

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

**COORDINATION TITLE-** 24JDA08 – Backflushing SFP Intake with Compressed Air

**COORDINATION DATE-** 7/2/24

**PROJECT-** John Day Dam

**RESPONSE DATE-** 7/14/2024

**Description of the problem** – The John Day Project (JDA) has been running a 2-turbine operation for attraction flow at the south fish ladder (SFL) (see MOC: 24JDA01). The turbines have been running at reduced RPMs due to the condition of the equipment. As a result, SFL differentials have been at the lower acceptable criteria range. Any variation in the system may ultimately result in an “out of criteria” operation (OOC). One potential scenario for an OOC is if the intake trash racks (for the AWS turbines) get blocked with debris. JDA has a system to blow compressed air through the backside of the trash rack and help dislodge some of the debris (mostly milfoil and other vegetation).

Unfortunately, in order to use the compressed air clearing method, the turbines must be taken offline for about 15-30 minutes. During this time the SFL would be OOS. JDA would like to perform this operation once/month to prevent any debris accumulation and keep the system running in criteria.

**Type of outage required** – Attraction water will be shutoff to the SFL for approximately 15-30 minutes while the operation is being performed. During this time the North Fish Ladder will remain in service.

**Impact on facility operation** – The SFL AWS pumps will be turned off resulting in a loss of attraction water to the SFL.

**Dates of impacts/repairs** – Estimated outages will occur approximately: July 15<sup>th</sup> (after FPOM), August 1<sup>st</sup>, September 2<sup>nd</sup>, and October 1<sup>st</sup>.

**Length of time for repairs** – 15-30 minutes for each occurrence. The outage will be scheduled between 1200 and 1700 hours to decrease the impacts to fish attraction.

**Analysis of potential impacts to fish-**

10-Year Average (July 14 - July 20)					10-Year Average (July 28 - August 3)				
	Chinook	Steelhead	Sockeye	Coho		Chinook	Steelhead	Sockeye	Coho
SFL	1,705	968	7,233	0	SFL	873	1,182	920	0
NFL	3,080	1,689	5,601	0	NFL	1,566	1,477	733	0
% SFL	35.63%	36.43%	56.36%		% SFL	35.79%	44.46%	55.67%	

10-Year Average (September 1 - 7)					10-Year Average (September 29 - October 5)				
	Chinook	Steelhead	Sockeye	Coho		Chinook	Steelhead	Sockeye	Coho
SFL	29,958	7,183	35	4,142	SFL	11,358	7,014	2	3,402
NFL	7,220	3,003	10	821	NFL	6,996	2,754	1	1,390
% SFL	80.58%	70.52%	77.73%	83.46%	% SFL	61.88%	71.80%	66.67%	71.00%

Table 1: The 10-year average for fish passing JDA during the proposed weeks of the compressed air operation and SFL passage percentage.

