

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

**COORDINATION TITLE-** LMN 08 MOC Removal of walleye from Primary Dewatering Structure

**COORDINATION DATE-** 8/10/17

**PROJECT-** Lower Monumental Dam

**RESPONSE DATE-**

### **1. Description of the problem**

Numbers of walleye being collected in the Lower Monumental Juvenile Fish Facility (JFF) are significantly higher than previous years (Figure 1). Smolt monitoring contractors relayed to project biologist that several of the sample fish being collected in the lab displayed fresh injuries from piscivorous predators consistent with the sharp teeth of walleye. Separator operator also witnessed walleye holding in the Primary Dewatering Structure (PDS) and notified biologist. After this situation was presented to FPOM during the monthly conference call 10 August, their recommendation was to lower the water in the PDS and attempt to enumerate/remove the holding walleyes.

**2. Type of outage required** – No unit outage required. Several gatewell orifices were closed for a short period to temporarily cut water supply to the PDS.

**3. Impact on facility operation** – All but two gatewell orifices were closed to enable the crew to lower water in the PDS to a manageable level to enumerate the fish located inside. The orifices were closed, four at a time, beginning at 1330 hours until desired water levels were observed. Fish were removed/enumerated and all closed orifices were re-opened by 1400 hours. The water-up valve in the juvenile channel remained open throughout the process to ensure the channel itself was not completely dewatered.

**4. Dates of impacts/repairs** – This work occurred from 1330 to 1400 hours on 10 August, 2017.

### **5. Analysis of potential impacts to fish**

Juvenile outmigration at this time consists mainly of subyearling Chinook salmon. The 10 year average for 10 August is 180 smolts per day passing Lower Monumental. Figure 2 shows the daily subyearling chinook smolt index for Lower Monumental over the last 10 years.

The current juvenile run appears to be dropping off rapidly and an estimated 24 subyearling chinook were collected by the JFF on 10 August, 2017.

### **6. Expected Impact Analysis**

When considering the rapid decrease of smolts entering the JFF and limited timeframe of this event, there would likely be very little impact on juvenile salmonids. When the PDS

was dewatered, no smolts were observed in the pool. Also, there were zero mortalities observed in the separator after water was restored to the PDS.

## **7. Results of Process**

We began by removing the hydro-jump upstream of the separator and increasing the flow to the separator. Then, we began lowering the water the Primary Dewatering System (PDS) overflow weirs and dropping the water in the transition flume enough to block it with a screen to stop fish from entering. We kept this flow for approximately 10 minutes to flush the flume before we lowered the water any further.

At approximately 1330, we began closing orifices, 4 at a time, dropping the water level in the dewaterer. After less than 30 minutes, all but two orifices were closed and the water had receded far enough to see all fish in the PDS. We netted out 4 walleye and observed several catfish, one sturgeon and 3 steelhead. The water was dropping too fast and the orifices were opened back up to return water to the PDS. Three walleye were left in the PDS.

During this process, an additional 4 walleye were flushed and removed in the separator for a total of 11 walleye (between 16-20 inches) found in PDS; 8 of which were removed. No fish were harmed during this process.

Netting the fish out of the PDS is difficult due to the distance from the deck to the water. In the future, if we feel that walleye are building up in the PDS, a more effective approach may be lowering the water enough to see and going to primary emergency bypass just long enough to flush the fish to the river without dewatering the JFF.

## **Comments from agencies**

### **Final coordination results**

MOC Approved. FPOM recommended documenting process and results for potential use at other projects.

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

From: Barnes, Charles A Jr CIV USARMY CENWW (US)  
Sent: Thursday, August 10, 2017 3:54 PM  
To: Setter, Ann L CIV USARMY CENWW (US) <Ann.L.Setter@usace.army.mil>;  
Hockersmith, Eric E CIV USARMY CENWW (US)  
<Eric.E.Hockersmith@usace.army.mil>; Peery, Christopher A CIV (US)  
<Christopher.A.Peery@usace.army.mil>  
Cc: St John, Scott J CIV (US) <Scott.J.StJohn@usace.army.mil>; Holdren,  
Elizabeth A CIV CENWW CENWD (US) <Elizabeth.A.Holdren@usace.army.mil>;  
Fone, Kenneth R CIV CENWW CENWD (US) <Kenneth.R.Fone@usace.army.mil>;  
Johnson, Bobby R CIV CENWW CENWD (US) <Bobby.Johnson@usace.army.mil>  
Subject: walleye in separator

