

Upper Colorado River  
Wild & Scenic Stakeholders  
Alternative Management Plan

2012

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Annual  
Monitoring  
Report



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# INTRODUCTION

## BACKGROUND & PURPOSE

The Kremmling and Colorado River Valley Field Offices of the Bureau of Land Management (BLM) and the Forest Service (White River National Forest) (USFS) are in the process of revising Resource Management Plans (RMPs) for a combined Planning Area that includes a large segment of the Upper Colorado River within Colorado<sup>1</sup>. As a part of the plan revision process, the federal agencies are required to inventory waterways within the Planning Area pursuant to requirements under the Wild and Scenic Rivers Act (Act) to determine if those waterways meet the Act's free-flowing standard and also possess Outstandingly Remarkable Values (ORVs) that may be suitable for agency protection under the Act.

A Stakeholder Group (SG) has formed to bring state and local government, water users, and other interested entities together to develop a plan that balances protection of the ORVs with Colorado's other competing needs through cooperative and voluntary efforts. An alternative management plan developed by the SG (SG Plan) has been proposed to BLM and USFS as a Wild and Scenic management alternative for the resource management plan revision process to protect the ORVs identified in the Eligibility Reports for BLM Segments 4 – 7 (USFS Segments 1 – 2) of the Upper Colorado River. The purpose of the SG Plan is to balance permanent protection of the ORVs, certainty for the stakeholders, water project yield, and flexibility for water users. A complete listing of entities that have endorsed the SG Plan is included as Attachment B.

The SG Plan developed by the SG over the past five years has been included as one of the four management alternatives in the agencies' Draft RMPs and Draft Environmental Impact Statements. The SG Plan would become effective (i.e. effective date) upon issuance of records of decision by BLM and the USFS approving the Plan without material change as the Wild and Scenic Rivers management alternative for these segments.

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<sup>1</sup> See Attachment A: Project Area Map

## **GOALS**

The SG Plan aims to monitor and protect all the ORVs identified in the BLM's original eligibility report, while focusing on the primary streamflow-influenced ORVs identified below. Implementation procedures in the SG Plan provide a feedback loop to periodically assess and confirm that the management measures under the SG Plan, in coordination with the BLM's and USFS's other land management actions, are protective of all ORVs.

- The primary streamflow-influenced ORVs are:
  - Recreational Fishing
  - Recreational Floatboating
- Other streamflow-influenced ORVs are:
  - Wildlife
  - Botanical
  - Scenic
- Additional ORVs are:
  - Geological
  - Historical
  - Paleontological

## **STAKEHOLDER PARTICIPATION**

The SG Plan stipulates that no formal funding assessments are to be levied during the Pre-Provisional Period (i.e. period after submittal of the SG plan to the federal agencies and before the effective date). To date, funding for the SG effort has been provided by the stakeholders and by the CWCB through its Wild and Scenic Alternatives Fund and other sources. During 2012, stakeholders voluntarily contributed more than \$18,000 and provided in-kind work that raises the stakeholders' contributions to approximately \$80,000. During the same time period, the CWCB dedicated approximately \$99,000 to the Upper Colorado River Wild & Scenic Stakeholder Group.

## 2012 PLAN HIGHLIGHTS

The SG Plan contemplates the performance of a number of tasks prior to its effective date. These tasks are specified in Attachment B to the SG Plan (“Timeline and Task List”)<sup>2</sup>.

### During the Period Prior to Submittal of Endorsed SG Plan

Section 1 of Attachment B outlines tasks that were to be completed prior to submittal of an endorsed plan to BLM and the USFS. These tasks, which include agreement on instream flow (ISF) amounts for recommendation to the CWCB and finalizing the definition of year-types for use in the SG Plan, were completed prior to 2012. Appropriate language was incorporated in the SG Plan which was submitted to BLM and the USFS in January 2012.

### During the Period Following Submittal of Endorsed SG Plan until Effective Date (Pre-Provisional Period)

Section 2 of Attachment B outlines tasks to be completed after submittal of the endorsed SG Plan to BLM and the USFS but prior to the effective date of the SG Plan. Decisions made during this period are by unanimous consensus of all stakeholders. As of December 2012, the SG completed the following steps toward completion of the identified tasks:

- Provided a formally endorsed SG Plan to BLM and USFS.
- Began monitoring activities contemplated for the Pre-Provisional Period.
- Engaged in good faith efforts toward reaching agreement on final Resource Guides and ORV Indicators. These efforts included a 2012 pilot floatboating survey.
- Implemented Cooperative Measures.
- Made joint written recommendations to the CWCB for ISF water rights and supported CWCB in securing decrees for such rights.
- Discussed commitments by Windy Gap Firing Enterprise, Northern Water and its Subdistrict and Denver Water pursuant to Section III.C.2.C of the SG Plan (Poison Pill).
- Held seven full SG meetings, multiple committee and work group meetings, and began preparation of the 2012 Annual Monitoring Report.

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<sup>2</sup> See Attachment C: Timeline & Task List from the SG Plan.

- Drafted a proposed MOU for execution among SG members for the Provisional Period of the SG Plan.
- Began discussions to determine the extent to which channel maintenance flows may be incorporated into the SG Plan. A “channel maintenance” workgroup was created and tasked with developing working definitions of channel maintenance and other flows to facilitate discussion within the SG and with outlining relevant information needed to make decisions.

Instream Flow Water Rights

The CWCB filed water court applications for three Colorado River ISF water rights recommended by the SG on November 30, 2011. Entry of a decree for the CWCB ISF water rights by December 21, 2015 was a long-term protection measure (e.g., a “milestone”) in the SG Plan. That milestone was achieved two years ahead of the final deadline contemplated in the SG Plan, with the entry of final decrees for the following ISF water rights in March 2013 with a July 12, 2011 appropriation date:

**Decreed Instream Flows (cfs)**

<b><u>Upper Colorado River</u></b>	Sept 16-May 14	May 15-July 31	June 16-Sept 15
Blue River to Piney River	500	600	750
Piney River to Cabin Creek	525	650	800
Cabin Creek to Eagle River <sup>3</sup>	650	900	800

2012 Cooperative Measures

The SG Plan provides for a process to implement voluntary Cooperative Measures strategies that complement the Long-Term Protection Measures, taking into consideration various factors, including: prediction of the type of hydrologic year; the opportunities available; and respect for the priority system and water users’ operations. As such, the SG must collaborate with other non-SG entities and water users through other processes to achieve benefits to the ORVs.

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<sup>3</sup> Cabin Creek to Eagle River is to “a point immediately upstream of confluence with the Eagle River”; other termini are defined by their confluence with the Colorado River.



