



United States Department of the Interior

BUREAU OF RECLAMATION

Great Plains Region

Montana Area Office

P.O. Box 30137

Billings, Montana 59107-0137



IN REPLY REFER TO: MT-450

September 11, 2006

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. 06-40**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3599.05; Storage: 739,366 acre-feet; River Release: 1,500 cfs; Inflow: 1,935 cfs;

GENERAL COMMENTS:

Recent flow measurements indicates actual river flows and canal flows are lower than anticipated. The BIA has also requested an increase in diversions to the Bighorn Canal. In response, the following operation changes are required at Yellowtail Dam and Powerplant applying a new shifts to the river and canal stages.

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:

Beginning at 1530 hour on Monday, September 11, 2006:

Increase average daily turbine release to 1,715 cfs (≈ 760 MW-Hrs/day using 54.2 cfs/mw).

Beginning at 1700 hour on Tuesday, September 12, 2006:

Increase average daily turbine release to 1,715 cfs (≈ 860 MW-Hrs/day using 47.8 cfs/mw).

Beginning at 1700 hour on Wednesday, September 13, 2006:

Increase average daily turbine release to 1,715 cfs (≈ 995 MW-Hrs/day using 41.4 cfs/mw).

AFTERBAY RELEASE AND OPERATION:

Beginning at 1530 hour on Monday, September 11, 2006:

Increase diversions to the Bighorn Canal to 285 cfs (gage height = 73.76 using shift of -0.81).

Maintain river release at 1,500 cfs (increase gage height to 59.63 using shift of -0.56).

Increase total release from the Afterbay to 1,785 cfs.

Beginning at 1700 hour on Tuesday, September 12, 2006:

Maintain diversions to the Bighorn Canal at 285 cfs (gage height = 73.76 using a shift of -0.81).

Maintain river release at 1,500 cfs (increase gage height to 59.86 using shift of -0.79).

Maintain total release from the Afterbay at 1,785 cfs.

Beginning at 1700 hour on Wednesday, September 13, 2006:

Maintain diversions to the Bighorn Canal at 285 cfs (gage height = 73.76 using a shift of -0.81).

Maintain river release at 1,500 cfs (increase gage height to 60.08 using shift of -1.01).

Maintain total release from the Afterbay at 1,785 cfs.

/S/ Tim H. Felchle