



Operation & Maintenance Plan Irrigation Pipeline (Code 430)

Expected Lifespan

The minimum expected lifespan of this practice is at least 20 years.

A properly operated and maintained **Irrigation Pipeline** is an asset to your property. The purpose of this practice is to efficiently convey irrigation water to crops. The life of the practice can be assured and usually extended by developing and carrying out a good operation and maintenance program.

This practice will require you to perform periodic operation and maintenance to maintain satisfactory performance. The following are some requirements to help you develop a good operation and maintenance program.

Operation and Maintenance

1. Open/close valves in a manner that prevents excessive water hammer.
2. Fill at the specified rate requirements to remove entrapped air and prevent water hammer surges. Appurtenances, such as a flow meter, weir, etc., 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. The system valve(s) to the irrigation application device (gated pipe, wheel line, pivot, etc.) should be opened to release entrapped air and minimize water hammer in the system.
3. Inspect and test pipeline, valves, pressure regulators, pumps, switches and other appurtenances.
4. Check and ensure proper operation of any backflow protection devices.
5. Check for debris, minerals, algae and other materials which may restrict system flow.
6. Drain and/or provide for cold weather operation of the system.
7. Promptly repair or replace damaged or inoperable components.
8. Perform routine maintenance of all mechanical components in accordance with the manufacturer's recommendations.
9. Prior to retrofitting any electrically powered irrigation equipment, electrical service must be disconnected and the absence of stray electrical current verified.
10. Protect the components from damage by farm equipment and livestock.
11. Repair any settlement or erosion that occurs around the pipe with soil and reseed as needed. If this problem persists, evaluate the pipe for leakage and erosion of the fill material into or along the pipe.
12. Maintain erosion protection at outlets.
13. Provide for appropriate trench safety during any excavation for repairs.

Operation, Maintenance and Inspection Costs

1. It is estimated that the annual time to routinely inspect and make minor repairs to your Irrigation Pipeline System will be:
 - a. Inspection = 2 hours/month
 - b. Minor Repairs = 2 hours/month
 - c. Mowing and Debris Removal = 2 hours/year
 - d. Major repairs to damaged pipeline will require extra time and materials.
2. Most minor repairs can be made by the operator using basic hand tools. However, major repairs to damaged pipe and appurtenances may require hiring a professional experienced in these repairs and improvements.
3. Most maintenance, such as mowing, reseeding, debris removal, etc. can be accomplished using common farm machinery. Occasionally major damage may require heavy construction equipment to make repairs.

Specific Site Requirements