Appendix A – Rio Grande National Forest Watershed Project Checklist (4-2005)

Project Name: _____
Expected Implementation Date:_____

The following checklist would be completed before watershed projects are implemented. Public scoping would be done. The appropriate specialist would check site-specific conditions of the project and respond. Any negative responses may require additional analysis. Documentation can be attached as necessary for the project file.

Project Checklist		
1. Is the project proposal consistent with the FS LMP's goals, standards, desired conditions and management area prescriptions?	Y/N	Initials and date
2. There would be no effects to Heritage Resources?		
3. There are no mass movement concerns?		
4. TE&S Plants are not affected		
5. TES and MIS species would not be adversely affected by the project? (based on site specific project ba/be)		
6. There are no conflicts with other land uses planned in this area?		
7. There are no conflicts with adjacent Agencies or landowners?		
8. There are no unusual soil conditions that would require more intensive analysis?		
9. The adverse impacts to watersheds would be negligible?		
10. Fisheries would not be adversely affected by the project?		
11. Adverse impacts to native vegetation by noxious weeds would be negligible.		
12. Does the activity meet the Scenic Integrity Objective and appropriate Recreation Opportunity Spectrum?		
13. Project complies with nationwide or regional Corps of Engineers 404 permits and implements best management practices associated with the appropriate 404 permit. Corps of Engineer has been contacted about this project.		
14. Project is appropriate for the stream type and does not cause indirect impacts to stream health.		
15. The project will not add unacceptable cumulative effects to other management activities occurring in this watershed.		
16. This project has been scoped in the legal notices of the Valley Courier		

Recommended by Teamleader: _____
Date:_____

Approved by Line Officer

District Ranger: _____Date_____

Mitigation measures specific to this project (List or attach).

Appendix B

U.S. Department of the Interior
Bureau of Land Management
_____ Field Office

_____
_____, CO 8____

DETERMINATION OF LAND USE PLAN CONFORMANCE AND NEPA ADEQUACY

NUMBER: CO-___-2004-00__ DNA

CASEFILE/PROJECT NUMBER (optional):

PROJECT NAME:

PLANNING UNIT:

LEGAL DESCRIPTION:

APPLICANT:

ISSUES AND CONCERNS (optional):

DESCRIPTION OF PROPOSED ACTION:

LAND USE PLAN (LUP) CONFORMANCE REVIEW: The proposed action is subject to the following plan:

Name of Plan: _____ Resource Management Plan

Date Approved:

____ The Proposed Action is in conformance with the LUP because it is specifically provided for in the following LUP decision(s):

Decision Language:

____ The Proposed Action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (objectives, terms, and conditions):

Decision Language:

REVIEW OF EXISTING NEPA DOCUMENTS:

List by name and date all existing NEPA documents that cover the Proposed Action.

Name of Document:

Date Approved:

List by name and date any other documentation relevant to the Proposed Action (e.g., biological assessment, biological opinion, watershed assessment, allotment evaluation, and monitoring report).

Name of Document:

Date Approved:

NEPA ADEQUACY CRITERIA:

Is the Proposed Action substantially the same action and at the site specifically analyzed in an existing document?

Documentation of answer and explanation:

Was a reasonable range of alternatives to the Proposed Action analyzed in the existing NEPA document(s), and does that range and analysis appropriately consider current environmental concerns, interests, and resource values?

Documentation of answer and explanation:

Does the information or circumstances upon which the existing NEPA document(s) are based remain valid and germane to the Proposed Action? Is the analysis still valid in light of new studies or resource assessment information?

Documentation of answer and explanation:

Does the methodology and analytical approach used in the existing NEPA document(s) continue to be appropriate for the Proposed Action?

Documentation of answer and explanation:

Are the direct and indirect impacts of the Proposed Action unchanged from those identified in the existing NEPA document?

Documentation of answer and explanation:

Are the cumulative impacts that would result from implementation of the Proposed Action unchanged from those analyzed in the existing NEPA document(s)?

Documentation of answer and explanation:

Are the public involvement and interagency review associated with the existing NEPA document(s) adequate for the Proposed Action?

Documentation of answer and explanation:

INTERDISCIPLINARY REVIEW: Identify those team members conducting or participating in the NEPA analysis and preparation of this work sheet (by name and title).

