

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**OPERATION AND MAINTENANCE  
PUMPING PLANT  
CODE 533**

Landowner/Operator \_\_\_\_\_

Practice Location \_\_\_\_\_

County \_\_\_\_\_ Farm/Tract No. \_\_\_\_\_

Prepared By \_\_\_\_\_ Date \_\_\_\_\_

Inspections and maintenance are required to achieve the intended function, benefits, and life of the practice. The landowner/operator is responsible to establish and implement an inspection and maintenance program. Items to inspect and maintain during the 15-year design life of the practice include, but are not limited to, the following:

1. Inspect after storm events and at least annually to identify repair and maintenance needs.
2. Inspect and/or test all pumping plant components and appurtenances (safety features, screens, filters, valves, air vents, pressure regulators, pumps, switches, anti-siphon devices, fuel storages, fuel lines), as applicable.
3. Promptly repair or replace damaged or inoperable components in accordance with the manufacturer's recommendations and system needs.
4. Perform routine maintenance of all mechanical components (power unit, pump, drive train, etc.) in accordance with the manufacturer's recommendations and system needs.
5. Perform routine tests and inspections of all automated components of the pumping plant, to assure the proper functioning as designed.
6. Follow start-up and shut-down procedures for the operation of the pumping plant in accordance with the manufacturer's recommendations.
7. Do not enter confined spaces without taking the proper safety precautions, wearing the appropriate personal protective equipment, and having the right equipment available for entrance and exit.
8. Open/close valves in a manner that prevents excessive water hammer.
9. Where applicable, fill pipe at the specified rate requirements to remove entrapped air and prevent water hammer surges. Appurtenances, such as a flow meter or other means (e.g., number of turns of a gate valve) should be used to determine the rate of flow into the pipeline. If filling at a slow flow rate is not possible, the system shall be open to the atmosphere (outlets open) prior to pressurizing.
10. Ensure proper operation of any backflow protection devices, where applicable.
11. Check for debris, sediment, minerals, algae and other materials which may restrict system flow.
12. Drain the system in cold weather when not in use. Provide for cold weather operation of the system.
13. Inspect and maintain secondary containment facilities, if applicable.
14. Prior to retrofitting any electrically powered equipment, electrical service must be disconnected and the absence of stray electrical current verified.
15. Protect the components from damage by farm equipment, livestock and rodents. Repair any damages.
16. Repair damaged components such as pump house, insulation, locks, etc to maintain proper function.
17. Repair any settlement, lost cover depth or erosion that occurs around the pumping plant facility and reseed as needed. If this problem persists, evaluate the facility and/or piping for causes of leakage and erosion of the fill material.
18. Repair or replace pump safety guards as needed.

Signatures

Landowner/Operator \_\_\_\_\_ Reviewer \_\_\_\_\_ Date \_\_\_\_\_