Appendix N

Response to Public Comments

Overview

The Environmental Assessment for Weed Management on the Arapaho and Roosevelt National Forests and Pawnee National Grassland was mailed to 96 recipients on March 23, 1999. Notification that the Environmental Assessment was available for review was mailed to 475 recipients on March 23, 1999. An additional, 73 people requested and received a copy of the Environmental Assessment (EA). One hundred and seventy-seven comment letters were received. The commentors are listed on pages ** through ** of this document.

Substantive comments[1] are identified and cross-referenced to aid in identifying the response. Individual comments, extracted or paraphrased from letters received in response to the Environmental Assessment, are listed below. The numbers after each comment reference the person(s) or organization(s) responsible for the comment.

Per 40 CFR 1503.4(a), the Forest can respond to comments in the following ways: (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.

The substantive comments and Forest Service response are by general categories. When a comment was made by more than one source, a single summarized comment was developed and responded to.

Herbicides

General

1. We are objecting to the use of herbicides, especially 2,4-D.
(2, 3, 5, 6, 7, 8, 9, 10, 11,12,13,14,17, 18,19,20,21,24,25, 26,27, 28, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 60, 61, 62, 63, 64, 65, 66, 67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 107, 108, 109, 110, 111, 112, 113, 114, 116, 117, 118, 119, 120, 121, 122, 123, 124, 126, 127, 128, 129, 130, 131, 132, 134, 135, 136, 139, 140, 141, 142, 143, 145, 147, 147b, 148, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176)

Alternative 3, Implement a Noxious Weed Management Plan and Associated Mitigation Measures Without Herbicides, was developed and analyzed to address this concern (Chapter 2, page 7).
Mitigation measures under alternative 2 address potential effects associated with application of herbicides (including 2,4-D).
A communications plan was developed for implementation under alternative B (see appendix L) to inform pesticide sensitive people (and others on request) about imminent herbicide applications on National Forest. This was done to address their concerns about potential effects herbicides might have on human health and safety.

2. Do not use Agent Orange, of which 2,4-D, is a major component. (2, 21, 24a, 31, 34, 38, 55, 56, 64, 65, 66, 69, 77, 80, 82, 96, 109, 113, 120, 121, 122, 134, 135, 142, 148, 155, 156, 166)

The product Agent Orange, used extensively in Vietnam, was about 50% 2,4-D. However, the controversies associated with the use of Agent Orange were associated with a contaminant (dioxin) in the 2,4,5-T component of the defoliant. The current formulation of 2,4-D does not contain dioxin. The Forest Service will not be using Agent Orange. (Extoxnet, Pesticide Information Profiles, 2,4-D)

3. There is almost always measurable drift with the application of herbicides. (14, 21, 42, 70, 96)

There is always the possibility of drift during herbicide application. Drift occurs primarily due to equipment and weather related factors. The amount of drift can be effectively minimized or eliminated by establishing buffer zones around open water, using hand application methods, applying only in low wind conditions, and using maximum effective droplet size (Mitigation Measures / Alternative B).

4. Why are you using toxic chemicals to control just one plant? (92)

The proposed action is to implement an integrated weed management plan, not to control a single plant species, or to use only herbicides for weed control. The weed management plan has identified 29 noxious weed species. The ARNF/ PNG priority list contains 9 species and the

invader list contains 20 species. These lists were developed to correspond with the Colorado State Weed list. (Appendix A, page 17 and 19).

5. The EA (page 20) indicates a likelihood of using herbicides as a first resort not last. A new alternative is needed, under which herbicides would only be used where it was demonstrated that non chemical methods were likely to be: ineffective or more damaging than chemicals, or emergency situation justified chemical used. (19)

