

Potential ORV Concerns & Considerations

	Spring (Apr-June) Rising Limb of Hydrograph	Summer (Jul-Sep) Falling limb of hydrograph	Fall (Oct-Nov) Transition	Winter (Dec-Mar) Base Flow Period
RECREATIONAL FISHING ORV (Segments 4-6)				
Physical Habitat	Rainbow Trout spawning Brown trout hatch (before peak) High flows may adversely impact spawning redds	Rainbow trout hatch (after peak) All trout growing to prep for winter	Brown trout spawning (rapid decrease in flow may strand eggs- CPW prefers flows stable by end of Oct)	Overwintering in pool (sensitive to low flows, low temp, low DO, limited habitat connectivity)
Macroinvertebrates	Higher flows clean sediment -increasing recruitment Stonefly hatch (sensitive to water temperature)	Stoneflies sensitive to drastic falling flows		
Water Temperature	High temperatures and possible MWAT exceedances during dry/dry typical years	High temperatures possible in all year types; possible MWAT exceedance	High temperatures possible during very low base-flow years	Extreme low temperatures - possible anchor ice
Recreational Experience	High flows: can limit wade fishing and increase turbidity	CPW Voluntary fishing closures during dry / dry typical years	Low flows can impair "floatability" (water depth, float speed).	
OPPORTUNITIES FOR COOPERATIVE MEASURES (In Conjunction with Long-Term Protective Measures)	Coordinate flows to facilitate a flushing flow, to encourage channel maintenance functions and processes, and to address temperature concerns.	Possible channel/facility improvements Opportunistic coordination of flows to achieve temperature objectives Higher flow opportunities during some years to achieve flushing flows	Possible channel/facility improvements	
MONITORING ACTIVITIES	CPW Biosurveys. Deploy W&S stream temperature dataloggers		W&S Macroinvertebrate field work. Retrieve stream temperature dataloggers and download data.	W&S temperature collection / study
COORDINATION CONSIDERATIONS	Begin weekly email updates Begin participation in State of the River calls Evaluate reservoir storage to anticipate possible upcoming low flows	Participate in HUP calls Consult with reservoir operators	Determine frequency of email updates	

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RECREATIONAL FLOATBOATING ORV				
Floatboating ORV Flows	Low or High flows outside the range of floatboating opportunities may be problematic for floatboaters High flows may help maintain beaches and riparian vegetation, benefitting the floatboating experience	Target Floatboating opportunity levels as defined in the SG Plan Gore Canyon Race in August (Target flow = 1000-1400 cfs)	Outside W&S boating season; use continues, but typically decreased from summer levels.	Outside W&S boating season; very low use expected. New Year's Day float from Shoshone to Grizzly Creek Rest Area.
Early Season Boatable Days	Above 860 cfs for at least 4 days during May 15-31 and 9 days in June			
OPPORTUNITIES FOR COOPERATIVE MEASURES (In Conjunction with Long-Term Protective Measures)	Look for opportunities to accommodate desired flow ranges.	Enhance flows to meet monthly Boatable days. Long term protective measures for late-season storage deliveries of water to the Grand Valley area are beneficial for floatboaters and anglers.		
MONITORING ACTIVITIES	Install traffic counters (May 1st target date), begin intercept surveys, setup kiosks. Update "boatable days" tracker.	Conduct Intercept surveys, maintain traffic counters	Wrap-up intercept surveys and kiosks, download & remove traffic counters (September 30th target date)	
COORDINATION CONSIDERATIONS	Begin email updates, as needed; begin participation in State of the River calls; evaluate reservoir storage to anticipate possible upcoming low flows. Touch base with outfitters, participate in agency/outfitter meetings.	Participate in HUP calls; consult with reservoir operators re: reservoir operations	Determine frequency of email updates, compare actual to projected W&S Year Type.	New Year's Day float coordinated by Colorado Whitewater. Data deadlines for ORV and Resource Guide information; establish W&S Year Type. Evaluate Boatable Days Resource Guide.

Cooperative Measures

Cooperative Measures are a complement to the Long-Term Protection Measures, as defined in the plan they are voluntary strategies implemented under the terms of the Upper Colorado Wild and Scenic Plan

