Pathfinder Project Completed –

The Pathfinder Project, a pilot program initiated by the Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests to provide external ideas, perspectives and options related to strategic planning for instream flow protection on National Forest System lands, has reached completion. The Steering Committee held its last meeting in late April to review final edits to its report prior to submitting it to Bob Storch, Supervisor of the GMUG National Forests.

This is the culmination of a four-year process that began in May of 2000. Representatives from eleven stakeholder groups, including the Forest Service, water users, conservationists, water regulators and resource management agencies met on a regular basis to provide local community perspectives, ideas and possible ways to manage for instream flows on National System lands. The mission of the Pathfinder Steering Committee was "to assist the Forest Service in providing appropriate instream flow protection on the GMUG National Forests". It has been suggested by Rick Cables, Regional Forester and others that the Pathfinder process and recommendations may have broad applicability on other National Forest System lands in Colorado, and other states as well.

The members of the Colorado Water Conservation Board will receive copies of the completed report, including the "Tenny Decision", a *Discretionary Review Decision* (March 21, 2003) by Deputy Under Secretary of the Department of Agriculture, David P. Tenny on Water Resources Management and Special Use Authorizations, and a letter from Forest Supervisor Bob Storch which was sent to members of the Steering Committee thanking them for their efforts and committing the GMUG National Forest staff and Ranger Districts to the concepts of cooperation and coordination outlined in its report. The Pathfinder Report and the "Tenny Decision" can be found on the GMUG Pathfinder website (www.GMUGpathfinder.org) or on the CWCB website (http://cwcb.state.co.us/MajorInitiatives.htm).

Executive Summary

Pathfinder Project Steering Committee Report

Strategies for Instream Flow Management

The Pathfinder Project is a pilot program that through its involvement with an array of stakeholders representing State interests, local water managers, water users, conservationists, and water resource managers working on a Steering Committee has developed strategies for instream flow management. The Steering Committee has worked to define a process that seeks to utilize "tools" (strategies or actions) that can provide for instream flows or protect existing instream flow regimes on National Forest lands in Colorado.

This process for instream flow management is meant to provide for instream flows that can meet federal resource management objectives on National Forest System lands. The Pathfinder Project Steering Committee recognized that there are several key issues that cause concern for stakeholders when the Forest Service attempts to provide for instream flows relying solely on its own authorities for National Forest lands. Three of those concerns or issues that were considered in specific detail during the stakeholder meetings are:

- Lack of Forest Service reliance on the State's Instream Flow Program as administered by the Colorado Water Conservation Board (CWCB);
- The conditioning of special-use permits by the Forest Service with "bypass" flow requirements to provide for instream flows; and,
- Adherence to state water law and recognition of privately held water rights and the State's ability to adjudicate water for instream flow purposes.

The process outlined by the Pathfinder Project Steering Committee seeks to address these key issues within the framework of existing federal and state statues, regulations, laws, and policies and by focusing on cooperative and coordinated strategies, that when applied, could potentially provide the necessary instream flows to meet Forest Service resource management objectives or to sustain resource values on National Forest lands. Much of the controversy related to these three key issues revolves around the application of "bypass" flow requirements (conditions) on special-use permits (whereby the Forest Service requires that a quantity of the decreed diversionary water remain in a stream on National Forest lands). Therefore one of the primary objectives of the Pathfinder process was to develop a list of "tools" that could be utilized by the Forest Service in a cooperative process working with state agencies, water managers, water users, and other interested parties to achieve instream flow protection instead of a possible decision by the Forest Service to act unilaterally and impose bypass flow requirements on special-use permits.

These tools are to be implemented in tiered fashion. The tools identified by the Pathfinder Project entail 27 possible actions or strategies. Some provide for direct instream flow protection, others are more indirect in their outcomes, but when a part of a larger strategy can collectively achieve instream flow protection. The first tier of tools generally focuses on the more cooperative strategies or existing conditions analysis that are less controversial, while the second tier of tools involves greater coordination and may involve negotiated agreements to be implemented. Key in these first two tiers of

action are efforts to collectively and cooperatively work out possible options for such actions as: re-operation of diversion or storage facilities, variable water use (drought options), possible acquisition (e.g.; donations, purchase, leasing), better monitoring and management of diversions (efficiency), protection under the CWCB Instream Flow Program, limiting diversions to decreed amounts, and conservation. It is anticipated that the first two tiers of tools, if applied or implemented, could provide the needed instream flow protection on National Forest lands without having to impose bypass flow conditions on special-use permits.

The Pathfinder Project Report is a strategy of progressive action. This strategy seeks cooperation first, then moving to more collective and coordinated efforts. It provides a variety of options that achieve the desired outcomes with regard to instream flows before the Forest Service would move to take unilateral federal action to provide instream flows through bypass flow requirements for special-use permits. This last course of action would only occur when and if the applicable tools in the first two tiers have been exhausted and determined not to meet Forest instream flow needs. The Pathfinder Project strategy views the application of bypass flow requirements as a federal action of "last resort," while recognizing that parties supporting the strategy have not waived their rights and abilities to challenge such action.

PATHFINDER PROJECT STEERING COMMITTEE REPORT

STRATEGIES for INSTREAM FLOW MANAGEMENT

FINAL REPORT

***

April 2004

Pathfinder Project Steering Committee Report

Table of Contents

Tables and Figures

Pathfinder Project Steering Committee Report

Strategies for Instream Flow Management

The Pathfinder Project is a pilot program initiated by the Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests. Its purpose is to provide external ideas, perspectives and options related to strategic planning for, and implementation of, instream flow protection on National Forest lands.

The Forest Supervisor for the GMUG National Forests convened a meeting in May 2000 to bring together representatives from various stakeholder groups that traditionally have been involved with water resource issues on the GMUG National Forests to help address instream flow needs and strategic protection strategies that could assist the Forest Service in its Forest Plan revision process.

The Forest Service has federal authorities to manage resources including water resources for multiple-use, sustained yield and to protect environmental values.[1] The Pathfinder Project attempted to resolve the contentious issues related to "bypass" flow (whereby the Forest Service requires that a quantity of the decreed diversionary water remain in a stream) authorities as defined by statute. The Pathfinder Project approach offers constructive alternatives to achieve the Forest Service's mandated outcomes for resource management and protection. While these alternatives may provide the means to achieve instream flow management objectives, the Forest Service will maintain its discretionary authority to add bypass flow requirements as conditions to special-use permits if such alternative strategies are unsuccessful in achieving needed instream flows for National Forest lands. The strategies and suggestions contained in this report reflect a consensus of the parties involved and these parties are credited with considerable compromise to achieve this consensus. However, stakeholders do not waive their rights to challenge Forest Service actions.

Pathfinder Project Steering Committee

Since the May 2000 meeting, representatives from eleven stakeholder groups (water users, conservationists, and water regulatory and management agencies) have met on a regular basis to provide local community perspectives, ideas, and possible ways to manage for instream flows on National Forest lands. The Pathfinder Project Steering Committee members represent the following groups or stakeholders:

Club 20
Grand Mesa and Grand Valley Water Users
Overland Reservoir and Ditch Company
High Country Citizens' Alliance
Local ranchers
Trout Unlimited
San Miguel Watershed Coalition
State of Colorado Division of Water Resources
State of Colorado Division of Wildlife
State of Colorado Water Conservation Board
U.S. Forest Service

[1] Organic Administration Act of 1897; Multiple-Use Sustained-Yield Act of 1960; the Federal Land Policy and Management Act of 1976; and the Wild and Scenic Rivers Act of 1968.

Mission Statement

The Mission of the Pathfinder Steering Committee is to assist the Forest Service in providing appropriate instream flow protection on the GMUG National Forests.

Background of Instream Flow Protection

Instream flow is the term generally referring to surface water that remains in the natural channel of a stream. In Colorado, as in most western states, surface water flowing in a stream is available to anyone who can make beneficial use of the water. Historically, that has meant that water is diverted via a constructed ditch or pipeline from the natural stream channel to agricultural lands or other locations where the water can be put to use for the purposes of growing crops, manufacturing products, or supplying water for human or animal consumption. The original purpose of Colorado water law was to adjudicate and administer the process of diverting water from the streams and protect the water put to beneficial use.

As Colorado's population has grown and development continues, demand for water has increased and diversion of water has resulted in diminished instream flows. Historically, Colorado water law did not have provisions to protect instream flows because in-situ use of water to maintain stream flows did not meet the traditional definition of beneficial use. Today, under Colorado State Law, the Colorado Water Conservation Board (CWCB) has the exclusive authority to acquire and appropriate water, water rights, and interests in water to protect instream flows. The CWCB Instream Flow and Natural Lake Level Program (Colorado ISF Program) under statutory authority[2] can appropriate minimum stream flows to preserve the natural environment to a reasonable degree. The Colorado ISF Program can also acquire existing water rights for subsequent conversion to instream flow rights for the preservation and improvement of the natural environment. Although the Colorado IFS Program includes natural lake-level protection, the focus of the Steering Committee is on instream flow protection.

Issues and Concerns

Two major issues and concerns surfaced in early meetings of the Steering Committee. They involved bypass flows and the use of the Colorado ISF Program.

The Forest Service may require bypass flows as a condition of special use permits on National Forest lands. It should be noted that requiring bypass flows as a condition of special-use permit renewals is much more controversial than conditions placed on new permits.

[2] §37-92-102(3) C.R.S.

In Colorado, imposing bypass flows (as well as the failure to impose bypass flows) as part of a special-use permit renewal have been subject to litigation. Much of the controversy involving bypass flow authority and preservation of water rights has not been fully resolved and therefore continues to be an issue of great interest for water users as well as other parties interested in water resource use and protection.

The Colorado state agencies were concerned that the Forest Service had not been an active participant in the Colorado ISF Program. They and some of the other stakeholders believed the ISF Program could provide needed instream flow protection, but has not been part of the Forest Service water-management strategy. For a variety of reasons, other stakeholders were less convinced of the effectiveness of the State's program to meet the full range of resource management and protection needs on National Forest lands.

A third concern related to federal adherence to state water law and recognition of privately held water rights surfaced after the initial Steering Committee meetings. Some stakeholders felt that state water law could also be a hindrance in providing instream flow protection on National Forests and believed that the Forest Service could not adequately carry out its resource management mandates without some authority over the waters on National Forest lands. However, all stakeholders generally recognized the necessity to respect existing water rights.

Public Meetings

The Pathfinder Project Steering Committee recognized that, while bypass flows, Colorado ISF Program participation, and recognition of existing water rights were important issues, there is a need to obtain more insight into issues and concerns held by the public with regard to water use, water management and instream flow protection on NFS lands. Accordingly, the Steering Committee decided to develop a public involvement program component to help further identify water use issues and concerns. The Steering Committee utilized the services of the Colorado State University Extension Service to develop and manage the public outreach activities. Radio and newspaper public service announcements were used to notify the public of pending public meetings. A Pathfinder Project website was developed (www.GMUG pathfinder.org) to provide information on the project, public meeting notices, and to make other related instream flow data available for review.

