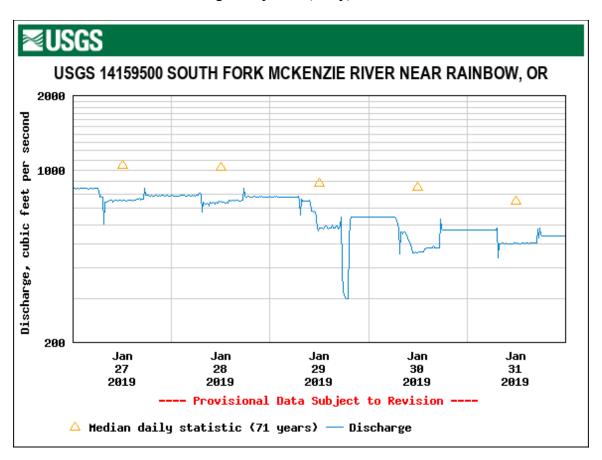
## MEMORANDUM FOR THE RECORD

**COORDINATION TITLE -** 19CGR01 MFR Ramp Rate Minimum Flow **NOTIFICATION DATE -** 05 February 2019

**PROJECT - Cougar Dam** 

**RESPONSE DATE -** 19 February 2019

**Description of the problem -** On 29 January there was an error while transitioning unit flow (both units) at Cougar Dam to regulating outlet (RO) flow for fish passage operations. Instead of a target flow around 580 cfs, it decreased to about 260 cfs resulting in a ramp rate deviation (-0.51 feet/hour) and a flow (277 cfs) deviation below minimums detailed in the Biological Opinion (BiOp).



**Dates of impacts/repairs -** January 29 (1700-2000)

**Length of impacts/repairs -** approximately 3 hours

**Expected impacts on fish -** A purpose of BiOp minimum flow and ramp rate criteria during winter are to protect existing redds and fry downstream. There may have been

increased downstream passage mortality due to a smaller RO gate openings during the fish passage operation.

## Comments from agencies - No comments

Please email or call with questions or concerns. Thank you,
Chris Walker
NWP Operations Division Fishery Section
Willamette Fish Operations Biologist
503.808.4316
Christopher.E.Walker@usace.army.mil