



2023 DWR CONSTRUCTION PREVIEW

The Department of Water Resources (DWR) has a construction team of three full-time employees that assist during emergencies and work on in planned and unplanned maintenance and upkeep on many agency-aligned projects. From servicing the Devils Lake Outlets, to several critical dam maintenance projects, DWR staff are planning a number of important projects throughout the state this year. The following is a preview of construction activities planned for 2023.

BOWMAN-HALEY DAM

Located southeast of Bowman, ND in Bowman County is the Bowman-Haley Dam. It is operated by the U.S. Bureau of Reclamation and is primarily used for recreation and flood-water management. In past years, it was discovered that a low-level pipe for the release structure had become dislodged, rendering it unusable. Efforts in the fall of 2022 to remedy the issue were hampered due to the discovery of excessive mud and silt that had built up over the pipe, hindering its removal and replacement. Currently, there are plans to use a remotely operated vehicle (ROV) to inspect the underwater pipe to determine next steps. Options still include a more extensive removal and repair or abandoning the current pipe and installing a new one. Data collected from the ROV will be used to determine the best course and allow contractors to bid the job accurately.



CROWN BUTTE DAM

Four miles west of Mandan, ND on Interstate 94 (I-94) is the Crown Butte Dam. The dam serves as a recreation reservoir and aids in flood-water management. The structure itself is also the embankment for I-94. Developed in the 1950s with the construction of the Interstate, some of the dam's infrastructure is in need of repair and modernization. Current plans include abandoning the obsolete low-level outlet by filling it with concrete. Concrete repairs to the principal spillway will also be included in the project.



BELFIELD DAM

Within the city limits of Belfield, ND is the Belfield Dam. The dam is surrounded by a park and primarily serves as a recreation area while providing some flood-water management capabilities for the city. The earthen dam is outfitted with a corrugated metal pipe spillway, which in recent years has deteriorated and no longer maintains water in the reservoir each summer. Plans are in place to construct a concrete vertical riser structure and repair the existing horizontal metal conduit with a cured-in-place pipe. A filter conduit will also be installed on the downstream portion to help mitigate seepage along the conduit.



BAUKOL-NOONAN DAM

Managed by the North Dakota Game and Fish Department, the Baukol-Noonan Dam is a small reservoir south-east of Noonan, ND in Divide County. The reservoir was once an old coal mine but now serves as a recreation site. Similar to the Belfield Dam, the corrugated metal pipe spillway is leaking, leading to low water levels in the reservoir each summer. Repairs at Baukol-Noonan Dam will be comparable to Belfield Dam.

DEVILS LAKE OUTLETS

The DWR construction crew typically aids in routine maintenance at the Devils Lake Outlets. Each year, outlet pumps need to be prepared for seasonal operation. Staff play an important role in preparing the outlets to serve their mission of being an integral part in the overall flood management of Devils Lake. Moreover, the construction crew remains ready throughout the season for any “as-needed” projects associated with the Devils Lake Outlets.



PRESENS INSTALLATION

PRESENS delivers real-time environmental data from sensors located in remote locations to publicly accessible databases at the DWR. The name PRESENS is an acronym for Pushing REMote SENSors but also is meant to convey a sense that the agency has a “presence” across the state and is constantly collecting valuable water resource data needed for sound scientific decision-making on water development, planning, and appropriation.

DWR plans to install 100-150 temporary and permanent PRESENS units throughout the summer in numerous locations in the state. This will bring the DWR’s total number of sites collecting data using PRESENS to approximately 450. Most of the units will be used for groundwater monitoring, and data collected from the new sites will provide parameters for permitting. About 20-30 units will be deployed to monitor surface water, with several being new sites, while others are re-installations of units that are removed during winter months.

A potential 30 units with additional precipitation and soil moisture monitoring capabilities will be deployed in efforts to augment the Atmospheric Resource Board’s Cooperative Observer Network, which consists of approximately 500 volunteer observers, and also aid in flood monitoring within the Souris River Basin.

The DWR construction team will likely assist with installing permanent PRESENS units by trenching and installing pipe that positions data collection equipment below the frost line, allowing the unit to perform its duties 12 months out of the year. Other seasonal units will be installed by department staff along with DWR’s Data and Technology Services Division.

For more information on these and other projects, please visit the DWR website at www.dwr.nd.gov.