

Table 1. Summary of comparison of No Action and BHBf Action for a "January-June Analysis" for Water Year 2000 Flow.

Objectives (based on management objectives)	Resource	No Action	Proposed Action
Increase height and area of existing sandbars	Hydrologic Scenario	Steady releases of at least 25K to 31K cfs for one month (Jan/June) followed by daily averaged fluctuating releases of 20-25K cfs through July.	Same as no action but with BHBf for 2-4 days at 45K cfs release followed by daily average fluctuating releases of 20-25K.
Reform/rework backwaters for native fishes	Sediment	Continued erosion of sandbars with some accumulation of sand in eddies. High steady flows increase erosion rates.	Conservation of sediment through sand deposition, especially if eddies storage capacity is full. Sand deposition on sandbars/beaches (3 feet or more), followed by erosion overtime. High steady flows increase erosion rates.
Displace non-native fish	Aquatic resources	Aquatic food base continues development. Drift loads downstream remain within observed patterns for flow following ROD. Backwater habitats fluctuate in temperature and are likely unavailable due to inundation. Spawning patterns of trout undisturbed. Native-Non Native interactions continue. Stabilized return channels not inundated may favor non-natives.	Potential reduction in food base with increased drift downstream. Recovery of food base becomes delayed after May and consequently impact to fish is greater. Some disruption of trout fry through displacement (Mar-May). Some backwaters temporarily reformed, or filled-in due to discharge/force dynamics. Potential downstream drift of juvenile or larval native fish, or increased habitat via pooling of tributary mouths (May-July). Pooling may be of little consequence since—Needs to be monitored. Native-Non-native interactions temporarily interrupted, but rapidly return to no action conditions.

Table 1 Cont.

<p>Provide water to Old-High Water Zone Vegetation.</p> <p>Maintain open sandbars for camping</p>	<p>Vegetation and Habitat</p>	<p>Continued woody vegetation development to the 25K cfs shoreline. Marsh areas inundated and some development of emergent marsh vegetation. Replacement of marsh vegetation with transitional riparian plants (e.g., cattails, willows), gradual loss of marsh habitat. Vegetation utilized by riparian bird community. SWWF nesting areas unaffected. Potential transport and establishment of Tamarisk seedlings. KAS habitat inundated to 25K stage possibly to 31K with associated incidental take of snails</p>	<p>Some emergent marsh and woody riparian vegetation lost due to burial. Recovery to no action levels within six months (Jan-April) or 1 year (April-July). Some wildlife habitat lost with 6 month recovery time. Ground nesting sites may be inundated (April-July). Recruitment of some riparian song birds may be affected, but the extent and species are not known (April-June). Nesting sites of SWWF unaffected. Potential transport and establishment of Tamarisk seedlings (May-July).</p>
<p>Not cause significant adverse effects on aquatic food base, trout fishery, endangered species, economics, cultural resources</p>	<p>Endangered Species and Other Special Status Species</p>	<p>Endangered species not significantly affected at flows to 25 K cfs. Habitat for native fish remains unchanged. Non-native/native fish interactions remain at current levels given current state of knowledge. Raptors food base not significantly affected. KAS habitat inundated to 25K stage possibly to 31K with associated incidental take of snails.</p>	<p>Possible habitat improvement for native fish or non-native fish (unstable backwater habitats). KAS habitat scoured to 45K cfs stage with incidental take of <10% of habitat. Recovery of KAS habitat 1-2 years to 24K cfs stage based on 1996 results. Raptors food base not significantly affected. Potential downstream drift of juvenile or larval native fish (May-July) or increased habitat via backwater formation. Stability of habitat is unknown. May have increased vegetated shoreline depending on subsequent flows--Needs to be monitored.</p>
<p>Protect cultural resources from erosion</p>	<p>Cultural Resources</p>	<p>Continued erosion of high terraces containing archeological sites by wind, rain and backward erosion from river channel.</p>	<p>Deposition of sand temporarily reduces erosion rates. Restoration of natural processes generally beneficial.</p>
<p>Preserve and restore camping beaches</p>	<p>Recreation</p>	<p>Anglers, day rafters and white-water rafters experience high fluctuating daily flows. Continued reduction of camping beaches. Beach numbers and sizes are still greater than pre-1996 flood event</p>	<p>Recreation activities disrupted for 2-4 days. Downstream safety and available camping areas reduced during BHBF, Safety a greater concern April- July. Number and size of beached increased subsequently.</p>

	Hydropower	Operations constrained to high steady flows and moderate fluctuating flow that average 20-25K cfs daily.	More energy is generated during the BHPF, when generating a full capacity, but overall less energy is generated due to the water by-passing the turbines.
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