

Aspinall Unit Operations Coordination Meeting
April 23, 2013

Participation: This meeting was held at Reclamation's office in Grand Junction. Attendees are noted on the distribution list located at the end of these notes. Handouts and presentations are available for review at:

<http://www.usbr.gov/uc/wcao/water/rsrvs/mtgs/amcurrnt.html>

Purpose of Meeting: The purpose of operation meetings which are held in January, April, and August is to gather input for determining upcoming operations of the Aspinall Unit (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 includes plans for Glen Canyon, Flaming Gorge, and Navajo Units, as well as the Aspinall Unit. Operation of the Aspinall Unit considers forecasted inflows to the reservoirs, hydropower and flood control needs, existing water rights, minimum instream flows, target elevations for reservoirs; flow needs and flow recommendations 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 2012-2013 operations; inflows to the reservoirs to date; and projected most probable, minimum, and maximum inflow forecasts for 2013; and potential operations for 2013.

The Fish and Wildlife Service flow recommendations for endangered fish were completed in 2003 and a final Aspinall Operations EIS and Record of Decision have been completed. Therefore operations to meet the flow recommendations have begun. In addition, the water right for the Black Canyon of the Gunnison National Park has been quantified and adjudicated. These operation meetings are used to discuss proposals for long-term operation plans to address these and related resource management issues.

Forecast Center and National Weather Service

Presentations were made by Greg Smith with the Colorado River Basin River Forecast Center and by Aldis Strautins with the National Weather Service.

The Colorado River Basin Forecast Center provides runoff predictions and public information is available at <http://www.cbrfc.noaa.gov/>. Greg described how forecasts are developed and discussed soil moisture considerations along with precipitation and temperature. Soil moisture conditions were below average entering the 2012-2013 winter.

Aldis described the two April storms that have helped snowpack conditions. This year's snowmelt is later than typical but is not uncommon. In the fall of 2012 the beginning of

El Nino conditions was seen but this shifted toward neutral conditions during the winter. Both short term (6-10 days) and long term (1-4 months) forecasts look like below average precipitation and above average temperature.

Center for Snow and Avalanche Studies

The Colorado Dust on Snow Program gave an update. There have been 8 dust events this year. The April 15-17 event was the most significant and this event contained more dust than all of the events in the 2011-2012 winter. This April 2013 event created a dust layer high in the snowpack and will accelerate snowmelt in the coming days.

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 af; inactive capacity is 81,100af; and dead storage is 111,200. Live capacity is the active plus inactive, which totals 829, 500af. Discussions during operation meetings use live capacity.

Gunnison Basin Reservoirs: In 2012, Paonia and Silver Jack were the only Reclamation reservoirs to fill because of the limited runoff. In 2013 Paonia and possibly Ridgway are expected to fill in 2013. Presently Taylor Park is 55% full; Ridgway 71%; Paonia 27%; and Silver Jack 29%. Inflow forecasts for 2013 are 54% of average to Ridgway; 56% to Taylor Park and 42% in the North Fork of the Gunnison basin upstream of Paonia.

2012 Conditions: 2012 conditions resulted in generally poor water conditions leading into 2013. The actual April through July inflow to Blue Mesa Reservoir was 206,000 af, the third lowest since 1937. The years 1977 and 2002 were lower. The April-July runoff at the Whitewater gage near Grand Junction was only 18 percent of average. Maximum content of Blue Mesa in 2012 was 543,000 af in April. Based on the May 1, 2012 inflow forecast to Blue Mesa, the Black Canyon National Park water right called for a 1-day peak of 814 cfs, which was met by a 845 cfs peak at the end of June. Flow Recommendations for endangered fish called for a 900 cfs peak at Whitewater in 2012 (which corresponds to maximum baseflows in these conditions) and this was met.

2013 Operations: Precipitation in the Gunnison Basin in October and November, 2012 was well below 50% of normal; December precipitation was near normal. January precipitation was in 70-90% range and February dropped to 50-70%. Conditions improved in March and April with April precipitation at 150% of average to date. March and April temperatures have been below average which delays the runoff.

As of April 23rd, snowpack in the Gunnison Basin is 83% of the long-term average for that date. The current inflow forecast to Blue Mesa for April through July is 50% of the long-term average.

Blue Mesa content is now 340,583 af and has gained only 13,000 af through the winter. April 2012 content was around 533,000 af.

As of April 15th, the forecasted April-July inflow to Blue Mesa is 340,000 af, down from 370,000 af in January. 2013 falls in the Dry Year category and would be expected to be exceeded in 93% of years.