*Under Alternative B, actions taken are the end result of an integrated, interdisciplinary process involving resource specialists who have met and participated in a ground survey of the areas to be treated. This process, and the decisions resulting from it, considers the individual noxious weed populations and their effects on resources and economics. The process then reviews treatment methods for their effectiveness in controlling noxious weeds along with their potential effects to the environment and human health and safety. Under this alternative, noxious weeds will be treated with one or more of the following methods: 1) manual or mechanical removal of top growth, 2) tillage, 3) biological agents, or 4) herbicides applied from ground-based equipment. The most effective treatment method or combination of methods will be used to control each infestation of noxious weed species. Under Alternative B, herbicides will only be applied in situations where their use is justified. (EA, Chapter 2, page 6)******

6. Proposed list of herbicides is limited and options should not be ruled out in advance. (15)

Text under the preferred alternative has been changed to provide for potential use of any herbicide registered by the EPA for use in forestry, rangelands, and right-of-ways (see chapter 2 / "Possible treatment methods to be implemented under Alternatives A, B, and C / Chemical Treatment paragraph).

7. The Forest is planning to spray noxious mixture of herbicides on several thousand acres of public land administered by the USFS in CO over the coming months. (72)

*The Forest Service is proposing to implement a Noxious Weed Management Plan (Appendix A) and associated Mitigation Measures described under alternatives considered in detail. The Weed Management Plan is a comprehensive and systematic plan. Under Alternative B, noxious weeds will be treated using one or more of the following methods: 1) manual or mechanical removal of top growth, 2) tillage, 3) biological agents, or 4) herbicides applied from ground-based equipment. Under Alternative B, approximately 750 acres will be treated annually using a combination of the above methods. (EA, Chapter 2, page 6)****. Under Alternative C, noxious weeds will be treated using one or more of the following methods: 1) manual or mechanical removal of top growth, 2) tillage, or 3) biological agents. Under Alternative C, approximately 350 acres will be treated annually using a combination of the above methods. (EA, Chapter 2, page 6)****. Regardless of which alternative is selected, the most effective treatment method or combination of methods provided by the selected alternative will be used to control each infestation of noxious weed species.*

8. I thought 2,4-D was banned (22)

2,4-D is not on the US EPA Restricted Use Products (RP) Report, the US EPA List of Pesticides Banned and Severely Restricted in the U.S., or the US EPA The Prior Informed Consent (PIC)

Procedure: International "Right-to-Know" list. 2,4-D is listed in the 1990 EPA Suspended, Cancelled, and Restricted Pesticides publication with special guidelines for handling, disposal, and use on rangelands.

9. Claims of the safety of these chemicals are illegal. (147b, 96)

Text has been edited for content representing herbicides as "Safe". EPA registration process (as per provisions of FIFRA) determines whether a herbicide "will perform its intended function without unreasonable adverse effects on the environment; and when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment.

10. Half life (sic) of toxic chemicals is not enough, what are the full lifes (sic)? (22)

Half-life is the time required for half the amount of substance to be reduced by natural processes. Eventually the amount of substance remaining becomes so small as to be un-measurable, at which time the entire substance is for practical purposes considered reduced. As a general rule, tripling the half-life period yields an estimate of the time required for reduction of a pesticide to un-measurable levels.

11. It is extremely difficult and perhaps physically impossible to ensure that herbicide applications are selective. Mechanical methods especially use of hand tools, and biological methods, that target only the species of concern, are clearly more selective control methods. (96, 115, 166)

*Herbicide applications involving backpack sprayers or wicking are very selective when applied following label directions, using the minimum effective application rate, and careful application. Trampling and accidental pulling of non-target plants may occur with hand pulling. Mechanical methods that kill plants by cutting roots are less selective and may affect non-target plants. Other mechanical methods, like mowing and moldboard plowing, are not selective, but disrupt all vegetation in their path. Non-target plants may be cut or pulled up by the roots via this method. When using insects as biological controls, some insect larvae can import a virus that attacks the noxious weeds, and possibly non-target plants as well. The use of grazing animals as biological treatment has a potential for affecting non-target plants by trampling or grazing of the plants. (EA, Chapter 4, pages 6 and 7)*****

12. What do you mean by spraying? Spot, aerial or what? (76, 92)

Aerial application of herbicides was an alternative not analyzed in detail (see Chapter 2, page 3). This alternative was not considered in detail for the following reasons: (1) the mapped project areas are not large enough in size with consistently high densities of weeds to warrant aerial application techniques; (2) the high cost per acre of aerial application on scattered infestations; and (3) the potential impacts of aerial spraying on chemically sensitive individuals. The proposed spraying methods include: Ground vehicle, backpack, and manual application methods. Spot treatment will be used to the extent practical and effective. Hand-held spraying equipment (spray-guns and wands) will be used from ground vehicles to direct treatment to target vegetation. Truck mounted boom sprayers or broadcast spreaders will be used only where target vegetation is dense enough and stand size large enough to warrant such methods.

