

OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE

TITLE - 18BCL04 debris removal operation

COORDINATION DATE - 01 June 2018

PROJECT - Big Cliff Dam

RESPONSE DATE - 15 June 2018

Description of the problem

On February 2018, the Big Cliff forebay boom broke causing a large amount of woody debris to pile up against the dam and requires removal. This will help reduce risk of having a forced outage at Big Cliff in the future outside the maintenance window. For the debris removal operation, the Big Cliff reservoir will be drawn down to a forebay elevation of under 1167 ft, and held there for a period of 24 hours. During this period, all flow would be passed preferably through one spillway gate (unless scheduled flows downstream of Big Cliff exceed one gate capacity flow). The operation is planned to take place within the 18-28 June window when an outage for maintenance has already been scheduled to be in effect.

The drawdown will be initiated on June 15. It is expected that an elevation of ~1180 ft, or an elevation below power pool, will be reached June 19. The expectation is to be at the desired ~1167-1165 ft range on June 22.

Once the desired elevation is reached, the operators will work to hold the elevation below 1167 ft for the next 24 hours as accumulated wood debris are passed through one spillway gate. In order to keep the Big Cliff pool as flat as possible in the desired range, a round-the-clock generation will be enacted from Detroit for this 24-hour period. Once the debris removal/flush-out operation is completed Big Cliff pool refill will be initiated on June 23. The expectation is to be at normal Big Cliff pool range (~1195-1200ft) by June 30. The minimum power pool elevation of 1182 ft is expected to be reached by June 27, even though refill will continue until we reach the desired elevation, generation at Big Cliff can begin as soon as the scheduled outage ends on June 28.

The intent during the debris removal/flush-out operation is to release through just one spillways gate at Big Cliff Dam. In case additional capacity is required to maintain flow downstream of Big Cliff, then additional spillway gates will be utilized to facilitate scheduled flow.

The scheduled turbine outage at Big Cliff during the maintenance period means that elevated TDG levels downstream of Big Cliff will be observed, thus, the debris removal operation would not cause elevated TDG in of itself.

Dates of impacts/repairs

June 15-28

Expected impacts on fish

Anytime a turbine unit is out of service or the spillway is utilized at Big Cliff Dam there is potential for elevated levels of total dissolved gas (TDG) and impacts to fish.

Comments from agencies

-----Original Message-----

From: Walker, Christopher E CIV USARMY USACE (US)
Sent: Tuesday, June 05, 2018 6:04 AM
To: 'Anne Mullan - NOAA Federal' <anne.mullan@noaa.gov>
Cc: Elise Kelly <elise.x.kelley@state.or.us>; Kelly Reis <kelly.e.reis@state.or.us>; Nancy Gramlich <nancy.h.gramlich@state.or.us>
Subject: RE: [Non-DoD Source] Re: WFPOM: 18BCL04 debris removal operation, 18BCL03 MFR minimum flow

The gate will depend on best getting debris out. I can suggest only gate 2 be used (if possible) if that is preferred.

Chris Walker
U.S. Army Corps of Engineers
Operations Division
Fish Biologist
w: 503-808-4316
c: 503-887-6452

Willamette Fish Passage Operations and Maintenance (W-FPOM) (website):
http://pweb.crohms.org/tmt/documents/FPOM/2010/Willamette_Coordination/

-----Original Message-----

From: Anne Mullan - NOAA Federal [mailto:anne.mullan@noaa.gov]
Sent: Friday, June 01, 2018 2:47 PM
To: Walker, Christopher E CIV USARMY USACE (US) <Christopher.E.Walker@usace.army.mil>
Cc: Elise Kelly <elise.x.kelley@state.or.us>; Kelly Reis <kelly.e.reis@state.or.us>; Nancy Gramlich <nancy.h.gramlich@state.or.us>
Subject: [Non-DoD Source] Re: WFPOM: 18BCL04 debris removal operation, 18BCL03 MFR minimum flow

Chris,
I have a question on the 18BCL04 debris removal operation

Do you know which spillway will be open-- and if gate 2 be used, when only one gate is open? If the location of the debris requires other gates to be open, please let us know.

Many thanks

On Fri, Jun 1, 2018 at 1:43 PM, Walker, Christopher E CIV USARMY USACE (US) <Christopher.E.Walker@usace.army.mil> <mailto:Christopher.E.Walker@usace.army.mil> > wrote:

W-FPOM,

Please review the attached MOC and MFR regarding a minimum BiOp flow criteria deviation and a debris removal operation at Big Cliff Dam. Please comment by COB June 14.

