



File Code: 1570-1

Date: June 9, 2003

Route To: (1570 - 215)

Subject: ARO Letter - Noxious Weed Treatment Project ROD - Bitterroot NF - Appeal #03-01-00-0052 - The Ecology Center, Inc., et al.

To: Appeal Deciding Officer

This is my recommendation on disposition of the appeal filed by Jeff Juel, on behalf of The Ecology Center, Inc.; Alliance for the Wild Rockies; and Friends of the Bitterroot protesting the Noxious Weed Treatment Project Record of Decision (ROD) on the Bitterroot National Forest.

The Forest Supervisor's decision adopts Alternative E-modified, which includes:

- The buffer zone will be expanded for the ground application of Picloram to 50 feet from the surface water or to the edge of sub irrigated land, whichever is the greater distance from live water;
- The total land treated with herbicide under this decision will not exceed 35,445 acres;
- The Forest will work with the Rocky Mountain Research Station to secure approval for a grazing demonstration area for noxious weed control on the Bitterroot River Research Natural Area (RNA);
- Continued prevention and education programs;
- Continued treatment of weeds by mechanical means, ground spraying with herbicides and biological agents approved for use by the Animal and Plant Health Inspection Service;
- Continued mechanical control of weeds on 5 acres annually;
- Aerial treatment of up to 3,000 acres of weeds annually, with appropriate mitigation;
- Use of new herbicides (adhering to label application instructions), registered by the Environmental Protection Agency; and
- Use of biological control agents across the Forest could be expanded outside of Wilderness Areas.

My review was conducted pursuant to, and in accordance with, 36 CFR 215.19 to ensure the analysis and decision is in compliance with applicable laws, regulations, policy, and orders. The appeal record, including the appellants' objections and recommended changes, has been thoroughly reviewed. Although I may not have listed each specific issue, I have considered all the issues raised in the appeal and believe they are adequately addressed below.

The appellants allege violations of the National Environmental Policy Act (NEPA) and the Administrative Procedures Act (APA). The appellants request a remand of the FEIS and ROD. They further ask the Bitterroot National Forest Supervisor to prepare an EIS that demonstrates it is in full compliance with the applicable environmental laws. An informal meeting was held but no resolution of the issues was reached.



ISSUE REVIEW

Issue 1. The FEIS and ROD failed to develop and consider a reasonable range of alternatives.

Response: Based on issues found during scoping, the Forest considered five alternatives. Alternative A was developed by the Forest to address the Purpose and Need (EIS, pp. 2-4 to 2-8). Alternative B was developed to address Issue 2, which was the concern about aerial application of herbicides (EIS, pp. 2-8 to 2-10). Alternative C was developed in response to Issues 1, 2, 3, and 4, which were concerns about effects of herbicides on human and ecological health (EIS, pp. 2-10 to 2-13). Alternative D is the No Action Alternative, under which the existing weed management programs would remain in place (EIS, pp. 2-13). The Forest developed Alternative E in response to the public comments they received on the draft EIS (pp. 2-13 to 2-18).

The EIS discusses the various techniques involved in an integrated weed management approach (EIS, pp. 1-10 to 1-15). These techniques can be found in the action alternatives. All the action alternatives include: 1) various treatment methods, such as herbicide use and/or mechanical elimination and/or biological agent use; 2) an adaptive management approach; 3) monitoring of effectiveness and further weed spread; 4) a Forest weed prevention strategy; and 5) a variety of environmental protection measures (EIS, pp. 2-18 to 2-29).

The Forest also considered two other alternatives, but eliminated them from detailed study (EIS, pp. 2-30 to 2-31). These two were: 1) focus treatment on the areas burned in 2000, using aerial spraying or the herbicide 2,4-D; and 2) eliminate/reduce human activities on the Forest to prevent spread of weeds. Forest Officials met with proponents of the second alternative to specifically define what this alternative would involve.

The Forest did develop and consider a reasonable range of alternatives, and the chosen alternative does use an integrated approach to weed management. The analysis is in compliance with NEPA.