In no case will boom spraying or broadcast spreading be employed where such methods pose significant additional risks to non-target species or to human health and welfare. (EA, Chapter 2, page 4 and 5).

13. The EA, proposed weed management plan or proposed mitigation measures do not adequately address herbicide drift, buffer zones and runoff. (96)

Mitigation measures 5,12,13,15-20, 22, and 23 under alternative B directly or indirectly address this concern. Among other thing, these measures require adherence to laws, regulations, and policy governing the application of herbicides (mitigation measure 18 / alternative B). These include laws, regulations, and policies pertaining to application of herbicides where there may be risks associated with drift and run-off. The measures further require site-specific planning and demarcation of buffer zones where herbicide application will be prohibited (mitigation measure 15 / alternative B). This provides for additional planning sensitivity to unusual circumstances where extra precautions may be necessary.

14. Concerned that chemical controls are listed as a preferred treatment method along road and trail corridors (96)

The Forest Service is proposing to implement a Noxious Weed Management Plan (Appendix A) and associated Mitigation Measures described in Alternative B. The Weed Management Plan is a comprehensive and systematic plan. Under Alternative B, noxious weeds would be treated with one or more of the following methods: 1) manual or mechanical removal of top growth, 2) tillage, 3) biological agents, or 4) herbicides applied from ground-based equipment. Under Alternative B, approximately 750 acres will be treated annually using a combination of the above methods. (EA, Chapter 2, page 6) Under Alternative C, noxious weeds will be treated using one or more of the following methods: 1) manual or mechanical removal of top growth, 2) tillage, or 3) biological agents. Under Alternative C, approximately 350 acres will be treated annually using a combination of the above methods. (EA, Chapter 2, page 7) Regardless of which alternative is selected, the most effective treatment method or combination of methods provided by the selected alternative will be used to control each infestation of noxious weed species.

15. Lack of data on the effectiveness of herbicides to control weeds, specifically leafy spurge. (123)

Appendix A, the Noxious Weed Management Plan, (pg 32) discusses the control of leafy spurge and states treatments will be other than chemical when those treatments are believed to be both effective and practical. Appendix A also provides for site-specific monitoring of treatment effectiveness (chapter2, section V, item B). Site-specific effectiveness monitoring provides empirical data from which to draw inference for future planning. Where control efficacy is concerned, few other forms of data are as meaningful and reliable.

16. Has the Forest Service taken into consideration other herbicide exposures in calculating the risk from herbicides proposed for use? (123)

*The Forest Service relies on the exposure standards developed and enforced by EPA. These standards were taken into consideration and are included in the application policy and procedures. ****

Soils and Water

1. What is your source of the soil half-life for 2,4-D is less than 7 days. (96)

This information was taken from Extoxnet, Pesticide Information Profiles (1996). Best Management Practices for Agricultural Pesticide Use (Waskom, 1995) lists 10 days.

2. Herbicides are a threat to water quality (96, 102).

If used incorrectly, herbicides are a threat to water quality. Implementation of Mitigation Measures designed to protect the water resource, such as: use of buffer zones; use of herbicides approved for use in and around water; hand application; and personnel applying herbicides following all label directions and precautions, will effectively minimize or eliminate effects to water quality (Final EA, Chapter 4, page 4-5)/

3. Runoff contamination is possible as long as active herbicide remains on the soil surface. Half life tends to be long in our soils, RPMs are inadequate given these factors (96)

EPA registration process (as per provisions of FIFRA) determines whether a herbicide "will perform its intended function without unreasonable adverse effects on the environment; and when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment. Adherence to herbicide label instructions (as required under alternative B) constitutes use in accordance with widespread and commonly recognized practice. Mitigation measure 26 under "mitigation measures common to all alternatives" has been added and provides additional safeguards against run-off contamination.

