

Upper Colorado River
Wild & Scenic Stakeholders
Alternative Management Plan

2014

Annual
Monitoring
Report

CONTENTS

Introduction.....	1
Background & Purpose.....	1
Goals.....	2
Stakeholder Participation.....	2
2014 Plan Highlights.....	3
2014 Monitoring Activities.....	5
Overview.....	5
Monitoring by Other Entities.....	7
U.S Bureau of Land Management.....	7
U.S. Geological Survey.....	7
Colorado Parks and Wildlife.....	9
Monitoring by Stakeholder Group.....	10
Water Temperature.....	10
Sediment & Macroinvertebrate Sampling.....	11
User Surveys.....	13
Evaluation of Monitoring Results.....	13
Provisional ORV Indicators.....	13
Provisional Resource Guides.....	15
Looking Ahead.....	22
List of Attachments:.....	25
Attachment A: Project Area Map.....	ii
Attachment B: Endorsing Entities.....	iv
Attachment C: Timeline and Task List from the SG Plan.....	vi

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 Colorado¹. 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 & 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) was established in 2008 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) was submitted to BLM and USFS in January 2012 as a Wild & Scenic management alternative 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 endorsed the SG Plan in January 2012 is included as Attachment B.

The SG Plan developed by the SG over the past eight years was included as one of the four management alternatives in the agencies' Draft RMPs and Draft Environmental Impact Statements. The SG Plan will 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 & Scenic Rivers management alternative for these segments.

¹ 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.

- Primary streamflow-influenced ORVs:
 - Recreational Fishing
 - Recreational Floatboating
- Other streamflow-influenced ORVs:
 - Wildlife
 - Botanical
 - Scenic
- Additional ORVs:
 - 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). As of December 2014, funding for the SG effort has been provided by voluntary stakeholder contributions and by the CWCB through its Wild & Scenic Rivers Fund. During 2014, stakeholders voluntarily contributed \$19,250 and provided in-kind work that raises the stakeholders' contributions to more than \$100,000. The CWCB allocated \$98,940 from the Wild & Scenic Rivers Fund (PO # 14000000064) and \$35,000 from the Severance Tax Fund (PO14000000118) to fund SG activities in 2014.

2014 PLAN HIGHLIGHTS

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

During the Period Prior to Submittal of Endorsed SG Plan

Section 1 of Attachment C 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 C 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. Actions taken during this period are approved by unanimous consensus of all endorsing entities. As of December 2014, the SG completed the following steps toward completion of the identified tasks:

- Provided a formally endorsed SG Plan to BLM and USFS.
- Implemented annual 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 include a floatboating survey piloted in 2012 and continued during the 2013 and 2014 seasons, with the addition of fishing-related survey questions during the 2014 season.
- Implemented Cooperative Measures. (See page 6 of this report for details.)
- Made joint written recommendations to the CWCB for ISF water rights and supported CWCB in securing decrees for such rights. The CWCB filed water court applications for three Colorado River ISF water rights recommended by the SG on November 30, 2011.

² See Attachment C: Timeline & Task List from the SG Plan.

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 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.

- Discussed commitments by Windy Gap Firing Project, Northern Water and its Subdistrict and Denver Water pursuant to Section III.C.2.C of the SG Plan (Poison Pill).
- Held 18 full SG meetings, multiple committee and work group meetings, and completed Annual Monitoring Reports for each year of the pre-provisional period.
- Developed the Stakeholder MOU contemplated in the SG Plan, which was subsequently executed by SG members in anticipation of the Provisional Period.
- Continued discussions, and conducted two SG workshops, to determine the extent to which channel maintenance flows may be incorporated into the SG Plan.

2014 Cooperative Measures

The SG Plan provides for a process to implement voluntary strategies (Cooperative Measures) that complement the Long-Term Protection Measures in providing protection to the ORVs. Various factors come into consideration in determining what strategies might be available and/or effective in providing protection to the ORVs, including the predicted general flow condition for the year, the available operational opportunities that arise during the year, and the commitment to respect the priority system and water users’ operations. Using this information, the SG collaborates with other entities and water users as opportunities are identified to achieve benefits to the ORVs.

The 2014 water year broke the previous 2-year pattern of limited water availability in the upper Colorado basin by producing very high flows for most of the year. The Kremmling stream gage peaked on June 1st at a flow of 7,640 cubic feet per second while the Dotsero stream gage experienced a peak flow of 16,500 cubic feet per second.

The high stream flow levels and the potential for flooding relieved any need for the Upper Colorado River Recovery Implementation Program to implement Coordinated Reservoir Operations to enhance spring peak flows for endangered species in the 15-Mile Reach. Additionally, relatively high flow levels were in place for much of the irrigation season, which provided positive support to the ORV’s as well as to strategies for Cooperative Measures for 2014.

The 2014 runoff filled basin reservoirs which, in turn, provided about 65,000 acre feet of water for release from Green Mountain, Granby, and Welford Reservoirs to support target flows for endangered fish in the 15-Mile Reach, boosting the flows in the Colorado River through the Wild & Scenic Segments. Stream flows for the Gore Fest boating weekend were optimal.

Members of the Cooperative Measures Working Group were regular participants in the weekly HUP calls where river conditions and operations were discussed in detail. That participation allows the water community to become aware of potential Wild & Scenic issues and the Wild & Scenic members to become aware of river conditions and operational plans.

Going into 2015, the Cooperative Measures Working Group plans to continue to participate in the HUP calls and to monitor processes and measures that come available to provide protection to the ORVs.

2014 MONITORING ACTIVITIES

OVERVIEW

During 2014, the SG conducted the following efforts contemplated for the Pre-Provisional Period (see SG Plan, Attachment B, section 2.C.).

- Gathered data collected by others: USGS water quality and quantity, BLM water temperature, CO Parks & Wildlife (CPW) *Pteronarcys californica* exuviae counts.
- Conducted temperature monitoring and floatboating/fishing survey work at selected sites from Gore Canyon to Two Rivers Park in Glenwood Springs.
- Evaluated available monitoring data and, where appropriate, compared data to provisional ORV Indicators and Resource Guides.

Table 1 provides a summary of monitoring and evaluation efforts undertaken by the SG and other agencies during 2014. Note that CPW did not conduct quality trout, biomass or species diversity monitoring in 2014 due to high water conditions.

Provisional Monitoring Parameters	2014 Monitoring	Responsible Party
<u>ORV INDICATORS</u>		
Recreational Fishing:		
Quality Trout	Not conducted ³	CPW
Biomass	Not conducted	CPW
Species Diversity	Not conducted	CPW
Total Fishing Effort	Ongoing	SG
Catch/Unit Effort	Ongoing	SG
Recreational Boating:		
Narrative during Provisional Period	Not applicable	SG
<u>ORV RESOURCE GUIDES</u>		
Recreational Fishing:		
Flow Guides	Year-end evaluation	SG
Flushing Flow	Year-end evaluation	SG
Recreational Boating:		
Usable Days	Year-end evaluation	SG
Visitor Preference Surveys	Ongoing	SG
Water Quality:		
CDPHE existing water quality standards	Year-end evaluation, during Provisional Period	MonWG
Temperature:		
CDPHE existing temperature standards	Year-end evaluation	MonWG

Table 1. Summary of monitoring and evaluation efforts undertaken by the SG and other agencies during 2014.