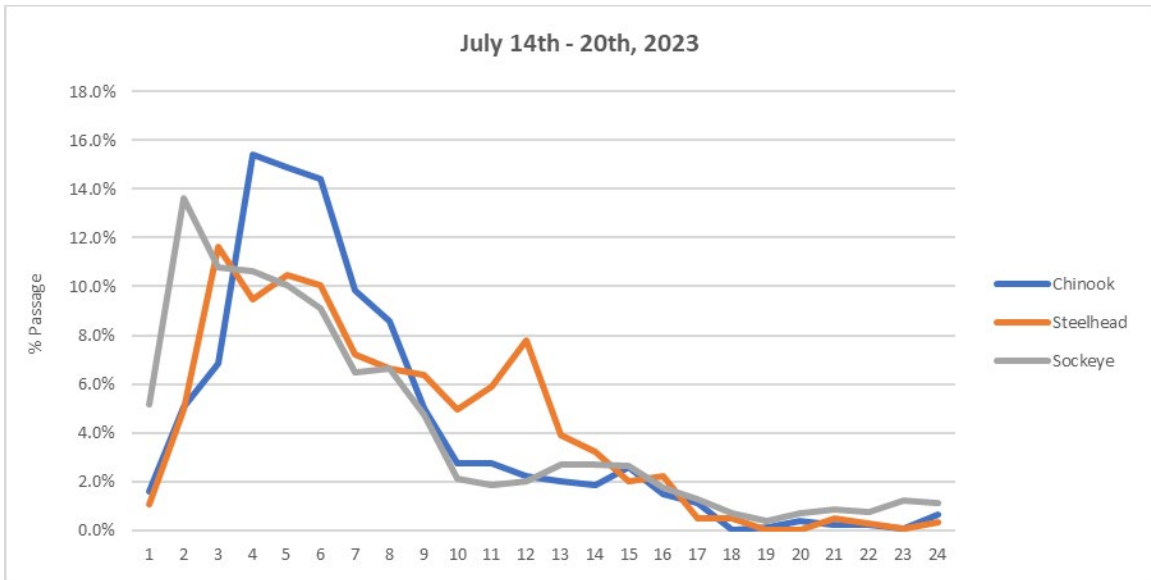


Figure 1: Hourly run times for adult salmonids in the SFL during 2023 proposed compressed air block. (July 14 – 20, 2023)

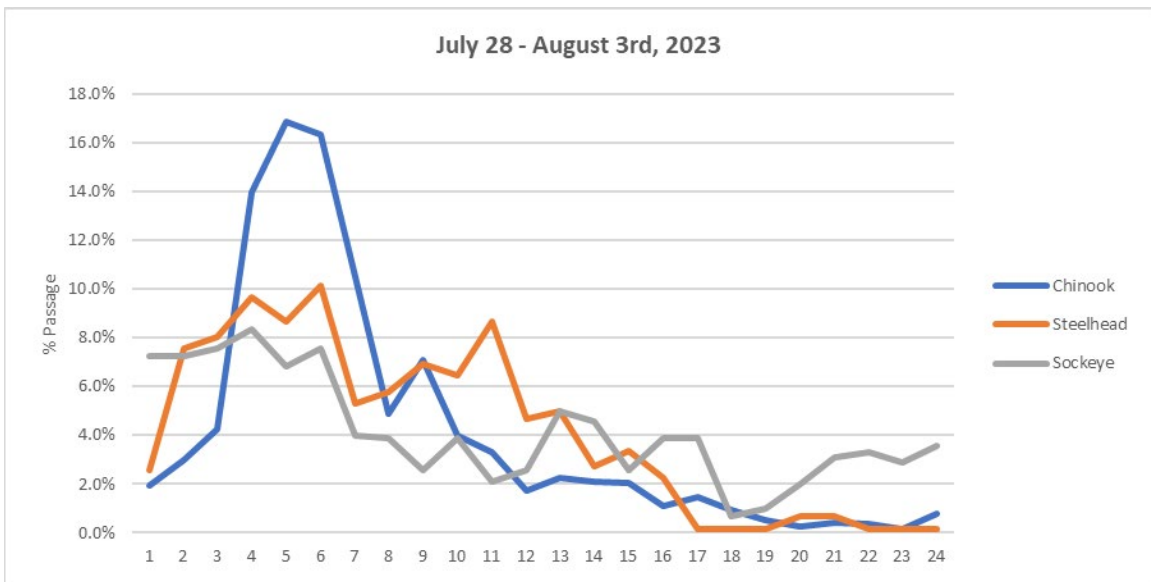


Figure 2: Hourly run times for adult salmonids in the SFL during 2023 proposed compressed air block. (July 28 – August 3, 2023)

