

Glen Canyon Dam Technical Work Group
Agenda Item Form
May 25, 2016

Agenda Item

Basin Hydrology and WY 2017 Hydrograph

Purpose

This update on the current basin hydrology, and briefing on the development of the 2017 Hydrograph, is designed to prepare the Adaptive Management Work Group (AMWG) for considering a recommendation on the hydrograph from the Technical Work Group (TWG), and making a recommendation to the Secretary, at its August 24-25, 2016 meeting.

Action Requested

Feedback requested from AMWG members.

Presenters

Paul Davidson, Hydraulic Engineer, Water Resources Group, Resources Management Division, Upper Colorado Region, Bureau of Reclamation

Previous Action Taken

By AMWG: At the August 2015 AMWG meeting, AMWG recommended to the Secretary of the Interior her approval of the DOI-DOE Proposed Hydrograph for Water Year 2016.

By TWG: The TWG has been presented with an initial proposal for the WY 2017 Hydrograph and operational scenarios based on the range of current projected hydrology. TWG members will consider a recommendation to AMWG during their June 14-15, 2016 meeting.

Relevant Science

The anticipated range of conditions and objectives for 2017 remain similar to previous years; therefore, the targeted approach adopted as the 2012, 2013, 2014, 2015, and 2016 Hydrographs is recommended again for the WY 2017 Hydrograph.

Background Information

Basin Hydrology

The presentation is intended to provide pertinent information to AMWG members on the current water supply and forecasted hydrologic conditions within the Upper Colorado River Basin. The presentation will focus on projected reservoir conditions and operations at Lake Powell/Glen Canyon Dam for the remainder of water year 2016 and provide a general outlook for 2017. The presentation will cover the range of potential releases in the current and upcoming water years. Such information is provided to assist the AMWG in developing recommendations to the Secretary on the operation of Glen Canyon Dam for water year 2017.

WY 2017 Hydrograph

The second portion of the presentation will cover a brief review of the 2016 Hydrograph and an overview of the upcoming 2017 Hydrograph. In cooperation with the other federal agencies, Reclamation is developing a recommendation for the 2017 Hydrograph. The initial proposed 2017 Hydrograph for Glen Canyon Dam is the same as the 2016 Hydrograph that was unanimously approved by AMWG in August 2015. The proposal to be presented to the TWG in June is as follows:

- Annual Release Volumes will be determined by the 2007 Interim Guidelines and shall be reviewed and adopted through the normal annual operating plan process (in consultation with the Basin States as appropriate).
- Monthly Release Volumes are anticipated to shift depending upon: (1) the projected Annual Release Volume, (2) powerplant capacity, and (3) the magnitude of a potential High Flow Experiment.
- Monthly Release Volumes may vary within the targets identified below. Any remaining monthly operational flexibility will be used for existing power production operations under the Modified Low Fluctuating Flow (MLFF) alternative selected by the 1996 ROD and contained in the 1995 FEIS and in compliance with all applicable NEPA compliance documents (HFE EA, NNFC EA, 2007 IG). Monthly release volumes proposed in this hydrograph will not affect operating tier determinations for Lakes Powell and Mead under the 2007 Interim Guidelines.
- Release objective for June is:
 - 600 to 650 kaf for annual releases below 9.0 maf
 - 800 kaf for annual releases of 9.0 maf to less than 9.5 maf
 - 900 kaf for annual releases of 9.5 maf to less than 10 maf
 - Greater than 900 kaf for annual releases 10 maf and greater
- Release objective for August is:
 - 800 kaf for annual releases below 9.0 maf
 - 900 kaf for annual releases of 9.0 maf to less than 10 maf
 - Greater than 900 kaf for annual releases 10 maf and greater
- Release objective for September is:
 - 600 kaf for annual releases below 9.0 maf
 - 700 kaf for annual releases of 9.0 maf to less than 10.0 maf
 - 800 kaf or greater for annual releases of 10.0 maf or greater; up to powerplant capacity for high equalization releases
- Monthly Release Volumes will generally strive to maintain 600 kaf levels in the shoulder months (spring and fall) and 800 kaf in the December/January and July/August timeframe.

Additionally, the Bureau of Reclamation will continue to apply best professional judgment in conducting actual operations and in response to changing conditions throughout the water year. Such efforts will continue to be undertaken in coordination with the DOI/DOE agencies, and in consultation with the Basin States as appropriate, to consider changing conditions and adjust projected operations in a manner consistent with the objectives of these parameters as stated above and pursuant to the Law of the River.