

MEMO

DATE: November 10, 2025

FROM: Joseph B. Gibbs, PE, Board Member, Missouri Levee & Drainage District Assoc. (MLDDA)

TO: Flood Plain Landowners and Levee and Drainage District Boards of Supervisors

SUBJECT: Flap Gates and Sluice Gates

Given the need to care for and repair flap gates and screw type sluice gates, I recommend that levee and drainage districts need to keep on file the following information and documents; and, perform necessary operation procedures.

1. Keep on file all of the original equipment installation and operation documents and manuals; and condition, operation and maintenance reports of district personnel..
2. At least every two years make contact with dealers and/or manufactures that the gates and their parts are still being manufactured and are available.
3. If the gates are out of production, seek local businesses that may be able to manufacture repair parts. It may be necessary to consider replacement of the entire gate and begin budgeting for associated costs. Seek new dealers if the present dealer no longer carries gate parts or the dealer is out of business.
4. Inspect the gates and the area around them at least twice a year. One time should be before usual flooding periods.
5. For screw type sluice gates, the gate should be operated by responsible and assigned personnel through a complete close and open cycle to check for condition of parts, gearbox oil, equipment and water tightness of all sealing surfaces. This too applies for both seating surfaces for valves designed for seating and unseating heads. Dry seating surfaces can be lubricated for ease of operation with undiluted liquid dish detergent if allowed by the manufacturer.
6. For flap type gates, the flaps should operate easily and the sealing surfaces be properly aligned and water tight. Alignment of the flap may need to be adjusted during the inspection procedure.
7. Brush, weeds and debris need to be removed from inside and around both ends on the pipe installation so that the valves can operate and seal properly. When flood water levels are forecast, checking for and removing debris from sealing surfaces is necessary.