4. Picloram cannot be used for leafy spurge infestations near Gold Hill in Boulder County because the sites all have high groundwater and are adjacent to aquatic areas. (33)

Picloram will not be applied in or near surface water, in areas vulnerable to groundwater degradation, or on certain soil types as per label directions and guidance. Implementation of Mitigation Measures (numbers 12 and 13 under alternative B) will effectively minimize or eliminate these effects.

Vegetation -- Target Species

1. Weed definition (page 1) includes any aggressive and invasive plant instead of only those species that are not native to the United States.

Text reads: For the purposes of this analysis, a noxious weed is defined as an alien, introduced, or exotic undesirable plant species that is adventive, aggressive, and overly competitive with

more desirable native species. The definition clearly limits scope to alien, introduced, or exotic, none of which are native.

2. The case for herbicides use is at least partially faulty: for example, in Boulder County it was claimed by officials that knapweed would destroy native species if left untreated, but when an experimental test was approved and conducted, the biologist in charge reports the knapweed only fills in when other plants are absent and in fact does not compete with or destroy native plants when they are present. (23)

According to our research, knapweeds readily establish on disturbed soils, and its early growth makes it a good competitor for soils moisture and nutrients. This highly competitive plant rapidly expands and competes effectively with cultivated and native vegetation for available nutrients and soil water (Benz, 1998). It is capable of invading relatively undisturbed native plant communities. Some knapweeds release chemical compounds that inhibit the growth of other plants. Once a colony is established, it may invade areas that are relatively undisturbed or in good condition (Benz, 1998). Because of its competitive nature, a combination of treatment methods, including herbicides may be necessary to stop expansion.

3. To establish benefits of weed control in natural areas or areas adjacent to natural areas, we need to know if native species are actually threatened by the introduced species or is the introduced species altering ecosystem services (water and material storage, etc.) of the site? (106)

Both. Noxious weeds affect the structure, organization and function of ecological systems in various ways, from nutrient cycling to plant species displacement, to altered activity patterns of animals. By altering the type and abundance of organisms in the environment, native species can no longer compete as well. Severe infestations of noxious weeds usually reduce community productivity, species diversity, and species richness. Changes in soil moisture, nutrient availability, nutrient cycles, increased evaporation, extreme soil temperature changes alter the ecosystem in which native species evolved. These changes favor the expansion of the noxious weed species. So, introduced species threatened native species by altering the ecosystem of the site to fit the introduced species needs, which may be very different from the native species needs, thereby out competing the native species. ***CITATION***

4. I understand from past neglect, weeds may be difficult to manage. (76)

It is not necessarily from past neglect that weeds invade an area. Weeds prefer highly disturbed sites such as river and stream banks, trailheads, roadsides, trails and campgrounds, even land in good condition is susceptible when natural disturbances (such as wind, water, and a wide variety of wildlife, including birds) open niches in the plant community and distribute plant parts and seeds. Once established, weeds are spread by many vectors, including vehicles, wind, recreationists, waterways, and animals.

5. Will you actually have made the claimed progress over the years of the treatment program i.e. actually reducing the number of weeds instead of merely containing the spread (133).

If budget and personnel levels remain constant, we believe we will be able to maintain or reduce the number of infested acres.