Potential Water Releases	Season	Party	Benefits
Middle Park Water in Granby	Year-Round	Middle Park Water Conservancy District (MPWCD)	Potential flushing flows, temperature mitigation, flow stabilization as ancillary benefits to delivery of water for allowed beneficial uses consistent with the Windy Gap Water Rights
Grand County water in Granby	Year-Round	Grand County	Potential flushing flows, temperature mitigation, flow stabilization as ancillary benefits to delivery of water for allowed beneficial uses consistent with the Windy Gap Water Rights
Coordination of 5412.5 water releases from Granby	July - October	U.S. Fish and Wildlife Service with input from upstream water users	Municipal/Recreational flows and enhancement of 15 mile reach target flows
The Colorado River Cooperative Agreement (CRCA)	Various	43 parties that have either signed the agreement or are receiving benefits	Long-term partnership to benefit water supply, water quality, recreation, and the environment on both sides of the Continental Divide
Voluntary Water Management & Facility Coordination			
Shoshone Outage Protocol	Year-Round	USBR, Denver Water, The Colorado Water District, Middle Park Water Conservancy District, Northern Water, Northern Water Municipal Subdistrict, Grand Valley Water Users Association, Orchard Mesa Irrigation District, and Grand Valley Irrigation Company	Increased flows during Shoshone Power Outage
West Slope Water from Shoshone Relaxation	Calendar year following implementation of call reduction	Colorado River District, Middle Park Water Conservancy District, Grand County and other West Slope Water Users	Potential Increase in water availability
Reservoir Management by W&S entities	Varies, primarily between April - October	USBR, Northern Water, Denver Water, The Colorado River District	Increased flows
River Operations/Coordination (State of the River/CROs)	May - June	Upper Colorado reservoir owners, CROs participants	Enhance the natural peak flows for 10 days to two weeks in the 15-mile reach
Water Acquisitions to Supplement Flows			
Purchase Storage or direct flow water rights	Year-Round	SG working with voluntary parties, including CWCB ISF Program	Acquire water rights and interests in water to preserve or improve flow and the natural environment
Lease Storage or direct flow water rights	Year-Round	SG working with voluntary parties, including CWCB ISF Program	Acquire water rights and interests in water to preserve or improve flow and the natural environment
Non-diversion agreements	Typically during irrigation season, but may occur at other times	SG working with voluntary parties	Increased flows
13CW3109 - Glenwood Recreational In-channel Diversion (RICD)	April 1 - September 30	American Whitewater, Aurora Water, Bureau of Land Management, Colorado River Water Conservation District, Grand County, Colorado Springs, Colorado Water Conservation Board, and Denver Water	Increased flows
10CW298 - Gore Canyon Whitewater Park Recreational In-channel Diversion (RICD)	April 5 - October 15	Aurora Water, Bureau of Land Management, Colorado River Water Conservation District, Colorado Springs, Colorado Water Conservation Board, Denver Water, Middle Park Water Conservancy District, Northern Colorado Water Conservancy District and the Municipal Subdistrict, Northern Colorado Water Conservancy District, and Summit County.	Increased flows
Physical Improvements in Stream Corridor			
Habitat Improvement projects		Private Land Owners / Local Watershed Groups	
Channel restoration / modification for low flows			
Revegetation / Invasive removal			
Facility Improvements	Year-Round	BLM, USFS, Eagle County, Grand County, Garfield County, CO Dept. of Transportation	Better infrastructure to support human access to and use of the river corridor
Stream Improvements	Year-Round	Federal, State, County, Private Groups, Local Watershed Groups	Maintenance of the ORV's
Coordination and Communication			
Outreach	Year-Round	Federal, State, County, Private Groups, Local Watershed Groups	Facilitation and Education
Facilities Management	Year-Round	BLM, USFS, Eagle County, Grand County, Garfield County, CO Dept. of Transportation	Responsive to Intercept Survey Results; facilities are a key aspect of boaters' & anglers' experience
Fish Stocking		CPW	
County, State, BLM/USFS projects	Year-Round	BLM, USFS, Eagle County, Grand County, Garfield County, CO Dept. of Transportation	Minimize impacts to ORVs through coordination with project proponents and permitting agencies
Supplemental data collection			

Long Term Protective Measures

Long Term Protective Measures are expected to provide significant protection of the ORV's, unless a Material Change in Circumstances occurs. These are defined within the plan.

	Season	Party	Benefits
<i>Appropriation of CWCB Instream Flow Right (Completed)</i>	<i>Year-Round</i>	<i>Colorado Water Conservation Board (CWCB)</i>	<i>Increased flow protection</i>
Delivery of Water to a Downstream Demand or Decree			
Historic User Pool (HUP)	June - October	Upper Colorado reservoir owners / HUP participants	Coordinated and Additional Water Releases
Instream flow water rights	Year-Round	Colorado Water Conservation Board (CWCB)	Increased flow protection
Existing Senior Water Rights			
Upper Colorado Recovery Program			
5412.5 Water From Granby	July - October	U.S. Fish and Wildlife Service with input from upstream water users	Municipal/Recreational flows and enhancement of 15 mile reach target flows
Fish Pool Release (Wolford)	July - October	U.S. Fish and Wildlife Service with input from upstream water users	Municipal/Recreational flows and enhancement of 15 mile reach target flows