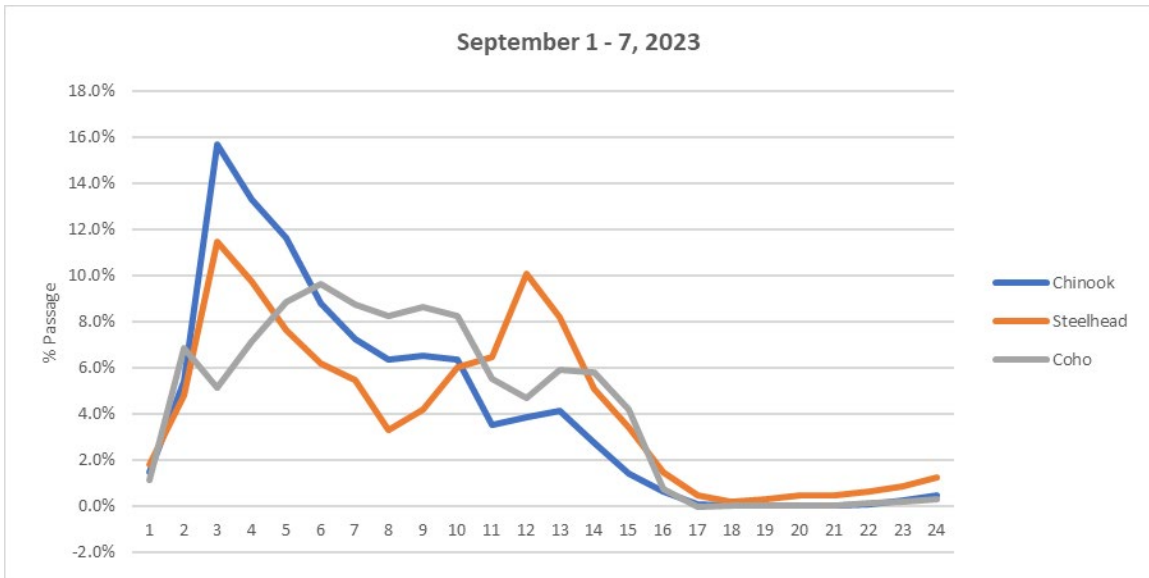


Figure 3: Hourly run times for adult salmonids in the SFL during 2023 proposed compressed air block. (September 1 - 7, 2023)

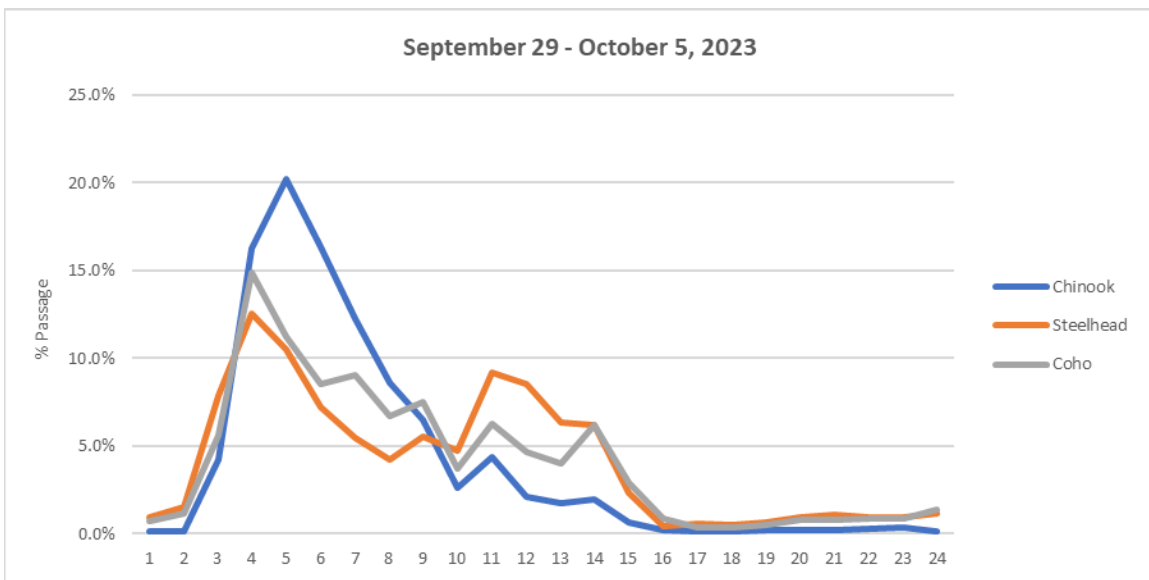


Figure 4: Hourly run times for adult salmonids in the SFL during 2023 proposed compressed air block. (September 29 - October 5, 2023)

**Summary statement – expected impacts on:**

**Downstream migrants:** There is no expected impact to downstream migrants.

**Upstream migrants (including Bull Trout):** The outage will be scheduled between 1200 and 1700 hours to decrease the impacts to fish attraction. Potential delayed migration due to a lack of attraction water at the SFL. The NFL will remain available for passage.

**Lamprey:**

Lamprey 10-Year Averages	
July 14 - 20	196
July 28 - August 3	189
September 1 - 7	62
September 29 - October 5	4

Table 2: The 10-year average for lamprey passing JDA during the proposed weeks of compressed air operation.

**Comments from agencies**

**From:** Tom Lorz <lort@critfc.org>  
**Sent:** Wednesday, July 3, 2024 8:51 AM  
**To:** Madson, Patricia L CIV USARMY CENWP (USA) <Patricia.L.Madson@usace.army.mil>  
**Subject:** [Non-DoD Source] Re: FPOM Official Coordination: 24JDA08 MOC Backflushing SFP Intake with Compressed Air

Thanks for the update. Lets talk about at the next FPOM since they want to make this a monthly operation. Should be ok but would want to push this until ideally after 2 or later. Assume they will want to do this until for the foreseeable future. What changes are needed to no longer require, and do we have a timeline on the repairs or changes.

