JOHN DAY DAM FISHWAYS’ ANNUAL MAINTENANCE SCHEDULE WINTER 2022/2023

**North Fish Ladder (NFL)**

 **[December 1st, 2021 – January 5th, 2022]**

North Upper

* PM count station and exit weirs - JDM & E
* Update light fixtures and install emergency lights at the Counting Station – JDE
* Set window brush to run 1-cycle instead of 3-cycles – JDE
* Repair leaking expansion joints – JDM
* Inspect all joints - JDF
* Adjust window/crowder brush to get closer to the CS window in Auto – JDM or JDE
* Install temp probe housing at the count station (not to interfere with tube traps) – JDM
* Paint the floor at the CS white – JDF
* PIT scan 180 – JDF
* Photo dewatered areas - JDF

LPS

* Modification installation – JDM JD Eng
* LPS – pull and inspect water supply piping and pumps if no mods - JDM
* Install valve at CS drain for future LPS gravity feed – JDM/JD Eng

North Entrance

* AWS pumps inspection & annual maintenance (year-round) JDM & E
* Entrance Computer System & sensors PM – JDE
* Fix and reinstall pump 4 - JDM
* Leaking Butterfly Valves (AWS Pumps) repair (3 @ $ 10K) – JDM
* Inspect and service two AWS pumps (has this been done)– JDM
* PMs of entrance sluice gates 1-8 – JDM
* Variable width weir front plating replacement - JD Eng and JDM
* Modify NFL Entrance weir plating – JDM

 **SMF and JBS**

**November 30th, 2021 – February 21st,2022]**

*(Dewater earlier in case of an inclement/winter weather forecast)*

**Lab** **December 1st, 2022**

* Complete the multi-year SCADA PLC updates to have all alarms and functions working properly - JDE and JD Eng

**Crest Gate Raised**  **January 2nd - February 22nd, 2022**

* Check all joints - JDF
* 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 – ENG/JDM
* Switch gate porosity plate rehab (smaller porosity, or plate over) – ENG/JDM
* PMs and cleanup including Screen Cleaner and calibrate weirs– JDM/JDE
* High-capacity drain opens in the off position – Should only open when prompted to - JDE
* Replace screen cleaner limit switches was this done?– JDE
* Clean PDS staff gauge, and clear coat - JDF
* Remove debris from PDS – JDF
* Repair PDS electric drain (opens in “off” mode) if need be - JDE
* Replace plug chains with new stainless chain – JDF
* Photo dewatered areas - JDF

**JBS Collection Channel Dewater** **January 3rd – February 21st, 2022**

* First joint downstream of the TG needs repacking within the wall – JDM
* Inspect CC conduit’s spalling & structural integrity – JD Eng. & JDM
* Inspect all orifices/ hardware – JDM
* Search for all metal strips/brackets to assure their structural integrity- JDF
* PM JBS Tainter gate –JDM & JDE

**South Fish Ladder (SFL)**

**[January 9th, 2023 – February 28th, 2023]**

**South Fish Ladder Exit Dewater** **January 9th - February 22nd 2023**

* PM counting station equipment and exit sills (JDM/JDE)
* Fix leaking expansion joints – JDM or contract by JD Eng – resources
* Clean clams and sand accumulation from LPS area – JDF
* Clean out triangular area where CS sensor is located JDF if NOT able to lift porosity plating– JDM, JDF?
* Check to ensure floor at CS is still white – clean all CS windows – JDF
* Check all joints – JDF
* Temp probe PVC install at CS - JDM

**South Turbine Bulkhead Install - ROV if necessary** **January 10th, 2023**

* AWS turbines 2/3 inspections -JDM
* Inspect inside of AWS Turbines’ penstock – JDM and JD Eng

**South Entrance Collection channel - Dewater**  **January 12th 2023**

* 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- JDM
* 90 degrees bend wall erosion – needs to be fixed before we have a landslide into Fishway’s channel – repair contract by JD Engineering!
* Inspect SE1 weir; check guides for wear from the stainless-steel wheels (TD had bad/costly experience with theirs!) – JDM
* Floating orifices, remove entrance plating - JDM
* If dewatered below tailwater replace Bay 1 and Bay 19 staff gauges - JDF
* PM SE1, NE1/2 entrance weirs –JDM&E
* Inspect diffuser valves/sluice gates on open diffusers only (ask Fisheries for details)- JDM
* Demob and remove Wing Gates hardware from Collection Channel MU 9 (Optional) – JDM
* Color-code picketed leads (before pulled ideally) - JDF

**South AWS conduit – Dewater or NOT?**  **January 16th, 2023**

* Inspect and remove accumulated mussel shells if necessary

**South fish turbine intake trashrack install and water up** **Feb. 28st. 2023**

* Install trashracks and picketed leads at count stations - JDM

**Guidelines**

* Adult winter maintenance (outage) season is Dec 1 through Feb 28.
* Juvenile winter maintenance (outage) season is Dec 1 through Mar 31.
* STS pulled after 15 December
* 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.