Experimental Flow Ad Hoc Committee

Consensus Recommendation to AMWG/TWG Regarding GCMRC Version 3.0 Experimental Design for Glen Canyon Adaptive Management Program

Phoenix, Arizona
April 18, 2002

The TWG Experimental Flow Ad Hoc Committee met in Phoenix from 9:30am to 2:30pm on April 18, 2002 to discuss the GCMRC Experimental Flows Recommendation document Version 3.0. A list of attendees is attached. The Experimental Flow Ad Hoc Committee unanimously supports the following set of recommendations to the AMWG:

1. Adoption of a long-term experimental framework similar to that described in the GCMRC Version 3.0 document

2. Implementation of specific year one and year two treatment scenarios for WY 2002-2004 as detailed below ***

3. GCMRC, in consultation with TWG and with advice from the GCMRC Science Advisors, develop a detailed long-term plan for the implementation of treatments under the experimental block design for WY 2004 and beyond.

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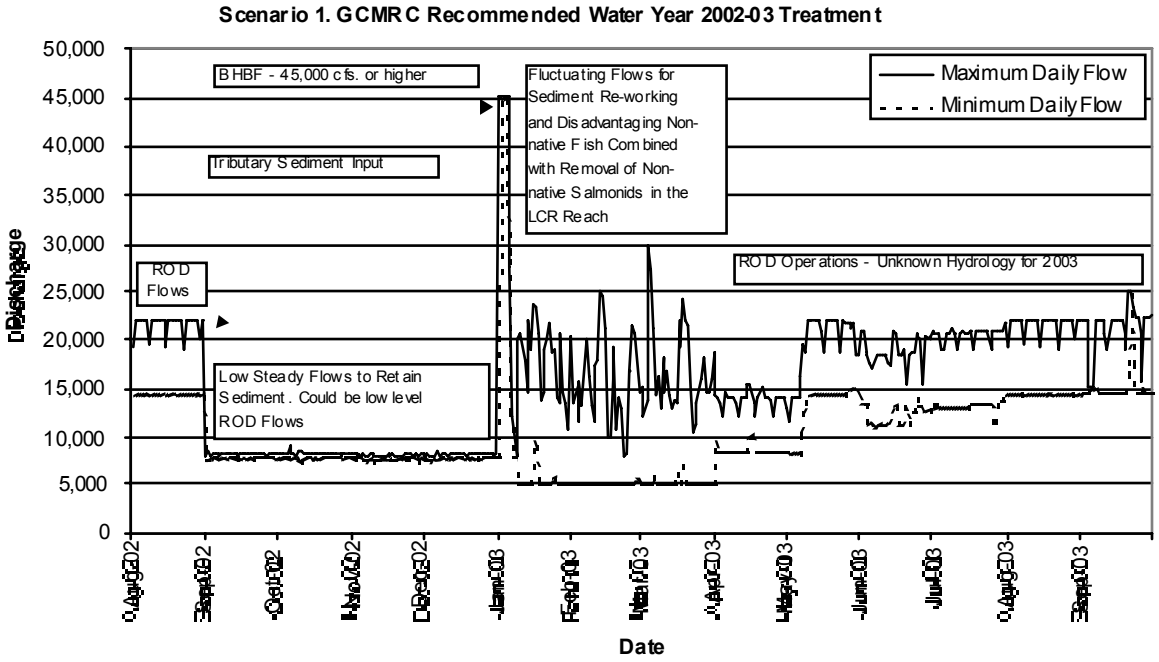
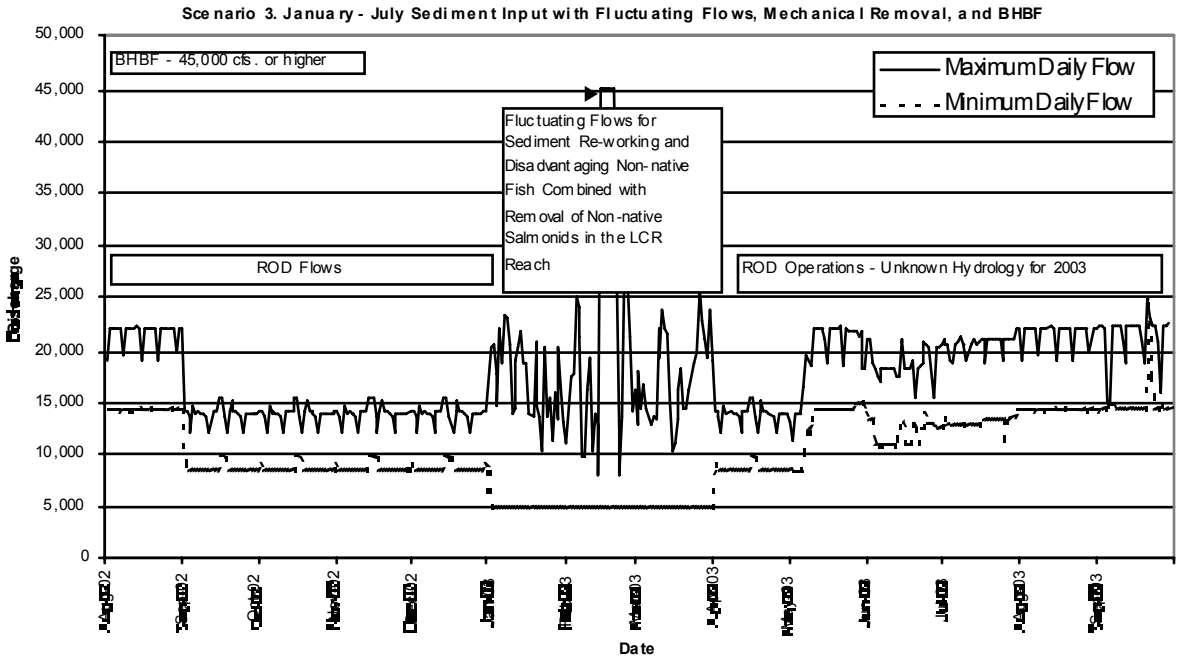
Year One Treatment Options