Non-target vegetation, wildlife, fish and aquatic organisms

1. What are the risks to native plants, animals and birds with the use of herbicides? (25, 26, 28, 30, 51, 56, 57, 61, 70, 74, 82, 100, 131, 132, 140, 157, 168)

Based on information from various resources, including but not limited to: Extoxnet; the Final Environmental Impact Statement for Vegetation Treatment on BLM Lands in Thirteen Western States dated May 1991 (BLM 1991 FEIS); and Risk Assessment for Herbicide Use in Forest Service Regions 1, 2, 3, 4, and 10 and on Bonneville Power Administration Sites, September 1992, USDA, Forest Service (FS 1992 Risk Assessment), the Forest Service concluded:

- *The toxicity levels of the proposed herbicides indicate effects on birds, rodents, and grazing animals are not expected (FS, 1992).*
- *None of the herbicides proposed for use bioaccumulate in wildlife in concentrations greater than their general environmental concentrations (Extoxnet, 1996).*
- *The toxicity of these herbicides to birds is extremely low (FS, 1996).*
- *For honeybees, dicamba, glyphosate and picloram are nontoxic and 2,4-D is slightly toxic. (Extoxnet, 1996).*
- *There is no risk to aquatic organisms from herbicides approved for use near and in water.*

*(from Chapter 4 of the final EA)***

Human Health and Safety

1. These chemicals (in particular 2,4-D) have been correlated with many serious illnesses in human populations, including non-Hodgkin's lymphoma, liver, kidney, muscle, endocrine disrupter, and damage to the central nervous system. (9,10,11,12, 14, 21, 26, 30, 31, 42, 45, 46, 48, 54, 56, 57, 63, 70, 72, 74, 76, 77, 81, 87, 90, 91, 94, 95, 96, 102, 107, 111, 113, 115, 131, 136, 139, 140,142, 145, 154, 166)

Based on information from various resources, including but not limited to: Extoxnet; the Final Environmental Impact Statement for Vegetation Treatment on BLM Lands in Thirteen Western States dated May 1991 (BLM 1991 FEIS); and Risk Assessment for Herbicide Use in Forest Service Regions 1, 2, 3, 4, and 10 and on Bonneville Power Administration Sites, September 1992, USDA, Forest Service (FS 1992 Risk Assessment), and Table 4-12b in Chapter 4 of the final EA (reprinted below) summarizes the Potential Effect of Herbicides on Human Health:

Herbicide	Reproductive	Teratogenic	Mutagenic	Carcinogenic	Fate in Humans
Dicamba	*Unlikely to cause effects at expected exposure levels*	*None*	*None*	*None*	*Rapidly absorbed into blood stream from gastro-intestinal tract. Does not bioac-cumulate in tissues. 90-95% excreted unmetabolized in dog urine*
Glyphosate	*Unlikely to cause effects at expected exposure levels*	*None*	*None*	*None*	*Poorly absorbed in digestive tract and largely excreted unchanged by mammals. No potential to bioaccumulate in tissues*
Picloram	*Unlikely to cause effects at expected exposure levels*	*None*	*None*	*None*	*Rapidly absorbed through the gastrointestinal tract and excreted unchanged in urine. Does not accumulate in fat.*
2,4-D	*Unlikely to cause effects at expected exposure levels*	*None*	*Low*	*Unclear*	*Rapidly absorbed through the gastrointestinal tract and excreted unchanged in urine. No evidence of significant accumulation levels.*

Based on the above information, the low application rates of herbicides proposed, the use of ground equipment and hand spraying, implementation of the Mitigation Measures (alternative B), the Forest Service concluded that there will be little to no effect to human health and safety of the general population, if Alternative B is implemented. The Forest Service will work closely with chemically sensitive individuals as per provisions of the Communications Plan (appendix L), and in accordance with provisions of § 35-10-112 (1), C.R.S. (Colorado Revised Statutes), and Parts 12.06 and 12.07 of the associated rules and regulations, to provide advance warning of imminent herbicide treatments.

2. Spraying a known cancer causing herbicide is not an acceptable solution to a measly little weed problem (95)

As stated in the EA (Chapter 2, pgs. 6-7) herbicide spraying will occur only if it is the best of the options (manual, mechanical, tillage, biological, or chemical) available for noxious weed control. The Noxious Weed Management Plan has been developed in order to prevent noxious weed infestations on the forests and grassland from becoming major problems. EPA

registration process (as per provisions of FIFRA) determines whether a herbicide "will perform its intended function without unreasonable adverse effects on the environment; and when used in accordance with widespread and commonly recognized practice it will not generally cause unreasonable adverse effects on the environment. The element of reasonability in this process ("without unreasonable adverse effects") stems from the assessment that the benefits derived from herbicides justify the risks associated with their use. Justification of such rationale falls outside the scope of this analysis.