Five public meetings were conducted in local communities adjacent to the GMUG National Forest in the spring of 2002. Prior to the public meetings, almost 1,000 questionnaires were mailed out to water users, special-use permit holders, and other interested parties notifying them of the meeting dates and locations, and asking them to comment on water use issues, concerns, and water-related values on NFS lands. The public meetings were structured to provide information on the Steering Committee's objectives and the Forest Plan Revision process, and to gather public input on the importance of instream flows on NFS lands and their concerns regarding instream flow protection strategies and procedures. The Pathfinder Project website also allowed the

public to respond to the questionnaire via the Internet. Details of public meeting responses and results of the questionnaires are contained in a report titled, *Summary of Outreach Activities and Public Input: Spring 2002*.

In general the major issues, objectives, and values identified during the public involvement process were that:

- Any assertion of bypass flows as a legitimate administrative tool was highly contentious.
- Bypass flows constituted a "takings" of private property.
- Bypass flows created by Forest Service permitting are not protected water rights under the State's statutes.
- Water developments (reservoirs) sometimes provide instream flows that are not adequately recognized.
- Beneficial effects of return flows are not adequately recognized.
- First priority should be to protect existing beneficial uses (existing water rights) rather than environmental uses.
- Economic trade-offs (costs of instream flow protection to water users) must be considered prior to any instream flow management action.
- Compensation should be made to water right holders if bypass flows are required
- Maintain multiple-use doctrines for NFS lands.
- Encourage greater cooperation among state, federal and local agencies.
- Aesthetics of instream flows are important.
- Water quality is an important component of water management.
- Wildlife, fish, and riparian areas are important values related to instream flows.
- Instream flows are important for recreational uses – rafting and fishing.
- Industrial and domestic water uses should be a priority.

After reviewing and evaluating the public comments and input as well as continued feedback from their stakeholder groups, the Steering Committee categorized the issues and concerns into seven-major components to be addressed. They are:

- absolute water rights
- conditional water rights
- water development
- ecological values
- fish and aquatic species habitat
- unique or high-use recreational values
- flow-dependent water quality

Flow-dependent Values

Resources or stream uses that are directly linked to surface water flow (flow-dependent values) were identified for GMUG National Forests using mapped information (geo-spacial databases) derived from existing water use and resource information available

from the State and the Forest Service. Absolute and conditional water rights associated with stream diversions, as well as existing instream flow water rights held by the CWCB, were identified along with other flow-dependent natural resource components, such as:

- aquatic species of concern (includes threatened and endangered species)
- unique or high-use recreational attractions (e.g., waterfalls)
- water quality (flow-dependent parameters)
- fish and amphibian habitats
- riparian vegetation
- wildlife water
- gazing water
- groundwater recharge
- wetlands
- native and sport-fish populations
- dispersed and developed recreation use along streams
- aesthetics of flowing water
- stream channel dynamics (sediment movement, gravel deposition, bank-full discharge)

Evaluation of these data showed that many of the flow-dependent resource values were widespread on streams throughout the GMUG National Forests and could not be depicted on maps as specific site locations. These values, because they were common and wide-spread across a majority of forest streams, represent "baseline" resources on the GMUG National Forests.

From information contained in the Forest Service database, the GMUG National Forests can be delineated into several watershed levels. These levels are based on size and position within the river basin and are referred to as HUCs.[3] The smallest watershed level (7th level HUC) would generally have less than 10,000 acres. The next larger watershed level is the 6th level HUC watershed that generally ranges in size from 10,000 to 90,000 acres. There are approximately 223 delineated 6th level HUC watersheds where there are NFS lands within the watershed. Delineations of smaller level HUC watersheds are possible for most of the 6th level HUC watersheds; however, mapping to the 7th level almost triples the number of watersheds where there are NFS lands within the watershed.

Water diversions and water storage facilities on National Forest lands are present on two-thirds of the 6th level HUC watersheds. Water is diverted or stored for agricultural, municipal, domestic, and industrial supply. Water is consumed on National Forest lands by livestock and wildlife; it provides groundwater recharge, supports vegetation (grasses, shrubs and timber), sustains wetlands and riparian communities, creates aquatic species habitat, and provides for recreational use and aesthetic enjoyment. The National Forest lands are managed for multiple-use and are open to the public and for authorized private

[3] HUC; Hydrologic Unit Classification, a system derived by the USGS to classify watersheds based on size and position within river basins.

and commercial activities consistent with federal laws and regulations governing National Forests.

Because water diversions are linked to most of the instream flow issues and concerns, the streams on the National Forest lands were characterized or sorted into major categories based on levels of diversion. Watersheds were sorted into groupings based on the percentage of annual water yield (stream flow) being diverted (annual average) for out-of-channel use. The Steering Committee selected the four levels of diversion to characterize and differentiate streams on the GMUG National Forests that are:

- no recorded diversions (No Diversions)
- water right diversions with no recorded volume of diversion or with less than 20 percent of the total calculated annual yield (0 to 20 % Diverted)
- quantified water right diversions with a range of 20 to 50 percent of the total annual yield (20 to 50% Diverted)
- quantified water right diversions with a percentage greater than 50 percent of the calculated annual yield (> 50% Diverted)

These four categories were further sorted as to whether the streams were inhabited by wildlife species of concern (which includes federally listed threatened and endangered species) or had potential populations of such species (Table 1). One of the key species triggering this sort is the Colorado River Cutthroat trout because of the Forest Service's commitment to the multi-state, multi-agency *Conservation Agreement and Strategy for Colorado River Cutthroat Trout* (April 2001) that outlines a plan for sustaining that trout population in Colorado and other western states.

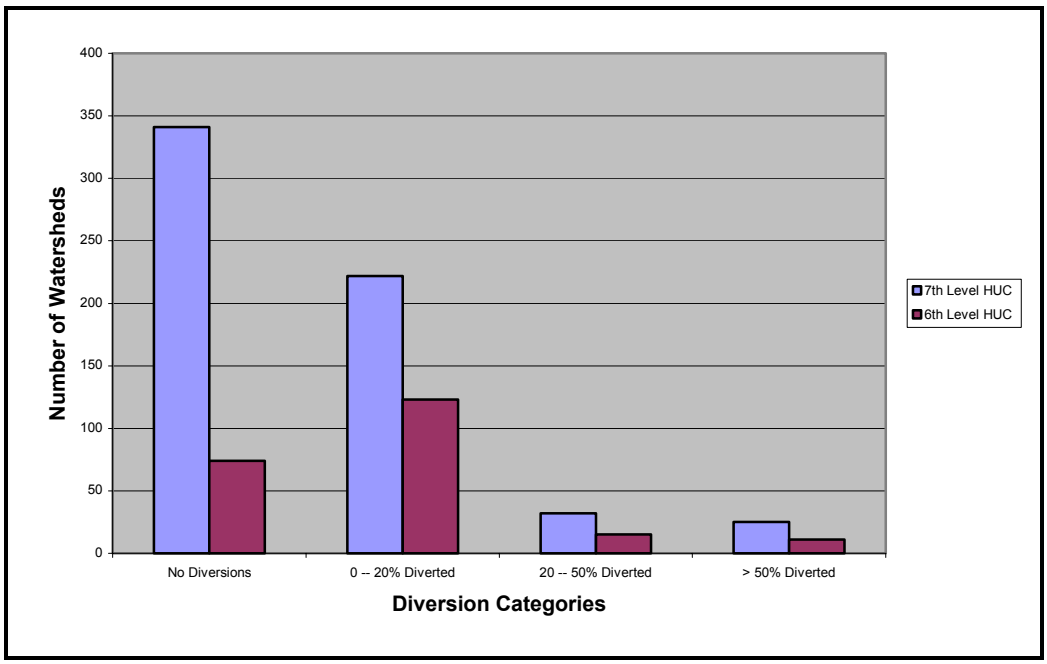
Table 1 -- Watersheds by Sorting Categories

	No Recorded Diversions		**0 to 20% Diverted**		**20 to 50% Diverted**		**> than 50% Diverted**	
	Species of Concern	No Species of Concern	Species of Concern	No Species of Concern	Species of Concern	No Species of Concern	Species of Concern	No Species of Concern
6th Level HUC's	4	70	56	67	4	11	3	8
7th Level HUC's	40	301	72	150	9	23	4	21
CWCB ISF Filings	18	46	29	51	5	8	3	3

The number of streams in any of these eight sub-categories is subject to change over time. This type of database is dynamic in that as new or updated information is acquired and as new diversions occur it could change the characterization of the watersheds based on presence or absence of species of concern or the amount of water diverted. It is important to note that as the size of the watershed increases (e.g., from 7th level to 6th

level) there are fewer watersheds without diversions. However, the majority of watersheds still continue to fall under the No Recorded Diversions and 0 to 20 % Diverted categories (Figure 1).

Figure 1 -- Distribution of Watersheds by Diversion Categories



The primary purpose of the sorting characterizations was to provide a basis for defining goals and objectives for instream flow protection as well as to give perspective to the proportional relationship of the number of streams in each of the sorting categories.

Instream Flow Protection Goals, Objectives and Implementation

Tools

The Steering Committee compiled a list of strategies or actions that could be utilized to provide for or protect instream flows. These "tools" generally exist within the framework of federal and state statutes, regulations, laws and policies that, when utilized, can provide for instream flow protection or enhancement (Table 2). It is important to note that the numerical listing does not prioritize or assess the effectiveness of these tools. The list is categorized by three major headings: those options available under the auspices of the Forest Service, the State of Colorado programs, and those activities requiring cooperative or collective action by multiple parties to be effective. Some of the tools provide for direct instream flow protection, while others are more indirect with regard to their outcomes, but when they are a part of a larger strategy they can collectively achieve instream flow protection. The application of the tools relies on a tiered approach and is addressed in more detail in a later section (Implementation of Instream Flow Protection Strategies) and in Appendix B: Interpretation of Tools.