The first year treatment should consist of either Scenario 1, 3, or 4 from the Version 3.0 document. Which of these treatments is implemented will depend on the magnitude and timing of sediment inputs (if any) from the Paria River. Each of the conceptual hydrographs for these scenarios is repeated below with footnotes regarding clarifications agreed upon by the Experimental Flows Ad Hoc Committee.



This scenario provides for experimental flows aimed at **both** conserving sediment and benefiting native fishes. From October 2001 through June 2002 the dam follows normal

ROD operations. Following **significant**[1] sediment inputs in the July - December 2002 period the dam is operated at a constant 8,000 cfs following sediment inputs (or perhaps a low level, e.g. 5-10,000 cfs ROD flow) until January 2003[2]. In January 2003 a BHBF[3] of limited duration is conducted. This is followed by high experimental fluctuating flows for the main portion of the non-native spawning and emergent/juvenile season (January through March). From April – Summer 2003 operations would follow monthly volumes under the ROD. This scenario also includes mechanical removal of salmonids.



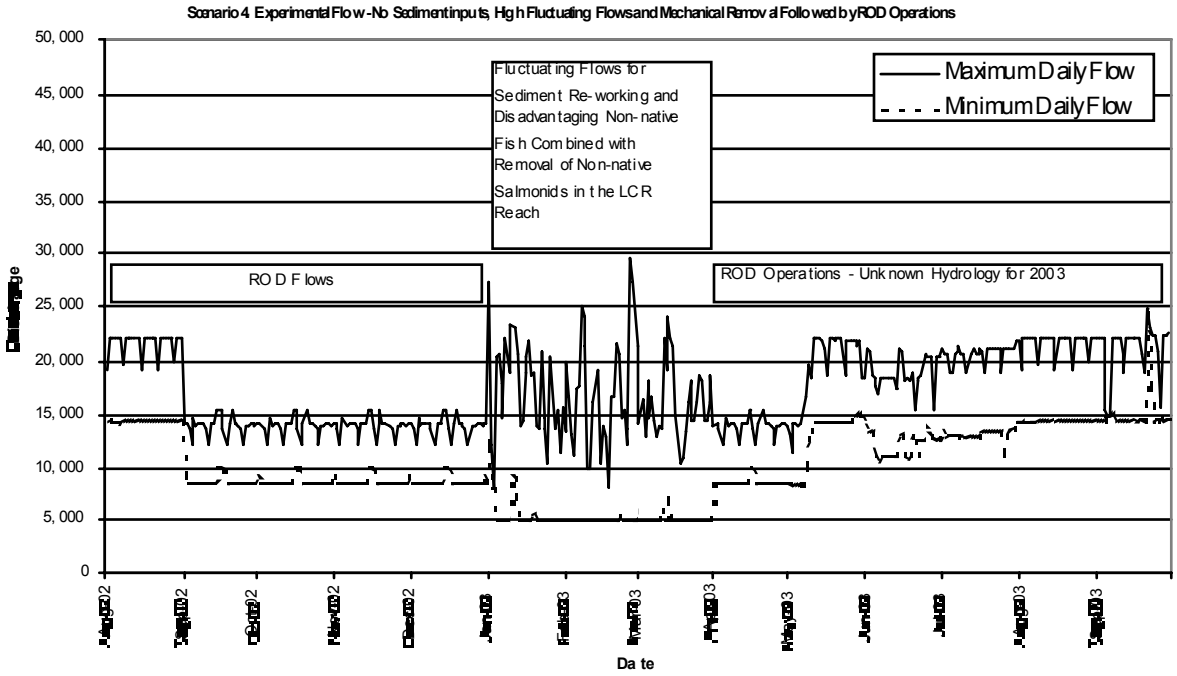
This scenario represents no significant monsoon sediment inputs but there are significant **sediment inflows in winter.** It also includes flows intended to benefit native fishes. If there are No significant sediment inputs in the August through December period the dam would be operated under normal ROD operations until December 2002. Beginning in January 2003 high experimental fluctuating flows for the main portion of the non-native

[1] A year with significant sediment inputs would be defined as a period of 1 to 30 days during which the Paria River contributes at least its long-term, annual average input of sand (about 1.4 million metric tons, or greater), to the Colorado River. These inputs may occur as either one discrete flood or many cumulative inputs over the course of a month.

[2] GCMRC will conduct an analysis of the probable amount of sediment that would be stored under either of these two flow regimes based on a fluctuating flow schedule provided by WAPA. If no substantial difference exists the fluctuating flow option will be implemented. Additional flow adjustments may be agreed upon for the month of December.

[3] In every scenario where a BHBF is proposed to be released in January 2003, the BHBF should have a magnitude of at least 10,000 cfs above peak powerplant discharge, or higher depending on lake elevation. A determination of whether to conduct a BHBF will be based on estimates of both sediment inputs and sediment retention prior to January.

