

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 that are supplied by streams, springs, wells, ponds, or other sources.

PURPOSES

To provide watering facilities for livestock at selected locations that will protect vegetative cover through proper distribution of grazing or through 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.

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 should be well drained, or if not, drainage measures will be provided. 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 as appropriate. Valves or pipes shall be protected by shields or covers to prevent damage by livestock. Overflow shall be piped to a desirable point of release. 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 at some sites. Roofs can be placed over the trough to provide shade and reduce loss of water by evaporation.

The quality and durability of all materials shall be in keeping with the planned useful life of the installation. Common construction materials are reinforced concrete, steel, and wood.

CONSIDERATIONS

Water Quantity

1. Effects on components of the water budget.
2. Effects on downstream flows or aquifers that effect other water uses or users.

Water Quality

1. Effects on erosion and movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.
2. Effects on the visual quality of onsite and downstream water resources.
3. Effects on wetlands and water related wildlife habitats.

Endangered Species Considerations

Determine if installation of this practice with any others proposed will have any effect on any federal or state listed Rare, Threatened or Endangered species or their habitat. NRCS's objective is to benefit these species and others of concern or at least not have any adverse effect on a listed species. If the Environmental Evaluation indicates the action may adversely affect a listed species or result in adverse modification of habitat of listed species which has been determined to be critical habitat, NRCS will advise the land user of the requirements of the Endangered Species Act and recommend alternative conservation treatments that

avoid the adverse effects. Further assistance will be provided only if the landowner selects one of the alternative conservation treatments for installation; or at the request of the landowners, NRCS may initiate consultation with the Fish and Wildlife Service, National Marine Fisheries Service and/or California Department of Fish and Game. If the Environmental Evaluation indicates the action will not affect a listed species or result in adverse modification of critical habitat, consultation generally will not apply and usually would not be initiated. Document any special considerations for endangered species in the Practice Requirements Worksheet.

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 insure that it is operating properly. Make certain that that 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 any serious 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