Upper Colorado River Stakeholder Group Conceptual Plan for a Wild and Scenic Management Alternative[1]

Prepared on Behalf of:

Grand County
Eagle County
Summit County
Northwest Colorado Council of Governments
Colorado River Water Conservation District
Blue Valley Ranch
Middle Park Water Conservancy District
Colorado Springs Utilities
Denver Water
Northern Colorado Water Conservancy District
Trout Unlimited
American Whitewater
The Wilderness Society
Colorado River Outfitters Association

In Consultation with:

Colorado Water Conservation Board (CWCB)
Colorado Division of Wildlife (CDOW)
U. S. Bureau of Reclamation
U. S. Forest Service

For Submittal to:

U.S. Bureau of Land Management
on
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[1] Participation in development of a Conceptual Plan does not assume endorsement of the final Management Plan Alternative.

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EXECUTIVE SUMMARY

The Upper Colorado Wild and Scenic Stakeholder Group ("Stakeholder Group" or "SG") is working together in good faith to develop a Management Plan Alternative that would protect the outstandingly remarkable values ("ORVs") of Segments 4 through 7 of the Colorado River, as identified in the 2007 Eligibility Report ("2007 Eligibility Report") issued by the Bureau of Land Management ("BLM"). The Management Plan Alternative will be proposed to the BLM as a potential Wild and Scenic Rivers management alternative in the BLM Resource Management Plan revision process.[2] The Stakeholder Group's intention is to develop a collaborative plan that balances the following: permanent protection of the ORVs; certainty for the stakeholders; water project yield; and flexibility for land owners, management agencies and water users.

This Conceptual Plan lays out a framework for development of the Management Plan Alternative. The Conceptual Plan was developed cooperatively by a group of stakeholders and consulting agencies representing a diverse range of interests. It lays out the group's progress to date and intentions for additional data gathering, analysis and collaborative planning. The group will continue to work together throughout 2008 and 2009 to gather adequate information to develop more specific elements and details of the Management Plan Alternative. The goal of the group is to furnish additional information to BLM as needed to satisfy NEPA requirements supporting issuance of the Draft Environmental Impact Statement ("EIS"), and to complete the detailed final Management Plan Alternative for submission to and consideration by BLM prior to its issuance of a Final EIS and Record of Decision on the final plan.

The geographic scope of the Management Plan Alternative will encompass the Upper Colorado River from the top of Gore Canyon, Colorado extending downstream to a point one mile east of No Name Creek. This reach correlates with Colorado River Segments 4 through 7 as described in BLM's 2007 Eligibility Report (See Appendix C; Figures C-1 through C-4). The Management Plan Alternative will cover BLM lands within ¼ mile of the river, and may also cover land owned by or within the jurisdiction of state, local and private interests within the river corridor with the consent of those landowners and other management agencies. In the development of the Management Plan Alternative, the Stakeholder Group will consider impacts to areas outside of these segments.

This Conceptual Plan focuses primarily on the flow-based ORVs of recreational floatboating and recreational fishing, as identified in BLM's 2007 Eligibility Report. Flow protection is one of the strongest features of the Wild & Scenic Rivers Act but, more importantly, it is the aspect that state and local entities are most able to influence. Although the Stakeholder Group is focused primarily on flow protection, the Management Plan Alternative will consider whether flow protections recommended for recreational fishing and recreational floatboating are protective of other ORVs, which may or may not be flow dependent. Where the recommended flows do not protect the other ORVs, the Stakeholder Group will consider measures that would be complementary to land management actions adopted by the BLM to protect the river's ORVs and classification. The Management Plan Alternative will address all ORVs identified by the

[2] The Stakeholder Group makes no joint recommendation, at this time, on whether BLM should proceed with a "suitability" determination, postpone such determination, or abandon it altogether.

BLM for Colorado River Segments 4 through 7. These values include the following: recreational, which includes fishing (Wild Trout Waters) and floatboating; scenic driving; scenic; wildlife (bald eagles, river otter); geological; paleontological; botanical; and historic.

The Conceptual Plan includes the following information:

- Data available on the current recreational fishery and floatboating uses and the SG's plans for reviewing available data and addressing data gaps.
- The SG's proposed approach for quantifying the rate and timing of flows needed to support and protect the ORVs. These targets will help the Stakeholder Group assess the effectiveness of different protection measures.
- A mechanism to develop land-based strategies that are protective of the ORVs.
- A mechanism to develop water quality strategies that are protective of the ORVs.
- A description of the types of issues that have the potential to affect the ORVs.
- An initial list of potential ORV protection measures identified by the SG, organized in two tiers with the first tier representing measures that the majority of SG members identified as most promising and the second tier including additional concepts that may be considered by the SG in its proposed management plan alternative. Any one or any combination of concepts may be included in the final Management Plan Alternative depending upon what the flow needs are for Segments 4 through 7 and upon the ability to implement the concepts.

Tier 1 Concepts supported by a majority of Stakeholders:

a. Delivery of Water to a Downstream Demand: Water that is made available for streamflow protection would be released into the Colorado River or its tributaries upstream of the protected stream segments.

b. Protection Offered by Existing Senior Water Rights: The existing river operations and water rights administration regime have the potential to maintain ORVs.

c. Protection Provided by Upper Colorado River Endangered Species Recovery Program: The Final Programmatic Biological Opinion issued in December 1999 included a Recovery Action Plan that identified several flow enhancements to assist the recovery of endangered fish in the 15-mile Reach above the confluence of the Colorado and Gunnison Rivers. Several flow enhancements/sources could impact stream Segments 4 through 7.

d. CWCB Instream Flow Protection: The CWCB has exclusive authority in the State of Colorado to hold instream flow water rights for the preservation or improvement of the natural environment to a reasonable degree. CWCB instream flow options include:

(1) Instream flow for baseflow
(2) Instream flows for large seasonal or flushing flows
(3) Acquisition of senior decreed water rights for ISF use
(4) Shepherding of CWCB water for downstream users through study segments

e. Voluntary Flow Management Programs: Voluntary flow management programs (FMPs) provide a water management tool that can be used for maintaining and enhancing flow-related values within a given stream reach through the collaborative operation of water facilities and other cooperative efforts.

Tier 2 Concepts under Consideration by the Stakeholder Group:

a. Federal Legislation: Several legislative mechanisms including special legislation, Natural Recreation Areas, and National Conservation Areas are described below. These strategies have similar qualities.

(1) National Recreation Areas require federal legislation to protect areas on federal lands that are extraordinary in quality and recreation. They are intended for recreational use and recognize recreation as the dominant purpose.

(2) National Conservation Areas require federal legislation to protect areas on federal lands to conserve and protect a range of natural and other values in an area.

(3) Special legislation can be tailored to meet the protection needs of a particular situation, and can be designed to protect a broad suite of resource values (as is the case for the Rio Grande Natural Area) or can be very narrowly focused.

b. Plan for Augmentation to Supplement Flows: A plan for augmentation is "a detailed program, which may be either temporary or perpetual in duration, to *increase the supply of water available for beneficial use in a division* or portion thereof by the *development of new* or alternate *means* or points *of diversion*, by a *pooling of water resources*, by water exchange projects, by *providing substitute supplies of water*, by the development of *new sources of water*, or by any other appropriate means." C.R.S. §37-92-103(9) (emphasis added).

c. Protection of Bypass Flows/Releases of Water: Under this proposal, the bypass flows and releases of water from reservoirs and other sources of water would be protected either as: 1) increases to or augmentation of CWCB instream flows; 2) augmentation of Colorado River District Constant Flows; and/or 3) augmentation of RICD flows through Gore Canyon.

d. Recreational In-Channel Diversions (RICDs): RICDs are in-channel water rights for recreational purposes.

e. River District Appropriation of Water for Fish Preservation: The Colorado River District's enabling legislation allows the District to file upon and hold water rights to maintain stream flow needed to preserve fish.

f. Wild & Scenic Rivers Designation.

(1) Under § 2(a) (i) -- Under this approach, Congress would designate the segments under the Wild and Scenic Act.

(2) Designation under § 2(a)(ii) -- Under this option, the Secretary of the Interior may approve designation upon petition by the Governor of the State, after

enactment of state legislation that (a) designates the segments as wild, scenic and/or recreational and (b) appoints a state agency (or political subdivision) with the duty of permanently managing the river as such.

The Stakeholder Group is committed to developing a Management Plan Alternative that will include some combination of the flow protection concepts described above. A thorough understanding of the ORV flow requirements is needed before any of the protection ideas can be eliminated from consideration, and a final plan developed. In addition, the Management Plan Alternative developed by the Stakeholder Group will include land-based protection strategies to address the needs of the recreation, wildlife, scenic, historic, geological, botanical and paleontological ORVs. Water quality needed to protect the ORVs will be addressed. Other elements to be addressed in the Management Plan Alternative include strategies to address the issues that may affect the ORVs, procedures for agency coordination, implementation provisions, governance structure, and funding for implementation of the plan.

SECTION 1
BACKGROUND INFORMATION

A. Introduction

This Conceptual Plan for a Wild and Scenic Management Alternative ("Conceptual Plan") lays out a framework for development of a management alternative for that area of the Colorado River below Kremmling and above Glenwood Springs. The Conceptual Plan was developed cooperatively by a group of stakeholders and consulting agencies (see listing below). The Conceptual Plan lays out the group's progress to date and intentions for additional data gathering, analysis and collaborative planning. The group will continue to work together throughout 2008 and 2009 to gather adequate information to develop more specific elements and details of the Management Plan Alternative. The goal of the group is to furnish additional information to BLM as needed to satisfy NEPA requirements supporting issuance of the Draft EIS, and to complete the detailed final Management Plan Alternative for submission to and consideration by BLM prior to its issuance of a Final EIS and Record of Decision on the final plan.

Appendix A presents a Glossary for key terms referenced in this Conceptual Plan. Appendix B presents descriptions of potential flow-based protection measures that will be evaluated by the stakeholders for possible inclusion in the Management Plan Alternative. Appendix C presents a series of maps depicting Colorado River Segments 4 through 7.

B. Plan Purpose and Joint Intent

The Upper Colorado Wild and Scenic Stakeholder Group ("Stakeholder Group" or "SG") is working together in good faith to develop a Management Plan Alternative that would protect the outstandingly remarkable values ("ORVs") as identified in the 2007 Eligibility Report issued by the Bureau of Land Management ("BLM") for Segments 4 through 7 of the Upper Colorado River. The Management Plan Alternative will be proposed to the BLM as a potential Wild and Scenic Rivers management alternative in the BLM Resource Management Plan revision process.[3] The Stakeholder Group's intention is to develop a collaborative plan that balances the following: permanent protection of the ORVs; certainty for the stakeholders; water project yield; and flexibility for land owners, management agencies and water users.

C. Scope of the Management Plan Alternative

The geographic scope of the Management Plan Alternative will encompass the Upper Colorado River from the top of Gore Canyon, Colorado extending downstream to a point one mile east of No Name Creek. This reach correlates with Colorado River Segments 4 through 7 as described in the BLM Wild and Scenic Eligibility Report for the Kremmling and Glenwood Springs Field Offices (See Appendix C; Figures C-1 through C-4). The Management Plan Alternative will cover BLM lands within ¼ mile of the river, and may also cover land owned by or within the jurisdiction of state, local and private interests within the river corridor with the consent of those

[3] The Stakeholder Group makes no joint recommendation, at this time, on whether BLM should proceed with a "suitability" determination, postpone such determination, or abandon it altogether.

landowners and other management agencies. In the development of the Management Plan Alternative, the Stakeholder Group will consider impacts to areas outside of these segments.

This Conceptual Plan focuses primarily on flow-based ORVs of recreational floatboating and recreational fishing, which are identified in the BLM's Final Wild and Scenic River Eligibility Report issued in March, 2007. Flow protection is one of the strongest features of the Wild & Scenic Rivers Act but, more importantly, it is the aspect that state and local entities are most able to influence. Although the Stakeholder Group is focused primarily on flow protection, the Management Plan Alternative will consider whether flow protections recommended for recreational fishing and recreational floatboating are protective of other ORVs, which may or may not be flow dependent. Where the recommended flows do not protect the other ORVs, the Stakeholder Group will consider measures that would be complementary to land management actions adopted by the BLM to protect the river's ORVs and classification.

The Management Plan Alternative will address all ORVs identified by the BLM for Colorado River Segments 4 through 7. As listed in Table 1: Segments and ORV Descriptions, these values include the following: recreational, which includes fishing (Wild Trout Waters) and floatboating; scenic driving; scenic; wildlife (bald eagles, river otter); geological; paleontological; botanical and historic.

Table 1
Segment and ORV Descriptions

	Reach	ORVs	Preliminary Classification
Segment 4	Colorado River from top of Gore Canyon to the Pumphouse recreational site (5.36 miles)	Scenic (canyon, cliffs) Recreational (fishing - DOW Wild Trout waters; floatboating - Class V whitewater boating; scenic driving). Geological Wildlife (bald eagle nesting and winter habitat; river otter habitat). Historic (Moffat Rd.; early hydroelectric projects; WWII German POW camp).	Recreational
Segment 5	Colorado River from the Pumphouse Recreational Site down to State Bridge (15.26 miles)	Scenic (Little Gore Canyon & Red Gorge). Recreational (fishing - same as Segment 4; floatboating - Class II/III run; scenic driving). Geological Wildlife (same as above). Historic (early hydroelectric projects; early copper mining; Brass Balls Mine/Cable Rapids Cabin; State Bridge; historic Moffat Road). Paleontological (fossils).	Recreational
Segment 6	Colorado River from State Bridge to Dotsero (18.02 miles)	Scenic Recreational (floatboating; scenic driving). Geological Wildlife (river otter habitat). Historic (Ute Trail). Botanical (riparian plant communities).	Recreational
Segment 7	Colorado River from Dotsero to ½ mile east of No Name Creek/Glenwood Canyon (15.78 miles)	Scenic Recreational (floatboating). Geological	Recreational

D. Stakeholders Involved in the Development of the Management Plan

The following list identifies the stakeholders participating in the development of this Conceptual Plan. Participation in the development of the Conceptual Plan does not assume endorsement of a final Management Plan Alternative.