Thanks

FPOM – July meeting minutes.

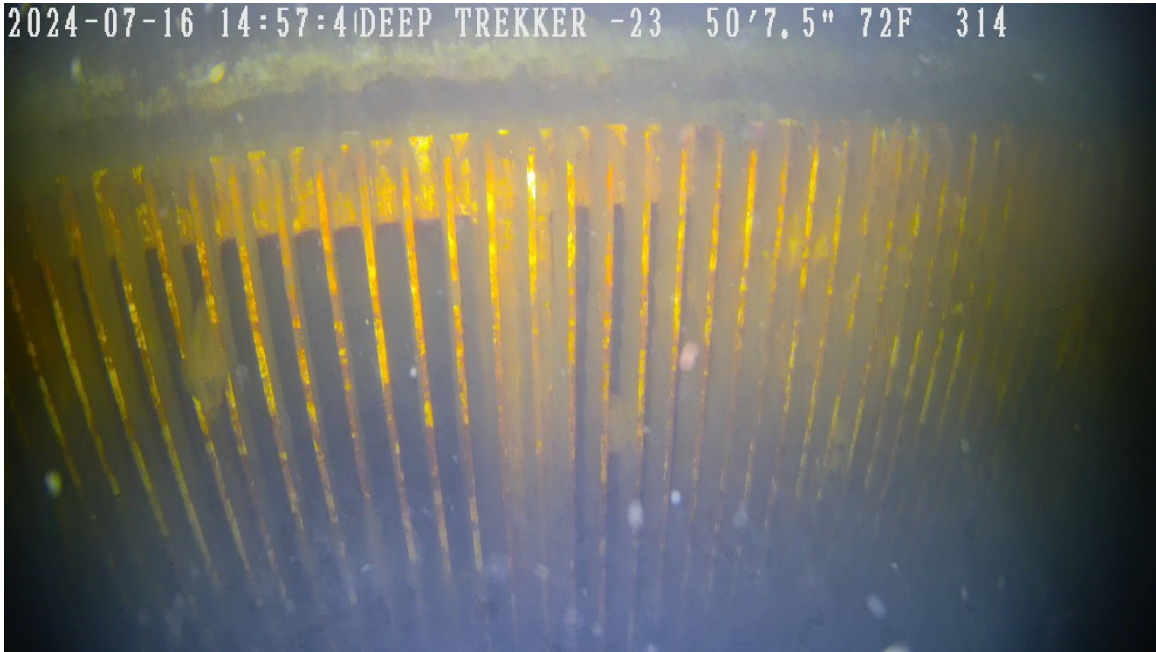
1.1.1.24JDA08 MOC Backflushing SFP Intake with Compressed Air – This is a temporary change until the trash rake is up and running. Backflush will occur after 2 pm. Lorz said later in the day is good. No other comments.

