

APPENDIX G

Deschutes and Ochoco National Forests and Crooked River National Grassland Invasive Plant Species Prevention Practices

January 2006

Table of Contents

INTRODUCTION.....	3
DESIRED FUTURE CONDITION.....	3
GOALS AND OBJECTIVES	3
NEW FOREST PLAN STANDARDS.....	6
DESCHUTES, OCHOCO, CRNG	10
INTEGRATED INVASIVE PLANT PREVENTION PRACTICES.....	10
Education	10
Project Need	11
Prevention – Minimize Transportation of Invasive Plant Seed.....	12
Project Planning, Design, and Special Use Permit Administration	13
Pre-Project Activity, Inventory, and Analysis	16
Project Implementation.....	18
Revegetation/Site Rehabilitation	19
Monitoring	20
CONTRACT AND PERMIT CLAUSES -- EXAMPLES.....	21
Mining Claims	21
Special Uses.....	21
Contracts.....	22

INTRODUCTION

In October 2004, Forests in Region 6 were directed to develop local invasive plant prevention practices. This document fulfills that obligation. The Invasive Plant Prevention Practices were developed using the Guide to Noxious Weed Prevention Practices (July 12, 2001).

The practices are preceded in this document by Forest Plan direction that was established with the Pacific Northwest Region Preventing and Managing Invasive Plants Record of Decision (October 2005). When the R-6 Invasive Plant Species FEIS ROD came out in October 2005, it amended R-6 Forest Plans and contained 23 Standards related to prevention and treatment of invasive plants. Additional direction for the management of invasive plants is contained in Forest Service Manual, Section 2080.

The invasive plant prevention practices are provided for use on the Deschutes and Ochoco National Forests and Crooked River National Grassland to minimize the introduction of invasive plants; minimize conditions that favor the establishment or spread of invasive plants; and to facilitate the integration of invasive plant management practices into resource programs. In order to display a complete list of the ways in which invasive plant establishment and spread can be prevented, required actions are also included.

DESIRED FUTURE CONDITION

In National Forest lands across Region Six, healthy native plant communities remain diverse and resilient, and damaged ecosystems are restored. High quality habitat is provided for native organisms throughout the region. Invasive plants do not jeopardize the ability of the National Forests and National Grassland to provide goods and services communities expect. The need for invasive plant treatment is reduced due to the effectiveness and habitual nature of preventative actions, and the success of restoration efforts.

GOALS AND OBJECTIVES (From the R-6 IPEIS ROD)

Goal 1- Protect ecosystems from the impacts of invasive plants through an integrated approach that emphasizes prevention, early detection, and early treatment. All employees and users of the National Forest recognize that they play an important role in preventing and detecting invasive plants.	
Objective 1.1	Implement appropriate invasive plant prevention practices to help reduce the introduction, establishment and spread of invasive plants associated with management actions and land use activities.
Objective 1.2	Educate the workforce and the public to help identify, report, and prevent invasive plants

Objective 1.3	Detect new infestations of invasive plants promptly by creating and maintaining complete, up-to-date inventories of infested areas, and proactively identifying and inspecting susceptible areas not infested with invasive plants.
Objective 1.4	Use an integrated approach to treating areas infested with invasive plants. Utilize a combination of available tools including manual, cultural, mechanical, herbicides, biological control.
Objective 1.5	Control new invasive plant infestations promptly, suppress or contain expansion of infestations where control is not practical, conduct follow up inspection of treated sites to prevent reestablishment.
Goal 2- Minimize the creation of conditions that favor invasive plant introduction, establishment and spread during land management actions and land use activities. Continually review and adjust land management practices to help reduce the creation of conditions that favor invasive plant communities.	
Objective 2.1	Reduce soil disturbance while achieving project objectives through timber harvest, fuel treatments, and other activities that potentially produce large amounts of bare ground
Objective 2.2	Retain native vegetation consistent with site capability and integrated resource management objectives to suppress invasive plants and prevent their establishment and growth
Objective 2.3	Reduce the introduction, establishment and spread of invasive plants during fire suppression and fire rehabilitation activities by minimizing the conditions that promote invasive plant germination and establishment.
Objective 2.4	Incorporate invasive plant prevention as an important consideration in all recreational land use and access decisions. Use Forest-level Access and Travel Management planning to manage both on-highway and off-highway travel and travel routes to reduce the introduction, establishment and spread of invasive plants.
Objective 2.5	Place greater emphasis on managing previously “unmanaged recreation” (OHVs, dispersed recreation, etc.) to help reduce creation of soil conditions that favor invasive plants, and reduce transport of invasive plant seeds and propagules.
Goal 3- Protect the health of people who work, visit, or live in or near National Forests, while effectively treating invasive plants. Identify, avoid, or mitigate potential human health effects from invasive plants and treatments.	
Objective 3.1	Avoid or minimize public exposure to herbicides, fertilizer, and smoke
Objective 3.2	Reduce reliance on herbicide use over time in Region Six
Goal 4— Implement invasive plant treatment strategies that protect sensitive ecosystem components, and maintain biological diversity and function within ecosystems. Reduce loss or degradation of native habitat from invasive plants while minimizing adverse effects from treatment projects.	
Objective 4.1	Maintain water quality while implementing invasive plant treatments.
Objective 4.2	Protect non-target plants and animals from negative effects of both invasive plants and applied herbicides. Where herbicide treatment of invasive plants is necessary within the riparian zone, select treatment methods and chemicals so that herbicide application is consistent with riparian management direction, contained in Pacfish, Infish, and the Aquatic Conservation Strategies of the Northwest Forest Plan.

