

**NATURAL RESOURCES CONSERVATION SERVICE  
OPERATION AND MAINTENANCE PLAN FOR  
PUMPING PLANT**

**CODE 533**

Name \_\_\_\_\_

Ident. No. \_\_\_\_\_

Legal Desc. \_\_\_\_\_

County \_\_\_\_\_

A properly operated and maintained pumping plant is an asset to your farm. This structure was designed and installed to provide a dependable water source or disposal facility for water management. The estimated life span of this installation is at least 15 years. The life of this installation can be ensured and usually increased by developing and carrying out a good operation and maintenance program.

This practice will require you to perform periodic operation and maintenance for satisfactory performance. Here are some recommendations to help you develop a good operation and maintenance program.

**General Recommendations**

- Inspect or test all pumping plant components and appurtenances (as applicable). Have a proper start-up and shut-down procedure for the operation of the pumping plant.
- Maintain all pumps, agitators, piping, valves, drive train, and other electrical and mechanical equipment in good operating condition following the manufacturer's recommendations.
- Maintain grounding rods and wiring of all electrical equipment in good working condition.
- Periodically inspect and maintain all safety features on pumps, motors, or other electrical or mechanical equipment. Disconnect electric supply before servicing the pumping plant (as applicable).

- Check all pump bases and mountings for durability and the ability to hold the pump in place without vibration. Repair when necessary.
- Replace, repack, or tighten the seals when leakage is in excess of manufacturer's recommendations.
- Drain all pumps and piping, including valves that are subject to freezing. If parts of the system cannot be drained, a noncorrosive anti-freeze solution shall be added.
- Inspect metal surfaces for rust and other damage. Especially inspect sections in contact with earthfill and/or other materials. Repair or replace sections and apply a protective covering.
- Maintain area around the pump and other equipment. Check for fuel or lubricant leaks (when applicable) of the power unit, fuel storage facilities, and fuel lines and repair as needed.
- Test and inspect, on a routine basis, all automated components of the pumping plant to ensure their proper functioning as designed.
- Remove all debris that hinders system operation—whether at the water intake or around the pumping plant. This includes sediment in suction bays.
- Maintain surface drainage around the pumping plant to avoid ponding of water.

- Immediately repair any damage due to vandalism, vehicles, or livestock that has been done to the structure, earthen areas surrounding the structure, or any appurtenances.
- Eradicate or otherwise remove all rodents or burrowing animals. Immediately repair any damage caused by their activity.
- For photovoltaic-powered pumping plants, adjust the tilt angle of the solar modules on a seasonal basis (if applicable).

#### **Specific Recommendations for This Project**

**If you need additional technical assistance to implement the operation and maintenance plan for this structure, contact the Natural Resources Conservation Service (NRCS) at your local USDA Service Center (listed in the telephone book under United States Government).**