

Date: December 11, 2008

From: Water Resources Group, Salt Lake City
All Colorado River Annual Operating Plan (AOP) Recipients

Current Status

	November Inflow (unreg) (acre-feet)	Percent of Normal	Midnight Dec 08 Elevation	Reservoir Storage (acre-feet)
Fontenelle	41,000	96	6486.52	205,000
Flaming Gorge	47,000	83	6020.71	3,005,000
Blue Mesa	27,000	88	7491.21	591,000
Powell	413,000	76	3620.97	13,866,000
Navajo	21,000	59	6055.33	1,290,000

Expected Operations

The operation of Lake Powell and Lake Mead in this 24 Month Study is pursuant to the December 2007 Record of Decision on Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations of Lake Powell and Lake Mead (Interim Guidelines). Pursuant to the Interim Guidelines, the Upper Elevation Balancing Tier is the operational tier for water year 2009 for Glen Canyon Dam. The Interim Guidelines are available for download at:

<http://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf>

The December 24-month study projects that the annual release volume from Glen Canyon Dam for water year 2009 will likely be 8.23 million acre-feet (maf) consistent with Section 6.B.1 of the Interim Guidelines.

FONTENELLE – Releases from Fontenelle are currently 980 cfs while inflows are averaging 700 cfs. Releases will remain at 980 cfs until early spring. The elevation of Fontenelle Reservoir is 6487 feet above sea level, about 19 feet from top of pool, or 61% full. The reservoir elevation is declining and will continue to decline through the winter months.

Inflows for the month of November were 41,000 af, or 96% of average. Based on the latest inflow forecast from the Colorado Basin River Forecast Center, inflows will be below average through the fall and winter months (31,000 af, 28,000 af, and 25,000 af for December, January and February, respectively). Current modeling projects that the reservoir elevation low point will be approximately 6468 ft above sea level early next spring.

Open forum discussions on Fontenelle operations take place at the "Fontenelle Reservoir Working Group" meetings. The Working Group is a forum for information exchange between Reclamation and other parties associated with the operation of Fontenelle Reservoir. The public is encouraged to attend and express their concerns and interests with regard to Fontenelle Reservoir operation. The next Working Group meeting is scheduled for April 21, 2009 at 10:00 am at the visitor's center of the Seedskadee National Wildlife Refuge below Fontenelle dam. For more information about the Fontenelle Working Group, contact Ed Vidmar at 801-379-1182.

FLAMING GORGE – October observed unregulated inflow into Flaming Gorge reservoir was 46,500 acre-feet (AF), or 84 percent of average inflow. Flaming Gorge will release an average daily flow of 1,300 cfs through December in a double-peak pattern. The double-peak pattern in December will be similar to that proposed at the August Working Group Meeting and follow a similar hourly pattern to that shown below.

Hour	Total Release (cfs)
0	820
1	820
2	820
3	820
4	820
5	1,419
6	1,671
7	1,671
8	1,671
9	1,671
10	1,671
11	946
12	820
13	820
14	820
15	1,419
16	1,892
17	1,892
18	1,892
19	1,892
20	1,892
21	1,261
22	820
23	820

It is anticipated that Reclamation will release an average daily flow of 1,300 cfs during the both December and January. Once the January forecast has been received, Reclamation will reevaluate the situation and determine the February monthly volume and release pattern. Currently, the double peak pattern is anticipated to continue through

February 2009. Beginning March 1, 2009, the release pattern is scheduled to be a steady 800 cfs until the beginning of the spring peak sometime in May 2009.

The next Flaming Gorge Working Group meeting is scheduled for April 15, 2009, in Vernal, Utah. The meeting will be held at 10:00 a.m. at the Western Park Convention Center located at 302 East 200 South in Vernal, Utah. For directions, please call 435-789-7396. The Flaming Gorge Working Group is an open public forum for information exchange between Reclamation and the stake holders of Flaming Gorge Dam. The public is encouraged to attend and comment on the operations and plans presented by Reclamation at these meetings. For more information on this group and these meetings please contact Ed Vidmar at 801-379-1182.

ASPINALL – November unregulated inflow into Blue Mesa Reservoir was 27,000 acre-feet or 88 percent of average. Precipitation during November started wet but has become dry, it was observed to be about 70 percent of average. The current inflow rate into Blue Mesa Reservoir is about 500 cfs; and releases are averaging about 650 cfs. Blue Mesa's present elevation is 7491.21 feet, which corresponds to a storage content of about 591,000 acre-feet.

Releases from Crystal are currently set at 700 cfs. The Gunnison Diversion Tunnel was shut down for the season on October 30, with exception of some small 50 to 100 cfs diversions taken bi-weekly for municipal water needs in Montrose, Colorado.

On December 1, 2008, the National Weather Service's River Forecasting Center issued its forecasted inflow into Blue Mesa for the next 3 months. The unregulated inflow forecast for December, January, and February is for 71,000 acre-feet, which is 96% of normal for these months.

The next meeting of the "Aspinall Unit Working Group" will be held on Thursday January 22nd in the Montrose, Colorado, starting at 1:00 PM. At this meeting, review of last summer and fall reservoir operations, and plans for this winter and next spring 2009 operations will be discussed. These meetings are open forum discussions on the Aspinall Unit reservoir operations with many interested groups participating. Anyone needing further information about these meetings should contact Dan Crabtree in the Grand Junction Area Office at (970) 248-0652.

NAVAJO – Reclamation decreased the release from Navajo Reservoir on Tuesday, October 7th by 200 cfs, bringing the total reservoir release down from 700 cfs to 500 cfs.