Objective 4.3	Protect threatened, endangered, and sensitive species habitat threatened by invasive plants. Design treatment projects to protect threatened, endangered, and sensitive species and maintain species viability.
Goal 5 – Expand collaborative efforts between the Forest Service, our partners, and the public to share learning experiences regarding the prevention and control of invasive plants, and the protection and restoration of native plant communities.	
Objective 5.1	Use an adaptive management approach to invasive plant management that emphasizes monitoring, learning, and adjusting management techniques. Evaluate treatment effectiveness and adjust future treatment actions based on the results of these evaluations.
Objective 5.2	Collaborate with tribal, other federal, state, local and private land managers to increase availability and use of appropriate native plants for all land ownerships.
Objective 5.3	Work effectively with neighbors in all aspects of invasive plant management: share information and resources, support cooperative weed management, and work together to reduce the inappropriate use of invasive plants (landscaping, erosion control, etc.).

NEW FOREST PLAN STANDARDS (from the R-6 IPEIS ROD)

The following standards and an implementation schedule are from the Pacific Northwest Region Invasive Plant Program Record of Decision (October 2005) which amended Forest Plans in the Pacific Northwest Region.

Standard #	Text of Standard	Implementation Schedule
1	Prevention of invasive plant introduction, establishment and spread will be addressed in watershed analysis; roads analysis; fire and fuels management plans, Burned Area Emergency Recovery Plans; emergency wildland fire situation analysis; wildland fire implementation plans; grazing allotment management plans, recreation management plans, vegetation management plans, and other land management assessments.	This standard will apply to all assessments and analysis documents started or underway as of March 1, 2006; this standard does not apply to assessments and analysis documents signed or completed by February 28, 2006.
2	Actions conducted or authorized by written permit by the Forest Service that will operate outside the limits of the road prism (including public works and service contracts), require the cleaning of all heavy equipment (bulldozers, skidders, graders, backhoes, dump trucks, etc.) prior to entering National Forest System Lands. This standard does not apply to initial attack of wildland fires, and other emergency situations where cleaning would delay response time.	This standard will apply to permits and contracts issued after March 1, 2006. Ongoing permits/contracts issued before this date may be amended, but are not required to be amended, to meet this standard. This standard will apply to Forest Service force account operations starting March 1, 2006.
3	Use weed-free straw and mulch for all projects, conducted or authorized by the Forest Service, on National Forest System Lands. If State certified straw and/or mulch is not available, individual Forests should require sources certified to be weed free using the North American Weed Free Forage Program standards (see Appendix O) or a similar certification process.	Forests are already applying this standard on an informal basis; weed-free straw and mulch will be required as available, starting March 1, 2006.
4	Use only pelletized or certified weed free feed on all National Forest System lands . If state certified weed free feed is not available, individual Forests should require feed certified to be weed free using North American Weed Free Forage Program standards or a similar certification process. This standard may need to be phased in as a certification processes are established.	National Forest managers will encourage the use of weed-free feed across the National Forests in the Region. Pelletized feed or certified weed-free feed will be required in all Wilderness areas and Wilderness trailheads starting January 1, 2007. Pelletized or certified weed-free feed will be required on all National Forest System lands when certified feed is available (expected by January 1, 2009). Weed-free (or pelletized) feed requirements will be listed in individual Forest Closure orders.
5	No Standard	N/A

