growing seasons after the seeding.

s/Roy Masinton

4/17/2001

\_\_\_\_\_  
Authorized Official

\_\_\_\_\_  
Date



0.2 0 0.2 0.4 Miles



-  Herbicidetreatment.shp
-  Pastures
-  Fire2000a

## Appendix 1

### Extension Toxicology Network Glyphosate Information Profile

A Pesticide Information Project of Cooperative Extension Offices of Cornell University, Oregon State University, the University of Idaho, and the University of California at Davis and the Institute for Environmental Toxicology, Michigan State University. Major support and funding was provided by the USDA/Extension Service/National Agricultural Pesticide Impact Assessment Program.

EXTOXNET primary files maintained and archived at Oregon State University

Revised June 1996

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## Glyphosate

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**Trade and Other Names:** Trade names for products containing glyphosate include Gallup, Landmaster, Pondmaster, Ranger, Roundup, Rodeo, and Touchdown. It may be used in formulations with other herbicides.

**Regulatory Status:** Glyphosate acid and its salts are moderately toxic compounds in EPA toxicity class II. Labels for products containing these compounds must bear the Signal Word WARNING. Glyphosate is a General Use Pesticide (GUP).

**Chemical Class:** Not Available

**Introduction:** Glyphosate is a broad-spectrum, nonselective systemic herbicide used for control of annual and perennial plants including grasses, sedges, broad-leaved weeds, and woody plants. It can be used on non-cropland as well as on a great variety of crops. Glyphosate itself is an acid, but it is commonly used in salt form, most commonly the isopropylamine salt. It may also be available in acidic or trimethylsulfonium salt forms. It is generally distributed as water-soluble concentrates and powders. The information presented here refers to the technical grade of the acid form of glyphosate, unless otherwise noted.

**Formulation:** Glyphosate itself is an acid, but it is commonly used in salt form, most commonly the isopropylamine salt. It may also be available in acidic or trimethylsulfonium salt forms. It is generally distributed as water-soluble concentrates and powders.

### **Toxicological Effects:**

- **Acute toxicity:** Glyphosate is practically nontoxic by ingestion, with a reported acute oral LD50 of 5600 mg/kg in the rat. The toxicities of the technical acid (glyphosate) and the formulated product (Roundup) are nearly the same. The oral LD50 for the trimethylsulfonium salt is reported to be approximately 750 mg/kg in rats, which indicates moderate toxicity. Formulations may show moderate toxicity as well (LD50 values between 1000 mg/kg and 5000 mg/kg). Oral LD50 values for glyphosate are greater than 10,000 mg/kg in mice, rabbits, and goats. It is practically nontoxic by skin exposure, with reported dermal LD50 values of greater than 5000 mg/kg for the acid and isopropylamine salt. The trimethylsulfonium salt has a reported dermal LD50 of greater than 2000 mg/kg. It is reportedly not irritating to the skin of rabbits, and does not induce skin sensitization

in guinea pigs. It does cause eye irritation in rabbits. Some formulations may cause much more extreme irritation of the skin or eyes. In a number of human volunteers, patch tests produced no visible skin changes or sensitization. The reported 4-hour rat inhalation LC50 values for the technical acid and salts were 5 to 12 mg/L, indicating moderate toxicity via this route. Some formulations may show high acute inhalation toxicity. While it does contain a phosphatyl functional group, it is not structurally similar to organophosphate pesticides which contain organophosphate esters, and it does not significantly inhibit cholinesterase activity.

- **Chronic toxicity:** Studies of glyphosate lasting up to 2 years, have been conducted with rats, dogs, mice, and rabbits, and with few exceptions no effects were observed. For example, in a chronic feeding study with rats, no toxic effects were observed in rats given doses as high as 400 mg/kg/day. Also, no toxic effects were observed in a chronic feeding study with dogs fed up to 500 mg/kg/day, the highest dose tested.
- **Reproductive effects:** Laboratory studies show that glyphosate produces reproductive changes in test animals very rarely and then only at very high doses (over 150 mg/kg/day). It is unlikely that the compound would produce reproductive effects in humans.
- **Teratogenic effects:** In a teratology study with rabbits, no developmental toxicity was observed in the fetuses at the highest dose tested (350 mg/kg/day). Rats given doses up to 175 mg/kg/day on days 6 to 19 of pregnancy had offspring with no teratogenic effects, but other toxic effects were observed in both the mothers and the fetuses. No toxic effects to the fetuses occurred at 50 mg/kg/day. Glyphosate does not appear to be teratogenic.
- **Mutagenic effects:** Glyphosate mutagenicity and genotoxicity assays have been negative [58]. These included the Ames test, other bacterial assays, and the Chinese Hamster Ovary (CHO) cell culture, rat bone marrow cell culture, and mouse dominant lethal assays. It appears that glyphosate is not mutagenic.
- **Carcinogenic effects:** Rats given oral doses of up to 400 mg/kg/day did not show any signs of cancer, nor did dogs given oral doses of up to 500 mg/kg/day or mice fed glyphosate at doses of up to 4500 mg/kg/day. It appears that glyphosate is not carcinogenic.
- **Organ toxicity:** Some microscopic liver and kidney changes, but no observable differences in function or toxic effects, have been seen after lifetime administration of glyphosate to test animals.
- **Fate in humans and animals:** Glyphosate is poorly absorbed from the digestive tract and is largely excreted unchanged by mammals. At 10 days after treatment, there were only minute amounts in the tissues of rats fed glyphosate for 3 weeks. Cows, chickens, and pigs fed small amounts of glyphosate had undetectable levels (less than 0.05 ppm) in muscle