³ Due to season-long high water conditions, CPW personnel were not able to conduct biosurveys on the Upper Colorado River Wild & Scenic stream reaches.

MONITORING BY OTHER ENTITIES

U.S Bureau of Land Management

Within the Wild & Scenic segments, the U.S. Bureau of Land Management supports two water temperature monitoring locations in Wild & Scenic segments 4 & 5. In addition, the BLM is undertaking monitoring to support other ORVs, including monitoring populations of bald eagles, river otters, riparian vegetation, and noxious weeds.

U.S. Geological Survey

Figure 1 represents the annual daily average streamflow recorded at the U.S. Geological Survey (USGS) gage **09058000 Colorado River NEAR KREMMLING, CO** and Figure 2 represents USGS gage **09070500 Colorado River NEAR DOTSERO, CO**. The SG has selected these two stream gages for monitoring flows in the Wild & Scenic stream segments. These gages are operated by the USGS as part of the National Streamflow Information Program (NSIP)⁴.

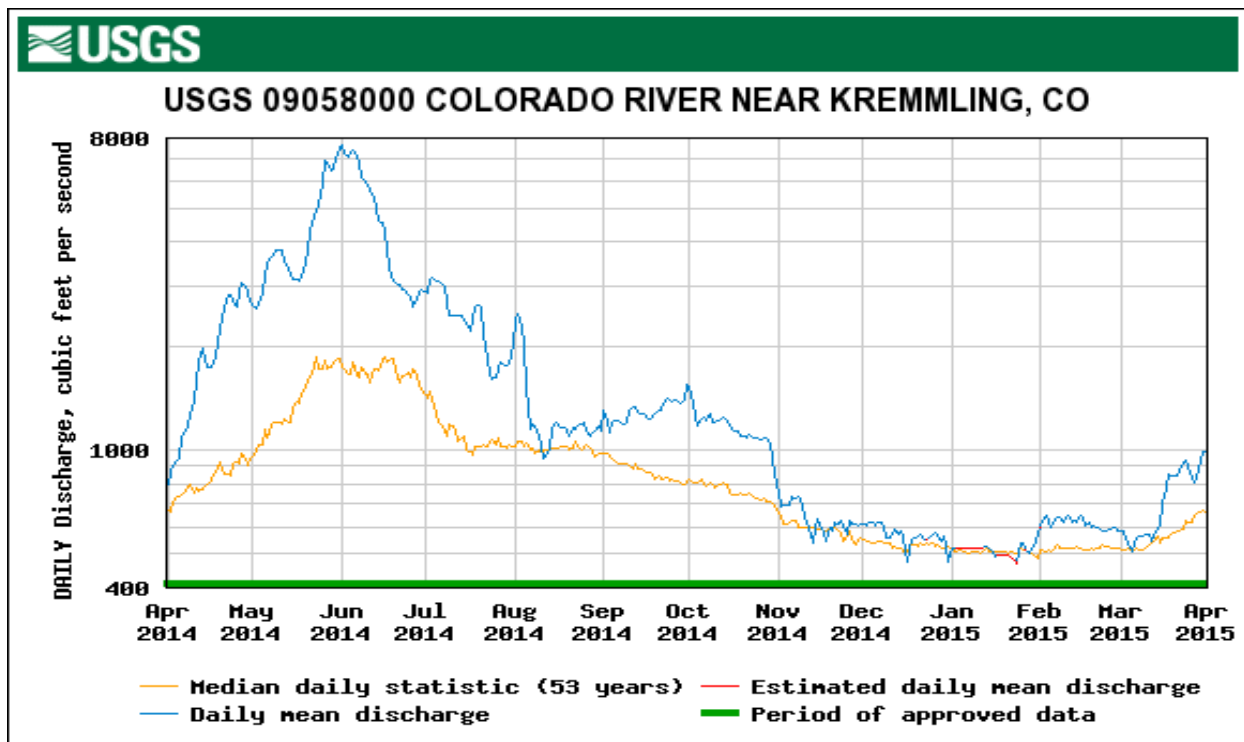


Figure 1. Daily average streamflow during 2014 at USGS gage **09058000 Colorado River NEAR KREMMLING**.

⁴ 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.