Standard #	Text of Standard	Implementation Schedule
6	Use available administrative mechanisms to incorporate invasive plant prevention practices into rangeland management. Examples of administrative mechanisms include, but are not limited to, revising permits and grazing allotment management plans, providing annual operating instructions, and adaptive management. Plan and implement practices in cooperation with the grazing permit holder.	This standard will apply to grazing permits beginning March 1, 2006.
7	Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.	This standard will apply to rock source management beginning March 1, 2006.
8	Conduct road blading, brushing and ditch cleaning in areas with high concentrations of invasive plants in consultation with District or Forest-level invasive plant specialists, incorporate invasive plant prevention practices as appropriate.	This standard will apply to all road blading, brushing and ditch cleaning projects beginning March 1, 2006.
9	No Standard	N/A
10	No Standard	N/A
11	Prioritize infestations of invasive plants for treatment at the landscape, watershed or larger multiple forest/multiple owner scale.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.
12	Develop a long-term site strategy for restoring/revegetating invasive plant sites prior to treatment.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.
13	Native plant materials are the first choice in revegetation for restoration and rehabilitation where timely natural regeneration of the native plant community is not likely to occur. Non-native, non-invasive plant species may be used in any of the following situations: 1) when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality and to help prevent the establishment of invasive species), 2) as an interim, non-persistent measure designed to aid in the re-establishment of native plants, 3) if native plant materials are not available, or 4) in permanently altered plant communities. Under no circumstances will non-native invasive plant species be used for revegetation.	This standard will apply to restoration and rehabilitation projects beginning March 1, 2006.
14	Use only APHIS and State-approved biological control agents. Agents demonstrated to have direct negative impacts on non-target organisms would not be released.	This standard will apply to biological control projects beginning March 1, 2006.
15	Application of any herbicides to treat invasive plants will be performed or directly supervised by a State or Federally licensed applicator. All treatment projects that involve the use of herbicides will develop and implement herbicide transportation and handling safety plan.	This standard will apply to herbicide treatment projects as of March 1, 2006.

Standard #	Text of Standard	Implementation Schedule
16	<p>Select from herbicide formulations containing one or more of the following 10 active ingredients: chlorsulfuron, clopyralid, glyphosate, imazapic, imazapyr, metsulfuron methyl, picloram, sethoxydim, sulfometuron methyl, and triclopyr. Mixtures of herbicide formulations containing 3 or less of these active ingredients may be applied where the sum of all individual Hazard Quotients for the relevant application scenarios is less than 1.0.¹</p> <p>All herbicide application methods are allowed including wicking, wiping, injection, spot, broadcast and aerial, as permitted by the product label. Chlorsulfuron, metsulfuron methyl, and sulfometuron methyl will not be applied aerially. The use of triclopyr is limited to selective application techniques only (e.g., spot spraying, wiping, basal bark, cut stump, injection).</p> <p>Additional herbicides and herbicide mixtures may be added in the future at either the Forest Plan or project level through appropriate risk analysis and NEPA/ESA procedures.</p>	This standard will be applied to invasive plant projects with NEPA decisions signed after March 1, 2006.
17	No Standard	N/A
18	Use only adjuvants (e.g. surfactants, dyes) and inert ingredients reviewed in Forest Service hazard and risk assessment documents such as SERA, 1997a, 1997b; Bakke, 2003.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.
19	To minimize or eliminate direct or indirect negative effects to non-target plants, terrestrial animals, water quality and aquatic biota (including amphibians) from the application of herbicide, use site-specific soil characteristics, proximity to surface water and local water table depth to determine herbicide formulation, size of buffers needed, if any, and application method and timing. Consider herbicides registered for aquatic use where herbicide is likely to be delivered to surface waters.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.
20	Design invasive plant treatments to minimize or eliminate adverse effects to species and critical habitats proposed and/or listed under the Endangered Species Act. This may involve surveying for listed or proposed plants prior to implementing actions within unsurveyed habitat if the action has a reasonable potential to adversely affect the plant species. Use site-specific project design (e.g. application rate and method, timing, wind speed and direction, nozzle type and size, buffers, etc.) to mitigate the potential for adverse disturbance and/or contaminant exposure.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.
21	Provide a minimum buffer of 300 feet for aerial application of herbicides near developed campgrounds, recreation residences and private land (unless otherwise authorized by adjacent private landowners).	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.

Standard #	Text of Standard	Implementation Schedule
22	Prohibit aerial application of herbicides within legally designated municipal watersheds.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.
23	Prior to implementation of herbicide treatment projects, National Forest system staff will ensure timely public notification. Treatment areas will be posted to inform the public and forest workers of herbicide application dates and herbicides used. If requested, individuals may be notified in advance of spray dates.	This standard will apply to invasive plant treatment projects with NEPA decisions signed after March 1, 2006.

1. ATSDR, 2004. Guidance Manual for the Assessment of Joint Toxic Action of Chemical Mixtures. U.S. Department Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

DESCHUTES, OCHOCO, CRNG

INTEGRATED INVASIVE PLANT PREVENTION PRACTICES

These invasive plant prevention practices are supplemental to the previously listed Regional Prevention Standards, which are now Forest Plan Standards.

Education

Management Objectives:

1. Ensure public and employee knowledge of invasive plants to help reduce both the spread rate of existing invasive plants and the risk of infestation by new invasive plants.
2. Increase education and awareness to aid in the early detection of new invasive plant sites.

