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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



August 11, 2009

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
Area 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. 09-56**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3643.69; Storage: 1,118,963 acre-feet; River Release: 3,050 cfs; Inflow: 3,982 cfs;

GENERAL COMMENTS:

A 12-day maintenance outage is scheduled on the Afterbay Dam sluice gates for August 17-28. During this time, the level of the Afterbay must be maintained no lower than elevation 3182 to sufficiently release the required flow to the Bighorn River. As a result, the following operation is required at Yellowtail Dam and Powerplant and the Afterbay Dam. It is anticipated the maintenance may be completed ahead of schedule and all restrictions on the Afterbay levels will be removed at that time.

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 required to meet energy demands.

TURBINE RELEASES:

Beginning 0700 hour on Monday, August 17, 2009 through 1700 hour on Friday, August 28, 2009:
Maintain average daily turbine release at 3,470 cfs ($\approx 2,465$ MW-Hrs/day using 33.8 cfs/mw).

AFTERBAY RELEASE AND OPERATION:

Beginning 0700 hour on Monday, August 17, 2009 through 1700 hour on Friday, August 28, 2009:
*Maintain diversions to Bighorn Canal at 490 cfs (gage height = 74.94 with a shift of -0.56).
Maintain river release at 3,050 cfs (gage height = 60.74 with a shift of -0.31).
Maintain total release from the Afterbay at 3,540 cfs.*

Special Note: The level of the Afterbay must be maintained no lower than elevation 3182 to allow for maintenance of the sluice gates and ensure releasing 3,050 cfs over the Afterbay spillway overflow weir to the river.

/S/ Tim H. Felchle