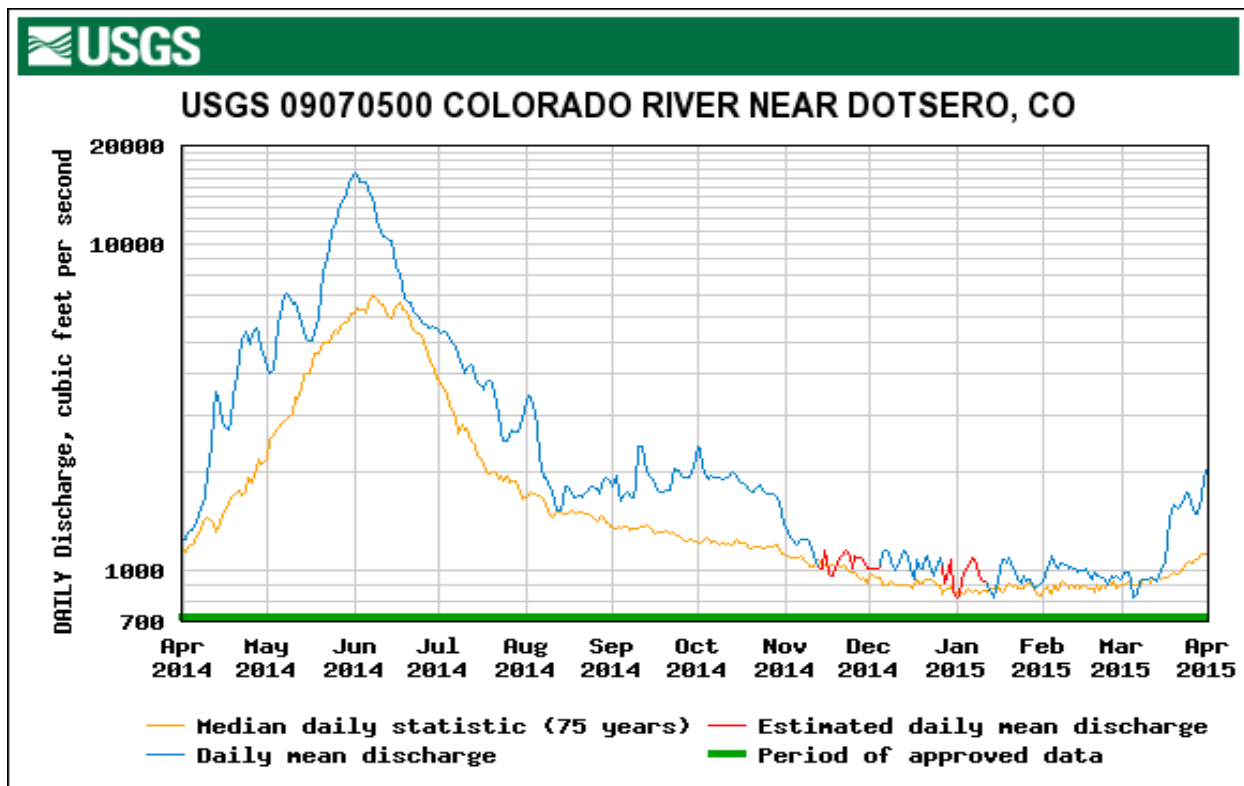


Figure 2. Daily average streamflow during 2014 at USGS gage **09070500 Colorado River NEAR DOTSERO, CO.**

2014 Hydrology⁵

The January 1, 2014 basin snowpack began at 102-percent of median. Winter brought wet weather, resulting in the basin’s precipitation for January, February, and March, being recorded at 152-percent, 150-percent, and 116-percent of average, respectively. Due to this well above-average winter precipitation, the Upper Colorado River Basin’s snowpack reached 130-percent of median by April 1. As a result, the April 1 runoff projections ranged from 130- to 150-percent of average for most of the Upper Colorado River sub-basins.

April precipitation was just 82-percent of average with the snowpack dropping to 122-percent of median by May 1. Wetter conditions returned to the basin in May, with precipitation for the month being recorded at 133-percent of average. Due to wet May conditions, the snowpack reached 223-percent of median by June. Both the May 1 and June 1 streamflow forecasts reflected the well

⁵ Information taken, in part, from 2014 HUP summary report

above average snowpack totals, with most of the Upper Colorado River’s sub-basins April-July runoff projections coming in at between 140 and 150 percent of average. The high stream flow levels and potential for flooding relieved any need for the Upper Colorado River Recovery Implementation Program to implement Coordinated Reservoir Operations to enhance spring peak flows for endangered species in the 15-Mile Reach.

The peak flows on the Upper Colorado River occurred on June 1, 2014. The flows at USGS gage at Kremmling peaked at 7,640 cfs, which is the 6th highest peak flow on record (1962-2014). Calculated flows for the Colorado River above Dotsero indicate flows peaked at 16,500 cfs, which is the 4th largest calculated peak flow on record (1962-2014).

Colorado Parks and Wildlife

Biosurveys conducted by CPW provide data that can be used in assessing the provisional ORV Indicators for Recreational Fishing. CPW conducts fish population surveys at the sites shown in Figure 3 on an annual basis, depending on water conditions. High water conditions prevented CPW personnel from conducting biosurveys in the Wild & Scenic stream segments during 2014.

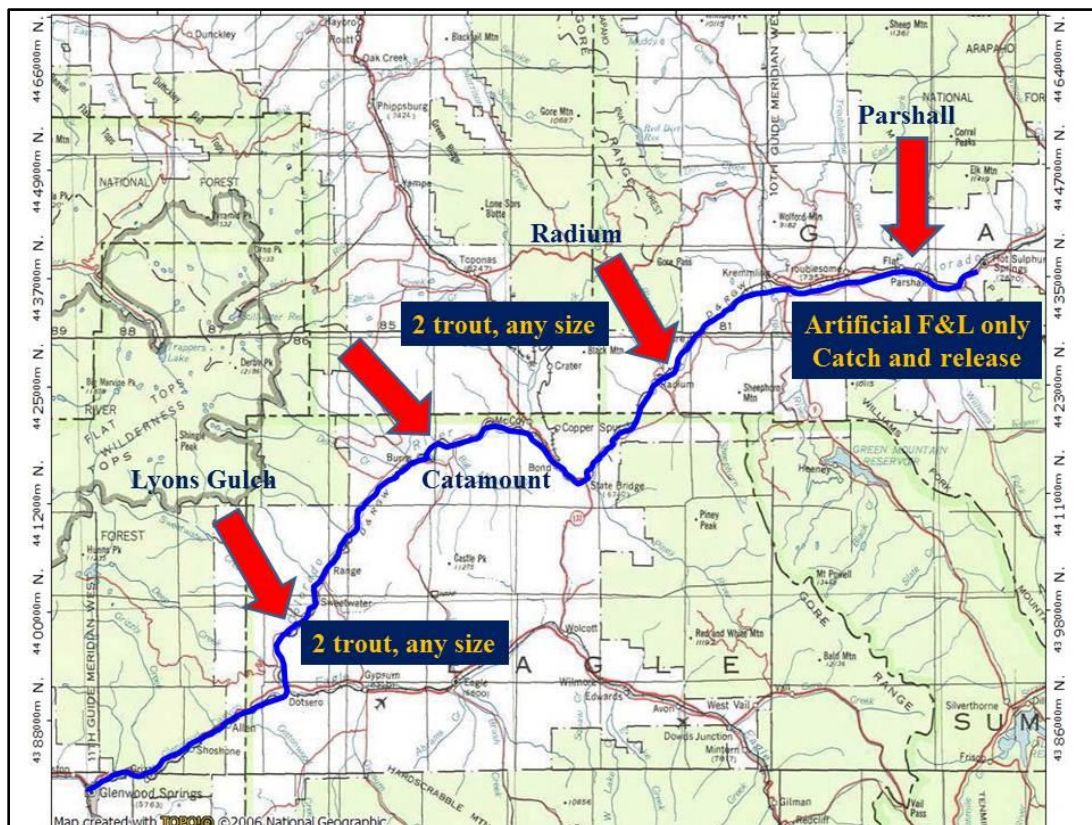


Figure 3. Colorado Parks and Wildlife Biosurvey Sample Sites and Associated Fishing Restrictions

In addition to Quality Fish⁶ 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 & Scenic stream reach⁷. Table 2 lists 14 fish species and three hybrids captured by CPW at the Radium sample site, as of 2013.

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

Table 2. Species diversity determined by CPW at Wild & Scenic Water biosurvey sites.

MONITORING BY STAKEHOLDER GROUP

Water Temperature

Since 2012 the Wild & Scenic Monitoring Work Group (MonWG) has been collecting and reviewing water temperature data at seven sites within the Wild & Scenic segments 4 -7. Table 3 and Figure 4 below show the locations and entities responsible for these water temperature stations.

Currently the MonWG maintains three water temperature sites which are located on the Colorado River: at State Bridge; below the confluence with Red Dirt Creek; and upstream of the confluence of the Eagle River near Dotsero.

