Vegetation Treatments Draft Environmental Impact Statement (EIS)
Questions & Answers
October 2009

What are the main objectives of the Draft EIS?

The BLM's overall objective is to broaden the array of tools available to control noxious weeds, invasive plants, and other weeds by allowing for the use of more effective, target specific herbicides. One goal is to promote landscape health by containing and preventing the spread of noxious and invasive vegetation.

What does the Draft EIS analyze?

There are five alternatives in the Draft EIS representing a range in both the number of herbicides available for use, and the areas/treatment objectives that they can be used for.

They range from Alternative 1, which would not permit use of herbicides, to Alternative 5, that would permit the use of the 18 herbicides used by the BLM nationally, and permit them to be used to achieve nearly any management objective except enhancing commodity production such as timber growth or livestock forage.

What is the Proposed Action?

Alternative 4 is the Proposed Action and would make available 12 herbicides west of the Cascades and 16 herbicides east of the Cascades (see **Table 3-1** below for a description of the herbicides):

- To treat noxious weeds and other invasive plants as necessary to meet non-commodity integrated vegetation management objectives.
- To treat any vegetation as needed to control pests and diseases in State-identified control areas, such as Sudden Oak Death in southwest Oregon.
- To treat any vegetation to meet safety and operation objectives in administrative sites, recreation sites, and rights-of-way.
- To treat any vegetation to achieve habitat goals specified in approved recovery plans, conservation strategies, or conservation agreements for Federally-Listed or Bureau-sensitive species.

The Proposed Action (Alternative 4) would prohibit aerial application of herbicides west of the Cascades.

Why does the Proposed Action call for the use of different herbicide use east and west of the Cascades?

The BLM Districts east and west of the Cascades identified different program needs due to differences in vegetation types and weed occurrence, weather patterns, and management objectives.

Why is a broader array of herbicides needed for noxious weeds and invasive plant treatments on BLM lands in Oregon?

Over the 25 years that BLM Oregon has been limited to the use of four herbicides; many new herbicides have been developed. Most of these are generally less toxic, more target-specific, and can be used in lower quantities than the four herbicides currently being used. Also, at least a dozen of the more common noxious weeds and many of the invasive plants in Oregon cannot be effectively controlled with the four

herbicides, or any of the non-herbicide treatment methods, currently available to BLM Oregon.

In an effort to control and limit the spread of noxious weeds, invasive plants, and other weeds, BLM Oregon uses a variety of other methods including manual (e.g. hand-pulling), mechanical (e.g. mowing), biological (e.g. arthropods or goats), and prescribed fire, as well as an emphasis on education, prevention, early detection, and eradication of new invaders.

Used in combination with other management practices, herbicide treatments can slow the spread of noxious weeds and invasive plants, which in turn helps restore ecosystem health and watershed functions.

How extensive is the invasive plant issue on BLM lands in Oregon?

Noxious weeds and other invasive plants are difficult to control. In spite of an aggressive vegetation management program using all available treatment methods, these plants are spreading, habitats are being degraded, and fuel buildup is increasing.

Approximately 1.2 million of the 15.7 million acres of BLM lands in Oregon are currently infested with noxious weeds and they are spreading at an estimated rate of 12 percent per year.

Will the Proposed Action in the Draft EIS stop the spread of invasive species on BLM lands?

The use of the additional herbicides would allow for more effective treatment of noxious and invasive vegetation. Currently, there are 12 listed noxious weed species, such as medusahead rye that cannot be effectively treated using existing manual, mechanical, or herbicide treatment methods -- nor are there effective controls for many invasive species such as cheatgrass, which, like medusahead, is an annual grass. These grasses are overtaking native sagebrush ecosystems, degrading habitat for many Federally-listed plant and wildlife species, and increasing the risk of wildfire.

While it isn't possible under any alternative in this Draft EIS to eliminate noxious and invasive weeds, the proposed action is expected to slow the noxious weed spread rate from its current 12 percent per year to 6 percent per year.

What types of vegetation treatments are currently taking place and how would that change under the Proposed Action in the Draft EIS?

The BLM currently treats approximately 22,000 acres of designated noxious weeds each year -- of those 22,000 acres, approximately 12,000 acres are treated with herbicides and the remaining 10,000 acres are treated mechanically, manually, with biocontrols, and with other nonherbicide methods.

