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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 14, 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. 08-36**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3642.51; Storage: 1,102,783 acre-feet; River Release: 6,225 cfs; Inflow: 6,520 cfs;

GENERAL COMMENTS:

Streamflows in the Bighorn River Basin are quickly receding. In response, releases from Buffalo Bill and Boysen Reservoirs are being reduced to control the runoff. To control the rate at which storage in the exclusive flood pool in Bighorn Lake is evacuated and provide relief from the high river flows downstream of Yellowtail Afterbay Dam, 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 Monday, July 14, 2008:

Decrease average daily turbine release to $\approx 5,930$ cfs ($\approx 4,520$ MW-Hrs/day using 31.5 cfs/mw).

At 0600 hour on Tuesday, July 15, 2008:

Decrease average daily turbine release to $\approx 5,430$ cfs ($\approx 4,135$ MW-Hrs/day using 31.5 cfs/mw).

At 1700 hour on Tuesday, July 15, 2008:

Decrease average daily turbine release to $\approx 4,930$ cfs ($\approx 3,755$ MW-Hrs/day using 31.5 cfs/mw).

AFTERBAY RELEASE AND OPERATION:

At 1700 hour on Monday, July 14, 2008:

Maintain diversions to the Bighorn Canal at 375 cfs (gage height = 73.63 with 0.0 shift).

Decrease release to the Bighorn River to 5,625 cfs (gage height = 61.88 & apply shift of 0.08).

Decrease total release from the Afterbay at 6,000 cfs.

At 0600 hour on Tuesday, July 15, 2008:

Maintain diversions to the Bighorn Canal at 375 cfs (gage height = 73.63 with 0.0 shift).

Decrease release to the Bighorn River to 5,125 cfs (gage height = 61.62 & apply shift of 0.08).

Decrease total release from the Afterbay at 5,500 cfs.

At 1700 hour on Tuesday, July 15, 2008:

Maintain diversions to the Bighorn Canal at 375 cfs (gage height = 73.63 with 0.0 shift).

Decrease release to the Bighorn River to 4,625 cfs (gage height = 61.35 & apply shift of 0.08).

Decrease total release from the Afterbay at 5,000 cfs.

/S/ Tim H. Felchle