Water Order Change

July 12, 2022

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
   Project Manager, Mills, Wyoming
   Attention: WY-4000, WY-4100, WY-6040
   Superintendent, National Park Service, Lovell, Wyoming
   Attention: James R. Hill

From: Reservoir and River Operations, Billings, Montana

Subject: Yellowtail Water Release Order - BHR No. 22-46

CURRENT RESERVOIR CONDITIONS:
Elevation: 3639.34 feet; Storage: 1,002,154 acre-feet; River Release: 4,250 cfs; Canal Diversion: 400 cfs
Inflow: 3,330 cfs; River Gage Shift: 0.06 feet; Canal Gage Shift: 0.04 feet

GENERAL COMMENTS:
This water order supersedes a portion of Yellowtail Water Release Order – BHR No. 22-45. Bighorn River
releases are being decreased. Diversions to the Bighorn Canal are being increased. In response, the
following operation changes are required at Yellowtail Dam, Powerplant and 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 3183.0 feet and provide a mixing flow of approximately 75% through the
radial gates and 25% through the sluice gates.

YELLOWTAIL TURBINE RELEASE:
At 1600 hour on Tuesday, July 12, 2022:
   Decrease average daily turbine releases to 4,380 cfs. (≈ 3,445 MW-Hours/day using 30.5 cfs/mw)
   Limit turbine release to 3-unit capacity
At 1600 hour on Wednesday, July 13, 2022:
   Decrease average daily turbine releases to 4,130 cfs. (≈ 3,250 MW-Hours/day using 30.5 cfs/mw)
   Limit turbine release to 3-unit capacity.
At 1600 hour on Thursday, July 14, 2022:
   Decrease average daily turbine releases to 3,880 cfs. (≈ 3,055 MW-Hours/day using 30.5 cfs/mw)
   Limit turbine release to 3-unit capacity
At 1800 hour on Friday, July 15, 2022:
Increase average daily turbine releases to 3,630 cfs. (≈ 2,855 MW-Hours/day using 30.5 cfs/mw)
Limit turbine release to 3-unit capacity

At 1800 hour on Saturday, July 16, 2022:
Decrease average daily turbine releases to 3,380 cfs. (≈ 2,660 MW-Hours/day using 30.5 cfs/mw)
Limit turbine release to 3-unit capacity

At 1800 hour on Sunday, July 17, 2022:
Decrease average daily turbine releases to 3,130 cfs. (≈ 2,465 MW-Hours/day using 30.5 cfs/mw)
Limit turbine release to 3-unit capacity.

At 1600 hour on Monday, July 18, 2022:
Decrease average daily turbine releases to 2,980 cfs. (≈ 2,345 MW-Hours/day using 30.5 cfs/mw)
Limit turbine release to 3-unit capacity.

AFTERBAY RELEASE AND OPERATION:

At 1600 hour on Tuesday, July 12, 2022:
Increase diversions to Bighorn Canal to 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 4,000 cfs. (gage height = 61.00 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 4,450 cfs.

At 1600 hour on Wednesday, July 13, 2022:
Maintain diversions to Bighorn Canal at 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 3,750 cfs. (gage height = 60.84 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 4,200 cfs.

At 1600 hour on Thursday, July 14, 2022:
Maintain diversions to Bighorn Canal at 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 3,500 cfs. (gage height = 60.67 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 3,950 cfs.

At 1800 hour on Friday, July 15, 2022:
Maintain diversions to Bighorn Canal at 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 3,250 cfs. (gage height = 60.51 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 3,700 cfs.

At 1800 hour on Saturday, July 16, 2022:
Maintain diversions to Bighorn Canal at 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 3,000 cfs. (gage height = 60.33 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 3,450 cfs.

At 1800 hour on Sunday, July 17, 2022:
Maintain diversions to Bighorn Canal at 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 2,750 cfs. (gage height = 60.14 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 3,200 cfs.

At 1600 hour on Monday, July 18, 2022:
Maintain diversions to Bighorn Canal at 450 cfs. (gage height = 73.44 with a 0.04 ft shift)
Decrease river releases to 2,600 cfs. (gage height = 60.02 ft with a 0.06 ft shift)
Decrease total release from the Afterbay to 3,050 cfs.