Name	Title	Review Completed

REMARKS:

Cultural Resources:

Native American Religious Concerns:

Threatened and Endangered Species:

MITIGATION:

COMPLIANCE PLAN (optional):

NAME OF PREPARER:

NAME OF ENVIRONMENTAL COORDINATOR:

DATE:

CONCLUSION

CO-___-2004-00__ DNA

Based on the review documented above, I conclude that this proposal conforms to the land use plan and that the NEPA documentation previously prepared fully covers the Proposed Action and constitutes BLM's compliance with the requirements of NEPA.

Based on the review documented above, I conclude that either the proposal does not conform with the land use plan, or that additional NEPA analysis is needed.

SIGNATURE OF RESPONSIBLE OFFICIAL: _____
_____, Field Manager

DATE SIGNED:

Note: The signed Conclusion on this worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision.

Appendix C- Definitions and Descriptions of Proposed Treatments

Aerator, mechanical: This is a farm implement that has knife-like blades that gently lift soil layers, improving aeration and infiltration. It keeps the vegetation layer intact and does not contribute to erosion.

Bioremediation: Use of living organisms to reclaim harshly impacted soils and sites. Example is to use livestock to add important organic matter to an impoverished site.

Buffer strips: Areas having native vegetation where erosion can be filtered by natural or created filtration techniques. These help keep soil and sediment from reaching stream waters.

Check Dams: There are a number of types and variations that would be used. These are generally rock structures placed in rills and gullies to stop head and downcutting so that vegetation can establish and stabilize the system for the long-term. Periodic up-keep is necessary.

Coir: Erosion fibers made from coconut husks.

Fish Improvement Structures: In-stream structures that create or improve fish spawning, resting or hiding habitat. Often includes use of rock, stumps or woody materials. May include fencing, removal of structures if deemed unnecessary, and vegetative improvements like willow plantings.

Gully: Eroding “v” cut into soil that is generally deeper than 1 foot.

Hydromulching: Spraying a slurry of wood or other fiber materials onto eroding soils to create a mulch layer. Often, a tackifier (soil adhesive) is also added to keep the fibers from blowing away in severe winds.

Rill: An erosional “v” in the soil surface, generally from 1 inch to 12 inches deep.

Ripping (or Subsoiling): Use of ripping teeth or winged subsoiler on the back of a bulldozer to de-compact soils and restore soils to better aeration and infiltration.

Sediment Trap: Structure designed to capture sediment where long-term vegetative goals may not be possible. Periodic maintenance and sediment removal would be expected.

Sheet Erosion: Lateral movement of soil particles downslope due to raindrop impact and surface runoff.

Slashing, Slash Check Dams: This erosion control treatment involves the scattering of logging slash or tree debris to slow soil movement. Long term objective is to stabilize the erosion with native vegetation.

Streambank stabilization: This treatment would use rock materials or other materials to stabilize an unstable and eroding streambank. Vegetation plantings or treatments would also help achieve this objective.

Subsoiler Implement, Subsoiling: A 3-shanked ripping tool designed to alleviate soil compaction. It is drawn by a bulldozer.

Suction Dredging: Use of hosed equipment and motor that sucks sediment from important stream channel locations to improve stream and fish habitat.

Water bars (drainage dips): These structures are constructed in native surface roads so that erosion and drainage are taken off the road surface and ditch and filtered into proper buffer strips.

Wattles: Consist of 8 to 12 inch diameter flexible tubes of straw, coconut fiber or other material used on the contour to reduce erosion.