If this inflow forecast is maintained, it would represent the 5th lowest inflow since Blue Mesa was constructed (1977, 1981, 2002, and 2012 were lower).

The Black Canyon National Park peak flow will be based on the May 1 forecast; if the present forecast is maintained the peak would be 973 cfs. However, the drought provision in the water right (based on prior dry year and low Blue Mesa content) reduces this peak to 697 cfs. It is expected this flow will be achieved through normal operations; however a small increase may be necessary if conditions dictate otherwise.

Flow Recommendations call for a 900 cfs peak at Whitewater in a Dry Year based on the present forecasted inflow. Base flow targets at Whitewater are 890-900 cfs from May-August in this type year.

Under most probable conditions, Blue Mesa is expected to reach 7465 feet in elevation (400,000 af content) at the end of June which is 54 feet short of filling. By the end of the year, Blue Mesa is predicted to be 6 feet lower than the 2012 end of the year elevation.

Black Canyon flows January to April were around 300 cfs and may increase to 400-500 cfs in the summer. A peak of around 700 cfs will occur. Changing conditions always have the potential to affect these early predictions.

Special Flow Requests: Colorado Parks and Wildlife will not do a fishery inventory in the Gorge this year due to low water conditions. The National Park Service will do vegetation inventories the last weekend in July (Saturday through Monday) but do not have a special request for flows; however they would like to be notified of any flow changes during that time.

Reports:

State Engineer: April snow has helped. In the Gunnison Basin there are 3 significant water rights in terms of river calls:

-Gunnison Tunnel

-M&D Diversion on the Uncompahgre River-called on May 2 in 2012 and affects diversions upstream in Montrose and Ouray Counties. This call will be later this year.

-Redlands Power Canal. This call affects primarily the North Fork area. Discussed the need for a junior water right for the Redlands fish structures. Would allow Redlands to call while Aspinall storage water was delivered to the fish ladder/fish screen.

CRWCD: State of Colorado River Meeting is May 13 at 5:30 at Colorado Mesa University. State of Gunnison River Meeting will be associated with the June Gunnison Basin Round Table meeting.

National Park Service: Plans to start Morrow Point tour boat over Memorial Day. Western and Montrose Power Office thought this was very doable in terms of Morrow Point elevations. Allison Robb was introduced as the new invasive species specialist.

Trout Unlimited: Relief Ditch Diversion restoration work is complete and a May 18 float trip is planned to celebrate. Many thanks to Colorado River District and Colorado Water Conservation Board for assistance on this project which improves boater safety on this reach of the river.

Delta: Because of 2012 and 2013 dry conditions, very concerned with fire conditions this year. Reservoir storage in the county is very low.

Colorado Parks and Wildlife: Dan Kowalski has accepted a research position with CPW and Eric Gardunio was introduced as his replacement. 3 million kokanee were released last week from Roaring Judy Hatchery to the East and Gunnison River. Fish quickly make their way to Blue Mesa. Thanks to irrigators who cooperated with their diversion structures in between Roaring Judy and Blue Mesa.

Power Office: Normal outage at Blue Mesa May 13. No special projects upcoming.

UVWUA: South Canal hydropower project is under construction and some power may be produced this summer at the upper Drop 1 site. Fish deterrent at the Gunnison Tunnel entrance has been completed and will be operated in 2013. At the Drop 3 site, there were some erosion problems and South Canal diversions were stopped for a few days while concrete repairs were made. Ridgway water was used during this time. Full diversions are expected to be reached next week.

Western: Generation limited throughout the system due to low flows. Will be buying a lot of power this year but prices are relatively good.

FWS: Pointed out that in drought years like this, the PBO flow targets are adjusted to conserve water. Sampling for endangered and other fish in the Gunnison River between Delta and Grand Junction is planned for this summer.

Tri-County: Hydropower Project is under construction. Hope to produce some power with the smaller of the two generators late in 2013 or early 2014. Ridgway Reservoir is low but may fill this year.

BLM: Thanks to Trout Unlimited, CWCB, and CRWCD for work on the Relief Diversion Dam fish passage. Low flows can make rafting in the Gunnison Gorge difficult.

USGS: Will be busy with river gaging this summer.

CREDA: Board meeting in Denver May 16. There is new EIS process ongoing for Glen Canyon operations with NPS and Reclamation as joint lead agencies. All alternatives being considered so far adversely affect power production. Alternatives may have secondary effects on Aspinall and Flaming Gorge operations.