Grand County
Eagle County
Summit County
Northwest Colorado Council of Governments
Colorado River Water Conservation District
Blue Valley Ranch
Middle Park Water Conservancy District
Colorado Springs Utilities
Denver Water
Northern Colorado Water Conservancy District
Trout Unlimited
American Whitewater
The Wilderness Society
Colorado River Outfitters Association

The following agencies have consulted with the Stakeholder Group in developing this Conceptual Plan: the Colorado Water Conservation Board ("CWCB"), the Colorado Division of Wildlife ("CDOW"), the U.S. Bureau of Reclamation ("BOR"), and the U.S. Forest Service ("USFS"). Any management actions resulting from the Management Plan Alternative may complement the actions and management decisions of these agencies, but in no way would their land, water and resource management responsibilities be superseded.

E. BLM Factors to be Considered in Creating the Management Plan Alternatives

Since there are no formal guidelines for the content of Management Plan Alternatives, the BLM has provided information on factors that could make the plan comparable to or more protective of the ORVs than Wild and Scenic designation. These factors are not prescriptive and a plan that addresses many but not all of the factors may be an acceptable preferred alternative in the BLM's Draft Environmental Impact Statement ("EIS"). As stated in the BLM manual 8351 for Wild and Scenic Rivers, any management plan adopted by the BLM shall provide protection of the following elements: ORVs, free-flowing characteristics, river classification (level of stream corridor development allowed pursuant to the Wild and Scenic Rivers Act), and water quality.

This Conceptual Plan focuses on an approach that addresses the following five factors identified by the BLM:

- Factor 1: A mechanism to scientifically quantify the rate and timing of flows needed to support and protect the ORVs.
- Factor 2: A mechanism to provide permanent protection for such flows.
- Factor 3: A mechanism for cooperation and coordination with decision-making agencies and proponents of projects that have the potential to impair the ORVs.
- Factor 4: A mechanism to address potential water quality impacts that may affect the ORVs.

- Factor 5: Identification of (1) the most significant issues potentially affecting the ORVs, (2) appropriate parties to address these issues, and (3) specific actions for addressing these issues.

Other factors of concern to be considered in the Management Plan Alternative submittal are:

- Any known water storage or water diversion proposals that might impair the free-flowing characteristic of the segments.
- Any known conflicts between managing for the various ORVs (*e.g.,* conflicts between increased floatboating use and fishing) and potential mechanisms for addressing those conflicts over the long-term.
- Coordination with local governments to address development issues within the corridor since many of the ORVs (especially scenic, historic, and recreation) depend upon the rural and undeveloped character of the stream corridor.
- The types, amounts, and timing of the various recreational uses within the segments. The plan should also identify a process for determining user capacities for the river corridor, and whether any actions are required to sustain the types of recreational experiences that are now available within the corridor.
- The current status of fisheries in the stream corridor and whether any actions are warranted to address habitat or disease issues.

While none of these factors are absolutes, they reflect the types of protection that could be afforded under Wild and Scenic designation, and therefore, are appropriate for consideration in a Management Plan Alternative. If agreement is reached among the Stakeholder Group, the Management Plan Alternative may consider enhancements that exceed Wild and Scenic requirements.

The following sections describe the Stakeholder Group's approach to developing recommendations for the Management Plan. The sections are organized as follows:

- Section 2: **Existing Conditions** describes data available on the current recreational fishery and floatboating uses. This information describes the status quo and will be used to identify management issues that will be addressed in the final plan.
- Section 3: **Methodology for Identifying ORV Flow Targets** describes the mechanism the Stakeholder Group will use to scientifically quantify the rate and timing of flows needed to support and protect the ORVs. These targets will help the Stakeholder Group assess the effectiveness of different protection measures.
- Section 4: **Management Plan Elements** presents an initial list of potential ORV protection measures. These will be further studied and evaluated to develop the Stakeholder Group's recommended plan.

In Sections 2 and 3 the term "participant" includes the Stakeholder Group and the CDOW.

SECTION 2

EXISTING CONDITIONS

A. Introduction

This section describes existing information available on the BLM's recreational ORVs for fishing and floatboating uses. It also describes the Stakeholder Group's current understanding of the types and levels of recreation use for the stream segments. This information and other relevant information identified in preparing the Management Plan Alternative will be used to identify management issues and develop the plan recommendations. Recreational fishing and floatboating are the ORVs for which the Stakeholder Group intends to develop flow targets. The Management Plan Alternative will also include information on existing conditions for the other ORVs referenced in Table 1: Segments and ORV Descriptions.

In preparation of its Management Plan Alternative, the Stakeholder Group will include existing information about land status, ownership, hydrology and existing water rights.

B. Recreational (Fishing)

The Upper Colorado River Segments 4 through 7 offers a variety of river related recreation activities. Anglers are drawn to the Wild Trout fishery. Anecdotal information indicates a moderate to high level of angling use (both drift boat and wade fishing) occurring in Segments 4 through 7. Angling use varies from segment to segment based upon ease of access. Segments 4 and 5 have more angling use than Segments 6 and 7. The BLM has identified the Wild Trout fishery as an ORV in Segments 4 and 5, but has not identified Segments 6 and 7 as having ORVs associated with recreational fishing.

Stream Segments 4 through 7 are designated by the Colorado Wildlife Commission ("Commission") as "Wild Trout Waters" (for brown and rainbow trout) and are managed as such by the CDOW. To qualify for the designation, a stream must have a naturally reproducing trout population with a minimum standing stock of 40 pounds per acre, or if it is a stream reach with less than 40 pounds per acre, it must provide essential spawning and nursery habitat for the adjoining water.

All segments are subject to the following Wild Trout Waters management guidelines adopted by the Commission whereby the CDOW is to: (1) promote protection and enhancement of aquatic and terrestrial habitats to perpetuate wild trout populations through cooperation with land management agencies; (2) request mitigation for human activity that may result in the loss or degradation of Wild Trout Water; (3) recommend special regulations to protect and perpetuate populations (*e.g.*, size, species or bag limits; tackle restrictions, season closures, etc.); and (4) perform no stocking of hatchery-reared fish except to restore or reestablish a population after an environmental calamity or to recover or enhance native populations.

All segments are subject to a two-trout bag and possession limit.

Available Data

Information regarding the current status of fisheries within BLM Segments 4 through 7 was provided by the CDOW. CDOW has identified the following existing fishery information:

1) *Fish Surveys*
   - BLM Segments 4 and 5: 1986 and 1992 (BLM Pump House below Gore Canyon).
   - BLM Segment 6: 1912 and 2001 (at McCoy Cemetery); 1982 (from Big Alkali to Burns).
   - BLM Segment 7: 1995, 1996, 1997 and 2002 (at Dotsero); 1912, 1983 and 1993 (2.5 miles below confluence with the Eagle); 1983 and 2005 (above Glenwood Springs).

2) *Fish Stocking*

   According to CDOW stocking data from 1973 to the present, the following segments of the Colorado River have been stocked by the State:
   - Rainbow trout have been stocked in Segments 4 and 5 (1981, 1984, 1989-1993); in Segment 6 (1973-1978, 1981, 1984, 1989, 1990 and 1992-4); in Segment 7 (1973-1996 and 2002).
   - Brown trout have been stocked in Segments 4 and 5 (1983); and in Segment 7 (1973, 1980-2, 1984 and 2001). There are no records of brown trout stocking in Segment 6.

The data listed above does not include private stocking data.

Data Gaps

Some of the fish surveys were conducted before rainbow trout were impacted by whirling disease and, therefore, may not properly reflect existing populations for the species. CDOW plans to collect additional data within BLM Segments 4, 5, 6 and (possibly) 7 in the summer or fall of 2008, if conditions allow. If the Management Plan Alternative is accepted by the BLM, CDOW will develop a study plan to monitor the status of the fishery. The participants will review this data along with existing data in preparing the Management Plan Alternative.

In addition, data to quantify flow needs for the maintenance and enhancement of the fishery is lacking. The participants will evaluate existing sources of information to identify where further studies are needed and will initiate the appropriate studies to determine quantifiable flow protection targets for the fishery.

The participants have identified minimal data on both wade fishing and drift fishing. Data collection on angling will focus on Segments 4 and 5 since these are the segments that have been identified as possessing recreational (fishing) ORVs. The participants will assess the adequacy of data from CDOW and will contact Trout Unlimited ("TU"), U.S. Fish and Wildlife Service, USFS, fishing clubs, and outfitters to fill data gaps as needed. This information will be used to characterize existing access and assess the adequacy of access and facilities supporting the angling uses on the river.

C. Recreation (Floatboating)

Segment 4, Gore Canyon, is one of the most popular Class IV-V whitewater runs in the State. It is mostly visited by advanced-skill level whitewater rafting and kayaking enthusiasts. Gore Canyon is host to the Gore Race, and has been host to the U.S. Whitewater National Championships. Commercial rafting is infrequent in Gore Canyon because of the risk and safety issues associated with this challenging whitewater run.

Segment 5, from Pump House to State Bridge, is a popular Class II/III river run. It is heavily used by commercial and private rafters, kayakers, canoeists and anglers. A detailed breakdown of commercial rafting and drift fishing uses from BLM permit records for 2005 show commercial user days on the order of 30,000. Ninety percent of the use was commercial boating (kayaking, rafting, canoeing) and ten percent was for drift fishing. An additional 12,800 private user days were recorded.

Segment 6, from State Bridge to Dotsero, is a stretch with long segments of flat water interspersed with several short class III/IV drops, and is used for floatboating, kayaking, canoeing and drift boat angling. Segment 6 receives approximately 5 to 10% of the use that occurs upstream in Segment 5.

Segment 7 runs through Glenwood Canyon and offers many opportunities for kayaking, canoeing, rafting and angling. Segment 7 below the dam at Shoshone Power Plant is the busiest segment within the study area. There is almost no on-water recreation below Dotsero and above the dam. Most, if not all, of the commercial use is permitted through the United States Forest Service ("USFS"). The USFS allows a total annual capacity of 71,500 commercial user days for rafting, 730 user days for commercial kayaking and 150 user days for commercial angling. In 2007, the Glenwood Canyon segment experienced 65,502 commercial user days.

Available Data

The Stakeholder Group has identified several sources of data on the amount of recreation use, access, facilities and user capacities. These include the following:

- BLM permit records.
- Colorado River Outfitters Association commercial outfitting records.
- BLM Analysis of Management Situation (AMS) documents for the Kremmling and Glenwood Springs Field Offices.
- A soon-to-be completed study by Arizona State University that describes visitor use preferences in the Kremmling Field Office Management Area.
- USFS commercial permit data for Glenwood Canyon.
- Additional CDOW data (whirling disease surveys or anecdotal information from game wardens).

Data Gaps

The BLM has commercial permit data for all the segments, but it only has detailed breakdowns of commercial use and private use for Segment 5. There is very little information available on the amount and types of private recreational use taking place in Segments 4, 6 and the BLM's portion of Segment 7.

The available sources of data will be reviewed and evaluated within 45 days of the availability of the Arizona State University user preference survey to identify whether additional survey work is needed to better define current private uses of the river and user capacities. Once this survey is reviewed, a decision will be made as to whether additional data collection will be necessary.

SECTION 3
METHODOLOGY FOR IDENTIFYING ORV FLOW TARGETS

A. Introduction

This section describes the mechanisms the Stakeholder Group will use to scientifically quantify the rate and timing of flows needed to support and protect the ORVs (Factor 1).

B. Methodology for Identifying Flow Targets

The participants, *i.e.*, the Stakeholder Group and CDOW, will evaluate existing sources of information to identify where further studies may be needed. Assuming funding is available from the State, they may conduct additional studies and surveys to fill in the missing pieces. The results will allow the participants to define flow protection targets for fishery and recreational ORV needs.

1. Recreational (Fishing)

BLM has indicated potential suitability determinations for BLM Segments 4 through 7. The Eligibility Study identifies Segments 4 and 5 as possessing recreational (fishing) ORVs. Because the ORV designation relies on the high quality fisheries in these segments, an evaluation of flows needed to protect the fisheries will be conducted.

BLM's Eligibility report identifies fishing uses incidental to floatboating in Segments 6 and 7 and the CDOW manages those segments in the same way as in Segments 4 and 5 (*i.e.*, as Wild Trout Waters). However, BLM has indicated that these segments are not identified as having Recreational (fishing) ORVs, because the available BLM information does not show the same level of angling use as in Segments 4 and 5. The participants will review all existing user information (*i.e.* USFS data) before making a final determination on how each segment is managed.

To ensure that recommended flows for Segments 4 and 5 do not negatively impact the fisheries in Segments 6 and 7, the participants commit to collect data to improve the knowledge base about the fishery in Segments 6 and 7. They may consider this data as they develop flow recommendations and protection strategies for the Management Plan Alternative. This effort would be considered an enhancement under the Management Plan Alternative. While the Stakeholder Group does not intend to collect data for other stream segments outside of the study scope, the effect of the Management Plan Alternative on adjacent stream segments will be considered.

The Stakeholder Group is anticipating that protection of flows for maintenance and enhancement of fisheries will in general be protective of conditions to support both wade fishing and drift fishing. However, in some instances, flows that are beneficial for the fishery may be too high for wade fishing.

Existing Information:

In addition to the existing fish surveys indicated in Section 2, there are currently two studies relevant to the evaluation of flows needed to protect fisheries within the pertinent segments:

- Grand County's Streamflow Management Plan (Phase II) (April 2008).
- Eagle County's Colorado River Flow Regimes Draft Report (January 2008).

The Grand County Streamflow Management Plan ("GCSMP") plan includes fish habitat analyses using the PHABSIM methodology as well as channel maintenance flow needs. The Eagle County Colorado River Flow Regimes report ("ECCRFR") includes a preliminary analysis of habitat-related flows for fisheries and flows for recreational uses. The ECCRFR extrapolated data from the GCSMP. The plans include information for Segments 4 and 5 and for Segment 6 down to the confluence with the Eagle River. The plans also include flow recommendations for Segments 4 and 5, which will be considered by the participants. Since the plans were only recently released, they require further review to determine how well they satisfy the data needs for the Management Plan Alternative.

Data Gaps:

The participants are not aware of any site-specific habitat information regarding flows needed to protect fisheries for the portion of Segment 6 below the confluence with the Eagle River and for Segment 7. USGS streamflow records are available for determining flow needs using hydrologic data. Review of the Grand County and Eagle County plans will reveal whether additional data gaps exist for the remaining segments. The participants expect to complete their review of the GCSMP and ECCRFR by June 30, 2008 to assist in determining whether and where additional data will be collected.

In addition, updated fisheries data is needed for all segments. CDOW expects to conduct fish surveys in Segments 4, 5, 6 and (possibly) 7 during summer or fall of 2008, if flow conditions allow (*i.e.*, surveying is not possible when flows are either so high that sampling is not possible or so low that surveying will significantly impact fish).