**Final coordination results – Coordinated.**

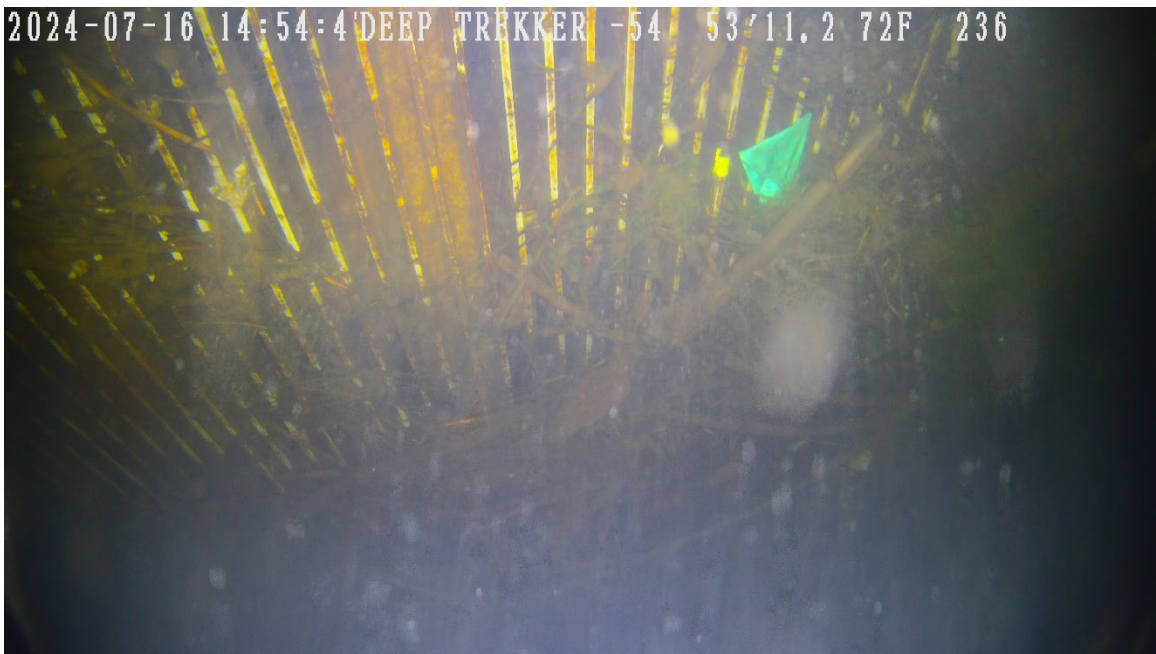
**After Action Update**

The south fish pumps were taken out of service from 1420 hours to 1520 hours on July 16 to backflush the intake screen. The screen was inspected using the ROV to assess the condition before and after the procedure. Prior to the procedure, the top 5 feet of the screen was found to be clear of debris (Photo 1) while the bottom 7 feet of the screen was packed with debris (Photo

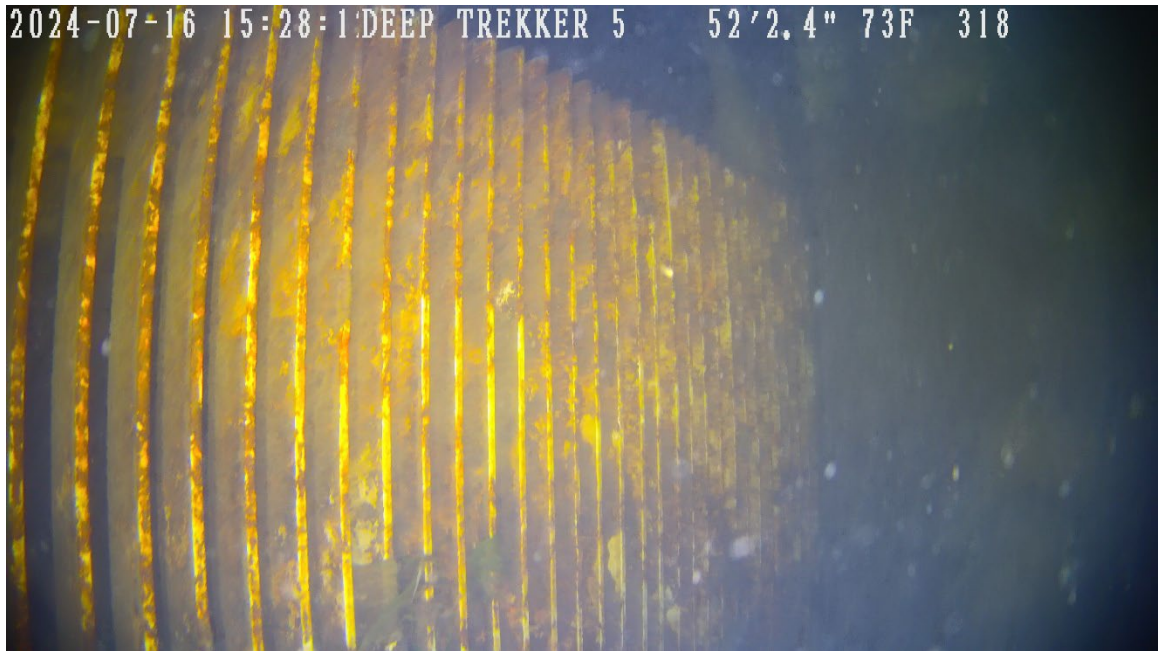
2). The compressed air was operated for 10 minutes with little to no impact on the accumulated debris (Photo 3 & Photo 4). The bottom 7 feet of the screen remained packed with debris.



1 Photo: Top of intake screen Before backflush



2 Photo: Middle of intake screen Before backflush



3 Photo: Top of intake screen After backflush



4 Photo: Middle of intake screen After backflush

The scheduled August, September, and October procedures will be cancelled.

Please email or call with questions or concerns.

Thank you,

David Miller  
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