

WCN-SMcCall  
ENV-4.00/PRJ-13.00

Subject: Wayne N. Aspinall Unit Operations

Dear Interested Party:

Enclosed is a summary of our January 19, 2006 meeting to coordinate Reclamation's operation of the Aspinall Unit. The meeting was held at the Pavilion in Montrose. Highlights of the operation meeting include:

- January snowpack and runoff forecasts are near average for the Gunnison Basin and if this trend continues Blue Mesa will fill this year. However, it is early in the snow season and forecasts may increase or decrease significantly by spring runoff season.

- Black Canyon flows have been increased to around 700 cfs in response to normal snowpack. Projections show good recreation flows through the summer but probably not a significant spring peak—however, as indicated above, all projections are very preliminary.

-A presentation on the Gunnison Gorge fishery was made by the Colorado Division of Wildlife. Total trout biomass is very high; however whirling disease and favorable flow conditions have caused a marked shift from a rainbow to a brown trout fishery. The powerpoint presentation is included with the electronic distribution of this meeting summary. Call Dan Kowalski at 970-252-6017 for further information.

If you have any suggestions on improving the operation meetings or summaries, please let us know. The next operation meeting will be on Thursday, April 20 at 1 p.m. at Reclamation's Grand Junction Office. If you have questions, please call me at (970) 248-0652.

Sincerely,

/s/

Dan Crabtree  
Water Resources Group Chief

Enclosure  
Distribution (see attached list)

bc: w/ enclosure

Curecanti Field Division, Attention: CCI-100 1820 South Rio Grande Avenue, Montrose CO 81401

John Bezdek, Office of Interior Solicitor, 1849 C St. NW, Mail Stop 6412, Washington, D.C. 20240

Regional Director, Salt Lake City UT  
Attention: UC-400, UC-434, UC-436, UC-438, UC-600, UC-700, UC-720, (ea w/encl)

Director, Technical Service Center, Denver CO  
Attention: D-8510 (w/encl)

WCN-CDeAngelis, SMoyer, EWarner, BUilenberg, SMcCall, CStanton, EKnight, MSteves,  
DCrabtree, TStroh, JHock (ea w/ encl)

WCS-RSwickard, JSimons, PPage

Distribution List –  
 January 19, 2006 Aspinall Operation Meeting  
 \*An asterisk indicates person attended the meeting

**Daily Sentinel**..... Sally Spaulding, Gary Harmon, Dave Buchanan  
**Delta County Independent** ..... Bob Borchardt\*  
**Gunnison Country Times** ..... Alan Wartes, Pat Daniel, Toni Todd  
**Montrose Daily Press** ..... Jason Shea\*, Jason Monroe, Caitlin Switzer  
**Western Resource Advocates** ..... Bart Miller  
**Club 20** ..... Reeves Brown  
**Colorado State University** ..... Brett Johnson  
**Environmental Defense Fund** ..... Jim Martin  
**Gunnison Basin POWER** ..... Ralph (Butch) Clark, Ramon Reed  
**Gunnison River Expeditions** ..... Hank Hotze  
**Helton & Williamsen, P.C.** ..... Duane Helton  
**High Country Citizens Alliance/Sierra Club** ..... Steve Glazer, Wendy McDermott,  
 Steve Schechter, Shara Rutberg  
**Xcel Energy** ..... Fred Eggleston\*  
**Matt Owens Fly Company** ..... Matt Owens  
**Trout Unlimited** ..... Pat Oglesby, Melinda Kassen, Drew Peternell John Trammell  
**Western Colorado Congress** ..... Randy See, Fred Wetlaufer  
**Argonne National Laboratory** ..... John Hayse, Kirk Lagory  
**University of Montana** ..... Jack Stanford  
**Colorado River Water Conservation District** ..... Dave Kanzer\*, Don Meyer, Eric Kuhn, Bill Trampe,  
 David Halford, Ray Tenney  
**Ridgway Guide Service** ..... Tim Peterson  
**Self** ..... George Sheldon, Bo Gates\*, Marlene Zanatell, Jim Cochran,  
 Jim Hokit, Lynn Johnson  
**Colorado River Energy Distributors** ..... Leslie James  
**North Fork Water Conservancy District** ..... Tom Alvey  
**Tri County Water** ..... Mike Berry\*, Kathleen Margetts  
**Redlands Water and Power Company** ..... Gregg Strong\*, Mike Gross, Verdon Moore\*  
**Uncompahgre Valley Water Users Association** ..... Marc Catlin\*  
**Upper Colorado River Commission** ..... Everett Sunderland  
**Upper Gunnison R. Water Conservancy District** ..... Greg Peterson, Karen Shirley\*, Kathleen  
 Curry, Mark Schumacher, Tyler Martineau, Dennis Steckel, Jim Slattery, Ken Spann  
**City of Grand Junction** ..... Terry Franklin, Greg Trainor  
**Delta County Commissioners** ..... Jan McCracken, Wayne Wolf, Olen Lund  
**Delta County** ..... Duane Freeman  
**City of Delta** ..... Dale Hukle\*, Barry Bullard, Richard Sales, Wilma  
 Ervin  
**Delta County Emergency Management** ..... Rob Fiedler  
**Gunnison County Commissioners** ..... Hap Channell, Paula Swenson, Jim Starr  
**Colorado Department of Agriculture** ..... Jim Miller  
**Colorado Division of Water Resources** ..... Wayne Schieldt, Frank Kugel\*,  
 Richard Rozman, and Cory Denison  
**Colorado Division of Wildlife** Mike Japhet\*, Daniel Brauch\*, Sherman Hebein, Dan Kowalski\*, David Graf,  
 Ryan Swygman, Jay Skinner, Pat Martinez, Rick Anderson, Mark Uppendahl  
**Colorado Water Conservation Board** ..... Randy Seaholm, Ray Alvarado, Michelle Garrison\*,  
 Rick Brown, and Steve Miller