Table 2 -- Tools

Forest Service Management Options	Cooperative or Partnership Approach Options	CWCB's Instream Flow Program Options
1. Inventory and consult with permittee on water rights, water uses, and permits.	**11.** Assist Colorado Water Conservation Board (CWCB) and State Engineer in monitoring and protecting existing ISF rights on GMUG National Forests (NF)	**21.** Pursue opportunities offered by CWCB ISF Program
2. Negotiate permit conditions for instream flow purposes on new water development.	**12.** Work with CWCB to recognize the NF land and resource management objectives and quantification methods for streams on the Forest may differ from the objectives and methods CWCB currently provides.	**22.** Seek CWCB agreement to appropriate or acquire needed flows on NF lands.
3. As a permit condition, limit diversions to decreed amounts when needed, seasonally.	**13.** Investigate voluntary re-operation alternatives with existing diversion permit holders to meet FS and permittee objectives.	**23.** Encourage CWCB to file on USFS flow recommendations the year they are made.
4. Implement channel and fish habitat improvements to compensate for lower flows when a determination has been made that such improvements have biologic merit.	**14.** Seek voluntary agreement with new applicants to develop operational plans to meet FS and applicant's objectives.	**24.** Establish legal, shared property ownership with the CWCB for acquired ISF rights on NFS lands.
5. Consider other forest practices that influence stream flows, such as vegetation management.	**15.** Consider new and expanded storage with participation by the USFS for instream flow purposes (which include the Forest Service appropriating or acquiring an interest in the water rights).	**25.** Encourage CWCB to file on peak spring flows and shoulder flows under ISF Program to allow for recharge of groundwater and to maintain riparian and off-channel habitat.
6. Use land and water acquisition programs and water right purchases to obtain water rights that could be converted to instream flow (ISF) rights.	**16.** Consider off-channel storage for later release.	**26.** Encourage the State Legislature to expand the CWCB ISF program to include recreational, scenic, and aesthetic uses.
7. Ensure that water rights acquired as part of an USFS acquisition or exchange are incorporated into the Forest water right inventory.	**17.** Provide State Engineer with documentation on water rights not being used.	**27.** Identify stream segments currently limited by availability of water for ISF protection and improvement.
8. Protect water rights held by USFS.	**18.** Initiate educational program for water conservation and promote/facilitate delivery and application efficiencies.	
9. Expand USFS efforts to inventory and assess the aquatic and riparian resources on GMUG NF.	**19.** Establish ISF management objectives for watersheds on the GMUG NF.	
10. Practice good watershed and streamside management to deliver sufficient quantity and quality of water to meet downstream and forest uses.	**20.** Work cooperatively with local governments to establish Recreational Instream Channel Diversion (RICD) on stream segment(s) located on NFS lands.	

Goals and Objectives

Using the stream sorting characterizations (see Flow Dependent Values) the Steering Committee developed Goals and Objectives for instream flow management for each of the four stream classification categories (Table 3). The Goals define a direction or theme for each of the four stream categories and the Objectives focus on a specific emphasis relative to several of the key issues (see Issues and Concerns, above). The Goals change focus or have different visions for the different stream classification categories. The level of existing stream diversion has an influence on the Goals and Objectives for each classification category, as does the presence or absence of species of concern.

The Objectives provide more specific direction for different uses or resource values. The Objectives address specific values such as existing and conditional water rights, ecological values, fish/amphibian habitats, unique or high-use recreational areas, stream restoration, species recovery, and specific water quality concerns. Inherent in all the Objectives is the need to address both the unique values or key issues and those common or widespread values that provide a baseline of flow-dependent resources prevalent throughout the forests. These baseline values include, but are not limited to:

- riparian vegetation
- wildlife water
- grazing water
- groundwater recharge
- wetlands
- native and sport-fish habitats
- dispersed and developed recreation use along streams
- aesthetics of flowing water
- natural hydrologic functions associated with stream flow

The more unique resource values and the amount of current water diversions most often were linked to identified instream flow issues or concerns. Therefore, the Goals and Objectives are directly tied to these values and issues rather than focused on the broader and more common baseline values that occur throughout the forests. There is a general pattern or vision for the different stream classification categories. The Steering Committee looked at streams in the No Diversion category as a logical category to focus on preservation, because these streams offer the greatest potential for instream resource management with the least potential for conflict with existing water uses. For the diversion categories (0 to 20% Diverted and 20 to 50% Diverted) where diversions constitute less than 50 percent of stream flow, the vision is to recognize existing and future water uses and the instream flow needs in a balanced fashion consistent with multiple-use objectives. In the last category of the matrix, where diversions exceed 50 percent of stream flow, the vision recognizes existing water use but also the possible need to implement more active management strategies to restore instream flows.

Table 3 -- Instream Flow Management Matrix for GMUG Watersheds

	NO RECORDED DIVERSIONS		0 to 20% DIVERTED OF ANNUAL YIELD		20 to 50% DIVERTED OF ANNUAL YIELD		GREATER THAN 50% DIVERTED OF ANNUAL YIELD	
	SPECIES OF CONCERN	**NO SPECIES OF CONCERN**	**SPECIES OF CONCERN**	**NO SPECIES OF CONCERN**	**SPECIES OF CONCERN**	**NO SPECIES OF CONCERN**	**SPECIES OF CONCERN**	**NO SPECIES OF CONCERN**
	GOAL I: Preserve existing natural flows for the benefit of species of concern, ecosystem integrity and reference conditions	**GOAL II:** Protect hydrologic flow regimes needed to maintain baseline values	**GOAL III:** Maintain existing flow conditions for the benefit of species of concern and ecosystem integrity	**GOAL IV:** Establish and/or maintain a reasonable balance between consumptive and non-consumptive uses of water resources on the Forest	**GOAL V:** Maintain existing flow conditions for the benefit of species of concern and ecosystem integrity	**GOAL VI:** Establish and/or maintain a reasonable balance between consumptive and non-consumptive uses of water resources on the Forest	**GOAL VII:** Maintain existing flow conditions for the benefit of species of concern and ecosystem integrity	**GOAL VIII:** Establish and/or maintain a reasonable balance between consumptive and non-consumptive uses of water resources on the Forest
Water Rights	**OBJECTIVE I. A:** Preservation of these watersheds will be the Forest Service's top priority for the conservation of species of concern **TOOLS:** Tier I: 9, 10, 19, 21, 22, 23, 25 Tier II: 12 Tier III: none	**OBJECTIVE II. A:** Instream flow volumes, including peak flows and timing regimes shall not be reduced to the extent that existing baseline flow-related values are unacceptably impacted or degraded within a sixth level watershed (HUC) **TOOLS:** Tier I: 10, 19, 21, 22, 23, 25 Tier II: 6 Tier III: none	**OBJECTIVE III. A:** Recognize existing legal water uses **TOOLS:** Tier I: 1 Tier II: 7, 8, 17 Tier III: none	**OBJECTIVE IV. A:** Recognize existing legal water uses **TOOLS:** Tier I: 1 Tier II: 7, 8, 17 Tier III: none	**OBJECTIVE V. A:** Recognize existing legal water uses **TOOLS:** Tier I: 1 Tier II: 7, 8, 17 Tier III: none	**OBJECTIVE VI. A:** Recognize existing legal water uses **TOOLS:** Tier I: 1 Tier II: 7, 8, 17 Tier III: none	**OBJECTIVE VII. A:** Recognize existing legal water uses **TOOLS:** Tier I: 1 Tier II: 7, 8, 17 Tier III: none	**OBJECTIVE VIII. A:** Recognize existing legal water uses **TOOLS:** Tier I: 1 Tier II: 7, 8, 17 Tier III: none
Stream Flows	**OBJECTIVE I. B:** Recognize conditional water right **TOOLS:** Tier I: 1, 17 Tier II: none Tier III: none	**OBJECTIVE II. B:** Recognize conditional water rights **TOOLS:** Tier I: 1, 17 Tier II: none Tier III: none	**OBJECTIVE III. B:** Recognize conditional water rights **TOOLS:** Tier I: 1 Tier II: 7, 17 Tier III: none	**OBJECTIVE IV. B:** Recognize conditional water rights **TOOLS:** Tier I: 1 Tier II: 7, 17 Tier III: none	**OBJECTIVE V. B:** Recognize conditional water rights **TOOLS:** Tier I: 1 Tier II: 7, 17 Tier III: none	**OBJECTIVE VI. B:** Recognize conditional water rights **TOOLS:** Tier I: 1 Tier II: 7, 17 Tier III: none	**OBJECTIVE VII. B:** Recognize conditional water rights **TOOLS:** Tier I: 1 Tier II: 7, 17 Tier III: none	**OBJECTIVE VIII. B:** Recognize conditional water rights **TOOLS:** Tier I: 1 Tier II: 7, 17 Tier III: none
	OBJECTIVE I. C: Achieve flow regimes that maintain self-sustaining populations of species of concern **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 6 Tier III: none	**OBJECTIVE II. C:** For those segments identified in cooperation with the DOW as potentially providing high value habitat for reintroduction of species of concern, pursue protection efforts **TOOLS:** Tier I: 10, 19, 21, 22, 23, 24, 25 Tier II: 4, 18 Tier III: none	**OBJECTIVE III. C:** Achieve flow regimes that maintain self-sustaining populations of species of concern **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 5, 6, 13 Tier III: Unilateral Federal Actions	**OBJECTIVE IV. C:** Ensure instream flows necessary to sustain baseline ecological values **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 5, 6 Tier III: Unilateral Federal Actions	**OBJECTIVE V. C:** Achieve flow regimes that maintain self-sustaining populations of species of concern **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 5, 13, 15, 17 Tier III: Unilateral Federal Actions	**OBJECTIVE VI. C:** Ensure instream flows necessary to sustain baseline ecological values **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 5, 6, 13 Tier III: Unilateral Federal Actions	**OBJECTIVE VII. C:** Achieve flow regimes that maintain self-sustaining populations of species of concern **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 5, 6, 13, 16 Tier III: Unilateral Federal Actions	**OBJECTIVE VIII. C:** Pursue instream flows necessary to sustain baseline ecological values **TOOLS:** Tier I: 9, 10, 21, 22, 23, 25 Tier II: 4, 5, 6, 13 Tier III: Unilateral Federal Actions
Water Development	**OBJECTIVE I. D:** Entertain future water development only when the action can be determined to have an insignificant impact on flow regimes necessary for the conservation of species of concern **TOOLS:** Tier I: 2, 3, 10, 11, 19 Tier II: 18 Tier III: none	**OBJECTIVE II. D:** Accommodate future water development requests when a high level of ecosystem protection can be ensured **TOOLS:** Tier I: 3, 11, 21 Tier II: 2, 18 Tier III: none	**OBJECTIVE III. D:** Entertain future water development requests when a high level of population protection and habitat protection can be ensured **TOOLS:** Tier I: 2, 3, 4, 19 Tier II: 14, 15 Tier III: none	**OBJECTIVE IV. D:** Accommodate future water development so long as baseline recreational and ecological values are not precluded **TOOLS:** Tier I: 3, 15 Tier II: 2, 4 Tier III: none	**OBJECTIVE V. D:** Entertain future water development requests when a high level of population protection and habitat protection can be ensured **TOOLS:** Tier I: 2, 3, 4, 19 Tier II: 14, 15 Tier III: none	**OBJECTIVE VI. D:** Accommodate future water development so long as baseline recreational and ecological values are not precluded **TOOLS:** Tier I: 3, 15 Tier II: 2, 4 Tier III: none	**OBJECTIVE VII. D:** Do not entertain future water development requests if it would contribute to degradation that causes loss of species viability **TOOLS:** Tier I: 2, 3,14 Tier II: 15, 16 Tier III: none	**OBJECTIVE VIII. D:** Scrutinize future water development to avoid unacceptable impairment of baseline recreational and ecological values **TOOLS:** Tier I: 3, 4, 15 Tier II: 2 Tier III: none
Recreational	**OBJECTIVE I. E:** Protect appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 10, 11, 15, 20 Tier II: 12, 18, 25, 26 Tier III: none	**OBJECTIVE II. E:** Protect appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 4, 10, 15, 20 Tier II: 12, 24, 25, 26 Tier III: none	**OBJECTIVE III. E:** Protect appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 1, 4, 10, 15, 20, 26 Tier II: 12, 24, 25 Tier III: none	**OBJECTIVE IV. E:** Protect appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 1, 4, 10, 15, 20, 26 Tier II: 12, 24, 25 Tier III: none	**OBJECTIVE V. E:** Protect and/or enhance appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 1, 4, 10, 15, 20, 26 Tier II: 3, 6, 12, 16, 18, 24, 25 Tier III: none	**OBJECTIVE VI. E:** Protect and/or enhance appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 1, 4, 10, 15, 20, 26 Tier II: 3, 6, 12, 16, 18, 24, 25 Tier III: none	**OBJECTIVE VII. E:** Protect and/or enhance appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 1, 4, 10, 15, 20, 26 Tier II: 6, 12, 16, 18, 24, 25 Tier III: none	**OBJECTIVE VIII. E:** Protect and/or enhance appropriate instream flows so that recreational uses (high use areas/unique recreation attractions) are not precluded by future water development **TOOLS:** Tier I: 1, 4, 10, 15, 20, 26 Tier II: 6, 12, 16, 18, 24, 25 Tier III: none
Restoration					**OBJECTIVE V. F:** For those segments identified in cooperation with the DOW as potentially providing high value habitat and/or recovery sites pursue restoration efforts to improve flow and habitat conditions **TOOLS:** Tier I: 2, 3, 11, 13, 15, 21, 22, 23, 24, 25 Tier II: 4, 5, 6, 7, 12, 16, 18 Tier III: Unilateral Federal Actions	**OBJECTIVE VI. F:** Consider restoration of baseline values where evaluation has concluded that restoration is needed. **TOOLS:** Tier I: 1, 3, 5, 6, 10, 11, 13, 19, 21, 22, 23, 24, 25 Tier II: 4, 7, 18, 27 Tier III: Unilateral Federal Actions	**OBJECTIVE VII. F:** For those segments identified in cooperation with the DOW as potentially providing high value habitat and or recovery sites pursue restoration efforts to improve flow and habitat conditions **TOOLS:** Tier I: 2, 3, 6, 13, 15, 21, 22, 23, 24, 25 Tier II: 4, 5, 7, 12, 16, 18 Tier III: Unilateral Federal Actions	**OBJECTIVE VIII. F:** Seek restoration of baseline values where evaluation has concluded that restoration is needed. **TOOLS:** Tier I: 1, 3, 5, 6, 10, 11, 13, 19, 21, 22, 23, 24, 25 Tier II: 4, 7, 18, 27 Tier III: Unilateral Federal Actions
Water Quality	**OBJECTIVE I. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2 Tier III: none	**OBJECTIVE II. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2 Tier III: none	**OBJECTIVE III. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2, 3 Tier III: none	**OBJECTIVE IV. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2, 3 Tier III: none	**OBJECTIVE V. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2, 3, 5 Tier III: none	**OBJECTIVE VI. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2, 3, 5 Tier III: none	**OBJECTIVE VII. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2, 3, 5 Tier III: none	**OBJECTIVE VIII. G:** Recognize Forest Service obligation to comply with provisions of the Clean Water Act (303(d)) as it relates to instream flow **TOOLS:** Tier I: 10 Tier II: 2, 3, 5 Tier III: none