All,

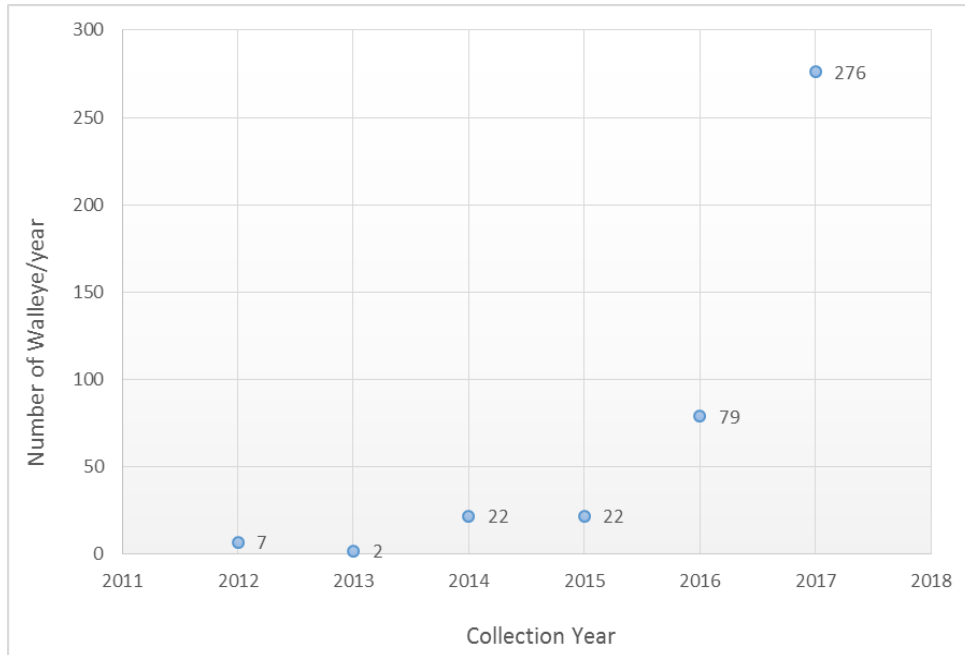
Just looked into some historical data real quick out of curiosity...  
The following are the number of walleye collected in the separator and  
put through the LMO adult bypass each year (2017 is 4/1-8/10).

2012 - 7  
2013 - 2  
2014 -22  
2015 - 22  
2016 - 79  
2017 - 276

Thanks,

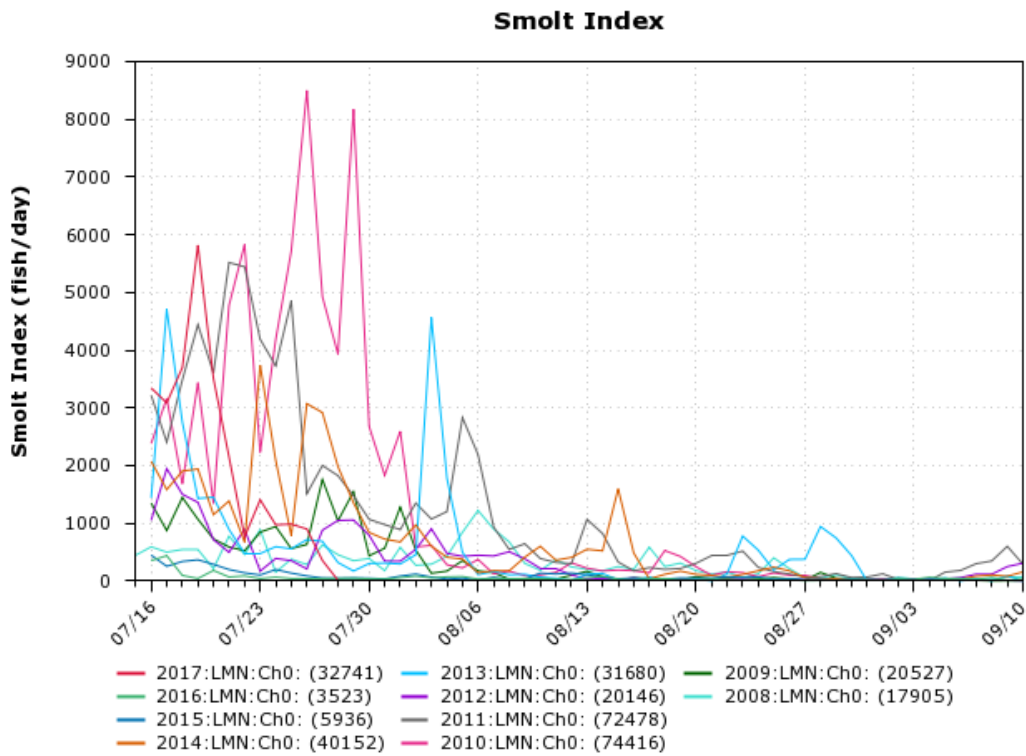
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**Figure 1. Historic walleye fallback numbers in LMN juvenile separator**



*\*2017 numbers are for a partial collection season (4/1-8/10)*

**Figure 2. Smolt index for affected time period over last 10 years.**



- 2017:LMN:Ch0: (32741)
- 2016:LMN:Ch0: (3523)
- 2015:LMN:Ch0: (5936)
- 2014:LMN:Ch0: (40152)
- 2013:LMN:Ch0: (31680)
- 2012:LMN:Ch0: (20146)
- 2011:LMN:Ch0: (72478)
- 2010:LMN:Ch0: (74416)
- 2009:LMN:Ch0: (20527)
- 2008:LMN:Ch0: (17905)

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

Chuck Barnes  
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Lower Monumental Dam  
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