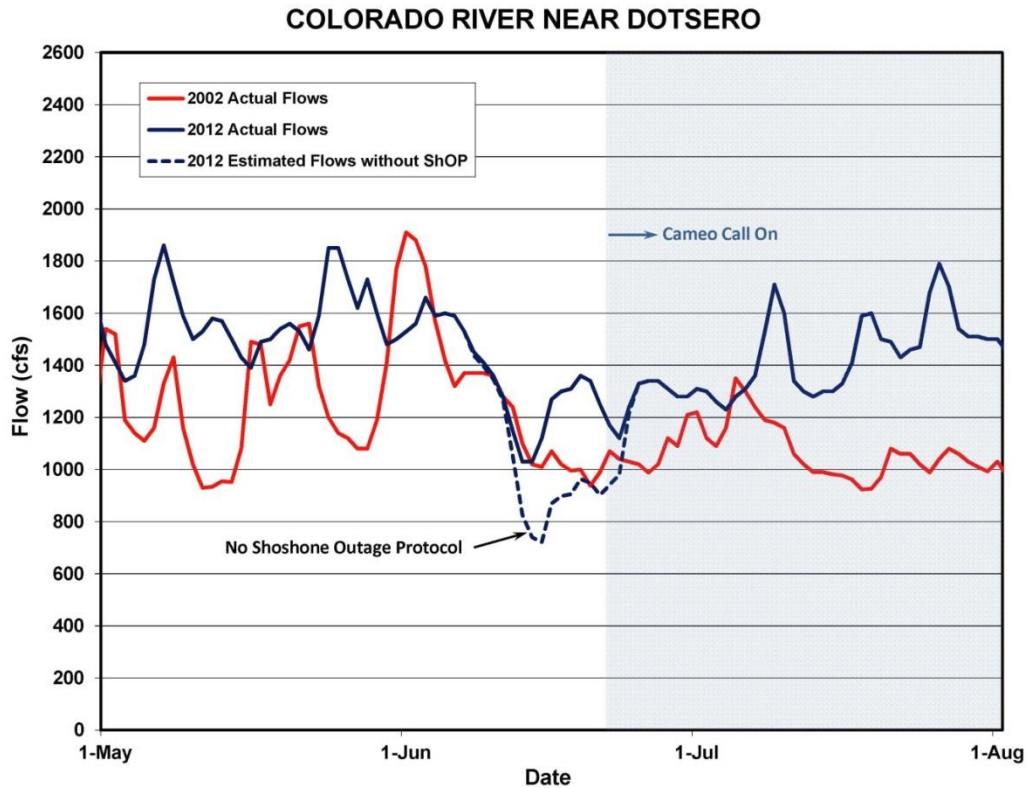


Figure 1. Voluntary 2012 implementation of Shoshone Outage Protocol (ShOP)

Because of the lower than average snowpack and the lack of a water rights call by the Shoshone Power Plant due to an outage for diversion dam repairs, flows in the Upper Colorado River during spring 2012 were lower than normal. Even though the Shoshone Outage Protocol (ShOP)<sup>4</sup> had not been finalized at that time, the basic features of the ShOP were voluntarily implemented and included releases of water from Williams Fork Reservoir, Green Mountain Reservoir, and Wolford Reservoir to replace much of the streamflow that would otherwise have occurred under a Shoshone call. Figure 1 illustrates the results of these voluntary releases; actual flows for 2012 are compared to estimated flows without ShOP and compared to 2002 flows to illustrate an example of a low-flow year and the stream flow benefits that resulted from this effort in 2012. These releases helped increase flows in the Colorado River below Kremmling and presumably contributed to cooler stream temperatures below Gore Canyon.

<sup>4</sup> ShOP is an agreement among several members of the Stakeholder Group and other reservoir owners to mitigate the potential adverse effect to water users and recreational interests on the Colorado River as a result of the outages at the Shoshone Power Plant in Glenwood Canyon resulting in the Plant not calling for water.

## **2012 MONITORING ACTIVITIES**

### **OVERVIEW**

In 2012, the SG conducted the following efforts contemplated for the Period Following Submittal of an Endorsed Plan until Effective Date (see SG Plan, Attachment B, section 2.C.).

- Gathered data collected by others: USGS water quality and quantity, Colorado Parks and Wildlife (CPW) biosurveys, BLM water temperature
- SG conducted temperature monitoring and a pilot floatboating survey at three sites
- Evaluated available monitoring data and, where appropriate, compared data to relevant provisional ORV Indicators and Resource Guides
- Began preparation of this Annual Report

Table 1 summarizes monitoring and evaluation efforts undertaken by the SG and other agencies in 2012.

<b>Provisional Monitoring Parameters</b>	<b>2012 Monitoring</b>	<b>Responsible Party</b>
<b><u>ORV INDICATORS</u></b>		
<b>Recreational Fishing:</b>		
Quality Trout	Completed	CPW
Biomass	Completed	CPW
Species Diversity	Completed	CPW
Total Fishing Effort	Ongoing	SG
Catch/Unit Effort	Ongoing	SG
<b>Recreational Boating:</b>		
Narrative during Provisional Period	Not applicable	SG
<b><u>ORV RESOURCE GUIDES</u></b>		
<b>Recreational Fishing:</b>		
Flow Guides	Year-end evaluation	SG
Flushing Flow	Year-end evaluation	SG
<b>Recreational Boating:</b>		
Usable Days	Year-end evaluation	SG
Visitor Preference Surveys	Pilot completed, ongoing	SG
<b>Water Quality:</b>		
CDPHE existing water quality standards	Year-end evaluation, during Provisional Period	MonWG
<b>Temperature:</b>		
CDPHE existing temperature standards	Year-end evaluation	MonWG

TABLE 1: 2012 Upper Colorado River Wild and Scenic Monitoring and Evaluation Summary

## MONITORING BY OTHER ENTITIES

### *U.S. Geological Survey*

Figure 2 represents the annual daily average streamflow recorded at the U.S. Geological Survey (USGS) gage **09058000 Colorado River NEAR KREMMLING, CO** and Figure 3 represents USGS gage **09070500 Colorado River NEAR DOTSERO, CO**. The SG has selected these two stream gages for monitoring flows in the Wild and Scenic stream segments. These gages are operated by the USGS as part of the National Streamflow Information Program (NSIP)<sup>5</sup>.

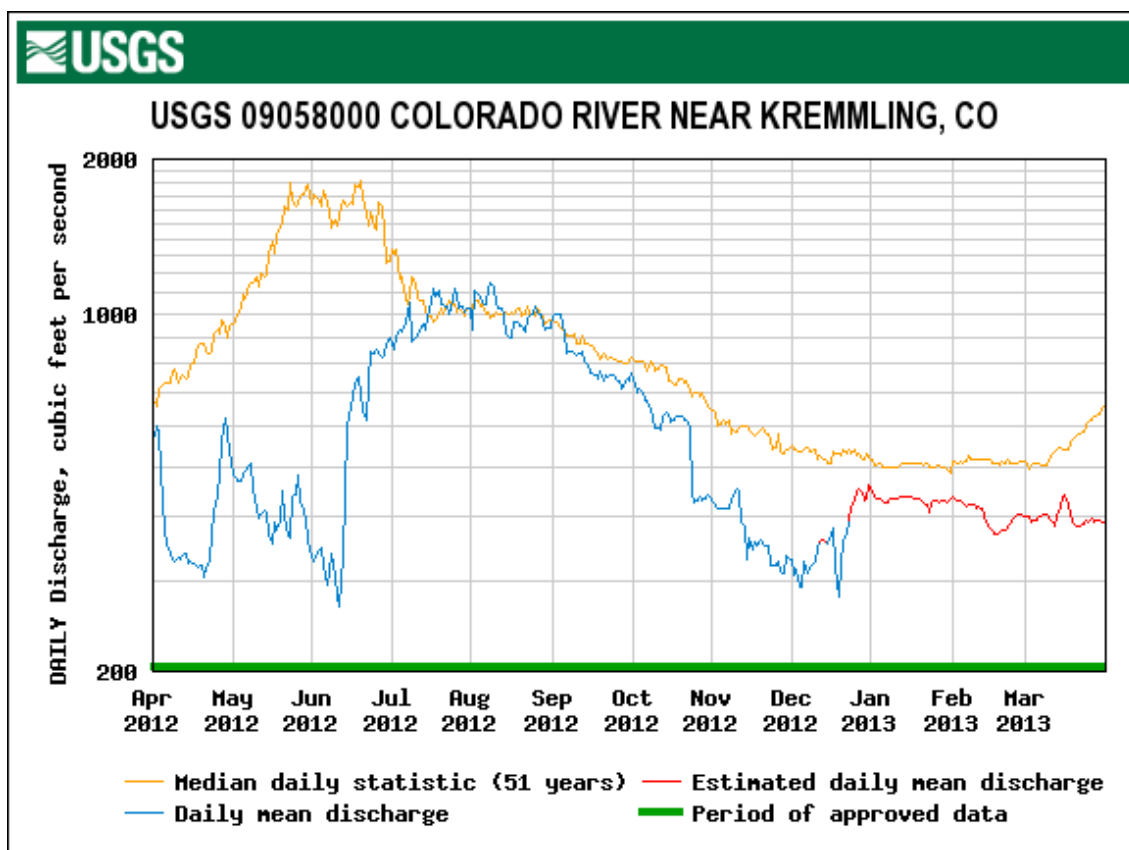


Figure 2. Daily average streamflow during 2012 at USGS gage **09058000 Colorado River NEAR KREMMLING, CO**

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<sup>5</sup> In addition to streamflow, each site is sampled four to six times per year for a full suite of physical and chemical water quality parameters.

