APPENDIX Z: Response to Comments

The objective of this section is to display the public comments received by the USDA Forest Service regarding the three alternatives presented in the Draft EIS for the Site-Specific Invasive Plant Treatments, and to provide responses to these comments. The public comments were used to update and finalize the analysis in the Final EIS, and to help the Responsible Official select an alternative.

Z.1. Comment Period

The Draft EIS was released and distributed to the public on May 22, 2006. The Notice of Availability appeared in the Federal Register on May 26, 2006, initiating the formal 45-day comment period, which ended on July 13, 2006. Approximately 22 hardcopies of the documents, 191 CDs, and 977 summaries were either mailed or delivered to individuals, organizations, interested Tribes, and government agencies. All recreational residence permitees, approximately 550 people, received a summary or CD announcing the project. In addition, the document was made available on the Mt. Hood National Forest website (http://www.fs.fed.us/r6/mthood/projects/) and the project website (http://www.fs.fed.us/r6/invasiveplant-eis/site-specific/MTH/). Hard copies of the document were made available for public viewing at 6 USDA Forest Service offices.

Z.2. Responding to Comments Process

During the pubic comment period 25 responses were received (See Table Z-1). Consistent with the National Environmental Policy Act (NEPA), 40 CFR 1503.4(b), this volume addresses substantive comments on the DEIS. Substantive comments include those which challenge the information in the DEIS as being inaccurate or inadequate, or which offer specific information that may have a bearing on the decision. Non-substantive comments are those that express opinions without any accompanying factual basis or rationale to support the opinion; these comments are maintained in the project file in Mt. Hood National Forest Headquarters, Sandy, Oregon.

A process for responding to comments on a DEIS has been outlined in the USDA Forest Service Handbook (FSH) which states that the agency preparing the EIS must “review, analyze, and respond to substantive comments on the draft EIS” (FSH 24.1). Possible responses to substantive comments include:

1. Modify alternatives including the Proposed Action;
2. Develop and evaluate alternatives not previously given serious consideration by the agency;
3. Supplement, improve, or modify its analyses;
4. Make factual corrections; and,
5. Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

All comments were assigned a unique identifying code and logged in. Each substantive comment was then assigned to a subject matter expert for a detailed response. All comments and response are part of the administrative record for this EIS, and have been considered during the decision-making process.

Table Z-1. List of Respondents to the DEIS.

Letter Number	Agency, Organization, Business, or Individual	Letter Number	Agency, Organization, Business, or Individual
1	LeRoy W. Layton, Individual	14	Larry Grant, Individual
2	B. Sachau, Individual	15	Jean Anderson, Individual
3	Kim Antieau, Individual	16	Carl Ray Clark, Individual
4	Linda Short, Individual	17	Jurgen Hess, Columbia Gorge Institute
5	Ron Garcia, Individual	18	Jordan Kim, Hood River Soil & Water Conservation District
6	B Strasburger, Individual	19	David Marshall, Individual
7	Emery Ingham, Individual	20	Don Mench & Christy Slovacek, Individuals
8	Jack Burkhalter, Individual	21	Preston Sleeger, U.S. Department of the Interior, Office of Environmental Policy & Compliance
9	Steven M. and Karen R. Schoenfeld, Individuals	22	Gloria Wiemann, Individual
10	Vern Holm, Northwest Weed Management Partnership	23	Joanna Wagner, Northwest Environmental Defense Center
11	Jennifer Vollmer Ph.D., Environmental Resources Specialist, BASF Corporation	24	Katy Coba, Oregon Department of Agriculture
12	Anne Saxby, Manager, Hood River Soil and Water Conservation District	25	Michael Carlson, Clackamas River Basin Council
13	Dave Anderson, Water Quality Manager, City of The Dalles	26	Christine B. Reichgott, Manager of NEPA Review Unit, U.S. Environmental Protection Agency

Z.3. Comments and Responses

The proceeding tables display the substantive comments and USDA Forest Service response by issue area. Full letters are not reproduced in this appendix, expect for comment letters received from governmental agencies (Federal, State and local) per FSH 24.1.1.(b). All comment letters are available in the project file in Mt. Hood National Forest Headquarters Office, Sandy, Oregon.

KEY ISSUES			
ISSUE: Treatment Effectiveness			
Invasive plant treatments can vary in effectiveness, depending on the invasive species to be treated, size of the population/infestation, method of treatment, and a host of other factors including timing, weather, soils, and moisture. The choice of treatment methods in combination with other factors needs to reflect a balance between optimum effectiveness and protection of the desirable botanical resources. The proposed alternatives and treatment methods vary in how well they provide the tools to effectively treat invasive species and protect natural resources, including water quality, fish, wildlife, soil productivity, and native plant communities. Further, the presence and spread of invasive plants within the Forest and Scenic Area may affect the presence and spread of invasive plants on neighboring ownerships. The effectiveness of treatments would influence if and to what degree invasive plants might spread to other ownerships.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
2.2	Treatment methods	Use hand pulling or goats and stop poisoning every inch of earth in this country.	All alternatives utilize a range of invasive plant treatment methods; none propose to poison every inch of the earth. Emphasis would be placed on non-herbicide treatment unless they are ineffective. See Sections 1.3 and 2.1.3 for more details.

ISSUE: Treatment Effectiveness			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
6.5	Comment/ opinion/position statement [1]	In the long run herbicides don't really work, but they are fairly easy to administer and the herbicide makers are happy to receive the federal funds.	Comment noted.
11.3	Comment/ opinion/position statement	Addition of newer chemistry will aid in reducing the active ingredient to the environment while also increasing effectiveness of treatments. Therefore, I support the Proposed Action alternative.	Comment noted.
11.5	Early Detection/ Rapid Response strategy	All vehicle tracks (including road and utility right-of-ways (ROW)) and hiking trials, excluding wilderness, should be included in the EIS. These are all major possible routes of spread. Due to budgeting, work force and numerous other resources that will be most likely limiting factors to treatment, the opportunity for spread beyond the designated Invasive Plant Treatment Areas is highly likely. Rather than minimizing approved treatment areas and waiting for the invasive plant occurrence to spread, causing a need for amendments and delays, add all travel routes now to assure a cost effective, efficient overall program. These areas and situations maybe covered under the Proposed Action alternative, EDRR, last paragraph of page 2-33.	The Early Detection / Rapid Response strategy (EDRR) allows for treatment of uninventoried invasive plant sites that are unknown at this time and/or new infestations that become established in the future. The intent is to minimize the time between invasive plant detection and USDA Forest Service response (treatment). The EDRR is described in Sections 1.3, 2.1.3. and 2.1.4.

[1] The statement is: 1) a comment, opinion, or position statement with no specific concerns noted about adverse effects of the Proposed Action on a resource; 2) already decided by law, regulation, Forest Plan/Management Plan, or other higher-level decision; 3) outside the scope of the Proposed Action; 4) irrelevant to the decision to be made; or, 5) conjectural and not supported by scientific evidence.

ISSUE: Treatment Effectiveness			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
26.1	Toxicology	Because science cannot, in any practical sense, assure safety through any testing regime, pesticide use should be approached cautiously.	A conservative, cautious approach is taken throughout the Invasive Plant ROD standards (2005b) and PDC, which are above and beyond label restrictions and advisories. For example, PDC A.8. states: "Herbicide applications would not exceed the typical application rates specified in Table 2-7, except for imazapyr." Invasive Plant ROD Standard 15 (2005b) does require the use of licensed herbicide applicators, which are trained and tested in safety application techniques, as well as safe disposal techniques. The Invasive Plant ROD standards (2005b) are listed in Appendix A; the PDC are listed in Section 2.2; and layers of caution are discussed in Section 3.3.
26.2	Toxicology	Aside from the potential for toxic effects to people, overuse of pesticides may cause problems such as: a)killing beneficial organisms that would otherwise help control pests; b) promoting development of pesticide resistance in pests, which starts a vicious cycle in which more and more pesticides are needed: c) resurgence of pest populations, and d) contamination of the environment.	Compliance with Invasive Plant ROD, Standard 12 (2005b) would reduce the need for repeated herbicide treatments over time by requiring the development of a long-tem site strategy for restoring / revegetating invasive plant sites prior to treatment. By using effective treatment methods and minimizing the adverse effects to non-target species, this project would comply with Standards 19 and 20. The restoration strategies for this project as discussed in Section 2.1.3. Herbicide label advisories further disclose the potential for the development of herbicide resistance for specific herbicides. All label directions would be followed, as required in PDC A.1. Also, see response to Comment 2.2 (Issue: Treatment Effectiveness). Non-herbicide treatment methods would be used unless they are ineffective.

ISSUE: Economics and Social Resources			
Invasive plant treatments vary in cost, which affects the acreage that could be effectively treated each year given a set budget. The proposed treatments would be costly and fiscal resources are always limited. In addition to cost efficiency, the treatment methods vary in the amount of employment provided. Increasing the number of jobs could benefit local communities that are suffering from reduced employment levels.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
6.6	Economics	Hand digging and pulling give people jobs and has a much less negative impact.	Section 3.7.3 of the EIS shows that more jobs would be created as the amount of manual and mechanical treatment increases. Hand pulling, however, does not have less impact necessarily and these manual treatments may actually exacerbate the invasive plant problem. As documented in Section 3.6.2, for example, "some authorities do not recommend manual or mechanical treatment of hawkweeds because disturbance to the plant could stimulate the growth of new plants from fragmented roots, stolons, and rhizomes and redistribute the plants, increasing their rate of spread (Montana State University Extension Service, 2006)." In Section 2.5.2, the analysis concluded that "many of the invasive plants proposed for treatment are most effectively controlled with herbicide methods, making non-herbicide methods ineffective and unsuccessful."
17.7	Economics	While expensive, this more natural weed control method provides jobs for rural people and is effective. Of course, a caution is that goats tend to eat everything, including native plants.	Comment noted. As documented in Table 2-2, "grazing could either promote or reduce invasive plant abundance at a particular site. When grazing treatments are combined with other control techniques, such as herbicides, severe infestations could be reduced and small infestations may be eliminated.

ISSUE: Economics and Social Resources			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
17.10	Outside the scope	Funding must be addressed in this strategy. Show Congress what the complete costs are. Educate congressional staffers as to the issue and what the needs are – that's not lobbying.	See response to Comment 17.6 (Issue: Monitoring and Maintenance).
26.3	Economics	Integrated pest management, when viewed by traditional economics, often results in lower costs than conventional pest management. Additional costs beyond those considered in traditional analysis are likely to shift the balance even further towards IPM. Some of these additional costs are: potential long-term health effects, contamination of the environment, effects of pesticides on non-target animals and plants, the health effects to someone who may be particularly sensitive to a pesticide or pesticides, and any other effects that are not now understood, but will be uncovered over time.	The alternatives were analyzed using a combination of economic, quantitative, and qualitative measures to provide an assessment of effects beyond that considered in "traditional" economics. See Section 3.7 – Economics for more details. Integrated weed management (IWM) [a.k.a. IPM] techniques are incorporated into all alternatives. IWM is a process by which one selects and applies a combination of management techniques (manual, mechanical, and herbicide for example) that, together, would control a particular invasive plant species or infestation efficiently and effectively, with minimum adverse impacts to non-target organisms. It is species-specific, site-specific and designed to be practical with minimal risk.

ISSUE: Water Quality and Aquatic Organisms			
The application of herbicides in riparian areas has the potential to contaminate water and cause mortality to fish and other aquatic species. Herbicides that do not directly affect fish may affect their food chain through lethal effects to aquatic insects, plants, or algae. Sub-lethal effects, such as behavior changes, could result in increased vulnerability to predators. Fish and other aquatic organisms may also be impacted by manual and mechanical treatments, which may change dissolved oxygen levels, nutrients, water temperature, turbidity, fine sediment, and riparian structure.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
23.17	Water quality	Water quality and the well-being of aquatic organisms are threatened more by herbicidal control methods than by either invasive plants or non-chemical means of controlling invasive plants. The Forest Service must carefully analyze the effects of its proposed actions on dissolved oxygen, water temperature, stream turbidity, peak flows, low flows, water yield, and water chemistry. The area of most concern is that of water chemistry. We urge the Forest Service to consider a less herbicide-intensive method of invasive plant control.	A thorough analysis of effects to water quality and aquatic organisms is contained in Sections 3.9 and 3.10, and associated specialist reports. This analysis utilizes a blend of pertinent research, monitoring, modeling and literature review to display anticipated effects to water quality and aquatic organisms from implementing all of the proposed alternatives. Section 3.9 includes discussion on the direct, indirect and cumulative effects of water quality from soil, disturbance, turbidity and fine sediment; dissolved oxygen and nutrients; water temperature; peak flows/low flows/water yield; riparian structure; and water chemistry. This section was updated to clarify the analysis conducted and the results. Alternative 3 (Restricted Herbicide Use) considered a less herbicide-intensive method of invasive plant control. Only 4,047 acres were proposed for herbicide treatment.

