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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 23, 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. 08-29**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3636.75; Storage: 1,030,777 acre-feet; River Release: 9,565 cfs; Inflow: 11,340 cfs;

GENERAL COMMENTS:

Releases from Boysen Reservoir have been reduced to better assure Boysen Reservoir of filling to the top of the conservation pool. In response, the inflow into Bighorn Lake has decreased. In response and in an effort to reduce and eliminate releasing excess water past the powerplant, the following operation change is 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 1900 hour on Monday, June 23, 2008:

Maintain average daily turbine release at $\approx 8,020$ cfs ($\approx 6,440$ MW-Hrs/day using 29.9 cfs/mw).

At 1900 hour on Tuesday, June 24, 2008:

Maintain average daily turbine release at $\approx 8,020$ cfs ($\approx 6,440$ MW-Hrs/day using 29.9 cfs/mw).

YELLOWTAIL SPILLWAY RELEASE:

At 1900 hour on Monday, June 23, 2008:

*Close the Yellowtail Dam spillway gates to a minimum gate opening of 6 inches, maintaining an average daily release through the spillway of $\approx 1,300$ cfs. **At no time should the spillway gates be closed to less than 6 inches.***

At 1900 hour on Tuesday, June 24, 2008:

Completely close the Yellowtail Dam spillway gates to maintain an average daily release through the spillway of 0 cfs.

AFTERBAY RELEASE AND OPERATION:

At 1900 hour on Monday, June 23, 2008:

*Maintain diversions to the Bighorn Canal at 400 cfs (gage height = 73.80 with 0.0 shift).
Decrease release to the Bighorn River to 8,990 cfs (gage height = 63.33 & apply shift of 0.08).
Decrease total release from the Afterbay to 9,390 cfs.*

At 1900 hour on Tuesday, June 24, 2008:

*Maintain diversions to the Bighorn Canal at 400 cfs (gage height = 73.80 with 0.0 shift).
Decrease release to the Bighorn River to 7,690 cfs (gage height = 62.81 & apply shift of 0.08).
Decrease total release from the Afterbay to 8,090 cfs.*

/S/ Tim H. Felchle