**OFFICIAL COORDINATION REQUEST FOR**
**NON-ROUTINE OPERATIONS AND MAINTENANCE**

**COORDINATION TITLE - 18 LGS 16 Spill modification for equipment retrieval**
**COORDINATION DATE - 08/10/2018**
**PROJECT - Little Goose Dam**
**RESPONSE DATE – 08/10/2018**

**Description of the problem**
The Corps and PNNL would like to retrieve the hydroacoustic autonodes used for the adult chinook telemetry study from the Little Goose North Tailrace. This equipment retrieval is being requested before the end of spill season because we believe a very large amount of fish behavior data is on theses nodes and waiting until after spill season increases the risk of losing the equipment. Several autonodes have already broken loose during the spill season as steel cables frayed and severed. The nodes are located north of the spillway and navigational lock. We are requesting shifting spill for up to 6 hours one afternoon of the week of 13 August 2018.

**Type of outage required -** None

**Impact on facility operation** (FPP deviations)
Temporary shift of 2-stop gate opening from spillbay 8 to southern spillbays as below.

| Flow | Spill | Bay 1 | Bay 2 | Bay 3 | Bay 4 | Bay 5 | Bay 6 | Bay 7 | Bay 8 |
|---|---|---|---|---|---|---|---|---|---|
| 24 | 7.2 | closed | 1 | 1 | 1 | 1 | | | ~~2~~ |
| 26.4 | 8.9 | closed | 1 | 1 | 1 | 1 | 1 | | ~~2~~ |
| 31.5 | 8.9 | closed | 1 | 1 | 1 | 1 | 1 | | ~~2~~ |
| 35.7 | 10.7 | closed | 1 | ~~2~~1 | 1 | 1 | 1 | | ~~2~~ |

**Impact on unit priority -** None

**Impact on forebay/tailwater operation**
Temporary shift of 2-stop gate opening from spillbay 8 to southern spillbays.

**Impact on spill**
Move the 2 stops from spillbay 8 to the southern spillbays to aid in retrieval of the autonodes and for BRZ boating safety concerns and access.

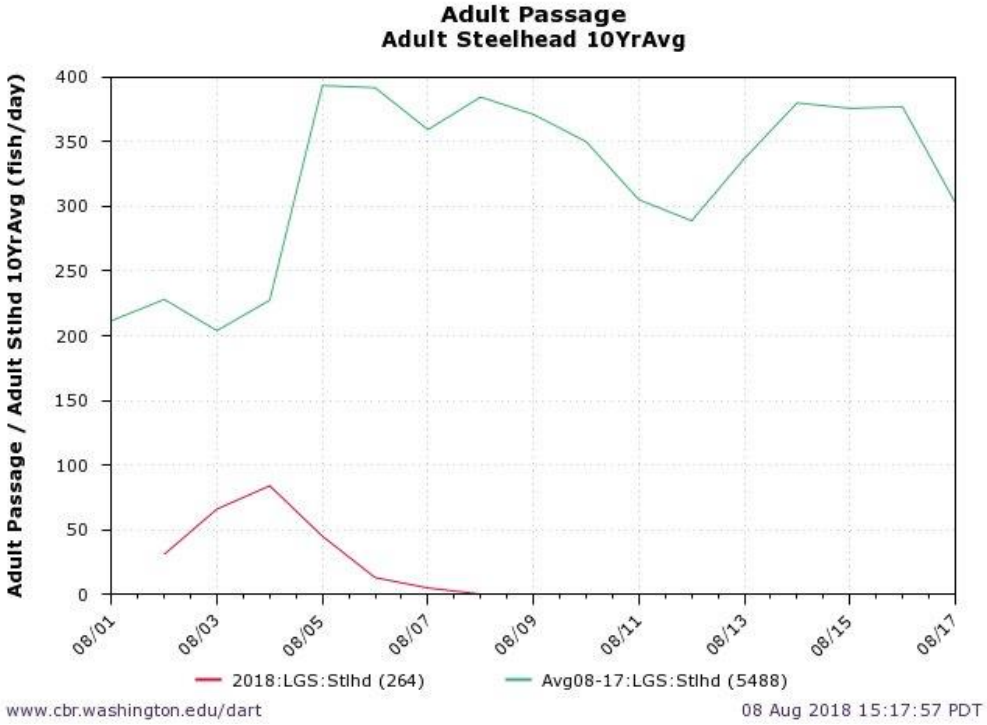
**Dates of impacts/repairs**
One afternoon during the week of August 13th – up to 6 hours - in the afternoon.

