



# 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

July 2, 2014

## **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-6040  
Assistant Superintendent, National Park Service, Lovell, Wyoming  
Attention: Valerie Newman

From: Reservoir and River Operations, Billings, Montana /s/ Clayton R. Jordan

Subject: **Yellowtail Water Release Order - BHR No. 14-62 (Revised)**

### **CURRENT RESERVOIR CONDITIONS:**

Elevation: 3637.42; Storage: 989,148 acre-feet; River Release: 4,000 cfs; Inflow: 7,345 cfs;

### **GENERAL COMMENTS:**

The BIA requested an increase in diversions to the Bighorn Canal. Release to the Bighorn River will be increased to control the rate of fill of Bighorn Lake. Recent power generation and streamflow data indicate the need to apply a new shift to the Bighorn River gage. A new shift needs to be applied to the Bighorn Canal with the recent shutdown of the canal. Western Area Power Administration (WAPA) requested total generation from Yellowtail Powerplant be limited to 171 MW/hour. In response, the following operations are required at Yellowtail Dam and Powerplant and Yellowtail Afterbay Dam.

**SPECIAL NOTE:** To provide the proper mixing of water releases to the Bighorn River in attempt to minimize PSAT levels, it is desirable to maintain the Yellowtail Afterbay Reservoir between a maximum elevation of 3192.0 feet and a minimum elevation of 3184.6 feet and provide a mixing flow of approximately 75% through the spillway gates and 25% through the sluice gates, plus or minus 10%.

### **YELLOWTAIL BYPASS RELEASE:**

**At 1700 hour on Wednesday, July 2, 2014:**

*Maintain release through river outlet works at 0 cfs.*

**At 0800 hour on Thursday, July 3, 2014:**

*Increase release through river outlet works to 500 cfs.*

**At 1500 hour on Thursday, July 3, 2014:**

*Maintain release through river outlet works at 500 cfs.*

### **YELLOWTAIL TURBINE RELEASE:**

**At 1700 hour on Wednesday, July 2, 2014:**

*Increase average daily turbine release to 4,705 cfs ( $\approx$  4,060 MW-Hours/day using 27.8 cfs/mw).*

**At 0800 hour on Thursday, July 3, 2014:**

*Decrease average daily turbine release to 4,305 cfs ( $\approx$  3,715 MW-Hours/day using 27.8 cfs/mw).*

**At 1500 hour on Thursday, July 3, 2014:**

*Increase average daily turbine release to 4,380 cfs ( $\approx$  3,780 MW-Hours/day using 27.8 cfs/mw).*

**Restrict and limit turbine release to 3-unit capacity.**

**AFTERBAY RELEASE AND OPERATION:**

**At 1700 hour on Wednesday, July 2, 2014:**

*Increase diversions to the Bighorn Canal to 275 cfs (gage height = 72.51 and apply a new shift of -0.22).*

*Increase river release to 4,500 cfs (gage height = 61.80 and apply a new shift of -0.44).*

*Increase total release from the Afterbay to 4,775 cfs.*

**At 0800 hour on Thursday, July 3, 2014:**

*Increase diversions to the Bighorn Canal to 375 cfs (gage height = 73.22 with -0.22 shift).*

*Maintain river release at 4,500 cfs (gage height = 61.80 with -0.44 shift).*

*Increase total release from the Afterbay to 4,875 cfs.*

**At 1500 hour on Thursday, July 3, 2014:**

*Increase diversions to the Bighorn Canal to 450 cfs (gage height = 73.70 with -0.22 shift).*

*Maintain river release at 4,500 cfs (gage height = 61.80 with -0.44 shift).*

*Increase total release from the Afterbay to 4,950 cfs.*