

From: Dan Crabtree
To: Aspinall Operations
Subject: Aspinall Unit Operations Meeting Summary

Enclosed is a summary of our August 27, 2009 meeting to coordinate Reclamation's operation of the Aspinall Unit. The meeting was held at the Elk Creek Visitor Center on Blue Mesa. Highlights of the operation meeting include:

- April through July inflow to Blue Mesa was 772,000 af which is considered an average wet year. (The May 1 April – July forecasted inflow was 690,000 af.) The 31-year average is 720,000 af. 2008 inflow was 1,006,000 af.
- Runoff was early and forecasted inflow increased significantly after May 15.
- The Black Canyon water right has been quantified and this year's average daily spring peak of 6,730 cfs in the Black Canyon exceeded the water right, which varies based on inflow. At Delta, flows peaked at 12,500 cfs with no significant problems reported. Flows in critical habitat peaked at 12,900 cfs as measured at Whitewater and there were 13 days above 8,070 cfs (half-bankfull). Endangered fish flow recommendations, based on May 1 forecast, would call for 10 days above 8,070 cfs and a peak of 8,070 cfs.
- Ramping rates steeper than planned occurred as flows reached their peak causing safety and fishery concerns.
- Blue Mesa filled and summer flows through the Black Canyon finally settled at around 1,000 cfs. Flows will decrease gradually in September to the 600-700 cfs range and then increase in late November and December to around 2,000 cfs for hydropower production.

If you have any suggestions on improving the operation meetings or summaries, please let us know. The next operation meeting will be on Thursday, January 21, 2010 in Montrose; location to be announced later. If you have any questions, please call me at 970 248-0652 or respond to this email.

Sincerely,

Dan Crabtree
Water Resources Group Chief

Aspinall Unit Operation Coordination Meeting
August 27, 2009

Participation: This meeting was held at Elk Creek Visitor Center on Blue Mesa. Attendees are noted on the distribution list located at the end of these notes. Handouts are available for review at <http://www.usbr.gov/uc/wcao/water/rsvrs/mtgs/amcurrnt.html>

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 (www.usbr.gov/uc/water/crsp/studies/index.html) 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, hydropower and flood control needs, existing water rights, minimum instream flows, target elevations for reservoirs, flow needs for endangered fish and other resources, recreation, 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 2009 operations; projected inflows to the reservoirs for remainder of 2009; and potential operation plans under probable maximum, most probable, and probable minimum runoff forecasts for the coming fall and winter.

The Fish and Wildlife Service flow recommendations for endangered fish have been completed and published, and a draft Aspinall Operations EIS has been released to evaluate alternative operations to help meet these recommendations. In addition, the water right for the Black Canyon National Park has been quantified and adjudicated. 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 (af). 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.

2009 Operations:

The actual April through July inflow to Blue Mesa was 772,000 af which is considered an average wet year. The 31-year average is 720,000 af. The forecast varied over the months leading to runoff:

January ---750,000
March 15---680,000
May 1 ---690,000
May 15 ---690,000
June 1 ---790,000
June 15 ---765,000

Many operational decisions, such as determining Black Canyon water right target, are made on May 1; and it can be seen that the forecast increased 100,000 af between May 15 and June 1, causing adjustments in operations.

Peak runoff occurred in May and was earlier than average. Blue Mesa filled and had a content of 827,000 af at the end of June.

Based on the May 1 forecast, a peak flow of 5,864 cfs was determined to be the Black Canyon reserved right target for this year. The actual instantaneous peak was 7,340 cfs on May 13 and the average daily peak was 6,730 cfs. In general, operation plans were to increase flows 25% per day leading to the peak and then ramp downward at 15%. As discussed at the meeting, however, flows in the Black Canyon increased from 3,440 cfs (gage height 6.37 ft) on May 12 to 7,340 cfs on May 13 (gage height 9.41 ft). This resulted from miscommunications between Reclamation and Western on when to start spilling Crystal compounded by high inflows from the Cimarron and high power releases from Morrow Point. The abrupt change was a concern for river safety and fisheries and was outside of the planned operation. The bright side is that Reclamation and Western can learn from the experience and make sure that plans are clearly understood in the future. It also points out that when Crystal reaches spill elevation it is difficult to manage downstream flows.

