

Appendix III. Lower Snake River District Weed E.A. (Draft)

Environmental Assessment for Integrated Weed Management Tiered to the Vegetation Treatment on BLM Lands FEIS EA #ID 090 00-005

I. Need for the Proposal

The LSRD continues to implement the weed control program consistent with the Vegetation Treatment on BLM Lands Record of Decision dated July 23, 1991. The proposed action meets the Purpose and Need set forth in the Vegetation Treatment on BLM Lands Final EIS of May, 1991. The statutes, policy, and planning criteria for that decision are set forth in the Final EIS and Record of Decision (ROD).

The productivity of public lands in the LSRD is in danger of being severely reduced by invasions of new weeds and the uncontrolled spread of established weeds. It is believed that most weeds are initially established on public lands from seeds that are brought in by vehicles, hay, heavy equipment, livestock, wildlife, or contaminated seed. The weeds usually invade and become established in disturbed areas such as roadsides or overgrazed rangeland. Some of the weeds of concern are whitetop, diffuse knapweed, spotted knapweed, yellow starthistle, leafy spurge, Dalmation toadflax, Scotch thistle and musk thistle. The weeds that are currently a problem in the LSRD are listed in Table 1. This table shows the priority for each weed and its growth form. New weeds may be added to the list as they are discovered on public lands within the District.

The LSRD is committed to employing an integrated weed management program using chemical herbicides, biological agents, prescribed burning, seeding to rehabilitate disturbed areas, pulling or digging individual plants, livestock management, public education, and monitoring to achieve effective, safe, economical weed control. Small infestations can most effectively be treated by the immediate application of herbicides and/or mechanical treatment. Biological controls and management strategies are proposed for long term results over extensive areas.

II. Description of Proposed Action

The proposed action in the LSRD is to implement the integrated weed management program on public lands called “Partners Against Weeds; An Action Plan for the Bureau of Land Management” dated January, 1996. This plan works toward a fully operational Integrated Pest Management (IPM) program for noxious and invasive weeds. It is anticipated that the IPM program will take a coordinated effort over the next several years with our partners from other federal agencies, state and county governments, industry and conservation organizations, and private citizens, before this program is fully operational and institutionalized. It is anticipated that this EA will remain in effect for a period of five (5) years. This time period may change

based on changing circumstances, new weeds being added to the noxious weed list, and as new technology becomes available.

The IPM program has three time periods:

PERIOD

ACTIVITIES

Startup

1. Begin in-house educational activities on program objectives and processes.

2. Prioritization of weeds for application efforts.
3. Collection of site and historical information.
4. Design of monitoring process (Appendix A).
5. Implementation of monitoring plan. Field work begins.
6. New techniques are tried where appropriate.
7. Initial evaluation for effectiveness, cost, and acceptance (Appendix B).

Growth

1. Larger_scale application.
2. Training and education of in-house personnel and/or recruitment and guidance from outside vendors.
3. Continue to seek public support.
4. Cost analysis continues.
5. Modifications to initial program, e.g., monitoring system or treatment activities.
6. Apply new research and/or techniques on difficult or unstudied weed problems.

Maturity

1. Routine monitoring and inventory.
2. Fine tuning continues.
3. Ongoing applied research continues.

Because the LSRD is in the growth/maturity period this EA will concentrate on the growth / maturity activities outlined above.

A. Objectives of the IPM Program:

The weeds listed in Table 1 (below) exist in varying degrees throughout the 4.8 million acres of public land within the LSRD. Weeds vary in their distribution and density. Weeds that are known to exist within the boundaries of the district are listed below. Other weeds may be added to this list as they are discovered.

TABLE 1
PRIORITY WEEDS

Priority Number	Common Name	Scientific name	Growth Form
1	Yellow starthistle	<i>Centaurea solstitialis</i>	Annual
2	Leafy spurge	<i>Euphorbia esula</i>	Perennial
3	Purple loosestrife	<i>Lythrum salicaria</i>	Perennial
4	Spotted knapweed	<i>Centaurea maculosa</i>	Perennial
5	Diffuse knapweed	<i>Centaurea diffusa</i>	Biennial or Short-lived Perennial
6	Russian knapweed	<i>Centaurea repens</i>	Perennial
7	Dalmation toadflax	<i>Linaria dalmatica</i>	Short-lived perennial
8	Musk thistle	<i>Carduus nutans</i>	Biennial
9	Scotch thistle	<i>Onopordum acanthium</i>	Biennial
10	Canada thistle	<i>Cirsium arvense</i>	Perennial
11	White top	<i>Cardaria draba</i>	Perennial
12	Poison hemlock	<i>Conium maculatum</i>	Biennial or perennial
13	St.Johnswort	<i>Hypericum perforatum</i>	Perennial
14	Black henbane	<i>Hyoscyamus niger</i>	Annual or Biennial
15	Puncturevine	<i>Tribulus terrestris</i>	Annual
16	Perennial pepperweed	<i>Lepidium latifolium</i>	Perennial
17	Rush skeletonweed	<i>Chondrilla juncea</i>	Perennial
18	Jointed goatgrass	<i>Aegilops cylindrica</i>	Annual
19	Mediterranean sage	<i>Salvia aethiopsis</i>	Biennial
20	Field bindweed	<i>Convolvulus arvensis</i>	Perennial
21	Salt Cedar	<i>Tamarix ramoissima</i>	Decidious shrub

The objective for each weed species is as follows:

1. Yellow Starthistle: This plant is our top priority weed. It is established on public land in the Goodrich area in Adams County. Other counties with scattered patches on land (other than public) are Boise, Gem, and Owyhee. The goal is to control the infestation and eradicate in cooperation with the counties. Washington and Canyon counties have had small patches but they have been eradicated to date. Eradication will be the goal if any additional infestations are discovered. Manual removal of small infestations is preferred on small sites. Flowering plants will be collected and burned.
2. Leafy Spurge: Since the 1930's, leafy spurge has existed in the Weiser River drainage. Leafy spurge is a tough rhizomatous weed and when established in an area eradication is usually not feasible. Prevention, plant competition, physical, biological, and chemical control are methods used to manage leafy spurge. The most effective management of leafy spurge incorporates several or all of these methods (Sheley and Petroff, 1999). An integrated weed management plan (IWMP) for several years can reduce the population to an acceptable level. It is the District's goal to continue this practice through annual treatment and inventory.
Through Cooperative Weed Management Areas (CWMA's), leafy spurge populations are being reduced in some locations. This species is found in Adams, Boise, Elmore, Owyhee, and Washington counties. In small locations, where leafy spurge has not established to a large degree, annual inventory and eradication will be the goal for these infestations. For extensive populations our goal is to reduce and contain the acreages.
3. Purple Loosestrife: This species has steadily expanded into the Snake River Plain in southern Idaho. Purple loosestrife poses a serious threat to native emergent vegetation in shallow marshes. Sites exist along C.J. Strike Reservoir and the Snake River from Bell Rapids to Ontario, OR. It is also increasingly common along irrigation ditches in Ada, Gem, Canyon, and Payette counties. This species has also been found at Foremans Reservoir in Owyhee County.
Eradication may be feasible for small infestations. Chemical, physical, and biological techniques are practices that will aid in controlling this species.
4. Spotted Knapweed: This weed has great potential to spread rapidly on rangelands within the district. Established populations currently exist in Twin Falls, Elmore, and Boise counties. New populations have been discovered in Ada, Boise, Gem, Elmore, Owyhee and Payette counties. The goal is to quickly eradicate new infestations and control the established infestations. Eradication of small sites will be by manual digging, collection, and burning of any plants with mature seedheads. If cooperation from other land owners is obtained, the Twin Falls County infestations may eventually be eradicated. Biological control by itself has not been successful in controlling spotted knapweed. However, biological control used in combination with other control methods such as herbicides is much more effective in controlling this plant (Sheley & Petroff, 1999).
5. Diffuse Knapweed: This weed is well established in south_central Idaho. This species spreads rapidly in poor condition rangelands. The eastern and western edges of the district are experiencing invasion of this species and it will be difficult to limit this species to these locations. Vehicles and road maintenance equipment are the suspected transporters of the seed along major roads. The goal is to control the established