3. Irresponsible to say that there is little risk to the majority of the public. Majority is not even represented in safety tests only young, healthy adult males are used in tests on humans. Does this mean that the risks to the more vulnerable minority children, the elderly, the chronically ill is simply being dismissed as unimportant (96)

The EPA is the lead Federal agency responsible for assessing potential risks to human health associated with applications of registered herbicides. The Forest Service must defer to EPA's assessments in this regard. Since the comment is premised on the assertion that testing procedures performed or considered by the EPA in its' assessment were not representative of the majority population, treatment of this comment falls outside the scope of this document.

4. Health risks to workers. (96)

*The manufacturer includes worker safety instructions on the product label. The Forest Service Manual and Handbook contain extensive worker safety procedures. Carefully following these guidelines during herbicide application will greatly reduce the risk to the workers' health and safety.****

5. Inert ingredients (96), by products of herbicides in bodies, have you confirmed that none of these bioaccumulate?

To minimize the risk of detrimental effects from inert ingredients, formulations containing inert ingredients known or suspected to be toxic will not be used. See Appendix J for additional information regarding inert ingredients, and a list of permitted formulations for dicamba, glyphosate, picloram, and 2,4-D (Appendix A, pg.17).

6. How are you going to assure me my health will be protected from these chemicals? You should not use them unless you can guarantee no harmful impacts – and you can't do that. (5)

EPA's registration of herbicides is not intended to imply that there are no risks to human health associated with their use. Registration is premised on the assessment that the benefits derived from herbicides justify the risks associated with their use. In determining an alternative's viability for noxious weed treatment, the Forest Service must consider findings of the EPA's registration process.

7. Page 21, People who are sensitive to chemicals would not be able to use areas treated with herbicides for 2 weeks to 1 month after treatment. The arbitrary 2 weeks to 1 month is incorrect for Joey James. Each CMS person is an individual. Joey's doctor specifies that if spraying is done within 5 miles of his home, Joey can't even come back to our own personal property and

live in his home for 6 months. Appendix B, B5-#17" Buffers will be a minimum of 100 feet, and greater where necessary to protect chemically sensitive residents. Need your fullest cooperation in respecting the doctor's medical recommendations of large buffer zones for Joey. (14,141)

The buffer zone around Nederland is 5 miles (EA pg 10).

8. Parag 3 – If the chemicals chosen will be the safest in terms of human health, then why is 2,4-D present in this plan at all? (96)

Current text reads "Specific chemicals will be selected for each treatment area based on efficacy of control for the target species, relative risks to non-target species (plant and animal), and human safety". This provides for consideration of human health in conjunction with other factors, but increases flexibility to choose the most efficacious treatment method where risks of human exposure to recently applied herbicide are low.

9. Well Head Protection (32)

Section 17 of Appendix B lists the procedures and restrictions for the use of the proposed herbicides near water, water sources, and ground water.

10. Impact on tourism should be secondary to the impact on the health and safety of our communities. (23)

Tourism (recreation) is only one of several resources impacted by the presence of noxious weeds, and is secondary to public health and safety under the alternatives considered in detail.

11. Weed presence appears associated with disturbances (roads and trails)...removal of weeds by any method usually sets up conditions for subsequent weed colonization. ...a proactive revegetation plan should be used in these areas. (106)

Mitigation measures for both action alternatives (measure 31 under Alternative B and measure 7 under alternative C) state: Ensure re-vegetation of all treated sites with desirable plants to discourage noxious plants. As a part of all noxious weed control projects, assess re-vegetation needs, including monitoring. Re-vegetate sites if necessary, following the Interim Re-vegetation Policy for the ARNF & PNG, Chapter 2, Section II.C.2. of the Noxious Weed Management Plan (Appendix A). Re-establish vegetation on all disturbed bare ground sites to minimize opportunity for noxious weed invasion and establishment. Seed all bare sites as soon as possible, unless ongoing disturbance at the site will prevent noxious plant establishment.

