

# Nacimiento Dam (No. 1008) Spillway Work Plan

July 14, 2017

Following are known repairs that will be made at Nacimiento Dam Spillway before next flood season:

1. Seal spillway floor slab joints with elastomeric sealant.
2. Seal small cracks with elastomeric sealant. (Cracks that can receive sealant at least ¼” below concrete surface with elastomeric sealant, and up to ½” wide.)
  - a. Any Existing joint or crack sealant will be removed to the extent possible.
  - b. Joint and crack preparation will consist of high pressure water jetting.
  - c. Backer-rod will be installed in joints and cracks as-needed to allow filling to concrete surface. Backer-rod will be installed ½” deep minimum.
  - d. Elastomeric sealant manufacturer(s) will be consulted for best sealant application.
    - i. Desirable elastomeric sealant properties include:
      1. Submerged environment compatibility
      2. Capable of 50% joint movement
      3. Non-sag material behavior (not self-leveling)
      4. Meets ASTM C-920, Type M
3. Repair concrete spalls and large cracks (cracks over ½” wide).
  - a. Site preparation may include water-jetting, concrete chipping, concrete saw-cutting, and non-shrink, high early strength grout placement.
4. Grind flush offset floor-slabs and wall-slabs, if found. One wall-slab joint offset on the south chute wall is known to exist that needs grinding flush.
5. Video survey spillway under drains.
  - a. Video survey internal condition of all under drains; examine for flushing and/or repair needs; flush as-needed; perform specific repair(s) if needed.
6. Check torque settings of inflatable spillway crest gate anchor bolts; re-torque to specifications as-needed. (This is performed after each year the gates impound water or every 5-years if no water is impounded. The gates impounded water in early 2017. Anchor bolt torque was last checked May 2016.)
7. Touch-up inflatable spillway crest gate coating chipped or corroded locations.
8. Repair the south high level gate operator.
9. MCWRA has hired GEI Consultants, Inc. to perform a Spillway Condition Assessment inspection, prepare a technical memo identifying additional items, if any, to be addressed before the next flood season, and complete a Condition Assessment Report for submittal to DSOD and FERC. An amended Work Plan will be sent to DSOD if anything not included above is discovered during the initial Spillway Condition Assessment inspection that needs repair before next flood season.

# San Antonio Dam (No. 1008-2) Spillway Work Plan

July 14, 2017

Following are known repairs that will be made at San Antonio Dam Spillway before next flood season:

1. Seal spillway floor slab joints with elastomeric sealant.
  2. Seal small cracks with elastomeric sealant. (Cracks that can receive sealant at least ¼" below concrete surface with elastomeric sealant, and up to ½" wide.)
    - a. Any Existing joint or crack sealant will be removed to the extent possible.
    - b. Joint and crack preparation will consist of high pressure water jetting.
    - c. Backer-rod will be installed in joints and cracks as-needed to allow filling to concrete surface. Backer-rod will be installed ½" deep minimum.
    - d. Elastomeric sealant manufacturer(s) will be consulted for best sealant application.
      - i. Desirable elastomeric sealant properties include:
        1. Submerged environment compatibility
        2. Capable of 50% joint movement
        3. Non-sag material behavior (not self-leveling)
        4. Meets ASTM C-920, Type M
  3. Repair concrete spalls and large cracks (cracks over ½" wide).
    - a. Site preparation may include water-jetting, concrete chipping, concrete saw-cutting, and non-shrink, high early strength grout placement.
- NOTE: Spillway floor panels near the upstream third of the spillway contain cracking such that sealant may be insufficient water control. The Spillway Condition Assessment inspection scheduled to be performed in July 2017 is expected to identify recommended additional testing and/or repair measures for that area, if such is needed.
4. Grind flush offset floor-slabs and wall-slabs, if found.
  5. Video survey spillway under drains.
    - a. Video survey internal condition of all under drains; examine for flushing and/or repair needs; flush as-needed; perform specific repair(s) if needed.
    - b. Repair of partially collapsed 10" dia. clay sewer pipe is needed at approximately STA 14+90 at the right (south) spillway side drain line (Ref. Drawing 3440-5-006).
  6. Repair spalled concrete with exposed rebar at the first left wall joint of the approach to the spillway.
  7. MCWRA has hired GEI Consultants, Inc. to perform a Spillway Condition Assessment inspection, prepare a technical memo identifying additional items, if any, to be addressed before the next flood season, and complete a Condition Assessment Report for submittal to DSOD. An amended Work Plan will be sent to DSOD if anything not included above is discovered during the initial Spillway Condition Assessment inspection that needs repair before next flood season.