populations and prevent the spread into new areas. Chemicals will be used along roadsides and bio_agents will be used on the rangelands. If new populations are discovered, eradication by mechanical or chemical means will be employed and mature plants with seeds will be collected and burned.

6. Russian Knapweed: This weed appears to be introduced primarily by contaminated hay. There are established populations in Twin Falls, Elmore counties, and on the eastern and western side of Owyhee County. These areas are relatively small in size and the weed does not spread rapidly. The use of herbicides, along with planting competitive plant species to occupy ground once infested with this weed, is the long term management necessary to reduce the presence of this plant.
7. Dalmation Toadflax: This rhizomatous species is extremely difficult to control when a population becomes established. This weed is present in Adams, Boise, Elmore, Gem and Washington counties where the goal is to reduce the acreages over the next few years. Repeated hand pulling can be effective for small infestations. Bio-agents and chemicals will also be used to control this plant. However, the effectiveness of herbicides is highly variable due to the plant's genetic variability. Treated areas will be monitored annually to determine the success of each treatment.
8. Musk Thistle: Twin Falls County has one small population of this weed which appears to have been eradicated on public lands. The goal is to eradicate this weed using chemical and/or mechanical means when found. We will continue to monitor for this weed to ensure that it does not become established in the District.
9. Scotch Thistle: Seeds from this weed spread easily in the wind and through animal movement, resulting in a wide and varied distribution. It becomes well established along disturbed roadsides and in moist areas. It is currently found in all the counties within the LSRD. The goal is to control existing populations along roadsides and on rangelands where there are small scattered populations. Eradication is not feasible but reducing the acreages of this species to an acceptable level, through the use of herbicides, cultural, and mechanical methods, is feasible.
10. Canada Thistle: This plant is common in agricultural land in Idaho. It occurs mainly along roadsides and some riparian areas on public lands. The goal is to chemically control this weed along roadsides to prevent its spread by vehicles and road machinery. Chemical control will be used as needed. Bio-agents and mechanical means are not feasible for control.
11. Whitetop: This plant is well established in Ada, Canyon, Elmore, Owyhee, and Washington counties. This species spreads rapidly in disturbed areas. The goal is to control existing populations (mainly along roadsides) by using chemicals. Currently, there are no bio-agents available for whitetop.
12. Poison Hemlock: This poisonous plant is currently found in most counties within the LSRD. The goal is to eradicate small infestations of this species by hand- pulling, hoeing or spot herbicide application.
13. St.Johnswort: This poisonous plant is well established in Ada, Gem, Adams, Washington, and Elmore counties. The goal is to use chemicals on populations along roadsides and introduce bio agents on other populations.
14. Black Henbane: There are several known locations of this weed in Owyhee and Twin Falls counties, mostly along roadways. The goal is to eradicate these small areas by using

chemicals. To date the counties have been successful in control of this weed. Annual inventories will be conducted to ensure that this weed is not spreading.

15. Puncturevine: This plant is a problem in recreational campgrounds such as Steck Park (Washington County). This plant can be controlled by mechanical and/or chemical means.
16. Perennial Pepperweed: This rhizomatous species is difficult to control. It grows in wetland areas, ditches, roadsides, disturbed areas, and croplands. This plant is established in Ada, Elmore, Owyhee, and Washington counties. The goal is to control existing populations by the use of chemicals. Currently, there are no effective bioagents available for this species.
17. Rush Skeletonweed: Well established populations exist on the public lands that lie north of the Boise River and on the western edge of the Danskin Mountains. The goal for these areas is to introduce bioagents in the rangelands and use chemicals along roadways to control and contain these established populations. Eradication will be the goal for public land south of the interstate (I-84).
18. Jointed Goatgrass: This weedy annual grass is known to exist in Washington, Gem, Payette, and Ada counties. It is spread easily by vehicles and road machinery. It poses a threat to growers of small grains. The goal is to use herbicides and then reseed the sprayed areas to prevent re-infestation of this weed.
19. Mediterranean Sage: This species is known to exist in Payette County. Once established this species can spread into non-disturbed land. Disturbances such as livestock grazing and trampling and off-road vehicle use allow this species to spread. The goal is to use manual methods along with herbicides to control and contain this plant.
20. Field Bindweed: This species is known to exist in most counties within the LSRD. It is a difficult weed to eradicate as it has a widespread, deeply penetrating root system and the seeds can remain viable for up to 50 years. The goal is to contain existing populations within the district.
21. Salt Cedar: This deciduous or evergreen shrub is difficult to control. It grows at ground level but can be controlled or eradicated by using a cut stump/herbicide treatment.

B. Priorities of the Program:

The proposed action will be based on three priorities for weed control:

1. prevention of potential invaders,
2. eradication of new invaders,
3. control of established infestations.

The proposed treatment methods are listed in Tables 2, 3A, 3B, and 4. The sites and areas are shown on the maps in Appendix C. A supplement to this document may be prepared in the future as the IPM program and proposed action expands.

1. **Prevention of Potential Invaders**

The first priority will be the prevention of potential invading species. Increased and continuing emphasis will be directed toward training district personnel and public land users to recognize noxious and invasive weeds and the importance of preventing and reporting new invaders. This will include sharing information with county weed control supervisors, associations, and other interested groups, collecting, posting, and distributing published bulletins, continuing the development of Idaho's Weed Management Areas (WMA's) and supporting the Idaho Department of Agriculture's weed database and mapping program. The University of Idaho and the county weed supervisors will assist in the education process for the priority weeds. The BLM will notify the University of Idaho if new locations of priority weeds are reported and confirmed.

Emphasis will also be directed to implement procedures to minimize or prevent the spread of weeds from known locations. Techniques that have been implemented or are being proposed for implementation include the following:

- a. Clean BLM heavy equipment prior to moving to another area.
- b. Require BLM's contractors to clean equipment prior to moving that equipment onto public land.
- c. Require equipment to be cleaned before use on construction jobs under the BLM's rights_of_way program.
- d. Require a noxious weed seed inspection prior to seeding public lands.
- e. Revegetate disturbed areas as soon as it is practical using weed-free seed. Temporary fencing of revegetated sites may be required to assure establishment of the new seeding.
- f. Use certified weed-free hay, straw, and mulch on public lands, whether for rehabilitation, restoration, or recreational activities.