Appendix D

Cost of Implementing Various Watershed and Fisheries Treatments and Economic Analysis Updated to Most Recent Costs

Costs and Structural Watershed and Fisheries Treatments (updated to 2004 costs)

Watershed Treatments	Estimated Costs of Implementation $$$'s per structure	Sources of Values
Each waterbar, earth barriers	$62	FS work crew production rate
Checkdam, rock, slash, filter bales, waddles, mulch dams	$32 to $320	FS work crew production rate
Wetland Restoration Structures	$2100	FS work crew production rate
Sediment Trap	$84	FS work crew production rate
Cleaning Culverts	$84	FS work crew production rate
Diversion Structures	$525-2100/250 feet of treatment	Engineering cost estimate

Costs Per Acre of Watershed Treatments

Land Treatments	Per Acre Cost	Source
Seeding	$32 seed cost $52.00 travel $105.00 labor	Colorado Seed Company Cost of seed mix per acre montane mix (3/2001)
Mulching 2tons/ac straw	$140.00 straw $105.00 labor $105.00 transport	Cost of weed free straw San Luis Valley. Estimated transport and labor.
Fertilization	$18.00 bagged fertilizer, $53/acre labor $53 Transportation	Monte Vista Coop Prices Plus estimated deliver and application.
Erosion Fabrics	$7350 to $12,600	International Erosion Control Association, Agnew, 2001.
Bioremediation with	$3670.00	Actual Forest costs at

Animals		Treasure Trove Project (3/2001)
Silt fence, tackifiers, polymers,	Varies $53 to $1575.00	FS work crew production rate
Planting Trees/shrubs	$315.00	FS work crew production rate
Hydromulching	$1575	International Erosion Control Association, Agnew, 2001
Mechanical Aeration, aerway or subsoiling	$37.00-$74.00	Based on contract summer/2000 on RGNF, Difficult Creek Project
Mechanical Mulchers/Hydroaxe	$105 to $158	Dale Gomez discussions with contractor who performs this service. (3/2001)

Unit Costs of Habitat/Stream Improvements

Habitat Treatments	Unit Cost	Source
Vanes, jettys, grade control structures	$525-2100	Forest costs estimates
Planting Willows	$1.58 per running foot	Natural Resource Cons Service estimates
Soft Structures, willow and erosion waddles etc, reshaping cutbanks, traffic control	$1050.00/100 foot segment	Medano Creek project (2000),
Hard Structures/ rip rap	$5250/250 feet	Crooked Creek Rip Rap project
Suction dredging	$315/100 foot segment.	Forest level costs based on Hydrologist estimates, Big Springs Project.
Fencing	$5000.00/mile	Forest Service cost estimates

Quick-Silver Investment Analysis

A Quick-Silver investment analysis was completed for this environmental analysis. We analyzed the No Action and proposed Action alternatives. We used an experienced budget constraint of about $132,500 and analyzed four categories of treatments: structures, habitat treatments, land treatments and fish structures. A major difference between alternatives is the amount of investment in NEPA analysis. In the No Action, annual NEPA cost is high because each District needs to do an environmental analysis. In

the proposed action, each District completes a checklist which has lower cost than and EA document.

Results of the economic analysis for a 10 year period show the following costs and units.

Parameter	No Action	Proposed Action
Present Value Costs (10 years)	-$1,116,500	-$1,119,368
Units Accomplished	260	335

The Table shows that because of improved efficiency in NEPA analysis, more dollars in a constrained budget can go to on-the-ground improvements and accomplish 22% more acres/targets.

APPENDIX E

FOREST SERVICE RESPONSES TO PUBLIC COMMENTS

The Rio Grande National Forest issued a legal notice inviting public comment for a 30 day period. The legal notice was published in the Valley Courier on January 20, 2005. Comments were accepted if they were postmarked no later than February 22, 2005 since the exact due date would have fallen on a holiday weekend. A press release was also issued about that same time and an article was published in the Valley Courier announcing the Watershed Treatment EA.

The Rio Grande national Forest also notified the public of this proposal in quarterly scoping documents. American Indian Tribes were consulted directly about the proposed environmental assessment.

The Forest received two written comments and one comment via phonecall record.

Public Comment: The Colorado Division of Water Resources offers the following comments regarding the subject public notice. Our comments are based upon the limited information provided in the notice and are restricted to the potential impacts this proposal has to water resources and the protection of other vested water rights. The proposed conservation treatments include stream stabilization treatments, wetland creation, and improving fisheries through fish habitat techniques within the San Luis Valley and Upper Rio Grande Drainage.

