

WCN-SMcCall
ENV-4.00/PRJ-13.00

Subject: Wayne N. Aspinall Unit Operations

Dear Interested Party:

Enclosed is a summary of our April 15, 1999, meeting to coordinate Reclamation's operation of the Aspinall Unit.

Highlights of the meeting include:

--The most probable inflow prediction to the Aspinall Unit, based on April 1 snow course information, was 60 percent of normal. Based on almost 100 years of data, this inflow is exceeded 86 percent of the time; thus, 1999 is shaping up to be a very dry year.

--Average monthly flows planned for the Gunnison River through the Black Canyon National Monument and Gunnison Gorge are around 450-600 cfs for May-September. These initial plans are based on the most probable forecast and can change if snowpack conditions change.

--A small spring peak of an additional 500 cfs will be released for 7-10 days later this spring under certain hydrologic conditions.

--One of the bypass tubes at Crystal Dam will be out of service for 30 or more days; plans are being made to protect stream flows during this time in the event the powerplant shuts down.

If you have any suggestions on improving the operation meetings or the summaries of the meeting, please let us know. The next scheduled operation meeting will be held on Thursday, August 19, at 12:30 at the National Park Service's Elk Creek Visitors Center Multi-Purpose Room at Blue Mesa Reservoir. If you have questions, please call me at (970) 248-0654.

Sincerely,

Ed Warner
Water Resources Group Chief

Enclosure

bc: Curecanti Field Division, Attention: CCI-100, CCI-400
1820 South Rio Grande Avenue
Montrose CO 81401 (w/encl)

Regional Solicitor's Office
Attention: Scott Loveless
125 South State Street, Room 6201
Salt Lake City UT 84138 (w/encl)

Regional Director, Salt Lake City UT
Attention: UC-433, UC-434, UC-600, UC-720, UC-723 (ea w/encl)

WCN-CDeAngelis, DMutz, EWarner, SMcCall, JOzga, CStanton, LWest, KFogelquist,
MSteves, RStorbo, JWright (ea w/ encl)
WCS-LTowne (w/encl)

WBR:SMcCall:rb:4/19/99:0639:aspinall.smc

Distribution List - April 15, 1999 Aspinall Operation Meeting

*An asterisk indicates person attended the meeting

Argonne National Laboratory John Hayse
City of Grand Junction Greg Trainor
Club 20 Shane Henry
Colorado State University Brett Johnson
CREDA Cliff Barrett*
Daily Sentinel Dave Buchanan
Environmental Defense Fund Jim Martin
Gunnison Basin POWER Ralph (Butch) Clark
Gunnison Country Times Paul Wayne Foreman
Gunnison River Expeditions Hank Hotze, Bo Gates
Helton & Williamsen, P.C. Duane Helton
High Country Citizens Alliance/Sierra Club Steve Glazer*
Matt Owens Fly Company Matt Owen
KNFS Environmental Services (Trans Colorado Pipeline Project) Craig Meis
Trout Unlimited Pat Oglesby, John Trammel*
Western Colorado Congress Fred Wetlaufer
University of Montana Jack Stanford
Co. River Water Conservation District Mike Gross*, Dave Kanzer*, Ray Tenney
North Fork Water Conservancy District Tom Alvey
Redlands Water and Power Company Gregg Strong*
Uncompahgre Valley Water Users Association Marc Catlin*, Jim Hokit*
Upper Colorado River Commission Everett Sunderland
Upper Gunnison River Water Conservancy District Kathleen Klein*
Mark Schumacher*, Dennis Steckel, Ramon Reed
Delta County Commissioners Donna Ferganchick*, Jim Ventrello
Gunnison County Commissioners Marlene Zanetell*
Colorado Department of Agriculture Jim Miller
Colorado Division of Water Resources Wayne Schieldt*, Frank Kugel*
Colorado Division of Wildlife Daniel Brauch*, Sherman Hebein*, Pat Martinez
Colorado Water Conservation Board Randy Seaholm; Ray Alvarado*
Wyoming State Engineers Office John Shields
Congressman Scott McInnis Melissa Ippolito
U.S. Army Corps of Engineers Grady McNure
U.S. Bureau of Land Management Allan Belt, Dennis Murphy*, Roy Smith
U.S. Fish and Wildlife Service Sue Moyer, Terry Ireland*, Chuck McAda*
Reed Harris, Henry Maddux, George Smith
U.S. National Park Service Bill Hansen, Chuck Pettee*, Sheridan Steele*, Mark Wondzell*
Myron Chase, Ken Stahlnecker*
U.S. National Weather Service Brian Avery*, Mike Myers
U.S. National Oceanic & Atmospheric Administration Klaus Weickmann
U.S. Geological Survey Paul von Guerard*, Bob Jenkins, Gordon Mueller
U.S. Western Area Power Administration Gary Burton; Shane Collins*
Jeff Ackerman*, Kathy Crane, Ken Green*, Annette Falvo

