

REDUCING BACTERIA WITH BEST MANAGEMENT PRACTICES FOR LIVESTOCK

WATERING FACILITY NRCS CODE 614

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Description:

A permanent or portable off-stream water supply, such as a trough or pond system, that provides an adequate amount and quality of drinking water for livestock and/or wildlife and also helps improve animal distribution.

Benefits to Producer:

- Reduces herd health risks associated with livestock standing in muddy areas, such as foot disease and injuries due to unstable footing.
- Provides clean source of water for livestock.
- Decreases herd injuries associated with cattle climbing steep and unstable stream banks.
- Improves water quality by reducing sediment, nutrient, bacterial, organic, and inorganic loading to the stream.
- Reduces stream bank destabilization and associated erosion due to trampling and overgrazing of banks.
- During drought, when surface water sources are dry, an alternative water source provides the water necessary for beef cattle producers to remain in business.



A water tank in a pasture combined with fencing keeps cattle out of critical riparian areas. Photo by Jeff Vanuga, NRCS.

Bacterial Removal Efficiency:

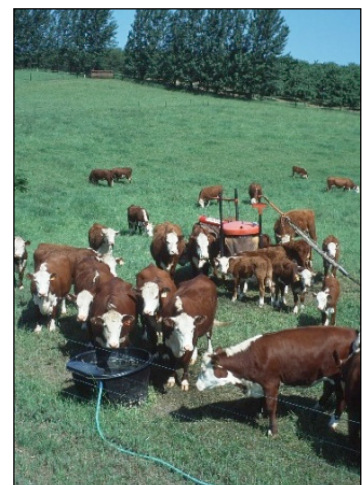
- An off-stream alternative water supply resulted in the following bacterial reductions based on scientific research:
 - *E. coli*: 85%
 - Fecal coliform: 51 to 94%
 - Fecal streptococci: 77%

Other Benefits:

- Decreased the amount of direct livestock use of stream for drinking and other activities between 48 and 90%.
- Decreased stream bank erosion by 77%.
- Increased gain in beef cattle of 0.2-0.4 lb/day.
- Improved milk and butterfat production in dairy cattle.
- Increased annual net returns to ranch between \$4,500 and \$11,000 depending on cattle prices and precipitation levels with use of off-stream salt supplements.
- Increased annual grazing capacity by 85 AUMs.

Estimated Installation Costs:

- Watering troughs: \$450 to about \$7,600 depending on the size and material (plastic, galvanized metal, fiberglass, or concrete).
- Electric water pumps: \$1,900 to \$4,000 depending on the size.
- Solar water pumps: \$5,700 to \$12,000 depending on well depth.
- Windmills: \$8,200 to \$17,800 depending on fan diameter.
- Pond: \$2.08/cubic yard to \$10.08/cubic yard depending on size.
- Cost information obtained from the Texas NRCS Electronic Field Office Technical Guide for Zone 4; costs may vary for other zones.



Cattle watering at an off-stream portable water system. Photo by Chris Coulon, NRCS.

Practice Life Span:

- Trough: 15-20 years
- Electric pump: 15 years
- Solar pump: 15 years
- Windmill: 15 years
- Pond: 20 years

Available Cost-Share Programs:

- EQIP (up to 75% cost-share).

For More Information:

- Contact your local County Extension Agent, Soil and Water Conservation District (<http://www.tsswcb.state.tx.us/swcds>) or the Natural Resources Conservation Service (<http://www.usda.nrcs>).