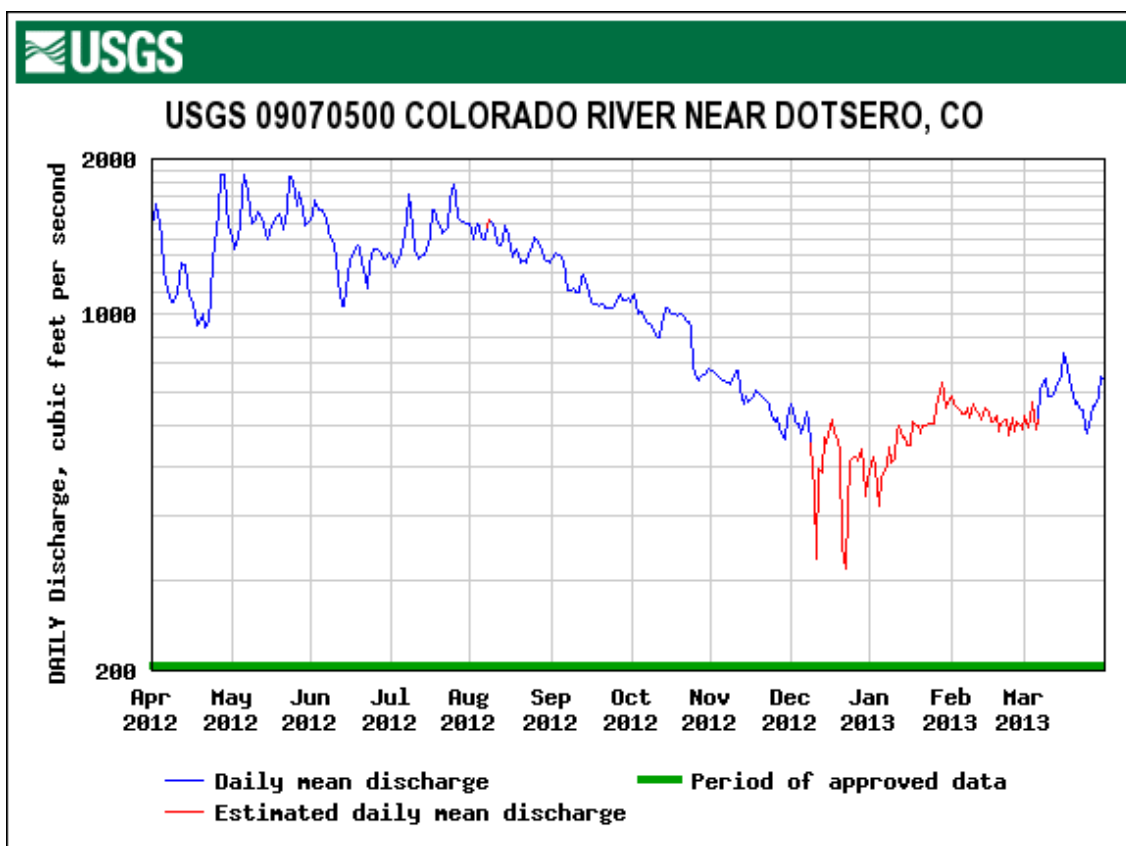


Figure 3. Daily average streamflow during 2012 at USGS gage **09070500 Colorado River NEAR DOTSERO, CO**

The 2012 water year followed one of the wettest years in recent history and began with well above-average precipitation in the fall of 2011. In the end, 2012 had the lowest statewide snowpack accumulation since 2002, but the distinguishing factor in 2012 was that reservoir levels were very close to average due to the abundant snowfall and runoff from the 2011 winter. On June 1, 2012, the snowpack in the Colorado River basin was just 1 percent of average and the official melt-out on June 2, 2012 was 19 days earlier than the normal melt-out date of June 21<sup>6</sup>.

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<sup>6</sup> United States Department of Agriculture, Natural Resources Conservation Service, Colorado State Basin Outlook Report for June, 2012.

## Colorado Parks and Wildlife

Biosurveys conducted by CPW provide data that can be used in assessing the provisional ORV Indicators and Resource Guides for Recreational Fishing. CPW conducts fish population surveys at the sites shown in Figure 4 on an annual to bi-annual basis. Table 2 shows the results of CPW's spring biosurveys at the Radium site over a three year period<sup>7</sup>.

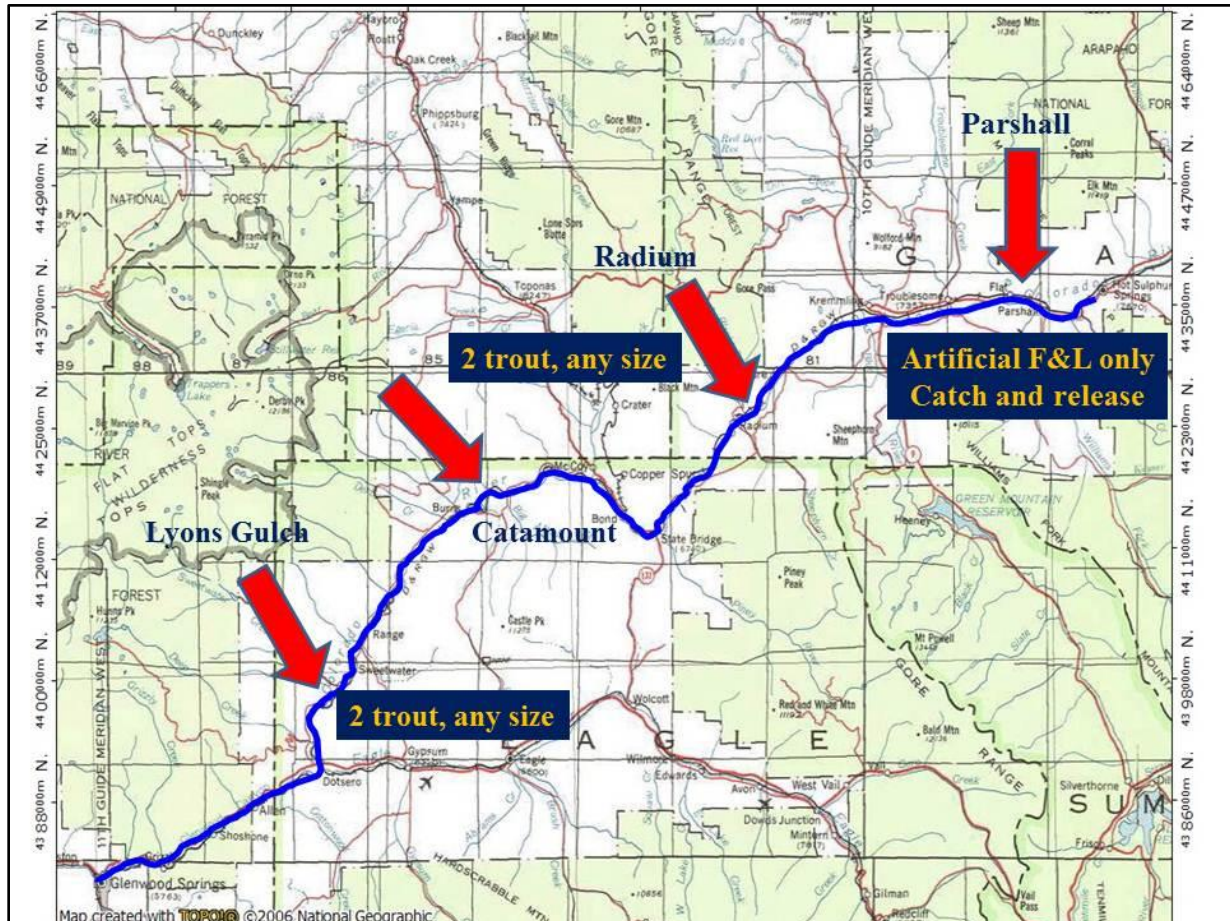


Figure 4. Colorado Parks and Wildlife Biosurvey Sample Sites and Associated Fishing Restrictions

<sup>7</sup> Ewert, Jon. Colorado Parks & Wildlife, Fish Survey and Management Information, Colorado River Pumphouse-Radium. 2012.