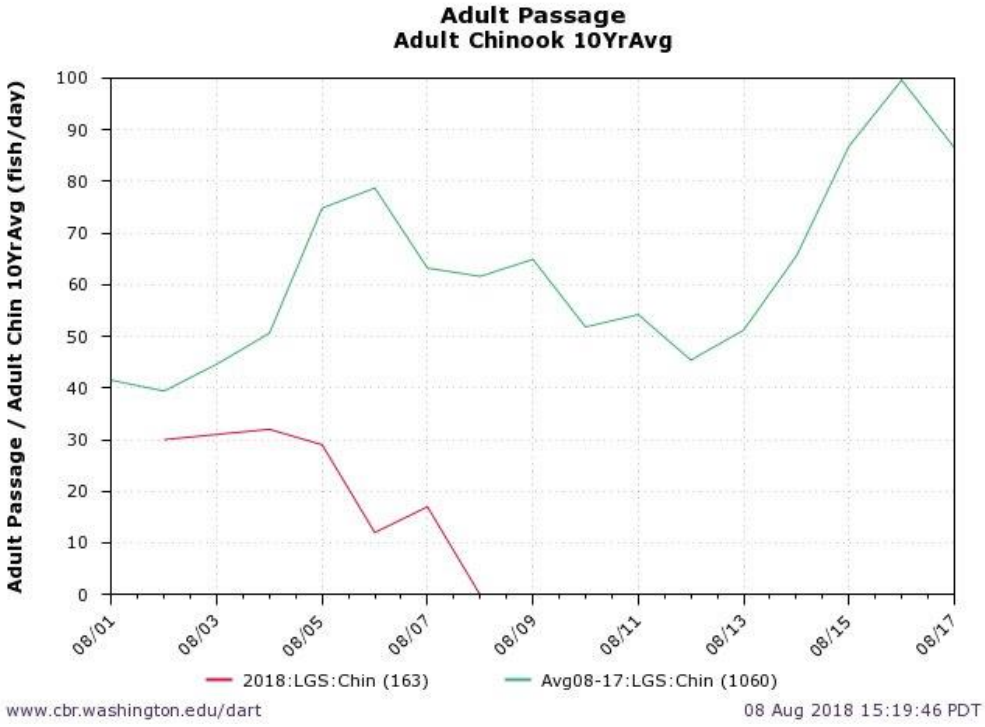
**Length of time for repairs**
6 hours (12:00 pm to 6:00pm) in the afternoon one day the week of August 13th, allowing the morning adult fish passage to occur under FPP conditions. Spill will resume to match

the FPP immediately following retrieval of the equipment and after boats have cleared the tailrace BRZ.

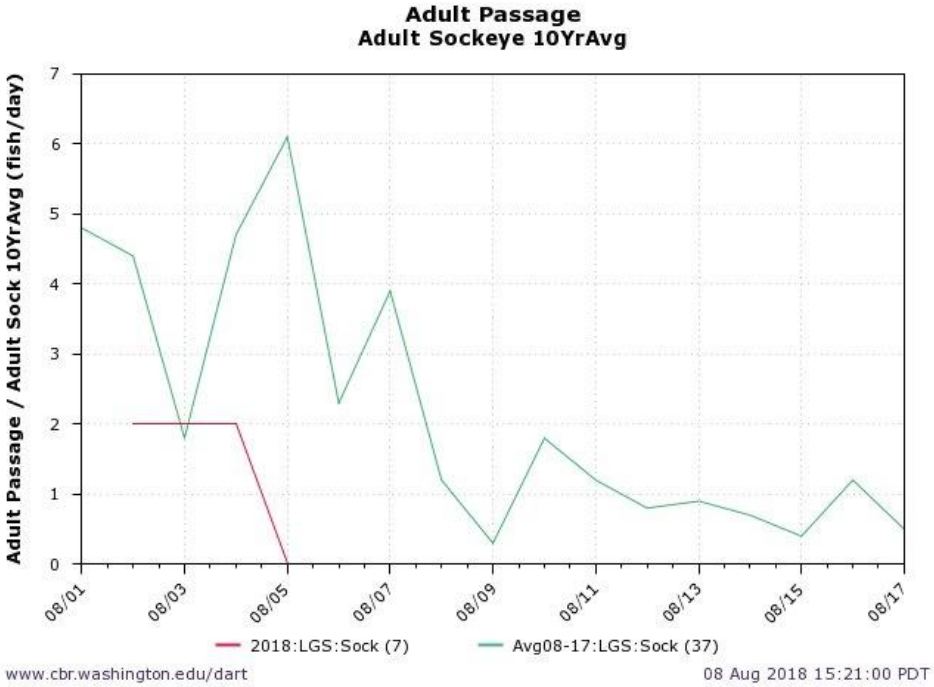
**Analysis of potential impacts to fish**

Steelhead numbers passing the dam are anticipated to be very low with low numbers passing the dam over the last few days, well below the 10 year average. The steelhead 10-year average indicates that 300-350 fish per day normally pass the dam during this period. Very few adult salmon are anticipated passing at this time. The current Chinook passage numbers and 10-year average are included in the graphs below.
Estimated exposure to the requested condition should not inhibit ladder entrance or passage.