Two smaller peaks occurred in June after the main peak; these occurred to avoid uncontrolled spill at Blue Mesa.

Concerning the abrupt flow change, Kent Holsinger representing CREDA asked what was bad about the abrupt change. Reclamation replied that there were fishery and safety concerns and changes were outside of the planned operation. The Colorado Division of Wildlife had hoped for increases to be ramped more gradually to protect the fishery. Clayton Palmer with Western stated that lots of water used up during ramping and was interested in learning if ramping can occur at a steeper rate...would like to study this. Western asked if we can define any damages

from the abrupt change this year.

The Colorado Division of Wildlife state that the 25% ramping rate is already higher than what they recommend and the concern is that more frequent peaks and steep ramping rates will adversely affect the trout fishery. Data collected after the peak indicate a significant reduction in brown trout fry this year (fry would have emerged in the river at the time of the peak). Brown trout fry fared much better last year with more gradual ramping, even though the 2008 peak was actually higher than this year. Rainbow trout, which emerge later, appear to have increased number of fry.

At Delta, flows peaked at 12,500 cfs with no significant problems reported. Flows in critical habitat peaked at 12,900 cfs as measured at Whitewater and there were 13 days above 8,070 cfs (half-bankfull). Endangered fish flow recommendations, based on May 1 forecast, would call for 10 days above 8,070 cfs and a peak of 8,070 cfs.

Operations will lower Blue Mesa elevation to 7,490 feet by the end of December to meet the upstream icing target. Flows downstream from the Gunnison Tunnel should remain around 1,000 cfs through August and begin to decline in early September. Flows from later in September to mid-November should be in the 650-750 cfs range. Late November and December flows will be in the 2000 cfs range to maximize power production in the high demand winter months and to meet the icing target. Flows would taper off to around 750 cfs next March, subject to changing snowpack conditions.

Input was requested from those in attendance concerning 2009 operations: The Colorado Division of Wildlife requests flows in the 700 to 1000 cfs range from Sept. 29 to Oct. 2 for Gunnison Gorge trout inventory.

Aspinall EIS

The Aspinall EIS evaluates alternative plans for releasing water from the Unit for endangered fish habitat in the lower Gunnison River. In general, flow recommendations for the endangered fish call for higher spring flows and moderate baseflows.

The review period for the draft EIS ended in April and public hearings were held in Gunnison and Delta. Fish and Wildlife Service has completed a draft programmatic biological opinion for the reoperation and this draft has been reviewed by cooperating agencies. Reclamation is preparing the final EIS which will include the final biological opinion from the Service. When the final EIS is completed, a Record of Decision is prepared. The goal is to have this process completed by next spring.

The programmatic biological opinion is designed to evaluate and provide ESA coverage on all existing Gunnison Basin water uses, a limited amount of new water use, and on the Dallas Creek and Dolores Projects. River flows and water quality are the main concerns discussed in the draft opinion. A selenium management program is being considered to reduce selenium loading in the basin.

Blue Mesa Fishery

The Colorado Division of Wildlife discussed the Blue Mesa fishery. Goals are to provide strong kokanee and rainbow fishery along with a trophy lake trout fishery. In addition, a kokanee egg supply needs to be maintained to support other fisheries around the state. Sonar studies show an extreme drop in kokanee numbers, a near 90% decline has occurred from peak populations. Lake trout predation is considered the primary cause of the decline.

To address this problem, anglers will be encouraged to harvest lake trout and an effort will start this fall to net and remove lake trout under 30 inches. Rainbow trout, also in decline due to predation, will be stocked at a larger size starting in 2010 to hopefully reduce predation.

Agency/Organization Activities and Discussion of Related Activities:

Colorado Water Conservation Board – Randy Seaholm retires in November. Board still plans to provide comments on the draft programmatic biological opinion.

Bureau of Land Management: Timing of the spring peak this year was good because a mid-May peak does not affect as many recreationists as a later peak would. There were a few complaints about high water in mid May, and the smaller peaks later in the year discussed above caused some complaints. BLM staff report positive resource responses to the peak flow including reduction in thistle and other non-native plants. Communication with Reclamation and river users was good and this is important to continue in future years. Sudden spikes in flow, such as occurred this year, can cause safety problems. In general, flows below 3,000 cfs are boatable by experienced boaters, above 3,000 cfs boating becomes more difficult, and flows above 7,000 cfs can create “very scary water.”