Under the Proposed Action (Alternative 4), the BLM anticipates treating approximately 28,100 acres of invasive plants using non-herbicide methods (mechanical, manual and biocontrol) and 30,300 acres of invasive plants using herbicides. The BLM also anticipates treating 15,100 acres of native plants using herbicides in such areas as rights-of-way, recreation sites and administrative sites and to meet habitat objectives for listed wildlife species.

Does the Draft EIS identify where specific vegetation treatments will take place in Oregon?

No. The Draft EIS is programmatic in nature and will only addresses the environmental effects of an estimated level of herbicide use on BLM-administrated lands state-wide. This EIS will provide the necessary context and analysis of environmental effects that will allow each of the nine BLM Districts in Oregon to prepare National Environmental Policy Act (NEPA) analyses on specific projects and treatments.

What herbicides are being proposed for use in this Draft EIS?

The 18 herbicides being analyzed for use in the Draft EIS can be found in **Table 3-1**.

Why does BLM Oregon only utilize four of the 18 herbicides currently used nationally by BLM?

In 1984, the BLM in Oregon was prohibited from herbicide use by the U.S. District Court in Oregon. In 1987, the BLM released a Final Supplement to the *Northwest Area Noxious Weed Control Program* Environmental Impact Statement (FSEIS) and submitted it to the U.S. District Court in Oregon. In the FSEIS, the BLM proposed resuming the use of the herbicide active ingredients dicamba, glyphosate, picloram and 2,4-D and provided "Worst Case Analyses" for these herbicides. The U.S. District Court found that the FSEIS fulfilled National Environmental Policy Act requirements and partially dissolved the injunction, permitting BLM Oregon to use the four herbicide active ingredients analyzed in the FSEIS. These herbicides can only be used on weeds officially designated on county, state and Federal noxious weed lists.

How is this Draft EIS related to BLM's national Vegetation Treatment Using Herbicides on Bureau of Land Management Lands in 17 Western States Final Programmatic EIS and Record of Decision?

On September 29, 2007, the BLM Washington Office signed the *Vegetation Treatment Using Herbicides on Bureau of Land Management Lands in 17 Western States* Record of Decision. This national decision provides analysis for the use of 18 herbicides to treat vegetation as part of an integrated pest management program for non-commodity uses. In addition, the decision establishes a protocol for assessing human health and ecological risks of additional herbicides that may become available in the future. The national document can be found online at:

http://www.blm.gov/wo/st/en/prog/more/veg_eis.html

The Oregon Vegetation Treatments Draft EIS tiers to the Programmatic EIS and Record of Decision. The Oregon Vegetation Treatments Draft EIS identifies which herbicides will be available for use in Oregon and how those herbicides will be used as part of an integrated vegetation management program on BLM lands in Oregon. The EIS, once finalized, will provide the necessary context and analysis of environmental effects that will then allow each of the nine BLM Districts in Oregon to prepare planning analyses on specific projects and treatments.

Other BLM states are not preparing statewide, programmatic EISs because those states were already using 20 herbicides to accomplish a wide range of management objectives. Because the BLM in Oregon proposes to increase the number of herbicides available from 4 to 16, and to use those herbicides to meet a wider range of management objectives than just the control of listed noxious weeds, BLM Oregon has chosen to consider the environmental effects of such a change in an EIS.

What is the difference between invasive plants, noxious weeds and other weeds?

Invasive plants (or weeds) are non-native aggressive plants with the potential to cause significant damage to native ecosystems and/ or cause significant economic losses.

Noxious weeds are a subset of invasive plants that are county, state, or Federally-listed as injurious to public health, agriculture, recreation, wildlife, or any public or private property.

Vegetation includes noxious weeds, invasive weeds, and introduced and native plants.

Native vegetation includes native and desirable non-native plants.

What is biological control?

This is the use of non-native agents including invertebrate parasites and predators (usually insects, mites, and nematodes), and plant pathogens to reduce populations of invasive plants.