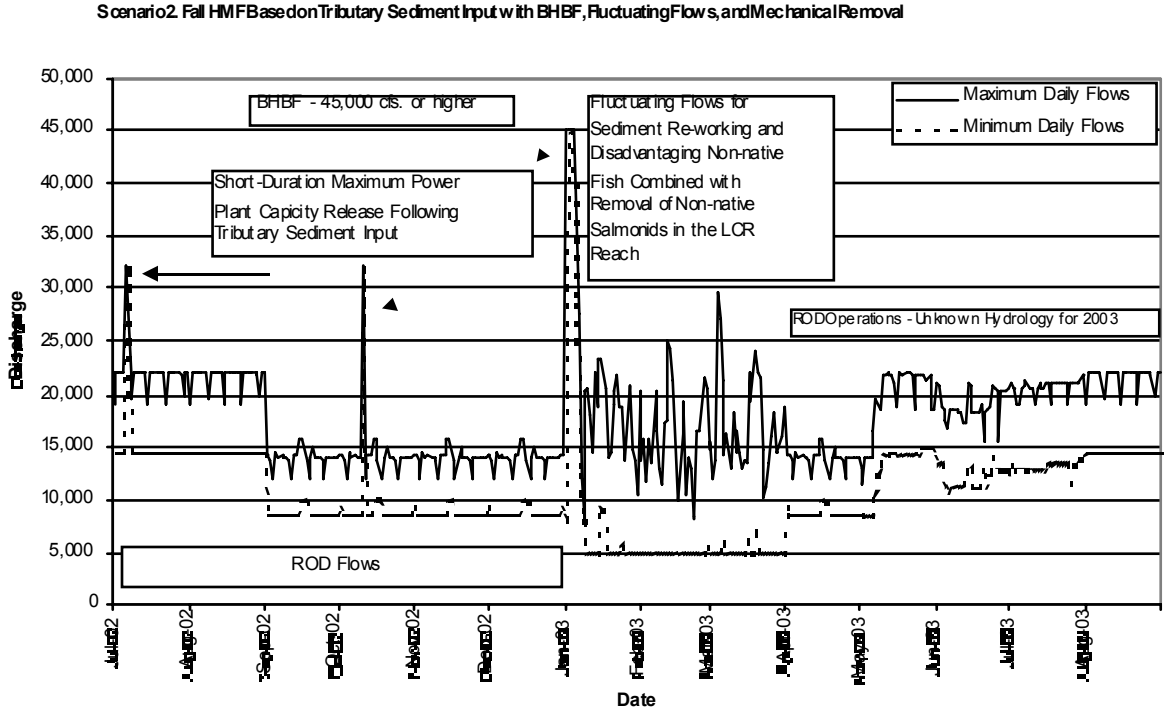
spawning and emergent/juvenile season (January through March) would be implemented. From April – Summer 2003 operations would follow monthly volumes under the ROD. In this scenario, a BHBF would occur if significant sand inputs occurred during the January through July period. The BHBF would be released as soon as possible and in the same month that the sediment input(s) occur. The BHBF would have a magnitude of at least 10,000 cfs above peak powerplant discharge, or higher depending on lake elevation. This scenario also includes Mechanical Removal of Salmonids.



In this scenario, no significant sediment inputs occur in the summer/fall or the winter input period. The dam is operated under normal ROD operations until December 2002. Beginning in January 2003 high experimental fluctuating flows for the main portion of the non-native spawning and emergent/juvenile season (January through March) would be implemented. From April – Summer 2003 operations would follow monthly volumes under the ROD. No BHBFs or HMFs would be implemented. This experiment is essentially focused on negatively affecting non-native fish populations by disrupting the non-native fish spawning and emergent/juvenile season. This scenario also includes Mechanical Removal of Salmonids

Year Two Treatment

The treatment recommended for implementation in year two is Scenario 2 from the GCMRC Version 3.0 document if there are substantial late summer-fall sediment inputs from the Paria River. Alternative flows is~~f~~ there are no summer-fall sediment inputs would be the same as Scenarios 3 or 4 above.



This scenario provides for experimental flows aimed at **both** conserving sediment and benefiting native fishes. From October 2001 through June 2002 the dam follows normal ROD operations. Whenever **significant** sediment inputs in the July - October 2002 period occurs, a Habitat Maintenance Flow (HMF) is immediately triggered[4]. This is followed by either[5] a flat flow of 8,000 cfs or low level (5-11,000cfs) ROD operations until January 2003. In January 2003 a BHBF of limited duration is conducted. This is followed by high experimental fluctuating flows for the main portion of the non-native spawning and emergent/juvenile season (January through March). This scenario also provides for Mechanical Removal of Salmonids. From April – Summer 2003 operations would follow monthly volumes under the ROD.

Experimental Flow Ad Hoc Meetin List of Attendees

Steve Gloss, Rick Johnson, Ted Melis, Dennis Kubly, Bill Davis, John Hayse, Perry Benemelis, Matt Kaplinski, Wayne Cook, David Topping, Norm Henderson, Clayton Palmer, Randy Peterson

[4] The HMF is anticipated to be a PowerPlant capacity flow of short duration timed to coincide with sediment input from the Paria River. Timing of the sediment input and the HMF will be facilitated by a real-time monitoring network of stream gauges to be implemented at selected sites on the Paria River in WY 2002-03.

[5] Determination of whether the flow between HMF's is flat or ROD will be determined at a later date based on year one experience, biological considerations, and BO compliance using best available scientific information.