ISSUE: Water Quality and Aquatic Organisms			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
23.18	Aquatics	We also urge the Forest Service to use caution when treating invasive plant populations near riparian areas. Aggressive treatment may not be necessary to protect riparian systems; it might damage them instead. While "trained field crews that are effectively supervised can achieve safe herbicide applications that do not result in biologically significant direct application or drift of herbicide into vegetated areas more than 25' from the edge of the treated area," (DEIS 3-139) perfect applications may not be the norm. Thus a plan of action that completely eliminates herbicide applications anywhere near the vicinity of these streams would be ideal. The Forest Service must remember that the effects of some herbicide ingredients – surfactants, adjuvants, and inert ingredients – have not been thoroughly studied, and aquatic species are more susceptible to their effects than terrestrial species.	Only trained and State or federally licensed applicators would apply herbicides at all treatments sites within the Forest and Scenic Area. In addition, PDC were carefully crafted to greatly reduce, if not eliminate, the chance that herbicides would drift or otherwise move off-target. As outlined in Sections 3.9 and 3.10, the effects to riparian dependent native fauna and flora as a result of invasive plant treatment are expected to be negligible. Riparian function and structure, in terms of native vegetation benefits, would improve as a result of proposed invasive plant treatment. If riparian areas were not treated, invasive plant populations would continue to spread, and have degrading impacts to riparian native vegetation composition and riparian structure. The best available information was used in the peer reviewed risk assessments, including information regarding surfactants, adjuvants, and inert ingredients. These results were incorporated in the aquatic-related analysis and in the formulation of PDC (Section 2.2). See also response to comments 3.2, 11.16, 23.10, and 23.16.
23.19	Aquatics	Of specific concern are the seventeen sites mentioned on DEIS 3-151, for which modeling showed that four herbicides (glyphosate, AQ glyphosate, AQ triclopyr, and picloram) could result in exposures that exceed the acute NOEC for fish. The Forest Service expects the amount of herbicide to reach the water to be less than modeled, due to "physical characteristics that would further minimize the risks posed by herbicides such as well vegetated buffer strips, larger streams than modeled, and few acres treated in the aquatic influence zone." (DEIS 3-151). This would be unnecessarily risky behavior on the part of the	The analysis presented in Sections 3.9 and 3.10 outlines why the GLEAMS model used in the SERA risk assessments would overestimate amounts of herbicide reaching water at Forest and Scenic Area treatment sites. PDC would further reduce the actual amount reaching any water body. The four herbicides do not all exceed the acute NOEC at all seventeen sites – there are other herbicides proposed for use at each of the sites that could be used instead that did not exceed the acute NOEC. Viable populations of aquatic species would be maintained if invasive plant treatments are

ISSUE: Water Quality and Aquatic Organisms			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		Forest Service, and contrary to the mandates of 36 C.F.R. 219.19, which states that "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native species," and 36 C.F.R. 219.27(a)(1), which states that "All management prescriptions shall: Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land."	implemented as proposed. None of the herbicide or other treatment methods would result in death of any individuals, and any sub-lethal effects would be biologically irrelevant (i.e. they would not reduce fitness, survival, or some aspect of behavior).
23.20	Aquatics	The Forest Service admits that, "Alternative 3 relies more on manual and mechanical treatments. For example, over half of the riparian reserve acres (52 percent) in this alternative would be treated with non-herbicide methods only, compared to less than 1 percent in Alternative 2. Similarly, 57 percent of aquatic influence zone treatments would be non-herbicide treatments only, compared to 0.1 percent in Alternative 2." Under this plan, fish at only seven sites would face the possibility of mortality due to applications of glyphosate. Surely the Reduced Herbicide Use Alternative is a better plan of action for aquatic species. However, the Forest Service excuses itself from this action by claiming that control methods would be less successful and would require that sites be treated more frequently. The Forest Service has defeated its own logic, however; no additional damage to the environment would occur from more frequent treatments, because only minimal damage is expected to occur from manual, cultural, and mechanical means of control in riparian areas. It is the price of labor that is the issue.	Section 3.10.2.4 - There would be no mortality of any fish resulting from herbicide application under this alternative (Alternative 3). The EIS acknowledges there are seven sites in this alternative, compared to 17 in Alternative 2, where the ***predicted*** herbicide concentration ***could*** exceed the acute NOEC for fish. However, the actual amounts reaching water would be less than predicted due to site conditions and PDC (Section 2.2). Chapter 2 in the EIS describes the underlying assumptions regarding treatment efficiency. Manual and mechanical methods generally are not as efficient as herbicide treatment. For some invasive plant species, manual or mechanical treatment may actually exacerbate the infestation, leading to continued existence and spread (see Section 3.6).

ISSUE: Water Quality and Aquatic Organisms			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
24.6	Water quality	One of the pesticides on the proposed list, triclopyr, was detected in surface waters during the USGS National Ambient Water Quality Assessment (NAWQA) studies of the Willamette Basin. (pubs.usgs.gov/circ/circ1161/nawqa91.html). The number and frequency of detections of various herbicides found in the NAQWA study suggests that standard application practices may result in presence of herbicides in streams, sometimes above water quality standards. It should be noted that the occurrence in Oregon waters of some of these pesticides, such as chlorsulfuron, imazapic, imazapyr, metsulfuron methyl, sethoxydim, and sulfometuron methyl is unknown because of a lack of water quality data.	A thorough analysis of effects to water quality and aquatic organisms is contained in Sections 3.9 and 3.10, and associated specialist reports. This analysis utilizes a blend of pertinent research, monitoring, modeling and literature review to display anticipated effects to water quality and aquatic organisms from implementing all of the proposed alternatives. These sections were updated to clarify the analysis conducted and the results. In addition, PDC aimed at minimizing or eliminating detrimental effects to water quality were developed using the aforementioned sources. Some of the sources of the PDC include Best Management Practices (BMP) suggested by the Oregon State Department of Environmental Quality (DEQ) for pesticide and herbicide application along with BMPs recommended by the Environmental Protection Agency (EPA) Region 10 for source water protection. The majority of pesticides identified in the referenced USGS National Ambient Water Quality Assessment (NAWQA) studies of the Willamette Basin, were found in basins draining predominately agricultural or urban areas. The report states that “Only atrazine and deethylatrazine were detected in streams draining forested basins (greater than 90 percent forest, by area), and these compounds were present at extremely low concentrations (0.002 to 0.004 µg/L)” (Wentz et al, 1998). Neither of these herbicides is proposed for use with this project.
24.7	Aquatics	As a result of a lawsuit filed against the EPA by the Washington Toxics Coalition (2002), a federal judge ordered that “buffer zones” be placed around salmon bearing streams for the application of certain pesticides. Of the 26 pesticides still being investigated for their potential effects on threatened and endangered salmon species, diuron, 2,4-D, and triclopyr are the only three that are approved for use	Triclopyr is the only herbicide proposed for use in this project that is discussed in the Washington Toxics Coalition et. al. vs. EPA lawsuit. For triclopyr, the order from the lawsuit specifically excludes noxious weed programs and allows “the use of pesticides for control of state-designated noxious weeds as administered by public entities, when such control program implements the following safeguards that

ISSUE: Water Quality and Aquatic Organisms			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		on national forests. DEQ asks that the USFS keep these restrictions in mind during the potential application of these pesticides. (www.epa.gov/espp/wtc/maps.htm)	NMFS (National Marine Fisheries Service) routinely requires for such programs . . .” (dated January 22, 2004). The safeguards are listed in Section 1.4 of this EIS. These safeguards are incorporated into the PDC and through consultation with regulatory agencies, including NMFS and U.S. Fish and Wildlife Service.
24.8	Water quality	The Source Water Assessments of the Safe Drinking Water Act Amendments provide a database of information about the watersheds and aquifers that supply public water systems in Oregon. USFS should consult with DEQ to ensure that the GIS shape files of the 5th-field watersheds and aquifer recharge areas are included in the USFS GIS data in this area. As the USFS project team selects alternatives to address areas within the municipal watersheds and groundwater recharge areas, the focus should be on decreasing the risks presented by the potential contaminant sources on national forests.	The most recent information on locations of the Drinking Water Protection Areas was secured from the DEQ and is included in Appendix V. This was confirmed in a July, 2006 phone conversation with Sheree Stewart of DEQ.
24.9	Water quality	Within the mission, budget, and legal authority, we request that the USFS consider local drinking water protection priorities when developing management plans for federal lands and facilities. This will preserve the use of public funds that would otherwise be spent to upgrade treatment facilities to remove the contaminants downstream.	Considerable effort went into reducing or eliminating potential detrimental effects to water quality from this project. Section 3.9 – Water Quality includes a full discussion of those potential effects. This section was updated to clarify the analysis and results.
24.10	Water quality	To prevent the potential increase in sedimentation from the removal of vegetation, we recommend the use of less intensive treatments in the areas adjacent to public water supply streams and the intakes. We do recognize that vegetation removal can occur from natural events, especially as a result of fire.	Invasive plant eradication has the potential to temporarily leave treatment areas with reduced ground cover which in turn has the potential for increased erosion and resulting sedimentation. In addition, equipment used in plant treatment has the potential to disturb or displace soil, making the soil more vulnerable to erosion. Short term erosion would be mitigated by creation of a restoration plan that would identify specific measures to ensure protection against erosion and resulting sedimentation. These

ISSUE: Water Quality and Aquatic Organisms			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
			measures would be tailored to reduce erosion based on site specific conditions in the treatment areas. Typical measures such as application of mulch, hydroseeding with soil binding agents or erosion control blankets may be used to reduce the potential for soil detachment from raindrop impact and create a favorable environment for native vegetation to re-establish faster in the treatment area. See Sections 3.8 – Soil Productivity and 3.9 – Water Quality for more details. These sections were updated to clarify the analysis and results Also, see response to Comment 23.17 (Issue: Water Quality and Aquatic Organisms).
24.11	Water quality	Herbicides can negatively impact the water quality in streams and groundwater serving as public water supply sources. Most herbicides are not monitored at the intakes or wells for public water supplies as part of the routine requirements to meet federal drinking water standards. Most communities and public water providers do not have the resources to increase their monitoring capabilities when significant areas are sprayed adjacent to or upstream of their intake or well.	See response to Comment 24.6 (Issue: Water Quality and Aquatic Organisms). Also, Section 3.9 – Water Quality provides more information on the potential effects to water quality in streams and groundwater servicing as public water supply sources.
24.12	Water quality	We recommend that USFS establish direct communication with the public water system operator or community liaison downstream of the USFS land management areas. As with all of our state and federal partners, we request that USFS's management alternatives in the municipal watersheds/aquifers should be selected to support the overall goal of providing the highest quality water possible to downstream intakes and wells.	Contact was made to cities that have Drinking Water Protection Areas identified for treatment. The cities were provided an opportunity to comment on the project. Contact with these various entities would continue throughout the life of the treatment proposed with this project as this is a very important communication link to maintain.

RESOLVED ISSUES

ISSUE: Human Health and Safety

Invasive plant treatments within the Forest and Scenic Area may result in health risks to forestry workers and the public, including contamination of special forest products and drinking water. The health and safety of forestry workers and the public may be at risk from exposure to herbicides. The public expressed particular concern about human health effects related to the toxicity of chemicals and drinking water contamination. Public concern for drinking water contamination is high for the Forest, since it serves as a drinking water source for approximately a third of Oregonians. Implementing the PDC, as required by the alternatives, would mitigate any possible impacts to human health and safety.

Comment Number	Comment Summary/Topic	Comment Text	Response to Comment
2.1	Comment/ opinion/ position statement	I for one am sick and tired of toxic chemical pollutants covering our forests in the drive to get rid of invasive exotics.	Comment noted.
3.3	Toxicology & treatment methods	I have asthma and chemical sensitivities and could become seriously ill if I come in contact with pesticides. Unfortunately we have many people in the area with cancer and other immune problems who could also be harmed by these herbicides.	Risk assessments indicate these herbicides would not be detrimental to human health, given proposed application methods and rates. For instance, cancer risks are smaller than one in a million (SERA, 2001b; 2003a; 2003b; 2003c; 2004a; 2004b; 2004c; 2004d; 2004e; 2004f). Further discussion of the health risks are contained in Section 3.5 – Human Health and Safety.

ISSUE: Human Health and Safety			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
6.4	Toxicology	I have cancer and could become seriously ill if I come in contact with pesticides. Unfortunately we have many people in the area with other immune problems who could also be harmed by these herbicides.	See response to Comment 3.3 (Issues: Human Health and Safety).
15.2	Toxicology	One needs to be mindful of current and prior lawsuits and, at minimum, EPA phaseouts of acknowledged "dangerous pesticides"… In the late 1960s persons in the Coast Range observed that their lands were being sprayed by the FS under the guise of "eliminating weeds and scrub"…The described "harmless" agent in the Siuslaw NF areas was identified as being 2,4,5T -- "dioxin" the most toxic molecule known at that time. It became widely known as "Agent Orange", the air-deposited pesticide used first in the Viet Nam. Agent Orange's effects are now a definitive issue for the VA's treatment of affected military personnel -- and a costly error for all taxpayers in terms of financially supporting the gross neglect of the dangers of Agent Orange. Similarly, despite the on-going use domestically of other pesticides, many have been shown to be carcinogens (19 products), 13 have been hormone system.	Standard 16 of the Invasive Plant ROD (2005b) states: “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.” This site-specific EIS tiers to these standards. As such, only the ten active ingredients listed in this standard are proposed for use on the National Forest System lands. 2,4,5T (a.k.a. Agent Orange) and other “EPA phaseouts” are not approved for use. Information from laboratory and field studies of herbicide toxicity, exposure, and environmental fate was used to estimate the herbicide risks in the risk assessments. Formal risk assessments were done by Syracuse Environmental Research Associates, Inc. (SERA) using peer-reviewed articles from open scientific literature and current EPA documents, including Confidential Business Information. They considered worst-case scenarios including accidental exposures and application at maximum label rates. At the project scale, additional layers of caution would be integrated into herbicide use in both action alternatives:

ISSUE: Human Health and Safety			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
			• Treatment methods would be limited to those necessary to eradicate, control or contain invasive plants on the Forest and Scenic Area. No aerial treatment is proposed and broadcast application would be limited to certain areas. Treatment methods would be chosen based on the decision key presented in Figure 1-4. • PDC would ensure proposed herbicide exposures do not exceed conservative thresholds of concern for human health, water quality as well as botanical, wildlife and aquatic species of special concern. The analysis throughout Chapter 3 demonstrates that herbicide use is unlikely to result in exposures of concern. More information on the impacts of herbicide use on human health and safety can be found in Section 3.5 of this EIS.
23.10	Toxicology	Important questions about the dangerous effects of some herbicides remain unanswered. The chemicals deemed safest for application, strangely enough, appear to be those least thoroughly studied. The effects of Imazapic on soil organisms have not been studied at all. NEPA also mandates that the Forest Service evaluate the nonlethal effects of herbicides on plants. The DEIS omits important recent research in this area, which examines the mutagenic effects of 2,4-D at exposure levels below application rates, and the increase in disease susceptibility to plants exposed to glyphosate. Finally, it is crucial to further investigate how herbicidal chemicals combine together to become synergistically toxic, and how their inert ingredients, and surfactant and adjuvant additives, affect plants and soils.	Risk assessments considered active ingredients, additives, surfactants, metabolites and inerts. The risk assessments are discussed in Section 3.3 – Herbicides, Adjuvants, Surfactants and Inert Ingredients, and referenced throughout the document. Uncertainties have been considered and disclosed throughout Chapter 3. Uncertainties are addressed through PDC that limit the rate, type and method of herbicide application sufficiently to eliminate exposure scenarios that would cause concern. Imazapic is degraded by soil microbes (See Section 3.8 – Soil Productivity). Some studies have shown arthropod population increases over controls, as they can utilize the carbon on some of the herbicides as a food source. There are effects of herbicides on non-target plants, as discussed in Section 3.6 – Botany and Treatment Effectiveness.