2. **Eradication of New Invaders**

If prevention is ineffective in controlling the spread of invasive weeds, herbicide and manual control treatments are then being proposed to eradicate new invasive weed sites. Sites needing rehabilitation will be identified and will be reseeded if necessary. As evaluations and IPM techniques are developed, additional methods may be utilized. Personnel will continue to be trained and educated on state-of-the-art weed control management.

3. **Control of Established Infestations**

If eradication is not possible then containing and preventing further spread of established populations of weeds is being proposed. Highest priority will be given to areas of new infestations, along rights-of-ways (roads, trails and canals), riparian areas, or sites adjacent to private land. Although any acceptable control measure may be used on the main infestations, biological control will be emphasized where successful agents are available.

Management treatments and project design features relating to weed control activities are presented in the Vegetation Treatment FEIS. All mitigation measures adopted in the Record of Decision are incorporated in this EA as additional project design features.

TABLE 2 - BOISE DISTRICT
 Estimated Weed Acreages for the LSRD
 (See Appendix C For Site and Map Locations)
 * - probable eradication

Weed Name	Ada	Adms	Boi	Cyn	Elm	Gem	Owy	Pay	TF	Wash	Total
Yellow starthistle	90			2						10	102
Leafy Spurge	40	35		10			15	35		450	585
Purple loosestrife	50			45		40	95	25		50	305
Spotted knapweed	5	35	40	15	40	5	240			35	415
Diffuse knapweed			150		450			1450	1200	15	3,265
Russian knapweed	20	10	3		50	2	60		90	20	255
Dalmation toadflax	2	10	110		10	20	3	5		220	380
Musk thistle								1*			1
Scotch thistle	40	800	20	25		70	40	250	30	180	2500
Canada thistle	35	20	15	80	5	60	10	130	500		855
Whitetop	650	40			450	50	200	30	60	160	1,640
Poison Hemlock	30	10	20	10	20		15			260	365
St. Johnswort										200	200
Black henbane								10			10
Puncture vine						2	3	20		5	30
Perennial pepperweed	30	20	20			30	60			260	420
Rush skeletonweed	15500	1000	5000	4000	1450	6000	2000	200	400	8000	43550
Jointed goatgrass	10				10					25	45
Mediterranean sage								5			5

Total	16372	2010	5270	4053	2360	6204	3213	1865	2326	12710	563383

C. Proposed Treatments

1. Treatment Methods

a. County Agreements

Currently the LSRD has assistance agreements with Adams, Ada, Boise, Canyon, Elmore, Gem, Owyhee, Payette, Twin Falls and Washington counties to conduct weed control on public lands. The proposed procedure is to have those counties which have assistance agreements with the LSRD submit their inventories, monitoring, treatments performed, and evaluations from the previous year and proposed treatment for the following year. Then a work statement (with stipulations) would be submitted to each county for the following year's work based on available funding. Also included in the statement would be a cost estimate for the proposed work. Counties must submit bills with descriptions of the performed work before they are paid.

b. Permittee Weed Control

The BLM and some Counties are proposing to authorize grazing permittees to apply herbicides to weed populations on public lands. In these instances the permittees would have the option to either conduct weed control activities themselves or allow the County to complete the work. If an individual permittee expressed interest in this type of arrangement they would be required to submit a weed control plan to the LSRD. Prior to conducting any weed control activities on public lands the permittee would then be required to meet with staff members from the LSRD to review the weed control plan and discuss appropriate mitigation, required stipulations, and avoidance areas. At a minimum the plan would include the following:

1. a map that displays each targeted control area with weed populations identified by species;
2. identification of the herbicide to be applied and the proposed rate of application;
3. a map that identifies avoidance areas within targeted control areas;
4. documentation that the applicator is certified, by the Idaho Department of Agriculture, to apply herbicides;
5. a list of appropriate stipulations and mitigation required by the BLM authorized officer as a contingency plan approval;

6. and other specific requirements the BLM authorized officer determines to be necessary. The permittee would be required to obtain approval of the plan from the authorized officer prior to conducting any weed control activities on public lands. The permittee could then present the approved plan to the county and obtain herbicides needed to conduct weed control activities on public lands. The permittee would be required to complete a BLM or County weed control form (application record) after each herbicide application and return the form to the appropriate county representative. The County would provide the original form to the BLM authorized officer. The County and/or BLM would conduct field inspections and monitoring as needed.

The BLM will evaluate and monitor this program annually to evaluate the program's effectiveness and consider the need for any changes.

c. Other

The LSRD will continue to do weed control work utilizing force account personnel, seasonal employees, coordination with WMA's and CWMA's, and through private contracting of certified and licensed applicators.

Off highway vehicle (OHV) use for spraying weeds will be allowed with the following stipulations:

OHV use will not be allowed within wilderness study areas (WSA's).

OHV travel would be confined to one trip to and from each weed site to avoid creating new roads and trails and to also limit the potential for spreading weed seeds.

OHV use will not be allowed on erosive soils, steep slopes, or in areas with wet or muddy ground conditions.

The effects of OHV travel, in conjunction with weed spraying, will be monitored to ensure that new roads and/or trails are not becoming established.

Aerial spraying of noxious weeds is authorized by the LSRD. The requirements for aerial spraying were established by the Vegetation Treatment on BLM Lands ROD (Record of Decision) dated July 23, 1991 and supported by the Vegetation Treatment on BLM Lands FEIS (Final Environmental Impact Statement) of May 1991.

All applicators are responsible for complying with any applicable Federal, State, and county laws, codes, and regulations connected with the use of herbicides and biological agents. They must be aware of safety requirements, including personal protective equipment, spray equipment, chemical labels and rates, and environmental concerns. All applicators are also responsible in the event of a hazardous material release on public lands. Refer to Appendix F for the Safety Plan and Appendix G for the Storage and Transportation Plan.

The BLM will provide each county a detailed map depicting the following areas of special concern:

1. Wilderness Study Areas (WSA's)
2. Areas of Critical Environmental Concern (ACEC)
3. Research Natural area (RNA)
4. Areas with sensitive plant species

These areas will be discussed at the annual coordination meetings between BLM and the eleven counties to ensure that these counties understand any restrictions these areas may have in terms of spraying and OHV use. Additional information, such as descriptions of sensitive plants, will also be made available to each county to aid them in identifying and avoiding these special status plants.

TABLE 3A
 PROPOSED COUNTY ANNUAL WEED CONTROL TREATMENT METHODS
 BASED ON TABLE 2

*Chemical	
Ground - Vehicle	4,000-6,000
Ground - Hand	<1,000
**Aircraft	1,000-2,000
Manual	
hand tools	<100
burn/seed	<100
Biological (1)	
insects	<1,000
pathogens	<1,000

(1)Biological treatments could use the pathogens shown in Table 4.

PROPOSED BLM ANNUAL WEED CONTROL TREATMENT METHODS
 BASED ON TABLE 2

<u>Treatment</u>	<u>Estimated Acres</u>
*Chemical	
Ground - Vehicle	5,000-6,000
Ground - Hand	<500
**Aircraft	1,000-2,000
Manual	
hand tools	<100
burn/seed	<1,000
Biological(1)	
insects	1,000-2,000
pathogens	1,000-2,000

*Dyes approved for use with herbicides may be used to obtain uniform coverage. This would help prevent under or over treatment application, especially when several individuals are spraying within the same area, and would help with detection of drift. It would also reduce the risk of treating non-target species.