Upper Gunnison Water Conservation District: Working with Uncompahgre Valley Water Users and Gunnison Electric on potential development of hydropower at Taylor Park. In future, may request lease of power privilege from Reclamation.

Colorado State Engineer: Recognizes that changes in forecasts and runoff timing this year can make operations difficult.

Colorado River Water Conservation District: Stressed that the programmatic biological opinion is very significant to water users in the basin. Suggests more outreach and public meetings to inform people about the opinion and its ramifications. Need to publicize benefits and costs, including fee requirement for depletions >100 af after 1988. Concerning the Aspinall EIS, the district suggests a cooperating agency meeting before documents are finalized.

The District has a grant program—check their website. September 18th is the District’s annual seminar in Grand Junction—will feature Asst. Secretary of Interior, discussion on Lower Colorado River operations, and dust on snow.

The District has purchased a parcel of land in the Grand Valley to facilitate a water management project involving the Orchard Mesa Irrigation system.

Western Area Power: Appreciate spring operation efforts. There is a low-steady flow experiment at Glenn Canyon in September and October. This should not affect Crystal releases but may affect Blue Mesa and Morrow Point peaking operations.

Trout Unlimited: Stressed that it is important to adhere to ramping rates for safety and to protect the fishery.

Dust on Snow: Chris Landry reported that there were 12 dust events last winter. Early runoff was directly related to the dust layer on snowpack. Runoff was early and fast. In response to a question, indicated that chemical analysis of the dust does not show it is a significant source of nitrates or phosphates but is high in calcium.

CREDA: CRSP pumping rate goes up 11.2% in October. Last year rate went up 6%.

USGS: Working on selenium concentration trend analysis. Will increase Uncompahgre River monitoring; new North Fork gage is operating.

National Park Service: Tour boat could operate entire season this year. High spring flows in Black Canyon had good effects on scouring sediment and undesirable vegetation. Native riparian vegetation should benefit. Expect to have inspected 15,000 boats at Blue Mesa this year for mussels; 3 or 4 boats did show contamination. Thanks to Division of Wildlife for assisting in inspections.

High Country Citizens: Gunnison Round Table has finalized map of critical non-consumptive water use areas. In 2010 there will be rule making on new water quality standards.

Next Meeting: **The next operation meeting is scheduled for 1:00 p.m., Thursday, January 21, in Montrose, Colorado. Exact location to be determined.**

August 27, 2009 Aspinall Operation Meeting

*An asterisk indicates person attended the meeting

Daily Sentinel..... Gary Harmon, Dave Buchanan*
Delta County Independent Bob Borchardt
Gunnison Country Times Michelle Burkhart, Will Shoemaker, Alan Wartes, Pat Daniel
Montrose Daily Press James 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, Al DeGrange
Helton & Williamsen, P.C. Duane Helton

High Country Citizens Alliance/Sierra ClubSteve Glazer*, Wendy McDermott, Steve Schechter, Shara Rutberg

Xcel Energy..... Fred Eggleston

Matt Owens Fly CompanyMatt Owens

Trout Unlimited Pat Oglesby*, Melinda Kassen, Drew Peternell, John Trammell, Marshall Pendergrass*, Matt Mayer, Mac Cunningham

Western Colorado CongressRandy See, Fred Wetlaufer

Argonne National LaboratoryJohn Hayse, Kirk Lagory

University of Montana..... Jack Stanford

Ridgway Guide Service.....Tim Peterson

Black Canyon Anglers.....Richard Dudgeonski

SelfCurt Treichel, Lynn Johnson*, George Sheldon, Bo Gates, Marlene Zanatell, Jim Cochran, Jim Hokit, Richard Girvan, Coll Stanton, Joe Waggoner*

Colorado River Energy Distributors.....Leslie James*, Kent Holsinger*

Colorado River Water Conservation DistrictDave Kanzer*, Don Meyer, Jim Pokrandt*, Eric Kuhn, Bill Trampe, David Halford, Ray Tenney

North Fork Water Conservancy District Tom Alvey

Tri County WaterMike Berry, Ion Spor, Kathleen Margetts, Project 7Richard Margetts