Recreation

1. Where is the support documentation for the statement that applications of herbicides would cause less loss of recreation days than not using herbicides, page 12 (115)

Text has been removed

2. What is the basis for this statement,.continued weed infestation will reduce recreation use (pp. 12, 18). This assumes that people do not like to look at weeds. The use of chemicals would be unattractive, if not dangerous, to recreationists and their dogs. The presence of signage would not be pleasing to recreationists because they would have to stay out of areas they are used to visiting. Sprayed areas should be posted for approximately the same amount of time (72 hours vs. 2 weeks to 1 month) for CMS. Page 18 states weeds can make access to streams more difficult. How do weeds make access to streams more difficult than other, native vegetation such as willows? (19)

Text has been removed. However, text exists elsewhere in document implying that dense noxious weed infestations may limit access, and affect aesthetics. Dense Canada thistle stands can be very uncomfortable to walk through without heavy protective clothing, thus effectively limiting access to casual hikers. While assumed aesthetic effects are qualitative, there can be little doubt from public reactions to noxious weed infestations that at least some publics find them aesthetically displeasing.

Appendix A – Integrated Weed Management Plan

1. Does not take into consideration effects of herbicides on humans or wildlife which may not be either immediate or readily observable, but which may cause great suffering. (Pages A17-18) (96)

The Monitoring section in Appendix A, pages A17 to A18 is designed to determine the effectiveness of treatment practices, including prevention strategies and the effectiveness of management actions in implementing the Weed Management Plan (Appendix A, V. A., page A-17). It was not developed to monitor herbicide effects to humans or wildlife. Effects to wildlife and human health and environment are discussed in chapter 4, and appendix D.

2. There is no mention of goats, sheep or horses as a biological control. (19) (96)

The use of sheep and goats are listed as a biological treatment method, see Appendix A, and page A-12. Horses are not a proposed biological control method.

3. A-8 (3) should be amended to include an order for the use of certified weed free pellets and cubes now that they are commercially available in Colorado. (58)

The ARNF/PNG is working with the Regional Office to include the use of certified weed free pellets and cubes. The Weed Management Plan will be amended when and if the order is signed.

4. Appendix A shows chemicals are the preferred method, or at least a preferred method for every noxious weed when Alternative B states chemical would be used only when evaluation of the situation concludes it is appropriate (p.8)

Please see the updated priority species descriptions and treatments in Chapter 4 of Appendix A.

5. Analysis of biocontrols on some of the species (knapweed, A-32) appears incomplete. (106)

Please see the updated priority species descriptions and treatments in Chapter 4 of Appendix A.

6. Suggest need to document why the weeds are where they are at each site (115) should be included in the list of goals and objectives, page A-1.

Chapter 3 describes the affected environment where the noxious weeds are and the reasons the areas are infested. Noxious weeds often establish first in disturbed areas, and from there have tremendous capacity to invade adjacent undisturbed natural plant communities. Frequent human travel – hiking, mountain biking, horseback riding, and motorized vehicle travel – along trails results in continuous soil disturbance where weeds can take hold, assists in dispersing weed seeds to uninfested areas. Other infested areas and the reasons for the infestations are:

- *Areas associated with timber harvest activities such as skid trails; log landings, and parking areas for logging equipment. Noxious weed infestations often occur in the actual timber sale areas as well.*
- *Areas of concentrated human use including campgrounds, trailheads, administrative sites, ski areas, and special use lodges.*
- *Areas associated with livestock grazing activities such as near livestock watering developments, fences and corrals.*
- *Areas along streambanks where human or animal activity has removed desired vegetation or degraded the riparian area.*
- *Areas along water transportation ditches where construction, reconstruction or maintenance activities are occurring or have occurred in the past.*
- *Areas near or adjacent to streams, creeks, and rivers where road construction, reconstruction and maintenance activities are occurring or have occurred in the past.*
- *Rivers, streams and creeks can serve as a vector for noxious plant seeds to move to new areas and become established.*
- *Trails in and adjacent to rivers, streams and creeks which have frequent human travel – hiking, mountain biking, horseback riding, and motorized vehicle travel.*
- *Grassland and meadow areas where livestock grazing activities are occurring or have occurred in the past. Examples include areas that have been over grazed, livestock driveways, and areas near livestock watering developments, fences and corrals.*
- *Riparian areas where concentrated human use occurs.*

