

Draft Memorandum

Date: May 16, 2007

To: Coordination Committee

From: Biology Committee

RE: Recommendation to implement revised Navajo Dam Operating Rules

Introduction

The Standardized Monitoring Program Five Year Integration Report (Miller, 2005) evaluated the flow recommendations and made the following recommendations:

- Investigate the ability to obtain high peak flows (i.e. greater than 8,000 and 10,000 cfs) during runoff more frequently than currently recommended.
- As part of the above investigation, change the shape of the ascending and descending limb of the hydrograph and do not try to meet the 2,500 cfs and 5,000 cfs flow recommendations.
- Use the Riverware model as the method to make the above determination.

A request was forwarded to the Hydrology Committee to perform the above referenced recommendations. The Hydrology Committee completed the requested model analysis with the Generation III San Juan River Basin Hydrology Model and forwarded the findings in a memorandum dated January 3, 2007 (attached).

Model Analysis Results

Modelers developed a set of operating rules for Navajo Dam that increased the number of days that flows were above 8,000 and 10,000 cfs for the 1929-1993 analysis period by as much as 25%. The number of days that flows were above 2,500 and 5,000 cfs dropped by 9% and 6%, respectively. The frequency of meeting the 8,000 and 10,000 cfs durations also improved for the primary criteria and for the longer duration secondary criteria. Only the 5,000 cfs criteria fell below the minimum requirements. The full results of the Hydrology Committee analysis are shown in the attached memorandum.

Recommendation

We recommend that the new Navajo Reservoir decision tree described in the attached memorandum be implemented, using the configuration described as G3-250(b). Implementation of this set of operating rules will increase the probability of high flows in the San Juan River and preserve extra reserve water to protect against shortage. We also recommend that the recommendations for 2,500 and 5,000 cfs be relaxed so they do not control the determination of meeting the flow recommendations.

These recommendations should be considered as interim, while we complete evaluation of the formal modification of the elements of the flow recommendation. This will allow improved flow conditions for habitat creation and maintenance while the final standards are developed. Until the generation 3 model is completed and accepted by the Hydrology Committee, the evaluation of future projects will continue to be evaluated using the generation 2 model and the published flow recommendations. Therefore, this interim recommendation will not impact consideration of future projects. In the next 12 months, the flow recommendations will be evaluated based on data collected to date and updated to reflect the new conditions.