

**MEMORANDUM FOR THE RECORD** 15 LGS 004 MFR Adult fishway control system installation.

**SUBJECT: *Installation of new Adult Fishway controls***

Commissioning of the new Adult Fishway control upgrades began on February 23, 2015. It was discovered at this time that the adult entrance weir depths were not part of the criteria points for the new software system. The system was operated in manual mode and tuned to produce criteria requirements at all fishway entrances. The week of March 2-5 the system was under hourly checks during normal business hours and found to be in criteria (still in manual) during the three fishway inspections. On March 9 the contractor requested an overnight run in auto to see how the new system will function. On March 10 the fishway system was checked at 0700 and NPE (North Powerhouse) was found 0.9 feet out of criteria at 6.1 feet (criteria: 7 foot or greater). North shore and South shore were in criteria. All entrances met the criteria for channel to tailwater differentials (1-2 feet). The system has been running in manual at all times and in criteria except for the March 9 and 10 periods. We are currently running on only two of three fish pumps. Fish pump #1 is waiting on parts. We are scheduled to have the Juvenile system running on March 24. This will add more water into the Adult Channel via the overflow weirs at the primary dewater. At this time the main issue is lack of water in the Adult Channel due to two pump operations and the Juvenile system not running. With the entrance weirs not a criteria set point in the current Fishway program, the only way the system can adjust the channel to tailwater differentials is to raise the weirs. This results in a failure to meet weir depth criteria. Therefore the system is remaining in manual mode keeping weir depth and channel to Tailwater differential in criteria.

**PLAN FORWARD:**

Now - Operate in manual mode. Bring contractor back to fix level sensor at north shore entrance.  
18 March - Little Goose will report measurements of system dynamics, such as the propagation time between the south and north shore entrances.

23 March - Attempt ~~manual~~-automatic mode again with full water supply.

24 March - If out of criteria, modify control system to account for interactions between gates using measurements from Little Goose.

- A. Species – NA
- B. Origin – NA
- C. Length – NA
- D. Marks and tags – NA
- E. Marks and Injuries found on carcass – NA
- F. Cause and Time of Death – NA
- G. Future and Preventative Measures – NA

Sincerely,  
Richard Weis  
Asst. Biologist LGS