CENWW-OD-WI **May 27, 2015**

MEMORANDUM FOR THE RECORD: 15-IH-08

SUBJECT: Juvenile salmonid mortalities at navigation lock on May 27, 2015

A. Species – 19 steelhead, 2 Chinook (21 total fish, but a few of the fish recorded as steelhead may have been Chinook).
B. Origin – unknown.
C. Length – smolts of various sizes
D. Marks and tags – did not check for fin clips, due to urgency in recovering live fish.
E. Marks and injuries found on carcass – none.
F. Location – navigation lock fill valve #4 chamber
G. Cause and time of death – unwatering of valve #4 chamber with a pump began on May 26 to facilitate preventative maintenance on the valve. The pump has a float switch to shut off the pump when the target water depth (1-2 feet) is reached. For some reason, the pump did not shut off and continued pumping water down until the water was below the level of the pump intake, leaving about 3" of water. This probably occurred sometime last night or early this morning. When this situation and the presence of fish in the chamber were discovered the morning of May 27, fish recovery actions commenced at 0945 hours. Fisheries staff rescued 81 juvenile salmonids, mostly steelhead, and released them to the river with most of them being in good condition. The mortalities found in the valve chamber presumably died from hypoxic-related stress after the water was pumped down, although there is a small constant flow of fresh water leaking into the chamber.
H. Future and preventative measures – this is the first time that Ice Harbor staff have observed fish in any of the navigation lock tainter valve chambers. A chamber can be pumped down to a workable level of 2-3 feet of water depth in as little as 2-3 hours if the bulkheads make a good seal. In the future when these chambers are partially unwatered, personnel will monitor the water level at established intervals depending on the size of the chamber. Also a recommendation will be to not turn on the pump at night, when limited staffing and reduced visibility may make it logistically challenging to monitor the water level.
I. Pictures included – none.

Ken Fone
Ice Harbor Project
Fishery Biologist