

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

**COORDINATION TITLE:** 22JDA19 MU-5B STS Screen Failure

**COORDINATION DATE:** 8 December 2022

**PROJECT:** John Day Dam

**RESPONSE DATE:** ASAP

**DESCRIPTION OF THE PROBLEM:**

On the morning of December 8, 2022, personnel at John Day Dam noticed the submersible traveling screen (STS) in MU05B slot had a failed motor. Without a functioning motor, the STS is unable to rotate.

At John Day, Line 1 and MU05 are the only sources of station service (which provides power to the entire project). MU05 is currently providing station service. In order to remove and replace the fish screen, MU05 must be shut down prior. Screens cannot be pulled while a unit is running (potentially destroying the STS, guides, and other infrastructure). It should also be noted that all STSs are scheduled to be removed December 12th. Unfortunately, MU05 STS must remain deployed until Line-1 is available for reasons noted below.

Line-1 is currently out of service until December 22<sup>nd</sup>, 2022, for critical maintenance. Shutting down MU05 would cause John Day plant to go “black” (loss of all A/C power) until station service could be reconfigured. A Plant “black condition” has a high-risk potential for loss of all power generation capability, loss of spillway gate control, loss of navigation lock usability, and use of fish passage facilities, to include other STS screens currently functioning. There is a high risk and potential for sustained loss of John Day Project with flooding risk and high impact to civilians downstream of the dam, to impact power generation and environmental consequences, such as a release of oil to the river.

Currently gatewell debris accumulations are low, and the foreseen chance of plugging up the STS is minimal. There are very few ESA listed fish moving downstream at JDA (see downstream migrant impacts).

**TYPE OF OUTAGE REQUIRED:**

JDA project will need to run MU05 with a deployed STS in the gatewell B slot without the ability of the screen to rotate due to the failed motor until line 1 is returned to service.

**Impact on facility operation:** There would be no impacts to facility operation.

**Impact on unit priority:** There would be no impact to unit priority.

**Impact on forebay/tailwater operation:** There would be no impact on forebay/tailwater operation.

**Impact on spill:** There would be no impact on spill. It should be noted that since the line-1 outage the project has been forced to spill water to compensate for lost power generation. The project is currently spilling approximately 12% of the total discharge. This may help divert fish away from MU05.

**DATES OF IMPACTS/REPAIRS:** December 8<sup>th</sup>, 2022 – December 22<sup>nd</sup>, 2022.

**LENGTH OF TIME FOR REPAIRS:** When line-1 comes online, station service could be switched almost immediately. At that time MU05 would come offline until the screens are pulled. The estimated RTS for line-1 is December 22<sup>nd</sup>, 2022.

**ANALYSIS OF POTENTIAL IMPACTS TO FISH:**

The SMF at JDA is typically dewatered during the 1<sup>st</sup> week of December. During the final 2-weeks of the

season there have been very few PIT detections over the past 5-seasons (see Figure 1).

Observation Date	Species	Rear Type
11/25/2022	Chinook	Wild
12/1/2022	Chinook	Wild
12/1/2022	Coho	Hatchery
11/26/2021	Steelhead	Wild
12/1/2021	Coho	Hatchery
12/1/2021	Coho	Hatchery
12/1/2021	Coho	Hatchery
11/27/2021	Chinook	Wild
12/1/2021	Chinook	Wild
11/27/2020	Chinook	Wild
12/4/2019	Chinook	Wild
11/25/2019	Coho	Wild
11/28/2019	Chinook	Unknown
11/26/2018	Chinook	Hatchery
11/26/2018	Chinook	Wild

Figure 1: All PIT detections (from full-flow PIT detectors) at JDA for the last 5-years (24 Nov – 8 Dec).

**SUMMARY STATEMENT - EXPECTED IMPACTS ON:**

**Downstream migrants:** Since November 24<sup>th</sup> there have been 3- PIT tagged fish in the full flow PIT detectors (downstream detections: 1- this coho is also counted in the upstream PIT detections, and 2-juvenile Chinook). Note: these fish could have been diverted from any running unit and does not necessarily mean they went through MU-5 gatewell B. Any downstream migrant that goes through MU-5 gatewell B, may or may not see adverse conditions.

**Upstream migrants (including Bull Trout).** There were 3 PIT tagged adults migrating upstream (2-coho, 1-steelhead) in the past 2-weeks. There should be no impact on upstream migrants.

**Lamprey.** A non-rotating screen has the potential to impinge migrating juvenile lamprey. However, very few juvenile lamprey are migrating during this time period.

Please email or call with questions or concerns.

**ERIC GROSVENOR**  
 Chief of Fisheries  
 John Day – Willow Creek Project  
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 541-739-1063

**BRETT E. CALL**  
 Operations Project Manager  
 John Day – Willow Creek Project  
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 541-739-1010

**COMMENTS FROM OTHER AGENCIES:**

**CRITFC –**

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

From: Tom Lorz <lort@critfc.org>  
 Sent: Thursday, December 08, 2022 3:02 PM  
 To: Mackey, Tammy M CIV USARMY CENWP (USA) <Tammy.M.Mackey@usace.army.mil>  
 Subject: [Non-DoD Source] Re: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

well this sucks.....not sure what the best path forward is.....will do some thinking but not optimistic I will have some brilliant idea....

thanks  
 tom

**ODFW -**

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

From: Grosvenor, Eric G CIV USARMY (USA) <Eric.Grosvenor@usace.army.mil>  
Sent: Friday, December 09, 2022 1:25 PM  
To: Mackey, Tammy M CIV USARMY CENWP (USA) <Tammy.M.Mackey@usace.army.mil>;  
Erick.S.VANDYKE@odfw.oregon.gov  
Subject: RE: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

Hi Erick,

We went over every possible alternative we could imagine and this was the best decision given the circumstances.