Redlands Water and Power Company..... Charles Mitisek, Mike Gross

Uncompahgre Valley Water Users Association..... Marc Catlin, Ed Suppes*, Steve Fletcher*

Upper Colorado River Commission Everett Sunderland

Upper Gunnison R. Water Conservancy District.....John McCloy*, Frank Kugel*, Greg Peterson, Kathleen Curry, Mark Schumacher, Tyler Martineau, Dennis Steckel*, Jim Slattery, Ken Spann

City of Grand Junction..... Terry Franklin, Rick Bukus, Greg Trainor

Delta County Commissioners.....Jan McCracken, Wayne Wolf, Olen Lund

Delta County.....Duane Freeman

City of Delta..... Lanny Sloan, Steve Glammeyer, Barry Bullard, Jim Brown, Wilma Ervin

Delta County Emergency Management.....Rob Fiedler

Mesa County Emergency Management.....

Gunnison County Commissioners Hap Channell, Paula Swenson, Jim Starr

Colorado Department of Agriculture..... Jim Miller

Colorado Division of Water Resources Pat McDermott, Bob Hurford*, Scott King, Richard Rozman

Colorado Division of Wildlife...John Alves*, Dan Brauch*, Sherman Hebein, Dan Kowalski*, David Graf, Ryan Swygan, Jay Skinner, Pat Martinez, Rick Anderson, Mark Uppendahl

Colorado Water Conservation Board..... Randy Seaholm, Ray Alvarado, Michelle Garrison*, Rick Brown, Steve Miller

Congressman John SalazarRichard Baca

Senator Mark Udall.....

Senator Michael Bennet Trudy Kareus

Army Corps of Engineers..... Ken Jacobson

Bureau of Land ManagementDennis Murphy, Roy Smith, Rooster Barnhart*, Karen Tucker, Edd Franz*, Forest Zerbe, Jesse Kirthorp, Peter Dennett, Julie Stotler, Ryan Mathis, Michelle Bailey

Fish and Wildlife Service..... Al Pfister, Jana Mohrman, Patty Gelatt*

National Park Service Connie Rudd*, Ken Stahlnecker*, Dave Roberts, Matt Malick, Mark Wondzell, Melissa Trammell, Michael Dale*, Bill Johnson, DanGude Bockus, Bill Hansen, Chuck Pettee, Norm Henderson

National Weather Service.....Brenda Alcorn, John Lhotak, Jim Pringle, Bryon Lawrence, Bill Reed, Aldis Strautins

National Oceanic & Atmospheric Administration..... Andrea Ray, Robert Webb, Klaus Weickmann, Brad Udall, Kevin Werner, Chad McNutt, Bryon Lawrence, Tracy Cox*

NRCS..... Tom Pagano, Mike Gillespie, John Scott

U.S. Geological Survey..... David Brown*, Bob Jenkins, Gordon Mueller, Gerhard Kuhn, Bob Boulgarz, Joe Sullivan*, Steve Anders, Kirby Wynn, Trisha Solberg*

Western Area Power Administration..... Burt Hawkes, Brad Warren, Nancy Scheid, Clayton Palmer* Jeff Ackerman, Kathy Crane, Ken Green, Annette Falvo, Ken Otto, Gary Burton; Margaret Matte, Dave Shelton, Jennifer Turnbull, Chris Brown*, Shane Messawo

Bureau of Reclamation...Carol DeAngelis, Ed Warner*, Steve McCall*, Don Phillips*, Joe Austin, Grant Watson, Ted Dunn, Dan Crabtree*, Chris Cutler, Terry Stroh*, Jane Blair*, Max Spiker, Paul Davidson*, Justyn Hock, Erik Knight*, Nancy Coulam, Laurie Jones*, Heather Patno, Dennis Kubly, Dave Harpman, Dawn Munger, and Rick Vinton

Interior Solicitors Office..... John Bezdek, Peter Fahmy

Department of Justice.....Dave Gehlert

Colorado U/CADSWES.....Edie Zagona, Satish Regonda

University of Colorado..... Christina Alford

Colorado Basin River Forecast Center.....Brenda Alcorn, John Lhotak

National Drought Mitigation Center.....Donna Woudenberg

Colorado Dust on Snow Chris Landry*