***Draft 1***

**JOHN DAY DAM FISHWAYS’ ANNUAL MAINTENANCE SCHEDULE**

**WINTER 2019/2020**

## North Fish Ladder, upper – Dewater Dec. 02, ’19

* PM count station and exit weirs - JDM & E
* Update light fixtures and install emergency lights at the Counting Station – JD Electrical
* Adjust window/crowder brush to get closer to the CS window in Auto (it gets .2” closer in Manual mode? Mike L, TR to JD Mechanical please.)
* Replace the existing, wore out AC unit at the NFL CS with new – (Mike L, TR to Electrical Shop please.)

## North Entrance, below tailrace – Dewater with Queen Pump Dec. 05, ’19

## LPS - Complete new, permanent water supply pumps installation - design by LPS PDT – Tyas Young, JD Engineering POC. Installed by JD Mechanical.

* AWS pumps inspection & annual maintenance (can be done year round) – JDM & E
* Entrance Computer System & sensors PM – JDE

**North AWS Conduit – Dewater** Dec. 06, ’19

* Complete dewatering
* Install dewatering pump # 7- JDM
* Leaking Butterfly Valves (AWS Pumps) repair (3 @ $ 10K) – JDM
* Inspect one AWS pump, $ 10 K ?
* PMs of sluice gates 1-8 – JDM

**SMF - Dewater** Nov. 26, ‘19 – Feb.25,’20

 **(Dewater on Nov. 25 in case of an inclement/winter weather forecast**)

* Design a better bottom seal/ boot on the Switch Gate (last winter’s work didn’t succeed): to minimize water leaks and potential for small fish getting stuck underneath – Engineering and Mechanical (TR has been already submitted.)
* Complete the multi-year SCADA PLC parts/ updates to have all alarms and functions working properly – JD Electrical and Engineering
* PMs and cleanup including Screen Cleaner – JDM & E
* Seal leaking expansion joints inside of the Elevated Chute – optional since they don’t leak a lot.

**JBS Collection Channel - Dewater** Jan. 22 – Feb.25, ‘20

* Install STSs at MUs 1-4 by February28 and the remaining ones by March 30.
* First joint downstream of the TG needs the redesigned cover plates and recessed concrete to fit them properly within the wall – JD Mechanical, TR has been already submitted.
* Inspect CC conduit’s spalling & structural integrity – JD Eng. & Structural
* Inspect all orifices/ hardware – JD Mechanical
* Search for all metal strips/brackets to assure their structural integrity- JD Fish
* PM JBS Tainter gate –JDM & JDE

**South Turbine Bulkhead Install - No ROV necessary** Jan. 13, ‘20

* AWS turbine 3 thrust bearing’s repair/ replacement – JDM
* Inspect inside of AWS Turbines’ penstock? – JDM and JD Engineering

## South Fish Ladder, upper - Dewater Jan 14 – Feb. 28, ‘20

* PM counting station equipment and exit sills (JDM,JDE)
* Fix four (4) leaking expansion joints – JD Mechanical or contract by JD Engineering
* CS Crowder is aging- needs JD Engineering and Maintenance inspection & plan to rebuild in the future?

## South Entrance, Collection channel - Dewater ? Jan. 17, ‘20

* Inspect all gratings and fix deficiencies if found. A few grating segments on the south end of CC showed some wear from the man lifts used there in 2013; JD Structural inspected/scoped in 2014- JD Structural
* 90 degrees bend wall erosion – needs to be fixed before we have a landslide into Fishway’s channel – repair contract by JD Engineering!
* Inspect new SE1 weir; check guides for wear from the stainless steel wheels (TD had bad/costly experience with theirs!) – JDStructural
* Overhaul of old/spare SE1 weir and install it – JD Structural
* PM SE1, NE1/2 entrance weirs–JDM&E
* Relocate SE1 tailrace sensor (TW) – (Mike L, TR to JD Electrical please.)
* SE1 wall diffuser – test/open in late November’19 - JD Fisheries assisted by JD Mechanical?
* Inspect diffuser valves/sluice gates on open diffusers only (ask Fisheries for details)- JDM
* Two lowest, unneeded overflow weirs need to be removed (Optional) – JD Engineering/Maintenance?
* Demob and remove Wing Gates hardware from Collection Channel MU 9 (Optional at $ 30K?) – Engineering and JDM & S

**South AWS conduit – Dewater or NOT?**  Jan. 22, ’20

* Inspect and remove accumulated mussel shells if necessary – JD Structural &

Engineering to determine if shell accumulation impacts the AWS performance?

## South fish turbine intake trashrack install and water up Feb. 25, ‘20

* Install trashrack– JDS

**JD Tailrace BRZ Avian Lines Grid –** All lines in place. No winter maintenance necessary.

## Guidelines:

* Adult winter maintenance (outage) season is Dec 1 through Feb 28.
* Juvenile winter maintenance (outage) season is Dec 1 through March 31.
* One adult ladder in regular service at all times when the second one is OOS for winter maintenance. Any overlapping outages (two ladders OOS at the same time)

are required to be coordinated in advance with FPOM.