**Aerial spraying of weeds in limited locations is authorized by the LSRD. The District requirements for all use of aircraft, including aerial spraying, would be enforced.

TABLE 4
PROPOSED TREATMENT
BIOLOGICAL CONTROL

<u>Target weed:</u>	<u>Potential bio-agents:</u>
Diffuse & Spotted knapweed	<ul style="list-style-type: none"> Urophora affinis (gall-forming fly) U. quadrifasciata (gall-forming fly) Chaetorellia acrolophi (peacock fly) Bangasternus fausti (weevil) Larinus minutus (weevil) Terellia virens (fly) Larinus obtusus (weevil) Sphenoptera jugoslavica (buprestid beetle) Cyphocleonus achates (root weevil) Pterolonche inspersa (moth) P. inspersa (root moth) Agapeta zoegana (root moth) Metzneria paucipunctella (moth) Pelochrista medullana (root moth) Subanguina picridis (gall forming nematode)
Dalmation & Yellow toadflax	<ul style="list-style-type: none"> Calophasia lunula (defoliating moth) Brachypterolus pulicarius (ovary-feeding beetle) Gymnaetron antirrhini (capsule-feeding weevil) G. netum (capsule-feeding weevil) Mecinus janthinus (stem-boring weevil) Eteobalea intermediella (root-boring moth)
Poison Hemlock	<ul style="list-style-type: none"> Agonopterex alstromeriana (defoliating moth)
Leafy spurge	<ul style="list-style-type: none"> Aphthona (root and foliage feeding beetles) several species of this genus are effective Oberea erythrocephala (stem and root boring beetle) Spurgia esulae (gall forming midge) Hyles euphorbia (foliage feeding moth)
Purple loosestrife	<ul style="list-style-type: none"> Hylobius transversovittatus (loosestrife root weevil) Galeurucella pusilla (golden loosestrife beetle) G. calmariensis (black margined loosestrife beetle) Nanophyes marmoratus (loosestrife seed weevil) N. brevis (blunt loosestrife seed weevil)
Rush skeletonweed	<ul style="list-style-type: none"> Puccinia chondrillina (rust) Aceria chondrillae (gall mite)

Cystiphora schmidti (gall midge)
Eriophyes chondrillina (gall mite)

Biological treatment would consist of introducing available bioagents and relying on their spread by natural means.

Project-specific, post-treatment evaluations would be completed as specified in both Appendix A and B.

5. Alternatives Considered But Not Analyzed

The alternatives of No Aerial Herbicide Application, No Use of Herbicides, No Use of Prescribed Burning and No Action (continuation of current management) have been analyzed in the Vegetation Treatment on BLM Lands FEIS and considered in the ROD. Further discussion in this EA is unnecessary since site-specific conclusions and impacts would be essentially the same.

6. Interrelationships

The Boise District coordinates and interacts with other federal, state, county and local agencies on a continuing basis concerning weed control activities. This coordination includes BLM's "Partners Against Weeds", the state of Idaho's "Strategic Plan for Managing Noxious Weeds", all CWMA's and WMA's within the LSRD and the Idaho Department of Agriculture's Noxious Weed programs including weed data base and weed mapping program.

III. Affected Environment

The LSRD is located in the southwest portion of the state. A general description of the affected environment may be found in the Final FEIS. Known components which could be affected by the proposal are as follows:

Roadsides and land where soil disturbance and seed dispersal occurs from motor vehicles, road equipment, and livestock comprise the majority of the treatment area.

Areas burned by wild fires comprise somewhat less area to be treated.

Pastures and rangelands, especially where livestock tend to congregate, comprise less area to be treated.

Riparian land, especially near the Weiser and Little Weiser Rivers where leafy spurge spreads easily, and other smaller waterways, comprise the smallest area to be treated.

Forty-six special status plant species are known from the district. Table 5 lists these species along with general habitat information and the Field Office and counties where they are found. None of the plant species are federally listed as threatened or endangered, however slickspot peppergrass (*Lepidium papilliferum*) is a federal candidate for possible listing by the U.S. Fish and Wildlife

Service. The plants can be found in a variety of habitats throughout the district, but many are restricted to unique soil types with a limited distribution (ie. Succor Creek ash) and are therefore quite localized.

IV. Environmental Consequences

The actions described in Section II of this assessment will cause environmental impacts. A discussion of these impacts is presented in Chapter 3 of the Final Environmental Impact Statement (FEIS). The FEIS revealed no impacts of significance upon the following resources: climate, geology, topography, minerals, utilities, communication sites and energy use. It has been determined that there would be no impact on air quality due to the proposed action because no highly volatile chemicals would be used.

No impacts have been identified which exceed those addressed in the FEIS and weed control decision referenced in Section I of this assessment. The following impacts are based upon site specific analysis of the proposed action.

1. **Soil**

The disturbance of soils caused by manual methods should be negligible due to the small size of areas proposed for treatment.

Off highway vehicle (OHV) travel to access weed sites may cause temporary, short term impacts. Because travel to these weed sites would only occur once per year per site overall impacts should be negligible.

Biological control of weeds would have minimal impacts due to the slow action of this process and the limited interaction with the soil.

Removal of solid stands of vegetation, by chemical treatment, may result in short term increases in soil erosion. This would diminish as vegetation becomes re-established on the treated site. It is expected that overall, soil loss from erosion would be insignificant.

2. **Aquatic Resources**

Manual methods would have little or no impact on aquatic resources.

Biological control by insects or pathogens would have little or no impact on aquatic resources as vegetative cover would remain intact as targeted plants would remain standing.

Herbicides applied to land may enter surface or ground water. However, low application rates in these arid and semi/arid areas are not expected to allow herbicides to reach ground water. Avoidance of waterways and adherence to buffer strips adjacent to waterways should also result in no water contamination there. Any herbicide escape into a stream system, due to heavy storm runoff or herbicide drift, would be very small and diluted by the stream flow.

Some herbicides, such as Rodeo (trade name) are registered for use in and around water. This type of herbicide may be used to control weeds that grow in and around wetland or riparian areas. By adhering to label restrictions and precautions, impacts to aquatic resources would be minimal.

The fate of herbicides applied under this environmental assessment will be consistent with the discussion of the FEIS regarding impacts on aquatic resources.

3. **Vegetation**

Manual vegetation treatment would have some weed control success on small areas, but most weeds in larger infested areas would spread as a result of ineffective control efforts. Non-target species would benefit from reduced competition from weeds for water and nutrients.

Impacts of biological treatment by insects and pathogens on vegetation would be slight. Target plants will normally remain standing although they may be weakened or unable to reproduce.

Terrestrial broad-leaf plants will be most affected by the application of herbicides as proposed. Many of these herbicides are selective for most broadleaf plants and both target species and non-target species may be killed where they are applied. Grasses may suffer slight damage but will recover and should increase due to reduced competition. The impacts on vegetation will be consistent with the discussion of the FEIS.

Federal candidate and BLM sensitive plants will be protected by conducting an annual review of the proposed spray areas and adopting the recommendations outlined by the District botanist. There are presently no known threatened or endangered plants within the district.