#	Invasive Plant Prevention Practices	LRMP Objective
1.1	Educate employees on the Forests regarding the problems associated with and the identification of invasive plants. Add invasive plant awareness to Employee Orientation, Fire Effects and other training. Report infestation to the appropriate District Invasive plant Coordinator.	1.2
1.2	Work to increase public (including contractors and permittees) awareness of invasive plants and their potential negative impact on the environment. Use education programs to increase invasive plant awareness and prevent invasive plant spread	1.2
1.3	Increase the level of educational material regarding invasive plants displayed at trailheads and District offices. Use education programs to increase invasive plant awareness and prevent invasive plant spread by recreationists and other Forest users. Post prevention practices at NFS trailheads, roads, boat launches, and other forest recreation facilities.	1.2
1.4	Continue work with State, local and interested partners to develop additional educational materials that improve the understanding and identification of invasive plants in Central Oregon.	1.2; 5.3
1.5	Discuss invasive plant prevention practices at annual grazing permittee meetings and contractor pre-work sessions.	1.2
1.6	Coordinate invasive plant prevention efforts with other agencies.	1.2, 5.3
1.7	Project level personnel will be trained to recognize invasive plants occurring on or adjacent to their Districts and should be able to recognize potential invaders.	1.2

Project Need

Management Objectives:

1. Weigh the need of the proposed project against the risk of invasive plant infestation.
2. Address invasive plant prevention needs when planning soil disturbance activities.

#	Invasive Plant Prevention Practices	LRMP Objective or Standard Addressed
2.1	In the earliest stages of project consideration, look at the risks of invasive plant infestation and the long-term consequences of dealing with invasive plants. Determine which prevention practice / mitigation measure would apply and be effective to reduce the risk of invasive plant introduction or spread.	2.4, Standard #1
2.2	Evaluate the need for any ground disturbing activity and ways to minimize the possible effects of implementation, e.g. winter logging, minimizing openings.	2.1, 2.2
2.3	Be realistic during project size-up. Consider the cost and the chance of success of the invasive plant prevention practices.	
2.4	Invasive plant risk assessment and management will be considered in all NEPA planning activities where soil disturbance or invasive plant introduction or spread could result from that activity. Prevention will be emphasized as the preferred strategy for invasive plant management.	1.1, 1.2, 2.3, 2.4, 2.5 FSM 2080.03
2.5	NEPA analysis will consider the costs associated with preventing the occurrence or spread of invasive plants.	

Prevention – Minimize Transportation of Invasive Plant Seed

Management Objective: Reduce the spread of existing invasive plants across the Forests and Grassland and the risk of introducing new invasive species to project sites and other areas of the Forests/Grassland.

#	Invasive Plant Prevention Practices	LRMP Objective or Standard addressed
3.1	When possible, keep active road construction sites closed to vehicles not involved with construction.	2.1
3.2	Treat invasive plants at all Forest Service administrative sites including Ranger Stations, compounds, staging areas, trailheads, boat launches, campgrounds, parking lots, airstrips, interpretive and historic sites, and roads leading to trailheads.	1.4, 1.5
3.3	Encourage motorized trail users to inspect and clean their vehicles prior to using NFS lands. Post message at trailheads and get information to Motorized Clubs.	2.5
3.4	Require all Forest Service employees to inspect, remove, and properly dispose of invasive plant seed and plant parts found on their clothing and personal equipment prior to leaving a project site.	1.1, 1.2,
3.5	Consider using transitional pastures when moving livestock from invasive plant infested areas onto NFS lands, where livestock have been identified as a vector in transport of invasive plant seeds. (Transitional pastures are designated fenced areas that can be logistically and economically maintained in an invasive plant-free condition).	R-6 Standard #6
3.6	Consider the exclusion of livestock, wildlife, and vehicles from high priority invasive plant sites where animals or vehicles are likely to cause a spread of the invasive plant off site.	1.1, 2.4, 2.5
3.7	The use of invasive plant-infested areas for fire camps, fire camp equipment, and crew bases should be avoided. Whenever possible, establish fire camps, vehicle and crew staging areas, helibases, helispots, and airstrips in areas inspected and verified as invasive plant-free. Where unavoidable, measures should be taken to prevent invasive plant spread. .	2.3, R-6 Standard #1
3.8	Work with other jurisdictions to identify and limit boat trailer introduction of aquatic invasive plant species to small lakes within the forest boundaries.	2.4

Project Planning, Design, and Special Use Permit Administration

Management Objectives:

1. Integrate invasive plant management practices into all resource programs and project planning.
2. Ensure that the risks of invasive plant introduction and/or spread, and the mitigation required to minimize that risk are properly considered before ground disturbing activities begin.