ISSUE: Human Health and Safety			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
			2,4-D is not proposed for use in this project. Only the 10 herbicides analyzed in the Invasive Plant FEIS (2005a) can be used on the Forest and Scenic Area. These herbicides are listed in Invasive Plant ROD, Standard 16 (2005b). Further, there are no known synergistic effects with any of the proposed herbicide formulations, as analyzed in the Invasive Plant FEIS (2005a). The environmental effects documented from field research of these formulations have been reviewed and the risk assessments for all proposed herbicides have disclosed known effects.

ISSUE: Public Notification			
The application of herbicides raises many public concerns; informing the public of invasive plant treatments would help alleviate some concerns. Information regarding location, time, and treatment method/type should be provided before treatments begin. Public notification is a required component of the PDC.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
15.3	Public involvement	I was unable to attend the "open house" on this subject . Notice of this event appeared on the same day as it was to occur, in the Oregonian via a very small announcement. Surely this was an ineffective way to announce such a vital issue to the public.	The USDA Forest Service hosted two open houses on June 8, 2006 in Hood River and June 19, 2006. Press releases announcing these meetings were distributed to local newspapers, including The Oregonian, on May 26, June 6 and June 14, 2006. Announcements of the meetings appeared in Sandy Post, Hood River News and The Oregonian. In addition, information regarding the open houses was posted to the Mt. Hood National Forest website as well as the project website (http://www.fs.fed.us/r6/invasiveplant-eis/site-specific/MTH/). Finally, a postcard announcing the meetings was distributed to the project mailing list. A copy of the list is available at the Mt. Hood National Forest Sandy Office.

TRACKING ISSUES

ISSUE: Native Plant Communities

Invasive plant treatments, especially herbicides may harm non-target plants, including culturally significant and special status species (USDA Forest Service Pacific Northwest sensitive plants, Survey and Manage plant species, federally listed plant species, and endemic plants). Different herbicides have varying degrees of potency and selectivity (e.g., some herbicides affect certain plant families more readily than others), and application methods vary in the potential for off-site drift. As invasive plants decrease, native plants are expected to benefit through increased habitat.

Comment Number	Comment Summary/Topic	Comment Text	Response to Comment
22.1	Toxicology	I am concerned by the use of herbicides like Imazapyr. It is not plant specific, so rare and endangered plants are also at risk. With a half-life of 17 months, and its high mobility, it can contaminate soil and water.	Imazapyr is a non-selective herbicide and as such does pose risks to non-target plants. These risks are managed through PDC that provide buffers around known sites of plants of concern. PDC E.1. details the botanical buffers incorporated into this project. Half life of Imazapyr in soil is 25 to142 days and the herbicide is decomposed by sunlight and soil microbes (See Appendix U). Potential exposures pose low risk to fish, birds, mammals, and bees. The effects to soil and water are minimized by following herbicide label requirements (PDC A.1.) and by properly implementing the PDC, especially PDC in Group F for Water Quality and Aquatic Organisms and Group G for soils. All PDC are listed in Section 2.2. More information on the properties of Imazapyr, and corresponding protection measures can be found in Appendix Q.

ISSUE: Native Plant Communities			
Comment Number	**Comment Summary/ Topic**	**Comment Text**	**Response to Comment**
23.9	Botany	The Forest Service fails to effectively consider the general impacts of its proposed actions. As a specific example, it fails to analyze the effects of herbicides on the population health of non-target plant species, saying that such information is unavailable, as studies have only been done on crop species. (DEIS 3-50). The Endangered Species Act (ESA) requires the Forest Service to use the best available scientific and commercial data in assessing the impacts to such species. The Forest Service has been using herbicides to eradicate invasive plant populations for years. Surely these treatments have produced some hard data about the effect of chemical control methods on non-target species. The law requires such data to have been collected. Additionally, the Management Plan for the Columbia Gorge National Scenic Area mandates specific sensitive plant protection standards. Revised Management Plan (RMP) at I-87-89. The Management Plan also includes a list of rare plant species in the Columbia Gorge. Management Plan, at I-134-35. Endemic species such as Howell's daisy (Erigeron howellii) and Oregon bolandra (Bolandra oregano) along with all listed rare plants must be protected by adequate buffer zones. The Forest Service must take special measures to prevent the further degradation of the habitat of sensitive plant species, eight of which are located in areas marked for invasive plant control measures. (DEIS 3-34). The Forest Service must also comply with the natural resource protection requirements for any actions that would occur in the National Scenic Area. Its willingness to gamble with the well-being of endangered	Negative impacts (adverse effects) on native plants from treatment of invasive plants are considered in the EIS. It is acknowledged that native plants, including special status plant species, may be harmed, weakened, or killed by treatment methods (manual, mechanical, cultural, or herbicide). Scientific research demonstrates that herbicide treatment is effective against invasive plants. Some herbicides are designed to kill only plants in certain genera or families in order to avoid killing non-target plants. Monitoring data indicates that these herbicides do not adversely impact non-target flora. This data generally are not in the scientific literature, rather the monitoring data is antidotal and professional judgment of USDA Forest Service botanists and their colleagues. The proposal outlines six steps to protect sensitive plant species (Project Design Criteria E.1 to E.6). These measures are analogous to those required by the Scenic Area Management Plan sensitive plant species protection guidelines. Buffer zones would be entered to treat invasive plants; a No Practicable Alternative Test and Mitigation Plan have been completed (See Appendix C). The project was also found to fulfill the General Management Area (GMA) Rare Plant guidelines. An Invasive Plant Treatment within Sensitive Buffer Zone “Practicable” Alternative Test and Mitigation Plan also were completed (see Appendix C). The EIS analyzed the sensitive plant species as defined by the Scenic Area Management Plan. Additional language has been added to Section 3.6. The analysis concluded that impacts to special status plants would be insignificant if the project is implemented with the appropriate PDC, which are designed to minimize or eliminate the negative impacts.

ISSUE: Native Plant Communities			
Comment Number	**Comment Summary/ Topic**	**Comment Text**	**Response to Comment**
		populations of plants is alarming.	The USDA Forest Service maintains monitoring data regarding herbicide and pesticide use and application on National Forest System lands. This information is available by contacting the Mt. Hood National Forest headquarters office of the Columbia River Gorge National Scenic Area office.

ISSUE: Wildlife Species			
The use of herbicides to treat invasive plants, if used in the certain habitats, could harm a variety of wildlife species. Late successional, wetland, talus, and aquatic habitats have special status species that may be affected by herbicides. Certain herbicides have the potential, for example, to affect the vital organs of some wildlife species, change body weight, reduce the number of healthy offspring, increase susceptibility to predation, or cause direct mortality. Wildlife, especially birds and mammals, may ingest vegetation or insects that have been sprayed with some herbicides and potentially experience these types of effects. Amphibians have semi-permeable skin that can absorb herbicides that affect them but herbicide effects to amphibians have not been thoroughly tested. Aquatic life stages of amphibians are susceptible to herbicides, but very little information has been documented on the effects of herbicides.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
6.1	Toxicology	I am very concerned about pesticide use in the Mt. Hood National Forest and the Columbia River Gorge. These are heavily used recreational Areas and these areas contain many threatened and endangered species.	Risk assessments indicate these herbicides would not be detrimental to human health, given proposed application methods and rates. The PDC (Section 2.2) are designed to avoid or minimize potential effects on sensitive resources, including threatened and endangered species. These PDC ensure that there would be no effect to human health, including recreationalists, as discussed in Section 3.5 Aquatic: The aquatic organisms and habitat analysis indicates that the proposed herbicide application would not result in the direct mortality of any fish, including threatened and endangered species. The amount of herbicide entering streams harboring listed is expected to be biologically meaningless Effects, if any, from herbicide application to fish would be sub-lethal in nature. This analysis is discussed in Section 3.10.

ISSUE: Wildlife Species			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
			Wildlife: The wildlife analysis indicates that there would be no effect to either of the two threatened and endangered species (Northern Spotted Owl and Bald Eagle) that occur on the Forest and the Scenic Area. This is shown in Table 3-36, and the analysis for these species is in Section 3.11.
23.14	Correction	While the DEIS states that its goals will be reached by "manipulating vegetation to benefit fish and wildlife habitation. . ." (DEIS 1-3), there is no indication that this result would follow from the preferred action. The DEIS admits its own flaws in the Executive Summary, stating that the Proposed Actions "risks to non-target plants and animals, especially species of concern, have not been adequately evaluated." (DEIS 3-2). This clearly violates 36 C.F.R. 219.19, which states that "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native species."	The two quotes in the comment cannot be found on the referenced pages or other sections of the DEIS. The purpose of this project is to eradicate, contain and control invasive plant infestations, to reverse the negative impacts caused by the invasive plants, and to restore healthy, native plant communities and function at the impacted sites in a cost-effective manner that meets current management direction. See Section 1.2 for more details on the purpose and goals.
23.21	Wildlife	The true effects of herbicide applications on individual wildlife species are unknown and it is unwise to gamble with the health of already threatened animal populations. The use of herbicides to manage invasive plants has the potential to harm free ranging wild animals and birds, especially those that eat grass and insects. Alternative 2 chemically treats the greatest amount of habitat that includes mature forest, thus increasing the potential for exposure of special status species wildlife. (DEIS 3-175). It increases the amount of herbicide sprayed by 500%! It makes little sense to choose an action alternative that increases the survival pressures on already	The EIS discloses that there is some uncertainty in the wildlife effects analysis. As a means to gain additional information across a wide range of species groups, surrogates have been used in testing taxonomic groups of animals and fish are used as a surrogate for aquatic amphibians (See Appendix X). The surrogates for testing are listed in Tables X-1 and X-2 in Appendix X. The Regional Invasive Plant FEIS (2005a) Appendix P is referenced. The wildlife analysis discloses that Alternative 2 bisects or traverses the greatest amount of mature forest. The wildlife analysis further points out that "by examining the life cycles of the special status species it becomes evident that the concern for exposure is minor because these species do not use the non-late seral habitats adjacent to their preferred late seral

ISSUE: Wildlife Species			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		sensitive species. Conversely, there are no adverse effects to habitat from the use of manual, mechanical or cultural treatment to any of the species analyzed for any of the alternatives, with the exception of the possibility of disturbance of nesting birds. The Forest Service claims that, "[t]he biggest difference in the effect of [the Reduced Herbicide Use Alternative] compared to the Proposed Action is the effectiveness of the treatment. Manual, mechanical and cultural treatments have been attempted in the past as the sole way to control invasive plants and the effect has been met with very minor successes….This alternative still puts the species that rely on the early successional habitat at more risk from habitat loss, compared to the risk that a few individuals could receive a toxic dose of an herbicide treatment." (DEIS 3-177). However, we see no concrete evidence that the reason for the failure of past non-chemical methods of control was the method itself, rather than the product of the construction of new forest roads, or of clearcut logging, or of poorly executed mechanical treatment methods, or lack of follow-up on removal projects.	habitats on a regular or frequent basis" (Section 3.11 – Wildlife). Also, the wildlife analysis demonstrated that the habitats being treated are not the primary habitat for any species analyzed, except deer, elk, blue grouse, Pacific pallid bat, and band-tailed pigeons. The EIS discloses that these species could occasionally forage in treated areas, and could be exposed to herbicide (See Table 3-36 in Section 3-11). Some species may occasionally travel into the sprayed habitats when dispersing from their primary habitat; however, this effect also would be minor (See Table 3-36 in Section 3-11). The EIS points to several examples of invasive plants where manual and mechanical treatments have been attempted and were unsuccessful. Both The Nature Conservancy and the Montana State University Extension Service recommend against using manual and mechanical treatments for certain invasive plants. See Section 3.6 – Botany and Treatment Effectiveness for more details. See responses to Comments 23.2 and 23.3 (Issue: Prevention) for discussion of management activities.
23.22	Wildlife	The Forest Service is apparently willing to risk the well-being of threatened and sensitive species such as the Northern Spotted Owl and the Crater Lake Tightcoil ("It is possible that some individuals may be removed from the population" (DEIS 3-204) as well as from other mollusk populations). It is willing to experiment with the health of the populations of various salamanders and turtles, when the effects of herbicides on amphibians and reptiles is not as well understood. It is also willing to use herbicides on areas known to be frequented by deer and elk, knowing that they sometimes tend to forage repeatedly in the same areas and that they tend to	Section 3.11 - Wildlife discloses that in rare situations some species may be affected by herbicides. In the case of the Northern Spotted Owl, there would be no individuals harmed, harassed, killed, or injured by herbicides. There would be no impact to any of the primary constituent elements of spotted owl habitat. The indirect effect of noise and disturbance would be negligible due to the very small area of suitable habitat and low noise created by mechanical and sprayers in the project area. The majority of the invasive plant treatments that would create noise occur along roads and openings.

ISSUE: Wildlife Species			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		ingest more herbicides than any other animal, due to their grazing on leafy herbs. Triclopyr is especially toxic to ungulates, but will nevertheless still be used as a spot spray.	In the case of the Crater Lake Tightcoil, the EIS discloses that there is a rare possibility that some individuals may be killed by invasive treatment in riparian areas. The analysis shows that the toxicology studies indicated that there would be no effect to mollusk from herbicide treatment. The wildlife analysis also points out that the footprint of the treatment is small and that PDC would assist in reducing this risk. Section 3.11 discusses that some deer or elk may be exposed to herbicides due to their foraging habits. If herbicides are used in openings of any type there is a high probability that deer and/or elk would ingest some herbicides. Since triclopyr is the most toxic to deer and elk the use of spot spraying would reduce the dosage that the deer or elk would receive. It is still possible for these animals to receive a dose that could cause harm or make them more susceptible to predators. The number affected is anticipated to be very small.