TABLE 5
 KNOWN FEDERAL CANDIDATE AND
 BLM SENSITIVE PLANTS ON THE BOISE DISTRICT

Latin Name	Common name	Status	Counties
<i>Allium aaseae</i>	Aase's onion	S	Ada, Gem, Boise, Payette, Washington
<i>Astragalus atratus</i> v. <i>inseptus</i>	Mourning milkvetch	S	Elmore
<i>A. cusickii</i> v. <i>packardiae</i>	Packard's milkvetch	S	Payette
<i>A. mulfordiae</i>	Mulford's milkvetch	S	Ada, Owyhee, Washington, Payette
<i>A. purshii</i> v. <i>ophiogenes</i>	Snake River milkvetch	S	Ada, Elmore, Twin Falls, Owyhee
<i>A. sterilis</i>	Barren milkvetch	S	Owyhee
<i>A. yoder_williamsii</i>	Osgood Mtns milkvetch	S	Owyhee
<i>Blepharidachne kingii</i>	Kings desertgrass	S	Owyhee
<i>Camassia cusickii</i>	Cusick's camas	S	Adams, Gem, Washington
<i>Ceanothus prostratus</i>	Mahala-mat ceanothus	S	Adams
<i>Chaenactis cusickii</i>	Cusick's false yarrow	S	Owyhee
<i>Cleomella plocasperma</i>	Flat-seeded cleomella	S	Owyhee
<i>Cymopterus acaulis</i> v. <i>greeleyorum</i>	Greeley's wavewing	S	Owyhee
<i>Dimeresia howellii</i>	Dimeresia	S	Owyhee
<i>Eatonella nivea</i>	White eatonella	S	Owyhee, Elmore, Adams
<i>Downingia bacigalupii</i>	Bacigalupis downingia	S	Owyhee
<i>Epipactis gigantea</i>	Giant helleborine	S	Boise, Elmore, Owyhee, Valley
<i>Eriogonum shockleyi</i> var. <i>shockleyi</i>	Matted cowpie buckwheat	S	Ada, Owyhee, Elmore, Twin Falls
<i>Gilia polycladon</i>	Spreading gilia	S	Owyhee, Elmore
<i>Glyptopleura marginata</i>	White-margined wax plant	S	Owyhee, Twin Falls, Elmore
<i>Hackelia cronquistii</i>	Cronquist's stickweed	S	Payette, Washington
<i>H. ophiobia</i>	Rattlesnake stickseed	S	Owyhee
<i>Haplopappus radiatus</i>	Snake R. goldenweed	S	Washington
<i>Lepidium davisii</i>	Davis peppergrass	S	Ada, Elmore, Owyhee, Twin Falls
<i>L. papilliferum</i>	Slickspot peppergrass	C	Ada, Elmore, Gem, Canyon, Payette, Owyhee
<i>Leptodactylon glabrum</i>	Bruneau R. phlox	S	Owyhee
<i>Lupinus uncialis</i>	Inch-high lupine	S	Owyhee
<i>Machaerocarpus californicus</i>	Fringed waterplantain	S	Owyhee
<i>Mentzelia mollis</i>	Smooth stickleaf	S	Owyhee
<i>Nemacladus rigidus</i>	Rigid threadbush	S	Owyhee
<i>Pediocactus simpsonii</i>	Simpson's hedgehog cactus	S	Owyhee, Twin Falls
<i>Penstemon janishiae</i>	Janish's penstemon	S	Owyhee, Elmore

Peraphyllum ramosissimum	Squaw apple	S	Washington
Peteria thompsoniae	Spine-noded milkvetch	S	Owyhee
Phacelia lutea v. calva	Malheur yellow phacelia	S	Owyhee
P. minutissima	Least phacelia	S	Owyhee
Psathyrotes annua	Turtleback	S	Owyhee
Stanleya confertifolia	Malheur princesplume	S	Owyhee, Washington
Stylocline filaginea	Stylocline	S	Ada, Owyhee, Elmore
Teucrium canadense	American wood sage	S	Ada, Canyon, Washington
Texosporium sancti-jacobi	Woven spore lichen	S	Ada
Trifolium owyheense	Owyhee clover	S	Owyhee

C = Federal candidate species for which the USFWS has substantial information to support the biological appropriateness of listing as endangered or threatened species.

S = Sensitive species on the Idaho BLM Sensitive Plant List.

4. **Livestock, Wild Horses, Wildlife and Fish**

Manual methods are highly selective, thereby avoiding the potential loss of valuable habitats. Based on the small size of proposed treatment areas, impacts are expected to be insignificant.

Impacts of biological treatment by insects and pathogens is expected to be slight as target plants will remain standing although weakened or unable to reproduce.

Domestic livestock, wild horses, and a variety of mammals, birds, reptiles, amphibians and arthropods occur in and around the LSRD. Any impacts of treatment will be consistent with those discussed in the FEIS. Application rates are low enough or applied in a form that would not affect livestock, wildlife, or wild horses. Minute amounts of herbicide could conceivably enter into the local river systems and reservoirs following a heavy storm event soon after a treatment. The highest direct risk is likely to arthropods caught within the spray pattern. Arthropods are an important food source for many game, non-game and special status species.

5. **Snake River Snails / State Sensitive Animals**

There are three endangered snails (Idaho Spring Snail, Snake River Physa, and Utah Valvata Snail), one threatened (Bliss Rapids Snail), and three candidate snails located on the Snake River above river mile 515. One endangered snail (Bruneau Hot Springsnail) is located on the Bruneau River. There are also two state sensitive fish (White Sturgeon and the Shoshone Sculpin) located on the same section of the Snake River, and one amphibian, the spotted frog, located mostly south of the Owyhee mountains in Owyhee County. The snails and fish are located in Elmore, Owyhee, and Twin Falls counties, and could be impacted if spraying occurs near them. The use of herbicides adjacent to water will allow for a minimum 25 foot buffer for vehicle application, a minimum 100 foot buffer for aerial application and a minimum 10 foot for hand application. Herbicides registered for use in wetland and riparian areas would not be used in these areas. Based on this it is expected that impacts would be minimal.

Based on the small size of manual treatment areas impacts are expected to be insignificant.

Impacts of biological treatment by insects and pathogens are expected to be slight as target plants will remain standing, although weakened or unable to reproduce.

6. **Cultural**

Cultural resources are cultural properties or traditional life way values that are identifiable through field inventory, document research, and ethnography. They include definite locations or sites, structures, historic trails, natural features, plants or items that have traditional cultural or religious importance to a specific social or cultural group.

Weed sites are not expected to have any direct impact on the cultural resources because most of the weed sites are in disturbed areas. Spray operators can be briefed about watching for visible artifacts and sites. If significant cultural sites are located and are also infested with weeds the area archaeologist shall be notified to assist in the spraying. The archaeologist can examine the site and determine its significance and make plans to limit the disturbance by using backpack sprayers, pulling weeds manually, or by carefully digging up the roots.

Biological control using insects or pathogens is not likely to affect cultural resources.

7. **Social and Economic**

A description of the social and economic impacts is discussed in the FEIS. Site specific conclusions are essentially the same.

8. **Human Health**

A detailed hazard analysis was conducted for each of the herbicides proposed for use in the FEIS (See Appendix E - Risk Assessment in the FEIS). Further discussion in this EA is unnecessary since site-specific conclusions and impacts would be essentially the same.

