Date: 5/22/19

From: Bob Cordie, The Dalles Dam Fisheries

To: FPOM

Re: **The Dalles Spillway Operations and Deficiency History**

The Dalles Spillway has been instrumental in providing juvenile salmonid passage for many years. Since that time, many deficiencies have been identified. Funding has always been insufficient to address most of these issues. The following is some history of operation of the spillway and issues identified.

1995-1999 Start of spillway testing for use in juvenile passage, using 30% and 64% river flow

2000-2003 Operate 40% of river flow spill using bays 1-17

2004 Construction of bay 6/7 spillwall

2005 Discover failing wire rope. Use of 4’, 5’, 6’ and 8’ pennants to support load on spillgates 3 - 6

2006 Replaced wire rope and drums for spillbays 1-9

2004-2009 Operate 40% spill trying to maintain north of 6/7 spillwall

2010 Construction of bay 8/9 extended spillwall

2010-2017 Operate 40% spill trying to maintain north of 8/9 spillwall

2012 Tagged out spillbay 9 after third time of seized trunnion pin. Tagged out 10, 11 and 13 for wire rope. Tagged out 16, 18 and 19 for structural distress. Tagged out 23 for apron undercutting

2013 Project evaluation of spillway and deficiencies

2016 Comprehensive assessment of Lower Columbia Spillways starts

2018 Operate according to gas cap guidelines

2018 Bathymetry test finds rock pile below spillbay 10.

2019 Operate according to flex spill guidelines