**398029 McNary TSW Permanence**

CRFM Work Plan

June 2017

**1. Project Information**

* **Purpose/Objective**. End goal of this project is to return McNary Spillway back to intended capability service which is to have two complete sets of Spillway gates to be used for maintenance and emergency proposes.

**Description**. McNary currently has two Top-Spill Weirs (TSWs) that were installed in 2007. The TSWs are installed on top of Lower Leafs in the main slot. Both TSW’s currently have Lower Leafs installed in the (upstream) Emergency Slot during operation. One of the TSWs is operated by way of a crane lifting a spillway gate leaf in the emergency gate slot. The other is operated by an elevated spillway gate hoist using a modified upper spillway leaf.

Two hoist stands were constructed in 2016. These stands have a design flaw and only one is in use at this time. AE firm is redesigning the hoist stands as concrete pillars on the ends of the hoists. We will need new hoist stands if we use existing upper leaves with closure devices attached.

### TSW 1

TSW 1 is currently installed in Spill Bay 19. TSW 1 does not have a closure gate on top of it. Because of the lack of a closure device, TSW 1 is configured so that flow control occurs from a spillway gate installed in the emergency slot. If an emergency occurred during TSW operational season, the Spillway Gate would need to be removed from in front of the TSW and then installed in the required bay. Doing this would then mean flow from TSW 1 could not be controlled and thus not turned off if needed. It would remove the bottom leaf from the Emergency Slot that is currently in place for normal operation.

### TSW 2

TSW 2 is currently installed in Spill Bay 20. TSW 2 utilizes a modified Upper Leaf to act as a closure gate on top of TSW 2. The modified Upper Leaf has bolted on closure device. Removal of this closure device is a time consuming process and due to this is never removed. By using a modified Upper Leaf on top of the TSW it creates a hoisting problem. Because of the need to get the bottom of the gate out of the flow an additional hoist stand is required.

The current tentative plan is to construct two new short TSW closure leaves with a fitted closure device built in. This would free the emergency gate leaves for their original intended purpose. It would also eliminate the need for the hoist stands and hoist modifications of larger drums and additional wire rope.

**2. Major Activities/Tasks**. Tentatively planning on completing design in FY18. The contract will be awarded in early FY19. The contract is for spillway leaves to control of MCN TSWs. FY20 is remaining S&A EDC and project close-out.

**3. Cost Estimate**. FY17 Final Obligations $86,874

FY18 Budget - $200,000

**4. Information and Issues**. Currently attempting to get regional buy-in on leaving the emergency lower leaves in the upstream (emergency) slots during TSW operation, but having the option of removing them if necessary for emergency use.