Implementation of Instream Flow Protection Strategies

The Steering Committee recognized the importance and need to apply the tools to the Goals and Objectives in order to implement the Steering Committee's instream flow management plan. The application of tools is intended to achieve the Objectives and ultimately reach the Goals identified for the different stream categories.

The anticipated geographic scope of a prospective project will dictate the geographic level at which the tools will be applied. The implementation strategies must be tied back to the scope of the planning effort, whether at the strategic or project level evaluation. The Steering Committee's instream flow management matrix (Table 3) is essentially strategic level planning, but the Steering Committee recognizes that some projects on the National Forests will have limited effects and only localized impacts. Many projects may not have impacts on the overall function or integrity of the entire watershed. Accordingly, the appropriate application of the specific tools will generally be limited to the smaller or local watershed level. If the consequences or the scope of the project or plan being evaluated has the potential to affect the function or integrity of the entire watershed, then the application of the Goals and Objectives, and tools should be at the larger scale and focus on impacted baseline values in the entire watershed.

Plans for new water diversions should primarily be evaluated under the existing stream sorting category (e.g., 0-20% Diverted), not the stream category (sort level) of post-project conditions. However, in the event the approval of a new water diversion project would result in a change from one stream sorting category to another, tools recommended for both of the sorting categories (the current and the post-project category) should be considered as part of a cumulative effects analysis that is required during the federal decision-making process required by the National Environmental Policy Act.

The Steering Committee adopted a tiered approach for implementation or application of tools. The management matrix (Table 3) identifies tools (Table 2) for each objective by "tiers." The tiers define the recommended order of implementation. All of the Tier I tools are a first level of action designed to meet instream flow needs on the GMUG National Forests. Tier II constitutes a second level of recommended actions or strategies. The intent of these first two tiers is to recognize the most cooperative and constructive strategies that would integrate Forest Service actions and non-Forest Service programs related to instream flows into a management scheme that would ultimately provide the needed instream flows without requiring bypass flows on special-use permits.

The Steering Committee defined the application of bypass flow conditions for a special-use permit renewal as an action of "last resort". This last course of federal action would only occur when and if the applicable tools in the first two tiers have been exhausted and determined not to meet Forest Service instream flow needs. The parties supporting this strategy have not waived their rights and abilities to challenge such action. Prior to requiring bypass flows, the Forest Service would involve the CWCB, Colorado Division of Wildlife, State Engineer's Office and other interested parties in a review of the process to ascertain that all the other options to meet instream flow needs have been exhausted.

The Steering Committee recognizes that imposing or failing to impose bypass flows will likely result in disputes and challenges which are inconsistent with the spirit of the process outlined by the instream flow management matrix and its suggested application of Tier I and II tools. Condemnation (eminent domain) is another use of the federal government's powers. The Forest Service can unilaterally acquire private property for public purposes using its powers of eminent domain. Use of condemnation to acquire water for instream flows is extremely contentious as it necessarily reflects a prior failure to negotiate a purchase of property on a willing seller basis. Nevertheless, it is an authority available to the Forest Service for the acquisition of water rights.

The Forest Service has the authority to take numerous actions with regard to managing natural resources, including water, on National Forest lands. The two most direct and controversial Forest Service actions are listed in Table 4 and should be considered actions of last resort (Appendix C). Additionally, the Forest Service has the discretion to deny a special-use permit application.

Table 4 Federal Unilateral Actions

Action	Application
Require by-pass flows as a condition of special-use permits for protecting and restoring natural resources and/or the aquatic environment.	Unilateral action by the Forest Service that requires water diversions on National Forest lands be reduced to provide for instream flows.
Use condemnation to acquire water for instream flows.	Forest Service acquisition of property rights for the benefit of the public if administrative options or willing seller have failed to provide water for instream flow purposes.

Public Review and Support

In a final effort to connect with stakeholders and the public on issues and concerns regarding the proposed instream flow management plan, the Steering Committee conducted a review process that involved presentations to various water management groups at seven public meetings. Steering Committee members were responsible for conducting the Pathfinder Project presentations at the different meetings where the audience was comprised of members from the larger constituency groups represented by the Steering Committee members. These meetings were open to the public but were either specially noticed meetings of a water management organization (e.g., Upper Gunnison River Water Conservancy District) or a noticed agenda topic at a regularly scheduled board meeting of a water organization or agency such as the CWCB and the Colorado River Water Conservation District. Comments and suggested revisions obtained from these outreach meetings provided important feedback and helped to formulate this report.

Further, the Steering Committee's work is consistent with portions of the recent *Discretionary Review Decision* (March 21, 2003) by Deputy Under Secretary of the Department of Agriculture, David P. Tenny, on Water Resources Management and Special Use Authorizations (www.GMUGpathfinder.org/Tennymemo) that states that "water uses on National Forest System lands should be managed through cooperation with states, other federal agencies, Tribal governments, holders of valid water rights and the interested public, rather than through unilateral regulatory action by the Forest Service."

Steering Committee Conclusions

The Values, Goals and Objectives, and Implementation sections and the associated tables in this report provide the rationale, process, and intent of the Pathfinder Project Steering Committee's instream flow management strategies.

The Steering Committee seeks to have the Forest Service carefully consider and evaluate their proposed goals, objectives, and strategies to provide instream flow protection on National Forest lands and that the concept of tiered application of management actions or strategies (tools) be integral in any Forest Service plan for managing water uses on the GMUG National Forests. The Steering Committee's assessment of Goals and Objectives for instream flow protection provides the Forest Service with a framework for its Forest Plan Revision that seeks to achieve resource protection and provide for multiple-use and protection of water resources on NFS lands based on the issues and concerns expressed by stakeholders and the general public. The implementation strategies favoring cooperation and coordination are integral to the Steering Committee's vision for instream flow protection and constitute the heart of what the Committee feels is necessary to successfully accomplish the goals and objectives.

The Pathfinder Project Steering Committee recognizes that ultimately the Forest Plan will define the implementation procedures for these tools or other strategies to meet GMUG National Forest instream flow needs, but the Pathfinder Project goals, objectives, and strategies provide the Forest Service with a reasonable management approach for instream flow protection that should be considered in the Forest Plan revision.

Appendix A --- Glossary or Definition of Terms Used

Accommodate – Work together with water users and project proponents to process new water development permits under the auspices of the Forest Plan Revision. (see Entertain)

Achieve – To accomplish through management or direct actions by the Forest Service.

Appropriate – A level of compliance that meets the prescribed needs through cooperative and cost-effective methods.

Baseline Value – A component of the forest natural resources that are flow dependent and are wide-spread and relatively common throughout the GMUG National Forests, (e.g., willows, cottonwoods, trout, fishing, groundwater recharge, wildlife and stock watering).

Bypass flow – An administratively required condition of use related to Forest Service issued water-related, special-use permits where a volume of water decreed to the user is required to remain in the stream, by-passing the point of diversion. It may also apply to reservoir operations where specific releases of water are required to provide for downstream flow.

Ecosystem – The community of plants and animals and their interrelated physical environment. Generally, the focus is on larger landscape units such as a mountain range, a river basin, or an entire watershed.