ISSUE: Soil Productivity			
Healthy soil organisms are fundamental to the ability of soil to provide water and nutrients to plants. All herbicides potentially can affect soil microorganisms. Manual and mechanical treatments may cause soil disturbance and/or erosion. Due to these potential impacts and the removal of vegetation, slope stability may be impacted.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
11.17	Soils	Table 3-17: In regard to Imazapyr and soil persistence: I am unsure of what your data source is for the table, but it appears old soil persistence data was used (original data submitted to EPA). Prior to the knowledge that imazapyr was degraded in soil by micro-organisms, sterile soil was used for persistence studies. Obviously with no microorganisms in the soil, imazapyr was not broken down. Typically imazapyr has a half-life in soil of three months, similar to other Imis and SUs. There are no cases of imazapyr and imazapic having been detected in ground water.	This comment is correct. Based upon updated data, Table 3-17 has been changed to reflect the new information. The rankings in the table remain the same. The updated data can be found at: http://tncweeds.ucdavis.edu/products/handbook/17.imazapyr.pdf.
23.8	Soils & botany	The DEIS does not adequately consider both cumulative and general impacts to plants and soils. The current DEIS fails to show how past herbicide use and invasive species management activities have negatively or positively affected the environment. NFMA requires monitoring "at intervals established in the plan, implementation shall be evaluated on a sample basis to determine how well objectives have been met and how closely management standards and guidelines have been applied." 36 CFR 219.12(k). Vague or general statements of impact are not sufficient, impact from projects must be discussed on an individualized basis. Lands Council, 395 F. Supp. At 1028.	The cumulative and general impacts to plants are discussed in Section 3.6, and the impacts to soils are discussed in Section 3.8. Monitoring would occur to ensure that the treatments are meeting the prescriptions and to ensure that implementation has occurred according to our management standards. This is required for all activities. New language has been added to the document clarifying the role and extent of monitoring (see Section 2.3).

ISSUE: Soil Productivity			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		NFMA clearly directs the Forest Service to create regulations to "insure research on and (based on continuous monitoring and assessment in the field) evaluation of the effects of each management system to the end that it will not produce substantial and permanent impairment of the productivity of the land." 16 U.S.C. § 1604(g)(3)(C); Sierra Club v. Martin, 168 F.3d 1 (11th Cir. 1999). There is no evidence that the Forest Service thoroughly monitored and assessed each particular invasive plant control action previously undertaken, as required by law. We instead read anecdotal comments about how such actions have failed in the past due to the restricted use of herbicides. Detailed data about how past Forest Service land use and management practices have affected vegetation is also lacking. (DEIS 4-206.) For example, we cannot know for sure that new weed infestations were a result of a pure failure of non-herbicide methods of control. They may have been the product of the construction of new forest roads, or of clearcut logging, or of spotty mechanical treatment methods, or lack of follow-up on removal projects. Such vagueness in analysis is impermissible.	Evaluation as to how well this has been conducted in the past is contained in the annual Forest Plan monitoring reports for the Forest and Scenic Area. The annual monitoring reports for the Forest are available on-line at: http://www.fs.fed.us/r6/mthood/publications/. The results of the monitoring reports are considered in the existing conditions sections contained in each resource area. In addition, impacts on individual sites have been disclosed in Chapter 3 in the EIS. Limited monitoring information is available regarding treatment effectiveness since neither the Forest or Scenic Area has had the authority for widespread treatment. Furthermore, the Invasive Plant ROD (2006b) requires that invasive plants be a consideration in all land use assessments as required by Standard 1 (Appendix A). As an example, any major road work (e.g., construction or decommissioning) must consider invasive plant prevention and treatment.
23.11	Law and regulations & soils	The DEIS must adequately analyze the impact of herbicides on soil resources and productivity. NEPA requires that an EIS contain "high quality information and accurate scientific analysis…If there is incomplete or unavailable relevant data, the [EIS] must disclose this fact" up-front. Lands Council, 395 F.3d at 1031-32 (citing 40 C.F.R. § 1502.22). Decisions based on fuzzy science should be unacceptable to the public. The Forest Service admits that "the effect of an herbicide treatment on the soil depends on the particular characteristics of the herbicide used, how it is applied, and soil physical, chemical, and biological conditions." (DEIS	Council on Environmental Quality directs agencies to "evaluate reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and if there is incomplete or unavailable information, the agency shall always make clear that such information is lacking" (Section 1502.22). Each resource area includes an "incomplete and unavailable information" section (See Sections 3.3.3, 3.5.8, 3.6.6, 3.7.5, 3.8.8, 3.9.7, 3.10.4, 3.11.11, 3.12.5, 3.13.5, 3.14.6, and 3.15.9). Section 3.8.8 discloses the incomplete and unavailable information related to soil productivity.

ISSUE: Soil Productivity			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		3-70). Generalizations about herbicide effects, then, are not permitted, and they are often attempts to minimize the lack of available data on the topics.	Section 3.8 – Soil Productivity provides information and analysis on the characteristics of the herbicide used, how it is applied, and soil physical, chemical, and biological conditions that would result in impacts. The potential impacts are summarized in Table 3-16, Table 3-17, and Appendix U. Appendix U provides a detailed report of the impacts of each herbicide on specific soil types. In addition, the PDC (Section 2.2) are designed to minimize or eliminate effects from invasive plant treatments, in part to provide added protection for the uncertainties associated with herbicides.
23.12	Soils	In one paragraph, the Forest Service says three different things: that herbicides are harmless, that they are less harmful than other methods of control, and that they really do not know much about the effect of herbicides on soil biology. Which statement is the public to believe? The Forest Service ultimately states that "it is likely that all herbicide treatments would have some effect on soil biota, but these effects would be more or less transitory depending on the timing, frequency, and herbicide used." Basically, we are told that what we don't know, won't hurt us. This is unacceptable under NEPA.	

ISSUE: Tribal/Treaty Rights and Environmental Justice			
Protecting and maintaining traditional uses of plants, animals, fish, and water rights on tribal reservation lands and the treaty rights of American Indian Tribes is a trust responsibility of the Federal Government. The Confederated Tribes of Warm Springs have rights outside the bounds of their Indian reservation on ceded as well as usual and accustomed sites on the Forest. Invasive plant treatments have varying impacts to culturally significant plants, which include huckleberries (*Vaccinium membranaceum*), blue camas (*Camassia species*), and possibly bitterroot (*Lewisia rediviva*) for the Confederated Tribes of Warm Springs, Yakama Nation, Confederated Tribes of the Grand Ronde, Nez Perce Tribe, and Confederate Tribes of the Umatilla Indian Reservation.			
Comment Number	**Comment Summary/ Topic**	**Comment Text**	**Response to Comment**
26.10	Tribal	We appreciate the effort undertaken by the Forest Service to engage the Tribes, but recommend that the final EIS clarify the status of communication with the tribes that did not consult.	No comments were received from any tribe or tribal members during the 45-day public comment period. All Tribes were sent a letter inviting them to comment on the EIS and informing them of the comment period. The comment period expired and the USDA Forest Service did not receive comments from The Grand Ronde, Yakama, Umatilla and Nez Perce tribes allowed.

ISSUES OUTSIDE THE SCOPE

ISSUE: Implementing Invasive Plant Management

Some members of the public suggested that the USDA Forest Service have a budget adequate to control the spread of invasive plants. The budget would be supplemented by developing partnerships and using volunteers or other workforces. Partners and volunteer groups would provide assistance and expertise in the management and treatment of invasive plants.

Comment Number	Comment Summary/Topic	Comment Text	Response to Comment
1.2	Comment/ opinion/ position statement	Let's get this job done this year. Too much time & money is spent on this already & not much field work has been accomplished that I know of.	The USDA Forest Service must comply with laws and regulations, including NEPA before the project can be implemented.
14.1	Outside the Scope	I trust that your tool kit contains all proven treatment methods. In some cases, that may mean a crew/day armed with shovels & pruning shears. Some sites may best be treated with a controlled burn. While other sites may involve chemicals (1) applied via hand sprayer, quad sprayer or helicopter.	Comment noted.
18.2	Comment/ opinion/ position statement	Successful weed control requires a combination or sequential use of several methods (integrated weed management – IWM). IWM techniques are the least harmful and the most beneficial methods for weed control. Patterns of weed spread indicate that many species have a lag phase following introduction before they spread explosively. Therefore, early detection and	Comment noted.

ISSUE: Implementing Invasive Plant Management			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		treatment before explosive spread will prevent many future problems and avoid the necessity of truly aggressive chemical management of an otherwise uncontrollable infestation	
20.2	Outside the scope	It is also important to fund the early protection/rapid response mechanism in order to follow through with invasive management.	USDA Forest Service funding is outside the scope of this EIS. Funding for invasive plant management on the Forest and Scenic Area would vary each year as budget levels change, information and knowledge concerning invasive plants improves, and invasive plant infestations are reduced. Appropriated treatment dollars are augmented and would continue to be augmented with partner and volunteer contributions.
20.3	Outside the scope	In the Sandy River Basin, there should be coordination with The Nature Conservancy knotweed eradication effort.	The Nature Conservancy has received all mailings and updates from the USDA Forest Service regarding this project. In addition, USDA Forest Service has been working with The Nature Conservancy in the Sandy River Basin, prioritizing and strategizing for the implementation of invasive plant treatments through a challenge cost share program. The challenge cost share program resulted in the development of a 5-year agreement between the Forest, Scenic Area, and The Nature Conservancy to eradicate invasive plant species in the Sandy River Basin in a holistic manner to achieve basin-wide ecosystem restoration objectives.
20.4	Outside the scope	When uses such as powerline corridors contribute to invasives, their special use permits should include funding support for the control and treatment efforts.	Project implementation is outside the scope of this EIS.
24.2	Comment/ opinion/ position statement	ODA is pleased to see an early detection and rapid response approach has been included in the DEIS and strongly supports this approach for invasive species management.	Comment noted.

ISSUE: Implementing Invasive Plant Management			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
25.2	Outside the scope	The continued success of our removal efforts on the lower river depends on timely treatment of known knotweed sites with the Clackamas basin on the Mt. Hood NF and identified in the DEIS. We are very concerned that if treatment continues to be delayed, fragments from plants growing upstream of River Mill Dam could re-colonize areas already treated by us downstream.	Comment noted.

ISSUE: Aquatic Invasive Plants			
Invasive plants floating or submerged in water.			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
12.3	Outside the scope	And in particular with the Soil and Water Conservation District, we are concerned about aquatic weeds. In addition to the purple loosestrife that we have had for a couple of years, various types of knotweed have taken hold in our area. There are a couple sites down in the Scenic Area down on Tanner and Maupin creeks that are not present on your maps, and I am hoping that those sites will be treated as well.	Invasive plants floating or submerged in water are currently being addressed through other federal actions in cooperation with the State; as such, these plants are not included in this analysis. (See response to comment 26.7 for more details.) All other invasive plant species, including purple loosestrife and knotweed, are included in this EIS. Only invasive plant infestations identified in the November 2004 inventory are analyzed in this site-specific EIS. Additional sites and species (e.g., purple loosestrife) can be considered for treatment using the EDRR as described in Sections 1.3, 2.1.3, and 2.1.4.
26.7	Outside the scope	On page 1-27 of the DEIS it is noted that the document will not address invasive plants floating or submerged in water because aquatic invasives, “are currently being addressed through other federal actions in cooperation with the states.” Since aquatic invasives are an emerging issue on National Forest land and elsewhere, please provide more specific information about the efforts underway to address aquatic invasives. Should the efforts under development prove insufficient to address aquatic invasives; the FS will need to revisit this issue.	Currently, invasive plants floating or submerged in water are not present on the Forest or Scenic Area. These species are primarily a problem on larger waterways (e.g., Columbia River), where agencies, including U.S. Fish and Wildlife Service, NOAA Fisheries, and U.S. Army Corps of Engineers are conducting in-water treatments of invasive plants. In addition, the Invasive Species Council created by the State of Oregon House Bill 2181 works to prevent and minimize the effects of invasive species within the state. If aquatic invasive become established on either the Forest or Scenic Area, the USDA Forest Service would need to reassess the problem and potentially conduct additional NEPA to allow treatment.

ISSUE: Aerial Herbicide Application or Prescribed Fire			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
3.5, 4.3, 6.7	Toxicology; Treatment methods	If you must use them, it should be done by backpacks ONLY. Truck and aerial spraying are so harmful and the chances of accidental poisoning are great. What if someone is hiking or working in the area when the planes spray or the trucks fog? What about the animals? There is no way to control drift.	PDC minimize adverse effects to people and the environment. Aerial spraying is not proposed. Fog spraying is not proposed. Drift from broadcast spraying would be managed through use of low pressure systems and maximum nozzle size. Licensed applicators (compliance with Invasive Plant ROD Standard 15 [2005b]) ensure applicators are knowledgeable about drift management. The Forest would notify the public prior to spraying and inadvertent public exposure would be minimized (compliance with Invasive Plant ROD Standard 23 [2005b]). All Invasive Plant ROD standards (2005b) are listed in Appendix A. The proposed invasive plant treatments not have any effects to human health, including hikers and workers. See Section 3.5 – Human Health and Safety.
13.3	Treatment methods	The draft EIS specifies that use of prescribed fire is Outside the Scope of this proposal. Would that prevent the use of hand torches in the treatment of puncturevine? From personal experience in an ag setting, one of the most effective treatments for relatively small areas of puncturevine where seeds have already been produced is to burn the ground with a hand torch (not a drip torch) to "roast the nuts". Would that be allowed?	Prescribed fire was not considered or analyzed as a treatment method in the EIS and, therefore, cannot be used. Prescribed fire could be used as a treatment method in the future if additional NEPA analysis confirms its effectiveness and appropriateness for treating invasive plants.

ADDITIONAL ISSUES			
ISSUE: General Comments on DEIS/Purpose & Need			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
1.1	Comment/ opinion/ position statement	I do not have any technical comments concerning the eradication of these "weeds", however the USDA Forest Service "Proposed Action" plan sounds very well thought out so go ahead with this proposal	Comment noted.