#	Invasive Plant Prevention Practices	LRMP Objective or Standard addressed
4.1	Invasive plant risk assessments will be completed, and invasive plant management will be considered in all NEPA planning activities where land disturbance or invasive plant introduction or spread could result from that activity.	1.1, FSM 2080.03
4.2	When conducting NEPA analysis, consider the costs associated with preventing the introduction or spread of invasive plants.	
4.3	For projects with the potential to introduce and spread invasive plants, involve the District invasive plant coordinator in the planning and implementation process.	1.1, 2.1, 2.4,
4.4	Project level personnel should be trained to recognize invasive plant species occurring on or adjacent to their Districts.	1.2
4.5	Project or contract maps should show known invasive plant infestations as a means to aiding avoidance or monitoring.	1.1, 1.2, 1.3, R6 Standard #1, 8
4.6	Consider Logging systems design that would provide for minimal land disturbance and avoid understory reductions in or adjacent to invasive plant infestations.	2.1, 2.2
4.7	Where inventories indicate an infestation, the project should be designed, in coordination with the District invasive plant specialist, to plan for the long-term management of the infestation and to prevent the spread of the infestation off the site.	1.1, 1.4,
4.8	Project should be designed to consider all resource values and tradeoffs, including the opportunity to restrict operators from working near high risk invasive plant sites during the time when invasive plants are capable of being spread by the operation, unless proper mitigation measures are used.	R6 Standard #8

4.9	Incorporate timber sale provisions C(T)6.6# (weed free seed) and B(T)6.35 (Equipment Cleaning) in all timber sale contracts. C(T)5.12# (Use of Roads by Purchaser), B(T)5.3 (Road Maintenance) and C(T)6.315# (Sale Operation Schedule) will be used as necessary to keep contract vehicles out of high-risk infestations during peak invasive plant seed dispersal periods. These types of requirements will also be incorporated in Federal Acquisition Regulation (FAR) contracts in Section H – Special Contract Requirements as deemed necessary (see page 22).	1.1, 1.2, 2.3
4.10	Revegetate disturbed land as soon as practical following ground-disturbing activities. Consider regeneration and other resource objective needs in planning for species to be seeded, timing, rates, etc.	1.1, 2.1
4.11	Favor the use of native species in preference to introduced species for re-vegetation seeding when the native species can accomplish the site objectives within a reasonable time frame, costs are not excessive, and seed is available.	1.1, 1.4
4.12	All seed purchased or otherwise designated or accepted for use on Forest System Lands will require testing for “All-States Noxious Weeds” according to AOSA (Association of Official Seed Analysts) standards and will be certified in writing by a Registered Seed Technologist or Seed Analyst as meeting the requirements of the Federal Seed Act and State Seed Law regarding the testing, labeling, sale and transport of prohibited and restricted noxious weeds. Only seed that has passed the testing for “All-States Noxious Weeds,” will be accepted and used on NFS lands. This measure will be incorporated into all new contracts, purchases, or agreements, as appropriate, prior to awarding or issuing such documents. It will also be incorporated by modification into all existing contracts or agreements where seed purchase or use is required and has not yet been completed.	1.1, 2.3
4.13	Consider the exclusion of livestock, wildlife, and vehicles (on and off-road) and other human activities from high priority invasive plant sites where such are likely to spread the infestation. Revegetate such sites as needed.	1.1, 1.5, 2.4, 2.5,
4.14	Where off-road vehicle (ORV) use is restricted to a specific area, that area will be closely monitored for invasive plants. Planning for the ORV area will consider prevention as a high priority.	2.4, 2.5
4.15	Road management objectives will consider allowing or encouraging desirable herbaceous vegetative growth on shoulders, cuts, and fills.	2.2, 2.4

4.16	Road maintenance planning will address practices to prevent the introduction and spread of invasive plants.	1.1, 2.4
4.17	Road closures will be coordinated with the District invasive plant specialist to ensure that invasive plant prevention is considered. If closed roads are to be seeded, certified weed free seed would be used.	2.4
4.18	Develop invasive plant management plans with grazing permittees for each allotment, include: location of and ground disturbance associated with salt licks, watering sites, yarding/loafing areas, corrals and other heavy use areas. Monitor these sites for invasive plants and treat them as needed. Consider invasive plant seed transportation, maintaining healthy vegetation to compete with invasive plant species, invasive plant control methods, revegetation, reporting and education.	1.1, 1.2, 5.1, 5.3, R6 Standard #6
4.19	Annual operating plans (AOPs) should provide information to grazing permittees concerning invasive plant locations and management activities.	1.1, 1.2, 5.1, 5.3, Standard #6
4.20	In Allotment Management Plans (AMPs) and AOPs, to the extent possible, consider the use of livestock as a tool in preventing palatable invasive plants from setting seed.	Standard 6
4.21	To reduce the risk of invasive plant introduction and spread following implementation of prescribed burning, pastures should be evaluated to determine if rest, deferment or other adjustments to livestock grazing use should be used.	1.1, 5.1, 5.3, Standard #6
4.22	Review mineral operating plans to ensure measures are implemented to prevent the introduction and spread of invasive plants. Use material only from invasive plant-free sources. Ensure that disturbed sites are re-vegetated as soon after disturbance as possible.	1.1, 1.2 R-6 Standards #1, 7
4.23	Consider invasive plant risk and spread factors in travel plan (road closure) decisions.	2.4 R-6 Standard # 1
4.24	Consider road closures in areas that are invasive plant free and/or at unusually high risk to invasive plant invasion.	1.3, 2.4
4.25	Incorporate invasive plant prevention considerations into road layout and design. Minimize the removal of trees and other roadside vegetation during road construction, reconstruction, and maintenance, particularly on southerly aspects. Design roads that are self-maintaining, e.g. outslope roads, rolling dips, take advantage of natural features. Design roads for revegetation success by saving and applying topsoil, laying back slopes, etc.	2.1, 2.4