Chris Walker
U.S. Army Corps of Engineers
Operations Division
Fish Biologist
w: 503-808-4316
c: 503-887-6452

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-----Original Message-----

From: Walker, Christopher E CIV USARMY USACE (US)
Sent: Thursday, June 14, 2018 12:11 PM
To: 'Elise X Kelley' <Elise.X.Kelley@state.or.us>
Subject: RE: WFPOM: 18BCL04 debris removal operation, 18BCL03 MFR minimum flow

That is the goal. Chat soon.

Chris Walker
U.S. Army Corps of Engineers
Operations Division
Fish Biologist
w: 503-808-4316
c: 503-887-6452

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-----Original Message-----

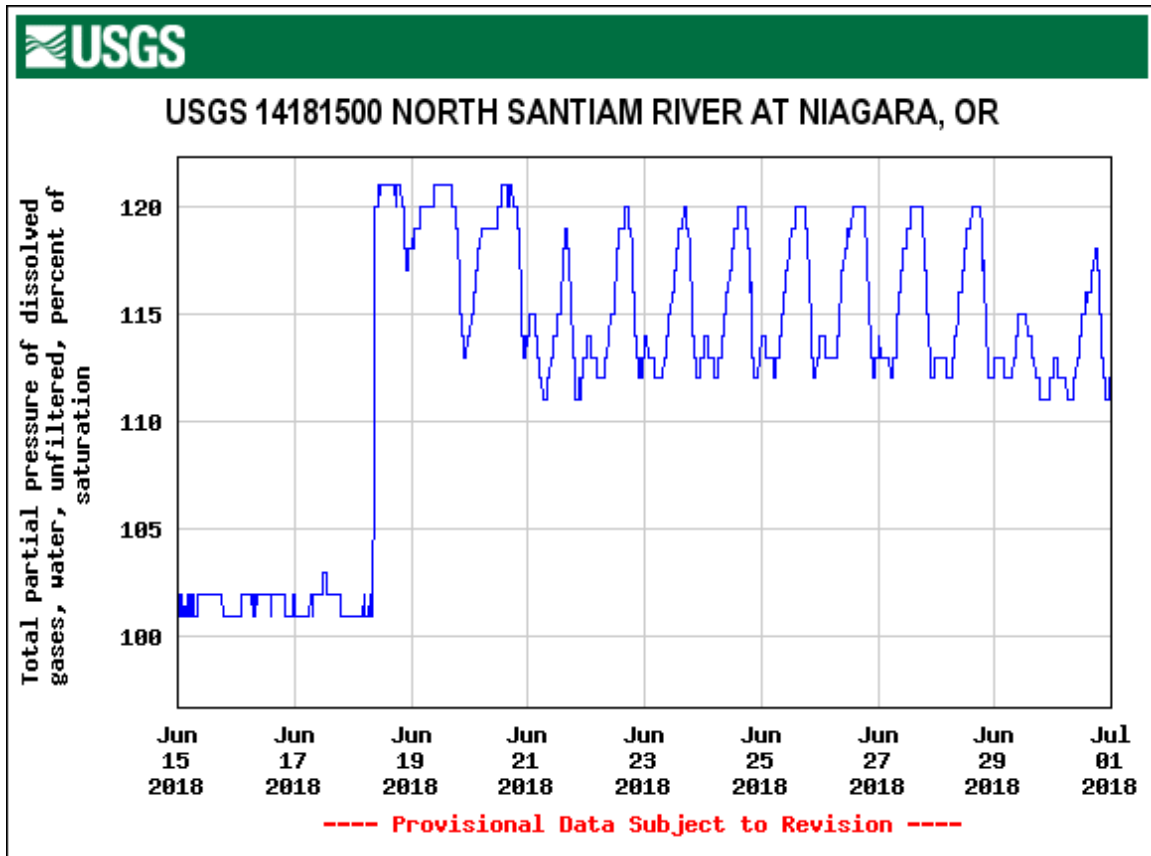
From: Elise X Kelley [mailto:Elise.X.Kelley@state.or.us]
Sent: Thursday, June 14, 2018 12:00 PM
To: Walker, Christopher E CIV USARMY USACE (US)
<Christopher.E.Walker@usace.army.mil>
Subject: [Non-DoD Source] RE: WFPOM: 18BCL04 debris removal operation, 18BCL03 MFR minimum flow

Hi Chris,
I'm assuming flow levels won't change with this operation?
Thanks,
Elise

Final results

Total dissolved gas levels were as high as 121% during the operation but the operation done while a turbine unit was out of service during the maintenance period where high gas levels would occur anyway due to use of the spillway. Therefore, there was no additional impact caused by the debris removal operation. During the operation, there

were 43 non-marked spring Chinook salmon and 159 winter steelhead placed in the reach where impacts primarily occur from elevated TDG levels.



Please email or call with questions or concerns.

Thank you,

Chris Walker
NWP Operations Division Fishery Section
Fish Biologist
503.808.4316
Christopher.E.Walker@usace.army.mil