ISSUE: General Comments on DEIS/Purpose & Need			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
1.3	Comment/ opinion/ position statement	I wonder if there is any merit in studying invasive species? I have a small woodland in Clackamas County & have many varieties of these plants to deal with. They appear to be very hardy, resilient to disease, & provide habitat for small animals, I have discovered. I use crossbow to dispose of these plants but wonder sometimes if let alone these plants would eventually be shaded out by trees etc. It is a very challenging problem I admit so keep up your work & take time to smell the Roses.	Comment noted.
3.1, 4.1, 6.2	Comment/ opinion/ position statement	I understand the need to control non-native species, but I strongly oppose any chemical means of doing so.	Comment noted.
3.2, 4.2, 6.3	Toxicology	Chemical pesticides are detrimental to area flora and fauna as well as to the water systems and the people in the forests or surrounding areas.	Scientific peer-reviewed risk assessments have been prepared for the herbicides proposed for use. The risk assessments indicate that the formulations proposed for use would not be detrimental to people, drinking water, and/or flora and fauna. PDC ensure the project complies with Invasive Plant ROD Standards 19 and 20 (2005b) to minimize or eliminate negative adverse impacts to non-target plants, animals and water. The Invasive Plant ROD standards (2005b) are listed in Appendix A, and the PDC are listed in Section 2.2. For more information, see Section 3.5 – Human Health and Safety.
3.4	Comment/ opinion/ position statement	My guess is that you'll use the pesticides anyway, even though herbicides don't really work. (If they did, you wouldn't have to keep using them.)	Effective measures for treating invasive plants are proposed. Common Control Measures (Mazzu, 2005) summarize proven effective control measures for treating invasive plants. These methods are the basis for treatments proposed in this project. The common control measures are summarized in Appendix G. All treatments would be followed by either active or passive restoration, and the restoration would be monitored over time. The restoration is aimed at

ISSUE: General Comments on DEIS/Purpose & Need			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
			establishing native plant communities, which would reduce and eliminate the need to use herbicides over time. The restoration approach for each treatment area is listed in Appendix F.
3.6, 4.4, 6.8	Toxicology	Please use the precautionary principle when making this decision.	Many layers of caution have been added to the proposal to use herbicides. The layers of caution are discussed in Section 3.3 and illustrated in Figure 3-2. These layers include label requirements, federal and state laws, EPA approval process, SERA Risk Assessment, Invasive Plant FEIS (2005a) and ROD (2005b), treatment methods, and PDC. Also, the project is guided by PDC that ensure herbicide use would be done in a cautious manner.
7.1	Comment/ opinion/ position statement	On invasive plants I'm for the "proposed action" NO HERBICIDE	Comment noted.
8.4	Comment/ opinion/ position statement	PS Somethings got to be done about ScotBloom [sic]	Scotch broom (*Cytisus scoparius*) is included in the list of invasive plants proposed for treatment in this EIS (see Table 2-3). Scotch broom is highly invasive and widespread within the Forest and Scenic Area, especially along highways and roads and in disturbed areas (e.g., clearcuts and quarries). In the Pacific Northwest, Scotch broom is considered "naturalized," meaning an invasive non-native that is now common and widespread. Thus, only a few treatment sites contain Scotch broom (see Appendix F). Additional Scotch broom populations within the Forest and Scenic Area may be treated in the future, but at present other invasive plant species identified in the EIS are of higher priority because of their ability to spread out of control rapidly (e.g., knotweeds, hawkweeds, butter and eggs, yellow star thistle).

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9.1	Comment/ opinion/ position statement	I am in receipt of the draft proposals for invasive plant treatments around Mt. Hood Forest and the Columbia Gorge. I own a cabin near Government Camp on Forest Road 31. In reading the abstract, as well as the more detailed documents on the proposed treatments, alternative 3, the restricted herbicide use alternative seems most appropriate. That would be my preference. Thank you for soliciting our comments.	Comment noted.
10.1	Comment/ opinion/ position statement	I am writing to provide comments on the Mt. Hood and Columbia River Gorge National Scenic Area's DEIS. Empiric evidence strongly suggests that both the Mt. Hood National Forest and the CRGNSA are being threatened by invasive weeds from outside their boundaries, most notable garlic mustard, false brome, and knotweed. These, and other invasives are moving at an alarming rate and in my estimation, it is critical that you have all the tools possible at your disposal to militate against these threats. Therefore, I am in favor of Alternative 2, the proposed action.	Comment noted.
11.6	Early Detection / Rapid Response strategy	Throughout the document 'road right-of-ways' are specifically included in the management plan. 'Utility right-of-ways' must be given the same management options due to the travel use by both utility company and general public (assuming Mt Hood NF has utility right-of-ways).	The Mt. Hood National Forest has Bonneville Power Administration (BPA) and Portland General Electric (PGE) utility corridors. Both BPA and PGE utility corridors are included in the EIS. Appendix F provides a description of the utility corridors analyzed (sites #61-041, 61-093, 66-008, 66-016, 66-089, 69-013, 69-027). BPA powerlines are located within the Scenic Area sites #22-01, 22-05, and 22-12. Additional portions of the utility corridors can be treated in the future, if necessary, using the EDRR as described in Sections 1.3, 2.1.3. and 2.1.4.

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11.13	Early Detection / Rapid Response strategy	The EDRR described throughout the document is unacceptable, too limiting to address unknown future events and out of context. In the true sense of EDRR, when action is taken quickly against a new invading plant (very small acreage treated), impact to the environment, no matter what control strategy is implemented, is negligible. When the impact is negligible, a new or amended section to this EIS should not be required. At most, an Environmental Assessment or Pesticide Use Permit should be quickly completed to allow for rapid action, even if that action requires the use of an herbicide not in this EIS. An EIS is only for when an environmental impact is anticipated. Time taken to secure resources for a survey, conduct the survey, compare control measures and site description to the current EIS, etc., will allow the plant to seed and spread. Immediate action is needed to keep the impact negligible.	The EDRR establishes a series of treatment caps to help ensure that the adverse effects associated with treating uninventoried invasive plant infestations are within the scope of the effects disclosed in this EIS. The basis for these caps is the current infestations as identified in the inventory completed in November 2004. These caps are discussed in Sections 2.1.3, Appendix J and Table 2-9. If the effects are within the scope of this EIS, no additional NEPA would be required. If the effects are beyond the scope of this EIS, then additional NEPA would be required. The Forest and Scenic Area would follow USDA Forest Service Handbook 1909.15, Section 18. Section 18.2 requires the USDA Forest Service to "prepare supplements to either draft or final environmental impact statements if: (i) The agency makes substantial changes in the Proposed Action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the Proposed Action or its impacts." The EDRR discussions in Sections 1.3, 2.1.3 and 2.1.4 have been modified based on the comments received.
12.1	Comment/ opinion/ position statement	I would like to support the more aggressive weed treatment for these areas. Invasive weeds have become a terrible problem for our region and it is a big problem on the National Forest. So, I would urge you, even through I am an organic orchardist and do not use herbicides on my own place – I would urge the National Forest to use them. I believe that you guys can abide by the labels and use them properly. And I think there is a real need to get out there and to treat this invasion of noxious weeds.	Comment noted.

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13.1	Comment/ opinion/ position statement	Let me say that the City supports efforts to control invasive plants on forest lands including treatments in municipal watersheds. And overall, I am impressed with the proposed action outlined in the draft EIS.	Comment noted.
15.1	Treatment methods & correction	I am concerned about the announced proposal "to treat invasive infestations on 13,000 acres" of the described areas. To comment effectively, one would have to know just how the terms "invasive" and "infestations" are specifically defined. One would need to know exactly which "208 sites" are involved, and exactly what the "variety of treatments" are. The terms "eradicate" and "contain" and "control" are vague, and without specificity, they are meaningless in terms of an adequate public comment. There is no described application methodology, nor how the application is to be itself "curtailed".	All of the cited terms in the comment are defined in the document (glossary and/or text). Several definitions in the glossary were clarified. Also, the treatment methodology is described and summarized in Table 2-2.
16.1	Comment/ opinion/ position statement	We all must rely on folks such as yourself, in such positions of power to do the “correct” and “life-sustaining” things toward the future of ALL involved	Comment noted.
16.3	Comment/ opinion/ position statement	Large-scale spraying of chemical pesticides and herbicides are not the answer. They may be faster but they are never better.	Comment noted.
17.1	Comment/ opinion/ position statement	I feel the proposed action is much too conservative to both stop the spread of invasive weeds and restore public lands to a long-term healthy ecosystem condition. The proposed action, Alternative 2, should be expanded to include much more land and include funding strategies for long term management and monitoring of National Forest lands.	Comment noted.

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17.2	Comment/ opinion/ position statement	I feel the DEIS and the proposed action are a good start, well planned and on the right track. I'm very confident there will be sufficient care taken with herbicide usage. The proposal is cost effective and appears to adequately protect humans and the natural environment.	Comment noted.
17.3	Comment/ opinion/ position statement	The cost and environmental impact of no action is much too weakly assessed and described. The impacts to the natural environment of doing nothing need to be displayed in terms the general public can relate to and understand. I recommend using similar allegories and facts used to describe the effects of wildfire on human and natural communities. The science must touch the hearts of the public to get their concern and support.	The No Action Alternative adequately described the current invasive plant treatments on the Forest and Scenic Area (Section 2.1.2). The impacts to the "natural environment of doing nothing" are described in Section 1.2.
17.8	Prevention	Knapweed is rampant and needs aggressive treatment. Unknowingly, hikers, bikers and their dogs are spreading weed seeds.	Comment noted.
17.9	Laws and regulations	The Columbia River Gorge Commission should be listed as a consulting partner. Their responsibilities in the Scenic Area should be coordinated with these weed control efforts. The Forest Service should give a special presentation to the Commission to consult with them and get their input.	The USDA Forest Service presented the project to the Columbia River Gorge Commission as part of the Scenic Area Manager's report in March 2006. The USDA Forest Service made a presentation at a Gorge Commission meeting on October 10, 2006. The Gorge Commission staff and each Commissioner were included in all public notifications. The Gorge Commission has been added as a consulting partner in Chapter 4.
18.1	Comment/ opinion/ position statement	The Hood River Soil and Water Conservation District strongly supports Alternative 2, the "Proposed Action Alternative" as the most viable solution to the invasive weed problem in the Columbia Gorge and Mt. Hood National Forest. As indicated by the expanding invasive weed problem in these areas, the current management practice is not working to control the problem. Alternative 3, the	Comment noted.

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		"Restricted Herbicide Use Alternative" is not a cost effective or realistic means to control the invasive weed problem.	
20.1	Comment/ opinion/ position statement	We support manual and mechanical invasive plant treatments, and the use of cultural (goat) treatments.	Comment noted.
21.1	Comment/ opinion/ position statement	The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Site-Specific Invasive Plant Treatments for Mt. Hood National Forest and Columbia River Gorge National Scenic Area in Oregon, Including Forest Plan Amendment #16, Clackamas, Hood River, Multnomah, and Wasco Counties, Oregon. The Department does not have any comments to offer.	Comment noted.
23.5	Early Detection / Rapid Response strategy	The Forest Service may not exempt itself from the requirements of NEPA by substituting its "Emergency Detection and Rapid Response" plan for national law. The Forest Service, claiming that "the NEPA process does not allow for rapid response," (DEIS 2-33), has set up a method for permitting herbicide treatments to be used on all land allocated to the forest and any plant species found to be invasive, including those not listed among the nineteen in the DEIS. This is a disturbing prospect for the following reasons. First, it is estimated that the 2004 survey only looked at about 50% of those forest lands likely to be infested with invasives. (DEIS 1-12). Second, new populations of plants are likely to have developed in the 2 year interim since 2004. That leaves, disappointingly, thousands of acres of potentially infested land unaccounted for. "Combining the known infestations (13,000 acres), future estimate (13,000 acres), and expansion acres	The EDRR is based on the premise that the impacts of similar treatments are predictable, even though the precise location or timing of the treatment may be currently unpredictable. The current inventory is likely representative of future infestations. The EDRR is not exempt from the requirements of NEPA. The requirements of NEPA and scientific analysis are incorporated into the EDRR using the known infestations, treatment areas and analysis conducted in Chapter 3. The methodology includes a consistency analysis (See Figure 1-4) to determine if the sites identified under the EDRR and the anticipated environmental effects fall within those analyzed in this EIS. If the anticipated environmental effects are not analyzed in this EIS, new NEPA would be required (See Section 1.3). The EDRR is also summarized as three implementation project design criteria (PDC), which are incorporated in both action alternatives. The PDC are <u>not</u> optional and are incorporated in the effects analysis (See Section 2.2).

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		(4,000), the total landscape assessed to be treated is 30,000 acres on the Forest and Scenic Area over the next 15 years." (DEIS 1-12). This means that over *half* of forest lands infested with invasive plants may be treated with herbicides without following the careful scientific analysis mandated by NEPA. It is possible for the Forest Service to both follow the law and implement creative solutions to the invasives problem – if it would look seriously at such plans of action as a Better Management Alternative, and refuse to immediately reject suggestions to "suspend…logging projects until a comprehensive EIS is completed that fully addresses the existing problem and 'root causes'" of invasive plant colonization (DEIS 1-26). The invasive plant crisis becomes partly the Forest Service's own making when it refuses to take a hard look at the true causes of the problem and allows constant re-infestation of forest lands.	In part, the EDRR was developed because the time necessary to complete new and/or additional analysis can take six months to a year. In that time period, the invasive plant population could expand, treatment costs could increase and the opportunity for eradicating/controlling the invasive plant population could be lost. In addition to the methodology established in this EIS, the USDA Forest Service Handbook 1909.15, Section 18 addresses new information and changed circumstances. Section 18.1 states: "If new information or changed circumstances relating to the environmental impacts of the Proposed Action come to the attention of the responsible official after a decision has been made and prior to completion of the approved program or project, the responsible official must review the information carefully to determine its importance. If, after an interdisciplinary review and consideration of new information within the context of the overall program or project, the responsible official determines that a correction, supplement of revision to an environmental document is not necessary, implementation should continue. Document the results of the interdisciplinary review in the appropriate program or project file. If the responsible official determines that a correction, supplement, or revision to an environmental document is necessary, follow the relevant direction in Sections 18.2-18.4." The consistency determination of the EDRR is designed to meet this regulation. Finally, the EDRR is consistent with recommendations presented in "Adaptive Management – A Strategy for Site Specific Environmental Analysis When Events and Circumstances Are Uncertain" (Beard & Carbone, 2001). The EDRR discussions in Sections 1.3, 2.1.3 and 2.1.4 have been modified based on the comments received. Also, see response to Comment 23.2 (Issue: Prevention).

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23.13	Analysis	Throughout the DEIS, the Forest Service asserts that the Proposed Action will result in improved water quality and protection of animal life, including human life. The DEIS, however, focuses on the long term goal and not the short term effects that may hamper those goals. 40 C.F.R. 1508.7 states that the agency must analyze not only the direct impacts of a proposed action, but also the indirect and cumulative impacts of "past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions." While the Forest Service does include some analysis on the future effects, the DEIS gives too much credit to the long term goals of restored ecosystems, while downplaying the short term effects – such as destruction of desirable insect and animal species, or water contamination -- that may make the long term goals impossible.	The EIS analyzes and discloses short-term, long-term direct, indirect, and cumulative effects of the proposed invasive plant treatment methods. When effects are anticipated by a treatment method, the EIS discloses the impacts. The PDC were developed to minimize or eliminate the negative effects of treatment. Also, the EIS discloses that there is not sufficient scientific information to make authoritative statements. These analysis and disclosures are throughout the document. (Example: Section 3.11.5.6 Oregon Slender Salamander) Water quality: The potential adverse effects of the action alternatives on dissolved oxygen, water temperature, stream turbidity, peak flows, low flows, water yield, and water chemistry are presented in Section 3.9. For example, the adverse effects include potential to disturb or displace soils, making the soil more vulnerable to erosion. The PDC minimize any potential adverse effect; as such the impacts to water quality would be negligible. Wildlife: Section 3.11 in the EIS discloses the potential adverse effects, including the loss of individuals. All of the herbicides in this EIS are excreted rapidly (often within 24 to 48 hours), and do not accumulate up the food chain. This reduces, but does not eliminate, the potential for effects to wildlife species. By properly implementing the Invasive Plant ROD standards (2005b), and PDC (Section 2.2), these effects largely should be avoided. Human Health: As Section 3.5 discusses, all potential impacts to human health and safety have been fully mitigated. As such, there are no short- or long-term effects to human health.