The BLM maintains two water temperature sites located on the Colorado River at Pumphouse and Radium.

Additionally, the USGS maintains two real-time temperature monitoring sites anchoring the Wild & Scenic segments. One is the Kremmling gage, located above Wild & Scenic Segment 4 (USGS gage

⁶ The SG Plan contemplates using # of quality fish per acre vs. CPW's units (# of quality fish per mile).

⁷ CPW and Trout Unlimited are also conducting preliminary studies of *P. californica* 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.

09058000 Colorado River NEAR KREMMLING, CO), and the second one is located in lower Wild & Scenic Segment 7 (USGS gage 09071750 Colorado River ABOVE GLENWOOD SPRINGS, CO). At this time there are no stations collecting simultaneous air and water temperature readings.

The MonWG is currently archiving their water temperature data in the Water Information Library and Unified Reference (WILBUR) database maintained by the Grand County Water Information Network (GCWIN). These data are accessible on GCWIN’s website at <http://wilbur.gcwin.org>.

TEMPERATURE STATION	Agency
Colorado River Near Kremmling - 0905800	USGS
COR - Pumphouse	BLM
COR - Radium	BLM
Colorado River Above State Bridge	Wild & Scenic
Colorado River Below Red Dirt Creek	Wild & Scenic
Colorado River Above Dotsero	Wild & Scenic
Colorado River Above Glenwood Springs - 09071750	USGS

Table 3. Wild & Scenic Water Temperature sites.

Sediment & Macroinvertebrate Sampling

The stakeholder group contracted Dr. Brian Bledsoe and Johannes Beeby from Colorado State University through the Eagle River Watershed Council (ERWC) to conduct additional sediment and macroinvertebrate sampling at five locations along the Colorado River within Wild & Scenic segments 4 – 6. This work was intended to be a continuation of the 2013 sampling at some of the locations from the ERWC’s “Colorado River In Eagle County Inventory and Assessment” and was conducted to evaluate sediment movement after a high run-off season. Only three of the five locations were sampled due to high flow levels in 2014 and to date none of this data has been thoroughly analyzed. In addition, macroinvertebrate sampling at the five locations was added at minimal cost, and samples were preserved for later analysis.

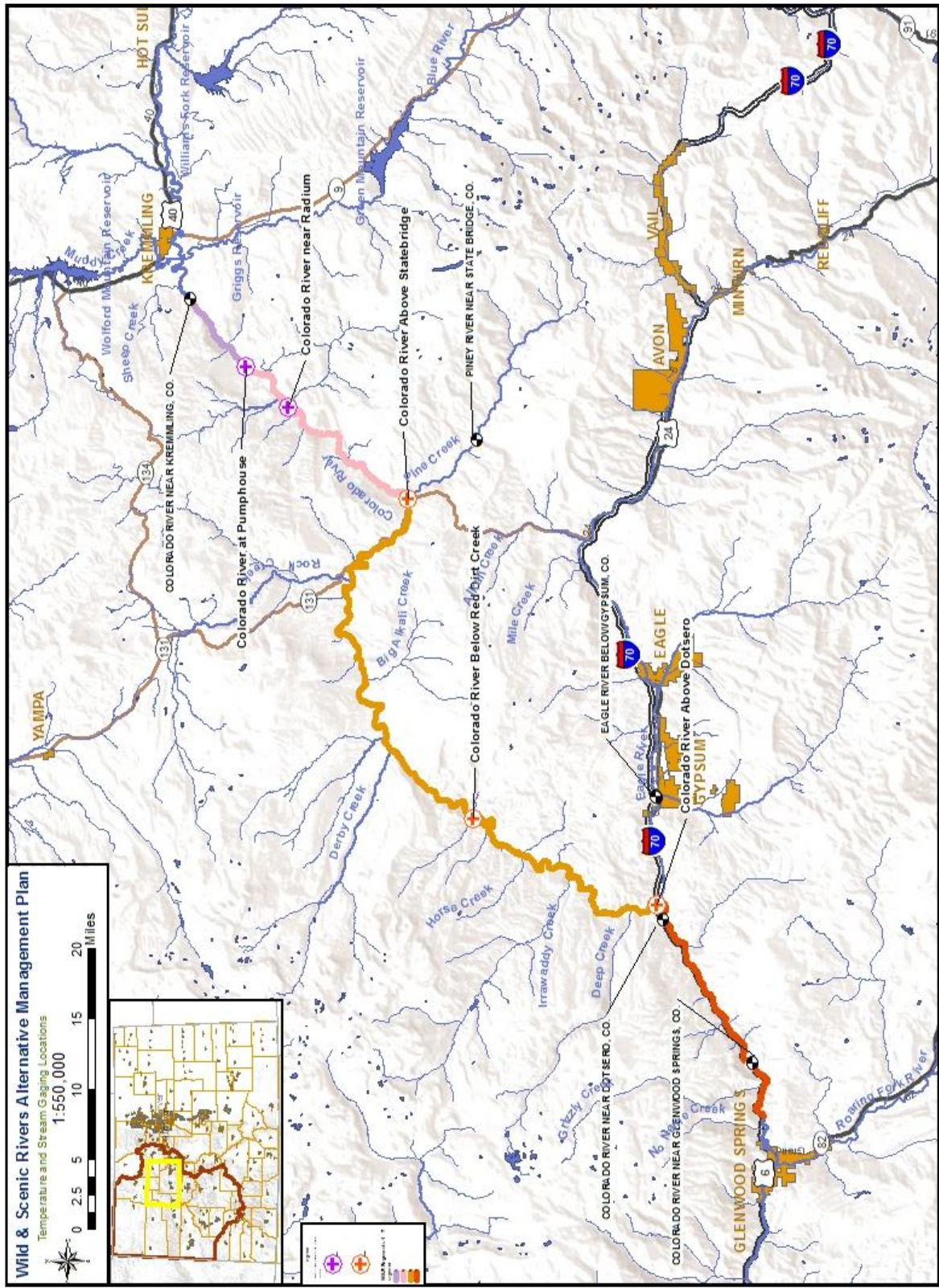


Figure 4. Site locations for temperature monitoring conducted by SG and USGS.

User Surveys

Following the user survey efforts⁸ conducted in 2012 and 2013, the SG again contracted with RRC Associates to continue floatboating and fishing surveys with the understanding that the data collected from user surveys would be used to inform management decisions, better understand and improve methods for future survey efforts, and to explore data analysis methods that could support future decision-making regarding the ORVs.

RRC Associates presented the results of the 2014 user surveys during the January 2015 SG meeting. RRC's annual survey reports can be downloaded from www.upcowildandscenic.com.

EVALUATION OF MONITORING RESULTS

The SG Plan uses two distinct measures to monitor and protect the ORVs:

ORV Indicators: Indicators are used to gauge whether the ORVs are being adequately 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 4 as the Provisional ORV Indicators for Recreational Fishing⁹.

