

### Fish Passage Plan (FPP) Change Request Form

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**Change Form # & Title:** 16LWG001 – Gatewell Orifices  
**Date Submitted:** January 28, 2016  
**Project:** LWG  
**Requester Name, Agency:** David Trachtenbarg, Corps NWW  
**Final Action:** APPROVED – January 28, 2016

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**FPP Section:** LWG 3.2.2.2 – Unscheduled Maintenance – Juvenile Fish Facilities.

**Justification for Change:** As part of the Lower Granite Dam Juvenile Bypass System (LGR JBS) upgrade project, the Fish Screen Slots (FSSs) have been permanently sealed closed. Therefore the 8” orifices no longer need to be operated as the FSSs are no longer hydraulically connected to the turbine intake area and any chance of fish entrainment to the FSSs has been eliminated. The 8” orifices connecting the FSSs to the juvenile collection channel will ultimately be removed as part of the overall LGR JBS upgrade project during construction of final channel improvements.

**Proposed Change:**

**3.2.2.2. Gatewell Orifices.** Each turbine intake slot has ~~four orifices:~~ two 10" orifices with air operated valves in the bulkhead slot ~~and two 8" orifices with manually operated slide gates in the fish screen slot~~ for allowing the fish to exit the slots. However, turbine unit intake 5A has one 10" orifice and one 14" orifice, both with air operated valves. Under normal operation, 18 bulkhead slot orifices (one per gatewell slot) ~~and fish screen slot orifice at 5B South~~ shall be operated. Additional bulkhead slot orifices may be operated to hasten fish departure and/or allow debris to exit gatewells as the hydraulic capacity of the gallery will allow. ~~If very high flow conditions in the collection gallery prevent the operation of all 19 previously mentioned orifices, priority shall be given to operating the 18 bulkhead slot orifices. With the exception of the condition where a turbine unit is out of service for an indefinite period of time (with fish screens non-operational and no fish being diverted into bulkhead slots), fish screen slot orifice 5B South shall be closed (as needed) prior to closing any bulkhead slot orifices.~~ If an orifice becomes blocked with debris it will normally be cleaned and remain in operation. If an orifice is damaged, it will be closed and the alternate orifice for that gatewell operated until repairs can be made. If both orifices are blocked with debris, damaged, or must be closed, the turbine unit will be taken out of service until repairs can be made. If repairs will take longer than 48 hours, juvenile fish will be dipped from the gatewell with a dip basket.

**Comments:**

1/28/2016 FPP Meeting: FPOM is fine with this change but wants to revisit as the new facility comes online.

**Record of Final Action:** APPROVED at FPP meeting 1/28/2016.