

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

TROUGH OR TANK

(No.)

CODE 614

DEFINITION

A trough or tank, with needed devices for water control and wastewater disposal, installed to provide drinking water for livestock.

SCOPE

This standard applies to all troughs or tanks installed to provide livestock watering facilities supplied from a spring, reservoir, well, or other source.

PURPOSE

To provide watering facilities for livestock at selected locations that will protect vegetative cover through proper distribution of grazing or better grassland management for erosion control. Another purpose on some sites is to reduce or eliminate the need for livestock to be in streams, which reduces livestock waste there.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where there is a need for new or improved watering places to permit the desired level of grassland management, to reduce health hazards for livestock, and to reduce livestock waste in streams.

DESIGN CRITERIA

The trough or tank shall have adequate capacity to meet the water requirements of the livestock. This will include the storage volume necessary to carry over between periods of replenishment.

The site shall be well drained, and areas adjacent to the trough or tank that will be trampled by livestock shall be graveled, paved, or otherwise treated to provide firm footing and reduce erosion. Automatic water level control and/or overflow facilities shall be provided. Shields or covers to prevent damage shall protect valves or pipes by livestock. Overflow shall be piped to a desirable point of release. Some provision for draining the tank should be considered. This could be accomplished by installing a pipe plug with end cap in the sidewall of the tank, or install a pipe sleeve on the outlet standpipe near the bottom of the tank.

The trough and outlet pipes will be protected from freezing and ice damage if this is a potential problem. Freeze proof troughs or electric heaters may be used. Roofs can be constructed over the trough to provide shade and loss of water by evaporation. The quality and durability of all materials shall be in keeping with the planned useful life of the installation, and all materials shall have a minimum expected life of 10 years. Troughs or tanks of lightweight construction shall be adequately anchored to prevent movement by livestock.

PLANS AND SPECIFICATIONS

Plans and specifications for installing troughs and tanks shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

Check periodically to see if any type of debris has fallen into the trough which may restrict the inflow or outflow system. Check tank for leaks or cracks and repair immediately if any cracks or wall separations are found. Check the automatic water level device to ensure that it is operating properly. Make certain that the area adjacent to the trough is well protected with gravel, paving, or good cover. Be sure that the outlet pipe has a free outlet and is not causing erosion problems.

If the trough has not been designed to prevent damage from freezing, it should be prepared for winter weather. This may include a measure such as adding material in the storage area to take up expansion.

Algae and iron sludges sometimes are problems in watering facilities. Chemicals such as copper sulfate and chlorine have been used. Local rules and regulations are to be followed when recommending chemicals.

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

TROUGH OR TANK

CODE 614

The foundation area shall be cleared of all material not suitable for the subgrade.

The foundation area and the immediately surrounding area shall be smoothed and graded to permit free drainage of surface water.

All materials, placement, anchoring, proportioning, and protection shall be as shown on the plans.

All backfill for underground pipes shall be compacted to the degree required to prevent settlement after construction is completed.

All construction shall be performed in a workmanlike manner, and the job site shall have a neat appearance when finished. All disturbed areas not graveled or paved will be vegetated to control erosion.