www.cbr.washington.edu/dart 08 Aug 2018 15:19:46 PDT

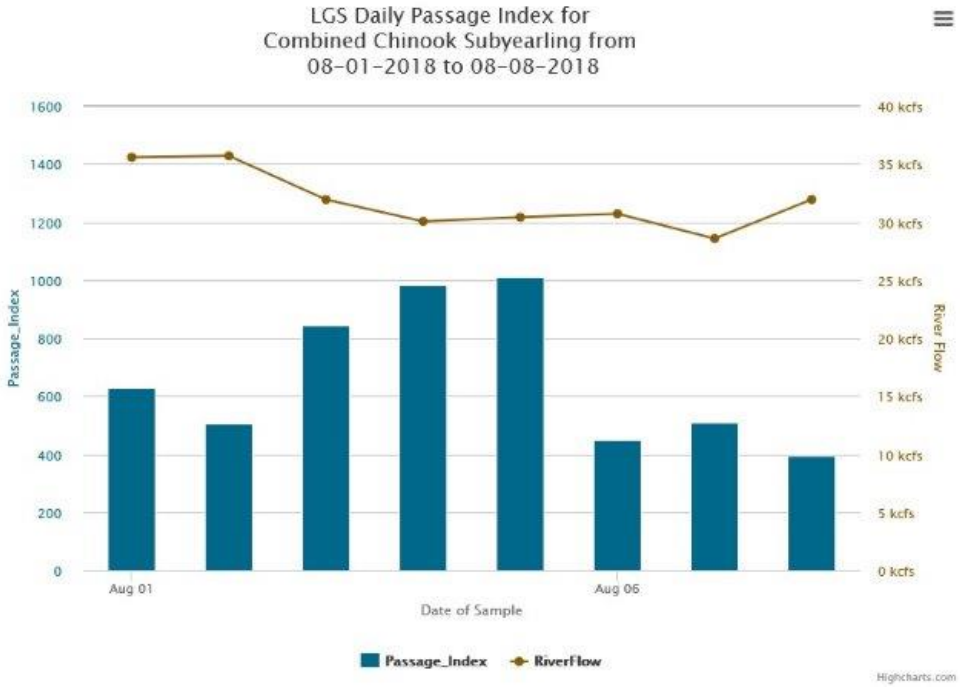



www.cbr.washington.edu/dart 08 Aug 2018 15:21:00 PDT

**Summary statement - expected impacts on:**

**Downstream migrants**

No net change in spill volume will occur only a shift in 2 gate stops from spillbay 8 to southern bays for approximately 6 hours. This request is not anticipated to reduce juvenile passage or survival. Approximately 400 subyearling Chinook juveniles are passing the dam per day at this time.




**Upstream migrants (including Bull Trout) -** No Impacts

**Lamprey -** No Impacts

**Comments from agencies**

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-----Original Message-----
From: Erick VanDyke [mailto:Erick.S.VanDyke@state.or.us]
Sent: Friday, August 10, 2018 12:29 PM
To: Peery, Christopher A CIV USARMY CENWW (US)
<Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 18 LGS 16 MOC Spill modification to
retrieve research equipment

Afternoon Chris,

After yesterday's FPOM discussion I was generally okay with the
importance of information on the Northern node string justifying this
request.  I would recommend removing "from the hydraulic nature of the
north eddy" from the third sentence of the description of the problem.
Unless of course you could provide the basis for the eddy influence on
node hardware damage and additional supporting information regarding
the status and impact of tailwater hydraulic influence on cabling set-
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up in other areas or during other studies when the set-up was used. I suspect that loss of nodes has been experienced throughout the history of autonomous node use and that fraying or hardware failure have occurred for many reasons.

Has it been confirmed that the lost nodes have been disconnected from the anchoring system? In other words that the decoupling mechanism for the node actually functioned to release the node from the anchor for retrieval? It is still a little unclear if:

1) the nodes floated away or are still connected to the anchoring system?

2) If the anchored nodes are still in the place they were deployed or flushed out of the tailrace?

3) If the fraying and severing of cable is on the anchor cable or if it is at the decoupling mechanism or another location of the cableing?

Feel free to call me if you think that would be easier to manage.

Erick S. Van Dyke
Oregon Dept of Fish & Wildlife
Fish Passage/Mitigation Technical Analyst
17330 SE Evelyn Street
Clackamas, OR 97015
971-673-6068 Office

-----Original Message-----
From: Peery, Christopher A CIV USARMY CENWW (US)
[mailto:Christopher.A.Peery@usace.army.mil]
Sent: Friday, August 10, 2018 12:35 PM
To: Erick VanDyke <Erick.S.VanDyke@state.or.us>
Cc: Fryer, Derek S CIV CENWW CENWD (US) <Derek.S.Fryer@usace.army.mil>
Subject: RE: 18 LGS 16 MOC Spill modification to retrieve research equipment

We can remove the wording you requested. Derek or PNNL will need to answer your other questions.

