



# 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

June 17, 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. 14-56**

### **CURRENT RESERVOIR CONDITIONS:**

Elevation: 3624.41; Storage: 863,294 acre-feet; River Release: 4,920 cfs; Inflow: 8,735 cfs;

### **GENERAL COMMENTS:**

Inflows into Bighorn Lake continue to decline. Releases to the Bighorn River will be reduced to conserve storage. The BIA has also requested a decrease in diversion to the Bighorn Canal. Recent streamflow measurements conducted by the USGS indicate the need to apply a new shift to the Bighorn Canal and Bighorn River. As a result, the following operations are required at Yellowtail Dam and Powerplant.

**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 at or above elevation 3186.0 feet and provide a mixing flow of approximately 85% through the spillway gates and 15% through the sluice gates, plus or minus 5%.**

### **YELLOWTAIL TURBINE RELEASE:**

**At 1600 hour on Tuesday, June 17, 2014:**

*Decrease average daily turbine release to 4,150 cfs ( $\approx$  3,090 MW-Hours/day using 32.2 cfs/mw).*

**At 0900 hour on Wednesday, June 18, 2014:**

*Decrease average daily turbine release to 4,055 cfs ( $\approx$  3,020 MW-Hours/day using 32.2 cfs/mw).*

**At 1600 hour on Wednesday, June 18, 2014:**

*Decrease average daily turbine release to 3,555 cfs ( $\approx$  2,650 MW-Hours/day using 32.2 cfs/mw).*

**At 1600 hour on Thursday, June 19, 2014:**

*Decrease average daily turbine release to 3,305 cfs ( $\approx$  2,460 MW-Hours/day using 32.2 cfs/mw).*

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

### **AFTERBAY RELEASE AND OPERATION:**

**At 1600 hour on Tuesday, June 17, 2014:**

*Maintain diversions to the Bighorn Canal at 470 cfs (gauge height = 73.98 apply a new shift of -0.38 ).*

*Decrease river release at 3,750 cfs (gauge height = 61.19 apply a new shift of -0.29).*

*Decrease total release from the Afterbay to 4,220 cfs.*

**At 0900 hour on Wednesday, June 18, 2014:**

*Decrease diversions to the Bighorn Canal to 375 cfs (gauge height = 73.38 with a -0.38 shift).*

*Maintain river release at 3,750 cfs (gauge height = 61.19 with a -0.29 shift).*

*Decrease total release from the Afterbay to 4,125 cfs.*

**At 1600 hour on Wednesday, June 18, 2014:**

*Maintain diversions to the Bighorn Canal at 375 cfs (gage height = 73.38 with a -0.38 shift).*

*Decrease river release to 3,250 cfs (gage height = 60.86 with a -0.29 shift).*

*Decrease total release from the Afterbay to 3,625 cfs.*

**At 1600 hour on Thursday, June 19, 2014:**

*Maintain diversions to the Bighorn Canal at 375 cfs (gage height = 73.38 with a -0.38 shift).*

*Decrease river release to 3,000 cfs (gage height = 60.68 with a -0.29 shift).*

*Decrease total release from the Afterbay to 3,375 cfs.*