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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



May 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. 08-20**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3614.04; Storage: 829,964 acre-feet; River Release: 1,500 cfs; Inflow: 7,770 cfs;

GENERAL COMMENTS:

Due to recent precipitation accompanying the high elevation snowmelt, streamflows into Bighorn Lake have increased substantially. To control the rate of fill of storage in Bighorn Lake, the following operation changes are required at Yellowtail Dam, Powerplant, and Afterbay as follows.

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 Friday, May 23, 2008:

Increase average daily turbine release to 2,255 cfs (\approx 1,280 MW-Hrs/day using 42.3 cfs/mw).

At 0800 hour on Saturday, May 24, 2008:

Increase average daily turbine release to 2,755 cfs (\approx 1,565 MW-Hrs/day using 42.3 cfs/mw).

At 1800 hour on Saturday, May 24, 2008:

Increase average daily turbine release to 3,255 cfs (\approx 1,845 MW-Hrs/day using 42.3 cfs/mw).

At 0800 hour on Sunday, May 25, 2008:

Increase average daily turbine release to 3,755 cfs (\approx 2,130 MW-Hrs/day using 42.3 cfs/mw).

At 1800 hour on Sunday, May 25, 2008:

Increase average daily turbine release to 4,255 cfs (\approx 2,400 MW-Hrs/day using 42.3 cfs/mw).

At 0800 hour on Monday, May 26, 2008:

Increase average daily turbine release to 4,755 cfs (\approx 2,700 MW-Hrs/day using 42.3 cfs/mw).

AFTERBAY RELEASE AND OPERATION:

At 1800 hour on Friday, May 23, 2008:

Maintain diversions to the Bighorn Canal at 325 cfs (gage height = 72.26 with 0.0 shift).

Increase release to Bighorn River to 2,000 cfs (gage height = 59.63 with a shift of -0.05).

Increase total release from the Afterbay to 2,325 cfs.

At 0800 hour on Saturday, May 24, 2008:

*Maintain diversions to the Bighorn Canal at 325 cfs (gage height = 72.26 with 0.0 shift).
Increase release to Bighorn River to 2,500 cfs (gage height = 60.05 with a shift of -0.05).
Increase total release from the Afterbay to 2,825 cfs.*

At 1800 hour on Saturday, May 24, 2008:

*Maintain diversions to the Bighorn Canal at 325 cfs (gage height = 72.26 with 0.0 shift).
Increase release to Bighorn River to 3,000 cfs (gage height = 60.44 with a shift of -0.05).
Increase total release from the Afterbay to 3,325 cfs.*

At 0800 hour on Sunday, May 25, 2008:

*Maintain diversions to the Bighorn Canal at 325 cfs (gage height = 72.26 with 0.0 shift).
Increase release to Bighorn River to 3,500 cfs (gage height = 60.79 with a shift of -0.05).
Increase total release from the Afterbay to 3,825 cfs.*

At 1800 hour on Sunday, May 25, 2008:

*Maintain diversions to the Bighorn Canal at 325 cfs (gage height = 72.26 with 0.0 shift).
Increase release to Bighorn River to 4,000 cfs (gage height = 61.11 with a shift of -0.05).
Increase total release from the Afterbay to 4,325 cfs.*

At 0800 hour on Monday, May 26, 2008:

*Maintain diversions to the Bighorn Canal at 325 cfs (gage height = 72.26 with 0.0 shift).
Increase release to Bighorn River to 4,500 cfs (gage height = 61.41 with a shift of -0.05).
Increase total release from the Afterbay to 4,825 cfs.*

/S/ Tim H. Felchle