Ecosystem integrity – The complex interactions and interrelationships of the components of a healthy or properly functioning ecosystem.

Entertain – Receive and process new water development permit applications that comply with all other aspects of the Forest Plan and provide protection of species of concern populations and habitats.

Flow-dependent – A resource or use that is directly linked to surface water flow as part of its lifecycle or as a component of its overall viability.

Flow regimes – The cumulative effect of a stream's hydrograph where there is variation in flow volumes, typically related to specific seasons of each year.

Flow related – An action or activity that involves some aspect of surface water flow, either in volume or timing.

HUC – Hydrologic Unit Classification. River basins are delineated based on the their composite of smaller watersheds forming the larger basin. The ordering or sequence of numbering, based on this US Geological Survey-derived system, is

that the larger the watershed basin, the lower the number. First level HUCs are the major river basins in the United States, such as the Colorado, Mississippi, or Columbia, ranging downward in size to the larger numeric levels. The Gunnison River basin and the Upper Colorado River basin are characterized as 2nd level HUCs. The 7th, 6th and 5th level HUCs were evaluated in this planning effort and data were usually sorted and quantified to the 7th level watershed. A 7th level HUC would generally have a watershed area of less than 10,000 acres.

Not precluded – Not eliminating or ignoring those factors or values in the process of developing other uses.

Preserve – To keep in its current or existing condition, not provide for change.

Protect – To ensure the continued existence of an existing value or use.

Recognize – To formally state the presence of an act, law, regulation, right or statute.

Restoration – The act of returning a system or hydrologic regime to some level or semblance of a former condition, not necessarily in the exact form or condition, but to a functional state with similar or like attributes.

Seek – To pursue through legal or management actions a desired outcome or result.

Self-sustaining – Pertaining to natural resource functions or populations that are able to reproduce or perpetuate themselves naturally and without human assistance or intervention.

Scrutinize – Review and evaluate new water development permit applications with respect to overall instream flow needs for the watershed and only entertain those new applications where baseline recreational and ecological values are not unacceptably impaired.

Species of concern – Those plant or animal species whose habitat have a flow related component and that, because of limited populations or declining habitat, have become reduced in number or are no longer able to sustain themselves naturally in the environments where they traditionally have been found and therefore have received special recognition and management emphasis by federal or state agencies. These species include federally listed threatened and endangered species that have flow-dependent habitats.

Unacceptable impairment – A degradation of a value to the point that it is not functioning.

Unique attraction – A feature or attribute of the natural environment that tends to have higher than average visitor use or is special to the region. Limited availability, one of a kind.

Watershed – Those lands that comprise a continuous hydrologic unit that drains into a specific stream. The hydrologic unit contains upslope land areas that all drain toward only one stream.

Yield – The volume of surface water that is generated by a watershed and is generally measured on an annual basis.

Appendix B: Interpretation of Pathfinder Project Tools

Table 1.3 of the Pathfinder Project Report contains actions or strategies (tools) that could be used to provide for or protect instream values/benefits on NFS lands in the GMUG. These tools cover a broad array of actions. Some are actions that are generally undertaken by the Forest Service through its resource management responsibilities, others are cooperative or partnership approaches to instream flow management and others require use or adherence to State instream flow procedures under the Colorado ISF Program.

The Pathfinder Project Steering Committee developed this list of tools to address an array of situations and management options. The numbering of the tools in no way reflects an order or sequence of application. The Pathfinder instream flow management matrix (Table 3) attempts to provide a basic order of application or implementation through the use of tiers with tools categorized in either Tier I or II as a preferred order of implementation. The following discussion attempts to document the details related to each of the tools and the intent(s) in applying them.

Forest Service Management Options

1. **Inventory and consult with permittee on water rights, water uses, and permits.**

Issue:	Intention in applying the tool:
The Forest Service does not always have a complete inventory of existing water rights, water uses, and other water related permits when evaluating instream flow needs relative to evaluating special use permit renewals. There appeared to be a lack of coordination between State water management agencies, the Forest Service and water users on determining existing water rights and water uses on National Forest System (NFS) lands.	The Forest Service would complete and maintain an up-to-date inventory of water rights acquired and held by the United States for NFS lands as well as those valid and existing water rights recognized by the Colorado State Engineer that have a point of diversion on or are conveyed across NFS lands. The Forest Service would consult with special use permittees on water use and water needs as part of its water rights and water use inventories and assessments prior to making determinations on instream flow needs as they relate to water-related, special-use permits.

2. **Negotiate permit conditions for instream flow purposes on new water development.**

Issue:	Intention in applying the tool:
The Forest Service can unilaterally impose conditions for maintaining instream flows when a new special-use permit is issued for a water diversion or storage project on NFS lands.	The Forest Service would negotiate and work in coordinated fashion with water users and water regulatory and management organizations to address instream flow needs on NFS lands and ultimately include permit conditions that are mutually agreed upon.

3. **As a permit condition, limit diversions to decreed amounts when needed, seasonally.**

Issue:	Intention in applying the tool:
Under Colorado water law, if there is more water than the decreed amount of the diversionary right and it can be put to beneficial use, it can be legally diverted.	The Forest Service would condition a special-use permit, whether new or when renewed, to limit water diversions to the water user's decreed water right.

4. **Implement channel and fish habitat improvements to compensate for lower flows when a determination has been made that such improvements have biological merit.**

Issue:	Intention in applying the tool:
Opportunities to develop in-channel improvements for fish habitat were not always considered when trying to mitigate reduced instream flows, resulting from current or prospective projects.	The Forest Service would fully investigate the potential for restoration or habitat improvements that may provide equivalent biological benefit at specific flow regimes.

5. Consider other forest practices that influence stream flows, such as vegetation management.

Issue:	Intention in applying the tool:
The Forest Service has been reluctant to consider other practices such as vegetation manipulation to increase water yield.	The Forest Service would consider watershed management techniques in its management plans to increase water yield in watersheds where additional instream flow is needed to meet Forest Service objectives.

6. Use land and water acquisition programs and water right purchases to obtain water rights or interests in water that could be converted to instream flow rights.

Issue:	Intention in applying the tool:
There are funding mechanisms and programs to acquire existing water rights that could be used to meet Forest Service needs for instream flows, including interruptible-supply arrangements (e.g., drought year leasing).	The Forest Service could, directly or indirectly, acquire water for instream flows for subsequent inclusion into the Colorado ISF Program. This would be on a willing seller basis or could be part of a larger land acquisition action.

7. Ensure that water rights acquired as part of an Forest Service acquisition or exchange are incorporated into the GMUG National Forests water rights inventory.

Issue:	Intention in applying the tool:
Concern that the Forest Service had acquired water rights as part of its land acquisition program and those water rights were not part of the its water resource management program.	Provide for coordinated management of water resources within the Forest Service between the lands program and the water resources/aquatics program.

8. Protect water rights held by USFS.

Issue:	Intention in applying the tool:
Concern that the Forest Service was not maintaining and/or documenting beneficial use of water rights filed by the United States on National Forest lands.	Ensure the Forest Service does not allow existing water rights to lapse into non-use so that those water rights do not become unavailable for future use, change in use, or transfer.

9. Expand Forest Service efforts to inventory and assess the aquatic and riparian resources on GMUG National Forests.

Issue:	Intention in applying the tool:
The Forest Service has not completed aquatic and riparian assessments Forest-wide. Completion of such assessments would aid in the prioritization of streams and focusing instream flow protection efforts.	The Forest Service should conduct needed field evaluations of aquatic resources and riparian areas to better apply scientific data as part of the instream flow protection strategies.

10. Practice good watershed and streamside management to deliver sufficient quantity and quality water to meet downstream and forest uses.

Issue:	Intention in applying the tool:
Concern that Forest Service programs or approved activities on National Forest lands could have inadequate water resource protection thereby causing poor quality runoff or reducing water yield.	Make sure that water resource protection and water management objectives are considered and incorporated into all activities occurring on National Forest lands. Emphasize the importance of erosion control and the value of maintaining healthy forest conditions on NFS lands.

Cooperative or Partnership Approach Options

11. Assist Colorado Water Conservation Board (CWCB) and the State Engineer in monitoring and protecting existing ISF rights on GMUG National Forests.

Issue:	Intention in applying the tool:
When the Forest Service evaluates water diversion or storage applications for special-use permits it may not be consulting with the State Engineer's Office or CWCB to see if such an approval would impact an existing ISF water right.	Administration and enforcement of water rights is the authority of the State Engineer's Office and the CWCB has the authority in Colorado to hold instream flow water rights. Therefore, the Forest Service would coordinate with those agencies when new special-use permits are being evaluated and assist in monitoring stream flows.

12. Work with CWCB to recognize the National Forest land and resource management objectives and quantification methods for streams on the National Forests may differ from the objectives and methods CWCB currently provides.

Issue:	Intention in applying the tool:
The Colorado ISF Program establishes instream flows to maintain baseflow conditions to protect the environment to a reasonable degree. There may be situations where those instream flow volumes and/or timing of flows may not adequately meet the Forest Service's broader resource management requirements and needs.	The Forest Service, aided by other interested parties, would identify the instream flow needs for specific streams where the Colorado ISF Program objectives and quantification methods may not fully address federal instream flow needs. Where additional flow volumes and/or timing of flows are deemed necessary, more intensive field assessments and resource information needs to be completed and those recommendations forwarded to CWCB.

13. Investigate voluntary re-operation alternatives with existing diversion permit holders to meet Forest Service and permittee objectives.

Issue:	Intention in applying the tool:
Voluntary changes of existing water users' diversion schedules or re-operating a reservoir may provide needed instream flow at critical periods or provide for additional instream flows. Such change could be accomplished through a proactive, joint problem-solving effort.	The Forest Service, the water users, and other interested parties, should work together to determine if, through mutual agreement, re-operations of existing facilities could provide instream flow benefits needed by the Forest Service on National Forest lands. Such re-operation alternatives should be based on a demonstrated need for change and a jointly agreed upon problem resolution.

14. Seek voluntary agreement with new applicants to develop operational plans to meet Forest Service and applicants' objectives.

Issue:	Intention in applying the tool:
Conditioning a water related special-use permit with unilaterally imposed operating schedules may provide for instream flow needs, but does not provide for coordinated input from the water user or other interested parties.	The Forest Service should seek to develop water diversion or water release operational plans with the applicants in a coordinated fashion, using input from other interested and knowledgeable persons. The Forest Service would attempt to attain voluntary agreement from the water user on how best to operate the water facility to benefit or provide instream flows while still achieving the beneficial uses of the water facility.

15. Consider new and expanded storage with participation by the Forest Service for instream flow purposes (which include the Forest Service appropriating or acquiring an interest in the water rights).