⁸ The concept of a recreational floatboating survey (user survey) is documented as a possible monitoring action in Attachment B.2.C(2) of the SG Plan.

⁹ Provisional ORV Indicators for Recreational Fishing apply to the Upper Colorado River from Gore Canyon to Red Dirt Creek.

Type	Name	Current level (if available)
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 4. Provisional ORV Indicators for Recreational Fishing

Comparisons of the Provisional ORV Indicators for Recreational Fishing and the CPW biosurvey results were not possible because high water conditions prevented biosurveys data collection during the 2014 field season.

Recreational Floatboating

The SG Plan includes the following narrative standard as the Provisional ORV Indicator for Recreational Floatboating¹⁰:

“Protect the existing range and quality of the outstanding floatboating opportunities. This narrative standard does not imply mirroring any specific hydrology.”¹¹

The SG’s 2014 user surveys continued to refine survey methods that can be used to better understand the resource and improve future survey efforts. In addition, the SG is continuing work with RRC Associates to obtain the best possible counts of all people using the resource (e.g., user days and private vs. commercial use). Efforts to identify and evaluate important factors that influence the overall boating experience will continue in 2015.

¹⁰ Provisional ORV Indicators for Recreational Floatboating apply to the Upper Colorado River from Gore Canyon to No Name in Glenwood Canyon.

¹¹ The intent of the SG is to develop and incorporate objective criteria into the final ORV Indicators for Recreational Floatboating.

Provisional Resource Guides

Recreational Fishing

The Provisional Resource Guides shown in Table 5 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 Plan¹². 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.

Season	Number of Days in Season	Month	Seasonal Fish Flow Range and Midpoint (cfs)
1	91	April	800-1000 900 midpoint
		May	
		June	
2	92	July	600-1000 800 midpoint
		August	
		September	
3	61	October	400-800 600 midpoint
		November	
4	121	December	400-600 500 midpoint
		January	
		February	
		March	

Table 5: Provisional Resource Guides for Recreational Fishing

¹² During the provisional period, the 5-year rolling average will include data from the previous 4 years.

In order to calculate the seasonal average flow and rolling 5-year average flows, the Kremmling gage (USGS gage 09058000 Colorado River NEAR KREMMLING, CO) was assessed for the Daily Mean Discharge data from April 1, 2008 to March 31, 2015.

Figure 5 provides a comparison of 5-year average flows at the Kremmling Gage to the Wild & Scenic Provisional Resource Guides for 2013 and 2014. In all but one case, the 5-year average streamflows exceed the mid-point value of the seasonal flow ranges for each season. In all years, the average flows fell in the range of acceptable flows defined in the Provisional Resource Guides for Recreational Fishing.

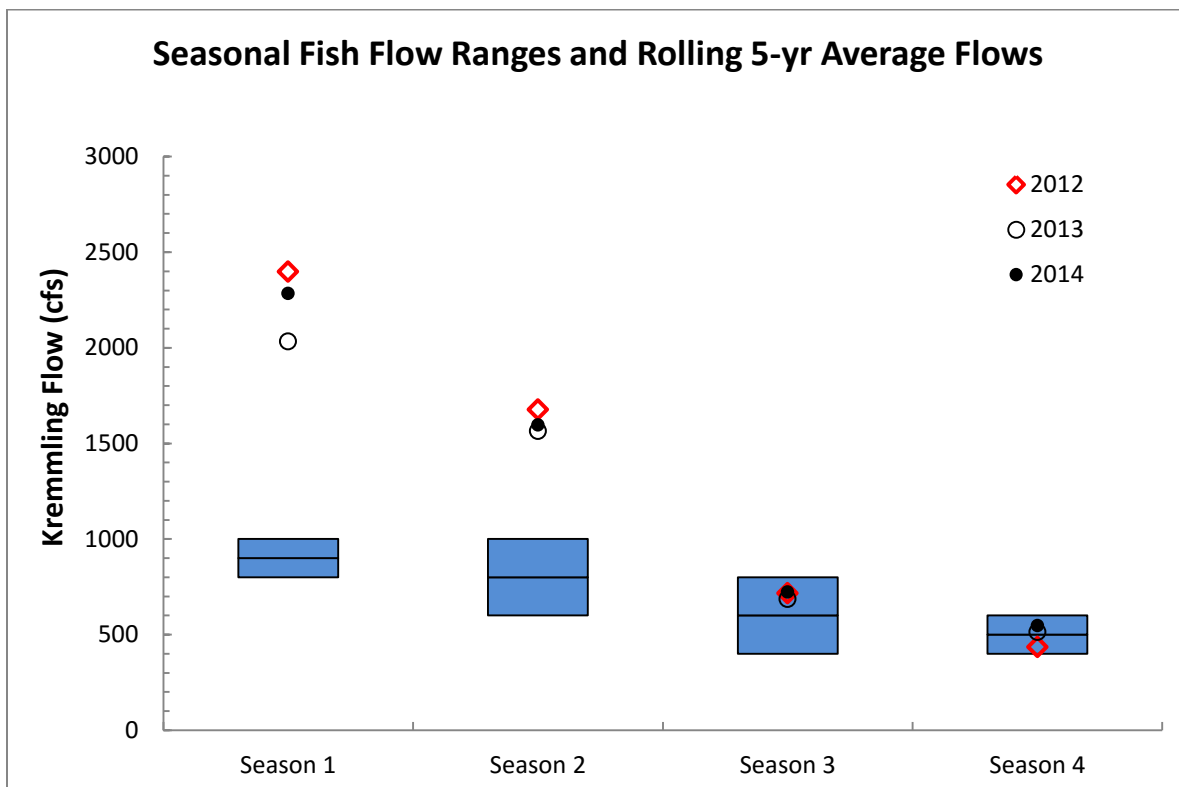


Figure 5. 5-year average streamflows for 2012, 2013, and 2014 compared to Wild & Scenic Provisional Resource Guides for Recreational Fishing (represented by blue bars).

Recreational Floatboating

Year-Type Determination

For Recreational Floatboating, the SG reviews the Usable Days for each preceding boating season by comparing actual flows with the criteria shown in the charts in Sections III.C.2.a (for Segments 4-6) and Section III.C.2.b (for Segment 7) of the SG Plan. The year-type for use with the charts is determined from the annual measured flow (aka the depleted flows) at the Kremmling gage for

Segments 4-6 and the Dotsero gage for Segment 7. The numeric criteria described in Table 6 and Table 7 below outline the number of expected boatable days (“Usable Days”) within the recreational floatboating season of April 1 to September 30 and flow based recreational opportunities, expressed as a range from minimum to median and maximum (**min#(median#)max#**) under each floatboating experience category and determined year type. The table compares the expected number of usable days to the actual number of usable days observed during the 2014 season. The year-type determination and corresponding Usable Day criteria for 2014 are summarized below.

