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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



July 16, 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. 08-41**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3642.33; Storage: 1,100,360 acre-feet; River Release: 4,550 cfs; Inflow: 4,655 cfs;

GENERAL COMMENTS:

Streamflows in the Bighorn River Basin continue to decrease. In response, releases from Buffalo Bill and Boysen Reservoirs continue to be decreased to control the runoff into these reservoirs. To control the evacuation rate of storage in the exclusive flood pool in Bighorn Lake and provide additional relief from the high river flows in the Bighorn River, the following operation changes are required at Yellowtail Dam and 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.

YELLOWTAIL TURBINE RELEASE:

At 1700 hour on Thursday, July 17, 2008:

Decrease average daily turbine release to $\approx 3,905$ cfs ($\approx 2,955$ MW-Hrs/day using 31.7 cfs/mw).

AFTERBAY RELEASE AND OPERATION:

At 1700 hour on Thursday, July 17, 2008:

*Maintain diversions to the Bighorn Canal at 475 cfs (gage height = 74.29 with 0.0 shift).
Decrease release to the Bighorn River to 3,500 cfs (gage height = 60.66 & apply shift of 0.08).
Decrease total release from the Afterbay to 3,975 cfs.*

/S/ Tim H. Felchle