

## **Chapter 2 - Alternatives Including the Proposed Action**

This chapter describes the process used to develop the alternatives considered in detail. It also provides a comparison of alternatives as well as detailed descriptions of the proposed conservation treatments.

### **2.1 The Process Used to Develop the Alternatives**

This environmental analysis complies with the National Environmental Policy Act (NEPA) and Council of Environmental Quality (CEQ) Regulations. The regulations require that public scoping be conducted as part of the analysis process. The quarterly scoping document issued from the Rio Grande National Forest contained public notice that this project was being analyzed. It invited comments on the proposed project and was distributed to the Forest Plan mailing list, having over 400 potentially interested individuals and organizations.

A scoping letter was sent to potentially affected interests in March 2002. The letter described the proposal and invited public comment. A legal notice was published in the paper of record Valley Courier March 5, 2002.

NEPA policy requires the use of an interdisciplinary team in order to conduct environmental analysis. An interdisciplinary team consisting of FS and BLM specialists was assembled for the analysis. The List of Preparers section in this EA for Comment shows the disciplines and specialists who contributed toward this analysis.

### **2.2 Alternatives Considered in Detail**

Two alternatives were identified in the environmental analysis process to address the key issue. Each alternative presents an option that could be implemented within the framework of each agency's Land Management Plans and meets the purpose of and need for action.

#### **Alternative 1 - No-Action**

This alternative would result in no change to current system of doing business relative to watershed and fisheries conservation treatments. Individual projects would be analyzed separately, done on a piecemeal approach that would not be efficient. Duplication of analyses of similar projects would occur every year. Important watershed treatments may be delayed due to duplication of analyses. Higher costs for analysis would be needed and less funding would be available for on-the-ground treatments.

#### **The Proposed Action - Alternative 2**

Alternative 2 is the proposed action. This alternative analyzes the effects of implementing important soil, water, and fisheries conservation treatments on Public Lands. This

alternative provides a programmatic analysis to all of the watershed and fisheries conservation treatments routinely practiced on the Public Lands thereby providing a consistent approach to analysis of effects. When Forest Service projects are proposed, specialists would then conduct site-specific analysis and summarize their findings on a checklist to ensure that the project is consistent with LMP goals and objectives and that effects are consistent with those described in this programmatic document (See Checklist Appendix A). When the BLM proposes projects, a similar process would occur through a Determination of Land Use Plan Conformance and NEPA Adequacy (DNA Form, See Appendix B). If a proposed project meets the scope and effects of the treatments described in this analysis, then no additional analysis would be necessary. A legal notice in the Valley Courier Newspaper would be issued annually so that the public would have opportunity to comment on proposed annual watershed and fisheries projects.

The following treatments are routine watershed and fisheries treatments that are applied to Public Lands. Please refer to Appendix C, which contains definitions and descriptions of proposed treatments.

### **Conservation Treatments and Description of Action**

#### ***Erosion and Sediment Control Practices***

1. Use of erosion fabrics, mulches, hydromulches, tackifiers, fiber applications, sodding, fiber-filled wattles, plugging with native plants, weedfree straw and applications to stabilize soils from erosion.
2. Use of erosion control structures such as slash check dams, silt fence, mulch ridges, rock check dams, wire-bound rock check dams, single and double fence rock check dams. These are structures designed to keep soils in place.
3. Use of sediment traps such as pit catchments or sediment collection basins.
4. Drainage structures, repairing, pulling, installing, relocating or cleaning culverts, improving drainage spacing, waterbarring, drainage dips, creating filter strips, disconnecting roads and trails from drainage systems, gravel spot surfacing.
5. Construct physical earth barriers to restrict motorized uses in areas needing restoration.
6. Fencing areas in need of reclamation
7. Head-cut control structures
8. Structures to divert stream or ditch flow in order to prevent channel erosion or redirect flow while restoration work is occurring.



9. Minor stream restoration measures including vanes, jetties and grade control structures.
10. Planting of willows and other vegetation for restoration of riparian areas, stream banks or disturbed areas.

### ***Reclamation or Restoration Practices***

1. Adding soil amendments such as lime, fertilizer, organic matter, compost, manure, and topsoil to soils for enhanced productivity.
2. Bioremediation, which is the use of concentrated livestock to reclaim areas impoverished of topsoil.
3. Seeding native plant materials if available when technically feasible. Use certified weed-free seed materials. Use local genotypes when available.
4. Planting trees or shrubs to stabilize soils and watersheds (maximum size 20 acres in any one location).
5. Using mechanical aerator (shown in photo) on compacted soils. The aerator is a farm implement that is drawn by tractor. Its knife-like teeth penetrate compacted soils, aerate the soil, without destroying the sod surface



6. Rip or subsoil densely compacted layers to restore soil porosity, infiltration and productivity. The subsoiler is designed to improve infiltration and aeration of deeply compacted soils.

