

REDUCING BACTERIA WITH BEST MANAGEMENT PRACTICES FOR LIVESTOCK

STREAM CROSSING

NRCS CODE 578

Jennifer L. Peterson, Extension Program Specialist, Texas AgriLife Extension Service
Larry A. Redmon, Professor and State Forage Specialist, Texas AgriLife Extension Service
Mark L. McFarland, Professor and State Soil Fertility Specialist, Texas AgriLife Extension Service

Description:

A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles.

Benefits to Producer:

- Reduces herd health risks associated with livestock standing in muddy areas, such as foot disease and injuries due to unstable footing.
- Improves water quality by reducing sediment, nutrient, bacterial, organic, and inorganic loading to the stream.
- Decreases herd injuries associated with cattle climbing steep and unstable stream banks.
- Provides livestock access to all pastures.
- Discourages cattle from congregating or wallowing in the stream.

Bacterial Removal Efficiency:

- Stream crossings resulted in the following bacterial reductions based on scientific research:
 - *E. coli*: 46% when combined with other practices.
 - Fecal coliform: 44%-52% when combined with other practices.
 - Fecal *streptococci*: 46%-76% when combined with other practices

Other Benefits:

- When combined with other practices, decreased total phosphorus, total nitrogen, and total suspended solid concentrations by 18-25%.
- Reduced baseflow phosphorus levels by as much as 38%.
- When combined with other practices, reduced nitrate nitrogen concentrations by 35% and particulate phosphorus concentrations by 78%.

Estimated Installation Costs:

- \$60.88/cubic yard to \$325.00/cubic yard depending on material used for crossing (rock or concrete).
- Cost information obtained from the Texas NRCS Electronic Field Office Technical Guide for Zone 4; costs may vary for other zones.

Practice Life Span:

- 20 years

Available Cost-Share Programs:

- EQIP (up to 75%)

For More Information:

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



Concrete water crossing for livestock. Photo by Jeff Vanuga, NRCS.



This livestock crossing was installed to offer a stable point for livestock to cross a stream. This low cost engineering practice is an efficient method of reducing bank erosion. Photo by Don Poggensee, NRCS.