Radium	Year of Biosurvey		
	2010	2011	2012
<b><i>Rainbow Trout</i></b>			
Quality (# > 6"/mile)	216	650	201
Quality (# > 14"/mile)	168	472	50
Biomass (lbs/acre)	17	47	6
<b><i>Brown Trout</i></b>			
Quality (# > 6"/mile)	1,721	1,823	2,524
Quality (# > 14"/mile)	596	741	765
Biomass (lbs/acre)	103	110	143

Table 2. Colorado Parks and Wildlife Summary Statistics, 2010-2012

In addition to Quality Fish<sup>8</sup> and Biomass data, CPW maintains an up-to-date list of fish species captured at each site, which can be used to monitor species diversity in Segment 5 of the Wild and Scenic stream reach<sup>9</sup>. The following list includes 17 species of fish captured by CPW at the Radium sample site, as of 2012.

Bluehead sucker	Brook trout	Brown trout
Colorado River cutthroat	Flannelmouth sucker	Kokanee salmon
Lake trout	Longnose sucker	Mottled sculpin
Mountain whitefish	Northern pike	Rainbow / cutthroat hybrid
Rainbow trout	Speckled dace	White sucker
White/flannel hybrid	White/longnose hybrid	

<sup>8</sup> The SG Plan contemplates using # of quality fish per acre vs CPW's units (# of quality fish per mile).

<sup>9</sup> CPW and Trout Unlimited are also conducting preliminary studies of *Pteronarcys californica* (e.g., Giant Stonefly) exuviae as possible indicators of population density. The SG is monitoring progress on these efforts and may include these and other studies in future reports.

## **MONITORING BY STAKEHOLDER GROUP**

### ***Water Temperature***

Since 2005, Grand County has monitored water temperature at 32 active monitoring sites upstream of the W&S segments. Currently, there is one water temperature monitoring site within the W&S reach<sup>10</sup>; there are no stations collecting simultaneous air and water temperature readings.

In 2012, the MonWG recommended the addition of three sites on the Colorado River mainstem for temperature monitoring by the SG. These sites included the Colorado River just below the confluence with Piney Creek, below the confluence with Red Dirt Creek and at Dotsero, as shown in Figure 5 below.

Temperature data loggers (Tidbits) were placed in the specified locations on June 29, 2012 using protocols approved by the SG. Once in place, inspections were conducted from July through October to download data and to ensure the loggers had not been lost or removed. The data loggers were pulled from the river in late October to prevent damage from freezing temperatures. During 2013, all sites are planned to operate from April 1 – September 30.

The MonWG will archive all water temperature data collected. These data will eventually be managed in an online database currently maintained for such purposes by a third party such as the Grand County Water Information Network (GCWIN).

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<sup>10</sup> This site is maintained by BLM below Gore Canyon, above Pumphouse; data are archived with Grand County Water Information Network (GCWIN).



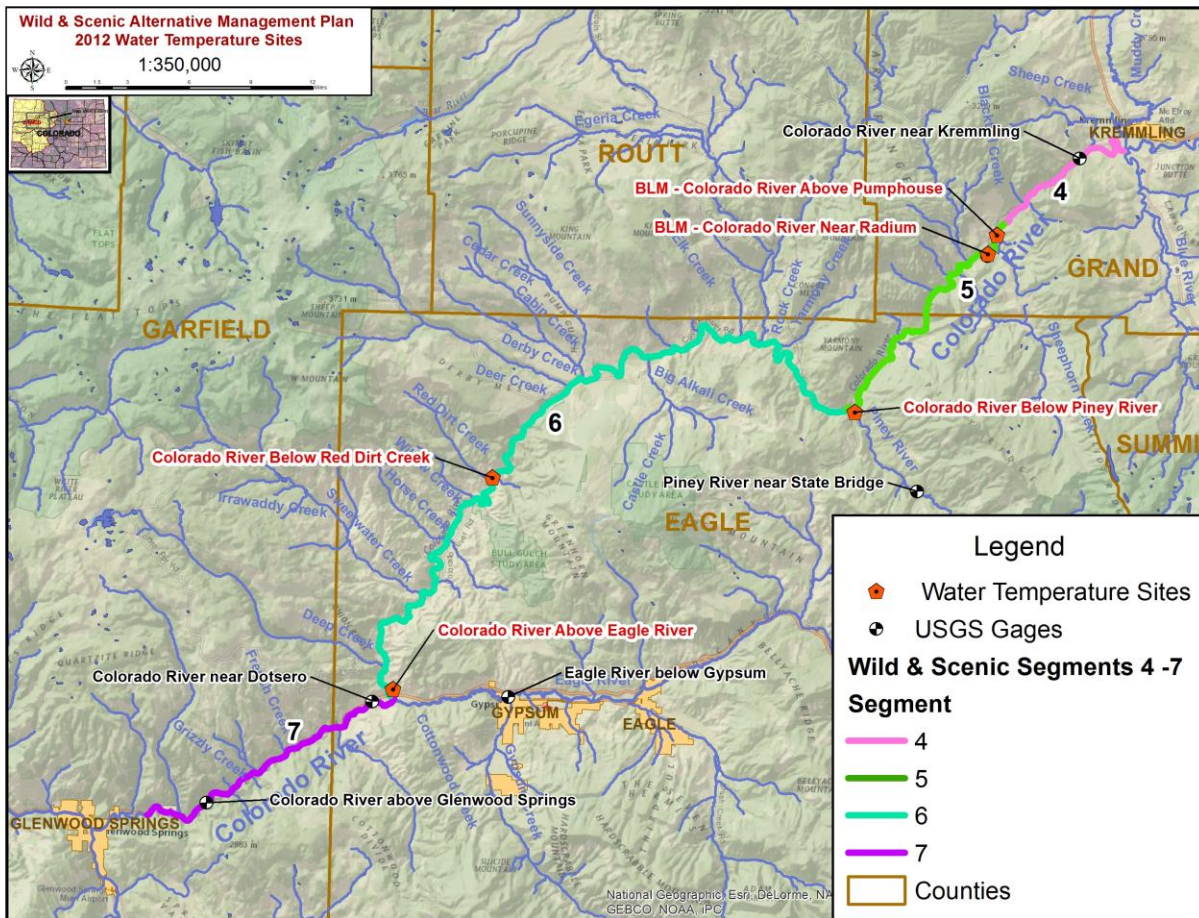


Figure 5. Site locations for 2012 temperature monitoring conducted by SG

### ***Recreational Floatboating User Survey***

The concept of a recreational floatboating survey is documented in Attachment B.2.C.2 of the SG Plan as a possible monitoring action. While not all Stakeholders agree that 2012 was an appropriate year to implement monitoring efforts, a Recreational Boating Survey Sub-Committee (Floatboating Group) was organized to prepare and make recommendations to the SG on a user survey to be implemented in 2012. The drafting of the user survey began in May, and a trial run of the user survey (SG Pilot Survey) was administered to participating SG members during a floatboating field trip on June 1, 2012.

The user survey was further refined after the June 1<sup>st</sup> pilot and, upon approval from the SG, was administered by Vital Resources at three sites along the Upper Colorado River from August 8, 2012 to September 5, 2012. Data from this effort were collected and analyzed using the

“Statistical Package for the Social Sciences” (SPSS) software to demonstrate how future analyses might be conducted<sup>11</sup>. The SG agreed that the data collected from the 2012 user survey would be used only to better understand and improve methods for future survey efforts, and would not be used for data analysis or decision-making regarding the ORVs.

Through the efforts described above, the Floatboating Group recognized the benefits of working with an expert in recreation opinion surveys to educate the SG on professional survey design and to assist with developing appropriate survey questions for future survey efforts. The Floatboating Group selected Mr. Chris Cares (RRC Associates), who subsequently reviewed the 2012 survey results and provided an overview of ways to assess recreational experiences through user counts, intercept surveys and survey panels. The SG will work with RRC Associates to conduct additional surveys in 2013.

