SCSC-PU-198 08/22

REDUCING BACTERIA WITH BEST MANAGEMENT PRACTICES FOR LIVESTOCK: STREAM CROSSING

Jennifer L. Peterson[1], Larry A. Redmon[2], and Mark L. McFarland[3]

Description

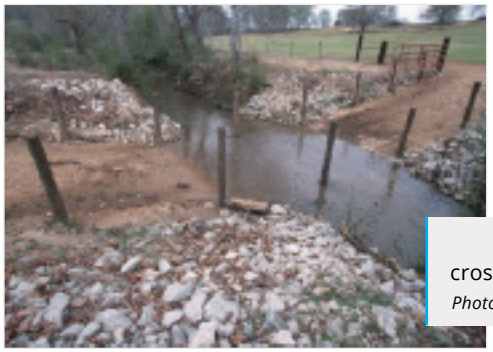
A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles.

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% to 52% when combined with other practices.
  - Fecal *streptococci*: 46% to 76% when combined with other practices.



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.

Other Benefits

- When combined with other practices, decreased total phosphorus, total nitrogen, and total suspended solid concentrations by 18 to 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.
- Prices are estimates and can vary depending on location and economic conditions.

For Technical or Possible Financial Assistance

- Contact your local County Extension Agent, Soil and Water Conservation District (*https://www.tsswcb.texas.gov/swcds*) or the Natural Resources Conservation Service (*https://www.nrcs.usda.gov/*).

[1] Extension Program Specialist
[2] Professor and State Forage Specialist
[3] Professor and State Soil Fertility Specialist

Lone Star Healthy Streams
http://lshs.tamu.edu/