Releases are made for the authorized purposes of the Navajo Unit, and to attempt to maintain a target base flow through the endangered fish critical habitat reach of the San Juan River (Farmington to Lake Powell). The San Juan River Basin Recovery Implementation Program recommends a target base flow of between 500 cfs and 1,000 cfs through the critical habitat area. The target base flow is calculated as the weekly

average of gage flows throughout the critical habitat area, therefore daily flows of less than 500 cfs may occur at some gages.

Precipitation for the month of November in the San Juan River basin was 75 percent of average. Unregulated inflow into Navajo Reservoir during the month of November was 21,000 acre-feet, or 59 percent of average. The current daily reservoir inflow is averaging about 250 cfs and the water surface elevation is at 6055.3 feet which corresponds to a reservoir content of about 1,290,000 acre-feet. Diversions for NIIP are currently been shut down for the winter.

On December 1, 2008, the National Weather Service's River Forecasting Center issued its forecasted inflow into Navajo Reservoir for the next 3 months. The unregulated inflow forecast for December, January, and February is for 49,000 acre-feet, which is 63% of normal for these months.

A public meeting on Navajo Reservoir operations will be held on Monday, January 26, 2009 at 1:00 p.m. at the Farmington Civic Center. At this meeting, review of last summer and fall reservoir operations, and plans for this winter and spring 2009 operations will be discussed. These are open forum discussions on the operation of Navajo Reservoir with many interested groups participating. Anyone interested in the general operation of the reservoir is encouraged to attend. Please contact Pat Page in Reclamation's Durango, Colorado Office at (970) 385-6560 for information about these meetings or the daily operation of Navajo Reservoir.

Glen Canyon Dam

Operations

The monthly release volume for December 2008 and January 2009 is scheduled to be 800,000 acre-feet for each month. Daily average releases during December and January will be about 13,000 cfs. Monday through Friday releases will peak each afternoon to about 17,000 cfs with early morning releases of approximately 9,000 cfs. Weekend peak flows will be about 16,750 cfs with morning low releases near 9,000 cfs.

Unregulated inflow to Lake Powell for the first 2 month of water year 2009 was 785,000 acre-feet (71% of average). The forecasted unregulated inflow for December, January and February is 1,050,000 acre-feet (83% of average). Next month, the Colorado Basin River Forecast Center will issue the first water supply forecast for Lake Powell (April through July 2009 Unregulated Inflow Volume) for 2009. As of December 9, 2008 the snowpack conditions above Lake Powell are well below average at 61% of average.

Under the Interim Guidelines, the water year 2009 operational tier is Upper Elevation Balancing. Under the Upper Elevation Balancing Tier, the projected release volume from Glen Canyon Dam for water year 2009 is 8.23 maf. As described in section 6.B.3 of the Interim Guidelines, if the April 2009 24-month study projects Lake Powell's end of water year 2009 reservoir elevation to be above the Equalization Level for 2009 (3639 feet

above sea level), the Equalization Tier would govern for the remainder of water year 2009. Under the Equalization Tier, it is possible for the water year release volume to be greater than 8.23 maf.

Upper Colorado River Basin Hydrology

The overall precipitation in the Colorado River Basin during water year 2008 was near average (101% of average). During the summer months, however, precipitation was persistently below average with June, July and August 2008 at 70%, 65% and 90% of average respectively. Precipitation during the fall has continued to be below average with September, October and November 2008 at 70%, 55% and 80% of average respectively. The 3-month climate outlook from the Climate Prediction Center for the Upper Colorado River Basin predicts near average precipitation and near average temperatures for December, January and February.

The unregulated inflow to Lake Powell during the April through July 2008 was 8.906 maf (112% of average). The long range outlook for unregulated inflow to Lake Powell for water year 2009 is projected to be 10.59 maf (88% of the 1971-2000 average).

Upper Colorado River Basin Drought

The Upper Colorado River Basin is experiencing a protracted multi-year drought. Since 1999, inflow to Lake Powell has been below average in every year except water year 2005 and 2008.

In the summer of 1999, Lake Powell was essentially full with reservoir storage at 23.5 million acre-feet, or 97 percent of capacity. Inflow to Lake Powell in 1999 was 109 percent of average. The manifestation of drought conditions in the Upper Colorado River Basin began in the fall months of 1999. A five year period of extreme drought occurred in water years 2000, 2001, 2002, 2003, and 2004 with unregulated inflow to Lake Powell only 62, 59, 25, 51, and 49 percent of average, respectively. Lake Powell storage decreased through this five-year period, with reservoir storage reaching a low of 8.0 million acre-feet (33 percent of capacity) on April 8, 2005.

Drought conditions eased in water year 2005 in the Upper Colorado River Basin. Precipitation was above average in 2005 and unregulated inflow to Lake Powell was 105 percent of average. Lake Powell increased by 2.77 million acre-feet (31 feet in elevation) during water year 2005. But as is often the case, one favorable year does not necessarily end a protracted drought. In 2006, there was a return to drier conditions in the Colorado River Basin. Unregulated inflow to Lake Powell in water year 2006 was only 71 percent of average.

Water year 2007 was another year of below average inflow with unregulated inflow into Lake Powell at 68 percent of average. Over the past 9 years (2000 through 2008, inclusive), inflow to Lake Powell has been below average in all but two years (2005 and 2008). Drought conditions eased in water year 2008 with above average inflows to the

main stem Colorado River reservoirs (with the exception of Flaming Gorge and Fontenelle Reservoirs). Reservoir storage in the Colorado River Basin, however, is still below desired levels with the overall Colorado River system storage as of December 1, 2008 of 33.4 maf which is 59.5% of capacity.