Please See Table 3-1on the Following Page

Table 3-1. Herbicide Information

Herbicide Representative Trade Names[1]	Common Targets	Selective to Plant Types	Pre/post Emergent Point of Application	Types of BLM Lands Where Use is Permitted[2]	Application Rate (lbs/acre)		Available under Alternative[4]				Aerial Spray[5] Allowed	K_{oc}[6]	Solubility[7] (mg/l)	SPISP II Rating[8] (Leaching Potential)		
					Typical	Max[3]	2	3	4	5				PLP[9] Leaching	PSRP[10] Solution Runoff	PARP[11] Adsorbed Particle Runoff
2, 4-D Many, including Amine, Hardball, Unison, Saber, Salvo, Aqua-Kleen, and Platoon	Annual and biennial broadleaf weeds.*Kochia, white top, perennial pepperweed, Russian thistle and knapweed, sagebrush, rabbitbrush.*	broadleaf	Post Foliar	Rng For RAq OGM ROW R&C	1	1.9	√	√	√	√		20-100	33,900	Inter-mediate	Inter-mediate	Low
Bromacil Hyvar	Annual grasses and broadleaf weeds.*Cheatgrass, puncturevine, ragweed, wild oat, dandelion, quackgrass, wild carrot.*	no	Pre and post Soil	OGM ROW R&C	4	12			E	√	avoid	32	700	High	High	Inter-mediate
Chlorsulfuron Telar	*Thistles, wild carrot, giant horsetail, poison hemlock, Russian knapweed, marestail, perennial pepperweed, puncturevine, tansy ragwort, common tansy, common teasel,dalmation toadflax, yellow toadflax, whitetop, dyers woad*	broadleaf	Pre and early post Soil or foliar	Rng OGM ROW R&C	0.047	0.141		E	E	√		40	7,000	High	High	Inter-mediate
Clopyralid Transline, Stinger, Spur	*Thistles, common burdock, knapweeds, yellow starthistle, oxeye daisy, hawkweeds, prickly lettuce, dandelion, cutleaf teasel, kudzu, buffalobur*	broadleaf	Post Foliar	Rng For OGM ROW R&C	0.35	1		√	√	√		2	1,000	High	Inter-mediate	Low
Dicamba Vanquish, Banvel, Diablo, Vision, Clarity	*Knapweeds, kochia, and thistles.*	broadleaf, woody plants	Pre and post Foliar	Rng OGMROW R&C	0.25	2	√	√	√	√	no	2	400,000	High	Inter-mediate	Low
Diflufenzopyr + Dicamba Overdrive, Distinct	*Knapweeds, kochia, and thistles.*	broadleaf	Post Foliar	Rng OGM ROW R&C	0.2625	0.35				√	no					
Diflufenzopyr											no	87	5,850	Low	Inter-mediate	Low
Diquat Reward	*Giant salvinia, hydrilla, and watermilfoils.*	no	Post Aquatic	RAq	1	4				√	no	1,000,000	718,000	Very Low	Low	High
Diuron Direx, Karmex	Annual grasses (including *bluegrass*) and broadleaf weeds.*Lambsquarters, kochia and Russian thistle.*	annual weeds, some perennials	Pre Soil	OGM ROW R&C	6	20			√	√	avoid	480	42	Inter-mediate	High	Inter-mediate
Fluridone Avast!, Sonar	*Hydrilla and watermilfoils*	submersed plants	Post Aquatic	RAq	0.15	1.3		√	√	√		1,000	10	Low	Inter-mediate	Inter-mediate
Glyphosate Many, including Rodeo, Mirage, Roundup Pro, and Honcho	Grasses (including *Italian ryegrass*), sedges, broadleaf weeds, and woody shrubs.	no	Post Soil or foliar	Rng For RAq OGM ROW R&C	2	7	√	√	√	√		24,000	900,000	Very Low	High	High