## **EVALUATION OF MONITORING RESULTS**

The SG Plan aims at monitoring and protecting the ORVs using two distinct tools:

ORV Indicators: Indicators to be used to gauge whether the ORVs are being protected; and

Resource Guides: Guides to be used as one source of information among others for informing SG discussions under the SG Plan.

Until such time as final ORV Indicators and Resource Guides are developed, the SG Plan will use the provisional ORV Indicators and Resource Guides described below.

### ***Provisional ORV Indicators***

#### Recreational Fishing

The SG Plan includes the numeric standards shown in Table 3 as the Provisional ORV Indicators for Recreational Fishing<sup>12</sup>.

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<sup>11</sup> This analysis was completed under the supervision of Dr. Kathryn Green at University of Denver.

<sup>12</sup> Provisional ORV Indicators for Recreational Fishing apply to the Upper Colorado River from Gore Canyon to Red Dirt Creek.

<b>Type</b>	<b>Name</b>	<b>Current level (if available)</b>
Fishery	Quality Trout	24 fish over 14” per acre
Fishery	Biomass	90 pounds per acre
Fishery	Species Diversity (SD)	14 species of fish
Recreational Fishing	Total Fishing Effort (TFE)	TBD
Recreational Fishing	Catch/Unit Effort (CPUE)	TBD

Table 3. Provisional ORV Indicators for Recreational Fishing

The following evaluations of the Provisional ORV Indicators for Recreational Fishing are compared to CPW’s biosurvey results shown in Table 2.

Quality Trout Evaluation

As shown in Table 3, the Quality Trout metric in the SG Plan specifies a measure of “number of fish over 14” per acre”, while CPW’s biosurvey results are reported in “number of fish over 14” per mile”. Consequently, evaluation of the Quality Trout metric is pending until this discrepancy is resolved.

Biomass Evaluation

CPW’s 2012 biosurvey results at the Radium site indicate a total trout biomass of 149 pounds per acre, including both Rainbow and Brown Trout. This biomass is 66% greater than the SG’s Provisional ORV Indicator of 90 pounds per acre.

Evaluation of Species Diversity

As of 2012, CPW has captured 17 different species of fish at the Radium Site, which is 21% greater than the SG’s Provisional ORV Indicator of 14 species of fish.

## Recreational Floatboating

The SG Plan includes the following narrative standard as the Provisional ORV Indicator for Recreational Floatboating<sup>13</sup>:

“Protect the existing range and quality of the outstanding floatboating opportunities. This narrative standard does not imply mirroring any specific hydrology.”<sup>14</sup>

The SG’s 2012 pilot survey helped to identify survey methods that will be used to better understand and improve future survey efforts. In addition, the SG recognizes that it will be imperative to get the best possible counts of all people using the resource (e.g., user days). Efforts to identify and evaluate important factors that influence the overall boating experience will continue in 2013.

## ***Provisional Resource Guides***

### Recreational Fishing

The Provisional Resource Guides shown in Table 4 represent the seasonal ranges of flow for the Recreational Fishing ORV in Segments 4, 5 and 6. Following the effective date of the Plan, the SG has agreed to use the mid-point value as a reference flow and compare it to the 5-year rolling average each season for purposes of discussion under the Plan<sup>15</sup>. While the highly variable flow conditions in these segments could be addressed through the use of criteria addressing a specified frequency of meeting these guides, such implementation criteria have not been established for purposes of the Plan. The SG may develop such criteria in the future, but the Plan is designed to operate in the absence of such criteria.

Comparisons of seasonal ranges of flow for the Recreational Fishing ORV to rolling average streamflows will require additional analyses and consensus decisions by the SG regarding methods for calculating rolling averages and the appropriate periods of record for data used in

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<sup>13</sup> Provisional ORV Indicators for Recreational Floatboating apply to the Upper Colorado River from Gore Canyon to No Name in Glenwood Canyon.

<sup>14</sup> The intent of the SG is to develop and incorporate objective criteria into the final ORV Indicators for Recreational Floatboating.

<sup>15</sup> During the provisional period, the 5-year rolling average will include the data from the previous 4 years.

these calculations. The MonWG will work with members of the SG to include these comparisons in Annual Monitoring Reports during the Provisional Period.

<b>Season</b>	<b>Number of Days in Season</b>	<b>Month</b>	<b>Seasonal Fish Flow Range and Midpoint (cfs)</b>
1	91	April	800-1000 900 midpoint
		May	
		June	
2	92	July	600-1000 800 midpoint
		August	
		September	
3	61	October	400-800
		November	600 midpoint
4	122	December	400-600 500 midpoint
		January	
		February	
		March	

Table 4: Provisional Resource Guides for Recreational Fishing

## Recreational Floatboating

### Year-Type Determination

*Segments 4 – 6:* The 2012 annual measured flow at the Kremmling gage was 405,503 acre-feet, which is less than 454,500 acre-feet; therefore within the driest year-type category (Driest 25% Years).

*Segment 7:* The 2012 measured annual flow at the Dotsero gage was 735,133 acre feet , which is less than 1,029,500 acre feet; therefore within the driest year-type category (Driest 25% Years).

### Usable Days Evaluation

*Segments 4 – 6:* Provisional flow guides for the Driest 25% Years are illustrated in Table 5. There were 103 total usable days in these segments during the 2012 boating season (April 1 - September 30), all of which were “Green” usable days. There were no “Blue” or “Black” usable days during the 2012 season. Figure 6 illustrates mean daily streamflow and the provisional range of floatboating opportunities in these segments during the 2012 boating season.

*Segment 7:* Provisional flow guides for the Driest 25% Years are illustrated in Table 6. There were 136 total usable days in this segment during the 2012 boating season (April 1 - September 30). The number of “Green” usable days was 131 (higher than the median), and the number of “Blue” usable days was 5 (lower than the minimum). There were no “Black” usable days during the 2012 season. Figure 7 illustrates mean daily streamflow and the provisional range of floatboating opportunities in this segment during the 2012 boating season.

	Total Usable Days	Green Opportunities 700 - 1300 cfs	Blue Opportunities 1300 - 4000 cfs	Black Opportunities 4000 - 7400 cfs
Driest 25% Years	62 (80) 96	53 (73) 87	0 (1) 25	0 (0) 0
2012	103	103	0	0

Table 5. Provisional Number of Usable Days in Segments 4 - 6 [min (med) max]