4.26	During trail planning and alternative development, evaluate invasive plant risk factors (presence of invasive plants, habitat type, aspect, shading, etc.) when determining trail location and design.	2.4
4.27	Include invasive plant prevention and control measures in all special use permits that involve ground disturbance.	1.1, 1.5 R-6 Standard #2
4.28	When administering Forest Roads and Trails Act and private road easements, require appropriate invasive plant prevention measures.	2.4
4.29	Plan for collection of KV or other funds to revegetate soil disturbance or treat invasive plants as needed after timber harvest and regeneration activities.	1.1, 1.4, 1.5, 2.1
4.30	Plan and apply for flood and/or fire rehabilitation funding to treat invasive plant infestations not treated effectively the first growing season after the disturbance event.	1.5
4.31	When possible, coordinate the timing of road maintenance activities and invasive plant control activities. Delay blading roads within two weeks of herbicide application. Delay spraying after blading until vegetative regrowth has occurred.	1.1, 1.2, 1.5 R-6 Standard # 8

Pre-Project Activity, Inventory, and Analysis

Management Objective: Minimize the spread of existing invasive plants into new project areas.

#	Invasive Plant Prevention Practices	LRMP Objective or Standard Addressed
5.1	Pre-project inventories should be completed and used during the project planning process. Develop site-specific plans for treatment of existing invasive plant populations. Maintain an invasive plant inventory and monitoring system.	1.3, 2.4, Standard 1, R6 Monitoring Framework
5.1a	Establish Invasive Plant Prevention Areas (high value, invasive plant-free areas that are a priority to keep clean). Prioritize Invasive Plant Prevention Areas for Early-Detection/Rapid Response strategy.	
5.2	Whenever budgets allow, Botanical surveys, range analyses, and other resource inventories should be expanded to note all invasive plant infestations by species, size of infestation, and location.	1.3
5.3	Before construction equipment moves into a project	Goal 2

	area, treat seed-bearing invasive plants along existing Forest Service access roads leading to the project area. Pretreat existing weed infestations prior to creating new seed beds.	
5.4	Treat invasive plants in road obliteration, closure, and reclamation projects before roads are made undrivable. Monitor and retreat as necessary.	Goal 2
5.5	Treat pre-existing and proposed landings, skid trails and helibases that are invasive plant infested before logging.	Goal 2, Objective 2.3
5.6	Where practical, treat high risk areas for invasive plant infestations (e.g. roads, disturbed ground) before burning. Monitor and retreat after burning if necessary.	Goal 2

Project Implementation

Management Objectives:

1. Minimize ground disturbance and the exposure of mineral soil during project activities, thereby reducing the potential for invasive plants to become established on new sites and the need to conduct revegetation activities.

#	Invasive Plant Prevention Practices	LRMP Objective or Standard Addressed
6.1	Minimize soil disturbance and conserve existing topsoil (A and B soil horizons) for replacement whenever possible in situations where ground disturbing activities are unavoidable.	2.1
6.2	Reduce disturbance when doing road maintenance. Limit the amount of ditch pulling only to the amount necessary to assure proper drainage. Limit blading to running surfaces and the minimum necessary on road shoulders.	2.1
6.3	Maintain desirable roadside vegetation. If desirable vegetation is removed during blading or other ground disturbing activities revegetate the area.	2.2
6.4	Consider rock armor in areas that are constantly disturbed (e.g. cattle watering sites, pump chances) at road/stream crossings.	Goal 2
6.5	In the overall context of meeting multiple resource objectives for a treatment area, Consider developing prescriptions and selecting logging and burning methods that minimize soil disturbance and that minimize weed establishment or spread.	1.1, 2.1
6.6	Minimize skid trails and the number and size of landings.	2.1
6.7	Minimize fire line and associated soil disturbance during prescribed burning. Utilize natural barriers and existing roads and skid trails for control lines where possible.	2.1
6.8	Where shoulders or drainage ditches are covered by desirable herbaceous cover, consider leaving it in place rather than blading it off if such a practice can be done without causing excessive damage to the road surface or significant public safety hazards.	2.2

Revegetation/Site Rehabilitation

Management Objective: Re-establish desirable vegetation on exposed mineral soil due to project activity and unplanned events such as fire, flood, or other disturbances to minimize the introduction and/or spread of invasive plants.