**Colorado Basin River Forecast Center** ..... Brenda Alcorn  
**Wyoming State Engineers Office**..... John Shields  
**Congressman John Salazar** .....Richard Baca  
**Senator Wayne Allard** .....Derek Wagner  
**Senator Ken Salazar** ..... Trudy Kareus, Mary Beth Buescher  
**Army Corps of Engineers**..... Ken Jacobson  
**Bureau of Land Management** ..... Dennis Murphy\*, Jim Ferguson, Roy Smith,  
Rooster Barnhart, Karen Tucker\*, Forest Zerbe, Jesse Kirthorp, Peter Dennett, Julie Stotler, John Arkins\*  
**Fish and Wildlife Service**..... Al Pfister, Chuck McAda, Patty Gelatt\*, George Smith  
**National Park Service** ..... Bill Wellman\*, Myron Chase\*, Ken Stahlnecker, Mark Wondzell,  
Melissa Trammell, Michael Dale\*, Bill Johnson, DanGude Bockus, Bill Hansen, Chuck Pettee, Norm Henderson  
**National Weather Service**..... Bill Reed, Brian Avery  
**National Oceanic & Atmospheric Administration**..... Andrea Ray, Robert Webb, Klaus Weickmann,  
Brad Udall  
**U.S. Geological Survey**.....Paul von Guerard, Bob Jenkins, Gordon Mueller, Gerhard Kuhn, Bob Boulgarz,  
Joe Sullivan\*  
**Western Area Power Administration**..... Brad Warren, Nancy Scheid, Clayton Palmer,  
Jeff Ackerman, Kathy Crane\*, Ken Green, Annette Falvo, Ken Otto, Gary Burton; Margaret Matte, Dave  
Shelton, Heather Patno  
**Bureau of Reclamation**...Carol DeAngelis, Sue Moyer, Ed Warner\*, Steve McCall\*, Coll Stanton\*,  
Don Phillips, Dick Girvan\*, David Steinmark\*, Ted Dunn, Dan Crabtree\*, Chris Cutler, Terry Stroh\*,  
Jane Blair, Paul Davidson, Justyn Hock\*, Erik Knight\*, Nancy Coulam, Dennis Kubly, Dave Harpman,  
Dawn Munger, Rick Vinton, Vern Harrell  
**Interior Solicitors Office**..... John Bezdek, Peter Fahmy  
**Department of Justice**.....Dave Gehlert  
**Project 7** .....Dick Margetts

Aspinall Unit Operation Coordination Meeting  
January 19, 2006

**Participation:** This meeting was held at Reclamation's Office in Grand Junction. Attendees are noted on the distribution list.

**Purpose of Meeting:** The purpose of operation meetings-- held in January, April, and August-- is to gather input for determining upcoming operations for Blue Mesa, Morrow Point, and Crystal Reservoirs. This input is used in Reclamation's development of specific operations for the Aspinall Unit and for the overall 24-month study for operation of Reclamation projects in the Upper Colorado River Basin, which include plans for Glen Canyon, Flaming Gorge, and Navajo Units as well as the Aspinall Unit. Operation of the Aspinall Unit considers projected inflows to its reservoirs, flood control needs, existing water rights, minimum instream flows, target elevations for reservoirs, flow needs for endangered fish and other resources, recreation, hydropower needs and other factors. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the Gunnison River.

Handouts provided included data on 2005 operations; projected inflows to the reservoirs for 2006; and potential operation plans under maximum, most, and minimum probable runoff forecasts.

