Glen Canyon Dam/Lake Powell
Operations and Hydrology Update

Operations

In June 2004, a volume of 800,000 acre-feet is scheduled to be released from Lake Powell, which is an average of 13,400 cubic feet per second (cfs). On Mondays through Fridays in June, daily fluctuations due to load following will likely vary between a low of about 9,000 cfs (during late evening and early morning off-peak hours) to a high of about 17,000 cfs (during late afternoon and early evening on-peak hours). On Saturdays, releases will likely vary between a low of about 9,000 cfs during off-peak hours to a high of about 16,000 cfs during on-peak hours. On Sundays, releases will likely vary between a low of about 9,000 cfs during off-peak hours to a high of about 15,000 cfs during on-peak hours. A volume of 898,000 acre-feet is scheduled to be released in July which is an average release of 14,600 cfs. Projected Lake Powell Releases are show in the following figure.

![Projected Lake Powell Releases](image)

Because of the draw down condition of Lake Powell, releases from Lake Powell in water year 2004 are being scheduled to meet the minimum release objective of 8.23 million acre-feet. This is consistent with the requirements of the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs.

Releases in water year 2005 will likely be the minimum release objective of 8.23 million acre-feet. Only a year with very high inflow (probability of about 10 percent) would trigger storage equalization releases from Lake Powell in 2005.

Upper Colorado River Basin Hydrology

The month of March pretty much dashed hopes that 2004 would bring relief to the ongoing drought in the Colorado River Basin. Basin snowpack on March 1, 2004 was 96 percent of
average. At that time, the April through July inflow was forecasted to be 82 percent of average. The weather pattern in March, 2004 was very dry and extremely warm for early spring. Temperatures around the basin for much of the month were 20 degrees above average. Basinwide snowpack dropped over 30 percentage points in March.

The National Weather Service’s June final forecast is calling for 3.4 million acre-feet of unregulated inflow to Lake Powell during the April through July runoff period, only 43 percent of average. This is a sizable reduction from the volume forecasted in March.

The drought continues. The Colorado River Basin is now in its 5th year of drought. Inflow volumes have been below average for 4 consecutive years, with 2004 now certain to follow suit. Unregulated inflow in water year 2003 was only 51 percent of average. Unregulated inflow in 2000, 2001 and 2002 was 62, 59, and 25 percent of average, respectively. Inflow in 2002 was the lowest ever observed since the completion of Glen Canyon Dam in 1963. Total unregulated inflow for water year 2004 is now forecasted to be 50 percent of average. Basinwide precipitation so far in 2004 has been 82 percent of average.

Inflow to Lake Powell in March and April approached average levels as abnormally warm temperatures melted out significant amounts of snow in the basin. Unregulated inflow in March and April was 81 and 83 percent of average, respectively. Unfortunately the inflows seen in March an April were at the expense of May and June inflows (when the largest inflow volumes are normally observed). Unregulated inflow in May was 1,180,000 acre-feet, 51 percent of average. Inflow in June will likely be only about 35 percent of average. Unless there is a summer monsoon in the Colorado River Basin, inflow in July could be less than 25 percent of average. There are only limited amounts of mountain snowpack remaining in the basin.

Peak inflow to Lake Powell this year occurred on May 14 (about three weeks earlier than normal) when inflow was 21,400 cfs. As of June 23, 2004 inflow to Lake Powell was 11,900 cfs about 33 percent of what is normally seen in late June.

Low inflows the past 5 years have reduced water storage in Lake Powell. The current elevation (as of June 24, 2004) of Lake Powell is 3,586.7 feet (113.3 feet from full pool). Current storage is 10.5 million acre-feet (43 percent of live capacity).

The water surface elevation at Lake Powell reached a seasonal low of 3,582.7 feet on April 2, 2004 and then increased to a seasonal high on June 14, 2004, reaching an elevation of 3,587.4 feet. The water surface has since begun to decline, and will likely continue to decline for the remainder of the year. Under the current inflow forecast, the water surface elevation of Lake Powell is projected to be about 3,570 feet on January 1, 2005. It should be noted that this projected elevation will likely shift, depending upon weather patterns the remainder of the year.

Projected Lake Powell water surface elevations are show in the following figure.
Projected Lake Powell Water Surface Elevations
Most Probable (based on June, 2004 inflow forecast)

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