

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

COORDINATION TITLE- 17 LWG 22 NPE& NSE bulkhead closure

COORDINATION DATE- 13 September 2017

PROJECT- Lower Granite Dam

RESPONSE DATE- 27 September 2017

Description of the problem: During the 2014-2015 winter fish ladder maintenance season it was determined that the bulkhead to permanently close NPE 3 failed (Picture 1). A temporary bulkhead was installed to close the entrance until funding to permanently close the gate was available. Physical inspection of the fish ladder collection channel past the transverse bulkhead at diffuser 13 has not been possible since 2014 due to personnel safety concerns with the temporary bulkhead. NSE 3 will likely have the same issues over time. Permanent closure of NPE 3 and NSE 3 will involve concrete pours at both locations. The contract to complete this work on the two gates is being scheduled for the 2017-2018 fish ladder winter outage. The proposed contractor work window inside the ladder following dewatering and fish rescue operations is January 8 through February 22. Work in the tailrace is being scheduled in the contract for January 1-February 28. The 2017-2018 winter work schedule was originally coordinated for January 3-February 13. Multiple activities occurring in the ladder including annual maintenance, replacement of gate cable cotter pins, phase 1a commissioning, and weather can result in completion dates slipping. Lower Granite is requesting to extend the fish ladder north collection channel water up date to February 28 to ensure enough time for the contractor to complete NPE 3 and NSE 3 closures. Diffuser 13 transverse bulkhead will be installed February 13 to minimize potential impacts to steelhead passage (Figure 1). The upper ladder and powerhouse collection channel will be watered up February 13 to allow for fish passage through NPE 1 & 2 and SSE 1 & 2 while work is completed in the north collection channel.

Type of outage required: NSEs will remain closed and the north collection channel will remain dewatered for about two weeks longer than original winter maintenance schedule.

Impact on facility operation: NSEs and the north section of the collection channel may not be watered up until February 28.

Impact on unit priority: N/A

Impact on forebay/tailwater operation: N/A

Impact on spill: N/A

Dates of impacts/repairs: February 14-28 are the additional days the north section of the collection channel will need to be dewatered.

Length of time for repairs: January 8 through February 22 for inwater work. Outage thru February 28 due to possible noise and vibration with the installation of bulkhead.

Analysis of potential impacts:

1. The 10-year average passage at Lower Granite from March 1-7 is used due to no fish count numbers being available at LWG during this time frame (Figure 2&3). Based on the ten year average passage counts about 630 steelhead will pass Lower Granite March 1-7 with a daily average of about 90 steelhead.
2. N/A
3. Based on the 10 year average daily passage at Lower Granite March 1-7 a full ladder outage would have the potential to impact about 0.3.8% of steelhead run. Lower Granite has a total of six fish ladder entrances. Five gates are operating with NSE 2 is out service in the closed position to maintain channel/tailwater head differential. To minimize potential impacts to fish passage NPEs and SSEs will be open following bulkhead installation to allow fish passage through four out of five operating entrance gates (Figure 1).
4. Minimal impacts to fish passage are expected.

Summary statement - expected impacts on:

Downstream migrants- Minimal impacts are expected for subyearling Chinook.

Upstream migrants- See comments above.

Lamprey- N/A

Comments from agencies

From: Bill Hevlin - NOAA Federal
To: Setter, Ann L CIV USARMY CENWW (US)
Cc: Bill Hevlin
Subject: [EXTERNAL] Re: 17 LWG 22 coordination
Date: Wednesday, September 13, 2017 12:33:29 PM

Ann,
Can the work be done in December rather than late February? Let's discuss this tomorrow.
Bill

Same recommendation received at FPOM (9/14) from other Fish Mgrs- is there anyway to get this done earlier?

Final coordination results

After Action update

Work was completed 27 February 2018.

