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

April 18, 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. 08-09**

CURRENT RESERVOIR CONDITIONS:

Elevation: 3610.19; Storage: 804,424 acre-feet; River Release: 1,900 cfs; Inflow: 1,305 cfs;

GENERAL COMMENTS:

The BIA has requested irrigation deliveries to begin on April 21 and be gradually increased during the week. With the temperatures remaining cool, the snowmelt runoff has not yet begun to increase substantially, resulting in well below normal inflows to Bighorn Lake. To conserve storage and slow the rate of decline of storage in Bighorn Lake, the following operation changes are required at Yellowtail Dam and Powerplant.

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 0900 hour on Monday, April 21, 2008:
Decrease average daily turbine release to 1,630 cfs (≈ 975 MW-Hrs/day using 40.1 cfs/mw).
At 1600 hour on Monday, April 21, 2008:
Increase average daily turbine release to 1,680 cfs (≈ 1,005 MW-Hrs/day using 40.1 cfs/mw).
At 1600 hour on Tuesday, April 22, 2008:
Increase average daily turbine release to 1,730 cfs (≈ 1,035 MW-Hrs/day using 40.1 cfs/mw).
At 1600 hour on Wednesday, April 23, 2008:
Increase average daily turbine release to 1,780 cfs (≈ 1,065 MW-Hrs/day using 40.1 cfs/mw).

AFTERBAY RELEASE AND OPERATION:

At 0900 hour on Monday, April 21, 2008:

Increase diversions to the Bighorn Canal to 50 cfs (gage height = 70.33 with 0.0 shift).
Decrease river release to 1,650 cfs (gage height = 59.54 with a shift of -0.05).
Decrease total release from the Afterbay to 1,700 cfs.

At 1600 hour on Monday, April 21, 2008:

Increase diversions to the Bighorn Canal to 100 cfs (gage height = 71.11 with 0.0 shift).
Maintain river release at 1,650 cfs (gage height = 59.54 with a shift of -0.05).
Increase total release from the Afterbay to 1,750 cfs.

At 1600 hour on Tuesday, April 22, 2008:

Increase diversions to the Bighorn Canal to 150 cfs (gage height = 71.71 with 0.0 shift).
Maintain river release at 1,650 cfs (gage height = 59.54 with a shift of -0.05).
Increase total release from the Afterbay to 1,800 cfs.

At 1600 hour on Wednesday, April 23, 2008:

Increase diversions to the Bighorn Canal to 200 cfs (gage height = 72.21 with 0.0 shift).
Maintain river release at 1,650 cfs (gage height = 59.54 with a shift of -0.05).
Increase total release from the Afterbay to 1,850 cfs.

/S/ Tim H. Felchle