Segments 4 – 6: The 2014 total annual flow measured at the Kremmling gage was 1,207,257 acre-feet, which is greater than 769,500 acre-feet; therefore within the Wettest 25% Year type category.

Segment 7: The 2014 total annual flow measured at the Dotsero gage was 2,170,195 acre-feet, which is greater than 1,519,500 acre feet; therefore within the Wettest 25% Year type category.

Usable Days Evaluation

Segments 4 – 6: Provisional flow guides for the Wettest 25% Years are illustrated in Table 6. There were 180 total usable days in these segments during the 2014 boating season (April 1 - September 30), including 50 “Green” usable days (lower than the median) and 106 “Blue” usable days (higher than the median). There were 24 “Black” usable days during the 2014 season (higher than the median). Figure 6 illustrates mean daily streamflow and the provisional range of floatboating opportunities in these segments during the 2014 boating season.

2014		Total Usable Days	Green Opportunities (700-1,300 cfs)	Blue Opportunities (1,300-4,000 cfs)	Black Opportunities (4,000-7,400 cfs)
Annual Flow: 1,207,257 AF Year Type: Wettest 25%	Expected	74 (115) 141	69 (106) 127	0 (14) 33	0 (0) 0
	Observed	180	50	106	24

Table 6. Number of Usable Days in Segments 4 – 6 Colorado River near Kremmling in 2014 [min (med) max]

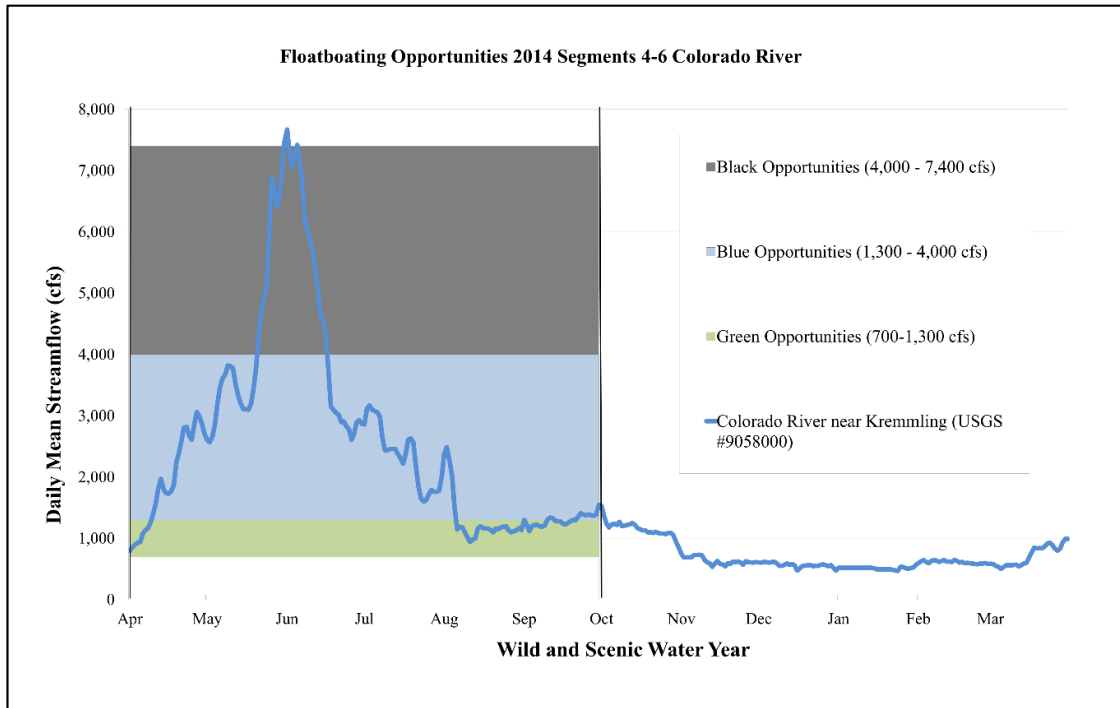


Figure 6: 2014 Floatboating Opportunities in Segments 4-6

Segment 7: Provisional flow guides for the Wettest 25% Years are illustrated in Table 7. There were 158 total usable days in this segment during the 2014 boating season (April 1 - September 30). There were 34 “Green” usable days (lower than the median), and the number of “Blue” usable days was 96 (higher than the median). There were 28 “Black” usable days during the 2014 season (higher than the median). Figure 7 illustrates mean daily streamflow and the provisional range of floatboating opportunities in this segment during the 2014 boating season.

2014		Total Usable Days	Green Opportunities (1200/1250-1800 cfs)	Blue Opportunities (1,800-5,500 cfs)	Black Opportunities (5,500-8,600 cfs)
Annual Flow: 2,170,195 AF	Expected	138 (161) 178	75 (86) 121	40 (61) 91	0 (2) 11
	Observed	158	34	96	28
Year Type: Wettest 25%					

Table 7. Number of Usable Days in Segment 7 Colorado River near Dotsero in 2014 [min (med) max]

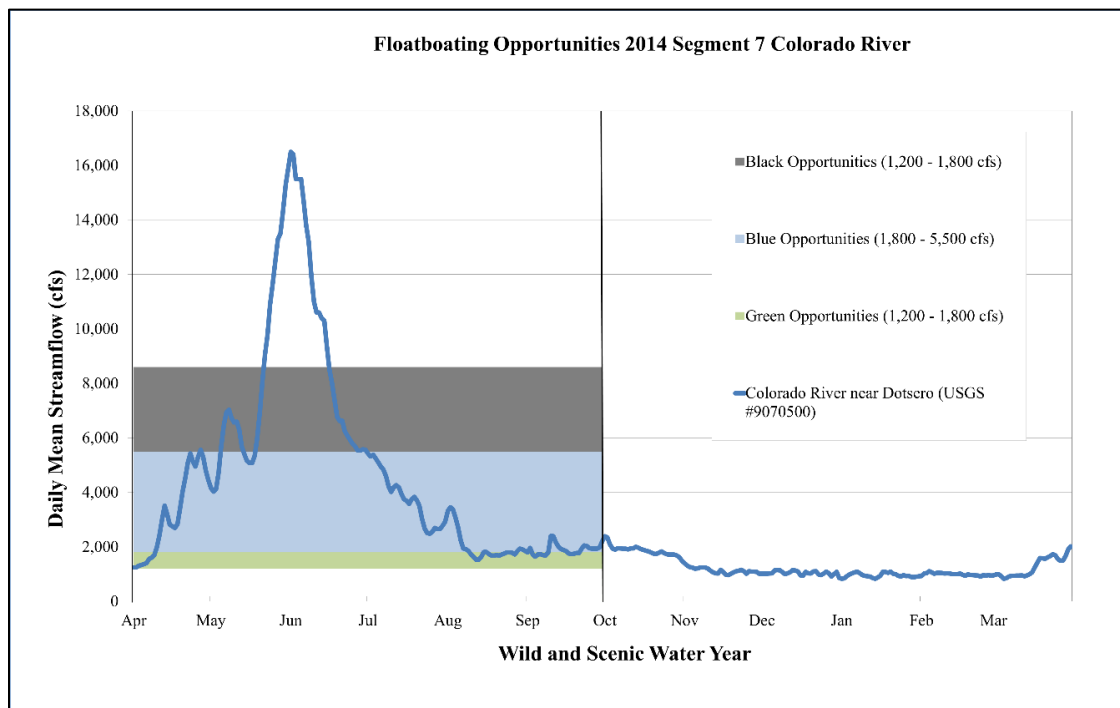


Figure 7: 2014 Floatboating Opportunities in Segment 7.