#	Invasive Plant Prevention Practices	LRMP Objective or Standard Addressed
7.1	Revegetate disturbed land as soon as possible following disturbance. Consider revegetation (reseeding) unless it can be documented that natural regeneration can accomplish within a reasonable time frame the same prevention objectives as seeding.	Goal 2
7.2	Favor the use of native species in preference to introduced species when the native species can accomplish the site objectives in a reasonable time-frame, costs are not excessive, and seed is available.	R-6 Standard #13
7.3	All seed purchased or otherwise designated or accepted for use on Forest System lands will be required to be tested for invasive plants according to the Association of Official Seed Analysts standards and will be certified in writing by a Registered Seed Technologist or Seed Analyst as meeting the requirements of the Federal Seed Act and the State Seed law regarding the testing, labeling, sale and transport of prohibited and restricted invasive plants.	Goals 1 & 2
7.4	Measure 7.3 will be incorporated into all new contracts, purchases, and agreements as appropriate, prior to awarding or issuing such documents.	1.1
7.5	Decommissioned roads should be seeded with certified weed-free seed to minimize potential invasion by invasive plants.	R-6 Standard #13
7.6	Where shoulders or ditches are covered by desirable vegetation, consider leaving it in place rather than blading it off if such a practice can be done without causing excessive damage to the road surface or public safety hazards.	2.2
7.7	If fertilizer is determined to be beneficial, based on soil analysis and cost effectiveness, apply fertilizer one year after germination and establishment of grass has occurred. All contracts must include specific language for revegetation prescriptions, including the timing of application of fertilizer, if applied.	R-6 Standard #12
7.8	Minimize and/or exclude grazing on restoration areas if not compatible with achieving revegetation efforts.	1.1, Standard #6

Monitoring

Management Objective: Conduct project follow-up and review to determine success of invasive plant treatments and revegetation efforts and detect new invasive plant sites requiring treatment and make corrections as necessary. Monitoring is a part of every project and as such, needs to be covered in NEPA discussions, and planned for as part of implementation. Conduct implementation compliance monitoring consistent with the 2005 ROD requirements – Appendix M of the FEIS.

#	Invasive Plant Prevention Practices R6 FEIS Standard	LRMP Objective or Standard Addressed
8.1	Determine if standards for use of herbicides are being adhered to, including mitigation measures, reducing reliance on herbicide, and record keeping.	3.1, 4.1, 4.2, 4.3
8.2	Determine if designated sites are being treated as proposed.	Goal 2
8.3	Determine whether prescribed health and safety measures are being followed, and if chemical labels are being followed.	3.1
8.4	Determine whether the trend of invasive plant infestations are increasing or decreasing. Accomplish this by revisiting treated sites annually for five years, or until project objectives are met, conducting a comparison of yearly records, and establishing photo monitoring stations at selected sites.	3.2, 5.1
8.5	Determine whether the prescribed treatments are having the desired effect and whether site objectives or treatment methods need to be changed. Accomplish this by determining if specific site objectives are still valid, deciding whether prescribed treatments are achieving site objectives, and whether prescribed mitigation measures and safety measures are working.	5.1
8.6	Conduct post-project monitoring for invasive plants for all activities that have the potential to introduce or spread invasive plants on Forest Service Lands, including but not limited to: prescribed burning, timber harvest, road maintenance, and stream restoration projects.	1.3, 5.1
8.7	Conduct monitoring after a wildfire event to determine whether the fire caused existing infestation to spread, whether the fire established favorable sites for new infestations, and if suppression activities caused new invasive plant introduction.	1.3, 2.3, 5.1
8.8	Monitor areas of concentrated livestock use for invasive plant establishment. Treat new infestations.	1.3, 1.4

8.9	Monitor rock pits and quarries to ensure no new invasive plant seeds are transported to the use site.	1.3 R-6 Standard #7
8.10	Retain performance bonds from mining operations until revegetation objectives are achieved.	Goal 2

CONTRACT AND PERMIT CLAUSES -- EXAMPLES

Mining Claims

CLEANING OF EQUIPMENT: Unless otherwise agreed, to prevent the introduction of seeds and noxious weeds onto National Forest System lands, the Claimant shall ensure all equipment moved onto National Forest System land is free of soil, seeds, vegetative matter, or other debris that could contain, or hold, seeds. The Claimant shall employ whatever cleaning methods necessary to ensure compliance with the terms of this provision. The Claimant shall notify the responsible Forest Service Officer prior to moving each piece of equipment onto National Forest System land, unless otherwise agreed in writing. Notification shall include identification of the location of the equipments most recent operation. Upon request by the Forest Service, arrangements shall be made for Forest Service inspection of each piece of equipment prior to entry upon National Forest System lands.