Additional fish surveys will likely have to be conducted in subsequent years to evaluate the efficacy of any methodology selected to predict flows that are protective of the fisheries. Additional water temperature monitoring may also be needed.

Little information is available on desired flows for wade fishing. To fill this gap, the participants plan to interview commercial outfitters and CDOW game wardens.

Approach:

If needed, and funding is available, computer modeling will be used to evaluate minimum and optimal fishery flows. Models that may be used include:

- Physical Habitat Simulation Model (PHABSIM).
- Instream Flow Incremental Methodology (IFIM).

- Two-Dimensional Hydraulic Models (River2D).
- Indicators of Hydrologic Alteration (IHA).

Depending upon which model is selected, additional modeling may be required. If computer modeling is needed, the participants will select one or more programs by July 15, 2008. Fish surveys will be performed using the "mark and recapture" method.

2. Recreational (Floatboating)

The BLM's Eligibility Study identifies Segments 4 through 7 as possessing recreational (floatboating) ORVs. To ensure the recommended flows for Segments 4 through 7 do not negatively impact the floatboating ORVs, the Stakeholder Group commits to collect data to improve the knowledge base for these segments of the Colorado River.

Existing Information:

In the fall of 2007, American Whitewater conducted an online survey for the Upper Colorado River basin to examine the flow needs for recreational boaters. These surveys offered evidence about various flows necessary for kayaking and other recreational floatboating opportunities.

The participants will review the Eagle County report and Grand County plan to examine these analyses as they relate to the flows associated with recreational opportunities. The studies were only recently released and need to be reviewed to determine whether they satisfy the data needs for the Management Plan Alternative and whether data gaps remain. A review of these plans will be conducted by June 30, 2008 to determine if additional data will be collected.

There are a number of additional sources of information on recreational flow needs:

- BLM information.
- Guidebooks.
- Websites such as Eddyflower.com and Mountainbuzz.com.
- Existing data from private boater survey conducted by American Whitewater.
- Commercial rafting permit records.
- Data and analysis used for designing and constructing the Glenwood Springs Whitewater Park.
- Arizona State University User Preference Survey for the Upper Colorado River.

Data Gaps:

Several data gaps need to be addressed:

- Commercial rafting is under-represented in the 2007 American Whitewater survey.
- Drift fishing is under-represented in existing data sources. There are several methods to obtain this data, such as additional surveys and a professional assessment.

Approach:

There are USGS stream gages at Kremmling and Dotsero as well as other gages that currently measure flows. The historic record will be examined as compared to the minimum acceptable and optimal flows for the various recreational opportunities. Records from the Glenwood Springs gage may also be considered. In addition, existing water rights administration conditions will be compared to the historic flows and the minimum and optimal flows for the various recreational opportunities.

There are several methods to fill in data gaps, such as additional surveys, interviewing current users and commercial operators, and a professional assessment with field verification. The Stakeholder Group intends to conduct additional surveys to assess the appropriate flows for recreational floatboating and drift fishing and to assess seasonal uses and preferred recreational experiences for the different segments. The Stakeholder Group will consider other methodologies for this purpose and make a decision whether to pursue additional methodologies by July 31, 2008. It is anticipated that the survey work will be completed by August 31, 2009. This data will be compared to the historical flows and the minimum and optimal flows for these additional recreational opportunities.

Flow range targets will be developed by: (1) comparing results from the American Whitewater surveys, other sources of flow recommendations listed above, and any additional studies that are identified as necessary to quantify flow recommendations; and (2) generating recommendations that are appropriate for the purposes of the Management Plan.

C. Other Flow-related ORVs

Other flow-influenced ORVs include "wildlife" for river otter and bald eagles, and "botanical" for a rare riparian dogwood / birch plant community. These ORVs depend upon a healthy riparian system and plant and animal communities associated with the riparian system. It is anticipated that flows necessary to maintain the recreation floatboating and fishing ORVs (specifically, any flushing flow goals for spawning bed maintenance) will be adequate to maintain the wildlife and botanical ORVs. The Scenic ORV may also be influenced by flows as it is based in part on what viewers believe is an aesthetically pleasing view of the river. It is anticipated that flows needed for the Scenic ORV will be protected if the recreational floatboating and fishing ORVs are protected. The Stakeholder Group will further investigate the validity of the above assumptions.

The Colorado Basin Round Table (CBRT) will be using a new non-consumptive flow needs tool to assess streamflow needs for environmental attributes identified by the CBRT as important. CBRT has selected the Kremmling to Glenwood stream reach to pilot the tool. Depending upon the timing for the completion of the assessment, the Stakeholder Group may also consider results from this analysis in developing environmental flow needs for Segments 4 through 7.

D. Process for Identifying Targets

The Stakeholder Group and CDOW will define flow targets or goals for the recreational (fishing) and recreational (floatboating) ORVs in Segments 4 through 7. Flow targets will have a seasonal variation based upon the needs of the ORV and water availability. There may also be a set of

flow targets established for wet, average and dry years to account for natural variability in flow conditions. Matrices will be developed for each of the segments that will display:

- ORV flow needs for floatboating and the fishery.
- The critical seasons for animals, plants and fish that factor into the ORVs.
- Hydrographs for representative wet, average and dry year conditions.

The Stakeholder Group will identify flow-based conflicts between the ORVs, if any. The matrix will illustrate potential conflicts in ORV flow needs, and will assist in development of a management strategy that will balance and sustain the conditions needed to maintain all ORVs.

SECTION 4

MANAGEMENT PLAN ELEMENTS

A. Introduction

This section of the Conceptual Plan presents potential flow-based, land-based and water quality protection measures identified by the Stakeholder Group (Factors 2, 3, 4 and 5). The Management Plan Alternative will incorporate specific protection measures selected among these concepts.

B. Flow-Based Protection (Factor 2)

While the assessment of ORV flow needs is being completed, the Stakeholder Group will explore implementation approaches for inclusion in the Management Plan Alternative. This section of the Conceptual Plan presents potential flow-based protection measures identified by the Stakeholder Group. The Tier 1 concepts presented below are the five concepts that garnered support by a majority of members of the Stakeholder Group as most promising. Tier 2 includes other concepts that garnered less agreement from the Stakeholder Group; but these concepts may still be considered in developing the Management Plan Alternative. The concepts are not presented in any order of priority within the sections below. Any one or any combination of concepts may be included in the final Management Plan Alternative depending upon what the flow needs are for Segments 4 through 7 and upon the ability to implement the concepts. More detailed descriptions and listings of pros and cons for each concept are included in Appendix B.

1. Tier 1 Concepts supported by a majority of Stakeholders:

a. Delivery of Water to a Downstream Demand.

Water that is made available for streamflow protection would be released into the Colorado River or its tributaries upstream of the protected stream segments. That water would be delivered to a party within or downstream of the protected segments who contracts for the use of the water. This approach could also be used to deliver water to an instream flow right under an agreement with the CWCB. Permanency will depend on the duration of agreements between the source of supply and ultimate water user. Reliability will depend on the ability to "shepherd" the contract water through the entire reach of the protected segments.

b. Protection Offered by Existing Senior Water Rights.

The existing river operations and water rights administration regime have the potential to maintain ORVs. Established water rights are in place to call for water under dry to average hydrologic conditions. The two main calling water rights on the main stem of the Colorado River are the Shoshone rights and a group of rights known as the Grand Valley rights. The Shoshone rights are capable of diverting water year round (1250 - 1408 cfs.); while the Grand Valley rights are irrigation rights that generally divert water between April and October. These are absolute water rights that, under dry to average

hydrologic conditions, govern the flows on the Colorado River through Segments 4 through 7. While these water rights operations have reliably shaped the flows in the Upper Colorado River during portions of most years, permanency of flow protection cannot be assured, as these rights may be subject to operational agreements (the Shoshone "Power Interference" agreement); may be purchased, resulting in elimination of the call; may not be able to beneficially use the water, or may be operated differently due to water rights changes. In addition, the Grand Valley rights do not have the need to call during the non-irrigation season, when protective flows for the fisheries are needed.

c. Protection Provided by Upper Colorado River Endangered Species Recovery Program.

The Final Programmatic Biological Opinion issued in December 1999 included a Recovery Action Plan that identified several flow enhancements to assist the recovery of endangered fish in the 15-mile Reach above the confluence of the Colorado and Gunnison Rivers. The flow enhancements/sources that could impact stream Segments 4 through 7 are as follows:

- CWCB instream flow decrees for the 15-mile Reach.
- Late summer and fall flow augmentation sources delivered from storage upstream of Segments 4 through 7.
- Spring peak enhancement through (1) coordinated reservoir operations that include deliveries from storage facilities upstream of Segments 4 through 7; and (2) enhancements that are developed through the Coordinated Facilities Water Availability Study, a study to examine additional alternatives to supply enhanced spring peak flows.

The permanency of protection provided by this program is linked to the continued operation of the program and use of flow enhancement sources upstream of the reaches to be protected. However, at this point, the use of upstream sources is not guaranteed. In addition, the flow-delivery obligations from upstream sources would have to be evaluated to ensure that they are sufficient, in time and amount, to meet the ORV flow needs.

d. CWCB Instream Flow Protection.

The CWCB has exclusive authority in the State of Colorado to hold instream flow water rights for the preservation or improvement of the natural environment to a reasonable degree. CWCB instream flow options include:

(1) Instream flow for baseflow -- The CWCB can protect stream flows in and through a reach between two points on a stream by appropriating new instream flow ("ISF") water rights. ISF water rights are for minimum stream flows to preserve the natural environment to a reasonable degree, and are adjudicated and administered within the State's water right priority system.

(2) Instream flows for large seasonal or flushing flows --To provide protection of environmental "flushing flows" with ISF water rights, the CWCB could be asked to consider these flows as part of the minimum flows necessary to protect the natural

environment to a reasonable degree. This option, while somewhat controversial, could help provide water in larger amounts in certain years. If providing spawning cues for target species is determined to be the minimum necessary to preserve the natural environment to a reasonable degree, it might be possible to file a new appropriation. Another way to achieve large seasonal flows would be through the acquisition of water by the CWCB via a donation, purchase of lease that the CWCB could use to improve the natural environment to a reasonable degree. These options could be less controversial than a new ISF appropriation, but would depend upon the availability of water for acquisition.

(3) Acquisition of senior decreed water rights for ISF use -- CWCB can (A) acquire water, water rights or interests in water to preserve or improve the natural environment to a reasonable degree, (B) acquire absolute direct flow or storage rights, and (C) acquire water rights on a permanent or temporary basis. CWCB must apply to Water Court to obtain a decreed right to use an acquired water right for ISF purposes.

(4) Shepherding of CWCB water for downstream users through study segments -- In this protection strategy, water would be released from an upstream point for delivery to a downstream user. To protect flows through the whole reach to the downstream point, CWCB would acquire an interest in or right to use that water for ISF protection under an acquisition agreement.

All of these protection strategies have the potential to provide permanent flow protections. However, permanency for shepherding of supplies for downstream users and acquisition of senior decreed water rights both would depend upon the term and the ability to renew the acquisition agreement.

e. Voluntary Flow Management Programs.

Voluntary flow management plans (FMPs) provide a water management tool that can be used for maintaining and enhancing flow-related values within a given stream reach through the collaborative operation of water facilities and other cooperative efforts. FMPs generally consist of a series of operating principles and guidelines that are intended to provide a flow regime that maintains or enhances environmental and recreational attributes, while maintaining the ability for water providers to operate their water facilities in a manner that will not adversely impact current or future water supplies.

FMPs are typically developed through a voluntary, collaborative process that provides a degree of local management and control that may not be achieved through designation under the Wild and Scenic Rivers Act. Stakeholders are able to craft an FMP that takes into account the operational, technical, and legal considerations that are unique to the river system.

An FMP could contain some combination of the following protective concepts:

- Year-round minimum flows, winter incubation flows, and spring egg hatching/fry hatching flows to support fisheries.

- Coordination of water releases to support and enhance the recreational floatboating and fishing ORVs.
- Voluntary curtailment of exchanges through the river segment during periods of peak recreation.
- Coordination of water releases for temperature moderation.
- Flow ramping schedules and guidelines for daily streamflow fluctuations.
- Annual operating plans and stakeholder meetings to establish reasonable and achievable flow targets based on anticipated weather, streamflow, and operational considerations.
- Preservation or support of operations and agreements that is protective of maintaining the status quo conditions.
- Adaptive management to address changing future conditions: As uses and conditions change, parties find new ways to meet target flow goals.
- The establishment of CWCB instream flow rights.

One concept being considered is an FMP built on the premise that present-day conditions may be sustaining, protective and potentially enhancing of ORVs. The concepts described above could offer protection of the status quo and provide enhancements to ORVs.

Permanence and reliability for voluntary flow programs can be achieved by entering into agreements that bind parties to the terms and conditions of the flow management plan.

2. <u>Tier 2 Concepts under Consideration by the Stakeholder Group:</u>

a. Federal Legislation.

Several legislative mechanisms including special legislation, Natural Recreation Areas, and National Conservation Areas are described below. These strategies have similar qualities.

(1) National Recreation Areas require federal legislation to protect areas on federal lands that are extraordinary in quality and recreation. They are intended for recreational use and recognize recreation as the dominant purpose.

(2) National Conservation Areas require federal legislation to protect areas on federal lands to conserve and protect a range of natural and other values in an area.

(3) Special legislation can be tailored to meet the protection needs of a particular situation, and can be designed to protect a broad suite of resource values, (as is the case for the Rio Grande Natural Area), or it can be very narrowly focused.

All three legislative options require Congressional designation. National Conservation Areas and National Recreation Areas also establish federal management. While the legislative options could provide permanent flow protection consistent with state law, it is not a requirement for the designations.

b. Plan for Augmentation to Supplement Flows.

A plan for augmentation is "a detailed program, which may be either temporary or perpetual in duration, to *increase the supply of water available for beneficial use in a division* or portion thereof by the *development of new* or alternate *means* or points *of diversion*, by a *pooling of water resources*, by water exchange projects, by *providing substitute supplies of water*, by the development of *new sources of water*, or by any other appropriate means." C.R.S. §37-92-103(9) (emphasis added). Many of the mechanisms for protection under consideration, including voluntary flow agreements, coordinated reservoir operations, CWCB instream flows, Colorado River District Constant Flows, and RICDs could be enhanced by a plan for augmentation.

c. Protection of Bypass Flows/Releases of Water.