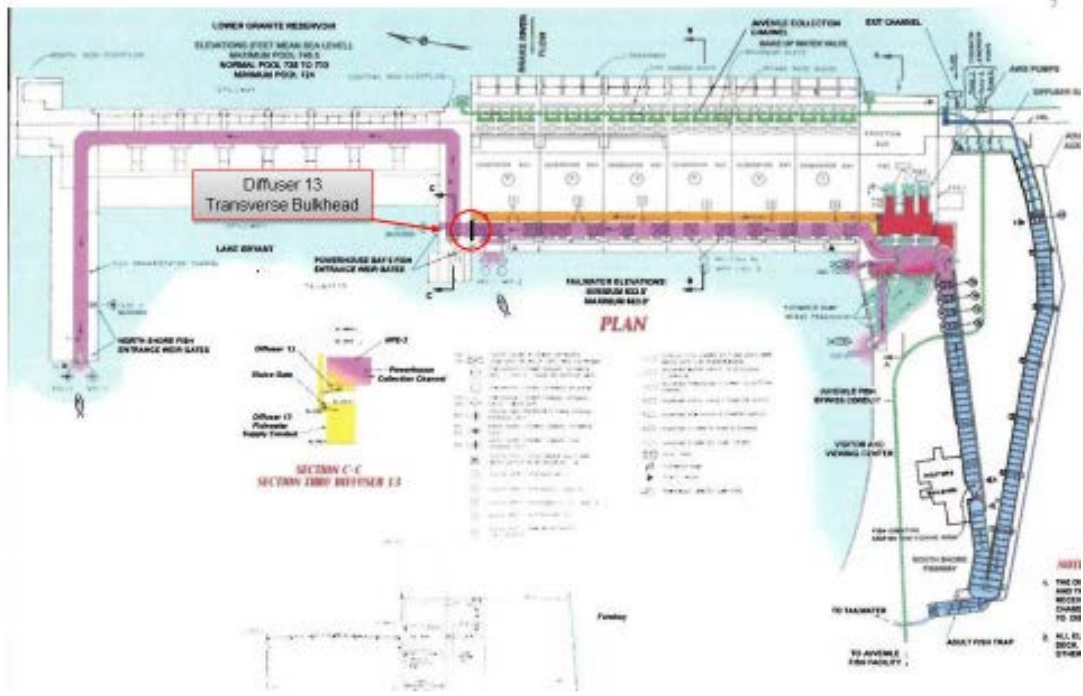
Please email or call with questions or concerns.
Thank you,

Elizabeth Holdren
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Lower Granite Lock and Dam
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Elizabeth.a.holdren@usace.army.mil

Please email or call with questions or concerns.



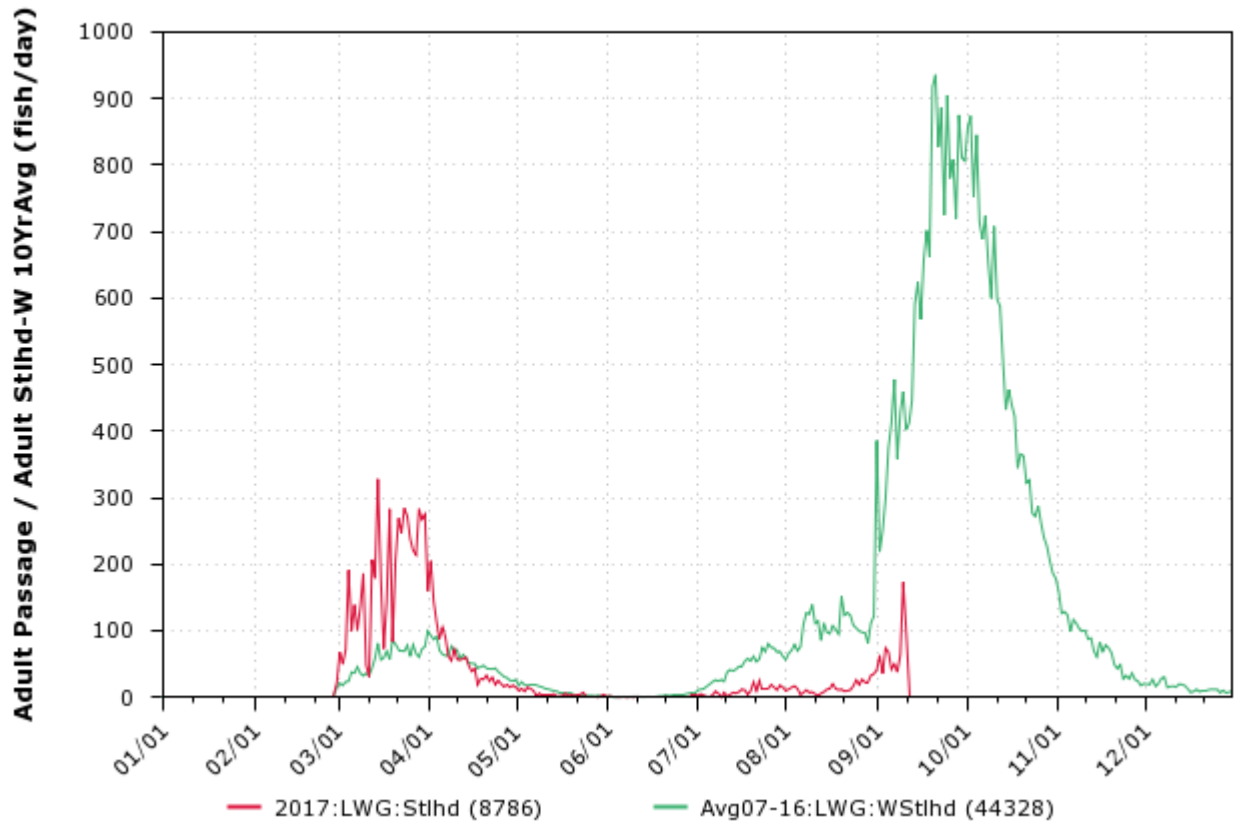
Picture 1. NPE 3 after it was removed January 2015.



