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# United States Department of the Interior

BUREAU OF RECLAMATION

Great Plains Region

Montana Area Office

P.O. Box 30137

Billings, Montana 59107-0137



June 4, 2008

## **FAXOGRAM: Water Order Change**

To: Chief, Power Supply and Billing Division, WAPA, Watertown, South Dakota  
Attention: F-6001  
Chief, Power Dispatching Branch, WAPA, Loveland, Colorado  
Attention: J-4120  
Facilities Manager, Hardin, Montana  
Attention: MT-300: Tom Tauscher  
Project Manager, Mills, Wyoming  
Attention: WY-4000, WY-4100, WY-6400  
Assistant Superintendent, National Park Service, Lovell, Wyoming  
Attention: Jim Staebler

From: Reservoir and River Operations, Billings, Montana

Subject: **Yellowtail Water Release Order - BHR No. 08-23**

### **CURRENT RESERVOIR CONDITIONS:**

Elevation: 3629.46; Storage: 954,363 acre-feet; River Release: 5,470 cfs; Inflow: 10,570 cfs;

### **GENERAL COMMENTS:**

Releases from Boysen and Buffalo Bill Reservoirs have been increased to control the storage levels due to snowmelt runoff. This in combination with the snowmelt runoff has result in high and increasing streamflows into Bighorn Lake. With storage levels in Bighorn Lake currently increasing about 1.0 feet per day, the following operation changes are required at Yellowtail Dam, Powerplant, and Afterbay as follows, to control the rate of rise of Bighorn Lake.

**NOTE: This is the time period when fish are more susceptible to high levels of nitrogen gas super-saturation. To provide a more desirable mixing flow of approximately 75% through the spillway gates and 25% through the sluice gates to maintain the total gas super-saturation levels at safe limits, the minimum Afterbay elevation should be maintained at or above elevation 3183 whenever possible. This is only a soft limit and may be deviated from during special or emergency operations.**

### **TURBINE RELEASES:**

**At 1800 hour on Wednesday, June 4, 2008:**

*Increase average daily turbine release to 6,180 cfs ( $\approx$  5,025 MW-Hrs/day using 31.8 cfs/mw).*

**At 0600 hour on Thursday, June 5, 2008:**

*Increase average daily turbine release to 6,680 cfs ( $\approx$  5,435 MW-Hrs/day using 31.8 cfs/mw).*

### **AFTERBAY RELEASE AND OPERATION:**

**At 1800 hour on Wednesday, June 4, 2008:**

*Maintain diversions to the Bighorn Canal at 250 cfs (gage height = 72.66 with 0.0 shift).*

*Increase release to Bighorn River to 6,000 cfs (gage height = 62.19 with a shift of -0.05).*

*Increase total release from the Afterbay to 6,250 cfs.*

**At 0600 hour on Thursday, June 5, 2008:**

*Maintain diversions to the Bighorn Canal at 250 cfs (gage height = 72.66 with 0.0 shift).*

*Increase release to Bighorn River to 6,500 cfs (gage height = 62.42 with a shift of -0.05).*

*Increase total release from the Afterbay to 6,750 cfs.*

/S/ Tim H. Felchle