9. **Visual Resource Management (VRM)**

The proposed action is consistent with District VRM objectives. Impacts would be positive by allowing regrowth of desirable vegetation by eliminating undesirable species.

Off highway vehicle (OHV) travel to access weed sites may cause temporary, short term impacts. Because travel to these weed sites would only occur once per year per site overall impacts should be negligible.

Impacts from manual and biological control would be negligible due to the small size of the treated areas and the target specific nature of these two methods.

10. **Research Natural Areas (RNA) and Areas of Critical Environmental Concern (ACEC)**

Chemical, mechanical, or biological weed control may be allowed in RNA's and ACEC's where identified resource values would be enhanced or maintained and impacts could be mitigated. Impacts would be positive by allowing regrowth of desirable vegetation by eliminating undesirable species.

G. **Wilderness Study Areas**

Weed control in Wilderness Study areas (WSA's) will be consistent with the BLM's Interim Policy Guidelines for Lands under Wilderness Review. Weeds may be controlled by chemical, manual, or biological means when there is no effective alternative and when control is necessary to maintain the natural ecological balances within a WSA or a portion of the WSA. Impacts to WSA's would be positive by allowing regrowth of desirable vegetation by eliminating undesirable species.

Impacts from manual and biological control would be negligible due to the small size of the treated areas and the target specific nature of these two methods.

V. Mitigation Measures

1. A field survey will be conducted on new proposed treatments to determine if federally threatened or endangered, proposed, candidate, or BLM sensitive plant or animal species would be affected by the project. If present, such species will be protected as recommended in the field survey report.
2. A cultural resource inventory will be conducted on any proposed treatment that requires surface disturbance. Historic properties will be protected through avoidance or mitigation of adverse effects as outlined in the inventory report. Native American medicinal plants and vegetation used for traditional religious ceremonies will be avoided.
3. The BLM will consult with the U.S. Fish and Wildlife Service (FWS) if herbicide use is proposed near habitats for listed species and will conference with the FWS on proposed species. The BLM will seek technical assistance from FWS when candidate species are present.
4. Permittee weed treatment shall be in conformance with a site specific weed control plan that has been approved by the authorized officer.
5. The use of herbicides adjacent to water will require a minimum 25 foot buffer for vehicle application, a minimum 100 foot buffer for aerial application, and a minimum 10 foot buffer for hand application.

VI. Agencies and Individuals Consulted

Marilyn Hemker, U.S. Fish and Wildlife Service
Brian Wilbur, Ada County Weed Control Supervisor
Mike Bottoms, Boise County Weed Control Supervisor
Glen Secrist, Idaho Department of Agriculture

Quinn Nuffer, Gem County Weed Control Supervisor
Mir Seyedbagheri, Elmore County Weed Supervisor
Bruce Siebert, Owyhee County Weed Control Supervisor
Rory Clinton, Payette County Weed Control Supervisor
Bonnie Davis, Washington County Weed Control Supervisor
Roger Rosentreter, ISO Weed Coordinator
Georgia E. Hoglund, Environmental Consultant

APPENDIX A

MONITORING FORM

BUREAU OF LAND MANAGEMENT
PESTICIDE APPLICATION RECORDS FORM
LSRD DISTRICT

1. a. Project Name: _____
b. Legal Location: _____
c. Primary Pest(s) Involved: _____
d. Total Acres: _____ Actual Area Treated: _____
e. County: _____

2. Name of applicator: _____

3. Date(s) of Application: _____

4. Time of Application: _____

5. Type of Equipment Used: _____

6. Pesticide(s) Used:
a. Company or Manufacture's Name: _____
b. Trade Name: _____
c. Type of Formulation: _____
d. Rate of Application Used:
(Active Ingredient Per Acre)

7. Stage of Noxious Plant Development: _____

8. Site Treated: _____

9. Weather Conditions:
a. Wind Velocity: _____
b. Wind Direction: _____
c. Temperature: _____

10. Monitoring Record:

*This record is required by law and must be completed except for monitoring within 24 hours after completion of application of pesticides. This record must be maintained for minimum of 10 years.

APPENDIX B POST-TREATMENT EVALUATION

A post-treatment evaluation will be completed annually for each project area. When conditions warrant, evaluations would be done more frequently to determine the need for additional treatment or other factors requiring closer monitoring. The evaluation will consider the effectiveness of both long term and short term treatments. Long term effectiveness will consider treatments which have been completed in the past five (5) years. Short term treatments will be up to one (1) year.

The following information would be included in the evaluation:

1. Project identification and date (Project name, number, etc.)
2. Project area (acres)
3. Actual area treated (acres, map if appropriate)
4. Description of the actual treatment (if different from the proposed project, describe the differences)
5. Objectives for the project area
6. An evaluation of the effectiveness of the treatment on the target species
(This should include a description of the effectiveness of long term treatment, as well as short term)
7. Any problems encountered in the treatment (include timing, adverse weather, coordination, etc.)
8. Adverse impacts to non_target species (including natural enemies) not anticipated in the FEIS and EA
9. Indication of possible water contamination
10. Recommended future action
11. Cost of the treatment
12. Other information, observations and data

Water quality monitoring would be conducted when the following conditions are present:

1. An accidental spill which could possibly contaminate either a live stream or ground water.
2. Other conditions which would indicate possible water contamination.

APPENDIX E

GLOSSARY

Area of Critical Environmental Concern (ACEC): BLM designation for public lands where special management is required to protect important natural, cultural, or scenic resources.

ANNUAL PLANT: A plant that completes its life cycle within a year.

BIENNIAL PLANT: A plant that normally completes its life cycle in 2 years.

BIOLOGICAL AGENTS: The use of natural enemies (insects, parasites) to attack, retard growth, prevent regrowth, or prevent seed formation of a target plant.

CONTAINMENT: The end result of 0% increase in the total number of infested acres in one project year.

CONTROL: Reduction of a pest problem to a point where it causes no significant economic damage.

COOPERATIVE WEED MANAGEMENT AREA (CWMA): A formal group of interested and concerned parties that combine their expertise, energy, and resources to deal with common weed problems within specific weed management areas.

CULTURAL WEED MANAGEMENT: Noxious weed management practices aimed at enhancing desirable vegetation to minimize weed invasion.

DRIFT: The movement of airborne particles by air motion or wind away from the intended target area.

EMERGENCE: The act of a germinating seedling breaking through the soil surface.

ENDANGERED SPECIES: Plant or animal species that are in danger of extinction through all or a significant part of their range.

ERADICATION (WEED): An ongoing process which does not allow propagation. All seed and plant parts are eliminated. The end product of the process (which may take

several years) is the complete elimination of all live plants, plant parts and seeds of the target weed from an area or region.

ESTABLISHED POPULATION: A population of weeds in such magnitude that eradication is not reasonably feasible.

INHIBIT: To check seed germination or plant growth.

INTEGRATED PEST MANAGEMENT (IPM): A systematic decision making process, the resultant management actions which derive from consideration of pest-host systems, and evaluation of alternatives for managing pest populations at levels consistent with resource management objectives. It deals primarily with a mixture of tools including biological agents, herbicides, and manual treatment along with prevention.

