

BOR Lake Powell Status Report 11/7/12

Posted by Waterbaby - 2012/11/08 12:35

Glen Canyon Dam / Lake Powell

Current Status November 7, 2012

Releases from Glen Canyon Dam are currently averaging approximately 8,020 cfs with fluctuations for hydropower generation between approximately 7,000 cfs (nighttime) and 9,000 cfs (daytime). The reservoir elevation is 3619.2 ft and declining.

From November 18-23, 2012, the Department of Interior will conduct the first High Flow Experiment under a multi-year High Flow Protocol announced earlier this year by Secretary Salazar. Under this Protocol, high flow releases are linked to sediment input and other resource conditions below Glen Canyon Dam.

Beginning on the evening of November 18th, releases from Glen Canyon Dam will begin ramping up to full power plant capacity (approximately 27,300 cfs). At midday on November 19th, bypass tubes at Glen Canyon Dam will be opened and releases will continue to increase up to full power plant and bypass capacity (approximately 42,300 cfs) by the evening of November 19th. Releases will be maintained at peak release for 24 hours and then begin ramping back down. Releases will return to normal operations in the evening of November 23rd. The entire experiment, including ramping is expected to last 5 days, with 24 hours at peak release. November releases from Glen Canyon Dam prior to and after the High Flow Experiment are expected to fluctuate between 7,000cfs and 9,000cfs. The elevation of Lake Powell is expected to decrease approximately 2 ½ feet during the 5-day experiment. For additional information, please check back for a link to 2012 High Flow Experiment website.

To view the most current reservoir elevation, content, inflow and release, click on: [Lake Powell Data](#).

The unregulated inflow volume to Lake Powell in October was 189 thousand acre-feet (kaf) (37% of average). The release volume from Glen Canyon Dam in October was 498 kaf. The end of October elevation and storage of Lake Powell were 3619.5 feet (80.5 feet from full pool) and 13.71 maf (56.4% of full capacity). The reservoir elevation is now declining.

The water year unregulated inflow volume for 2012 was 4.91 maf (45.3% of average), placing the 2012 as the third lowest on record since the closure of Glen Canyon Dam in 1963. In terms of reservoir elevation and storage, Lake Powell reached its peak for water year 2012 on June 3rd at 3636.9 ft (63.1 feet from full pool) and 15.64 maf (64.3% of capacity), respectively.

Releases for Water Year 2012 totaled 9.466 maf. Pursuant to the 2007 Interim Guidelines, Lake Powell operated under the Equalization Tier in 2012, releasing 9.463 maf, which is 8.233 maf plus 1.233 maf (the Equalization release volume from 2011 that could not be achieved by September 30, 2011). Throughout water year 2012, Reclamation adjusted operations of Glen Canyon Dam to release the appropriate annual volume during 2012 to achieve Equalization objectives as practicably as possible by September 30, 2012.

Current Dam Operations

The operating tier for 2013 is the Upper Elevation Balancing Tier, as establish in August 2012 and pursuant to the Interim Guidelines. However, if hydrologic conditions and projections become wetter, it is possible that beginning in April, the Equalization tier will govern the operations of Lake Powell for the

remainder of the water year. Based on analysis of a range of inflow scenarios, the current probability of realizing an inflow volume that would trigger Equalization in 2013 is approximately 20 percent. As hydrologic conditions for Lake Powell and Lake Mead change throughout the year, Reclamation will adjust operations of Glen Canyon Dam to release the appropriate annual volume during 2013 to achieve the governing operating tier objectives as practicably as possible by September 30, 2013.

Releases from Glen Canyon Dam in November in the days prior to and after the High Flow Experiment on November 18-23 will be approximately 8,020 cfs with daily fluctuations between 7,000cfs and 9,000cfs and are consistent with the Glen Canyon Operating Criteria (Federal Register, Volume 62, No. 41, March 3, 1997). The scheduled release volume for November, including the High Flow Experiment, is 724 kaf.

In December, the release volume will likely be about 800 kaf, with fluctuations throughout the day from about 8,250 cfs in the early morning to about 16,250 cfs in the early evening. In January, the release volume will likely be about 800 kaf with daily fluctuations for hydropower.

In addition to daily scheduled fluctuations for power generation, the instantaneous releases from Glen Canyon Dam may also fluctuate to provide 40 MW of system regulation. These instantaneous release adjustments stabilize the electrical generation and transmission system and translate to a range of about 1,100 cfs above or below the hourly scheduled release rate. Typically, fluctuations for system regulation are very short lived and balance out over the hour and do not have noticeable impacts on downstream river flow conditions.