Issue 2. The FEIS and ROD failed to take a hard look at the potentially significant adverse impacts of the severe disruption of soil and soil microorganisms by herbicides.

Response: The impacts the project will have on soil resources are discussed in Chapter 4 of the EIS (pp. 4-2 to 4-7). The analysis cites 10 research papers and reports to support the discussion. The cited documents can be found in the project file. The appellants appear to be particularly concerned about impacts from glyphosate, which the Forest only plans on using if purple loosestrife is found on the Forest (FEIS, p. 2-20). At this time, purple loosestrife is not known to be on the Forest.

The analysis concluded, “Cumulative effects may occur to soils organisms from herbicide applications; however, these adverse impacts are expected to be short-term. Positive cumulative effects would occur for weed treatments areas where native vegetation communities increase and long term soil stability/quality improve” (p. 4-7). The EIS also found no irreversible or irretrievable commitment of soils resources from the implementation of Alternative E (p. 4-7).

The FEIS and ROD took the required hard look at the impacts herbicides would have on soil and soils microorganisms.

Issue 3. The FEIS and ROD failed to take a hard look at the potentially significant adverse impacts of herbicide drift.

Response: In the appeal, the appellants cite drift studies indicating pesticide drift beyond those noted in Forest Service research and monitoring reports. These studies involved aerial spraying of BT or other *insecticides*. These studies are not comparable to herbicide spraying because a fine fog or mist is desirable for the application of insecticides, rather than the large droplet size desired for herbicide application.

The impacts of aerial application of herbicides, including potential for drift, was Key Issue #2 (EIS, p. 2-34). Alternative E reduced the amount of aerial spraying due to a concern about drift when having to fly higher above the burned area for safety reasons (EIS, pp. 2-13 to 2-14). The EIS discusses the use of drift cards to monitor the aerial application of herbicides (pp. 2-25 and Appendix A) and set up buffers that would be adjusted based on the monitoring (pp. 2-28 to 2-29). A drift analysis was conducted for this project, which included the monitoring result of the Mormon Ridge Project (EIS, pp. 4-78 to 80).

The analysis considered the AGDISP model (PF, Docs. L-10 to L-12) and the AGDRIFT model (EIS, p. 4-79), and considered published research (PF, Docs. N-10, N-115, N-203, N-204, and N-302). The analysis of air quality (EIS, pp. 4-8 to 4-10) water resources (pp. 4-11, 15, and 20), fisheries (pp. 4-44; PF, Vol. 5, Doc. F-31, p. 15), vegetation (EIS, pp. 48, 50 to 51 and 56), and the human health analyses (pp. 4-68 to 69) each considered the potential impact of herbicide drift. The analysis took a hard look at herbicide drift and its potential impacts.

Issue 4. The FEIS and ROD failed to take a hard look at the potentially significant adverse impacts of herbicides on aquatic ecosystems.

Response: An Aquatic Resources Specialist's Report was prepared to summarize the literature on the effects of water-soluble herbicides on aquatic resources (PF, Vol. 4, Doc. F-1, pp. 1 to 48). Ninety-six references were used in the making of this report. This report was used by the Bitterroot National Forest to prepare the Fisheries and Aquatic Resources section of the EIS (pp. 4-40 to 4-48). The Forest modeled the estimated concentrations of various herbicides that would be found in stream waters (PF, Vol. 4, Doc. F-23).

There is no information on the affects of herbicides on bull trout; therefore, information on cutthroat trout was used in the coarse filter model (PF, Vol. 4, Doc. F-15, p. 3, Step 6). The Biological Assessment for bull trout considered the effects on bull trout (PF, Vol. 5, Doc. F-31). USFWS concurred with the determination of "may effect, not likely to adversely affect" bull trout (PF, Vol. 5, Doc. F-32). Mitigation measure were considered and adopted to prevent impacts to water resources (EIS, pp. 2-28; ROD, pp. 3, 14 to 16, and 19; PF, Vol. 2, Doc. C-62, p. 3, Vol. 5, Doc. F-31, pp. 5 to 6, Vol. 12, Doc. N-265, pp. 88). The analysis took a hard look at potential herbicide impacts on aquatic ecosystems.