tissue and fat. Levels in milk and eggs were also undetectable (less than 0.025 ppm). Glyphosate has no significant potential to accumulate in animal tissue.

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### **Ecological Effects:**

- **Effects on birds:** Glyphosate is slightly toxic to wild birds. The dietary LC50 in both mallards and bobwhite quail is greater than 4500 ppm.
- **Effects on aquatic organisms:** Technical glyphosate acid is practically nontoxic to fish and may be slightly toxic to aquatic invertebrates. The 96-hour LC50 is 120 mg/L in bluegill sunfish, 168 mg/L in harlequin, and 86 mg/L in rainbow trout. The reported 96-hour LC50 values for other aquatic species include greater than 10 mg/L in Atlantic oysters, 934 mg/L in fiddler crab, and 281 mg/L in shrimp. The 48-hour LC50 for glyphosate in *Daphnia* (water flea), an important food source for freshwater fish, is 780 mg/L. Some formulations may be more toxic to fish and aquatic species due to differences in toxicity between the salts and the parent acid or to surfactants used in the formulation. There is a very low potential for the compound to build up in the tissues of aquatic invertebrates or other aquatic organisms.
- **Effects on other organisms:** Glyphosate is nontoxic to honeybees. Its oral and dermal LD50 is greater than 0.1 mg/bee. The reported contact LC50 values for earthworms in soil are greater than 5000 ppm for both the glyphosate trimethylsulfonium salt and Roundup.

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### **Environmental Fate:**

- **Breakdown in soil and groundwater:** Glyphosate is moderately persistent in soil, with an estimated average half-life of 47 days. Reported field half-lives range from 1 to 174 days. It is strongly adsorbed to most soils, even those with lower organic and clay content. Thus, even though it is highly soluble in water, field and laboratory studies show it does not leach appreciably, and has low potential for runoff (except as adsorbed to colloidal matter). One estimate indicated that less than 2% of the applied chemical is lost to runoff. Microbes are primarily responsible for the breakdown of the product, and volatilization or photodegradation losses will be negligible.
- **Breakdown in water:** In water, glyphosate is strongly adsorbed to suspended organic and mineral matter and is broken down primarily by microorganisms. Its half-life in pond water ranges from 12 days to 10 weeks.
- **Breakdown in vegetation:** Glyphosate may be translocated throughout the plant, including to the roots. It is extensively metabolized by some plants, while remaining intact in others.

### **Physical Properties:**

- **Appearance:** Glyphosate is a colorless crystal at room temperature.
- **Chemical Name:** N-(phosphonomethyl) glycine
- **CAS Number:** 1071-83-6
- **Molecular Weight:** 169.08
- **Water Solubility:** 12,000 mg/L @ 25 C
- **Solubility in Other Solvents:** is. in common organics (e.g., acetone, ethanol, and xylene)
- **Melting Point:** 200 C
- **Vapor Pressure:** negligible
- **Partition Coefficient:** -3.2218 - -2.7696
- **Adsorption Coefficient:** 24,000 (estimated)

**Exposure Guidelines:**

- **ADI:** 0.3 mg/kg/day
- **MCL:** Not Available
- **RfD:** 0.1 mg/kg/day
- **PEL:** Not Available
- **HA:** 0.7 mg/L (lifetime)
- **TLV:** Not Available

**References:**

References for the information in this PIP can be found in Reference List [Number 10](#)

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**DISCLAIMER:** The information in this profile does not in any way replace or supersede the information on the pesticide product labeling or other regulatory requirements. Please refer to the pesticide product labeling.

Appendix 2