a) Herbicides, such as 2,4-D will be aerial sprayed on the Forests and Grassland and may drift up to 100 miles in any direction depending on which way the wind blows (67, 105)

Aerial application of herbicides was an alternative not analyzed in detail (see Chapter 2, page 3). This alternative was not considered in detail because the mapped project areas are not large enough in size with consistently high densities of weeds to warrant aerial application techniques. Further reasons for eliminating this alternative from further consideration include: high cost per acre of aerial application on scattered and the potential impacts of aerial spraying on chemically sensitive individuals.

b) Controlled burns can be a beneficial element in an overall vegetation management plan, by not including this option, a potentially useful tool has been eliminated (19,59, 96,138,149)

The Noxious Weed Management Plan under Treatments – Cultural or mechanical control through soil disturbance includes prescribed burning as an option.

4) An Environmental Impact Statement should be written because of the significant harm that could result to the public and the environment. (123)

As per 40 CFR 1508.9(a), the purpose of an environmental assessment is to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact. FSH Chapter 40 states an environmental assessment is to document the results of environmental analyses and to disclose the environmental consequences for proposed actions that are not categorically excluded from documentation and for which the need for an environmental impact statement has not been determined. Using the definition of "significantly" at 40 CFR 1508.27, the responsible official and the ID team make the determination as to whether to prepare a FONSI or and EIS. In this case, it was determined the impacts to the human environment are not significant and a FONSI was prepared.

5) An EIS should be done every year as new data gaps for herbicides are filled and new alternatives or studies of efficacy of alternatives become available.

If newly registered chemicals become available in the future, the Forests and Grassland will evaluate them and determine whether or not they should be considered for use. If the new chemical meets the criteria and intent of this EA, the chemical would be covered under this NEPA analysis. If the new chemical fails to meet the criteria and intent of this EA, additional analysis would be completed before the chemical would be used. Any chemical used for treatment must be analyzed in the Risk Assessment for Herbicide Use in Forest Service Regions 1,2,3,4 and 10 and on Bonneville Power Administration Sites, September 1992, USDA, Forest Service (FS 1992 Risk Assessment) or other more current USDA risk assessments as they become available (EA Chapter 2, pg 5).

6) The requirements of the National Environmental Policy Act have not been met. Failure to adequately discuss non-chemical alternatives. (123)

Alternative C does not include the use of chemicals and was thoroughly analyzed and disclosed in the EA. Mowing and use of grazing animals, including goats, are just two control methods proposed under Alternative C. All the control methods proposed under Alternative C are also proposed under Alternative B.

7) Public should not have to rely on the Risk Assessment for Herbicide Use. This information should be incorporated into the EA in non-technical language that the general public can understand. (123)

Per 40 CFR 1502.21 the Risk Assessment for Herbicide Use in Forest Service Regions 1,2,3,4 and 10 and on Bonneville Power Administration Sites, September 1992, USDA, Forest Service (FS 1992 Risk Assessment) is incorporated by reference into the EA. The Risk Assessment is summarized in Chapter 4 (pgs. 14-21) in the Human Environment section.

8) The following comments are outside the scope this analysis and decision.

a) Get DOT to clean up their act.
b) To extent to which you have the authority, rethink and try to phase out lease grazing, logging, mining, drilling and other commercial practices. These uses contribute greatly to the weed problem through soil disturbance and use of heavy equipment (96).
c) EPA registration of herbicides process is inadequate and re-registration process has not been completed. (96)
d) What connection will there be between your study of the transpiration network and weed control.