Chris

-----Original Message-----
From: Erick VanDyke [mailto:Erick.S.VanDyke@state.or.us]
Sent: Friday, August 10, 2018 12:41 PM
To: Peery, Christopher A CIV USARMY CENWW (US)
<Christopher.A.Peery@usace.army.mil>; Erick VanDyke
<Erick.S.VanDyke@state.or.us>
Cc: Fryer, Derek S CIV CENWW CENWD (US) <Derek.S.Fryer@usace.army.mil>
Subject: [Non-DoD Source] RE: 18 LGS 16 MOC Spill modification to retrieve research equipment

Thanks. I am less concerned about an immediate response to the questions if you remove words. I think we are going to talk more about this at the next Walla Walla FDRWG meeting. That would be a good time to touch base on my additional questions.

-----Original Message-----
From: Fryer, Derek S CIV CENWW CENWD (US)

Sent: Friday, August 10, 2018 2:38 PM
To: Peery, Christopher A CIV USARMY CENWW (US)
<Christopher.A.Peery@usace.army.mil>; Erick VanDyke
<Erick.S.VanDyke@state.or.us>
Subject: RE: 18 LGS 16 MOC Spill modification to retrieve research equipment

Hi Erick,

We can remove that wording you requested. As to you questions below

From my knowledge the steel cable that attached the anchor to the node/acoustic release/buoy (Anchor cabling) was broken on 3 of the autonodes from the north tailrace eddy. We think these nodes were spinning in the eddy enough to wear out the cable based upon inspection of the frayed material. PNNL has deployed this anchoring system in several other challenging locations and had never had the cable break. These nodes floated away at different times across the season and I believe all have been recovered by PNNL from citizen reporting of the nodes along the shoreline downstream or by project staff. We believe the remaining 4 nodes are still in the deployed location but that is still an unknown until PNNL has an opportunity to get into the tailrace. We can give you more details when we hold the SRWG meeting in the near future to discuss preliminary results.

Derek

-----Original Message-----
From: Tom Lorz [mailto:lort@critfc.org]
Sent: Friday, August 10, 2018 3:29 PM
To: Peery, Christopher A CIV USARMY CENWW (US)
<Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 18 LGS 16 MOC Spill modification to retrieve research equipment

We are fine with this operation. Good luck

-----Original Message-----
From: Kiefer,Russell [mailto:russ.kiefer@idfg.idaho.gov]
Sent: Friday, August 10, 2018 3:35 PM
To: Peery, Christopher A CIV USARMY CENWW (US)
<Christopher.A.Peery@usace.army.mil>
Subject: [Non-DoD Source] RE: 18 LGS 16 MOC Spill modification to retrieve research equipment

Chris,

Talked to Derek about this.
Like the idea of trying to retrieve without changing spill pattern first.
If that does not work, IDFG will be OK with implementing the described spill change to retrieve.

Russ

-----Original Message-----
From: Trevor Conder - NOAA Federal [mailto:trevor.conder@noaa.gov]
Sent: Monday, August 13, 2018 9:00 AM
To: Peery, Christopher A CIV USARMY CENWW (US)
<Christopher.A.Peery@usace.army.mil>
Cc: Fryer, Derek S CIV CENWW CENWD (US) <Derek.S.Fryer@usace.army.mil>
Subject: [Non-DoD Source] Re: 18 LGS 16 MOC Spill modification to retrieve research equipment

Chris,

We can support this brief spill transition in the afternoon hours and agree the impact will be minimal.

-Trevor

-----Original Message-----
From: Peery, Christopher A CIV USARMY CENWW (US)
Sent: Monday, August 13, 2018 9:06 AM
To: 'Trevor Conder - NOAA Federal' <trevor.conder@noaa.gov>
Cc: Fryer, Derek S CIV CENWW CENWD (US) <Derek.S.Fryer@usace.army.mil>
Subject: RE: [Non-DoD Source] Re: 18 LGS 16 MOC Spill modification to retrieve research equipment

Thank your Trevor.

Chris

**Final coordination results**

Approved

**After Action update**
PNNL was able to retrieve two of the four nodes the afternoon of 14 August without the need to change the spill pattern.

Please email or call with questions or concerns.
Thank you,
Scott St. John
Project Fisheries Biologist
Little Goose Dame
(509) 399-2233 ext 263
Scott.St.John@usace.army.mil

And

Derek S. Fryer
Fish Biologist
Walla Walla District
509-527-7280

Derek.S.Fryer@usace.army.mil