### ***Streambank Stabilization and Aquatic Habitat Practices***

1. Use of rock rip rap or other structures to stabilize streambanks only where necessary. Use natural reclamation and stabilization in other instances.
2. Use suction dredging to remove sediments from streams.
3. Construction of “soft” structures, using bio-engineering approaches. This technique includes the use of soft erosion control materials like straw wattles in combination with willow plantings.
4. Construct headgates, drop structures or other structures that create or enhance wetlands so long as they are compatible with fisheries goals.
5. Maintain or remove and reclaim stock water facilities such as earth ponds that are breached or non-functional.

### ***Fisheries Improvements***

1. Use rock or structural placements into stream systems to improve fish habitat
2. Use logs, stumps and other structures to naturally restore fish habitat.
3. Use fencing to enhance fisheries habitat
4. Remove unnecessary structures where they cause damages to streams or soils

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5. Construct or re-construct fish migration barriers for use in restoring native fish populations.
6. Remove fish migration barriers when they are not desired.
7. Develop spawning habitat through spawning channel development and placement of gravels.
8. Enhance pool habitat through reconstruction of stream channel (restore meander pattern) or pool excavation.

Conservation treatments are generally applied to small areas, locations, and specific streams. Project size may be as small as a few acres up to several hundred acres in size. They usually do not disturb extensive areas and are beneficial in the long-term to restore watershed health.

Because the size of the restoration areas vary, and due to the wide variety of watershed and fisheries treatments that are needed across the Forest and BLM lands, it is difficult to define the upper limits of acres by treatment type. Actual treatment acres would be determined at the project level for a given year. For example, the BLM may need 10 miles of waterbars installed along roads (60 equivalent treated acres). The Conejos Peak Ranger District might do 20 acres of willow plantings and 30 acres of rock check dams. Divide District might do 30 acres of soil aeration improvements and 30 acres of waterbars. Saguache District might do 40 acres of stream habitat structures. Each Forest District or would have to complete Project Checklist Appendix A for appropriate protection measures before implementation of their proposed projects. Similarly, the BLM would have to complete Appendix B DNA before implementation. In this example the Forest would accomplish 150 acres while BLM would accomplish 60 acres.

The Forest Plan Alternative G was the selected alternative to manage the Rio Grande National Forest. In Alternative G, the watershed improvements program identified an annual need of 201 acres of watershed improvements per year. The Fisheries program projects an annual improvement need of 48 acres per year (8 miles of stream). The BLM projects a need of about 51 acres per year, for a grand total of 300 acres per year of improvements for the Public Lands. Any of the projected watershed and fisheries improvement needs are subject to funding levels in a given year so annual accomplishments can vary but will not exceed 300 acres in total.

Based on the combined program needs, this EA proposes to treat no more than 300 acres per year. This amount is relatively small when compared to the more than 2.0 million acres of public lands included in the analysis. Yet even though the acreage amounts are small in comparison, they are focused on some of the most important watershed and fisheries issues across this area and would have beneficial impacts to those resources.

Construction of these treatments may last from a few days to a few months, depending on the combination of treatments needed, weather, and other factors. Spring, summer and fall would be the implementation period when soils are unfrozen and workable. Actions may occur in combination as well. Treatments would be focused in priority watersheds.

### **2.3 Mitigation Measures**

The conservation treatments described in Alternative 2 are, in effect, specific mitigation measures that would be applied to restore or enhance problem areas. These practices are consistent with both agency's land management plans and WCP direction to restore and protect watersheds and fisheries. All standards and guidelines of each Agency's Land Management Plans would be followed. Any necessary specific mitigation measures for a specific project would be attached and included in the project file with the completed checklist.

### **2.4 Comparison of Alternatives**

Table 2.4 shows a Comparison of Alternatives.

<b>Table 2.4 Comparison of Alternatives</b>		
<b>Feature</b>	<b>Alternative 1</b>	<b>Proposed Action - Alternative 2</b>
Watershed treatment environmental analysis	Continues current process. Many duplicating analyses would be done on similar projects.	This programmatic analysis would provide a consistent analysis of conservation treatments. Site-specific analysis done thru public scoping and checklists/ DNA.
Allows for efficient implementation of important conservation treatments	Not as efficient	More Efficient
Uses the wide variety of conservation treatments described in Chapter 2	Yes	Yes
Accomplishment of soil, water and fisheries goals	Not as many acres accomplished	More acres accomplished on the ground. Estimate 20% more acres accomplished
Would Use Checklists or DNA for site specific analysis and would provide an analysis to which site-specific analysis would be tiered to.	No	Yes
Would better ensure resource protection through interdisciplinary review	Good	Better assurances
Would scope annual projects and invite public comment (legal notice Valley Courier Newspaper)	Yes	Yes
Estimated Annual Improvement Acres Accomplished by FS and BLM	200	240
Maximum program acres treated annually	300	300