

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

COORDINATION TITLE- 17JDA02 South Fishladder Outage Extension

COORDINATION DATE 2/22/2017

PROJECT- JOHN DAY DAM

RESPONSE DATE- 2/27/2017

Description of the problem – John Day Dam maintenance needs additional time to address two issues: inspection of AWS turbine #2 and joint repair work for the AWS conduit. The John Day-South (JDA-S) fishway has an auxiliary water supply (AWS) powered by three “turbines”, which feeds water to the entrance area of the JDA-S fish ladder (Figure 1). Each turbine design is complex and consists of a turbine, gear box, and the pump itself. The bearing of AWS turbine #1 was discovered to have failed on 2/08/16 during an in-depth winter inspection, which occurs every few years. Inspection of turbine #2 started on 2/17/16 and it was discovered that its pump’s lower bearing was also in a failed condition. Repairs were made to AWS turbine #2 for the 2016 adult fish passage season by salvaging old parts from AWS turbine #3 which was rehabbed in 2012. Repairs to turbine #1 are to be completed by 2/23/2017 for the upcoming adult passage season. JDA Maintenance has not yet been able to fully inspect turbine #2 and the condition on the guide bearing from a season of running.

The extension would give more time for joint repair work in the JDA-S fish ladder AWS conduit. The monolith joint between main unit 1 and the station service bay is leaking into the JDA-S fish ladder AWS turbine room (Image 1). Tarps have been set up to keep critical electrical equipment for turbine #3 dry and operating. Not addressing the joint leak could lead to damage to equipment of turbine #3.

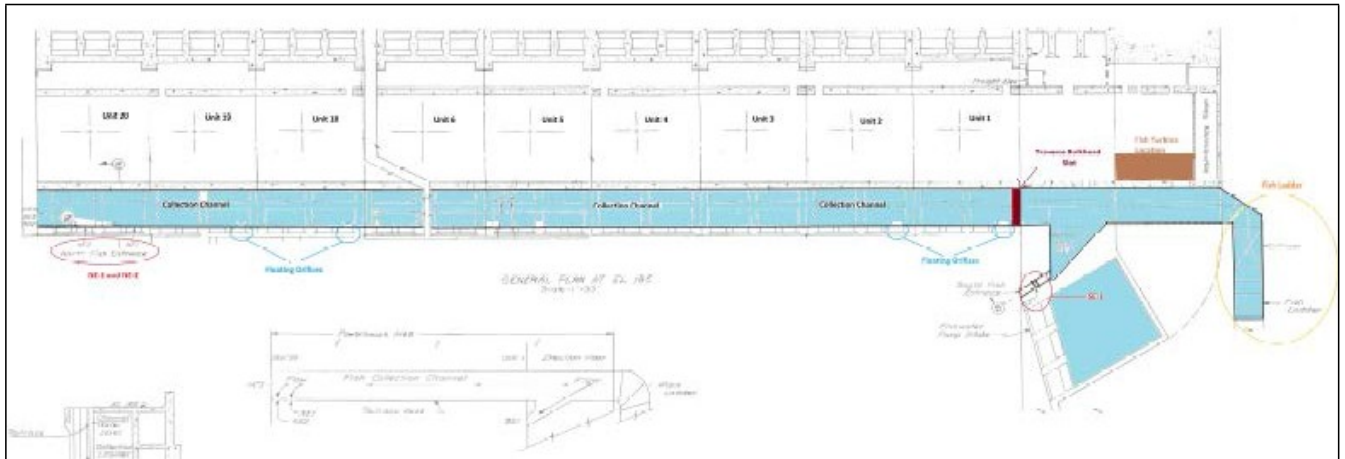


Figure 1. Schematic of the JDA-S fishway with the location of the AWS turbine pumps (brown) and the locations of potential operational measures described in the text.



Image 1. Tarps covering equipment in SFL AWS turbine room.