U.S. Bureau of Reclamation Ed Warner*, Steve McCall*, Coll Stanton*, Lorrie West*
Paul Davidson*, Karen Fogelquist, John Ozga*, Russ Storbo*, LeAnn Towne
Bob Adams, Gary McDermott, Donald Keith Phillips*, Richard Stodt, Arlo Allen, Chris Karas

Aspinall Unit Operation Coordination Meeting

April 15, 1999

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

Purpose of Meetings: The purpose of these 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 also used in Reclamation's development of an overall 24-month study for operation of Reclamation projects in the Upper Colorado River Basin, including plans for Glen Canyon, Flaming Gorge, and Navajo Units. Operation of the Aspinall Unit considers projected inflows to the reservoirs, flood control needs, existing water rights, 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.

April Meeting

Handouts provided at the meeting included background data on projected inflows to the Aspinall Unit Reservoirs; proposed operation plans under maximum, most, and minimum probable water supply forecasts; and snow course information.

Activities related to long-term operation planning were also discussed at the meeting. Field studies leading to flow recommendations to protect downstream endangered fish and to quantify a Federal reserved water right for the Black Canyon of the Gunnison River National Monument have been completed. A draft 'Synthesis Report' that will include flow recommendations is expected from the endangered fish Recovery Program later this year. 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.

January-April 1999 Operation: Runoff predictions continued to decline during this period. As a result, flows through the Black Canyon were reduced from around 800 cfs to around 550-600 cfs between January and March. In April, flows were reduced to 450-500 cfs in response to lowered runoff projections on April 1. The April reduction was made early in the month to avoid, as much as possible, reductions during rainbow trout spawning periods. Flows downstream from the Redlands Diversion Dam remained above 300 cfs except as noted below. Blue Mesa Reservoir content stayed relatively stable during the period.

On Sunday night, April 11 a concrete flume wall on the South Canal gave way. The Gunnison Tunnel was shut down during the night to avoid a major canal break. The Uncompahgre Valley Water Users alerted Reclamation, and Crystal releases were reduced as the tunnel was shut down in order to avoid a major surge in the Gunnison River. Flows at the Gage entrance to the Black Canyon Monument fluctuated between about 625 and 440 cfs between 10 p.m. and early morning April 12, and then stabilized around 525 cfs. On April 13, flows were increased to 750 cfs to lower Crystal Reservoir

several feet and allow divers to inspect and clean intake structures. On the afternoon of April 14, the Gunnison Tunnel reopened and releases were increased from Crystal to keep the river in the 450-500 cfs range. During this period, flows below the Redlands Diversion fell to around 150 cfs because of reduced tailwater from the Uncompahgre Project. With the tunnel back on line, the flows should rise above 300 cfs.

Proposed April-August 1999 Operation: These discussions were based on April 1 snowpack information. The most probable inflow to the Aspinall Unit is 60%; data available on April 15 show that this hasn't changed. Based on nearly 100 years of data, this inflow is exceeded 86 % of the time; thus, 1999 is shaping up to be a very dry year. Preliminary operation plans for the Gunnison Gorge and Black Canyon Monument would provide 450-500 cfs in April-June, and 600 cfs in July-September. Blue Mesa Reservoir is expected to be 100,000 acre-feet short of filling (10.5 vertical feet from full). Under almost all conditions, the content of Blue Mesa is predicted to remain above 400,000 acre-feet at the end of December; meaning that flows above 300 cfs can be maintained downstream from Redlands Diversion Dam for endangered fish.