In the Upper Colorado River and its tributaries, water is "bypassed" or "released" to satisfy conditions of a permit or legislation approving the project. Two examples include Forest Service "bypass" flows of water on the Fraser Basin under the "Amendatory Decision" for the Moffat Project and the "1961 Principles" concerning releases of water from Granby Dam to the Colorado River for the Colorado Big Thompson Project. Under this proposal, the bypass flows and releases of water from reservoirs and other sources of water would be protected either as: 1) increases to or augmentation of CWCB instream flows; 2) augmentation of Colorado River District Constant Flows; and/or 3) augmentation of RICD flows through Gore Canyon.

d. Recreational In-Channel Diversions (RICDs).

RICDs are in-channel water rights for recreational purposes. They must be held by local government entities, and must be for the minimum stream flow for a reasonable recreation experience. There must be a control structure as a point of diversion. RICDs are a potential mechanism to protect and enhance recreation floatboating ORVs in Segments 4 through 7. RICDs are being considered for Gore Canyon and Glenwood Springs. RICDs would be decreed water rights under Colorado water law, and therefore would provide permanent protection.

e. River District Appropriation of Water for Fish Preservation.

The Colorado River District's enabling legislation allows the District to file upon and hold water rights to maintain stream flow needed to preserve fish. The River District could apply for some amount of water to protect the fishery that would be sufficient to protect and enhance the ORVs in the designated reaches. The water right could be a combination of storage and/or in stream flows, and may be subject to possible conveyance to the CWCB. Any stored water could be delivered on an agreed upon scheduling and rate. A decreed right could offer long term stream flow protection. Timing and amounts would have to be determined.

f. Wild & Scenic Rivers Designation.

(1) Under § 2(a) (i) -- Under this approach, Congress would designate the segments under the Wild and Scenic Act. Flows necessary to support the ORVs could be protected through federal reserved water rights or through any other effective legal mechanism (*e.g.*, CWCB in-stream flow rights and operational agreements). The Wild and Scenic Act requires protection of water flows in designated rivers. However, it does not dictate protection by reserved rights. Rather, the means by which ORV flows are to be protected can be specified in the adopting federal legislation.

(2) Designation under § 2(a)(ii) -- Under this option, the Secretary of the Interior may approve designation upon petition by the Governor of the State, after enactment of state legislation that (1) designates the segments as wild, scenic and/or recreational and (2) appoints a state agency (or political subdivision) with the duty of permanently managing the river as such. State funding may be required under this approach, as the federal government may not fund implementation of § 2(a) (ii) plans except as necessary for federal agency implementation within federal lands.

Both **§ 2(a) (i) and § 2(a) (ii)** have the potential to provide permanent flow protection, depending upon the nature of the underlying flow protection mechanism.

The Stakeholder Group is committed to developing a Management Plan Alternative that will include some combination of the flow protection concepts described above. A thorough understanding of the ORV flow requirements is needed before any of the protection ideas can be eliminated from consideration, and a final plan developed.

C. Land-Based Protection (Factor 3)

The Stakeholder Group will develop land-based protection strategies to address the needs of the recreation, wildlife, scenic, historic, geological, botanical and paleontological ORVs. The BLM is in the process of developing its land use prescriptions for the river corridor and expects to have these developed by August, 2008. At that time, the Stakeholder Group will meet with the BLM to understand what the BLM is proposing and to brainstorm possible actions to be included in the Management Plan Alternative for local, state and private lands that would be complementary to what the BLM is proposing to protect the river's ORVs and classification. A map-based approach to identifying and addressing land use issues is proposed. A ¼ mile corridor on each side of the Colorado River will be mapped and the Management Plan Alternative will include a description of ownership, known development plans, zoning and associated uses by right or special uses that are listed. This approach will also include a summary of protective measures that currently exist in the Land Use Regulations, such as setbacks from streams and wetlands that will benefit non-federal land within the study area. Land uses on private land that have the potential to conflict with ORV protection will be identified and opportunities for improved protection of ORVs will be identified, such as GOCO legacy stewardship grants, conservation easements in key parcels, or multi-jurisdictional coordinated land management plans.

Changes in zoning and significant development projects require approvals from the County in a public process including legal notice.

D. Water Quality (Factor 4)

The issue of water quality is to be addressed by the Management Plan Alternative. The Stakeholder Group will develop a water quality monitoring plan and, if appropriate, a management plan to protect the identified ORVs. If the monitoring program determines that water quality standards are not being met, or the standards are insufficient to protect ORVs, then the Stakeholder Group may collect and analyze additional water quality data, develop a water quality management plan, become involved in the WQCD's basin evaluation process, propose site specific standards or a control regulation, and/or participate in TMDL development and implementation.

The following provides some background on water quality regulation in Colorado. The Colorado Department of Public Health and Environment Water Quality Control Commission (WQCC) recognizes Recreation and Aquatic Life as classified uses of surface waters in Colorado and has adopted water quality standards that are deemed to be protective of these uses. The State of Colorado has classified Upper Colorado River Stream Segment 03 for the protection of primary contact recreation and cold water aquatic life and has adopted specific standards for the protection of these uses (5 CCR 1002-33). This segment is described as the main stem of the Colorado River from the outlet of Lake Granby to the confluence with the Roaring Fork River.

Upper Colorado River Stream Segment 03 is also designated as "Reviewable" under the anti-degradation rules of the WQCC. This means that the existing water quality should be protected unless it can be shown in a formal review process that the proposed degradation is necessary to accommodate important social and economic development in the area where the waters are located.

Water quality standards and classifications are reviewed in a formal public process every five years. This review process is occurring now and the Colorado Water Quality Control Division has provided a fairly detailed summary of existing water quality in Upper Colorado River Segment 03. This review process provides an opportunity to evaluate whether existing quality is being maintained, to propose changes to the protective standards and classifications, or to object to changes proposed by others.

The state system also allows for site specific standards when deemed appropriate. Basin control regulations can also be developed for specific classes of state waters (Section 25-8-205, C.R.S.). Final oversight of this program is by the U.S. Environmental Protection Agency (EPA). Changes to this system would require significant changes to Federal and State legislation.

E. Issues that Have the Potential to Affect ORVs (Factor 5)

The intention of the Wild & Scenic Management Plan Alternative is to develop a collaborative plan that balances permanent protection of the BLM ORVs; certainty for the Stakeholder Group; water project yield; and flexibility for water users. There are numerous issues that may be relevant to protection of BLM's identified ORVs, including, but not limited to: changes in upstream water uses, increased diversions by existing water projects, development of new water

projects, changes in water administration, changing climatic conditions, forest fires, increased sediment loading, over-use of resources by recreational interests, insufficient facilities to support recreational use, and land development. The Stakeholder Group will develop consensus strategies in the Management Plan Alternative to protect the ORVs from these types of potential impacts.

Table 2: Summary of Potential Issues is a compilation of issues that may potentially affect the ORVs. Each issue is listed, followed by a brief description and specific examples of potential changes or influences on each issue. "All Flow-related ORV" issues are likely to affect all ORVs. Issues that are specific to the recreation fishing ORV, the recreation floatboating ORV, or related to land use are called out separately.

Table 2
Summary of Potential Issues

ALL FLOW-RELATED ORVs		
ISSUE	**DESCRIPTION**	**EXAMPLE**
Upstream Water Development	The present hydrologic conditions found in the Eligible Segments may be altered by the development and use of upstream water resources in addition to present uses. The majority of such changes are expected to reduce streamflow overall, although some may simply change the timing or result in an increase in streamflow.	Projected growth associated with ski-resort and recreation, municipal, industrial and other water diversions, including development of presently-decreed conditional water rights.
Changes in Water Administration	The present hydrologic conditions found in the Eligible Segments may be altered by changes in the present water administrative regime. Such changes may increase, reduce or alter the timing of present water rights "calls" and other administrative operations.	Shoshone Power Plant reduction or buy-out, reduction in irrigation demands in the Grand Valley, changes in Blue River Decree interpretation, Colorado River Compact-Call, and Construction of Wolcott Reservoir, Green Mountain Reservoir HUP protection of historic user deliveries.

Table 2 (continued)

ALL FLOW-RELATED ORVs (Continued)		
ISSUE	**DESCRIPTION**	**EXAMPLE**
Changes in Current Water Operations	The hydrology of the basin upstream of the Eligible Segments is heavily influenced by various water diversion and storage facilities. In addition to present water administrative practices, the operation of these facilities is influenced by various regulatory conditions and voluntary guidelines. Changes in these operational conditions may alter the present hydrologic regime through the Eligible Segments.	Releases and re-operations for the Upper Colorado River Recovery Program, CBT/Windy Gap pumping, hydropower generation at Shoshone, retirement of the Big Lake Ditch, re-irrigation of agricultural land, and cessation of mining at Henderson, etc.
Hydrologic Alterations due to Climate Change	Changes in conditions due to climate variability may have a significant impact on the present hydrologic regime, temperatures, etc. through the Eligible Segments.	While it is extremely difficult to predict such changes, early studies indicate that this region may see an overall reduction in snowpack, earlier run-off and potential increases in summer rainfall.
Watershed Forestation Risks	Changes in the overall forest ecology in the watershed above the Eligible Segments may result in hydrologic changes through the Eligible Segments. Such changes in the forest conditions may increase spring runoff, increase storm-event flows and increase sediment-loading to the river system. Water temperatures could also increase due to changes in runoff patterns from deforested lands.	Deforestation due to Pine Beetle infestation, and forest fires.
Water Quality Degradation	Change or reductions in water quality conditions may have impacts to the ORVs. Such changes may include direct-impacts to the ORVs (fisheries, recreation, and aesthetics).	Reduced flows (loss of dilution increase in temperature, moss growth) increased wastewater flows, sediment-loading from roads, development and other land changes, forest fire impacts (sediment, ash), contaminant spills (industrial, vehicular or train)

Table 2 (continued)

RECREATION (FLOATBOATING)		
ISSUE	**DESCRIPTION**	**EXAMPLE**
Overuse of the Resource	User levels could exceed a user capacity that is protective of the ORVs.	This may be a concern for Segment 7, where use is approaching the user capacity identified by the USFS.
Competition/conflict amongst the recreation users	Special events such as races the Gore Festival that bring crowds may cause competition and conflict between different users sharing the same river access points.	The Gore festival and the National Whitewater Championships are held in Gore Canyon.
Commercial Use	The amount and type of permits/access (angling vs. whitewater) can affect ORVs'. Too much of one may impair the quality of experience by another. Overuse by commercial may impairs the quality of experience by private users.	Conflicts may occur between angling, rafting and kayaking.

RECREATION (FISHING)		
ISSUE	**DESCRIPTION**	**EXAMPLE**
Aquatic nuisance species	Aquatic nuisance species can harm the quality of the fishery and angling experience.	Disease (Whirling, BHS, BKD), invertebrates (New Zealand mud snail, zebra mussels etc.) illegal fish introductions, aquatic plants and algae.
Seasonal variability in flows	Without seasonal and annual variability in flows, habitat can be diminished.	Can impact habitat connectivity, sediment movement, and temperature
Angling	The fishery can be impacted by over-fishing, handling mortality.	Overuse of the fishery by commercial outfitters can degrade the fishery.
Whitewater Recreation	Whitewater recreation goals can conflict with the needs of fisheries. White Water Parks can change substrate and habitat. This can have potential negative or positive affects on fish habitat and movement.	

Table 2 (continued)

LAND USE		
ISSUE	**DESCRIPTION**	**EXAMPLE**
Increased traffic	Increased traffic may cause an increased need for dust control and erosion control.	
Insufficient Public Access to River	There may be insufficient public access to the river in some stream segments.	This may be a concern for Segment 6, from State Bridge to Dotsero.
Increased Land Development	Conversion of open space to more concentrated development can increase sedimentation, runoff and pollutants to the river.	New roads, housing developments, and industry (pellet plants).
Lack of appropriate Facilities	Facilities (parking, restrooms, launch space – either loading or unloading) may be insufficient to meet the needs at river access points. Between designated put-ins and take-outs there are no restroom facilities, and this creates both a sanitary and esthetics problem.	Lack of facilities along the river is especially a concern for Segment 5.

F. Funding

The Stakeholder Group recognizes the need to identify and secure a funding mechanism to help implement the Management Plan Alternative. Stakeholders will explore funding options for the Management Plan Alternative over the long term. Options include but are not limited to:

- Establishment of an endowment fund.
- Securing a GOCO Legacy Grant.
- Reliance on funding sources available to federal, state and local agencies participating in the Management Plan Alternative (including potential funding for specific projects that the SG chooses to implement).
- Establishment of fee areas as a source of potential funding.

G. Management Plan Alternative Implementation and Governance

The Stakeholder Group recognizes that an important element of the Management Plan Alternative will be the definition of management strategies. These strategies will address:

- Recommendations on a governance structure for providing oversight to the Management Plan Alternative.
- Recommendations on collaborative and coordinated management measures and partnerships.
- Resolving issues, conflicts and unforeseen changes.
- Mechanisms for implementation of management strategies.
- Mechanisms for addressing enforceability.

Management strategies will depend upon the plan elements that are proposed. As the water and land based protection elements become better defined, the Stakeholder Group commits to developing specific management recommendations for the plan.

H. Agency Coordination

The Stakeholder Group commits to evaluating mechanisms for cooperation and coordination with project proponents and federal permitting agencies to address the potential effects of future projects on ORVs. An array of mechanisms will be assessed for inclusion in the Management Plan Alternative. These may include:

- The standard public review process for projects.
- The Stakeholder Group petitioning the BLM to develop an MOU for interagency consultation for cooperation and consultation with decision-making agencies and project proponents of on-stream or upstream projects that have the potential to negatively affect ORVs.
- Establishment of protection ideas within the plan intended to address potential impacts associated with future water supply development.
- Adaptive management to address changes with future projects and potential effects on ORVs and to modify protection measures as needed.

A separate mechanism may be identified for coordination and cooperation with local and state agencies regarding state and local permitting processes that either may be affected by the implementation of the Management Plan Alternative or that may affect the ORVs.

I. Conclusion

This Conceptual Plan lays out the Stakeholder Group's progress to date and intentions for additional data gathering, analysis and collaborative planning. The Stakeholder Group will continue to work together throughout the summer and fall of 2008 to gather adequate information to develop more specific elements and details of the Management Plan Alternative. The Management Plan Alternative may provide enhancements that exceed Wild and Scenic requirements. The Stakeholder Group urges the BLM to consider this Conceptual Plan as adequate progress toward a Wild and Scenic Management alternative for inclusion in its Resources Management Plan revision process. The Stakeholder Group intends to submit additional information to BLM as needed to satisfy NEPA requirements supporting issuance of the Draft EIS, which is tentatively scheduled for the winter of 2008/2009. The goal of the Stakeholder Group is to complete the detailed final Management Plan Alternative for submission to and consideration by BLM prior to its issuance of a Final EIS and Record of Decision on the final plan.

