

United States Department of Agriculture  
Natural Resources Conservation Service  
Montana

**Operation and Maintenance Guide  
For Your  
Stockwater Pipeline and Tanks**

Operator: \_\_\_\_\_  
Project: \_\_\_\_\_  
Location: \_\_\_\_\_ Sec. \_\_\_\_\_, T. \_\_\_\_\_, R. \_\_\_\_\_  
NRCS Office \_\_\_\_\_ Phone \_\_\_\_\_

*A properly operated and maintained stockwater pipeline and tank system is an asset to your operation. This system was designed and installed as a permanent solution to stockwatering deficiencies. The estimated life span of the installation is at least 20 years and can be assured and usually increased by carrying out the following recommendations. This checklist is provided for your convenience in order to help you develop a good operation and maintenance plan.*

**OPERATION CHECKLIST**

- ✓  The system was designed for a maximum of \_\_\_\_\_(number) of \_\_\_\_\_ (livestock). If the number is increased, additional water supplies may be needed during peak use periods.
- Close all hydrants and valves slowly to prevent water hammer.
- Make sure all pressure tanks, pressure relief valves and pressure reducer valves are operating within design pressure limits and are properly adjusted.

Properly operating pressure gauges at appropriate locations are a valuable aid in monitoring the system.

- If this is a pumped pressure tank controlled automatic system, make sure the system does not cycle on and off more than \_\_\_\_\_ times per hour. If rapid cycling is a problem, make operation adjustments or system modifications.

- Drain the following sections of pipeline prior to the date shown:

Stations \_\_\_\_\_ Date \_\_\_\_\_

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**MAINTENANCE CHECKLIST**

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- Inspect the system for sudden changes in quantity of water received from the source.
- Check periodically to see if debris is restricting inflow or outflow to a tank or trough.
- Check tank overflow outlets. If the outlet is being damaged by livestock, or a bog is creating a problem, protect the outlet with rocks, fencing, or other protective material.
- Periodically check the tank or trough for leaks and cracks and repair immediately as necessary.
- Periodically check all aboveground facilities for physical damage and repair as necessary.
- At the beginning of the year, inspect the entire length of the pipeline for any signs of leaks or pipe damage.
- Once a year, inspect the entire length of pipeline for signs of erosion and pipeline trench settlement. This is particularly important for the first two or three years after installation.
- Repair eroded areas and construct water bars (diversions) or other protective measures to keep water from running down trenches or into the area around tanks.
- Add backfill where pipeline trenches have settled.
- Check automatic water level devices to insure that they are operating properly. Adjust or repair as necessary.
- Check air valves and vents periodically to make sure they are operating properly and are not leaking.
- Check the area adjacent to troughs or tanks for erosion and wear-and-tear by stock. Use gravel, scoria, concrete, compacted earth or other durable material to build the area back up.
- If algae and iron sludge in tanks or troughs are a problem, consider using chemicals such as chlorine, copper sulfate, or adding small fish to the tank to keep it clean.

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