Reclamation, in cooperation with the Fish and Wildlife Service, proposed adding approximately 500 cfs to the Gunnison River during a 7-10 day period this spring under certain hydrologic conditions. Bypasses of the Crystal powerplant would not be necessary to achieve this. If flows reach near 4,100 cfs at the Gunnison/Uncompahgre confluence or at the Whitewater Gage during the spring, the extra 500 cfs will be added to the river (ramping up over a 1-or 2-day period). This would create flows of 4,600 cfs or greater in the portion of the river that is critical habitat for endangered fish.

There were several questions about the 500 cfs addition to the river. In response, the Fish and Wildlife Service explained the biological basis for the increase. According to research compiled by the Fish and Wildlife Service based on more than 50 cross-sections, flows of 4,600 cfs or greater began to help clean gravel beds in the river and create better spawning and insect production conditions. Reclamation indicated that the release would reduce Blue Mesa Reservoir elevations by approximately 1-foot, and the release would not interfere with maintaining 300 cfs downstream from the Redlands Diversion later in the year for endangered fish. While formal recommendations for endangered fish flows have not been developed yet, the flow is seen as a proactive way to protect fish habitat in a dry year like this one. Reclamation does not believe there is a problem in "accounting" for the water since it will all go through the powerplants.

One of Crystal's two bypass tubes will be out of service for at least 30 days and possibly much longer until inspections can be completed and any deficiencies corrected. What this means is that approximately 2,100 cfs can be released through the powerplant, and 1,000 cfs through the remaining bypass tube. If for some reason (mechanical difficulty, lightning strike, rock fall, etc.) the powerplant goes down, Crystal releases will automatically shift to the one bypass tube, leaving 1,000 cfs in the river. The Gunnison Tunnel, one mile downstream from Crystal, will be diverting 1,000 cfs most of the summer. Thus, the potential exists that the water supply to the river through the Monument and Gorge could be shut off. To protect against this situation, Reclamation will keep Crystal Reservoir nearly full--if the powerplant at Crystal shuts down, releases from upstream Morrow Point will be increased

causing Crystal Dam to spill and provide a flow in the river. Reclamation will also discuss with the Uncompahgre Valley Water Users the possibility of raising the sluice gate at the Gunnison Tunnel Diversion Dam for a few hours to add some water to the river.

River users should be aware that the situation with the bypass at Crystal could cause sharp drops in river flows.

Discussion of Preliminary Operation Proposal: The National Park Service recommended that Crystal be operated this spring to provide a peak of 3,000 cfs through the Monument. This would utilize about 30,000 acre-feet of water, including ramping up and down and a one day peak. Flows would be lowered later in the year to make up this water if necessary. The Park Service felt that this was an appropriate operation even under the very dry inflow conditions that are occurring because Blue Mesa has above average storage now; and because reservoir levels could end up the same at the end of the year with or without this peak under the most probable forecast. The Park Service would also like to see a peak this year in case next year is also dry, making a peak even more difficult and raising the risk of back-to-back years without a peak.

The National Park Service proposal was discussed and questions asked. In response to questions, it was noted that spilling at Crystal would be needed to accomplish this because of the bypass tube restrictions discussed previously. Providing the peak would lower Blue Mesa elevations by approximately 3 more feet than currently projected. If the Crystal powerplant went down during the peak, river fluctuations could be significant. Western Area Power Administration was opposed to any peak this year generated by a bypass or spill because hydropower resources will be limited throughout the Colorado Basin due to low snowpack. The Colorado Division of Wildlife was concerned with potential uncontrolled river fluctuations if the powerplant went down. Under pre-dam conditions, the Park Service predicted the peak this year, though the Monument would have been 4,000-5,000 cfs. Early spring and summer flows, however, would have probably been below 100 cfs.

Conclusion for Spring Operating Plan

Reclamation will include the 500 cfs increase discussed above for endangered fish in their operating plan. The 3,000 cfs spring peak through the Black Canyon will not be included because of the very low runoff projections and because of the bypass tube restrictions now in effect.