Appendix A
Glossary of Terms

Angling – Angling refers to fishing that can take place either from the shore (wade fishing) or from boats (drift fishing).

Classification – Classification refers to the level of human development adjacent to the shoreline. The classification can be Wild, Scenic, or Recreational and is part of the process of determining Wild and Scenic River designation under the Wild and Scenic Rivers Act ("WSRA").

Eligibility –Eligibility refers to the first step in the Wild and Scenic designation process. To be eligible, a river has to have certain characteristics; it must be free-flowing and contain at least one Outstandingly Remarkable Value, *i.e.*, scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value. (Source: Interagency Wild & Scenic Rivers Council).

Floatboating - Refers to floating the river in any type of craft, including hard shell kayaks and canoes, inflatable crafts and flat bottom boats.

Outstandingly Remarkable Values –A rare, uncommon or extraordinary resource, which is stream related and has statewide, regional or national significance. A stream must have an outstandingly remarkable value ("ORV") in order to be eligible for Wild and Scenic designation.

Project Yield – The quantity of water that a project can deliver. Project yield is quantified differently by different water users and also for different water projects.

Suitability - Suitability is a process of determining whether the stream is a worthy addition to the national wild and scenic rivers system. It is the third step in the evaluation of a stream for inclusion as wild and scenic after the Eligibility and Classification processes.

User Days - The number of visitor occurrences that a given area may have over a period of time. Ten people visiting one site on one day constitutes 10 user days.

User Capacity- User capacities are frequently used by land managing agencies to set limits on permitted use and to establish a basis for permitting segments of rivers for private or commercial use.

Wild and Scenic Rivers Act – Established in 1968, the WSRA requires land managing agencies as a part of their planning processes to conduct an eligibility inventory of streams to determine if they have outstandingly remarkable values and to conduct a suitability study to see if eligible stream segments meet the requirements of the Act for designation. If Congressional designation occurs the managing agency establishes a management plan to preserve the ORVs. The land managing agency also quantifies the amount and timing of water necessary to support the ORVs.

Appendix B

Descriptions of Potential Flow-Based Protection Ideas Prepared by the Water Rights Subcommittee

Introduction

This document provides detailed descriptions of flow-based protection concepts being considered by the Stakeholder Group for inclusion in a Wild and Scenic Management Plan Alternative. Each description provides a discussion of the basic concept, a description of the benefits in Colorado River Segments 4 through 7 (as described in the BLM Wild and Scenic Eligibility Report for the Glenwood Springs and Kremmling Field Offices), an assessment of whether the concept can provide permanent flow protection, and a discussion of the pros and cons for the concept. The descriptions are not set in any order of priority in the sections below.

1. Delivery of Water to a Downstream Demand

I. Basic Concept

Water that is made available for streamflow protection would be released into the Colorado River or its tributaries upstream of the protected stream segments. That water would be delivered to a party within or downstream of the protected segments who contracts for the use of the water. Potential sources of water include: storage releases from upstream reservoirs, such as Granby, Williams Fork, Green Mountain, or Wolford Mountain Reservoirs; changes of existing water rights, such as the Peabody Ditch in Summit County; and bypasses from trans-mountain diversion facilities. Examples of potential downstream delivery points could include municipal or agricultural users in the Grand Valley, municipal or energy industry users in Garfield County, on-channel hydroelectric projects, or a mainstream RICD. This approach could also be used to deliver water to an ISF right under an agreement with the CWCB.

II. Benefit to Stream Segments

The amount of water that could realistically be developed and delivered to a downstream demand needs to be assessed.

III. Permanent Flow Protection

Permanency of flow protection will depend on the duration of agreements between the source of supply and the ultimate water user.

IV. Pros and Cons

Pros

- Provides an additional tool for protecting flows outside of the CWCB instream flow program; depends on voluntary, market-based transactions among water users rather than a regulatory approach.
- Offers flexibility in structuring transactions to match demands.
- Provides multiple benefits by enhancing flows in the protected segments while also allowing the water to be consumptively used below those segments.

Cons

- Some water rights are not decreed for downstream use.
- There may be potential difficulty in ensuring administrative control of the water against intervening diversions that might be able to provide a substitute supply below the protected segment.
- The timing of the deliveries would need to be structured to match the demand pattern of the ORVs.

2. EXISTING WATER RIGHTS

I. Basic Concept

The two main calling water rights on the main stem of the Colorado River are the Shoshone Rights and a group of rights known as the Grand Valley rights or the Cameo Call, actually 3 different structures. The Shoshone rights are capable of calling for water year round (1250 to 1408 cfs), while the Grand Valley rights are irrigation rights which can only call for water April through October. These are absolute water rights, which under dry to average hydrologic conditions may govern the flows on the Colorado River through Glenwood Canyon during portions of the year. The Shoshone senior right is the focal point of this concept as it is the most senior water right and located at the bottom of the study area. However the Grand Valley rights do receive the delivery of the supplies from the Green Mountain Reservoir Historic Users Pool (HUP).

II. Benefit to Stream Segments

The year round utilization of the Shoshone right has the ability to keep flows of around 1250 cubic feet per second (cfs) in the Colorado River at the Dotsero gage. The Shoshone right is more protective for the Glenwood Canyon segment. The Grand Valley rights call for water from all upstream junior rights. During portions of the year, flows on the Colorado River have historically been maintained by the operation of the Shoshone rights, and to a lesser extent the Grand Valley rights.

III. Permanent Flow Protection

When operating at full capacity, the Shoshone rights offer year round protection in the operation of existing water rights administration. The administration of these rights has

largely shaped the historic hydrograph. The Grand Valley rights accept delivery of HUP supplies, generally from August through October.

IV. Pros and Cons

Pros

- These are established water rights in place to call for water under dry to average hydrologic conditions and that can help maintain ORVs during portions of the year.
- Reliance on these existing rights allows for upstream operational flexibility to deliver water to calling rights provided replacements are made upstream of Segment 4.
- Grand Valley HUP deliveries take place during drier conditions and therefore benefit the study area reaches when other concepts may not provide physical supply.
- Segments 4 through 7 are downstream of Green Mountain and therefore would benefit from HUP releases.

Cons

- Existing water rights do not provide guaranteed flows under all conditions.
- Existing water rights typically provide 1250 cfs at Dotsero, below the confluence with the Eagle River, and this may not be sufficiently protective to maintain all of the ORVs in Segments 4 through 7 above the confluence with Eagle River.
- The Shoshone right can be reduced when the plant does not operate and when the "Power Interference Agreement" which allows for reduced deliveries during drought periods is operating.
- There may be a lack of permanency since the Shoshone right is a private right. (*e.g.*, the water rights may be sold and no longer call flows through the reach).
- Calling rights could potentially be satisfied through means other than flows through he ORV reaches.
- Grand Valley rights are not year-round rights.

3. CURRENT PROTECTION PROVIDED BY UPPER COLORADO RIVER ENDANGERED SPECIES RECOVERY PROGRAM

I. Basic Concept

The Final Programmatic Biological Opinion issued in December of 1999 includes a Recovery Action Plan that identifies several flow enhancements to assist the recovery of fish in the 15-mile reach above the confluence of the Colorado and Gunnison Rivers. The flow preservation and enhancements/sources that could impact the stream segments identified by BLM as potentially eligible for designation are as follows:

- Colorado Water Conservation Board (CWCB) Instream flow (ISF) Decrees
    i. 581 cfs in the 15-mile reach during July, August, and September
    ii. 300 cfs for water accretions occurring in the 15-mile reach during July, August and September

- Late summer and fall flow augmentation sources to enhance flows in the 15-mile reach for the period July 15 through October 31, when flows in the 15-mile reach are most impacted by existing diversions. Program flows are considered to be in addition to the natural flows in the river with respect to the Shoshone water rights, and consequently enhance the natural condition in that section of the river. Supplies are made available through:
    i. Wolford Mountain Reservoir
        a. 6000 AF fish pool
        b. 5412.5 AF temporary pool (for 10 years beginning in 2000)
    ii. Green Mountain Reservoir Supplies that are "Surplus" to the HUP supplies
        a. This amount varies depending on flow conditions (can summarize from annual HUP reports)
    iii. Williams Fork Reservoir
        a. 5412.5 AF temporary pool (for 10 years beginning in 2000)

- Spring Peak Enhancement – to provide additional water up to approximately 20,000 AF/year for spring peak flow enhancement (10 day period) without impairing project yield or causing projects sponsors to incur significant costs. This occurs in all but extremely dry or wet years or generally when peak flows are between 12,900 cfs and 26,600 cfs in the 15-mile reach.
    i. Coordinated Reservoir Operations
        a. Operated in 1997 (+2000 cfs), 1998 (2400 cfs), 1999 (+2500 cfs) and in 2006. Coordinated Reservoir Operations have been impacted by drought conditions since 2000.

    ii. Coordinated Facilities Water Availability Study
        a. Feasibility investigation to examine additional alternatives to supply the 20,000 AF/year to enhance spring peak flows.

II. Benefit to Stream Segments

The operations associated with the Upper Colorado River Endangered Fish Recovery Program have produced positive benefits to the stream segments each year. Those benefits vary according to flow conditions in the basin, but historic contributions can be summarized in the hydrographs for the Colorado River at Dotsero and the Colorado River at Kremmling.

III. Permanent Flow Protection

The permanency of protection provided by the Program is linked to the continued operation of the Program and use of flow enhancement sources upstream of the reaches to be protected.

IV. Pros and Cons

Pros

- The Program requirements to provide flow mitigation are presently in place and operating.
- Program flows enhance both peak and low flow periods in the stream segments.
- CWCB in-stream flows may provide a permanent protection, even if the Program fails, depending on the parameters of the water rights.

Cons

- Certainty on the length of the Program is difficult to assess.
- Operations are variable, depending upon the yearly basin flow conditions.
- It is unclear whether recovery target flows are sufficient to satisfy ORVs.
- Location of flow enhancement sources may change over time. More or less water may be available to the stream segments.

4A. CWCB INSTREAM FLOW FOR BASEFLOW

I. Concept

The CWCB can protect stream flows in and through a reach between two points on a stream by appropriating new ISF water rights. ISF water rights are held exclusively by the CWCB for minimum stream flows to preserve the natural environment to a reasonable degree, and are adjudicated and administered within the State's water right priority system.

II. Benefit to Stream Segments

For the segments containing a wild trout fishery, the ISF water rights would be based upon data collection and analysis geared toward the needs of the trout species present, and would establish a water right for those flows that would be administered in priority. The ISF water rights would meet the basic habitat needs of the wild trout fishery.

III. Permanent Flow Protection

An ISF water right provides permanent stream flow protection by virtue of its place in the priority system. While it cannot affect operation of existing senior decreed water rights, under state water law, it is entitled to stream conditions as they existed at the time of the ISF appropriation. ISF water rights have standing in Water Court to ensure that proposed plans for augmentation and changes to senior water rights do not alter stream conditions to the detriment of decreed ISF water rights.

IV. Pros and Cons

Pro

- An ISF would provide permanent protection based on habitat needs.

Cons

- An ISF would be a junior water right and CWCB may not be able to appropriate flows in the amounts needed to adequately protect the ORVs if those flows were determined to be more than the minimum required to preserve the natural environment to a reasonable degrees.

4B. INSTREAM FLOWS BEYOND BASEFLOW (FOR LARGE SEASONAL OR FLUSHING FLOWS)

I. Concept

An ISF may be able to provide environmental "flushing flows". This could be done under an acquisition agreement using CWCB's "improve" authority where water would be provided in larger amounts in certain years. Another way to achieve large seasonal flows would be through the acquisition of water by the CWCB via a donation, purchase of a lease that the CWCB could use to improve the natural environment to a reasonable degree. This option could be less controversial than a new ISF appropriation, but would depend upon the availability for water for acquisition.

II. Benefit to stream segments:

A flushing flow ISF would provide spawning cues if timed correctly, and would improve trout habitat overall.

III. Permanent Flow Protection

A flushing flow ISF can provide the same degree of permanency as any other ISF water right. If done under an acquisition agreement, it would depend upon the terms and ability to renew the agreement.

IV. Pros and Cons

Pro

- An ISF for flushing flows can provide major habitat improvements.

Con

- An ISF for flushing flows may be politically controversial.

4C. ACQUISITION OF SENIOR DECREED WATER RIGHTS FOR ISF USE

I. Concept:

CWCB can acquire water, water rights or interests in water to preserve or improve the natural environment to a reasonable degree. CWCB can acquire absolute direct flow or storage rights, and can acquire water rights on a permanent or temporary basis. To do so, CWCB must apply to water court to obtain a decree to use an acquired water right for ISF purposes.

II. Benefit to stream segments

Benefits are for the same as for a basic ISF water right, with added benefits of (1) being able to improve the natural environment to a reasonable degree; and (2) there may be more flexibility and creativity possible under acquisition agreements.

III. Permanent Flow Protection

Permanency depends on the term and the ability to renew the acquisition agreement.

IV. Pros and Cons

Pro

- There may be an ability to provide more stream flow protection with the CWCB's "improve" authority.

Con

- The likelihood of success depends on availability of water, locating willing donors, sellers or lessors, costs of transactions and feasibility of changing water to ISF use.

4D. CWCB SHEPHERDING OF WATER FOR DOWNSTREAM USERS THROUGH SEGMENTS 4 THROUGH 7

I. Concept

Water can be released from an upstream point for delivery to a downstream user. To protect flows through the whole reach to the downstream point, CWCB can acquire an interest in or right to use that water for ISF protection under an acquisition agreement.

II. Benefit to Stream Segments

Benefits are the same as for a basic ISF water right, with added benefits of (1) being able to improve the natural environment to a reasonable degree; and (2) there may be more flexibility and creativity possible under acquisition agreements.

III. Permanent Flow Protection

Permanent flow protection depends on term and the ability to renew the acquisition agreement.

IV. Pros and Cons

Pros

- An acquisition agreement would ensure that the released water would reach downstream point and protect flows en route, minus transit losses.
- There is an ability to provide more stream flow protection with the CWCB's "improve" authority.

Con

- It would be necessary to add ISF use as a decreed use of the water right.