Issue:	Intention in applying the tool:
Water storage and reservoir releases may optimize stream flows to meet Forest Plan objectives.	The Forest Service should evaluate new and existing reservoir storage facilities to determine if additional storage could provide instream flow benefits on streams on National Forest lands. If such benefits could be derived from such projects, the Forest Service could participate in the development of the facilities both in terms of acquiring water rights to be used for storage water and later release or as a partner in reservoir construction and operation.

16. Consider off-channel storage for later release.

Issue:	Intention in applying the tool:
Traditional water storage often places the reservoir on the main stem of the stream channel creating fish passage barriers and changes the hydrology down-stream. Utilization of off-channel storage facilities avoids some of the changes to stream hydrology and does not create the barriers to fish passage that in-channel dams create.	The Forest Service would consider the use or development of off-channel storage to meet its instream flow needs.

17. Provide State Engineer with documentation on water rights not being used.

Issue:	Intention in applying the tool:
The Forest Service could be aware of water diversion facilities or reservoirs that have fallen into disrepair or non-use.	Administration and enforcement of water rights is the authority of the State Engineer's Office but if the Forest Service is aware of non-use of existing water rights or facilities it should, in a cooperative manner, make that information available to the State Engineer's Office.

18. Initiate educational programs for water conservation and promote/facilitate delivery and application efficiencies.

Issue:	Intention in applying the tool:
Because diversion facilities are often older structures built when there was less demand for water and overall water use was lower on many of the rivers and streams in the area, there was a lack of concern with conveyance losses, irrigation efficiency and water conservation. Inefficient irrigation practices have the potential to require greater diversion of stream flows than may be necessary.	Programs to educate and inform water users about conservation and the most current irrigation technology may encourage more efficient use of water. The Forest Service, in cooperation with other agencies and interest groups should help to encourage and implement strategies for more efficient delivery and application of irrigation water. More efficient use of water should result in reduced diversions and in turn benefit instream flows.

19. Establish instream flow management objectives for watersheds on the GMUG National Forests.

Issue:	Intention in applying the tool:
With over 3750 miles of perennial streams on GMUG National Forest lands, the Forest Service does not have a clear prioritization process for determining which streams need instream flow protection or where there is insufficient instream flow under current conditions to meet Forest Service needs.	The Forest Service should, in cooperation with other resource management agencies and interest groups, develop watershed priorities for instream flow evaluations. The Forest Service would develop criteria related to instream flow assessment methodology appropriate to meet its instream flow needs and should ultimately develop instream flow recommendations for those streams where protection is needed and remediation strategies for those streams where there is currently insufficient instream flow.

20. Work cooperatively with local governments to establish Recreational In Channel Diversion (RICD) on appropriate stream segments located on National Forest lands.

Issue:	Intention in applying the tool:
The RICD water rights can only be held by local governmental entities but these may protect or enhance opportunities for recreational instream flow management on National Forest lands.	The Forest Service should consider its recreational needs as well as evaluate the instream flow recreational potential of streams on National Forest lands for possible use by local governments as a RICD facility. The Forest Service needs to work cooperatively with those local entities that may apply for a special-use permit to operate and manage a RICD facility on National Forest lands since such use may meet public recreational demands as well as provide instream flow volumes that may benefit other natural resource values on National Forest lands.

Colorado Water Conservation Board Instream Flow Program Options

21. Pursue opportunities offered by Colorado ISF Program.

Issue:	Intention in applying the tool:
The Forest Service has not participated either in making instream flow stream recommendations to the CWCB nor has it provided CWCB with technical information related to instream flow needs on National Forest lands. Lack of Forest Service participation may be limiting the protection of instream flows on National Forest lands.	The Forest Service would make recommendations to the CWCB for streams that need ISF Program protection based on determinations of instream flow needs on National Forest lands. The Forest Service should assist the CWCB staff with technical information available on those streams recommended by the Forest Service.

22. Seek CWCB agreement to appropriate or acquire needed flows on National Forest lands.

Issue:	Intention in applying the tool:
The Colorado ISF Program appropriates and acquires water to protect or improve the environment to a reasonable degree.	The Forest Service, in coordination with other stakeholders, should provide technical information and studies that should be utilized by the CWCB in determining the needed instream flows for streams on National Forest lands.

23. Encourage CWCB to file on Forest Service flow recommendations the year they are made.

Issue:	Intention in applying the tool:
There was concern that instream flow recommendations may not be acted upon in a timely manner, thereby allowing other water users to precede the CWCB filing for instream flow water rights.	The Forest Service and other cooperating parties should request prompt action on instream flow recommendations for streams on National Forest lands.

24. Establish legal, shared property ownership with the CWCB for acquired ISF rights on National Forest lands.

Issue:	Intention in applying the tool:
One of the barriers to the CWCB and Forest Service working together on instream flow protection on National Forest lands is the question of legal ownership of federal property. Property purchased by the federal government cannot be transferred to a non-federal entity, thereby limiting the Forest Service's ability to convey acquired water rights to CWCB for instream flow water rights.	The Forest Service and CWCB would work to develop a Memorandum of Understanding (MOU) or some legally binding instrument so that the CWCB could manage water rights acquired by the Forest Service under the authorities of its ISF Program to provide instream flow protection on NFS lands.

25. Encourage CWCB to file on peak spring flows and shoulder flows under the ISF Program to allow for recharge of groundwater and maintain riparian and off-channel habitat.

Issue:	Intention in applying the tool:
The Colorado ISF Program bases instream flows primarily on a need to maintain baseflow conditions to protect the environment to a reasonable degree and there may be situations where those instream flow volumes may not adequately meet the Forest Service's broader resource management requirements and needs. Historically, the State's instream flow rates have only varied for summer and winter flow regimes in some situations; others only have one baseline flow amount for an entire year.	The Forest Service, in coordination with other stakeholders, would present technical information and studies that could be utilized by the CWCB in determining the need for multiple instream flow amounts based on historical variations in stream flow hydrographs in an effort to protect, components of the natural environment to a reasonable degree, such as alluvial groundwater recharge, riparian vegetation, and other alluvial or floodplain habitats that require periodic bank-full or out-of-bank flooding.

26. Encourage the State Legislature to expand the Colorado ISF Program to include recreational, scenic, and aesthetic uses.

Issue:	Intention in applying the tool:
The current Colorado ISF Program objectives do not recognize general recreational use, scenic and aesthetic values as beneficial uses attributed to instream flow water rights. Forest Service mandates include management of natural resources so as to minimize damage to scenic and aesthetic values	Interest groups and the CWCB would recommend to the State Legislature changes to the Colorado ISF Program which recognize general recreational use, scenic and aesthetic values as beneficial uses associated with instream flow**.**

27. Identify stream segments currently limited by availability of water for instream flow protection and improvement.

Issue:	Intention in applying the tool:
Some streams or segments of streams may not have sufficient unappropriated water to support a CWCB instream flow water right for baseflow conditions. Additionally, some streams, due to natural conditions may have insufficient flow regimes to sustain some desired uses.	The Forest Service would obtain the CWCB inventory of streams where existing conditions preclude or severely restrict the volume of water that could be appropriated for instream flow purposes and utilize other tools to make water available for instream flows.

Appendix C: Federal Unilateral Actions

Not included in the tools list (Table 2) are those existing federal authorities that are to be considered as actions of "last resort." The Forest Service maintains that these unilateral actions are within their sole discretionary authority. The Forest Service would deem these actions necessary in the event that other tools fail or are inadequate in meeting resource management objectives or mandates on National Forest lands.

These authorities have been and continue to be the subject of protracted legal and political debate. The State of Colorado is obligated and committed to protect the adjudicated use of water rights in Colorado. Similarly, federal and environmental interests have advocated in favor of federal bypass flow authority. The Pathfinder Project strategies seek to provide alternative actions and methods that through cooperation and coordination, can make the use of these unilateral actions unnecessary in order to protect instream flows.

The following are the two most direct and controversial Forest Service actions to manage water resources on National Forest lands:

Require bypass flows as a condition of special-use permits for protecting and restoring natural resources and/or the aquatic environment.

Issue:	Suggestions related to this action:
The contentious nature of bypass flow conditions on special-use permits, particularly renewals, makes the process used in implementing such restrictions a major issue with water users, water managers, special interest groups, and the State of Colorado. The timing, approach, and procedures used by the Forest Service regarding bypass flow requirements are of great interest to the water resource communities and the State of Colorado.	The use of special-use permit conditions that involuntarily restrict diversions should be taken only as a last resort in the process of providing for instream flows. Other actions or options that rely on cooperative and coordinated actions by the Forest Service, water users, water right holders, and other water management organizations to meet instream flow needs need to be explored and utilized first. This option should be considered only in the event that all other cooperative and administrative strategies to meet Forest Service instream flows have been fully exhausted.

Use condemnation to acquire water rights for instream flows.

Issue:	Suggestions related to this action:
Condemnation is a controversial issue and is a concern of many water users if it is used to provide instream flows on National Forest lands.	At this point, the Forest Service would have exhausted its options to acquire water rights on a willing seller basis and conditions would have been placed on the special-use permit for instream flow protection. The Steering Committee believes these actions may result in some form of legal intervention where the Forest Service is directed to acquire water rights for the benefit of the public under its powers of eminent domain. It is expected that such an action would be needed to provide just compensation to the owner(s) for the condemnation of water rights for instream flow purposes.

DISCRETIONARY REVIEW DECISION

ON THE

CHIEF'S APPEAL DECISION

REGARDING THE

ARAPAHO AND ROOSEVELT NATIONAL FORESTS

AND

PAWNEE NATIONAL GRASSLAND

REVISED LAND AND RESOURCE MANAGEMENT PLAN

NORTHERN COLORADO WATER CONSERVATION DISTRICT, ET AL.
(#98-13-00-0016)

/s/David P. Tenny_____ 3/21/03_____
DAVID P. TENNY **Date**

Deputy Under Secretary for
Natural Resources and Environment
United States Department of Agriculture

Table of Contents

Discretionary Review Decision
On The
Chief's Appeal Decision
Regarding the

Arapaho and Roosevelt National Forests and Pawnee National Grassland
Revised Land and Resource Management Plan

Northern Colorado Water Conservation District, et al (#98-13-00-0016)

Procedural Background

This is my discretionary review decision under 36 CFR 217 on the January 15. 2003 appeal decision of the Reviewing Officer for the Chief of the Forest Service regarding the appeal by the Northern Colorado Water Conservation District and others, of the Arapaho and Roosevelt National Forests and Pawnee National Grassland (ARNFPNG) Revised Land and Resource Management Plan (Revised Forest Plan) and its accompanying Final Environmental Impact Statement (FEIS). Acting Regional Forester Tom L. Thompson signed the Record of Decision (ROD) approving the Revised Forest Plan on November 19, 1997.