Herbicide Representative Trade Names[1]	Common Targets	Selective to Plant Types	Pre/post Emergent Point of Application	Types of BLM Lands Where Use is Permitted[2]	Application Rate (lbs/acre)		Available under Alternative[4]				Aerial Spray[5] Allowed	K_{oc}[6]	Solubility[7] (mg/l)	SPISP II Rating[8] (Leaching Potential)		
					Typical	Max[3]	2	3	4	5				PLP[9] Leaching	PSRP[10] Solution Runoff	PARP[11] Adsorbed Particle Runoff
Hexazinone Velpar	Annual and perennial grasses and broadleaf weeds, brush, and trees.	grasses, broadleaf, woody plants	Pre and post Soil or foliar	Rng For OGM ROW R&C	1	8		√	√	√		54	33,000	High	High	Intermediate
Imazapic Plateau, Panoramic	*Cheatgrass, leafy spurge, medusahead, white top, dalmation toadflax and Russian knapweed.*	some broadleaf and grasses	Pre and post Soil	Rng For OGM ROW R&C	0.0313	0.1875		√	√	√		137	2,200	High	High	Intermediate
Imazapyr Arsenal, Stalker, Habitat, Polaris	Annual and perennial broadleaf weeds, brush, trees. *Saltcedar, Russian olive, tanoak*	no	Pre and post Soil or foliar	Rng For RAq OGM ROW R&C	0.45	1.5		√	√	√		100	>11,000	High	High	Intermediate
Metsulfuron methyl Escort, Patriot, PureStand	*Whitetop, perennial pepperweed and other mustards and biennial thistles.*	broadleaf, woody plants	Post Soil or foliar	Rng For OGM ROW R&C	0.03	0.15		√	√	√		35	9,500	High	High	Intermediate
Picloram Triumph, OutPost, Tordon	Perennial and woody species. *Knapweeds, starthistle, thistle, bindweed,leafy spurge, rabbitbrush, rush skeletonweed, and poison oak.*	broadleaf, woody plants	Pre and post Foliar	Rng For OGM ROW R&C	0.4	1	√	√	√	√		16	200,000	High	High	Intermediate
Sulfometuron methyl Oust, Spyder	*Downy brome, annual and perennial mustards, and medusahead.*	no	Pre and post Soil or foliar	For OGM ROW R&C	0.14	0.38		E	E	√	no	78	70	Intermediate	High	Low
Tebuthiuron Spike	*Creosotebush and sagebrush (thinning).*	broadleaf, woody plants	Pre and post Soil	Rng OGM ROW R&C	0.5	4			E	√		80	2,500	High	High	Intermediate
Triclopyr Garlon, Renovate, Element	*Saltcedar, purple loosestrife, Canada thistle, tanoak, Himalayan blackberry*	broadleaf, woody plants	Post Foliar	Rng For RAq OGM ROW R&C	1	10		√	√	√		20 (salt) 780 (ester)	435	High	High	Intermediate

[1]See Appendix 9 (Herbicides) for the full list of herbicide trade names allowed for use on BLM Lands in Oregon, including formulations with 2 or more active ingredients.

[2]Rng = Rangeland For = Forest Land RAq = Riparian or Aquatic
OGM = Oils, Gas, and Mineral Sites ROW = Rights-of-Way R&C = Recreation and Cultural Sites

[3]Shading denotes herbicides that are limited, by PEIS Mitigation Measures, to typical application rates, where feasible.The maximum application rate for these herbicides is shown for informational purposes.

[4]√ indicates herbicides that would be available statewide; E indicates herbicides that would be available only to districts east of the Cascades.

[5]Aerial spray not allowed for any districts west of the Cascades under Alternatives 3 and 4.

[6]K_{oc}: Soil organic carbon sorption coefficient of an active ingredient in mL/g.For a given chemical, the greater the K_{oc} value, the less soluble the chemical is in water and the higher affinity the chemical has for soil organic carbon.For most chemicals, a higher affinity for soil organic carbon (greater K_{oc}) results in less mobility in soil.

[7]Solubility indirectly relates to runoff potential, if solubility number is low runoff potential is high

[8]SPISP II = Soil Pesticide Interaction Screening Procedure version II, which is a NRCS model that calculates leaching potential from basic soil properties (USDA 1994b).

[9]*PLP* - Pesticide Leaching Potential indicates the tendency of a pesticide to move in solution with water and leach below the root zone.A low rating indicates minimal movement and no need for mitigation.PLP is calculated according to a WIN-PST algorithm, and then the resulting rating is adjusted for type of spraying being conducted.

[10]*PSRP* - Pesticide Solution Runoff Potential indicates the tendency of a pesticide to move in surface runoff in the solution phase.A rating as calculated according to a WIN-PST algorithm indicates the potential for pesticide loss in solution runoff.Ratings are adjusted according to type of spraying being conducted.

[11]*PARP* - Pesticide Adsorbed Runoff Potential indicates the tendency of a pesticide to move in surface runoff attached to soil particles.A rating as calculated according to a WIN-PST algorithm indicates potential for pesticide movement adsorbed to sediment.Ratings are adjusted according to type of spraying being conducted.

Data source: USDA 2006b