5A. VOLUNTARY FLOW MANAGEMENT PROGRAMS

I. Basic Concept

Flow Management Programs ("FMPs") provide a water management tool that can be used for maintaining and enhancing flow related values within a given stream reach through collaborative operation of water facilities. FMPs generally consist of a series of operating principles and guidelines that are intended to provide a flow regime that maintains or enhances environmental and recreational attributes, while maintaining the ability for water providers to operate their water facilities in a manner that will not adversely impact current or future water supplies.

II. Potential Benefit to Stream Segments

FMPs are typically developed through a voluntary, collaborative process that provides a degree of local management and control that may not be achieved through designation under the Wild and Scenic Rivers Act ("WSRA"). Stakeholders are able to craft an FMP that takes into account the operational, technical, and legal considerations that are unique to the river system. FMPs have been successfully implemented in Colorado on both the South Platte and Arkansas Rivers to support fisheries, meet the demand for boating recreation, and support the regional tourism industry. Some of the key components that have been included in FMPs to benefit the stream segments include the following:

- Year-round minimum flows, winter incubation flows, and spring egg hatching/fry hatching flows to support fisheries;
- Coordination of water releases to support and enhance rafting activities;
- Voluntary curtailment of exchanges through the river segment during periods of peak recreation;
- Coordination of water releases for temperature moderation;
- Flow ramping schedules and guidelines for daily streamflow fluctuations;
- Annual operating plans and stakeholder meetings to establish reasonable and achievable flow targets based on anticipated weather, streamflow, and operational considerations.

III. Permanent Flow Protection

Although the FMP may be "voluntary", failure to comply with the terms and conditions of the program could result in the BLM moving forward with designation of the river segment under the WSRA. Threat of designation under the WSRA is, in itself, a strong incentive for all parties to continue working in good faith to ensure the success of the program. Additional permanence can be achieved by entering into agreements (*e.g.*, intergovernmental agreements) that bind parties to the terms and conditions of the FMP. Voluntary FMPs have proven to be successful over the long-term, in part, because stakeholders value the high degree of flexibility and relatively minimal regulation and oversight that these programs afford.

IV. Pros and Cons

Pros

- FMPs allow water facilities to be operated in ways that maintain and in some cases enhance fisheries, habitat, and water-based recreation.
- Provides a dynamic program that can be adjusted and refined to address changing conditions in the river system.
- Does not promote or restrict water development, but rather provides goals and commitments for operating water systems.
- Flow protection may be achieved by exercising water rights which are senior to any Recreational In-Channel Diversion ("RICD") or instream flow ("ISF") that could be obtained in lieu of the FMP.
- Provides water users with the flexibility to adjust operations based on anticipated hydrology, operational constraints, system maintenance needs, emergencies, and other considerations.

Cons

- Applicability/success of program highly dependent on location, size, and configuration of water facilities.
- May result in loss of system yield due to inability to capture releases.
- Water users may require the construction of additional downstream facilities to restore system yield.
- Water users may not all be able to participate in the FMP at the same level due to various operational, technical, and legal constraints.
- Stakeholders may have concerns over the permanency and reliability of flow protection.

5B. Adaptive Management Voluntary Flow Plan

I. Basic Concept

The concept for an adaptive management flow plan ("AMFP") is based upon the premise that the status quo conditions are sustaining, protecting and enhancing the ORVs. Mechanisms that offer protection of the status quo and other voluntary efforts will provide protection plus enhancement of ORVs.

The AMFP could provide minimum flow protection via a CWCB ISF or other mechanism. Status quo protective operations and agreements such as those described in concepts 1 (Existing Water Rights) and 2 (Upper Colorado River Endangered Species Recovery Program) described above also protect flows in Segments 4 through 7.

The AMFP could enhance flows by identifying target flows suggested for each ORV. Goals to reach targets could be developed to enhance flows for ORVs. These efforts include annual meeting of water users to determine if operations can provide flows at critical times. When new water development projects or changes in operations are being proposed water users and AMFP participants would determine if and how target goals

identified in plan could be met. AMFP participants would determine stream improvements that might maximize available flows.

Other voluntary efforts to enhance ORVs that would encompass the entire Management Plan (not just the flow protection component) include establishing funding mechanisms, and convening a management committee or enhancement board to determine stream improvement projects that could be done on federal and private land. Best Management Practices ("BMPs") for new structures and facilities that might impact ORVs could be established and applied to participating public and private landowners. A monitoring program could be established to identify and prioritize issues that may negatively affect ORVs and to prevent degradation.

The AMFP doesn't need a minimum flow requirement. It recognizes that ISF right or some other protection permanently protects the status quo condition and is therefore adequate to protect the ORVs. Voluntary mechanisms to provide flows will enhance the flow-dependent ORVs. This concept incorporates flexibility and awareness that conditions will change. Reaching average target flows is an achievable goal on average, but may not occur every year. Certain "voluntary efforts" generally described at the onset of the AMFP may become more defined and offer permanent protection (as a result of new agreements, as a result of reasonably foreseeable projects' mitigation plans,). Thus, voluntary and beneficial efforts can be additive without committing parties beyond their operational ability at this time.

II. Potential Benefit to Stream Segments

The AMFP can protect ORVs while maintaining flexibility for water users. The AMFP proactively adapts with changing conditions.

III. Permanent Flow Protection

The AMFP can provide permanent flow protection through an ISF right or some other mechanism that protects a minimum flow. As uses and conditions change, parties find new ways meet provide target flow goals.

IV. Pros and Cons

Pros – See 5a discussion
Cons – See 5a discussion

6. NATIONAL RECREATION AREAS ("NRAS")

I. Basic Concept

NRAs require federal legislation to protect areas on federal lands that are extraordinary in quality and recreation. They are intended for recreational use and recognize recreation as the dominant purpose.

II. Potential Benefit to Stream Segments

With a focus on recreation, the legislation would be tailored to address sight-specific needs and issues with regard to the Colorado River. Therefore, management of the area could include other uses with a balance on conservation and development. A NRA could potentially be less restrictive than a WSRA designation regarding future water development projects and structures within the river segments.

III. Permanent Flow Protection

Each NRA is different. Language in the legislation could provide permanent flows, but it is not a necessary criterion for establishment of an NRA.

IV. Pros and Cons

Pros

- NRAs can include within their boundaries scenic, historic, scientific, scarce, or disappearing resources, provided the objective of their preservation is compatible with the recreation mission.
- NRAs should be in conformity with State, regional, and local comprehensive plans.
- NRAs have a fee component that can be structured so that revenue stays local.

Cons

- NRAs need to be located and designed to achieve a high recreation carrying capacity.
- The focus is on recreation rather than multiple uses. The purpose is to preserve and enhance recreation opportunities. Proposed activities would be weighted against the impacts to recreation. No multiple uses can be carried on that would be significantly detrimental to recreation.
- Because recreation is flow-dependant with regard to the Colorado River, we would likely be developing a similar plan to protect and enhance flows, but mainly for recreational purposes. Other flow dependent uses would be secondary and could be precluded if those uses are detrimental to the protection of recreation interests.
- Requires high investment, development and operational responsibility of the Federal management agency.
- NRA would probably not be satisfactory to other interests in this workgroup if recreation needs have highest priority.
- NRAs require Congressional designation, which is a lengthy process and includes factors that are potentially beyond the control of the Stakeholder Group.
- Federal management would be required.

7. NATIONAL CONSERVATION AREAS ("NCAS")

I. Basic Concept

NCAs require federal legislation to protect areas on federal lands to conserve and protect the range of natural and other values in the area (cultural, archaeological, natural, wilderness, scientific, geological, historical, and biological, wildlife, educational, and

scenic) resources of the NCA. The NCA is subject to valid existing rights (*i.e.* preexisting mineral leases and valid mining claims), but the NCA legislation may withdraw all public land within an NCA from future mining, leasing, and disposal activities. The managing agency must establish a management plan. Aside from these components, the legislation can be tailored to a specific community. NCAs can provide landscape protections that help maintain their existing character, while allowing flexibility in defining how they will be managed. NCAs are multiple use; often include a variety of activities, ranging from livestock grazing and all forms of recreation to wilderness designation and conservation of historic and cultural sites.

II. Benefit to Stream Segments

As with National Recreation Areas and Special legislation/Natural Areas, legislation could be tailored to address sight-specific needs related to the Colorado River. Therefore, management of the area could include other uses and balance conservation and other values, including recreation values.

III. Permanent Flow Protection

NCA legislation has not generally included a new federal reserved water right. If the managing agency should determine that water rights are needed for a NCA, they must be applied for according to the laws of the state of the NCA, and are subject to the same process as any other water right.

IV. Pros and Cons

Pros

- NCAs can protect a wide variety of resource values, and while the focus is on natural resource conditions, recreation values can be considered.
- Though not a requirement, water rights can be appropriated for the NCA according to the laws of the state.
- Establishment of an NCA would remove the area from Wild and Scenic Designation, therefore future RMPs would not have to revisit eligibility/suitability of the area at end of the RMP term, thereby providing some certainty about future management considerations. (Some may believe this to be more of a Con.)

Cons

- NCAs require congressional designation, which is a lengthy process and includes factors that are potentially beyond the control of the Stakeholder Group.
- As with NRA's, federal legislation and federal management is required.

8. FEDERAL LEGISLATION (SPECIAL)

I. Basic Concept

Special legislation can be tailored to meet the protection needs of a particular situation. In the case of the Rio Grande Natural Area ("RGNA"), the Colorado segment of the Rio

Grande under management by the BLM was removed and put under an alternative management plan approved by Congress in lieu of Wild and Scenic designation. The purposes of the RGNA are to conserve, restore and protect the native, historic, cultural, scientific, scenic, wildlife and recreational resources of the RGNA. The RGNA is subject to valid existing rights (*i.e.* preexisting mineral leases and valid mining claims), but the RGNA legislation withdraws all public land from future mining, leasing, and disposal activities. A Commission was established to advise the Secretary on the RGNA and prepare an RGNA Management Plan ("Plan") specifically for on-federal lands, hold hearings and enter into cooperative agreements. The Commission may assist Colorado in preserving state land and wildlife; increasing public awareness of the RGNA; encouraging Colorado political subdivisions to implement land use plans consistent with the management of the RGNA and helping private individuals in implementation of the Plan. The Plan extends to private lands to the extent the private landowner agrees to be bound by the management plan. The Secretary is to cooperate with Colorado and the Rio Grand Water Conservation District to determine any needed changes in stream flows, but the RGNA does not impose mandatory streamflow requirements. The legislation prohibits construction of water facilities in the RGNA. A much more focused special federal legislation was enacted for North St. Vrain Creek. North Saint Vrain Creek special federal legislation prohibits federal agencies from providing assistance for the construction of any new water impoundment facility in segments of the Creek or its tributaries with Rocky Mountain National Park or on the main stem a certain distance below the Park.

II. Benefits to Stream Segments

Special legislation can be tailored to protect ORVs. The RGNA offers a comprehensive plan that allows for voluntary participation by private landowners. It can provide a comprehensive management across jurisdictional boundaries for strategic protection and preservation of resource values.

III. Permanent Flow Protection

Special Legislation for Segments 4 through 7 could be tailored to provide permanent flows. The RGNA does not expressly provide permanent flow protection; however it does prohibit construction of water facilities, similar to the special legislation for Saint Vrain Creek.

IV. Pros and Cons

Pros

- Special Legislation can be tailored to the specific needs of an area in a way that meets the needs of local interests while protecting the resource values. It may offer the most flexibility in creating a plan of the various legislation protection concepts (National Recreation Areas, and National Conservation Areas).
- Special legislation can create a comprehensive management plan that can integrate state, local and federal management practices.

- Though not a requirement, water rights can be appropriated for Special Legislation according to the laws of the state.
- Establishment of Special Legislation would remove the area from future Wild and Scenic Designation consideration. Future Resource Management Plans ("RMPs") would not have to revisit issue of eligibility/suitability of the area at end of the RMP term, thereby providing some certainty about future management considerations.

Cons

- Special Legislation requires congressional designation, which is a lengthy process and includes factors that are potentially beyond the control of the Stakeholder Group.
- Federal management may be required.

9. PLAN FOR AUGMENTATION TO SUPPLEMENT FLOWS

I. Basic Concept

A plan for augmentation is "a detailed program, which may be either temporary or perpetual in duration, to *increase the supply of water available for beneficial use in a division* or portion thereof by the *development of new* or alternate *means* or points *of diversion*, by a *pooling of water resources*, by water exchange projects, by *providing substitute supplies of water*, by the development of *new sources of water*, or by any other appropriate means." C.R.S. §37-92-103(9) (emphasis added). There has to be a lawful use to be augmented within the reach, such as an RICD or ISF.

Many of the mechanisms for protections under consideration, including voluntary flow agreements, coordinated reservoir operations, CWCB Instream Flows, Colorado River District Water for Fish Preservation, and RICDs could all be enhanced by a plan for augmentation.

II. Potential Benefits to Stream Segments

A plan for augmentation is a flexible tool that can increase (*i.e.* augment) flows, under many of the water based flow protection ideas.

III. Permanent Flow Protection

A decreed augmentation plan provides permanent protection, while having flexibility to accommodate additional supplies and needs.

IV. Pros and Cons

Pros

- An augmentation plan to supplement flows provides a permanent and flexible tool to protect and enhance stream flows for ORVs.
- An augmentation plan to supplement flows achieves higher flows than may otherwise be available under RICD or CWCB due to statutory limitations of minimum flows.

- An augmentation plan to supplement flows obtains more water than under traditional Wild & Scenic Water Right (*e.g.* Poudre).

Cons

- An augmentation plan to supplement flows would need cooperation and coordination of water users to provide substitute supplies and pooling of water resources.
- Costs to obtain a decree may be high.

10. PROTECTION OF BYPASS FLOWS/RELEASES OF WATER

I. Basic Concept

In the Upper Colorado River and its tributaries, water is "bypassed" or "released" to satisfy conditions of a permit or legislation approving the project. Two examples include Forest Service "bypass" flows of water on the Fraser Basin under the "Amendatory Decision" for the Moffat Project and the "1961 Principles" concerning releases of water from Granby Dam to the Colorado River for the C-BT Project. Once that water is bypassed or released, however, other water users on the stream have the ability to "pick-it-off." Grand County has also acquired and is in the process of acquiring senior irrigation rights for use in its Stream Management Plan. Under this proposal, the bypass flows and releases of water from reservoir and other sources of water for the SMP would be protected either as 1) improvements to or augmentation of CWCB Instream Flows, 2) augmentation of Colorado River District Constant Flows, and/or 3) augmentation of RICD flows through Gore Canyon.