The creation of wetlands and detention of water in basins will cause depletions to the stream system through evaporation from the water surface and the consumptive use of water by plant life. The impoundment of water in the basins may also alter the timing of the availability of water to vested water rights. The Rio Grande River is over-appropriated and the stream system must be compensated for these depletions in time, place and amount through a court approved augmentation plan or a State Engineer approved substitute supply plan. Additionally, if the wetlands mitigation occurs in locations that affect drainages other than those where the impacts occur, or if more wetlands are created than are eradicated in a drainage, the wetland mitigation may adversely impact vested water rights. To assist in avoiding this potential injury, we recommend that you consult with our Division office regarding the locations of the proposed wetlands relative to the existing wetlands locations.

Forest Service Response: The Forest Service recognizes the need to coordinate with the Colorado Division of Water Resources on any project that could cause a depletion of water and that would consequently need a water right or an augmentation plan. Completion of this EA, in compliance with the National Environmental Policy Act, does not eliminate the need to fulfill all obligations to secure necessary water through the Colorado Division of Water Resources. This language will be added to the EA, so that the public knows that we are aware of, and committed to meeting, those requirements.

Public Comment: SW Willow Flycatcher: We received a communication record that a reviewer saw no mention of Southwestern Willow Flycatcher in the EA for Comment.

Forest Service Response: The EA for Comment, p 25, 6th paragraph describes the situation whereby the proposed action has the determination of "May Affect, but Not Likely to Adversely Affect"….Southwestern Willow Flycatcher. The Southwestern Willow Flycatcher effects would also be considered at the site-specific project and is an evaluation item in the Wildlife Checklist that would be completed for each specific project.

Public Comment: In a phonecall dialogue, a reviewer was concerned about whether the public would have chance to provide comments at some later stage. He felt that as long as there was another level at which to comment, he did not want to "hold up progress" by having an attorney intervene or submit a letter on the draft.

Forest Service Response: The DEIS, page 10 1st paragraph describes that a legal notice would be placed in the Valley Courier newpaper so that the public would have the opportunity to comment on any specific watershed and fisheries proposed projects.

Public Comment A reviewer was concerned that we were proposing headgates and drop structures to enhance and restore wetlands. He said that that would tie up water in wetlands and deny downstream users of water.

Forest Service Response: No specific projects are proposed by this EA, nor does this EA eliminate the need to secure necessary state and federal permits. Each specific project proposed in the future will still have to meet all federal and state regulatory requirements. Such requirements include the need to secure whatever water rights or substitute water supplies are deemed necessary by the Colorado Division of Water Resources. Similarly, if other permits such as an Army Corps of Engineer Section 404 permit are required, they would have to be secured before that project could proceed.

Public Comment A reviewer was also concerned about us removing stock water ponds as it affects livestock allotments and water rights.

Forest Service Response: The removal and restoration of old stock water ponds is done only where ponds have not been maintained or are no longer needed. It was not a wholesale removal, but on a case by case basis. Some of the structures were intended as gully-plugs, structures aimed at stopping gully advancement and have failed in that effort. Stockwater ponds currently being maintained and used by livestock permittees would not be removed.

The Forest Service owns water rights for livestock water developments on the Rio Grande National Forest and is aware of the need to secure such rights before any new developments are constructed. The Forest is also aware of the need to protect existing water rights to ensure the continued use of livestock allotments on the Forest. The Forest has no intent to relinquish its water rights or jeopardize future options for use of livestock

allotments. If livestock developments need work, replacement or enhancements, this EA will fulfill the NEPA requirements and allow the Forest to proceed with necessary work more efficiently. The need for any specific project will still be determined in the future and affected parties will be included in those discussions.

Public Comment A reviewer stated that as a ski trail designer and builder, the processes described in Alternative 2 (the proposed action) would not unduly burden the Wolf Creek Ski Area's already existing erosion control efforts. He recommended that Appendix D (Cost of Implementing Various Watershed and Fisheries Treatments and Economic Analysis)…that these cost projections are low. It might be worthwhile to review this Appendix before the final decision is released.

Forest Service Response: The economic analysis for these projects was completed in 2001. This issuance of this EA was delayed until such time as the Forest Plan Amendment, relative to Management Indicator Species, was completed. Since that time costs have risen. We have made adjustments in costs and reanalyzed the economics using the Quick-Silver model. Costs were increased based on using the gross domestic product inflator (GDP) values to account for the increase in costs due to inflation over those years.