# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 18IHR004 – Fish ladder exit criteria

**Date Submitted**: December 20, 2017

**Project**: Ice Harbor

**Requester Name, Agency**: Ken Fone, USACE

**Final Action: APPROVED – 1/11/18**

**FPP Section**: IHR 2.4.2.9.i (Head on ladder exit trashracks)

**Justification for Change**: The criteria for allowable head differential across the ladder exit trashracks has been 0.5’ or less. The differential at the IH north fish ladder exit got up to 0.4' during the summer of 2017. This was caused by the high debris load in the forebay, along with south winds that blew some of the debris to the north shore and under/over the debris boom into the ladder exit. The debris had slowly built up on the exit trashrack over a period of several months. I was present when the trashrack was pulled out for cleaning in September. In the glimpse I had of part of the trashrack as it was being raised up out of the water, I could see lots of sticks densely matted across the bars of the trashrack, before all the debris fell off into the water.

The observed debris on the trashrack had the potential to cause injury to passing fish, or delay fish that could not squeeze through the matt of debris. A criteria of 0.3' or less head differential at the ladder exit would be more appropriate, because it would be the same as the allowable head differential across the picketed leads, and should maintain safer, unobstructed passage for fish. This change in criteria should not cause excessive work for the powerhouse crew to repeatedly clean the trashracks to maintain a 0.3' or less differential. Typically the differential is 0.1' or less all year without any cleaning. It would only be during a high debris year when this new criteria may cause increased maintenance.

**Proposed Change**: *[see below with edits to existing FPP in track changes]*

**2.4.2.9. Head on Trashracks**

1. Maximum head of 0.3’ on ladder exits.
2. Maximum head on picketed leads shall be 0.3’.
3. Trashracks and picketed leads installed correctly.

**Comments**:

**Record of Final Action**: Approved at FPOM 1/11/18