

**MEMORANDUM FOR RECORD****SUBJECT: Rectangular brush failure and switching to emergency bypass.**

**Narrative:** The JCC rectangular screen cleaning brush failed the morning of November 16 at about 0930. The brush was in the parked position, but the east side was hanging down into the water. The east brush retraction cable (one of two cables) was found wrapped around the east guide roller, which we have never observed before. Project personnel were able to return the brush to service by close of business that day. One of the mechanics noted the brush bar frame was bent and rubbing along the east wall when the brush was going through its cycle. One of the electricians was concerned with the brush retracting springs. The brush again failed on November 16 at about 2030 hours on the downstream limit. The brush was raised but there was concern the two retracting cables were not fully on their spools. The technician was able to manually park the brush and stayed in the channel until 0400 hours the next day, November 17, to manually clean screens. That morning, the mechanical and electrical staffs were about to return the brush to service. Adding to the previous concerns, the brush raise limit again needed to be adjusted as had occurred several times this season. Later, on November 17, at about 2130 hours, the brush again failed on the downstream limit and the brush was in the water and not fully raised. Again, the technician on duty was able to manually park the brush and remained in the channel to manually clean screens until 0400 hours on November 18.

With these recent rash of issues with the rectangular screen brush, project staff determined that the brush mechanism could not be used without risk of failure. With early start up in March, it was decided to switch the channel to emergency bypass to get a proper maintenance window of three months instead of two that early start up would allow. On November 18, from 0845 to 1145 hours, the channel was switched from primary to emergency bypass to ensure the rectangular screen brush and all other systems are fully function for early start up. This switch was originally scheduled for December 13.

**Location:** McNary juvenile collection channel.

**Method:** System was switched to emergency bypass approximately one month early to ensure the rectangular screen brush was repaired and all systems were ready for early start up.

**Timeline - Duration:** Increase maintenance window from two to three months.

**A. Species:** NA

**B. Origin:** NA

**C. Length:** NA

**D. Marks and Tags:** NA

**E. Marks and Injuries Found on the Carcasses:** NA

**F. Future and Preventative Measures:** Currently, there are no measures to avoid a brush mechanism wearing out.

**G. Photos Taken:** None.

Sincerely,  
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