File Name

Figure 1. Lower Granite fishway system showing diffuser 13 transverse bulkhead location.

Adult Passage Adult Steelhead-W 10YrAvg



www.cbr.washington.edu/dart

13 Sep 2017 08:28:45 PDT

Figure 2. 2017 and 10 year average adult Steelhead passage at Lower Granite.

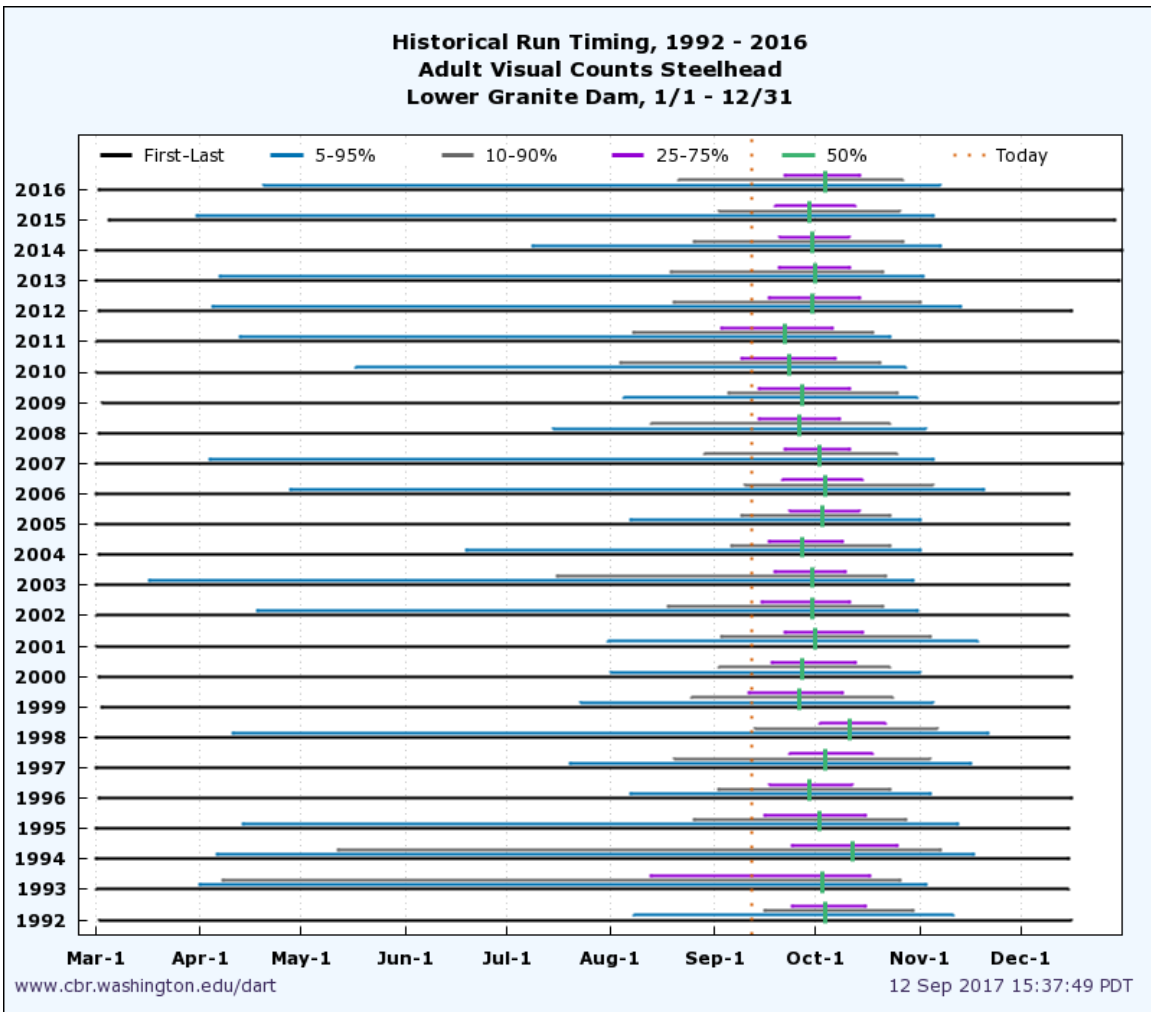


Figure 3. Lower Granite steelhead historic run timing.