Activities related to long-term operation planning were also discussed at the meeting. Field studies leading to flow recommendations to help recover downstream endangered fish and to quantify a Federal reserved water right for the Black Canyon of the Gunnison National Park have been completed. The Fish and Wildlife Service flow recommendations for endangered fish have been completed and an Aspinall Operations EIS has been initiated. These operation meetings will be used more in the future to discuss proposals for long-term operation plans to address these and related resource management issues.

**Operations:**

General: Blue Mesa Reservoir capacities are described in meetings as follows: The reservoir holds 940,700 acre-feet. Active capacity is 748,400, inactive capacity is 81,100, and dead storage is 111,200. Live capacity is the active plus inactive, which totals 829,500. Discussions during operation meetings use live capacity.

August-December 2005 Operations: Inflows to Blue Mesa were generally in the 300-550 cfs range during the period and were close to the long-term average. Crystal releases declined over the period as Gunnison Tunnel diversions tapered off. Black Canyon/Gunnison Gorge flows were in the 450 to 500 cfs range. By the end of December Blue Mesa contained 581,000 af and fell to an elevation of 7490 (general target for icing prevention is 7490).

### January-April 2006 Operations:

Based on January 1 snow conditions the forecasted runoff into Blue Mesa was approximately 105 percent (765,000 af) and 104 percent (1,620,000 af) at Whitewater. Based on January 1 data the Blue Mesa forecast places us in an “average wet” category. Readings on January 15 showed a Blue Mesa runoff forecast declining to 750,000 af. It was pointed out that these forecasts are very preliminary and will likely change. The year 2005 was pointed out as an example of optimistic runoff projections early in the year falling to below average conditions by onset of spring runoff.

A preliminary operation proposal was presented by Reclamation that showed Crystal releases increasing beginning in January (releases increased from 500 to 700 cfs the week of January 16<sup>th</sup>). Releases are projected to increase to around 2000 cfs in March and remain in that range through the summer. Because Gunnison Tunnel diversions begin in late March or early April and extend into the fall, actual summer flows in the Black Canyon would be around 1,000 cfs in the summer and 1000-2000 in early spring. At the present time a spring peak is not predicted however this could change with changing snowpack and spring weather conditions. If present trends continue, Blue Mesa is expected to fill in the June-July time period.

Input was requested from those in attendance concerning operations:

- The Colorado Division of Wildlife requested flows in the 550-600 cfs range during the last week of September to facilitate fishery inventories in the Gunnison Gorge.
- The Bureau of Land Management is working on plugging a riverside well in the Austin area the week of February 20th. This well has been cited as a pollution source. In order to move necessary equipment to the site, flows of 600 cfs or less are needed at the site. This would necessitate reducing Crystal releases to possibly 300 cfs. The Colorado Division of Wildlife and Fish and Wildlife Service were ok with this plan. The Colorado River Water Conservation District pointed out that the senior downstream Redlands water right would need to be addressed and Reclamation pointed out that power sale aspects would have to be coordinated with Western Area Power Administration. The Uncompahgre Water Users indicated that diversions for Fairview Reservoir will also have to be coordinated with any flow changes. It was generally believed the plan could be implemented after addressing the Redlands, Fairview Reservoir, and the power questions.

### **Snow Water Equivalent Estimating Model:**

The Colorado Water Conservation Board made a presentation on satellite mapping of snow coverage and water content in the state. As this work is refined it could improve forecasting and flood control.

As a reminder several other websites have been pointed out in the past that provide interesting forecast and related information:

[www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

<http://usbr.gov/uc/water/notice/snowpack.html>

<http://www.drought.unl.edu/dm/index.html>

<http://www.wcc.nrcs.usda.gov/>

### **Aspinall Unit Environmental Impact Statement:**

The EIS will look at alternative Aspinall Unit operation changes to help meet endangered fish flow recommendations while protecting Unit purposes. Flow Recommendations have been developed by the Recovery Program for endangered fish habitat downstream from Delta. Website information is available at [www.usbr.gov/uc/wcao/](http://www.usbr.gov/uc/wcao/).

Work is progressing on developing a No Action alternative which will describe Aspinall Unit operations in the absence of flow recommendations. Hydrology modeling is progressing well and will be used to evaluate alternatives.

The overall goal of the EIS is to select an alternative that avoids jeopardizing the continued existence of endangered fish, in cooperation with the Recovery Program, facilitates recovery of endangered fish, and continues to meet Aspinall Unit purposes such as supporting water development and providing flood control and hydropower.

Cooperating agency meetings are open to the public to attend and observe. Opportunity for public questions and comments is provided at the end of the meetings. The next meeting will be on February 13th at 9:30 a.m. in Grand Junction---contact [aspinalleis@uc.usbr.gov](mailto:aspinalleis@uc.usbr.gov) for information.