II. Benefit to Stream Segment

This is wet water in the stream, over and above what would be available for a Wild & Scenic Water Right. This is similar in concept to and could be used in conjunction with the shepherding of water or deliveries of water to a downstream demand, all of which provide additional flows.

III. Permanent Flow Protection

Protection of bypass flow releases has the potential to benefit Segments 4 through 7. If adjudicated as part of an augmentation plan, these sources of water could enhance flows on a permanent basis.

IV. Pros and Cons

Pros

- Protection of bypass flows can provide additional flows.
- With adjudication, bypass flow protection can provide permanent protection.

Cons

- Bypass protections would need to include cooperation with numerous water users.
- Flows would need to be administered to and through reach.
- Local water users and downstream water users may have decrees for use of bypasses.
- Bypass flow protection could be viewed as an expansion of use.

11A. RECREATIONAL IN CHANNEL DIVERSIONS AT GLENWOOD SPRINGS

I. Basic Concept

This concept would be for a Recreational in-Channel Diversion ("RICD") at the Glenwood Springs whitewater park. This RICD could have several co-applicants such as Glenwood Springs, the Colorado River Water Conservation District, the Northern Colorado Water Conservancy District, Denver Water, Colorado Springs, and Garfield County. RICDs must be held by a local governmental entity and it must be for the minimum stream flow for a reasonable recreational experience. This would allow the entities that held this water right to agree upon terms by which they would call for the water right and protect the flows for recreational purposes, but it would allow the entities to include provisions for certainty in drought conditions or when a compact call was being effectuated by the lower basin states.

An RICD at Glenwood Springs whitewater park would provide a minimum flow protection for recreational ORVs. These flows may be higher than the CWCB could protect under an ISF water right. Participation by east slope and west slope water providers and Glenwood Springs could assure protections for recreation and for water provider interests. An ISF water right could be included as a separate water right for the protection of different ORVs.

An RICD may provide enhancements to ORVs. Upstream water providers could voluntarily release or bypass water to this water right under conditions they agree to, but the flows could be protected, at least through the Glenwood Springs whitewater park reach. Additional RICD structures could be built and established in other areas and managed in the same manner.

A Glenwood Springs RICD allows the ORV to be protected with a decreed water right, but the water right decree could include terms and conditions that would allow Colorado to fully use its compact entitlements and provide flexibility for water providers in certain circumstances. Voluntary mechanisms to provide flows will enhance the flow-dependent ORVs and allow those flows to be protected. This concept incorporates flexibility and awareness that conditions will change and allows the water providers to develop decretal language that they can accept, but that will also protect the ORVs.

II. Potential Benefit to Stream Segments

An RICD protects ORVs, in particular the higher flows needed for the recreational purposes. It maintains flexibility for water users can be adapted with changing conditions and also provides some certainty for water users as well as the resource.

III. Permanent Flow Protection

An RICD can provide permanent flow protection. It would be a decreed water right that would be protected under Colorado water law. It could be accompanied by an instream flow right that would also be a decreed water right. As uses and conditions change, parties find new ways to meet target flow goals.

IV. Pros and Cons

Pros

- RICDs allow protection of the higher flows associated with recreation ORVs. By including several co-applicants, including water providers from the Front Range, the parties could agree on conditions when the RICD would not call for a water right. In addition, the final decree could include a pool concept for future upstream water uses.

Cons

- The Glenwood Springs whitewater park is downstream of the confluence of the Roaring Fork and the Colorado River and removed from Segments 4 through 7.
- The process to obtain a decreed water right would be unwieldy and time consuming.
- It may be difficult to get agreement between parties.
- There is no opportunity vis-à-vis a decree for non-governmental entities, the state, or the federal agencies to hold the water right, but they could participate in the process by filing statements of opposition in order to assure that their interests are protected in the water court process.

11B. RECREATIONAL IN CHANNEL DIVERSIONS AT GORE CANYON

I. Basic Concept

An application would be filed in water court for a recreational in-channel diversion for Gore Canyon in Segments 4 and 5. Control structures as defined by statute would be placed in the river. The Grand County Stream Management Plan (April 2008) ("SMP") which covers most of this reach from Gore Canyon to Grand-Eagle County Line (CR-7), recommended rafting and kayaking flows in this reach as follows:

Recreation	Minimum	Optimum
Kayaking – Gore Canyon	900 cfs	1200-1400 cfs
Kayaking – Pumphouse	500 cfs	600-1000 cfs
Rafting – Gore Canyon	1000 cfs	1200-1800 cfs
Rafting – Pumphouse	700 cfs	900-1300 cfs

There is some disagreement between these recommended flows and those that were indicated by commercial rafters operating in Segment 7 when Shoshone Power Plant went offline after its penstock burst in June 2007.

II. Benefit to Stream Segments

An RICD in Gore Canyon as a stand alone tool, or enhanced with an augmentation plan, would provide a mechanism to secure flows for the ORVs in these segments.

III. Permanent Flow Protection

A decreed RICD water right would provide permanent protection.

IV. Permanent Flow Protection

Pros

- RICDs provide a legal means for permanent protection of flows for recreation ORVs. With augmentation, RICDs could provide flows need for ORVs, not just the minimum values typically afforded through CWCB ISF rights.
- See Pros for Concept 4a.

Cons

- RICDs have been controversial.
- Diversion structures are costly to construct.
- Due to statutory limits, a stand-alone RICD may not be able to protect flow regime that allows the value to continue to be "outstandingly remarkable".
- Adding a RICD structure to the river may be in conflict with protection of ORVs.

12. River District Appropriation of Water for Fish Preservation

I. Basic Concept

The Colorado Revised Statutes Title 37 Article 46 is the founding legislation creating the Colorado River Water Conservation District (River District). Under the River District's legislation of General Powers:

> *(j) To file upon and hold for the use of the public sufficient water of any natural stream to maintain a constant stream flow in the amount necessary to preserve fish and to use such water in connection with retaining ponds for the propagation of fish for the benefit of the public*

The general concept would be for the River District to apply for some amount of water to protect the fishery that would be sufficient to protect and enhance the ORVs in the designated reach. The water right could be a combination of storage and/or in stream flows, subject to possible conveyance to the CWCB. Any stored water could be delivered on an agreed upon schedule and rate.

II. Benefit to the Stream Segments

A River District ISF right could offer the segment protection by preserving a minimum flow or enhance the flows within the designated reach or delivery area to provide more consistent suitable flows for the fishery.

III. Permanent Flow Protection

A River District ISF right could offer long term stream flow protection. Timing and amounts would have to be determined.

IV. Pros and Cons

Pros

- This concept may allow the River District to develop water rights for fish under their statutory authority.
- A River District ISF may be another source of water to protect flows through Segments 4 through 7.

Cons

- An application of this nature is most likely to be contentious in Water Court and within the Stakeholder Group.
- A River District ISF could entail lengthy litigation that could mire down the process to develop a Management Plan Alternative.
- CWCB believes this authority has been superseded by its own authority to appropriate ISFs.

13A. WILD & SCENIC RIVERS DESIGNATION UNDER § 2(A)(I)

I. Description of Basic Concept

Under this approach, Congress would designate the segments under the Wild & Scenic Rivers Act ("WSRA"). Flows necessary to support the ORVs could be protected through federal reserved water rights or through any other effective legal mechanism (*e.g.*, CWCB instream flow rights and operational agreements). The WSRA requires protection of water flows in designated rivers. However, it does not dictate protection by reserved rights. Rather, the means by which ORV flows are to be protected can be specified in the adopting, federal legislation.

II. Potential Benefits

WSRA designation provides permanency. Whichever flow protection measure is adopted, it would not be subject to review by BLM in subsequent land management plans. WSRA designation provides certainty. Once adopted through federal legislation, the flow protection plan would not be subject to challenge by third parties. WSRA designation under § 2(a)(i) may provide federal funding for implementation of a comprehensive management plan. WSRA designation is binding on federal agencies. There is compliance with a flow protection plan that is presumed to protect ORVs in the context of federal agency approval and funding of projects.

III. Permanent flow protection

WSRA can provide permanent flow protection provided the underlying protection mechanism selected provides permanent flow protection.

IV. Pros and Cons

Pro

- See the see description of potential benefits.

Cons

- Congress' approval can be a lengthy process and includes factors outside the control of the workgroup.
- Federal reserved water rights, if that is the underlying mechanism, can be quite controversial.
- There is a perception of federal control.

13B. WILD & SCENIC RIVERS DESIGNATION UNDER § 2(A)(II)

I. Basic Concept

This concept is similar to the concept above in 9(a). ORV flow protection would be provided by an underlying mechanism (*e.g.*, CWCB instream flow right, etc.), which would be adopted at the federal level as satisfying the WSRA. Federal reserved water rights are not required but congress has never designated without a federal reserved water right. If designated, BLM receives extra funding to plan in the RMP. It is different in that designation under § 2(a)(ii) does not require federal legislation. Rather, the Secretary of the Interior may approve upon petition by the Governor of the state, after enactment of state legislation that (1) designates the segments as wild, scenic and/or recreational, and (2) appoints a state agency (or political subdivision) with the duty of permanently managing the river as such. State funding would be required as well, as the federal government may not fund implementation of § 2(a)(ii) plans except as necessary for federal agencies to implement it within federal lands.

II. Potential Benefits

Because the ORV flow protection mechanism would be adopted at the federal level, the approach has some of the benefits of the § 2(a)(i) approach described above, including permanency, certainty, and binding effect on federal agencies. The federal funding benefit of § 2(a)(i) does not apply here, though. Adoption does not involve the complexity and uncertainties involved in the federal legislative process (although state legislative and Secretary approval processes have their own difficulties). Designation under § 2(a)(ii) is perceived as providing more state (rather than federal) control.

III. Permanent Flow Protection

WSRA under § 2(a)(ii) can provide permanent flow protection to the extent that the underlying flow protection mechanism provides permanent flow protection.

IV. Pros and Cons

Pro

- See description of potential benefits.

Cons

- There can be difficulties associated with state legislative, Governor and Secretary approval.
- This option requires state spending. There would be no federal funding to implement the management plan.

Appendix C

Maps of
Colorado River Segments 4 through 7

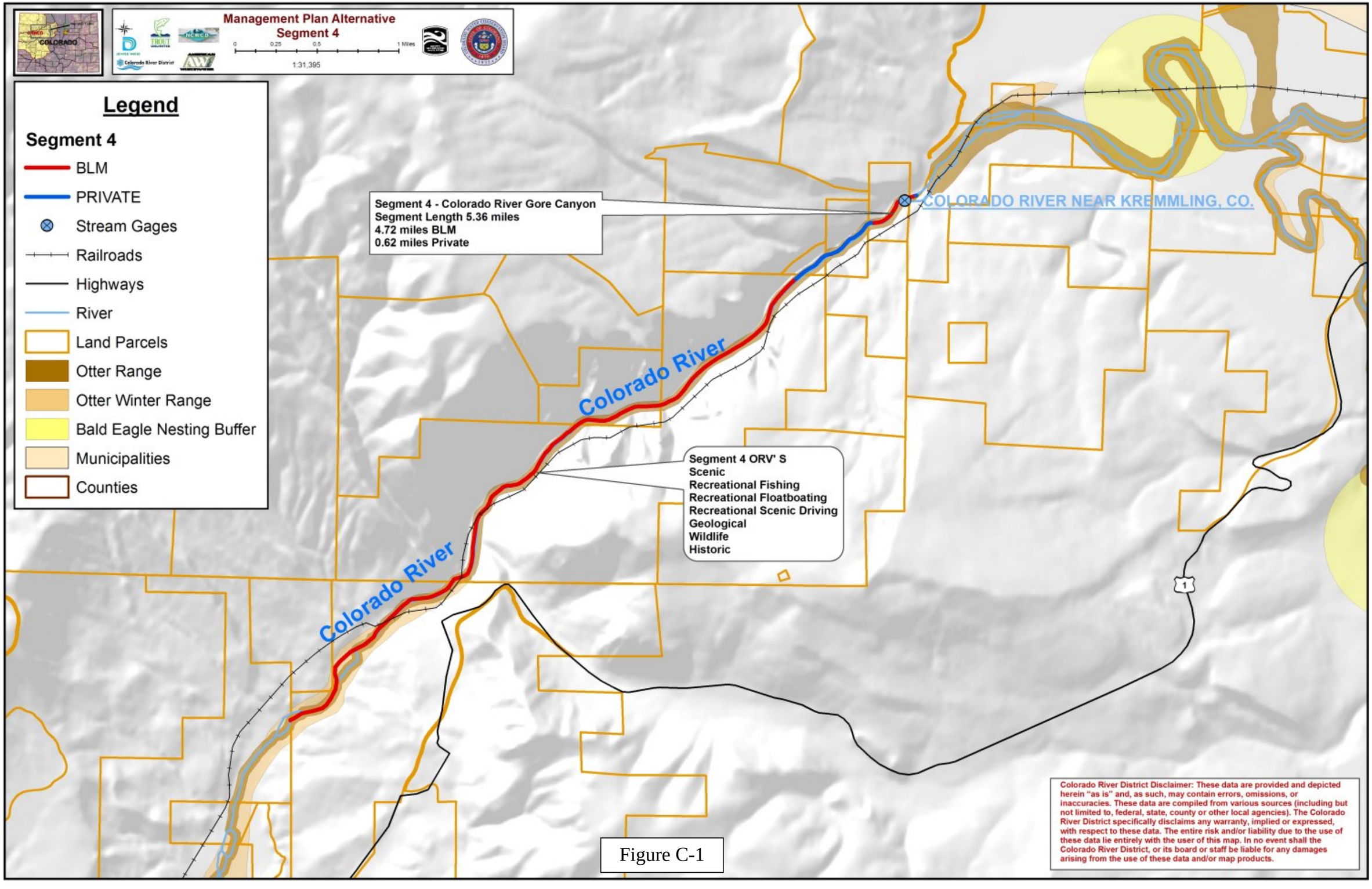
Management Plan Alternative
Segment 4
0 0.25 0.5 1 Miles
1:31,395
Legend
Segment 4
BLM
PRIVATE
Stream Gages
Railroads
Highways
River
Land Parcels
Otter Range
Otter Winter Range
Bald Eagle Nesting Buffer
Municipalities
Counties
Segment 4 - Colorado River Gore Canyon
Segment Length 5.36 miles
4.72 miles BLM
0.62 miles Private
COLORADO RIVER NEAR KREMMLING, CO.
Colorado River
Segment 4 ORV' S
Scenic
Recreational Fishing
Recreational Floatboating
Recreational Scenic Driving
Geological
Wildlife
Historic
Colorado River
1
Colorado River District Disclaimer: These data are provided and depicted herein "as is" and, as such, may contain errors, omissions, or inaccuracies. These data are compiled from various sources (including but not limited to, federal, state, county or other local agencies). The Colorado River District specifically disclaims any warranty, implied or expressed, with respect to these data. The entire risk and/or liability due to the use of these data lie entirely with the user of this map. In no event shall the Colorado River District, or its board or staff be liable for any damages arising from the use of these data and/or map products.