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23.16	Toxicology	The risk assessments for surfactants, adjuvants, and inert ingredients are incomplete or unavailable. It is alarming that human beings will be exposing themselves and their environment to chemicals whose effects have never been thoroughly studied. Moreover, the public has no idea what amount of these supposedly innocuous chemicals is being applied to public lands. The EIS does not estimate the number of acres treated with surfactants, adjuvants or inert ingredients for each alternative because only limited use information is available on these chemicals. Additionally, various herbicides potentially could be used at any treatment area, so the adjuvant, surfactants and inert ingredients used may vary. Again, the Forest Service must not make the mistake treating the symptoms of a disease (invasive plant colonization) without eradicating the disease itself (less than perfect management practices).	Section 3.3 discusses surfactants, adjuvants and inert ingredients. Section 3.3.3 discloses the incomplete and unavailable information related to these chemicals. Risk assessments considered active ingredients, additives, surfactants, metabolites and inerts. Uncertainties are appropriately addressed through PDC that limit the rate, type and method of herbicide application sufficiently to eliminate exposure scenarios that would cause concern. Section 3.5 found that there were no impacts from chemicals analyzed (including active ingredients, additives, surfactants, metabolites and inerts) to humans when invasive plant treatments were completed in conjunction with required PDC. Table 2-7 provides information on the typical application rate of the NPE surfactant. Each resource area in Chapter 3 analyzes the impacts of surfactants. Also, see response to Comment 23.2 (Issue: Prevention).
23.23	Laws and regulations	The Forest Service must comply with the Management Plan for the Columbia River Gorge National Scenic Area. Forest Service land in the NSA is predominantly designated Special Management Area (SMA) Forest or Open Space. In either case the Forest Service must follow the general resource protections guidelines for scenic, natural, cultural, and recreation resources. Revised Management Plan (RMP) at II-38 & II-58. The proposed action should be classified as a resource enhancement project and must comply with the guidelines for Resource Enhancement Projects. RMP at II-38 & II-58.	Appendix C provides a determination of consistency of the project with the Management Plan for the Columbia River Gorge National Scenic Area, as revised. It addresses the applicable resource protection guidelines. The project has been determined to be a resource enhancement project. Appendix C addresses the applicable Resource Enhancement Project guidelines. The project does not need to comply with the Special Management Area (SMA) Forest Practice guidelines because it does not meet the glossary definition of a forest practice. The project does not affect native forest tree or shrub species; the project affects nonnative shrub and herbaceous species.

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		Because this would be a project "conducted on or pertaining to forest land and relating to forest ecosystem management" the Forest Service must also comply with the Forest Practice guidelines. RMP at II-38 & II-58; RMP Glossary at 9. For any site where noxious weed treatment is proposed the Forest Service must also consult the applicable SMA Open Space plan. If a treatment site lies within an area that does not have a completed SMA Open Space plan then all treatment must comply with the noxious weed treatment provisions in the RMP. RMP at II-59.	Appendix C has been revised to address consistency with SMA Open Space Plans.
24.1	Comment/ opinion/ position statement	The Oregon Dept. of Agriculture (ODA) strongly supports the proposed action, that is less restrictive of the uses of herbicide and is more effective at controlling and reducing invasive weed infestations while promoting and restoring healthy native communities and their natural functions.	Comment noted.
24.4	Comment/opinion/ position statement	Despite a considerable body of data on acute exposure effects from the proposed list of herbicides, it is important to recognize that the chronic and sublethal risks are not yet well characterized. Because of these unknown risks, we encourage use of non-chemical alternatives with known risks wherever feasible. DEQ believes that use of non-chemical control, such as biological and cultural control should be considered first for treating widely spread invasive species infestations.	Comment noted.
24.5	Early Detection / Rapid Response strategy	A flow chart that describes the decision making process would be helpful for land managers to consider trade-offs.	The decision key (Figure 1-4) for the EDRR has been expanded to incorporate treatment of known and future infestations. The decision key outlines treatment methods preference, site conditions, implementation, monitoring, and restoration.

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26.4	Treatment methods	Page 2-23 of the DEIS indicates that the proposed alternative would utilize an Integrated Weed Management (IWM) strategy. We encourage the FS to embrace the full suite of options available to treat invasive plants, including biological controls and prescribed fire. Where herbicides are used we recommend the FS review progress on an annual basis toward reducing reliance on herbicides.	Section 2.1.3 addresses non-herbicide treatment methods that would be used in combination with herbicides. The effectiveness of the treatments would be reviewed and re-treatment needs considered each year (see Figure 1-4). Biological control agents have already been analyzed by the U.S. Department of Agriculture, Agricultural Plant Health and Insect Service (APHIS). The Oregon Department of Agriculture releases biological control agents for all land ownerships across the State of Oregon. Also, prescribed fire was not found to be the most effective treatment method for any of the invasive plants currently found within the Forest and Scenic Area (see Table 2-3 and Appendix G). As such, this analysis does not consider prescribed fire as a treatment method and prescribed fire is outside the scope. Finally, Each invasive plant treatment site would be either actively or passively restored with native plants, as defined in Appendix F. The restoration effects would be important to ending the continued reliance on herbicides in the future.
26.8	Treatment methods	Expand the discussion of site-specific prescriptions into a decision key. This would be helpful both in terms of understanding the document, and ensuring consistency in how future infestations are treated. This decision key should prioritize available control tools and clearly define the basis for moving from one tool to the next. Every control option has pros and cons that need to be carefully considered when deciding which control to use.	See response to Comment 24.5 (Issue: General Comments on DEIS/Purpose & Need).

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26.9	Early Detection / Rapid Response strategy	Page 1-6 of the DEIS indicates that the FS has surveyed approximately 50% of the areas likely to be infested. The DEIS should give some discussion to how treatment sites in the remaining, uninventoried areas will be identified. Given limited resources, consideration should be given to how to best utilize existing tools (NRIS/Terra database) and existing monitoring programs in order to systematically identify new infestations.	Identifying new infestations, utilizing existing tools and monitoring programs, and training staff in plant identification would all be considerations in implementation. See response to Comment 17.6 (Issue: Monitoring and Maintenance).

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Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
12.2	Prevention	We have a lot powerlines that come through from Bonneville that allow an easy transfer of weed seeds.	See response to Comment 11.6 (Issue: General Comments on DEIS/Purpose & Need).
18.4	Prevention	The importance of proper cleaning of equipment before entering and leaving infested sites cannot be emphasized enough. Equipment should include everything from clothing and shoes to spray equipment and vehicles.	PDC B.5. requires that "equipment used in off-road operations for invasive plant treatment activities would be properly cleaned prior to entering National Forest System land and upon leaving infested sites. Also, an herbicide transportation and handling plan would be required to ensure spay equipment is properly cleaned (see PDC B.2.). In addition, both the Forest and Scenic Area are implementing new prevention standards and guidelines through the adoption of the Invasive Plant ROD (2005b), which took effect in March 2006 (Appendix A). Also, both the Forest and Scenic Area have local prevention standards contained in Appendix D. Both sets of standards include specific requirements for cleaning of equipment.
22.2	Prevention	The best way to eliminate the spread of invasive plants is to discontinue road building and other ground disturbing activities.	See response to Comment 23.2 (Issue: Prevention).
23.1	Prevention	The DEIS is thorough and the examined alternatives have been well-researched. However, the Commenters are still concerned that the DEIS does not do enough to resolve the invasive plant problem. The project is not entirely in compliance with the applicable laws, and it should be revised or withdrawn entirely until those laws can be observed. Most importantly, the Forest Service must recognize that the true root of the invasive plant problem is improper forest management, and that even the most responsible use of herbicides to control invasive plant populations will only relieve the symptoms of the disease – not ultimately cure it.	This project is in compliance with all applicable laws and regulations. See Section 1.4 – Management Direction and Section 3.15 – Specifically Required Disclosures. See response to Comment 23.2 (Issue: Prevention) for discussion of forest management activities.

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23.2	Prevention & laws and regulations	This DEIS fails to abide by Section 1502.14 of NEPA, if it fails to consider a reasonable alternative. While it analyzes a Restricted Herbicide Use Alternative, it fails to analyze an alternative which includes better land management practices (Better Management Alternative) to avoid further invasive plant infestation. Such an alternative would meet the purpose and need of the project by describing herbicides that should be available for vegetation treatment on public lands, and, conditions and limitations that apply to herbicide use – including using those herbicides as a last resort, after management alternatives and non-herbicide alternatives have failed. In failing to adequately consider prevention as an alternative, the Forest Service violates NEPA, which requires that the Forest Service meet the requirement for high quality scientific analysis when producing an EIS. 40 C.F.R. § 1502.22. Without addressing these causes of the introduction of invasives – in fact *refusing* to take a "hard look" at these causes using such scientific analysis – the Forest Service cannot hope to meet a stated purpose of the project: "to eradicate, contain and control invasive plant infestations." In restricting the range of alternatives evaluated and considered, the Forest Service violates the very purpose of NEPA's alternative analysis requirement, which is to foster informed decision-making and full public involvement. 42 U.S.C. §§ 4331, 4332(2)(E); 40 C.F.R. § 1508.9(b). The public should be made aware if there are safer, more effective, or more creative alternative management plans in existence from which to choose. Thus the existence of a viable but unexamined alternative can ultimately	An alternative emphasizing prevention, including "better land management practices", was considered in the Invasive Plant FEIS (2005a) and ROD (2005b). This site-specific EIS tiers to theses documents as stated in Section 1.4. The USDA Forest Service Handbook 1909.15 Section 22.31 states: "Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. (40 CFR 1502.20)." As a subsequent action, this site-specific project-level EIS does not need to repeat analysis. Alternative B in the Invasive Plant FEIS (2005a) analyzed a balance between prevention and treatment. The alternative would have increased emphasis on reducing conditions related to land uses and activities on National Forest System lands that contribute to invasive plant introduction, establishment and spread. Herbicide use was a "tool of last resort" in this alternative. Alternative B in the Invasive Plant FEIS (2005a) represents the "Better Management Alternative" discussed in this comment. Prevention practices on the Forest and Scenic Area would follow the prevention standards analyzed and

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		render an EIS inadequate. *Alaska Wilderness Recreation and Tourism v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995).	adopted in the Invasive Plant ROD (2005b), which includes guidance on preventing the introduction and spread of invasive plants through land management activities. For example, prevention practices specially would be considered in all land use assessments as per Standard 1. These standards are included in Appendix A. Further, prevention alone does not meet the purpose and underlying need for action, as explained in Section 2.5.1. Part of the stated purpose is "to eradicate, contain and control invasive plant infestations," as stated in the comment. The treatment strategies of eradicate, contain and control as defined in Section 1.2 include treating a known infestation in some way. Prevention is defined as: "To detect and ameliorate conditions that establishment, or spread of invasive plants." Prevention alone, therefore, does not incorporate the underlying need for treatment as defined by the purpose and need for action. Although prevention does not meet the purpose and need, it is an important component of invasive plant management and integral to implementing successful treatments. The Forest and Scenic Area have a set of prevention standards, in addition to the Invasive Plant ROD (2005b) standards, that are incorporated into management activities on both units. These standards are included in Appendix D. See response to Comment 23.7 (Issue: Prevention) for discussion of range of alternatives.
23.3	Prevention	In contrast to a Better Management Alternative, the Proposed Action in the DEIS merely describes the disembodied use of herbicides for eradication and control. This action alternative is given a detailed analysis which seems much like a justification for its choice – especially when considering that the management plans of Alternative C, Reduced Herbicide Use Alternative, are given far less	Alternative 3 – Restricted Herbicide Use Alternative modifies the Proposed Action to reduce the risks associated with herbicides (See Section 2.1.4). As a modification of the Proposed Action, rather than an entirely new alternative, the analysis for Alternative 3 uses the analysis completed for the Proposed Action as a starting point.

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		attention. In fact, rather than analyzing what can be accomplished by Alternative C -- the less herbicide-intensive Action and one more comparable to a Better Management Alternative – the Forest Service focuses more on what the Action does not do. For example, the Forest Service repeatedly concludes that such a plan would not provide effective control of invasive plants over as great an acreage as Alternative B. It claims that manual and mechanical means of control have been and will be ineffective. However, there is no data to conclusively show that herbicides are the perfect solution. Alternative C offers the positive consequences of *less* potential for harm to human beings, flora, and fauna. Yet the Forest Service glosses over this fact in its abstract, stating that "all of the action alternatives protect human health and the environment," and makes similar statements throughout the body of the DEIS.	Alternative 3 does offer the positive consequences of less potential for harm to human beings, flora and fauna. These methods, however, are less effective. The effectiveness of manual, mechanical, and cultural methods is discussed in the No Action Alternative analysis (Section 2.1.2) and Section 3.6 Botany and Treatment Effectives. Both the positive and negative impacts of Alternative 3 are analyzed and discussed in each of the resource areas in Chapter 3 of the EIS.
23.4	Prevention	The Forest Service fails to analyze the active, positive control of invasive species that has been and can be accomplished with, 1) prevention of the conditions that favor the introduction, establishment, and/or spread of invasive species, and, 2) passive treatments in conjunction with, or sometimes obviating the need for, 3) use of herbicides. In order to effectively analyze a less herbicide intensive alternative, the Forest Service needs to examine what has happened to invasive species and lands threatened with invasive species throughout the seventeen western states and elsewhere in the world when, a) prevention-focused management, invasive species treatment and restoration of ecosystems have been practiced together, and, comparatively, b) where herbicide treatments have been employed without altering conditions that have favored	All alternatives analyze an integrated weed management (IWM) approach, where herbicides are only one proposed tool for treating invasive plants. IWM is a process by which one selects and applies a combination of management techniques (manual, mechanical, and herbicide for example) that, together, would control a particular invasive plant species or infestation efficiently and effectively, with minimum adverse impacts to non-target organisms. It is species-specific, site-specific and designed to be practical with minimal risk. See responses to Comment 23.2 and 23.7 (Issue: Prevention) for more information.

