



Dam Operations Guidelines

Safe Dams & Safe Public

- We follow a dam safety program (DSSMP or Dam Safety Surveillance and Monitoring Plan) that is consistent with the latest state, federal, national and international industry standards
- Thorough public safety plans (PSP) protect the public from facility hazards including, but not limited to, new barrier floats upstream of the spillway intakes, safety signage in and around the dams, and emergency alert systems.
- The DSSMP and PSPs are reviewed annually for improvements and needed changes
- FLTF is available 24 hours a day, 7 days a week to monitor and respond to any emergency situation

Emergency Action Plans

- In collaboration with Gladwin and Midland counties' emergency directors, we created an emergency action plan (EAP) for notifying the public of emergency conditions from abnormally high river flows, impending dam failures, or actual dam failures.
- EAPs provide clear instructions for operations personnel, are tailored to consider the current physical state of each dam, and are tested and updated annually

Employee Safety

- A quality safety program creates a safety-based culture and good working practices
- In collaboration with a safety consultant, we developed critical safety procedures and are creating a complete training system
- The team goes through weekly training sessions and monthly safety committee meetings
- Facility safety assessments and upgrades have been made to protect employees from hazards

Regulatory Compliance

- A Commitments Management System (CMS) ensures compliance with all regulatory requirements including dam safety, environmental monitoring, operations monitoring, equipment, and facilities maintenance management and administrative requirements
- Complete and timely compliance helps us maintain good relations with regulatory agencies and helps them meet their regulatory program objectives as well as public expectations

Cost Management

- We strive to effectively and responsibly use our funds
- Technology tools help us organize and improve work process efficiencies
- When necessary, we will hire contractors to perform peak or specialized work instead of bringing on additional specific full-time staff to minimize costs



River Operations & Gauging

- River gauges will help us operate the river system by measuring flood flows so we have early notification of impending high river flows and possible evacuation of residents
- We worked with United States Geographical Survey (USGS), the National Weather Service, Gladwin and Midland counties, and others to identify key locations for river flow gauges and weather stations (rainfall, barometric pressure, etc.)
- A Supervisory Control and Data Acquisition (SCADA) system provides real-time and historical data to the dam operators, site security, as well as important information about the maintenance of lake levels
- Operations staff have real-time access to SCADA information enabling them to understand evolving flood, security, or dam safety situations while maintaining compliance with monitoring, reporting, regulatory and operating requirements



Four Lakes Task Force

General Operations and Maintenance

These activities ensure the dam structures are in safe and operational condition to the extent that their current compromised conditions allow. Operations activities monitor the facilities and take action to correct potential or active issues.

- Mow earthen embankments and grounds
- Manage weeds and clean drainage ditches
- Snow plow drives and access areas
- Remove ice from the spillway structures
- Inspect and repair dams, concrete structures and earthen embankments
- Gather piezometer readings
- Perform safety inspections and general inspections on the dams and powerhouses
- Maintain gates and fences
- Repair and replace signage
- Maintain and check generators, fire extinguishers and emergency equipment
- Perform general upkeep of building and powerhouse structure
- Assist in environmental studies, project design and permitting
- Maintain drainage tile
- Test and maintain siren
- Maintain driveway
- Monitor public recreation sites

Dam Safety and Security

These activities ensure the dams remain structurally sound and continually operate as designed while meeting regulatory requirements.

- Monitor site security systems on powerhouses, dams and spillways
- Winterize facilities
- Perform public safety inspections
- Regularly update emergency action plans
- Maintain boat barrier and warning signage
- Maintain facility lighting systems
- Maintain emergency generators
- Comply with requirements listed in Commitments Management System
- Ensure adherence to environmental health and safety policies and procedures



Four Lakes Task Force gauges

- Maintain stream and rainfall