The appellants are:

Northern Colorado Water Conservation District, City of Greeley and Greeley Water and Sewer Board, Coalition for Sustainable Resources, Inc., Sabre Middlekauff, Poudre Canyon Group Sierra Club(2), Cache La Poudre Water Users Association and Water Supply and Storage Company, City of Boulder, and Pawnee Grazing Association.

Gloria Manning, Reviewing Officer for the Chief, signed the appeal decision (Chief's appeal decision) on January 15, 2003. I requested the appeal record from the Chief on January 30, 2003. The appeal record was received on February 4, 2003. I announced my decision to review the Chief's appeal decision on February 19, 2003. My decision is based on a review of the appeal record and the Chief's appeal decision.

The relief requested and the procedural background are both summarized in the Chief's appeal decision.

Statutory and Regulatory Authorities

Regulations governing forest plan appeals were promulgated in 1989 at 36 CFR 217 (47 FR 3357, January 23, 1989). These regulations are not based on any statutory requirement for an appeal process, but instead aid the Department of Agriculture in meeting its responsibilities under the Organic Administration Act (16 USC 472, 551), the Multiple-Use Sustained-Yield Act (MUSYA) (16 USC 528-531) and the National Forest Management Act (NFMA) (16 USC 1600, et seq.). The Under Secretary of Agriculture is responsible for protecting, managing, and administering the National Forests (7 CFR

2.20 (a)(2)(ii)). The Under Secretary is also charged under 7 CFR 2.20 (a)(2)(viii) to "exercise the administrative appeal functions of the Secretary of Agriculture in review of decisions of the Chief of the Forest Service pursuant to 36 CFR parts 215 and 217 and 36 CFR 251, Subpart C." Under 7 CFR 2.59, all duties and powers delegated to the Under Secretary may be performed by the Deputy Under Secretary.

The appeal regulations allow discretionary review of the Chief's decision by the Under Secretary. The Under Secretary has unlimited discretion in deciding whether or not to undertake a discretionary review. The regulation identifies factors that should be considered in making a determination of whether to undertake a discretionary review. These factors include, but are not limited to, such factors as the "controversy surrounding the decision, the potential for litigation, whether the decision is precedential in nature, or whether the decision modifies existing or establishes new policy." The Chief's appeal decision involves all of these factors. Accordingly, I concluded that a discretionary review of the Chief's appeal decision was warranted.

The Revised Forest Plan was prepared under NFMA and its implementing regulations promulgated in 1982 at 36 CFR 219 (47 FR 43073, Sept. 30, 1982). Under the terms of the newly issued NFMA planning regulations at 36 CFR 219 (65 FR 67514, November 9, 2000), the Arapaho and Roosevelt National Forests and Pawnee National Grassland Forest Plan is governed by the 1982 version of these regulations. Accordingly, I based my review on the 1982 regulations. Likewise, any additional planning necessary under my decision will be conducted under the 1982 regulations. All references to 36 CFR 219 in this decision refers to the 1982 version of those regulations.

Deputy Under Secretary Decision Summary

The Chief's appeal decision identifies issues raised in the Notice of Appeal (NOA) and grouped them in five topic areas. The appeal decision also contains an analysis of the appeal points for each issue in each topic area, and the Chief's decision. All this information was analyzed and considered during my discretionary review. Based upon a review of the appeal record, I have decided to affirm with clarifying discussion and instructions the Chief's January 15, 2003 appeal decision. My decision on each issue discussed in the Chief's appeal decision is as follows:

1. Water……..Chief is affirmed, with clarifications and instructions
2. Wildlife and Fisheries……..Chief is affirmed
3. Lands……..Chief is affirmed
4. Research Natural Areas……Chief is affirmed
5. Access and Travel Management…… …..Chief is affirmed

This decision is the final administrative determination of the Department of Agriculture under 36 CFR 217. By copy of this decision, I am notifying all participants of my decision.

Summary of the Issues

The Chief affirmed the Regional Forester on three appeal issues in the Wildlife topic area. These include compliance with consultation requirements for endangered species in downstream waters, Biological Assessments analysis of the effects of annul water depletions, and compliance with the Endangered Species Act consultation requirement in the Plan Revision. I agree with the Chief's analysis of these issues as presented in the appeal decision and I incorporate all of the Chief's analysis and conclusions regarding these seven issues into this decision by reference. Based on that information and for the same reasons, I affirm the Chief's decision on these three issues. This decision includes no further discussion of these issues.

The Chief affirmed the Regional Forester regarding the Silver Lake Watershed and the City of Boulder. I incorporate all of the Chief's analysis and findings regarding what should be included in the Forest Plan, as determined by significance to decision makers, and what should be excluded. Based on that information and for the same reasons, I affirm the Chief's decision on this issue. This decision includes no further discussion of this issue.

The Chief affirmed the Regional Forester's finding that the Forest Plan is not required to designate all existing utility corridors and that the ROD is consistent with applicable requirements. I incorporate all of the Chief's analysis and conclusions regarding this issue into this decision by reference. Based on that information and for the same reasons, I affirm the Chief's decision on this issue. This decision includes no further discussion of this issue.

The Chief affirmed the Regional Forester on six appeal issues related to Research Natural Areas. The Chief grouped these issues into two topic areas; 1) disclosure of The Nature Conservancy's influence on RNA decisions; and 2) utilization of The Nature Conservancy advice and recommendations. I agree with the Chief's analysis of these issues as presented in the appeal decision and I incorporate all of the Chief's analysis and conclusions regarding these six issues into this decision by reference. Based on that information and for the same reasons, I affirm the Chief's decision on these issues. This decision includes no further discussion of these issues.

The Chief affirmed the Regional Forester on eight appeal issues related to Access / Travel Management. The Chief grouped these issues into three topic areas; Motorized Use of Designated Travelways, Designation of Travelways Created by Use, and Quantifying System Road Obliteration. I agree with the Chief's analysis of these issues as presented in the appeal decision and I incorporate all of the Chief's analysis and conclusions regarding these eight issues into this decision by reference. Based on that information and for the same reasons, I affirm the Chief's decision on these issues. This decision includes no further discussion of these issues.

The Chief affirmed the Regional Forester on eight issues related to water. The Chief grouped these issues into four topic areas; bypass flow authority, water rights task force,

standards and guides requiring supplemental EIS, and alternative to maximize water yield. I affirm, with clarifications and instructions, the Chief's decision to affirm the Regional Forester regarding these eight issues.

I agree with the Chief's analysis of a maximum water yield management alternative. I incorporate all of the Chief's analysis and conclusions regarding this issue into this decision by reference, noting that, although the forest is not legally required to include water yield as a forest management objective, water yield should be considered when developing vegetation management strategies and decisions.

Clarification and instructions are necessary with respect to the remaining three topics and related issues.

Arapaho and Roosevelt National Forests and Pawnee National Grassland Revised Land and Resource Management Plan

The ARNFPNG Revised Plan was prepared under the Multiple-Use Sustained-Yield Act (MUSYA), the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 as amended by the National Forest Management Act (NFMA) (16 U.S.C. 1600 *et seq.*), the implementing regulations of the NFMA (36 CFR 219), and the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*) and its implementing regulations (40 CFR 1500-1508). The original Forest Plan for the ARNFPNG was approved in 1985. The NFMA requires such plans to be revised at least every 15 years; revision of the 1985 ARNFPNG Plan satisfies this requirement.

The Revised Plan is a programmatic framework for management of the ARNFPNG, an administrative unit of the National Forest System. The Record of Decision (ROD) (p. 56) and the Revised Plan (Introduction pp. i–vi) explain what the Revised Plan is and what it is not. The Regional Forester appropriately identifies and subsequently discusses six fundamental components of all LRMPs (ROD, p. 18). The Revised Plan (Chapter 1, pp. 1-3) defines forest-wide goals and objectives. These are subsequently elaborated in greater detail throughout the remainder of the Revised Plan. Programmatic standards and guidelines, to follow in pursuit of the goals, also are articulated.

Detailed Discussion of the Issue

Water Resources Management and Special Use Authorizations

There are four basic cornerstones to managing water resources on National Forest System lands. First, the Department recognizes and respects the authority of states to allocate water available for appropriation, and to manage water quality under the Clean Water Act. Second, the Department respects valid, existing water rights. Third, the Department, through the USDA Forest Service, is responsible for managing water uses on National Forest System lands consistent with both state and federal law as provided under the Organic Administration Act of 1897, 30 Stat.11. Fourth, water uses on National Forest System lands should be managed through cooperation with states, other

federal agencies, Tribal governments, holders of valid water rights and the interested public, rather that through unilateral regulatory action by the Forest Service.

1. State Authority to Issue Water Rights:

The states are responsible for the allocation of water available for appropriation. In western states, water is allocated through granting water rights for identified beneficial uses. The Forest Service must apply for water rights under state and federal law for use of water on National Forest System lands, and must identify water needed during state water rights adjudications when joined in those adjudications under the McCarran Amendment, 43 U.S.C. §666 (the McCarran Amendment). Because the management of land and water are intimately connected, a clearly defined and executed state system of water rights adjudication and granting of water rights provides for the certainty necessary for land management. Such a system also provides for the orderly distribution of rights between competing interests for a limited resource.

2. Respect for Water Rights Granted by the States:

Water rights are valuable property interests that are granted, exercised, transferred and otherwise managed in accordance with state law. These rights are held by private and public entities, including the federal government, and are assigned priority based upon the date on which they were established. In many instances, water rights predate the reservation of federal lands and the establishment of the national forest system.

Recognition of and respect for these rights is a fundamental tenet of responsible federal land management and is essential to maintaining order and predictability among water uses and water users. Frequently the exercise of a water right is connected to or dependent upon the permitted occupancy or use of national forest system lands. In these instances, it is incumbent upon the federal land manager to pursue land, water and other resource management objectives in a manner that minimizes potential negative impacts to the exercise of these rights. As noted below, there are some cases where conflicts will exist. However, such conflicts can and should be resolved through cooperation among the Forest Service, water right holders, state, tribal and local governments, and other interested parties.

3. Forest Service Responsibility for Managing Water Resources on Lands:

The responsibilities and duties of the Forest Service for managing water resources on the National Forests begins with the U.S. Property Clause of the Constitution. Article IV, Section 3 confers plenary authority to Congress over all federal property, which includes the land and resources of the National Forest System.

Congress used this authority to pass laws that establish and govern the National Forests, and define Forest Service management responsibility, including: the Organic Administration Act of 1897, 30 Stat.11; the Multiple-Use Sustained-Yield Act of 1960

(MUSYA) 74 Stat. 215; and the Federal Land and Policy Management Act (FLPMA) 90 Stat. 2743.