If you need further explanation give me a call on Monday.

Have a good weekend

Eric Grosvenor

Sent with BlackBerry Work (www.blackberry.com)

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

From: VANDYKE Erick S \* ODFW <[Erick.S.VANDYKE@odfw.oregon.gov](mailto:Erick.S.VANDYKE@odfw.oregon.gov)>  
Sent: Friday, December 09, 2022 8:58 AM  
Subject: [Non-DoD Source] RE: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

Thanks Tammy. What other units are on line 1? How many transmission lines are available at John Day? Does transmission at John Day include redirected service (MW in rather than MW out)? Thanks.

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

From: Mackey, Tammy M CIV USARMY CENWP (USA) <[Tammy.M.Mackey@usace.army.mil](mailto:Tammy.M.Mackey@usace.army.mil)>  
Sent: Friday, December 9, 2022 7:24 AM  
Subject: RE: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

Good morning Erick,

The difficulty is that the motor couldn't be swapped unless the STS was pulled out of the slot. The only way to pull the STS is to shut down the unit. Shutting down the unit ceases station service power to JDA and puts the powerhouse at risk. Station Service is limited to U5 and units on Line 1. Line 1 will not return to service until later this month so U5 is the only unit keeping lights on and safety equipment operable at this time.

Tam

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

From: VANDYKE Erick S \* ODFW <[Erick.S.VANDYKE@odfw.oregon.gov](mailto:Erick.S.VANDYKE@odfw.oregon.gov)>  
Sent: Thursday, December 08, 2022 3:20 PM  
Subject: [Non-DoD Source] RE: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

Tammy,

Thanks for sharing the new development. Given the operation constraints laid out in the MOC, I was curious why a potential option could not include replacing the STS motor with one from the lowest priority unit? It seems to be an alternative offered for other infrastructure at other projects. I suspect this has been considered, but it would be helpful to understand if 1) this is a possibility and 2) if it is not, why it is not. Any information you might be able to share would be appreciated, understanding "there are not really options for FPOM to weigh in on".

Erick Van Dyke  
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Ocean Salmon and Columbia River Program  
Fish Passage/Mitigation Technical Analyst  
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[erick.s.vandyke@odfw.oregon.gov](mailto:erick.s.vandyke@odfw.oregon.gov)

**Yakama Nation –**

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

From: Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>

Sent: Monday, December 12, 2022 10:28 AM

To: Ralph Lampman <lamr@yakamafish-nsn.gov>; Mackey, Tammy M CIV USARMY CENWP (USA) <Tammy.M.Mackey@usace.army.mil>

Subject: [URL Verdict: Neutral][Non-DoD Source] RE: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

Thanks for sharing this report Ralph. It certainly justifies a valid concern for juvenile lamprey passage at the Dalles during this operation in addition to your experience in the Yakima as well as concerns for the Umatilla.

Tammy, could you please note Ralph's comments in the MOC and attach or provide the link to Goodman et al's report ?

Charlie

From: Ralph Lampman <lamr@yakamafish-nsn.gov>

Sent: Monday, December 12, 2022 9:42 AM

To: Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>

Subject: Re: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

External Email

Hi Charlie,

Attached is a good one (& CTUIR Umatilla screw trap data). [22JDA16 Attachment 1]

Our run in the Yakima Basin also starts in December (but of course it varies from year to year on where exactly it starts).

~Warm Regards~

Ralph Lampman

On Mon, Dec 12, 2022 at 9:14 AM Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov <mailto:Charles.Morrill@dfw.wa.gov> > wrote:

Hi Ralph,

Thanks sharing your concerns for Juvenile lamprey. Does water temperature play a role in timing as well as flows? Where would I/we/the COE find additional data on known movement that could potential pose risks to passage at the Dalles during the proposed work period in the MOC ?

Thanks

Charlie

From: Ralph Lampman <lamr@yakamafish-nsn.gov <mailto:lamr@yakamafish-nsn.gov> >

Sent: Saturday, December 10, 2022 8:48 AM

To: Mackey, Tammy M CIV USARMY CENWP (USA) <Tammy.M.Mackey@usace.army.mil <mailto:Tammy.M.Mackey@usace.army.mil> >

Subject: Re: FPOM; Official Coordination - 22JDA16 MOC MU-5B STS Motor Failure

External Email

I am not familiar with the potential impacts stemming from this operation, but I will have to disagree with the statement below that says "very few juvenile lamprey are migrating during this time period":

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Winter migration makes up a large portion of the juvenile/larval migration run timing for many of the predominantly rain water fed subbasins and tributaries, such as Umatilla R and tributaries of the Yakima R. (and many others). Impacts should be assessed with that in mind.

Thanks,

~Warm Regards~

Ralph Lampman

COLUMBIA RIVER| Honor. Protect. Restore

Yakama Nation FRMP, Pacific Lamprey Project

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