ISSUE: Prevention			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		invasive species. When preventive actions and restorative treatments are part of the judicious use of herbicides, the latter will have far more lasting, positive results (i.e. efficacy) than spraying invasive species while leaving intact the activities that fostered the introduction, establishment and spread of invasive species. Yet this DEIS insists on disconnecting herbicide use from any other management on Forest Service lands and then purports to estimate the benefits of herbicide spraying. The benefits/costs of herbicide use alone versus herbicide use limited and conditioned by priorities for prevention and passive and/or active restoration must be analyzed in the DEIS.	
23.6	Laws and regulations	The DEIS Fails to Adequately Protect Plant and Soil Resources as Required by the National Environmental Policy Act, the National Forest Management Act, and the Endangered Species Act. 1. The DEIS alternatives fail to best protect plant and soil resources because they do not address the underlying cause of the spread of invasive plants. Ostensibly, the goal of the Forest Service is to effectively control the spread of invasive plants across public lands. However, the DEIS fails to consider all reasonable alternatives which would effectively provide this control. Specifically, it rejects alternatives which equally emphasize both the control of the symptoms of the spread of invasive plants (meaning, the eradication of invasive plant populations and the restoration of damaged plant communities) and the initial prevention of such invasions.	See response to Comment 23.2 and Comment 23.3 (Issue: Prevention).

ISSUE: Prevention			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
23.7	Laws and regulations	Disregarding viable alternatives that might more effectively protect plants and soils is inconsistent with NEPA's requirement that a range of alternatives be thoroughly considered. The Forest Service seems enthusiastic about experimenting with new chemical treatments of invasive plants, to the exclusion of other alternatives. It states that "although the first preference is non-herbicide, non-ground disturbing methods, this EIS focuses analysis on herbicide treatments." (DEIS 1-11). By claiming other treatment methods are/were ineffective, the Forest Service becomes automatically biased toward the Proposed Action – one that is more dangerous to plant and soil health and would expand existing herbicide use than less favored alternatives. `The Forest Service must remember that in determining the scope of alternatives to be considered, the Council on Environmental Quality (CEQ) advises that the emphasis [should be] on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.	The EIS considered 7 alternatives; the alternatives included prevention only and no herbicide use. These alternatives were dropped from further analysis (See Section 2.5) because neither alternative meets the purpose and need for this project (See Section 1.2). Additionally, the EIS considered the No Action Alterative which analyzes the impacts from treating invasive plants with limited herbicide use. The range of alternatives considered are: • No Action Alternative (limited herbicide use); • Proposed Action; • Restricted Herbicide Use Alternative; • Prevention Only; • No Herbicide Use; • No Amendment to the Mt. Hood Forest Plan; • Maximize Cost Efficiency; and, • Maximize Worker Jobs. The maximize cost efficiency alternative (alternative considered, but dropped from further analysis) is essentially the same as the Proposed Action (See Section 2.5). All other alternatives considered a level of herbicide use less than considered in the Proposed Action. See responses to Comments 23.2 and 23.3 for more information (Issue: Prevention).

ISSUE: Prevention			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
24.3	Prevention	DEQ encourages the USFS to consider adopting preventative measures to avoid infestation of new invasive species population on national forests, such as limiting OHV uses and closing or restricting access to non-essential roads where needed.	See response to Comment 23.2 (Issue: Prevention). The Forest will begin an OHV planning effort, which will designated specific OHV areas while closing other areas to OHV use, in fiscal year 2007; the Scenic Area will begin a similar effort in fiscal year 2008. Both planning processes consider the impacts of OHV on a variety of natural resource areas, including invasive plants.
26.6	Prevention	An effective invasive plant management program must include both active control/eradication of existing populations and prevention of new populations. There are important vectors for spread of invasives that are not addressed in existing standards and guidelines. Specifically, the FS should consider adopting a site-specific standard prohibiting cross-country use of off-highway vehicles and limiting the use of OHVs to designated routes and in designated areas, and closing, decommissioning, or seasonally restricting access to non-essential roads that are high-risk vectors for spread of invasive plants.	See response to Comment 18.4 and Comment 23.4 (Issue: Prevention)

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
5.1	Outside the scope	I believe that Japanese Knotweed should be rated as "T" on the noxious weed category list. It grows on my lot nearly 11' tall within the span of 5 to 6 weeks, and is taking over the entire lot between my cabin on Rd 12 Lot 79 and Still Creek. I have enclosed photos taken last year of a 3 week old growth. I would like to see the forest service develop a plan to irradiate this menace asap.	The Oregon Department of Agriculture (ODA) determines ratings for invasive plant species in the state. The ODA lists Japanese knotweed as a “B” designated weed (http://oregon.gov/ODA/PLANT/WEEDS/docs/weed_policy.pdf Invasive knotweeds (e.g., Japanese, giant, Himalayan) are considered high-priority species to be treated within the Forest and Scenic Area because of their ability to rapidly spread, drastically alter native plant communities, and negatively affect healthy functioning ecosystems. The EIS proposes to treat all presently known and future knotweed populations with the herbicide, aquatic glyphosate. Herbicide treatment has been demonstrated to be the most effective method for treating knotweeds.
11.2	Comment/ opinion/ position statement	I do not support the No Action alternative. Current herbicide use of only glyphosate, triclopyr, picloram and in some cases dicamba is unacceptable. Only two modes of action are represented and all herbicides are old chemistry requiring a high dose of active ingredient to control the weeds listed in the DEIS.	Comment noted.
11.7	Correction	Pg1-4 Within the weed list, I suggest changing Japanese knotweed (Polygonum cuspidatum) to Knotweed species (Polygonum spp). Several species of Polygonum are found in Oregon and they are rumored to have cross bread. All are extremely invasive and difficult to control. I suggest the change to avoid restrictions on control in case a knotweed plant has been miss identified as cuspidatum, when really Bohemian or a hybrid.	Alternatives 2 and 3 allow treatment of invasive plant species through either the identified treatment areas or the EDRR. The correction has been made throughout the document to prevent confusion.

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
11.8	Correction	Pg1-11 #2, first bullet. The last herbicide choice indicated appears to be a misspelling. This should be “aquatic imazapyr”. There is no aquatic form of imazapic. This is correct on pg2-23.	The correction has been made.
11.9	Laws and regulations	Pg1-11 #2, third bullet. Rates of triclopyr and picloram can be greatly decreased, possible reduction by half, with the addition of OVERDRIVE® herbicide. OVERDRIVE is a combination of dicamba plus diflufenzopyr. Addition of 2oz to 6oz per acre of OVERDRIVE can reduce triclopyr and picloram rates by half, resulting in overall decrease in active ingredient. In addition, restriction to the amine form of triclopyr reduces control for some species, addition of OVERDRIVE to triclopyr can increase that control to equal or improved over triclopyr amine alone.	The Invasive Plant ROD (2005b) adds invasive plant management direction to all National Forest Land and Resource management Plans in the Pacific Northwest Region (Region Six). Standard 16 states: “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.” This site-specific EIS tiers to these standards. As such, only the ten active ingredients listed in this standard are proposed for use on the National Forest System lands, as such dicamba and diflufenzopyr are not approved for use.
11.10	Botany	Pg 2-20 Mechanical Methods In addition to mowing, etc. being used with herbicides to prevent root sprouting or mowing being used after herbicides to aid in further control, mowing is effective on species such as reed canarygrass or Japanese knotweed to remove old growth that could intercept herbicide spray. Mowing will also stimulate root sprouts that help deplete root reserves prior to an herbicide application. Allow the plants to re-grow to at least 2/3 their original height and spray the new shoots for a more effective treatment.	The comment is correct: mowing is used to reduce vegetative materials and to promote vigorous growth in order to decrease the amount of herbicide application needed and to increase herbicide effectiveness. This change has been noted in Table 2-2.

<table>
<tr><th colspan="4">ISSUE: Additional Technical Issues</th></tr>
<tr><th>Comment Number</th><th>Comment Summary/Topic</th><th>Comment Text</th><th>Response to Comment</th></tr>
<tr><td>11.11</td><td>Treatment methods</td><td>Pg2-22 Herbicide Methods, Hand/Selective (e), Pg3-4 Japanese knotweed, Pg3-28

Spot herbicide treatment and broadcast herbicide treatment should be considered prior to stem injection treatments. Although stem injection has been promoted for control of knotweed with glyphosate and triclopyr, recent studies have shown the per ace rate applied typically far exceeds the EPA label rate of the herbicide. Stem injection should only be considered if stem density is low and total product used does not exceed EPA labels rates. Under no circumstance should imazapyr be applied by stem injection. Foliar treatment, spot or broadcast, of imazapyr can achieve 95% control. The following table was presented at the Western Society of Weed Science, March, 2006. Note the total Herbicide used per acre.

<table>
<tr><th>Treat-ments</th><th>Average # Stems /100 sq ft plot</th><th>Time to Treat 100 sq ft</th><th>Herbicide used per Acre</th><th>% Control</th></tr>
<tr><td>3 qts of Habitat</td><td>533</td><td>1.9 sec</td><td>3 qts</td><td>95</td></tr>
<tr><td>1% Habitat Solution</td><td>700</td><td>27.8 sec</td><td>25.7 oz</td><td>95</td></tr>
<tr><td>Rodeo 5 mls/stem</td><td>617</td><td>30 min to 2 hrs</td><td>354.9 gal</td><td>30 to 90</td></tr>
</table>
</td><td>Proposed treatment for knotweed sites include hand/selective (stem injection) and spot spraying with a backpack sprayer. The potential herbicides include glyphosate, triclopyr, and imazapyr. This combination of potential treatments allows any of the treatments that you discussed. The treatments would be chosen based on the size of the infestation and site conditions.

All proposed treatments are listed in Appendix F and all potential herbicides are listed in Appendix H.</td></tr>
</table>

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
11.12	Treatment methods	Pg2-30 Imazapyr General Uses/Known to be effective on: For each herbicide the list of weeds controlled is near accurate, I would strongly recommend adding knotweed to Imazapyr.	Table 2-6: Active ingredients and commercial herbicide names is meant to be illustrative and not all inclusive. Imazapyr is proposed as a treatment option for all knotweed sites and has been added to Table 2-6. See Appendix F for a summary of the proposed treatments for each species, and Appendix H for a list of herbicides proposed at each treatment areas.
11.14	Treatment methods	Pg2-35 Third Priority of Treatment. I am concerned about the treatment priority list as related to roadsides. Goat grazing listed as number one is not safe for roadsides. Mechanical should be unacceptable for roadsides, since this is a main mechanism of weed spread. Herbicide use, as immediate control, should be a first consideration for roadside weed treatment.	The treatments in Table 2-8 are possibilities based on site-specific conditions. Thus, the comment is correct and herbicide treatment may be the first choice. The table has been changed to reflect the treatment order preference discussed in Section 1.3.
11.15	Botany	Pg2-41 & 42 All the assumptions made are very realistic. I am only concerned that seed life was not considered. After the 3 to 5 years to rid the area of established plants, long-term plans should include monitoring the area for the expected documented or observed seed life of the species. Seedling or first year plants can often be hand pulled.	Seed life/seed banks must be considered when treating invasive plants. Seed longevity in the soil is very long for some species: 5 to 10 years for orange hawkweed, St. Johnswort, and as much as 75 to 80 years for Scotch broom. See Section 3.6 for more information. Monitoring would be required to ensure establishment of desired vegetation as indicated in Chapter 2, Section ”Site Restoration Strategy”. Restoration and monitoring are incorporated into both action alternatives projects; therefore, both would continue for the life of the project (10 to 15 years).
11.16	Toxicology	Pg3-10, 3.3.1. Herbicide Risk Assessment, 3rd paragraph This section is misleading, stating that metabolites and inert ingredients are not as extensively tested as active ingredients. Although they are not as extensively tested, they are still extensively tested. The reduced toxicology focus can be attributed to	The statement is intended to reflect the fact that metabolite and inert ingredients are not required to be tested independently from active ingredients. The risk assessments reviewed inert ingredients, even those that may not be revealed to the public. Risk assessments considered additives, surfactants, metabolites and inert ingredients, and PDC address

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		the much lesser degree they occur or are introduced in to the environment. A great deal of the cost to register a herbicide is identifying, isolating, and testing the metabolites. All inert ingredients are revealed to EPA and categorized by toxicology properties to be revealed to the pubic in 5 categories. Actual inerts are not revealed to the public because they are proprietary information. Few impurities are in modern manufacturer products due to quality control. Generic products may have a higher level of impurities.	use of surfactants shown to have possible adverse effects. Information regarding these chemicals is discussed in Section 3.3.2.
13.2	Correction	The draft EIS is pretty clear that precautions are to be taken to prevent application of herbicides to water, either directly or indirectly. Yet Table 2-10 indicates that an existing Standard and Guideline related to "Water (FW-076)", which I believe states the same objective, is proposed to be amended as part of this action. The language in that table gives the impression that "potentially detrimental materials" could be allowed to enter waters under the proposed standards. Is there more to the existing Standard and Guideline that requires its amendment? If so, perhaps there is a better way to amend the statement in Table 2-10 to avoid this misinterpretation.	The wording of the Forest Plan amendment has been changed to read as follows. "Water (FW-076*b*): Potentially detrimental materials associated with invasive plant treatments should ~~management activities (e.g. pesticides, fertilizers, and road surface treatments) shall~~ be prevented from entering water or other areas not intended for treatment*, according to standards in the Pacific Northwest Region: Preventing and Managing Invasive Plants Record of Decision (2005).*" The Invasive Plant ROD (2005b) Standard 19 addresses water quality and aquatic biota (See Appendix A). While the amount of herbicides and adjuvants expected to reach water area expected to be extremely low, the USDA Forest Service cannot conclude with certainty that the levels of chemicals potentially reaching streams would be zero. However, the amount is expected to be "biologically meaningless," as explained in Sections 3.9 – Water Quality and 3.10 – Aquatic Organisms and Habitat.