Project 7: South Canal hydropower construction during the winter altered the typical filling procedure for Fairview Reservoir. Essentially, the ground water entering the Gunnison Tunnel received less dilution water from the Gunnison River and this resulted in lower water quality delivered to Fairview. Quality improved quickly when normal canal operations resumed.

Next Meeting: September 5th at Elk Creek Visitor Center on Blue Mesa

April 25, 2013 Aspinall Operation Meeting Attendance
*indicates person attended meeting in person or by phone

Argonne National Laboratory.....John Hayse, Kirk Lagory
Black Canyon Anglers.....Richard Dudginski
Bureau of Land Management.....Rooster Barnhart*, Edd Franz*, Karen Tucker
Bureau of Reclamation.....Ed Warner*, Steve McCall*, Ted Dunn*, Dan Crabtree*,
Terry Stroh*, Jane Blair, Paul Davidson*, Justyn Hock, Erik Knight*, Phil Martin*,
Grant Watson, Martin Noll*
CSAS-CODOS.....Chris Landry*
City of Grand Junction.....Terry Franklin, Greg Trainor
Club 20.....Reeves Brown
Colorado Department of Agriculture.....Jim Miller
Colorado River Energy Distributors.....Leslie James*
Colorado River Water Conservation District...Dave Kanzer*, Jim Pokrandt*, Eric
Kuhn
Colorado State University.....Brett Johnson
Colorado Division of Water Resources...Pat McDermott, Bob Hurford*, Scott King,
Richard Rozman, Luke Reschke, Jason Ullmann*
Colorado Parks and Wildlife....Jay Skinner*, John Alves, Dan Brauch*, Dan
Kowalski, David Graf, Eric Gardunio*
Colorado Water Conservation Board...Michelle Garrison, Ray Alvarado, Steve Miller,
Ted Kowalski*
Daily Sentinel.....Dave Buchanan*
Delta County Independent.....Bob Borchardt
Delta County Commissioners.....
Delta County.....
City of Delta.....Steve Glaminage, Glen Black*
Delta County Emergency Management.....Rob Fiedler*

Fish and Wildlife Service.....Patty Gelatt*, Jana
 Mohrman*, Dale Ryden*
Gunnison Country Times.....Michelle Burkhardt
Gunnison Basin POWER..... Butch Clark, Ramon Reed
Gunnison County Commissioners.....
Gunnison River Expeditions.....Al DeGrange
High Country Citizens Alliance.....Steve Glazer*, Jennifer Boch, Wendy McDermott
Interior Solicitor.....John Bezdek, Peter Fahmy
Montrose Daily Press.....James Shea, Jason Monroe, Caitlin Switzer
National Drought Mitigation Center.....Donna Woudenberg
NOAA.....Andrea Ray, Robert Webb, Klaus Wieckmann, Brad Udall,
 Kevin Werner, Chad McNutt, Tracy Cox, Brenda Alcorn, John Lhotak
National Park Service....Michael Dale*, Connie Rudd, Ken Stahlnecker, Mark
 Wondzell, Melissa Trammell, Allison Robb*
National Weather Service.....Greg Smith*, Brenda Alcorn, Aldis Strautius*
NRCS.....
North Fork Water Conservancy.....Tom Alvey
Project 7.....Adam Turner*
Recovery Program.....Tom Pitts, Tom Chart
Redland Water and Power.....
Ridgway Guide Service.....Tim Paterson*, Matt McCannel
Tri-County Water.....Mike Berry*, Ion Spor, Kathleen Margetts, Norm Brooks*
Trout Unlimited.....Pat Oglesby, Marshall Pendergrass*, Cary Denison,
 Drew Peternel, John Trammell*, Mac Cunningham*
UVWUA...Ed Suppes*, Steve Fletcher*, Steve Shea*, Aaron English*, Dennis Veo*,
 Michelle Decker*
Upper Gunnison River Water.....John McClow*, Frank Kugel*, Greg Peterson
USGS.....David Brown*, Bob Jenkins, Steve Anders, Trisha Solberg
Water Center, CMU.....Hanna Holm*
Western Area Power....Clayton Palmer, Jeff Ackerman*, Jerry Wilhite*, Nancy
 Scheid*, Tim Vigil, Tanya Newman, Lynn Jeka*
Western Colorado Congress.....Fred Wetlaufer
Western Resource Advocates.....Bart Miller*
Xcel Energy.....Fred Eggleston