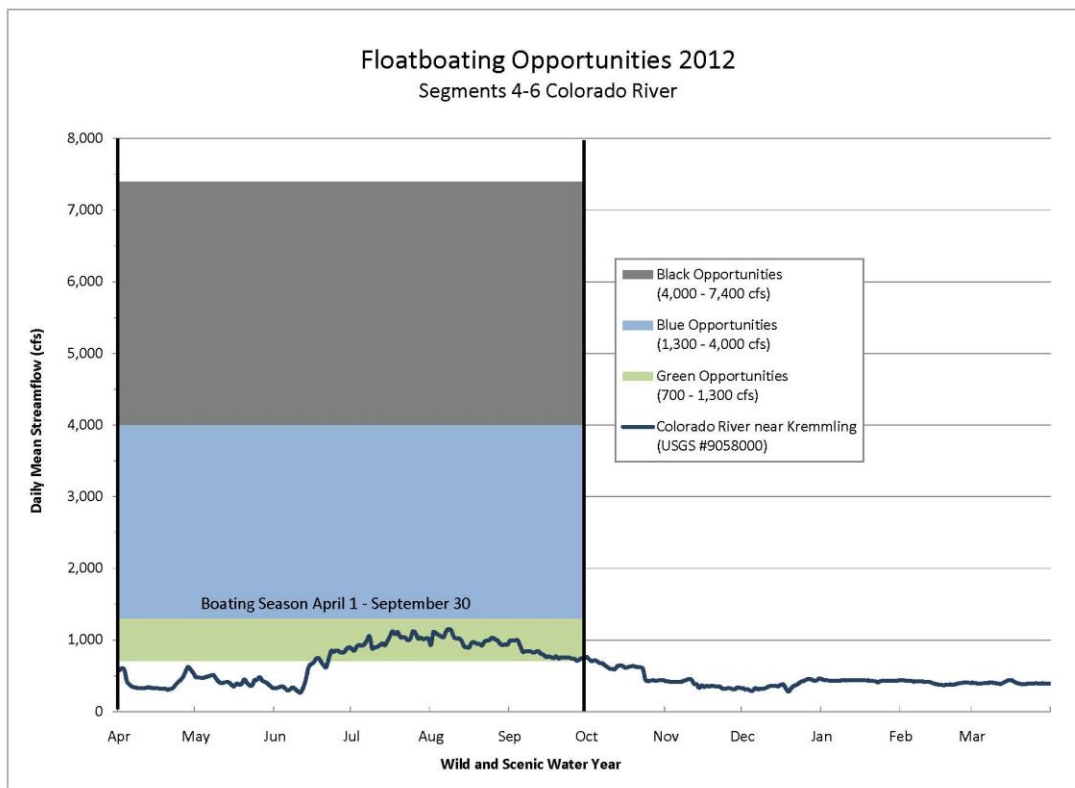


Figure 6: 2012 Floatboating Opportunities in Segments 4-6

	Total Usable Days	Green Opportunities 1200/1250 <sup>16</sup> - 1800 cfs	Blue Opportunities 1800 - 5500 cfs	Black Opportunities 5500 - 8600 cfs
Driest 25% Years	136 (159)	88 (126) 137	10 (32) 63	0 (0) 6
2012	136	131	5	0

Table 6. Provisional Number of Usable Days in Segment 7 [min (med) max]

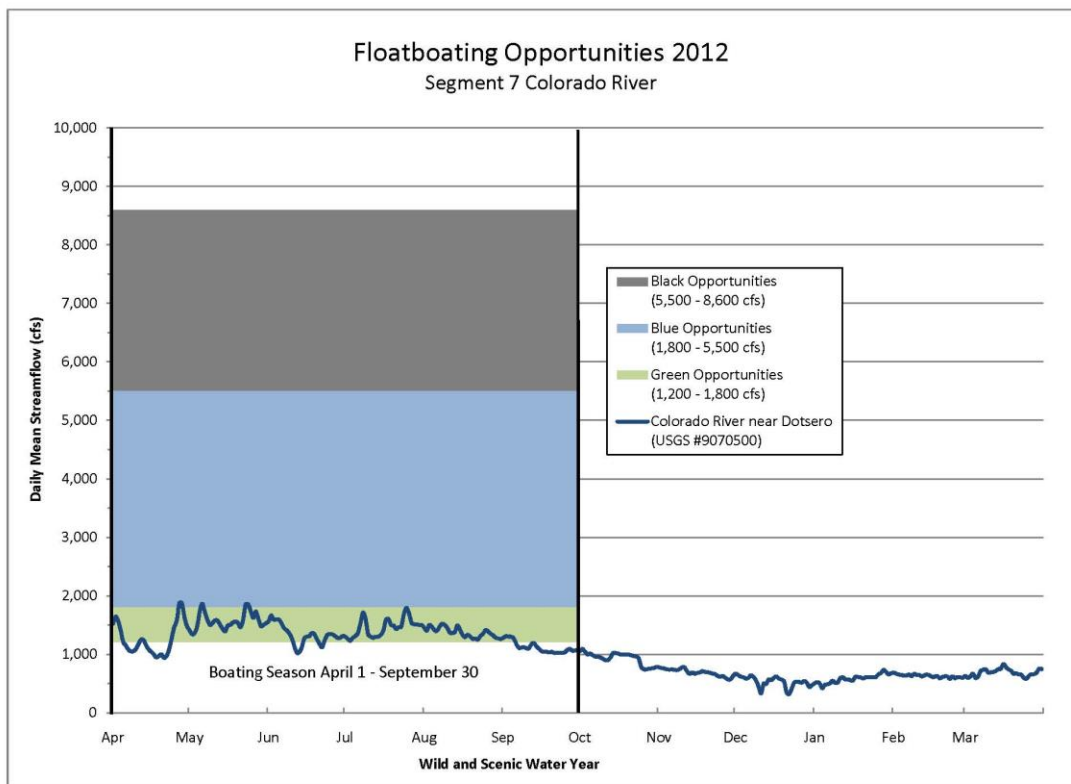


Figure 7: 2012 Floatboating Opportunities in Segment 7

<sup>16</sup> The stakeholders do not agree on the specific flow rate for the Green floatboating category in Segment 7; however, during the Provisional Period, the number of usable days in the Green floatboating category will be based on a flow rate of 1200 – 1800 cfs.



## Water Quality

As stated in the SG plan, “The [Provisional] Resource Guides for water quality are the Colorado Department of Public Health and Environment (CDPHE) water quality standards for cold water aquatic life and recreation uses for the portion of the stream segment that CDPHE has designated COUCUC03 (Mainstem of the Colorado River from the outlet of Granby Reservoir to the confluence with the Roaring Fork River) that is within the Wild & Scenic segments 4 - 7.” These standards are reported in CDPHE’s *Regulation #33 - Classifications and Numeric Standards for Upper Colorado River Basin and North Platte River*.

Colorado’s Section 303(D) List of Impaired Waters and Monitoring and Evaluation List (Regulation #93 – 5 CCR 1002-93), effective March 30, 2012, lists Segment COUCCUC03 for temperature and Manganese. While Segment COUCCUC03 encompasses all of the Wild and Scenic Segments 4, 5, 6, and 7, it also includes reaches of the Colorado River above and below the Wild and Scenic segments. The current listing for temperature is for a specific stream reach which is located upstream of Kremmling, outside the Wild and Scenic segments. The next Administrative Action Hearing for Regulation # 93 is scheduled to occur in March 2015.

## Temperature

### Temperature Evaluation

All of the SG’s 2012 temperature data were evaluated against the current water quality standards for segment COUCUC03. According to current regulations, temperature shall maintain a normal pattern of diurnal and seasonal fluctuations with no abrupt changes and shall have no increase in temperature of a magnitude, rate, and duration deemed deleterious to resident aquatic life.<sup>17</sup>

Temperature data collected by the SG, USGS and the BLM were analyzed utilizing the temperature macro4.5v application developed by CDPHE. Assessment of temperature data against numerical standards are evaluated against “chronic” and “acute” seasonal maxima.

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<sup>17</sup> Colorado Department of Public Health and Environment, Water Quality Control Commission 5 CCR 1002-33, January 1, 2012.

Attainment of “chronic” temperature standards is based on a “Maximum Weekly Average Temperature (MWAT)” which is defined as a simple moving average. Attainment of the “acute” temperature standard is based on a “Daily Maximum (DM)”, which is defined as the highest 2-hour average water temperature in a given 24-hr period. Some temperature excursions were observed when 2012 temperature is compared to the currently adopted stream standards. Table 7 shows the currently adopted numeric temperature standards for the Upper Colorado River Basin. Figures 8 and 9 depict the MWAT and DM for all temperature sites monitored within Wild and Scenic Segments 4-7 during 2012.

Temperature Tier	Tier Code	Species Expected to be Present	Applicable Months	Temperature Standard (°C)	
				MWAT	DM
Cold Stream Tier II	CS-II	Brown Trout, Rainbow Trout	April - October	18.3	23.9
			November - March	9.0	13.0