Releases from Glen Canyon Dam can also fluctuate beyond scheduled fluctuations for power generation when called upon as a partner that shares reserve requirements within the electrical generator community (i.e. balancing area). To provide system reliability, all participating electricity generators within the balancing area maintain a specified level of generation capacity (i.e. reserves) that can be called upon when an unscheduled outage occurs. Glen Canyon Dam typically maintains 43 MW of reserves (approximately 1,100 cfs) for this purpose. Reserve calls can be maintained for a maximum of 2 hours after which time the generation rate should be returned to the original schedule. If reserves from Glen Canyon Dam are called upon, releases from the dam can exceed scheduled levels and can have a noticeable impact on the river downstream from Glen Canyon Dam. Calls for reserves are fairly infrequent and typically are for much less than 43 MW.

Current Inflow Forecasts and Model Projections

The hydrologic outlook forecast for water year 2013 projects that the most probable (median) unregulated inflow volume will be 7.60 maf (70% of average based on the period 1981-2010). Based on this hydrologic outlook, the October 24-Month study projects the annual release volume for water year 2013 will be 8.23 maf and the end of water year reservoir elevation and storage for Lake Powell will be 3608.52 (91.48 feet from full pool) and 12.582 maf (51.7% capacity), respectively.

If hydrologic conditions and projections become wetter, it is possible that beginning in April, the Equalization tier will govern the operations of Lake Powell for the remainder of the water year and the release volume for 2013 could be greater than 8.23 maf. Based on analysis of a range of inflow scenarios, the current probability of realizing an inflow volume that would trigger Equalization in 2013 is approximately 20 percent.

Upper Colorado River Basin Hydrology

Since water year 2005, the Upper Colorado River Basin has experienced significant year to year hydrologic variability. The unregulated inflow to Lake Powell, which is a good measure of hydrologic conditions in the Colorado River Basin, has averaged a water year volume of 10.22 maf (94% of average (period 1981-2010)) during the period from 2005 through 2012. The hydrologic variability during this

period has been from a low water year unregulated inflow volume of 4.91 maf (45% of average) in water year 2012 to a high water year unregulated inflow volume of 15.97 maf (147% of average) in water year 2011. Based on observed inflows and current forecasts, water year 2013 unregulated inflow is expected to be 7.59 maf (70% of average).

Overall reservoir storage in the Colorado River Basin has increased by over 4 maf since the beginning of water year 2005 and this is an improvement over the persistent drought conditions during water years 2000 through 2004. From the beginning of water year 2005 to the beginning of water year 2013, the total reservoir storage in the Colorado River Basin increased from 29.8 maf (50% of capacity) to 33.9 maf (57 % of capacity). However, this period experienced increases and decreases in total Colorado Basin storage in response to wet and dry hydrology.

Updated: November 7, 2012

=====

Re:BOR Lake Powell Status Report 11/7/12

Posted by Lake Bum - 2012/11/08 12:50

kiss the cut goodbye until further notice.....pray for SNOW :unsure:

=====

Re:BOR Lake Powell Status Report 11/7/12

Posted by ken creta - 2012/11/08 13:09

So much for fishing the river for awhile.

=====

Re:BOR Lake Powell Status Report 11/7/12

Posted by parkcity2powell - 2012/11/08 21:53

WB

Can you explain why they are doing this. I understand last year was the 3rd lowest water year for Powell since they started tracking, whatever they are going to learn from this dump, could it not be learned under better conditions when the lake is up and has the excess to waste. What has changed in the recent years that allows them to conduct these massive dumps. I was on the dam a few years ago when they did the last dump and it was a beautiful sight, but such an incredible and unneeded waste of resources. Their reason then was something about rebuilding lost beaches in the downstream canyon or something like that.

=====

Re:BOR Lake Powell Status Report 11/7/12

Posted by Waterbaby - 2012/11/08 22:05

This is what I kept telling people when they wanted to vote for a certain party.. that party HATES Glen Canyon Dam and they will do anything to drain this lake one way or other to have an excuse to dismantle the dam.

They use the building beaches downstream, the fish downstream, etc. for excuses.. but the beaches never last long and they manage to flush the fish they claim they want to save into Lake Mead. Also, Wayne will tell you while this can help the fishery in Lake Powell -- IIRC it has to be done at a certain time of year to have a positive effect...

Basically.. I am angry about this.

=====
Re:BOR Lake Powell Status Report 11/7/12

Posted by Trix - 2012/11/12 12:12

Like Chris Mathews, flushing water down the canyon in the name of preserving a fish virtually no one has ever seen sends a thrill up my leg.

Let's see, for whom should be try to make a better world, some minnow in the Grand Canyon, or millions of people? Guess it's the minnow. :angry:

=====
Re:BOR Lake Powell Status Report 11/7/12

Posted by ken creta - 2012/11/12 13:34

Thank goodness the humped back chub may thrive once again!!!!!!

=====
Re:BOR Lake Powell Status Report 11/7/12

Posted by Trix - 2012/11/13 16:16

Actually I lied, I saw humped back chub in the aquarium at the Arizona Mills in Tempe. I'm not impressed. :blink:

=====
Re:BOR Lake Powell Status Report 11/7/12

Posted by ken creta - 2012/11/13 16:52

I am still looking for a good recipe for them.

=====