

2012 Libby Dam Operations Update

Kootenai River White Sturgeon BiOp Flow Augmentation / Flood Risk Management

KVRI – 18 June 2012

- Spill above PHC to be provided for 7 days total
 - Commenced spill 04 June.
 - Ceased on 05 June due to Bonners Ferry flood stage encroachment (high tributary inflow / rain / high Kootenay Lake elevation).
 - Re-commenced spill 10 June.
 - Montana TDG waiver to 127% ~ 8-9 kcfs spill possible
 - Ceased spill for sturgeon early morning 17 June.
- PHC / PHC+ flow to be provided for total of 14 days
 - Met morning of 17 June
- Likely to continue PHC+ (within Montana TDG standard of 110% ~ 2 kcfs) operations through the end of June after sturgeon flow augmentation operations have ceased - reservoir elevation management/refill.
 - May need to exceed TDG standards to prevent fill/spill of Koocanusa
 - Kootenay Lake elevation near 1752'
 - Managing for Bonners Ferry Flood stage (1764') – likely at/near 1763' for rest of June
- June's April-August inflow forecast 123% of average - upper basin snowpack still at or above last year's measurements on this date.
- 2012 was Year 3 of 3 years of spill testing (2011 counted even though no spill was provided)
- Will be preparing an assessment of “attribute attainment” and biological responses to sturgeon flow augmentation operations under the 2006 BiOp this fall
 - Physical (depth, velocity, temperature)
 - Biological (sturgeon movement and wild juveniles)



NEWS RELEASE

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Sturgeon spill operation resumes at Libby Dam, expected to last through June 16

SEATTLE – After a five-day interruption for flood risk management, the U.S. Army Corps of Engineers recommenced spilling as part of the sturgeon flow augmentation at Libby Dam on June 10 and expect the operation to last through Saturday.

The sturgeon flow augmentation operation began on June 4, but the spill operation was halted when heavy rainfall, increased tributary inflows and high Kootenai Lake elevation caused the Kootenai River to rise swiftly and reach flood stage, 1,764 feet above mean sea level, at Bonners Ferry, Idaho. The spill operation resumed June 10 and could include spilling up to 10,000 cubic feet per second above full powerhouse capacity, approximately 26,000 cfs, increasing outflows to about 36,000 cfs for a total of seven non-continuous days.

Spill amounts will be based upon the river stage at Bonners Ferry, which the Corps is targeting to maintain between 1,762.5-1,764 feet elevation during the sturgeon flow operation.

In addition, with upper basin snowpack still higher than normal and the current inflow forecast at 123 percent of average, the Corps continues to closely monitor local conditions and will make flow adjustments as necessary for flood risk management. The Corps plans to release flows of 26,000 cfs for the foreseeable future and possibly continue to spill up to 2,000 cfs after Saturday. The operation after Saturday is intended to maintain enough space behind Libby Dam to accommodate potentially high inflows to the Dam through early July.

Biologists and water managers will monitor the spill operation, called for in the 2006 U.S. Fish and Wildlife Service (USFWS) Biological Opinion, as clarified in 2008, to test whether additional flows over the spillway will provide the habitat conditions thought to be necessary for successful sturgeon spawning. Total dissolved gas levels will be monitored by the Corps to ensure they do not exceed criteria established by the Montana Department of Environmental Quality. Montana Fish, Wildlife and Parks will continue monitoring fish for symptoms of gas bubble trauma.

The flow augmentation operation is part of a collaborative, ongoing effort by regional biologists to enhance spawning and migration conditions for sturgeon in the Kootenai River near Bonners Ferry. Increased flows are intended to provide river conditions that may foster sturgeon spawning, successful egg hatching, and survival of larval sturgeon in the reach of river upstream of Bonners Ferry, where sturgeon do not currently spawn successfully. While hatchery reproduction has increased the number of young sturgeon in the river, federal, state, and tribal partners hope to improve habitat conditions for adult sturgeon to successfully reproduce on their own.

The U.S. Army Corps of Engineers' primary consideration in operating Libby Dam is to minimize risk to human life, health, and safety, while meeting the dam's multiple purposes and responsibilities. The dam is a multi-purpose water resource developed for flood risk management, hydropower, fish and wildlife, and recreation.

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Attribute	Measure	Objective
Timing of Augmentation Flows	May into July (triggered by sturgeon spawning condition), in all years except for Tier 1.	Provide conditions for normal migration and spawning behavior.
Duration of Peak Augmentation Flows for Adult Migration and Spawning	Maximize peak augmentation flows with available water for as many days as possible, up to 14 days during the peak of the spawning period with pulses, in all years except for Tier 1.	Through in-season management, provide peak augmentation flows that lead to a biological benefit for sturgeon to maximize migration and spawning behavior via a normalized hydrograph.
Duration of Post-Peak Augmentation Flows for Incubation and Rearing	Maximize post-peak augmentation flows with available water for as many days as possible, up to 21 days, in all years except for Tier 1.	Through in-season management, provide post-peak augmentation flows that lead to a biological benefit for sturgeon to maximize embryo/free-embryo incubation and rearing via descending limb of a normalized hydrograph.
Minimum Flow Velocity	3.3 ft/s and greater in approximately 60% of the area of rocky substrate in the area of RM 152 to RM 157 during post-peak augmentation flows.	Provide conditions for spawning and embryo/free-embryo incubation and rearing.
Temperature Fluctuation	Optimize temperature releases at Libby Dam to maintain 50° F with no more than a 3.6° F drop.	Provide conditions for normal migration and spawning behavior via a normalized thermograph.
Depth at Spawning Sites	Intermittent depths of 16.5 to 23 ft or greater in 60% of the area of rocky substrate from RM 152 to RM 157 during peak augmentation flows.	Provide conditions for normal migration and spawning behavior.
Minimum Frequency of Occurrence	To facilitate meeting the attributes via: powerhouse plus up to 10,000 cfs flow test; a flow test will occur 2010 through 2012 (or until the Kootenai River Restoration Project is implemented) if the Service determines in 2008 and 2009 that the success criteria described in Action 1.3(b) have not been met.	