All three JDS AWS Turbines are required in service to meet the full FPP criteria. The FPP provides operational guidance for AWS turbine failures. However, the two-turbine operations require ramping up the two remaining turbines to compensate for the lost hydraulic output and pulling floating orifices from unit gates 18 & 19. Returning turbine #1 to service will allow for full fishway operation at the FPP criteria. Inspecting the condition of turbine #2 guide bearing is critical to providing full operational criteria of the JDA-S fishway per the FPP.

Type of outage required

Impact on facility operation (FPP deviations) - JDA-S would be out of criteria; JDA-N will be running and in full FPP compliance.

Impact on unit priority - None

Impact on forebay/tailwater operation - None

Impact on spill - None

Dates of impacts/repairs – March 1, 2017 thru March 4, 2017.

Length of time for repairs – Ongoing until March 4th.

Analysis of potential impacts to fish-

1. Data on JDA fish passage in March is limited.

JDA STHD Passage			JDA Chin Passage				
	2014	2007	2006		2014	2007	2006
1-Mar	68	67	0	1-Mar	0	0	0
2-Mar	48	60	-5	2-Mar	0	0	0
3-Mar	43	138	12	3-Mar	0	0	0
4-Mar	56	173	21	4-Mar	0	0	0

Pit tag #'s 2017		
Location	Dates	#
The Dalles PIT detection	Jan 1 - Feb 22	2
Deschutes River Mouth	Jan 1 - Feb 22	6

2. Impacts to adult Chinook salmon from limited passage data are expected to be minimal for the outage requested.
3. This action is expected to delay a small percentage of the steelhead run which are now moving to areas above the dam where they will be spawning soon. However, the North fishway is available for passage and the short delay caused by the late return to service of the South fishway is expected to have minimal impact on these fish. It should also be noted that current steelhead passage at downstream monitoring sites is much lower than average for this date.

Summary statement - expected impacts on:

Downstream migrants - None

Upstream migrants (including Bull Trout) – This action could cause delay to steelhead and very minimal delay to Chinook.

Lamprey - None

Comments from agencies

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

From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Thursday, February 23, 2017 7:32 AM
To: Kovalchuk, Erin H CIV USARMY CENWP (US)
<Erin.H.Kovalchuk@usace.army.mil>
Cc: Zyndol, Miroslaw A CIV CENWP CENWD (US)
<Miroslaw.A.Zyndol@usace.army.mil>; Grosvenor, Eric G CIV CENWP CENWD
(US) <Eric.Grosvenor@usace.army.mil>; Lorz, Tom <lort@critfc.org>; Trevor
Conder <Trevor.Conder@noaa.gov>
Subject: [EXTERNAL] Re: FPOM: Official Coordination 17JDA02 MOC JDA SFL
Outage Extension

Erin, I would like to see the project get this kind of work done inside the maintenance season but I understand that this has been a tough year for the JDA project, so I agree with the 4 day extension. However, I took the liberty of adding some suggested edits to the MOC. The point of these edits are to add some recognition of the seriousness of delay this

time of year for steelhead and some observations of the current run conditions. Just saying the action effects only a very small portion of the run is weak. This could be the case with many actions and the result is the proverbial death by a thousand cuts and that just doesn't cut it under the ESA.

Another issue this brings up is the poor condition (and design) of these pumps and the fact that all three are needed to meet criteria.. Seems like emergency AWS at JDA South is something the region should be thinking about next.

Thanks, Gary

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

From: Tom Lorz [mailto:lort@critfc.org]
Sent: Wednesday, February 22, 2017 6:38 PM
To: Kovalchuk, Erin H CIV USARMY CENWP (US)
<Erin.H.Kovalchuk@usace.army.mil>
Subject: [EXTERNAL] Re: FPOM: Official Coordination 17JDA02 MOC JDA SFL
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will see where NOAA goes with this, so if am reading this right 3-4 day extension. Similar to TDA would think we should at least add some training spill to the north to help guide steelhead since we can have decent numbers and I can hear gary saying these steelhead need to get to where they are going.

thanks

tom

Final coordination results – FPOM concurred with this action via email.

After Action update – The ladder returned to service on 03 March.

Please email or call with questions or concerns.

Thank you,

Erin

Erin Kovalchuk
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