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 (Main stem 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 1, 2016, lists Segment COUCUC03 for Arsenic, Temperature, and Aquatic Life. While Segment COUCUC03 encompasses all of the Wild & Scenic Segments 4, 5, 6, and 7, it also includes reaches of the Colorado River above and below the Wild & Scenic segments. The current 303(D) listings are for specific stream reaches located upstream of Kremmling, which is outside the Wild & Scenic segments. The next Administrative Action Hearing for Regulation # 93 is scheduled to occur in December 2017.

Temperature

Temperature Evaluation

All of the SG's 2014 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.¹³

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

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. Only one Wild & Scenic temperature site in 2014 showed a MWAT temperature excursion in mid-August as compared to the currently adopted stream temperature standard (18.3°C). The "Colorado River at No Name" temperature site reported the only MWAT temperature (23.9°C) excursion. No Daily Max excursions were reported at any sites as well as wintertime excursions.

The 2014 temperature data shows a continued downstream warming trend through Wild & Scenic segments 4 – 7 that is expected with elevational change and ambient air temperature effects. Table 8 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 & Scenic Segments 4-7 during 2014. The Colorado River at No Name temperature site is the only site with repeated MWAT excursions from 2012 – 2014.

¹³ Colorado Department of Public Health and Environment, Water Quality Control Commission 5 CCR 1002-33, January 1, 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 8. CDPHE Numeric Temperature Standards for Cold Stream Tier II.

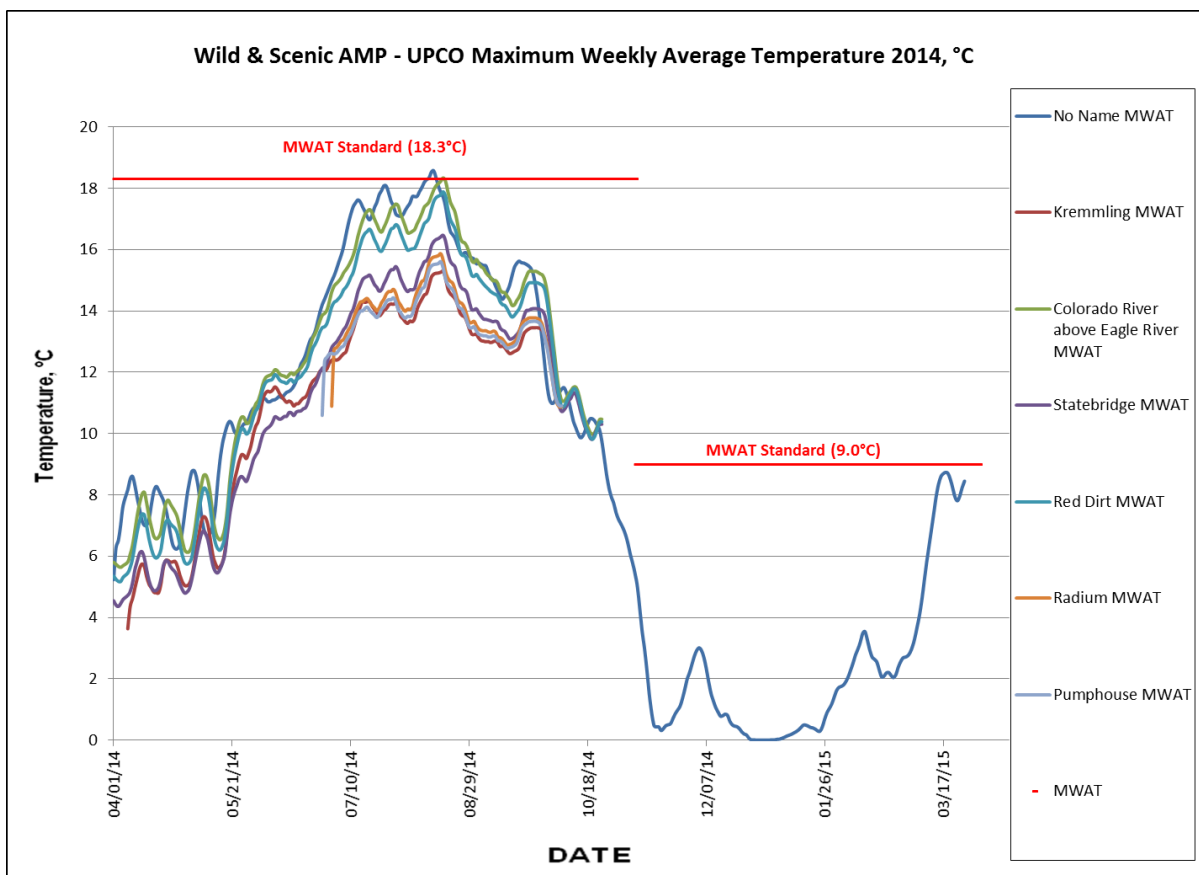


Figure 8. 2014 Measured Maximum Weekly Average Temperatures vs. CDPHE Standard.