Figure C-1

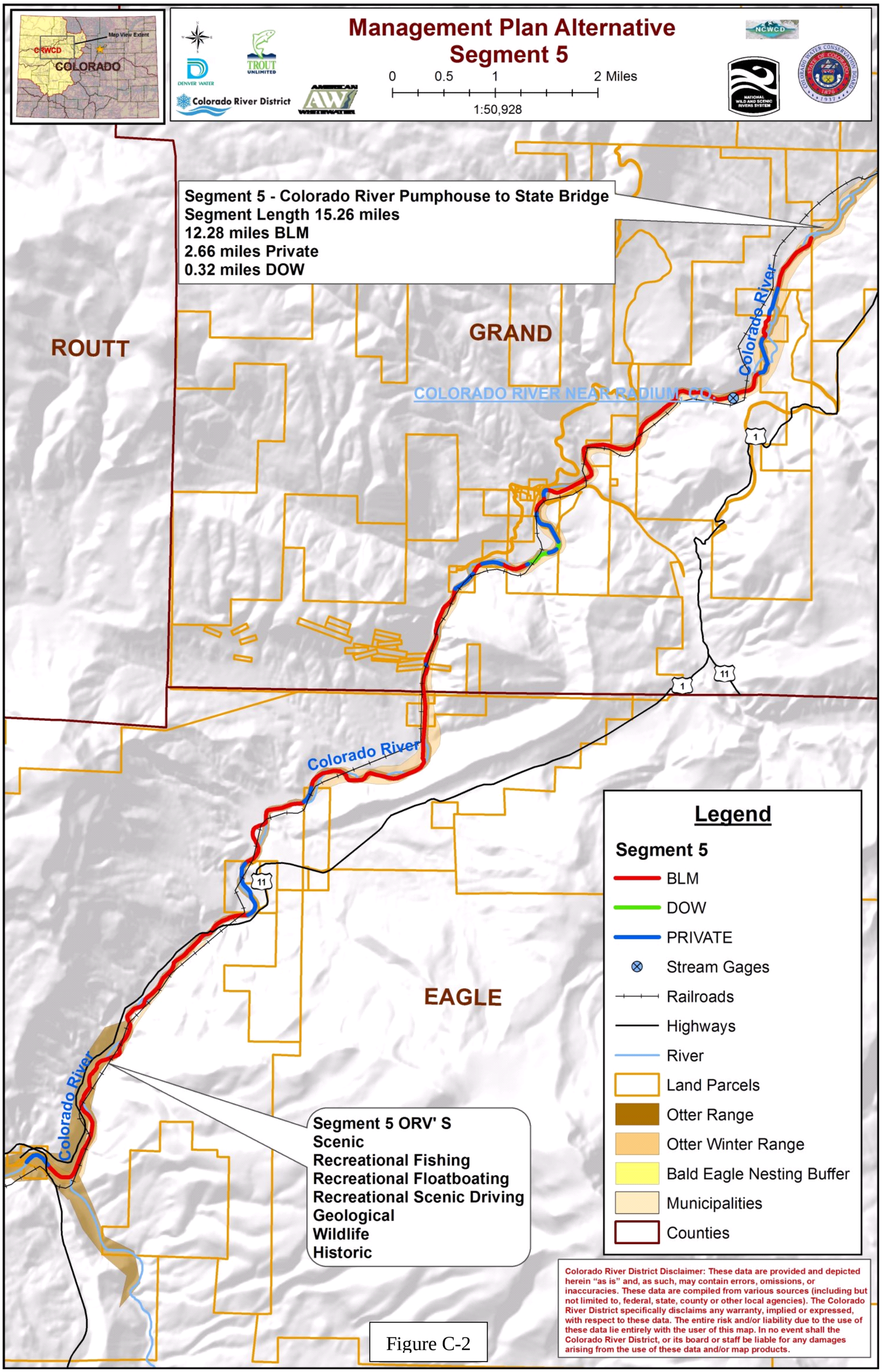
Management Plan Alternative
Segment 5
0 0.5 1 2 Miles
1:50,928
Map View Extent
CRWCD
COLORADO
Colorado River District
TROUT UNLIMITED
DENVER WATER
NCWCD
Segment 5 - Colorado River Pumphouse to State Bridge
Segment Length 15.26 miles
12.28 miles BLM
2.66 miles Private
0.32 miles DOW
ROUTT
GRAND
EAGLE
COLORADO RIVER NEAR RADIUM CO
Colorado River
Colorado River
Colorado River
1
11
Legend
Segment 5
BLM
DOW
PRIVATE
Stream Gages
Railroads
Highways
River
Land Parcels
Otter Range
Otter Winter Range
Bald Eagle Nesting Buffer
Municipalities
Counties
Segment 5 ORV' S
Scenic
Recreational Fishing
Recreational Floatboating
Recreational Scenic Driving
Geological
Wildlife
Historic
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Figure C-2

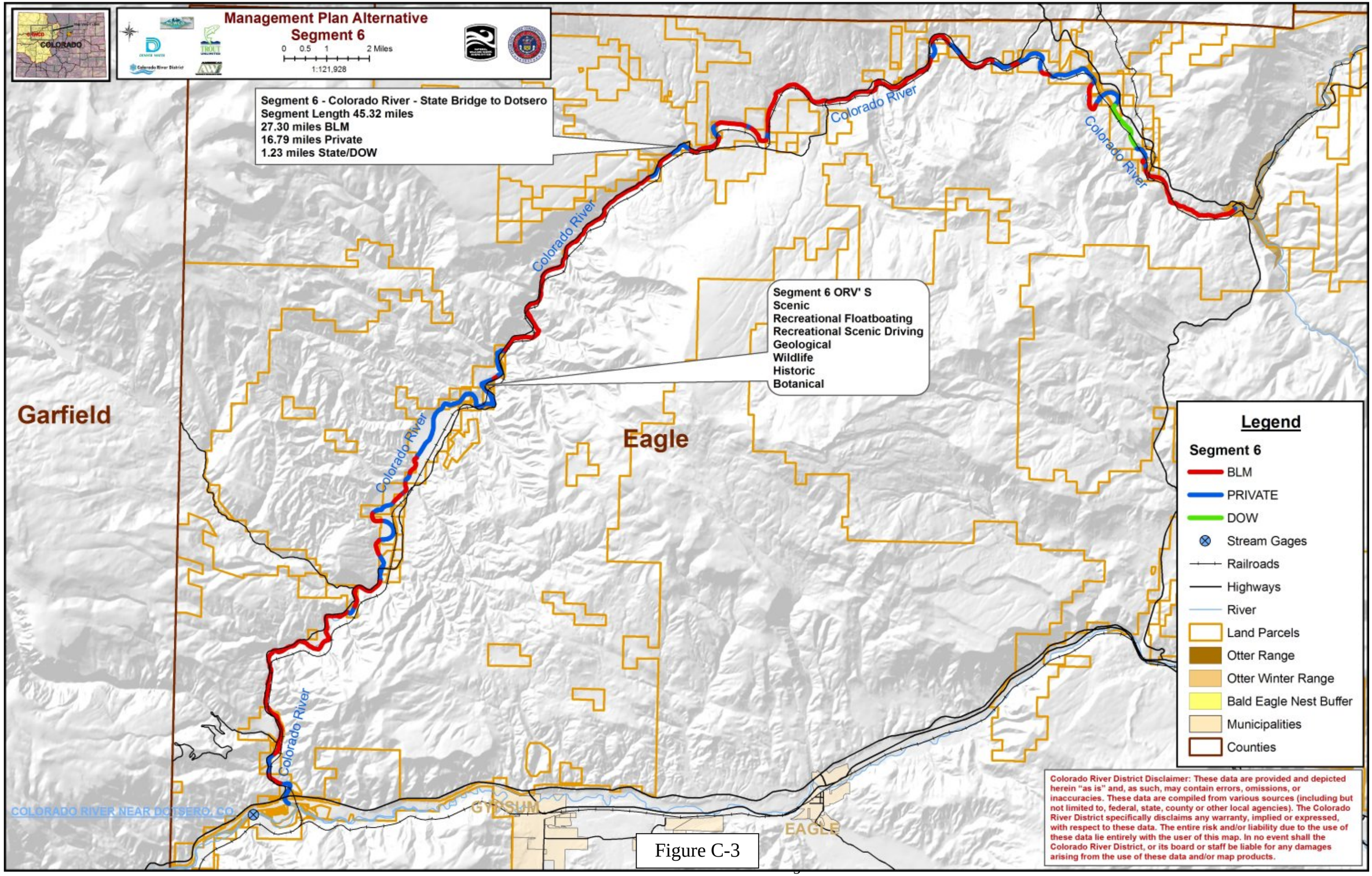
Management Plan Alternative
Segment 6
0 0.5 1 2 Miles
1:121,928
Segment 6 - Colorado River - State Bridge to Dotsero
Segment Length 45.32 miles
27.30 miles BLM
16.79 miles Private
1.23 miles State/DOW
Segment 6 ORV' S
Scenic
Recreational Floatboating
Recreational Scenic Driving
Geological
Wildlife
Historic
Botanical
Colorado River
Garfield
Eagle
Legend
Segment 6
BLM
PRIVATE
DOW
Stream Gages
Railroads
Highways
River
Land Parcels
Otter Range
Otter Winter Range
Bald Eagle Nest Buffer
Municipalities
Counties
COLORADO RIVER NEAR DOTSERO, CO.
GYPSUM
EAGLE
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Figure C-3

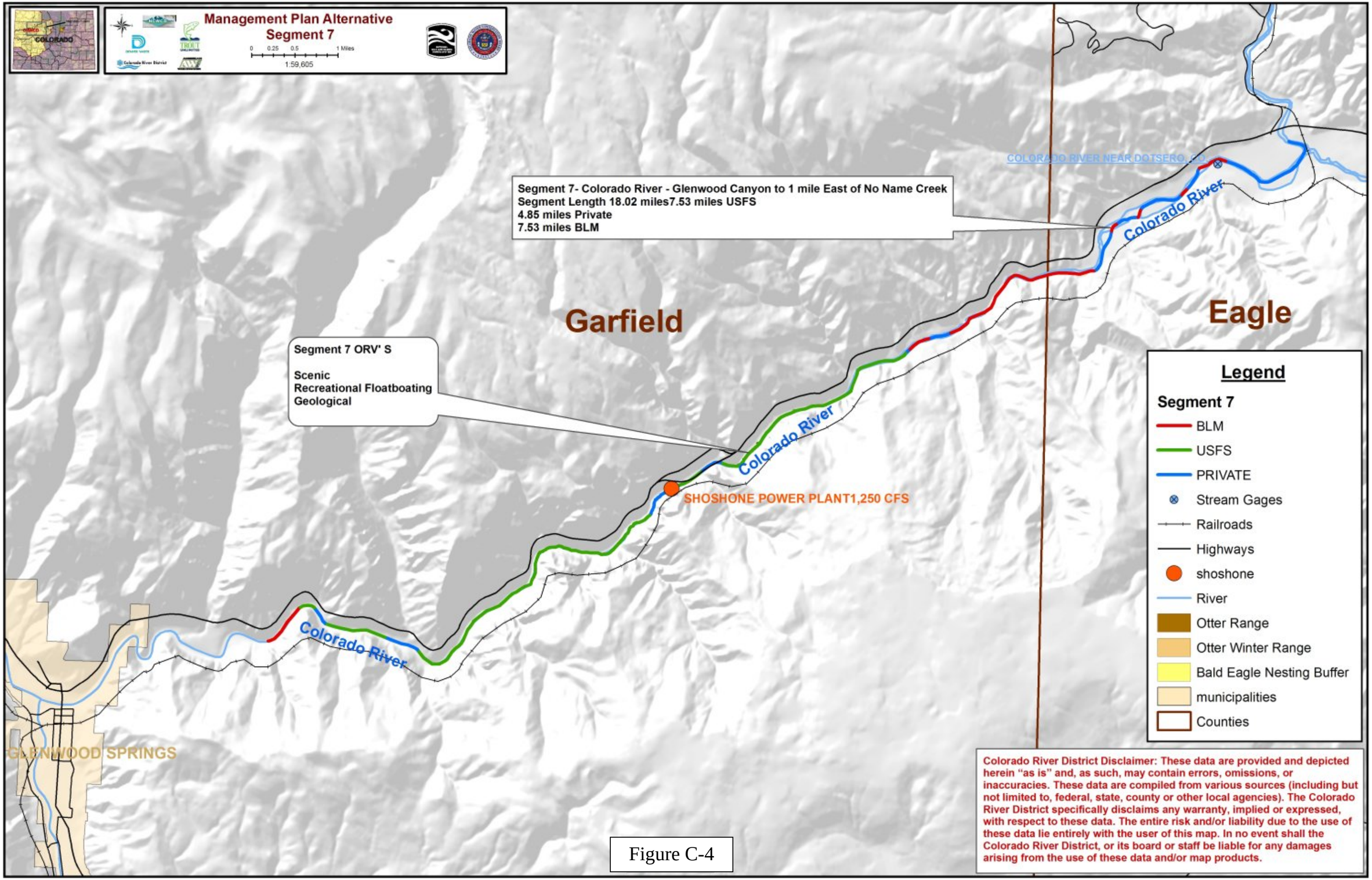
Management Plan Alternative
Segment 7
0 0.25 0.5 1 Miles
1:59,605
COLORADO
Segment 7- Colorado River - Glenwood Canyon to 1 mile East of No Name Creek
Segment Length 18.02 miles7.53 miles USFS
4.85 miles Private
7.53 miles BLM
COLORADO RIVER NEAR DOTSERO, CO.
Colorado River
Garfield
Eagle
Segment 7 ORV' S
Scenic
Recreational Floatboating
Geological
Colorado River
SHOSHONE POWER PLANT1,250 CFS
Colorado River
GLENWOOD SPRINGS
Legend
Segment 7
BLM
USFS
PRIVATE
Stream Gages
Railroads
Highways
shoshone
River
Otter Range
Otter Winter Range
Bald Eagle Nesting Buffer
municipalities
Counties
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Figure C-4