Issue 5. The FEIS and ROD failed to take a hard look at the potentially significant adverse impacts of herbicides on amphibians.

Response: The EIS discloses the potential effects herbicides have on amphibians, as well as knowledge gaps relating to the effects of herbicides to amphibians (pp. 4-27 and 4-30 to 32, 4-35, 4-37 and 4-39). The effects are based on peer reviewed and other published literature (PF, Vol. 7, Doc. N-24, Vol. 8, Docs. N-62 and N-67, and Vol. 10, Doc. N-215). The analysis took a hard look at potential herbicide impacts on amphibians.

Issue 6. The FEIS and ROD failed to take a hard look at the potentially significant adverse impacts to threatened, endangered, and management indicator species from herbicide use.

Response: The EIS discloses the potential effects herbicides have on wildlife (pp. 4-21 to 4-40). The Biological Assessment and Biological Evaluation (PF, Vol. 6, Doc. K-15) specifically looked at the effects Alternative E would have on threatened, endangered, and Regional Forester's Sensitive Species. The Wildlife Biologist based his analysis on numerous publications (PF, Vol. 6, Doc. K-1, pp. 32 to 38 and Doc. K-15, pp. 17 to 18). He determined the negative effects on wildlife would be minimal (pp. 4-21). The analysis took a hard look at potential herbicide impacts on wildlife.

Issue 7. The FEIS and ROD failed to take a hard look at the potentially significant adverse impacts of herbicides killing native, or non-target plants.

Response: The EIS discloses the potential effects herbicides have on vegetation (pp. 4-48 to 4-57). There is potential that non-target plants will be impacted (EIS, p. 4-48). The Plant Communities Specialist's Report (PF, Vol. 5, Doc. H-1) and the EIS (pp. 4-53 to 4-57) specifically looked at the effects Alternative E would have on threatened, endangered, and Regional Forester's Sensitive Species. The botanist based her analysis on numerous publications and past monitoring (PF, Vol. 5, Docs. H-12, H-13, N-6, N-7, N-37, N-43, N-178, N-181, and N-182). She determined native plant communities are at risk from noxious weeds and the implementation of Alternative E would result in no irreversible or irretrievable loss of native plant communities, while implementing the No Action Alternatives (C and D) would result in irreversible impacts (EIS, p. 4-53). The analysis took a hard look at potential herbicide impacts on native vegetation.

Issue 8. The FEIS and ROD failed to take a hard look at risk assessment, including inert ingredients and contaminants in herbicides.

Response: The EIS discloses the human health risk of using mechanical, cultural, and herbicide treatments (pp. 4-68 to 83). Contrary to the appellants' claim, the Forest primarily used 13 sources to analyze the risks (p. 4-70). Most of these were risk assessments completed by Syracuse Environmental Research Associates. Numerous other research papers are cited throughout the discussion. The EIS considers method of application; length of exposure; route of exposure; toxicity of herbicides; acute, sub-chronic, and chronic toxicity; impurities, adjuvants, and inert ingredients in herbicide formulations; endocrine disruption; uncertainties raised in the literature; herbicide drift; monitoring of past spraying; chemically sensitive

individuals; and the direct, indirect, and cumulative effects of the various alternatives. This disclosure and analysis is supported by over 120 documents in the project file (PF, Vols. 6, 7, 8, 9, 10, 11, 12 and 13). The analysis took a hard look at potential human health risks of herbicide use.

RECOMMENDATION

I have reviewed the record for each of the contentions addressed above and have found that the analysis and decision adequately address the issues raised by the appellants. I recommend the Forest Supervisor's decision be affirmed and the appellants' requested relief be denied.

/s/ Richard F. Roberts
RICHARD F. ROBERTS
Appeal Reviewing Officer
Director of Ecosystem Assessment and Planning