Discussion about the High Flow Experimental Design

June 26, 2018

AMWG

- “Actions outside of the ROD could require additional NEPA compliance. Andrea requested time to consider what is allowed with the assistance of the DOI Solicitor’s Office.”[1]

- Discussion expected at future AMWG meetings.

[1] AMWG meeting minutes, February 2018

Input Provided since April Meeting

The purpose of this table is organize and track the Technical Work Group's input on High Flow Experiment (HFE) designs or design elements.
This table is intended to be used as a discussion aide, helpful in answering an overarching research management question: How can HFE designs be optimized to achieve resource benefits?

Design or design element	Authorization Status[1]	Suggester(s)	Research management question(s)	Monitoring criteria and standards
Conduct sediment-triggered HFE's in June (i.e., the highest discharge month in the pre-dam record)	Proposed	Jim		
Modify the sediment accounting window (including accounting for any unused sand) to trigger more Spring HFE's in lieu of implementing Fall HFE's	Proposed	Jim/Larry/Shane/Craig/Clayton	Are there ecological and functional benefits of combining the sediment accounting periods and HFE windows to allow for Spring HFEs using fall sediment inputs?	Net differences between Spring HFE's and Fall HFE's for: 1) beach area availability during the high-use boating season; 2) aeolian sand transport and cultural site preservation; 3) brown trout abundance in Lees Ferry; 4) foodbase availability to chub; 5) Lees Ferry rainbow trout abundance and emigration; 6) hydropower value; 7) other ecosystem components
Conduct sediment-triggered HFE's below the maximum hydropower generating capacity	Authorized	Jim		

Design or design element	Authorization Status[1]	Suggester(s)	Research management question(s)	Monitoring criteria and standards
Time sediment-triggered HFE's closer to Paria River peak flows	Authorized (Oct, Nov, Mar, Apr); proposed (other months)	Jim/Shane/Craig/Clayton	Could a sediment-triggered HFE timed to occur soon after a Paria River flood (i.e. a couple of days) be better at meeting sediment goals?	Fine sediment and organic matter retention Sandbar cohesion and relative erosion rates Winter-time turbidity Chub predation rates
Proactive Spring HFE's	Authorized	Shane/Craig/Clayton	Are proactive Spring HFEs in equalization years better or worse than doing nothing at all?	Net differences between equalization flow and equalization flow plus Proactive Spring HFE for: 1) sand deposited above the stage for power plant capacity; and 2) sand transported
Extended duration Fall HFE's	Authorized	Shane/Craig/Clayton	Is extending the duration of an HFE worth the additional sediment being transported?	The elapsed time for when sand transport exceed sand deposits

[1] Not intended to indicate if or when a design or design element may be implemented