### **Gunnison Gorge Fishery:**

The Colorado Division of Wildlife made a presentation on the Gunnison Gorge fishery. Prior to initiation of water development in the Basin in the late 1880's, a Colorado River cutthroat fishery existed upstream of the Black Canyon and changed to a warm water fishery in the Black Canyon and Gunnison Gorge area. By 1908, extensive stocking had changed the fishery to a rainbow-brown trout fishery with an excellent fishery upstream from the Black Canyon. Construction of the Aspinall Unit cooled the river in the Black Canyon and downstream and an excellent rainbow fishery developed. Around 1992 whirling disease entered the Gunnison Gorge area and there has been almost complete mortality of rainbow fry since 1994. In 2005 rainbows comprised less than 2 percent of the fishery and brown trout have rapidly expanded.

Sampling in 2005 showed the highest brown trout biomass and total trout biomass in the Gorge in the last 22 years of sampling. During the last several dry years, conditions for brown trout recruitment have been excellent. The CDOW is experimenting with whirling disease resistant rainbows that were acquired from the Hofer Hatchery in Germany (it is probable that Gunnison River rainbow eggs collected in 1900 from Beaver Creek were shipped to Germany to start the "Hofer strain". Whirling disease is native to Germany and over the years the Hofer strain has developed some resistance; however, the strain is highly "domesticated" and has poor survival in the wild). In 2005 crosses of Hofer and Gunnison River rainbows were stocked in the Gorge and further stockings will be made in 2006.

Further information is attached to the electronic version of this summary or call Dan Kowalski at 970-252-6017

The spawning and emergence biology of Gunnison River trout was discussed. Brown trout spawn in the mid-October to mid-November period and emerge in the mid-April to end of May period. Rainbow spawn mid-April to mid-May and emerge in the June 1-mid July period. At emergence, the young fish are very susceptible to being lost during fluctuating flows or very high flows (above 4,000 cfs mentioned).

The question was asked whether high flows could reduce sediment in the Gorge and minimize whirling disease (tubifex worm) habitat. The Division thought that sediment habitat could be reduced but enough habitat would remain to continue high levels of whirling disease. It is also believed that, even near Crystal Dam, waters are not cold enough to reduce whirling disease.

### **Agency/Organization Activities and Discussion of Related Activities:**

**National Park Service** –The NPS has been coordinating with many interests on the potential “Outstanding Waters Designation” of certain Curecanti National Recreation waterways. NPS has decided not to propose designation this year. Concerning the Black Canyon reserved water right legal activities, oral arguments are scheduled for March 9<sup>th</sup> in Denver.

**Colorado Division of Wildlife**- The 2005 fall kokanee run from Blue Mesa was very good and 7 1/4 million eggs were collected. This was very encouraging because 2004 collections were low. Rainbow trout fishing improved in Blue Mesa in 2005 due to modifications in stocking plans. Kokanee remains the top sport fish in the reservoir, particularly for boaters. Rainbows are important for shore and ice fishing. Yellow Perch have expanded throughout the reservoir since first recorded in 2002 and there is a concern with competition about rainbow and kokanee.

In cooperation with the Upper Gunnison District, it is hoped that a diversion structure downstream from the town of Gunnison that impairs kokanee migration can be modified this year. Landowner concerns appear to have been resolved to allow this work to proceed.

**Colorado River Water Conservation District**- The District is participating in the Aspinall EIS process. Reports on the Aspinall subordination agreement have been completed for 2005.

**Fish and Wildlife Service** – The Recovery Program Management Committee met with the Service and Reclamation in early January to discuss a potential Programmatic Biological Opinion for the Gunnison Basin. It was concluded that it would not be efficient to start a PBO until Aspinall Unit EIS reoperation studies have reached conclusions. However, data collected during the Aspinall EIS process will be helpful for the PBO. The PBO and background information on the Endangered Species Act and Recovery Program will be discussed further at the February 13<sup>th</sup> EIS cooperating agency meeting (contact [aspinalleis@uc.usbr.gov](mailto:aspinalleis@uc.usbr.gov)).

The Service will sample the Gunnison River for adult endangered fish in 2006—this will be the first time in 10 years.



**State Engineer:** So far water conditions for 2006 are looking good. Concerned with Aspinall operations related to the Redlands Diversion and fish ladder since the temporary contract addressing these issues expired last August. Reclamation will provide flows to the fish ladder, with flows below Redlands being dependent on hydrology.

Next Meeting: **The next operation meeting is scheduled for 1:00 p.m. Thursday April 20 at Reclamation's office in Grand Junction.**