LABEL: All written, printed or graphic matter on or attached to pesticide containers as required by law.

LEACHING: The downward movement through the soil of a substance in solution.

MATERIAL SAFETY DATA SHEET (MSDS): MSDS printed sheets provide important health, safety, and environmental information for specific pesticides. These sheets are targeted for those individuals that handle large quantities of this product in activities other than product use. Information specifically for product use in the ordinary course is contained on the product label.

NEW INVADER: Isolated stands of weeds whose population is outside a specified area or county and are such that all seed production can be reasonably prevented in one propagation year.

NOXIOUS WEED: A plant species defined by law that is highly injurious or destructive and has the greatest potential for economic impact on forage and crop production.

PATHOGEN: A specific causative agent of disease, such as a bacterium or virus.

PERENNIAL PLANT: A plant that lives more than two years.

PESTICIDE: Any substance or mixture of substances intended for controlling insects, rodents, fungi weeds or other plants or animals that are considered pests.

POTENTIAL INVADER: Weeds as yet unrecorded in a particular area.

PREVENTION (WEED): The process of forestalling the contamination of an area by an objectionable plant species. Prevention includes the measure taken to forestall or hinder the introduction and establishment of a specific plant species in areas not currently infested with those weed species. Such areas may be local, regional or statewide in scope.

RATE: The amount of active ingredient or acid equivalent applied per unit area or other treatment unit.

Research Natural Area (RNA): An area where natural processes are allowed to predominate and which is preserved for the primary purposes of research and education.

ROSETTE: A cluster of leaves in crowded circles or spirals arising basally from a crown or apically from an axis with greatly shortened internodes.

SHORT LIVED PERENNIAL: A herbaceous plant which characteristically lives between 5 to 10 years.

SPOT TREATMENT: Applying pesticide to a selected individual area as opposed to broadcast application.

SUPPRESSION: The process of limiting, containing or reducing live plants, plant parts and seed of the target species from an area.

THREATENED SPECIES: Plant or animal species that are not in danger of extinction but are likely to become so within the foreseeable future throughout all or a significant portion of their range.

WEED: A plant that is a nuisance, hazard, or causes injury to humans, animals, or the desired crop.

WEED MANAGEMENT AREA (WMA): An area of common characteristics and specific boundaries which has been designated a logical area for management of noxious weeds.

APPENDIX F

SAFETY PLAN

Application of Herbicides approved on Public Lands

1. Permits
2. Emergencies
3. Use Monitoring
4. First Aid
5. Training
6. Sanitation
7. Handling and Application

1. Permits and Responsibilities for the Work

The certified applicator(s) shall be responsible for obtaining any necessary licenses, certifications and permits, and for complying with any applicable Federal, State, and county laws, codes, and regulations in connection with the use of pesticides as outlined in the Environmental Assessment document.

2. Emergencies

An emergency spill plan is covered under a storage, transportation and contingency plan, in Appendix G. First aid information is covered later in Section 4 of this Safety Plan.

3. Pesticide Use Monitoring

At each site, the certified applicators must:

- a. Ensure that herbicides are applied according to the product label.
- b. Ensure that application times, amounts applied, temperature, wind direction, and any circumstances which influence the actual application are recorded.
- c. Ensure that label required protective equipment is used.
- d. Ensure all full and empty containers are accounted for.
- e. Ensure that all safety and health requirements are complied with.

A copy of the product label and material safety data sheet for herbicides will be provided to and read by each person participating in herbicide application.

4. First Aid

A first-aid kit of sufficient size must be available on each application site.

- a. Skin contact - wash exposed area thoroughly with soap and water. Remove saturated clothes and wash contaminated body areas.
- b. Eye contact - wear splash goggles or face shields during mixing operations and application. If eye contact does occur, immediately flush with water for at least 15 minutes using appropriate eye wash bottle. Transport to a physician.
- c. If swallowed - Refer to the product label to determine whether to induce vomiting or administer an antidote. A universal antidote for ingested pesticides consists of two parts activated charcoal, one part magnesium oxide, and one part tannic acid.

Additional first aid information can be obtained from the Poison Control Center.

Poison Control Center Phone Numbers:

National Poison Control Center, Poison Information Hot Line - (412) 681-6669

Boise Control Center - 1-800-632-8000

5. Training

The certified applicator will instruct each applicator in the safe use of herbicides so as to protect themselves and the environment. Areas to be covered include safe handling, proper application, proper use of personal protective equipment, transportation, storage, and disposal of the containers as shown herein. Techniques of specific first aid procedures pertaining to poison on the skin and eyes, inhaled and swallowed poisons, and chemical burns would be part of this training.

All employees will receive Hazard Communication training (29 CFR 1910.1200) and Hazardous Waste Operations and Emergency Response (29 CFR 1910.120).

6. Sanitation

Drinking water. Separate containers will be used to haul and store drinking water while in the field. Rinse water must be kept separate.

Rinse water and soap. A minimum 5-gallon supply of clean water to be used for washing and eye rinse will be on site at all times. Adequate soap and disposable towels for washing and drying will be provided at each application site.

7. Handling and Application of Herbicides

Personnel handling herbicides will wear proper personal protective equipment (PPE) as recommended by the manufacturer and required by the label. Herbicides shall not be applied nor equipment cleaned, outside of areas designated by the official in charge of the pesticide operation.

The following rules will be followed when working with herbicides:

- a. Read and understand the safety information on the label and the material safety data sheet (MSDS).
 - b. Wear the proper protective equipment and inspect the integrity of all PPE before wearing.
 - c. Keep first aid equipment and at least a 5-gallon supply of clean water readily available, including soap and full eye wash equipment that meets OSHA regulations.
 - d. Don't work alone.
 - e. Haul and mix only the needed amount of herbicides.
 - f. Stand upwind from the spray projects to avoid contaminating yourself.
 - g. Keep the container below eye level when pouring to avoid splashing or spilling any chemicals on the face or into the eyes. Wear goggles or face shields.
 - h. If herbicide is spilled, stop immediately, wash out eyes if necessary, and remove contaminated clothing. Wash the skin thoroughly with soap and water. Depending on extent and severity of contamination, seek immediate medical attention. If it is determined that medical attention is not needed, put on clean protective clothing and equipment and clean the spill.
 - i. Keep measuring cups and other equipment clean and properly stored when not in use.
 - j. Wash hands carefully before, eating, drinking, smoking, or touching your skin.
- A. All loading/unloading and mixing of chemicals shall be done at least 150 feet from open waterways.

APPENDIX G

STORAGE, TRANSPORTATION, AND CONTINGENCY PLANS

Application of Herbicides

1. Temporary Storage Facilities
2. Transportation
3. Emergency Spills Plans
4. Spill Cleanup and Decontamination
5. Disposal Requirements

1. Temporary Storage Facilities

Herbicides will not be stored or left overnight except at storage facilities approved by the official in charge of the operation. Unused herbicides will be returned to the storage facility at the end of each work day. The following precautions will be taken:

- a. Identification and warning signs will be placed on buildings and trucks to advise of the contents of the stored material. MSDS's will be available at the storage site.
- b. Herbicides will be protected from direct sunlight, inclement weather, and physical damage to the containers.
- c. At least 5 gallons of clean water, along with adequate soap and disposable towels, will be available at each site for decontamination of personnel.
- d. An ABC-type fire extinguisher and emergency spill kit will be readily available at the storage facility.