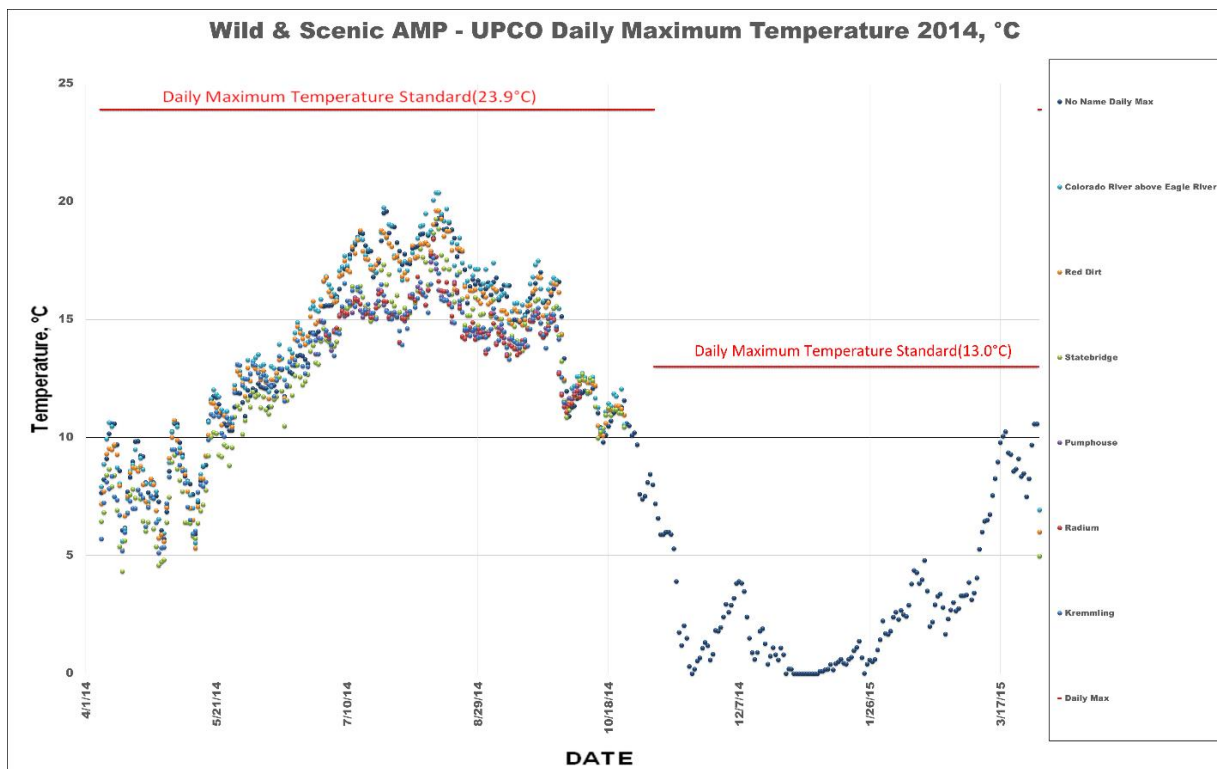


Figure 9. 2014 Measured Daily Maximum Temperatures vs. CDPHE Standard.

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 2015:

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.

Fish Surveys. CPW plans to continue biosurveys in the Wild & Scenic stream segments and will continue to explore methods for monitoring macroinvertebrate populations, particularly research relating *P. californica* exuviae counts to conventional methods of estimating *P. californica* populations. The SG will evaluate CPW’s 2015 biosurvey data in accordance with the SG Plan and include the results in the 2015 Annual Monitoring Report.

Floatboating Surveys and Creel Census. The SG contracted with RRC Associates to continue a comprehensive Floatboating survey effort in 2015 that builds upon and incorporates lessons learned from previous user surveys. The 2015 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 2015, 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 & Scenic Rivers Fund and other sources.

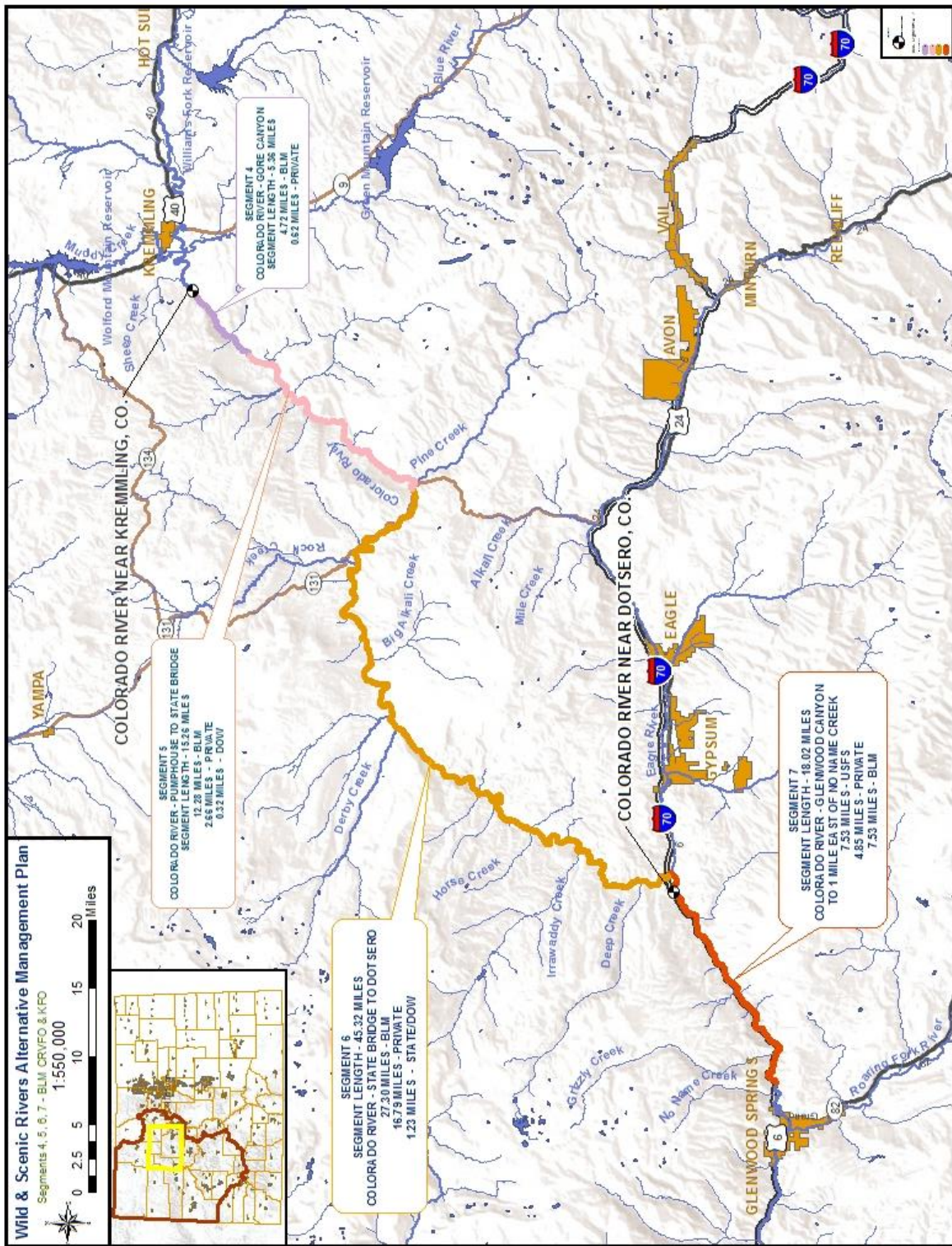
LIST OF ATTACHMENTS:

Attachment A: Project Area Map

Attachment B: Endorsing Entities

Attachment C: Timeline and Task List from the SG Plan

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 following stakeholder entities endorsed the final SG Plan submitted to BLM and USFS in January 2012:

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 & 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.¹⁴

¹⁴ 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

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

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.

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.