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
16.2	Treatment methods	For these invasive plants use goats or the like. I'm talking about natural means of controlling or ridding our problems. Not using chemicals like pesticides/herbicides that only destroy our environmental habitats. If 2-300 of these pygmy goats were fenced around these proposed areas that need attention (and I've seen this done in places to eat the invasive English ivy like in Lake Oswego), the goats would be well fed, the problem gets solved in a natural way, the environment gets re-fertilized at the same time.	Goats can be very effective control agents and, in many circumstances, have minimal impacts. Goat grazing is proposed at two sites (#22-01 and #22-07), and may be considered at other sites in the future under the EDRR.
17.4	Treatment methods	Weed eradication treatments must be repeated over many years	The maintenance schedule would be determined based on the invasive plant species present, site conditions, identified treatment strategy, and adopted treatment method. Several invasive plant treatment prescription assumptions were made regarding maintenance for analysis purposes. These assumptions are outlined in Section 2.1.3. The assumptions include treatment for a minimum of 5 years, and retreatment up to three times per year.
17.5	Restoration & Monitoring	Follow up eradication treatments with native grasses and herbaceous plant seedings and plantings. These plantings should be repeated over multiple years. Monitoring should be planned to go on forever. Weeds never sleep.	In many cases additional plantings of seedlings may be required to get the desired outcome and monitoring would be required to ensure establishment of desired vegetation as indicated in Chapter 2, Section "Site Restoration Strategy". Restoration and monitoring are incorporated into both action alternatives projects; therefore, both would continue for the life of the project (10 to 15 years).

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
19.1	Comment/ opinion/ position statement	My comments relate mainly to the fact that a lot of this did not have to happen. I have noted scotch broom just starting to become established at sites in F.S. Region 6 and have called this to the attention of Forest Service employees in the districts involved. However, I found that they did not respond and I suspect the infestations grew from a few plants to a real problem. In the future, lets hit these problems before they turn into major disasters.	Comment noted.
19.2	Treatment areas	I note there are now scotch broom plants along the shoulder of highway 26 east of Rhododendron.	Three treatment areas are located in the Highway 26 corridor (sites #69-001, 69-016, and 69-030). Figure 2-1 and 2-6 are maps illustrating treatment areas along the Highway 26 corridor, and more information on the individual treatment areas is available in Appendix F. If the sites of concern are not included, additional sites and species (e.g., purple loosestrife) can be treated using the EDRR as described in Sections 1.3, 2.1.3, and 2.1.4.
23.15	Laws and regulations	The Forest Service must comply with the applicable requirements for any invasive plant treatment within the National Scenic Area. Specifically, the Forest Service must determine the exact location of the water resource boundary and respect water resource buffer zones for any project location that may affect streams, ponds, lakes, wetlands, or other riparian areas in the Special Management Areas. RMP I-83–86.	The project is designed to meet the water resource boundary guidelines. The PDC of Section 2.2 defines treatment buffers and restrictions based on the herbicide and treatment method prescribed. Therefore, the exact location of water resource buffers do not need to be determined, as the project would enter the Management Plan water resource buffers. A no-practicable alternatives test and a water resource mitigation plan have been completed (See Appendix C).

ISSUE: Additional Technical Issues			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
25.1	Comment/opinion/ position statement	Strategies of eradication that have the least impact on the environment are preferred. However, the only known successful control of Japanese Knotweed at this time requires herbicides. Biological control agents are not yet available, and digging, cutting, and covering are ineffective. A combination of stem injection and foliar application results in approximately 80% reduction of stems in one season. Immediate action is needed to address this invasive plant	Comment noted.

ISSUE: Monitoring and Maintenance			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
17.6	Monitoring	Create volunteer organizations to help with this effort, especially the long term monitoring	The USDA Forest Service would explore various methods of implementation. Specific implementation strategies are outside the scope of this EIS. Also see response to Comment 18.3 (Issue: Monitoring and Maintenance). The USDA Forest Service has active volunteers involved in various land management efforts, including monitoring activities. Such opportunities would continue to be pursued where volunteers have interest.
18.3	Monitoring & treatment methods	One concern regarding the success of Alternative 2 as outlined in the DEIS is the minimal elucidation of details regarding a monitoring and maintenance schedule. While the DEIS does indicate that follow-up will be performed for 5-15 years, no detail is given as to the frequency of treatment or monitoring. All invasive weed eradication takes years of follow-up maintenance to be successful. A commitment to the follow-up treatment is just an important as the initial action.	More information was added to the decision key (Figure 1-4) and monitoring framework (Section 2.3). The maintenance schedule would be determined based on the invasive plant species present, site conditions, identified treatment strategy, and adopted treatment method. Several invasive plant treatment prescription assumptions were made regarding maintenance for analysis purposes. These assumptions are outlined in Section 2.1.3. The assumptions include treatment for a minimum of 5 years, and retreatment up to three times per year.
26.5	Analysis & monitoring	We appreciate these cumulative impacts findings (page 3-6, DEIS) being included in the DEIS, and encourage the FS to use this knowledge to inform the cumulative impacts assessment. The FS should also look across the landscape and identify what assumptions will be used with respect to adjacent non-Forest/Scenic Area lands, as well as the mechanisms for cooperating with other land owners to disclose the sum of individual effects of all projects on the local environment. Cumulative effects analysis should also consider appropriate mitigation strategies to minimize adverse and to enhance beneficial cumulative	Section 3.4 – Basis for Cumulative Effects discusses the information used to inform the cumulative effects analysis. Estimates of herbicide use for each county as well as orchards in Hood River are used to inform the analysis. The cumulative effects analysis assumes that adjacent lands are effectively treated in cooperation with this project. This section was updated to provide additional information. Funding and implementation methods, including mechanisms for cooperation, for invasive plant management on the Forest and Scenic Area are outside the scope of this document. Funding and implementation would vary each year as budget levels

ISSUE: Monitoring and Maintenance			
Comment Number	**Comment Summary/Topic**	**Comment Text**	**Response to Comment**
		effects. Monitoring and evaluation of the mitigation strategies' effectiveness would also be an important component of the proposed action, especially if data obtained from such monitoring can be used to modify land management and to promote cost effectiveness in the expenditure of mitigation resources.	change, information and knowledge concerning invasive plants improves, and invasive plant infestations are reduced. The decision key (Figure 1-4) and monitoring framework (Section 2.3) discuss how monitoring would be incorporated and used in this project.

Z.4. Agency Comments

This section contains comment letters received from governmental agencies (federal, state, and local). The entire letter is included in this section per FSH 24.1.3. The responses to the substantive comments identified in these letters are contained in Section Z.3 of this Appendix.

Letter 13: City of The Dalles

06/19/2006 01:12 PM
"Dave Anderson" <danderson@netcnct.net>
To "Jennie O'Connor" <jmoconnor@fs.fed.us>
cc
Subject Invasive Plant Treatment draft EIS

Jennie-

As Water Quality Manager, and Watershed Manager, for City of The Dalles, I am writing to ask a couple quick questions regarding the draft EIS currently out for public comment. I'm also trying to decide if I should be planning to go to Sandy this evening for the public meeting.

First, before my questions, let me say that the City supports efforts to control invasive plants on forest lands including treatments in municipal watersheds. And overall, I am impressed with the proposed action outlined in the draft EIS. So, with that, here are my questions.

1. The draft EIS is pretty clear that precautions are to be taken to prevent application of herbicides to water, either directly or indirectly. Yet Table 2-10 indicates that an existing Standard and Guideline related to "Water (FW-076)", which I believe states the same objective, is proposed to be amended as part of this action. The language in that table gives the impression that "potentially detrimental materials" could be allowed to enter waters under the proposed standards. Is there more to the existing Standard and Guideline that requires its amendment? If so, perhaps there is a better way to amend the statement in Table 2-10 to avoid this misinterpretation.

2. The draft EIS specifies that use of prescribed fire is outside the scope of this proposal. Would that prevent the use of hand torches in the treatment of puncturevine? From personal experience in an ag setting, one of the most effective treatments for relatively small areas of puncturevine where seeds have already been produced is to burn the ground with a hand torch (not a drip torch) to "roast the nuts". Would that be allowed?

Thanks for any clarifications that you can provide.

Dave Anderson
Water Quality Manager
City of The Dalles

Letter 18: Hood River Soil and Water Conservation District

Hood River Soil & Water Conservation District
3007 Experiment Station Rd.
Hood River, OR 97031
541-386-4588
Email: hrswcd@gorge.net

June 15, 2006

To: Jennie O'Connor, Invasive Plant EIS
Mt. Hood National Forest
16400 Champion Way
Sandy, OR 97055

Re: Hood River Soil & Water Conservation District Comments on Draft EIS

Dear Ms. O'Connor,

It was a pleasure to meet you at the recent open house in Hood River for the Draft EIS. I appreciate you spending the time to explain some of the alternatives being proposed for this area. I would like to take this opportunity to provide comment on the report.

The Hood River Soil & Water Conservation District strongly supports Alternative 2, the "Proposed Action Alternative" as the most viable solution to the invasive weed problem in the Columbia Gorge and Mt. Hood National Forest. As indicated by the expanding invasive weed problem in these areas, the current management practice (Alternative 1) is not working to control the problem. Alternative 3, the "Restricted Herbicide Use Alternative" is not a cost effective ($7.3 million for an estimated 60% efficacy rate as opposed to $4.3 million for an estimated 80% efficacy), or realistic means to control the invasive weed problem. Additionally, active invasive weed management is supported by many of the documents that drive the work of the Soil and Water Conservation District:

- One of the goals of the Hood River Watershed Action Plan is to "promote the preservation of native plant communities."
- The Hood River Watershed Assessment endorses the removal of invasive noxious weeds as a means to protect and enhance wildlife habitat.
- One of the recommended practices in the Hood River Agricultural Water Quality Management Area Plan is to control noxious weeds.
- The Hood River Soil & Water Conservation District's mission is to "protect, conserve and restore natural resources."

"To provide educational, technical and financial assistance to our community for the protection, conservation and restoration of natural resources."

Letter 21: U.S. Department of Interior, Office of Environmental Policy and Compliance

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 356
Portland, Oregon 97232-2036

9043.1
IN REPLY REFER TO
ER06/545

July 6, 2006

Jennie O'Connor
Mt. Hood National Forest
16400 Champion Way
Sandy, OR 97055

Dear Ms. O'Connor:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Site-Specific Invasive Plant Treatments for Mt. Hood National Forest and Columbia River Gorge National Scenic Area in Oregon, Including Forest Plan Amendment #16, Clackamas, Hood River, Multnomah, and Wasco Counties, Oregon. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Preston A. Sleeger
Regional Environmental Officer

Letter 24: Oregon Department of Agriculture

Oregon
Theodore R. Kulongoski, Governor

Department of Agriculture
Office of the Director
635 Capitol Street NE
Salem, OR 97301-2532
(503) 986-4552
FAX (503) 986-4750

July 13, 2006

Gary L. Larsen, Forest Supervisor
Mt. Hood National Forest
16400 Champion Way
Sandy, OR 97055

Daniel T. Harkenridge, Area Manager
Columbia River Gorge National Scenic Area
902 Wasco Ave
Suite 200
Hood River, OR 97031

Dear Gentleman:

The State of Oregon appreciates the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS) Site Specific Invasive Plant Treatments for Mt. Hood National Forest and Columbia River Gorge National Scenic Area in Oregon including Forest Plan Amendment #16.

The state of Oregon believes it is essential to protect the state's natural resources from invasive plants and noxious weeds. Invasive noxious weeds are causing significant environmental impacts and are costing Oregon millions annually in economic losses. The Mt. Hood National Forest and Columbia River Gorge National Scenic Area are essential partners in addressing Oregon's invasive noxious weed problems.

The state of Oregon supports an integrated weed management approach and believes in utilizing all tools available including chemical, mechanical, and biological control methods as well as prescribed fire for control projects. The State asks the USFS to minimize negative effects on the environment by considering site-specific criteria in developing decisions for the use of the most effective tools. In all cases, impact on water quality must be considered to avoid surface and ground water contamination and to protect the beneficial uses.

The state also supports the Early Detection/ Rapid Response (EDRR) strategy in order to aggressively control new invasive species in a timely manner in effort to minimize both of the invasive weeds and of herbicide use across the landscape.

The following are specific comments from three state natural resource agencies that include: Oregon Department of Agriculture, Noxious Weed Control Program (ODA), Oregon Department of Forestry (ODF), and Oregon Department of Environmental Quality (DEQ).

Letter 26: U.S. Environmental Protection Agency, Region 10

26

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

July 17, 2006

Reply To
Attn Of: ETPA-088

Ref: 06-033-AFS

Ms. Jennie O'Connor
Invasive Plant EIS
Mt. Hood National Forest
16400 Champion Way
Sandy, OR 97055

Dear Ms. O'Connor:

The U.S. Environmental Protection Agency (EPA) has reviewed the draft Environmental Impact Statement (DEIS) for the Site-Specific Invasive Plant Treatments on Mt. Hood National Forest and Columbia River Gorge National Scenic Area, including Forest Plan Amendment #16 (CEQ # 20060204) in Clackamas, Hood River, Multnomah and Wasco Counties, Oregon. We are submitting comments pursuant to our responsibility under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. We appreciate your consideration of these comments.

The Mt. Hood National Forest (the Forest) and Columbia River Gorge National Scenic Area in Oregon (the Scenic Area) are proposing invasive plant treatments on 208 sites (approximately 13,000 acres). The purpose of this project is to eradicate, contain and control invasive plant infestations, to reverse the negative impacts caused by invasive plants, and to restore healthy, native plant communities and functions at the impacted sites in a cost-effective manner that meets current management direction. The document considers three alternatives:

1. Alternative 1 – No Action. This alternative would continue current invasive plant management occurring under existing NEPA documents on the Forest and Scenic Area. A total of 1,235 acres would be treated annually. Of those, 600 acres would be treated with herbicide.
2. Alternative 2 – Proposed Action. Under this alternative the FS would undertake ground-based herbicide application plus manual and mechanical and cultural control, and combinations of treatments on about 13,000 acres. Of the acres treated, up to 12,950 could be treated with herbicide.
3. Alternative 3 – Restricted Herbicide Use. This alternative would reduce the number of acres treated with herbicide to 4,047 per year, but retain manual, mechanical and cultural treatments on all 13,000 acres.

Based on the information provided, we are rating the DEIS as EC-1 (Environmental Concerns - Adequate). An explanation of this rating is enclosed. EPA favors aggressive treatment of invasive plant infestations, but encourages the Forest Service (FS) to embrace the