Special Flow Requests: The Colorado Division of Wildlife asked to be kept informed of late April releases from Crystal Dam--stable flows then would help them in collection of rainbow trout in that reach. On April 16, a release of about 275 cfs from Taylor Park will be made to help with the kokanee release from the Roaring Judy Hatchery. The Division requested a flow of 600 cfs in the Gunnison Gorge between September 21 and 24 for the 1999 trout census.

Agency/Organization Activities and Discussion of Related Activities:

Reclamation - Several maintenance activities of interest are planned on the Aspinall Unit. A dive inspection of the stilling basin at Crystal Dam is needed. During the dive, all releases will be shut off. This work will be accomplished in the fall after the Gunnison Tunnel is shut down for the winter. The flows in the river will be maintained by time restrictions on the dive and by using water that pools behind the Gunnison Tunnel Diversion Dam. In another activity, Crystal Reservoir will need to be lowered approximately 50 feet to allow cleaning of intake structures. This will also be done after the irrigation season to avoid potential impacts on river flows. These activities will be discussed further at the August operation meeting.

Stilling basin work at Blue Mesa is scheduled for this June and should not interfere with stream flows.

Colorado Division of Wildlife - The Division described how lower Blue Mesa Reservoir levels can increase predation on kokanee salmon by lake trout. Rainbow trout immediately downstream from Crystal Dam will be sampled in late April. If rainbow trout in this area continue to prove healthy, this population will be used for egg collection in the future. Whirling disease continues to decimate young rainbow trout downstream in the Gunnison, and only 1 or 2 age classes of older rainbows remain.

Redlands Water and Power - Will be working this fall with the Fish and Wildlife Service on clearing sediment in front of the Redlands fish ladder.

Colorado River Water Conservation District - More specific criteria for Aspinall Unit operations would help resolve operational questions.

Trout Unlimited - Prefer as natural as possible river conditions while still maintaining at least a 300 cfs minimum.

Western Area Power Administration - Under the low water conditions in the entire Colorado River Basin, firm power obligations will just about be met. If conditions become drier, Western will have to purchase power. Heavy reliance on Blue Mesa and Morrow Point peaking capabilities is expected this summer in the late afternoon/early evening and morning periods when electrical demands are high.

Bureau of Land Management - Flows this summer will be below desired levels for floating. Would prefer to see the 500 cfs increase, described previously, later in May. If possible, avoid fluctuations over the Memorial Day weekend.

Colorado Water Conservation Board - Seconded the River District in that more specific criteria for the Unit operations would help resolve operational questions.

Upper Gunnison River Water Conservancy District - Monitoring the progress of the 60,000 acre-foot subordination agreement and working on the District's conditional water rights.

State Engineer - Looking at a difficult water administration year due to dry conditions--may be similar

to 1977.

Sierra Club/High County Citizens - Concerned with floating access through private lands on the Lake Fork of the Gunnison and will be working on this issue.

Gunnison County - Working on open space initiatives, some near the Aspinall Unit Reservoirs.

Colorado River Energy Distributors Association - Legislation will be introduced into Congress in the next two weeks on long-term funding of the Recovery Program. A good local consensus has been developed.

National Park Service Reserved Right - A summary of comments received from the December public meetings have been distributed. Public input is being used to see what the concerns and issues are and what issues will be looked at for impact analysis. Will be working with the Fish and Wildlife Service and Reclamation on developing hypothetical flow scenarios for a variety of years. When this is done, we can see where impacts on other resources occur and how they can be addressed. Will go back for public input when these flow scenarios are completed. Western Area Power indicated that they would like to participate in flow studies. It was also suggested that information be provided in a manner easily understood by the public.

Endangered Species Activities - The Fish and Wildlife Service is working on flow recommendations and the draft synthesis report (a summary of research results and flow needs). Fish ladder at the Redlands is open. A total of 42 Colorado pike minnows (Colorado squawfish) have used the ladder since it was completed in June 1996.

Next Meeting - Scheduled for 12:30 on Thursday, **August 19**, at **the National Park Service's Multi-Purpose Room at Elk Creek Marina Visitor Center** (on Blue Mesa Reservoir). A presentation on power marketing will be planned in addition to the normal agenda.