2. Transportation

The certified applicator is responsible for the safe transportation of herbicides. These general safety precautions will be followed to minimize incidents and to mitigate their impacts when they do occur:

- a. Transport from the storage area only the quantity needed for the day's operations, and return any leftover pesticide to the storage area at the end of the day.
- b. Do not leave vehicles that are transporting herbicides unattended unless the pesticide is in a locked area.
- c. Transport herbicides with the labeled "warning" on the container facing outward. When transporting herbicides also ensure that they are totally isolated from drivers, passengers, food, and clothing
- d. Secure containers to prevent tipping, physical damage, or excess jarring during transit.
- e. Make periodic checks en route to ensure that no spillage has occurred.
- f. Cover containers to protect them from direct sunlight while in transit to the worksite and place them in the shade upon arrival. Excessive heat can cause expansion resulting in container rupture or violent overflow when opened.

- g. The specific procedures described in the project safety plan, which are to be used if a spill accident occurs, shall accompany each shipment of herbicides.
- h. Properly filled out and updated shipping papers will accompany the transporter during each shipment.
- i. Do not mix, store or apply this product in galvanized steel or unlined steel containers or spray tanks. Highly flammable hydrogen gas could be generated.

3. Emergency Spill Plans

Prior to beginning operation, the following preparations shall be made:

- a. A list of key personnel or agencies, including telephone numbers, will be compiled and verified for potential emergency notification.
 - 1. Designate a local physician familiar with diagnosis and treatment of herbicide exposure problems.
 - 2. Poison Control Center in Boise - 1-800-632-8000.
 - 3. List local ambulance service.
 - 4. List emergency room location.
- b. Spill kit.

A spill kit with directions for use will be strategically placed where spills are most likely to occur. A label will list the contents of the kit.

The following is a list of necessary items for a storage facility and vehicle spill kit:

Pesticide Spill Kit Contents

Storage Facility Kit (storing over 200 gal)

Instructions

- 1 - 55 gallon open-head drum (may be used to hold other materials)
- 4 pairs neoprene gloves
- 2 pairs unvented goggles
- 2 respirator and cartridges (chemical resistant)
- 2 pair rubber or neoprene boots or overshoes
- 2 pair of coveralls or rain suit
- 1 dust pan
- 1 square point "D" handle shovel

- 1 dozen polyethylene bags with ties
- 1 18-inch push-broom, synthetic fibers
- 1 gallon liquid detergent
- 3 gallon household bleach
- 80 lbs absorbent material
- 1 polyethylene or plastic tarp
- 1 bung wrench, 3/4-inch and 2 1/2-inch
- 1 drum spigot
- 1 large adjustable wrench
- 1 drum pump (manual)
- 30 ft of 1/2-inch polyethylene tubing or 150 ft of garden hose
- blank labels
- ABC-type fire extinguisher

Vehicle Kit (transporting over 50 gal)

Instructions

- 1 pair of rubber or neoprene boots or overshoes
- 2 pair neoprene gloves
- 1 pair unvented goggles
- 1 respirator and cartridges
- 1 pair of coveralls or rain suit
- 1 dust pan
- 1 shop brush
- 10-30 lb absorbent material
- 1 polyethylene or plastic tarp
- 1 pint liquid detergent
- 6 polyethylene bags with ties
- 1 portable eyewash
- blank labels
- ABC-type fire extinguisher
- 100 feet of rope

4. Spill Cleanup and Decontamination

The certified applicator will be responsible for ensuring all cleanup of application operation and spills. After a spill occurs, specific procedures will be followed for cleanup and decontamination of the spill site. In most cases, spill size will dictate the procedures to be followed. OSHA has very specific guidelines for employees who respond to a hazardous material spill and these guidelines will be strictly adhered to. All spills shall be reported to the District's Hazardous Material lead for further guidelines and procedures.

Resulting from a major spill

Immediately determine if any personnel are injured. Each situation may differ, but the major and immediate effort should be to assist injured personnel. Accordingly, the following must be accomplished as readily as possible.

- a. Remove injured personnel from the site to a safe area only if it is safe to do so and you do not endanger yourself.
- b. Remove contaminated clothing from the injured, and the rescuer if necessary, and wash the individuals with detergent and water or clean as specified by the manufacturer.
- c. Immediately seek medical assistance for injured personnel. If necessary, direct a third person to stay with them until a physician takes charge and has been advised of the possible or actual injury or pesticide exposure.

Spill containment

Spilled herbicides must be contained as much as possible on the site where the spill occurs. The spilled materials must be kept from entering storm drains, wells, ditches, or water systems by the following procedures.

- a. Wear appropriate protective apparel.
- b. Prevent further leakage by repositioning the container or by applying a seal to the leak with rags, tape, or other materials at hand.
- c. Separate leaking container(s) from other containers.
- d. Keep unprotected personnel from entering the area.

Decontamination

The small amount of pesticide remaining after the cleanup process on the road surface, or storage area floor, must be decontaminated (see decontaminating solutions). Soil, roadways, tools, and nonporous surfaces should be decontaminated in the following manner:

- a. Soil, heavily contaminated, should be removed to a depth of at least two inches below the contaminated zone and placed in drums for disposal.
- b. Spread the appropriate decontamination material on spills that occur on roadways, floors, and other nonporous surfaces and work this material into the surface using a coarse broom. Allow the decontaminant to sit for two hours. Pick up the decontamination material by spreading fresh absorbent material

around the perimeter of the spill area, sweeping it toward the center, and shoveling it into plastic bags or drums.

- c. Discard or destroy porous material and equipment such as brooms or leather shoes.
- d. All personnel shall remove contaminated clothing and wash the exposed area. Contaminated clothing shall be washed separately from other clothing.

All spills shall be reported to the District's Hazardous Material lead. Proper disposal of any spill/contaminated material will also be coordinated and processed through the District's Hazardous Material lead.

Decontamination Solution

If any questions arise about decontamination solutions, the pesticide manufacturer should be contacted.

Alkali. The decontamination solution recommended is a caustic solution. Mild alkalis are soda ash (sodium carbonate), also called washing soda; baking soda (sodium bicarbonate); household ammonia; and limestone (calcium carbonate). These compounds are available from hardware, grocery, drug, or garden supply stores.

For safety, a preliminary test should be made in which very small amounts of the pesticide and alkali are mixed and observed to make sure the reaction is not too vigorous.

5. Disposal Requirements

Empty pesticide containers are never completely empty and must be handled cautiously.

The following precautions will be taken in disposing of waste herbicide materials and containers:

- a. Decontaminate empty containers by rinsing the containers three times. Containers should be capped and shaken vigorously between rinsings. The rinse water should be reused by pouring it back into the spray tank for application to the project target area.
- b. Punch holes in the empty decontaminated container.
- c. Do not reuse empty containers for other than intended purpose.
- d. Retain empty containers in a secure storage facility until adequate disposal can be arranged.

Disposal of empty containers may occur as follows:

- 1). Containers may be returned to the appropriate dealer/manufacturer for recycling
- 2). The Idaho State Department of Agriculture will collect containers for disposal and/or recycling
- 3). Each pesticide label provides information regarding proper disposal of containers.