Table 7. CDPHE Numeric Temperature Standards for Cold Stream Tier II

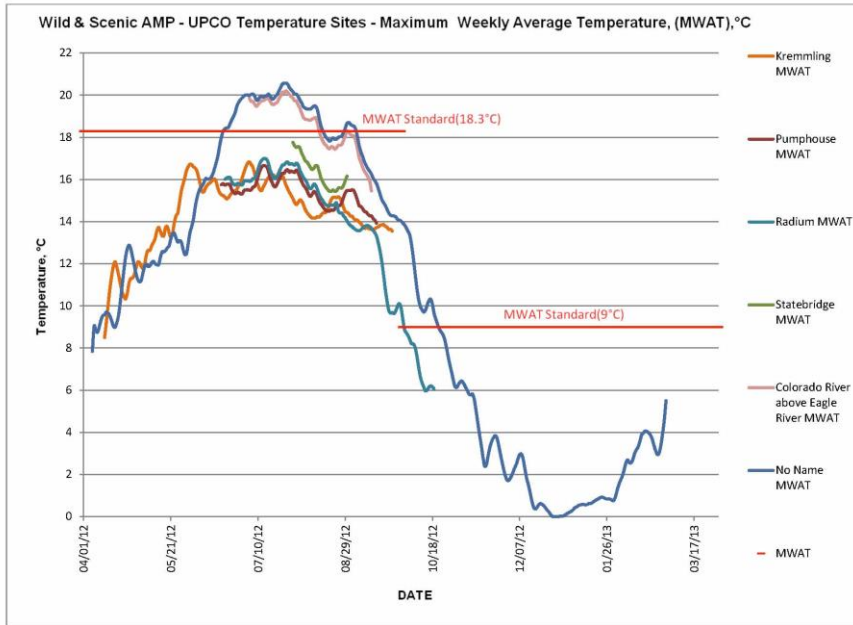


Figure 8. 2012 Measured Minimum Weekly Average Temperatures vs CDPHE Standard

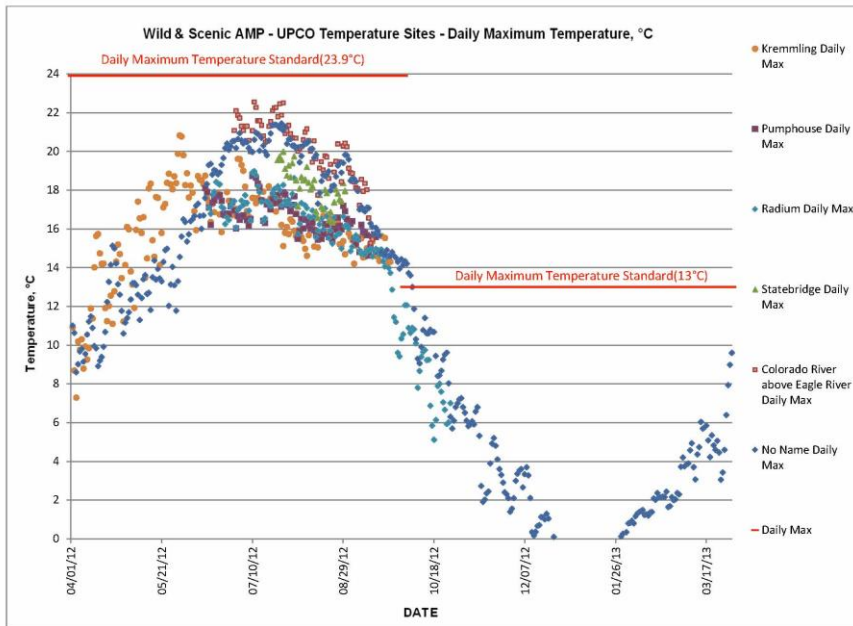


Figure 9. 2012 Measured Daily Maximum Temperatures vs CDPHE Standard

## **LOOKING AHEAD...**

Until such time as the BLM and USFS issue their final Records of Decision (RODs), the SG will continue to implement the tasks described in Attachment B, Paragraph 2 of the SG Plan. The following monitoring activities are anticipated for 2013:

Water Temperature Monitoring. The SG's Monitoring Work Group will continue to monitor water temperature at three sites on the Colorado River from April 1 – September 30. The sampling location below the Red Dirt Creek confluence will be moved to a new location directly across the river in hopes of avoiding the retrieval issues that plagued this site in 2012.

Fish Surveys. CPW plans to continue biosurveys in the Wild and Scenic stream segments and will continue to explore methods for monitoring macroinvertebrate populations. The SG will evaluate CPW's 2013 biosurvey data in accordance with the SG Plan and include the results in the 2013 Annual Monitoring Report.

Floatboating Surveys and Creel Census. The SG contracted with RRC Associates to conduct a more comprehensive Floatboating survey effort in 2013 that builds upon and incorporates lessons learned from the SG's 2012 Pilot Survey. The 2013 Floatboating survey will include accurate user counts, intercept surveys of Recreational Floatboaters and anglers, and a user panel survey that will provide opportunities for more in-depth surveys of interested individuals who participate in the intercept survey.

In addition, during 2013, the SG will meet on at least a quarterly basis, will continue its good faith effort toward reaching agreement on final Resource Guides and ORV indicators, explore voluntary Cooperative Measures and implement when appropriate, continue discussion and data gathering to determine the extent to which channel maintenance flows may be incorporated in the SG Plan, and perform other activities described in Attachment B, Paragraph 2 of the SG Plan.

Until the effective date of the SG Plan, funding will be procured through the SG's established practice of voluntary stakeholder contributions leveraged with funds from CWCB's Wild and Scenic Rivers Alternatives Fund and other sources.

## **LIST OF ATTACHMENTS:**

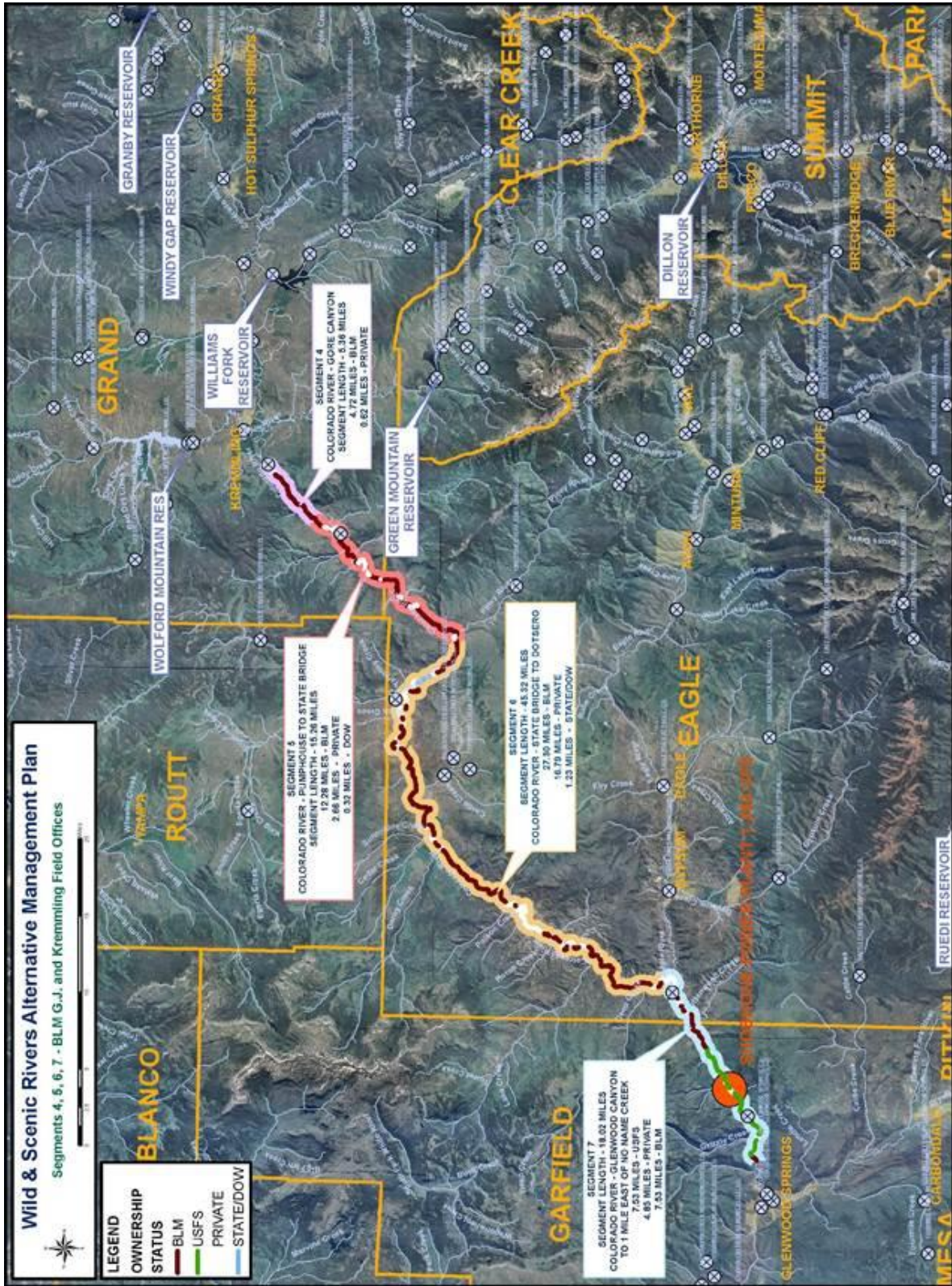
Attachment A: Map of Project Area

Attachment B: Endorsing Entities

Attachment C: Timeline and Task List



# ATTACHMENT A: PROJECT AREA MAP







## **ATTACHMENT B: ENDORSING ENTITIES**

The SG includes a broad range of East Slope and West Slope interests including water providers, landowners, local governmental agencies, conservation sportsmen and recreation groups in consultation with the Colorado Water Conservation Board (CWCB), Colorado Parks and Wildlife (CPW), and the Bureau of Reclamation. The SG Plan has been endorsed by the governing boards of the following stakeholder entities:

American Whitewater

Aurora Water

Blue Valley Ranch

Colorado River Outfitters Association

Colorado River Water Conservation District

Colorado Springs Utilities

Denver Water

Eagle County

Eagle Park Reservoir Company

Eagle River Water and Sanitation District

Grand County

Northern CO Water Conservancy District (NCWCD)

Northwest CO Council of Governments (NWCCOG)

NWCCOG/Quality Quantity Committee

Middle Park Water Conservancy District

Municipal Subdistrict, NCWCD

Summit County

Trout Unlimited

Upper Eagle Regional Water Authority

Vail Resorts, Inc

The Wilderness Society



## ATTACHMENT C: TIMELINE AND TASK LIST FROM THE SG PLAN

1. Period Prior to Submittal of an Endorsed Plan.
  - A. SG to come to resolution on amount of recommended ISF by April 15, 2011 or come to alternative resolution on how the CWCB process will proceed prior to endorsement of Plan.
  - B. SG to finalize language for definition of year-types for inclusion in Plan based on conceptual agreement to use Colorado Basin River Forecast Center forecasts of undepleted flow to predict the year type prior to the recreation season for informing the upcoming year's discussion about Cooperative Measures, and to use measured/depleted flows at the end of the wild and scenic year for evaluation of post-recreation season comparison to the boating Resource Guides.
  - C. SG to consider whether to include more detailed description of simulated future flows.
  - D. Prior to endorsement on April 30, 2011, the SG intends that any contact with press about this Plan should be handled through Rob Buirgy, Project Manager; or the BLM/USFS.
2. Period Following Submittal of an Endorsed Plan until Effective Date (i.e., before BLM/USFS approve the Plan as the alternative in the ROD).
  - A. Decisions made in this period are all by unanimous consensus of all stakeholders, continuing the current process of negotiation and compromise.
  - B. Provide formal SG Endorsement of Plan to BLM/USFS no later than April 30, 2011.
  - C. Begin monitoring:
    - (1) Gather data collected by others (e.g., CPW fish biomass).
    - (2) SG fund and gather data (e.g., conduct creel surveys, recreation surveys) if SG unanimously agrees to funding of such efforts.
    - (3) Evaluate monitoring data compared to provisional Resource Guides and provisional ORV Indicators.
    - (4) Prepare Annual Monitoring Report.

- D. No SG Plan funding assessments (Section VIII.B.2.) to be levied during this period.<sup>18</sup>
- E. Stakeholders will engage in a good faith effort toward reaching agreement on final Resource Guides and ORV Indicators; outline studies and data collection to be done in the provisional period. By unanimous consensus among all stakeholders, ORV Indicators and Resource Guides could be finalized during this period and would become effective upon the effective date of the Plan.
- F. Explore Cooperative Measures in accordance with the process set forth in the Plan.
- G. Conduct discussions and make written recommendation to CWCB for the base flow in-stream flow pursuant to C.R.S. §37-92-102 in accordance with Section IV.A.1. of the Plan.

If final decrees for the CWCB instream flow applications are not entered by the date anticipated in Attachment A, and the Plan has not become effective, the stakeholders will discuss the cause of the delay. The stakeholders will determine whether the delay causes any material adverse impact to the purpose of the Long-Term Protection Measures. If it is determined by unanimous consent of all stakeholders that a material adverse impact exists, the stakeholders may decide to implement management activities to reasonably mitigate the material adverse impact.

- H. Continue discussions on commitments to the Plan on behalf of the Windy Gap Firming Enterprise, Northern Water and Denver Water pursuant to Section III.C.2.c. of the Plan (Poison Pill).
- I. Hold full SG meetings (quarterly or semiannually) and prepare annual report/update; make any changes/refinements to the Plan agreed upon by all stakeholders.
- J. Develop MOU among SG members for provisional period of Plan. A long-term MOU or legal entity would be entered into subsequent to sunset of the Poison Pill.
- K. Begin discussions and review relevant data to determine the extent to which channel maintenance flows may be incorporated into the Plan.

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<sup>18</sup> Prior to expiration of the period for exercise of the Poison Pill, members of the SG would continue to contribute annual funding to the SG Plan, but shall not be required to contribute endowment funding under the Plan. The Homestake Partners will also only contribute annual (not endowment) funding to the SG Plan unless or until the ERMOU Project is “opted in” as a new project.

- L. By unanimous consensus of all stakeholders, other tasks can be performed as needed.

### 3. BLM/USFS Adoption of Plan without Material Changes – Plan becomes Effective

#### A. Provisional Period: First 3-to-5 years of Plan Implementation

- (1) Within 3 years or sooner, develop final Resource Guides and ORV Indicators by unanimous consent (6/6) of Interest Groups.
- (2) Execute MOU among SG members for provisional period of Plan. A long-term MOU or legal entity would be entered into subsequent to sunset of the Poison Pill. Develop long-term MOU.
- (3) Interest Groups develop protocol for selection of representatives and procedure for inclusion, and designate alternates and appoint members.
- (4) GC appoints Chair, Vice Chair and Secretary.
- (5) Within 3 years after Plan is effective, create an endowment fund and appoint trustee (per Section VIII.A. of the Plan).
- (6) Begin Provisional Period Monitoring Plan (per Section V and Attachment D of Plan):
  - a. Gather data collected by others (e.g., CPW fish biomass).
  - b. SG fund and gather data (e.g., conduct creel surveys, recreation surveys).
  - c. Evaluate monitoring data compared to provisional Resource Guides and provisional ORV Indicators.
  - d. Prepare Annual Monitoring Report.
- (7) Study the extent to which channel maintenance flows may be incorporated into the Plan.
- (8) Resolve Project permit issues; notify BLM/USFS if Plan is withdrawn or has continued support, and modify Plan to confirm that Projects fall under Reopener Clause of Plan (Section IV.D.2.).
- (9) Implement Tier 1 Long-Term Protection Measures (per Section IV.A. and Attachment A of the Plan).
- (10) Implement voluntary Tier 2 Cooperative Measures process (per Section IV.B. of the Plan) and hold quarterly meetings (or more frequently, as determined necessary) to assess need for, focus of, and availability of Cooperative Measures (per Section IV.B.3.).

- (11) Hold SG meetings (annual, regular, and special) (per Section VI.E.).
- (12) Perform other tasks determined by unanimous consensus of the SG.

B. At End of Provisional Period

Implement SG Plan, including, but not limited to:

- (1) Revise Plan for final Resource Guides (potentially including implementation criteria) and ORV Indicators.
- (2) Go through Mediation protocol if final Resource Guides, Indicators and potential implementation criteria are not unanimously agreed upon.
- (3) Revisit recommendation to defer a determination of suitability per the Guiding Principle.
- (4) Using results from the provisional period monitoring, develop and implement Long-Term Monitoring Plan (per Section V.A.2.).
- (5) Execute long-term MOU among stakeholders or legal entity.
- (6) Continue Tier 1 Long-Term Protection Measures.
- (7) Continue with voluntary Tier 2 Cooperative Measures process.
- (8) Continue holding SG meetings (annual, regular, and special).
- (9) Perform other tasks determined by unanimous consensus of the SG.