The Claimant shall certify compliance with the terms of this provision, in writing, prior to each entry of equipment onto National Forest System lands. For the purpose of this provision, “equipment” includes all construction and/or maintenance machinery, excluding pickup trucks, cars, and other passenger vehicles, used in the daily transport of personnel.

Special Uses

Non-Native, Invasive Plant Prevention and Control

(Use this clause in all authorizations involving ground disturbance, which could result in the introduction or spread of non-native, invasive plants. This clause may also be used where cooperative agreements for non-native, invasive plant control are in place with state and local governments).

The holder/grantee shall be responsible for the prevention and control of non-native, invasive plants of concern on the area covered by this authorization and shall provide prevention and control measures as directed by the Forest Service. Non-native, invasive

plants of concern are defined as those species recognized, as such, by Forest Service and/or State authorities in the area, where the authorized use is located.

The holder/grantee shall also be responsible for prevention and control of non-native, invasive plant infestations, which are determined by the Forest Service to have originated from the authorized area, including on National Forest System lands, which are not within the authorized area.

When determined to be necessary by the authorized officer, the holder/grantee shall develop a site-specific plan for non-native, invasive plant prevention and control. Such plan shall be subject to Forest Service approval. Upon Forest Service approval, the non-native, invasive plant, prevention and control plan shall become a part of this authorization, and its provisions shall be enforceable under the terms of this authorization.

Equipment Cleaning to Prevent the Spread of Non-native, Invasive Plants

(Use this clause in authorizations involving ground disturbance where equipment cleaning is essential to prevent the spread of non-native, invasive species).

To prevent the introduction of seeds and non-native, invasive plants onto National Forest System lands, the holder/grantee shall ensure all equipment moved onto National Forest System land is free of soil, seeds, vegetative matter, or other debris that could contain, or hold, seeds. The holder/grantee shall employ whatever cleaning methods are necessary to ensure compliance with the terms of this provision. The holder/grantee shall notify the responsible Forest Service Officer prior to moving each piece of equipment onto National Forest System land, unless otherwise agreed in writing. Notification shall include identification of the location of the equipment's most recent operation. Upon request by the Forest Service, arrangements shall be made for Forest Service inspection of each piece of equipment prior to entry upon National Forest System lands.

The holder/grantee shall certify compliance with the terms of this provision, in writing, prior to each entry of equipment onto National Forest System lands. For the purpose of this provision, "equipment" includes all construction and/or maintenance machinery, excluding pickup trucks, cars, and other passenger vehicles, used in the daily transport of personnel.

Public Works Contracts

H.7 NOXIOUS WEED CONTROL

- (a) In order to prevent the potential spread of noxious weeds into the Ochoco or Deschutes National Forest, the Contractor shall be required to furnish the Forest Service with proof of weed-free equipment.

- (b) Noxious weeds are defined as any exotic plant species established or that may be introduced in the State, which may render the land unfit for agriculture, forestry, livestock, wildlife, or other beneficial uses and which is designated by the Oregon Department of Agriculture or the Deschutes County Weed Board or by other appropriate agencies having jurisdiction.
- (c) All equipment and vehicles to be used at the job site shall be cleaned and certified free of noxious weeds and their seeds prior to entrance onto the National Forest. The restriction shall include equipment and vehicles intended for off-road use as well as on road use, whether they are owned, leased, or borrowed by the contractor or subcontractor.
- (d) Cleaning shall consist of the removal of all dirt, grease, debris, and materials that may harbor noxious weeds and their seeds. This may require the use of a pressure hose. Cleaning shall occur off Federal lands.
- (e) Equipment, materials and vehicles shall be visually inspected by a designated Forest Service Officer, and certified in writing to be reasonably clean and weed free. Inspections will take place at a location designated by the Forest Officer in advance of equipment and material arrival. Equipment and vehicles are expected to proceed directly to the job site following the inspection. Materials to be used on the project will be delivered to the job site following the inspection and approval.
- (f) Certification shall remain valid for each identified piece of equipment or vehicle only for the duration of the specified project and only as long as the vehicle or equipment remains at the job site. Equipment and vehicles (excepting passenger vehicles - this includes pickups and vans) that leave the job site will need to be re-certified as weed free before they are allowed to return to the job site or re-enter the National Forest.