The Organic Administration Act of 1897 ("Organic Act") (16 U.S.C. 473 *et seq*.) provided for the withdrawal of lands from the public domain and for the establishment of National Forests. The Organic Act defines the original purpose of the National Forests "to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber" (16 U.S.C. 475), and provides the Secretary of Agriculture with the authority to protect lands by making "…such rules and regulations and establishing such service as will insure the objects of such reservations, namely, to regulate their occupancy and use to preserve the forests"(16 U.S.C. 551). With respect to water resources, the Organic Act provides that "waters within the boundaries of national forests may be used for domestic, mining, milling, or irrigation purposes, under the laws of the states wherein such national forests are situated, or under the laws of the United States and the rules and regulations established there under, 16 U.S.C. 481.

The Multiple-Use Sustained-Yield Act of 1960 further defined the purposes of the national forests to include "outdoor recreation, range, timber, watershed, and wildlife and fish purposes"(16 U.S.C. 528). The Act directed the Secretary to administer the national forests so as to provide a sustained yield of renewable surface resources in a multiple-use context (16 U.S.C. 529). Section 4 of the Act further requires "the harmonious and coordinated management of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output" (16 U.S.C. 531). While the MUSYA clearly expanded the purpose for which the lands were to be administered, thereby broadening Forest Service management responsibility, it did not change the requirements of the Organic Act with respect to water resources.

The Federal Land Policy and Management Act of 1976 (as amended), governs the permitting of rights of way for private resource use on the national forest system lands and requires the Forest Service to condition such permits when necessary for the protection of the resources on the National Forests. Specifically, the Act requires that "[e]ach right-of-way shall contain (a) terms and conditions which will (i) carry out the purposes of this Act," in order to "minimize damage to scenic and aesthetic values and fish and wildlife habitat and otherwise protect the environment; . . ." (Section 505, 43 U.S.C. 1765).

While the Forest Service derives its mandate for managing the National Forest System primarily from these statutes, each defines only a portion of the universe governing resource management and none should be construed in isolation. As pointed out by the Chief, "to understand them these acts should be considered as a group." (Chief's Appeal Decision, page 5). Thus, while the MUSYA requires the Forest Service to manage the National Forest System for multiple uses, and the FLPMA requires the Forest Service to manage rights of way in a manner that minimizes damage to the environment, these mandates should be harmonized with the Organic Act and must, therefore, be carried out

consistent with the direction of that act, namely that the Forest Service manage water uses in accordance with state and federal law.

4. Federal and State Cooperation

Managing water uses on National Forest System land in accordance with state and federal law requires the Forest Service to coordinate its water resource objectives with state appropriation and allocation processes. Water needed to meet federal land management responsibilities, for example, should be identified by the Forest Service and the states in a cooperative planning effort that involves local governments, and the interests of water rights holders and other interested parties. This approach should be used to identify the amount of water on National Forest System lands available for appropriation.

Occasionally conflicts will arise between federal responsibilities, such as the requirement to protect and recover federally listed threatened and endangered species, and the administration of water rights pursuant to state authority. These conflicts are best avoided through careful advance planning. However, in those instances when conflicts do arise, they should be resolved by federal and state authorities working together in cooperation with water right holders, and where appropriate tribal and local governments, and other interested parties, not through unilateral regulatory action on the part of the Forest Service.

Report of the Federal Water Rights Task Force (August 25, 1997)

One issue raised on appeal was that the Revised Forest Plan did not include or address the findings of the Report of the Federal Water Rights Task Force. In his Decision, the Chief noted that the ARNFPNG began scoping for the Revised Plan in July 1990 and the comment period on the DEIS ended in June 1996. Since the Task Force Report was not issued until August 1997, the Task Force information was not available until well after the comment period ended. The Chief is technically correct.

The Task Force Report does, however, include information and recommendations that are helpful in identifying methods to improve cooperation between the Forest Service, states, water right holders, and the public. For example, the Task Force Report recommends that National Forest purposes be achieved whenever possible, using alternative water management strategies (e.g., system optimization, watershed approaches, etc.), rather than using bypass flow requirements; that the Forest Service recognize and use state programs that protect instream flows, to acquire rights and provide water for National Forest purposes wherever adequate state programs are available; and that the Forest Service should seek voluntary agreements with nonfederal water rights holders who might otherwise use their rights inconsistently with National Forest purposes.

The Task Force Report also offers a number of specific recommendations that can be helpful in future efforts to develop state / federal cooperative programs including:

- "The United States should assert, when joined as a party in a proceeding pursuant to 43 U.S.C. §666 (the McCarran Amendment) any claims it may have under federal or state law to the use of water for National Forest Purposes".
- "…the Forest Service should determine … whether the exercise of water rights owned or used for non-federal purposes will … ensure that instream flows will be protected".
- "Where state laws allow water rights, reservations, or conditions to be established for protection of instream flows or minimum lake levels, the Forest Service should use these laws to attain National Forest purposes".
- "The Forest Service should attain National Forest purposes relating to the protection of minimum instream flows for environmental and watershed management purposes in a manner that recognizes the laws and circumstances of each state where it seeks to acquire water rights for this purpose".
- "Optimization of the operations of water supply facilities that are subject to FLPMA land use authorization requirements can, in some cases, provide environmental benefits without interfering with the diversion, storage, and use of water supplies provided from facilities located on National Forest lands".

  From: Report of the Federal Water Rights Task Force Created Pursuant to Section 389(d)(3) of P.L. 104-127, August 25, 1997, Part VII: Task Force Recommendations, pp 1-6.

The Forest Service should, therefore, consider the Task Force Report as an important source of input to future policy addressing the management of water resources on National Forest System lands.

Clarification of 2001 Discretionary Review Language

The Chief addressed the question raised by the appellants as to whether Standard (135) and Guideline (136) constituted new information requiring supplemental NEPA to allow for additional public review. While I agree with the Chief's discussion and decision on that issue, the rational for why there was adequate opportunity for the public to comment raised an important issue that requires clarification and instructions. The Chief noted that stream flow requirements for recreational purposes were largely satisfied by Water Resources Standard 12. While Standard 12 was not specifically questioned in these appeals, it underlies the objection raised on appeals regarding the Forest Service's authority to regulate instream flows under Standard (135) and Guideline (136). It is, therefore, necessary to address standard 12, standard 135 and guideline 136 together to ensure clarity and consistency in the Revised Forest Plan.

The Department provided instructions to the Forest Service in its March 29, 2001 discretionary review of the Chief's decision regarding the Rio Grande National Forest appeal, and his decision regarding the Routt National Forest appeal. The instructions were to comply with the Federal Land Policy and Management Act with respect to forest plan goals, standards and guidelines addressing the issuing and reissuing authorizations for water storage and diversions facilities.

The relevant section of FLPMA for water resources requires that "[e]ach right-of-way shall contain (a) terms and conditions which will (i) carry out the purposes of this Act," in order to "minimize damage to scenic and aesthetic values and fish and wildlife habitat and otherwise protect the environment; . . ." (Section 505, 43 U.S.C. 1765). FLPMA describes the outcomes of water resource management, not the means. The means of achieving the outcomes should be defined at the project level and should be determined through cooperation consistent with statutory direction.

Because standard 12, standard 135, and guideline 136 prescribe the means for completing with section 505 of FLPMA they exceed the scope of direction required by the 2001 discretionary review. (e.g. return and/or maintain sufficient stream flows.)

Instruction

Based upon the forgoing clarification, I instruct that Forest Plan Standards in the Revised Plan be changed to comply with Section 505 of FLPMA and 26 CFR 251.56.

I instruct that standard 12 (ST) for Water Resources on page 13 of the Revised Forest Plan be changed to read:

> " 12.(ST) Cooperate with state, tribal and local governments, holders of water rights, and other interested parties to manage water resources to minimize damage to scenic and aesthetic values, fish and wildlife habitat, and to otherwise protect the environment."

I further add the instruction that standard 135 and guideline 136 for Managing for Recreational Users on page 34 of the Revised Forest Plan be changed to read:

> 135.(ST) Generally, Standard 12 provides for most recreation-related water uses, but additional water may be needed for special recreational features and heavy-use recreational areas. Cooperate with state, tribal and local governments, holders of water rights and other interested parties to maintain enough additional water in associated streams to sustain the water-dependent recreational values. A preliminary assessment identified the key areas where these values exist and they are shown in Table 1.16. Additional areas may be identified during plan implementation.
>
> 136.(GL) Cooperate with state, tribal and local governments, holders of water rights and other interested parties to protect instream flows at outstanding recreation features. Such features include, but are not limited to, designated/study wild, scenic, or recreational rivers, stream segments used for commercial boating, or segments having developed recreation sites or vistas; or national recreation/historic/scenic trails of scenic byways from which the segment(s) is visible in the foreground or middle ground. Protection of water quality and quality is vital to recreation experiences. See Table 1.16. Bypass flow and

instream flow water rights are distinctly different, but settlement of reserved water rights claims can meet this criterion if the negotiated flows are decreed to the United States by a court of jurisdiction. In addition, the word "outstanding" in this guideline is meant in the generic sense, and should not be confused with the use of the word to describe and analyze Wild and Scenic River characteristics.

United States Department of Agriculture
Forest Service
Grand Mesa, Uncompahgre Gunnison National Forests
2250 Highway 50
Delta, CO 81416
Voice: 970-874-6600
TDD: 970-874-6660

File Code: 3000-3
Date: April 30, 2004

Dan Merriman
Colorado Water Conservation Board
1313 Sherman St. Room 721
Denver, CO 80203

Dear Dan,

I have received the Pathfinder Project Steering Committee Report. Completion of this report addressing strategies for Instream Flow management on National Forest System lands is an excellent template for the Grand Mesa, Uncompahgre, Gunnison (GMUG) National Forests to consider as part of its Forest Plan revision.

I wish to personally thank you for the time and effort you have put into this collaborative process. I recognize a great deal of understanding, cooperation, and compromise was required by the Steering Committee to develop this report.

As a Committee member, in a group possessing and representing divergent opinions and beliefs, you are to be commended for your ability to work towards this common goal. The product of this work represents a fresh look at how the Forest Service can work cooperatively with a wide array of the stakeholders having diverse interests in how water resources are managed on the GMUG National Forests.

As the Forest Supervisor, I am committing the GMUG National Forest staff and Ranger Districts to the concepts of cooperation and coordination outlined in your Report. It is our intent to incorporate the Pathfinder Project process and strategies for instream flow management into our Forest Plan revision. The results of your efforts will provide proposals for the Plan revision that I believe will be the foundation to future Forest Service decisions regarding instream flow protection. The Forest Plan revision process will ensure continued public and stakeholder input on water resource management issues.

It is my firm belief that your Report, which embodies the collective wisdom of the Steering Committee, represents a fair balance of public perspectives on how water resources on our National Forest System lands should be managed in the future. It is my hope this effort will have more far-reaching influence and will serve as a template for other National Forests.

Your participation, effort, dedication, and contributions to the Pathfinder Project have been greatly appreciated.

Sincerely,

Robert L. Storch

ROBERT L. STORCH
Forest Supervisor

cc: Lisa Carlson, Maro Zagoras