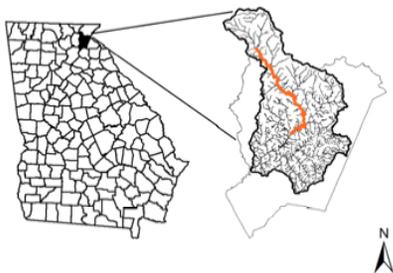


# Benefits to Clean Water

The projects in this brochure provide numerous benefits to water quality including:

1. Decreased bacteria & nutrients
2. Decreased erosion
3. Decreased water temperature
4. Improved habitat for fish



All farms for this project are located in the Soque River Watershed Basin which is the land area that drains to the Soque River (pictured right). A 29 mile length of the Soque River is listed by the GA EPD as “not meeting” state water quality standards for fecal coliform bacteria, and is considered impaired (highlighted in orange). Since 2008 the Soque Partnership has helped to complete 15 farm projects, fencing 45,000 linear feet of stream, and installing 7 stream crossings and 4 wells on 765 acres. As a direct result of these projects fecal coliform counts have gone down dramatically and EPD is considering removing the Soque River from the state’s impaired water list in 2012 as a result of the Soque Partnership’s monitoring data.

## The Soque Partnership

The Soque Partnership is a collaborative of over 20 local organizations as well as numerous individuals and farm businesses that have been working together since 2004 to initiate “on the ground” projects that improve water quality in the Soque River Watershed. The farm projects described in this brochure have been the central accomplishment of the Partnership to date, but future efforts include 1) streambank restoration projects; 2) site stabilization of Habersham County school sites for erosion and water infiltration; 3) advanced stormwater management to increase infiltration and groundwater supplies.



*If you are interested in participating in a Farm Project of the Soque Partnership please call one of the contacts below and request an application form and other information:*

**Duncan Hughes**  
Watershed Coordinator  
North Georgia Technical College  
(706) 754-7872  
dhughes@northgatech.edu

**Steven Patrick**  
County Agent  
Cooperative Extension  
(706) 754-2318  
stevep@uga.edu

**Justin Ellis**  
Executive Director  
Soque River Watershed Assoc.  
(706) 754-9382  
soque@windstream.net

# Livestock Alternatives for Cleaner Water

everything from watering to fencing



fishviews.com

Cattle need clean and plentiful drinking water at all times to insure their health and vigor. This short publication will offer some ideas and alternatives that demonstrate how to meet cattle water needs while also improving their water quality and the water quality of nearby surface waters. Protecting surface waters from contaminants such as bacteria, sediment and stormwater has long-term benefits to everyone and can improve drinking water, property values and ease in property management.

This publication describes practices that reduce livestock access to streams and provides for alternative and healthier water supplies for the herd. It then highlights the numerous benefits to farmers, to livestock, and to downstream water users of implementing these practices. Clean water is a tremendous asset to agricultural operations, as well as a benefit to residential water supplies and recreational uses like fishing and swimming.

### Soque Partnership Cost-Share Program

As part of a locally managed grant to reduce sources of bacteria and sediment to streams, farmers in the Soque River Watershed are eligible for cost-share funding (60% Federal / 40% landowner match) to install best management practices (BMPs) like exclusion fencing and alternative water supplies. The matching requirement may be met via cash investments or take the form of time and labor spent on BMP installation. Please contact the partners listed on this brochure for more information.

# Limiting Livestock access to streams and ponds

The following are just some of the projects that are eligible for funding through the Soque Partnership

## 1. Provide upland watering systems

There are many options for providing an off-stream source of water, and each depends on the water source, available power supply (ie. for pumps - solar power is an option), required water volume, pasture layout, and cost. Water may be delivered to troughs, tanks, or ball waterers (such as a MiraFount waterer- pictured right).



Bryan Welch/Mother Earth News



## 2. Install stream fencing

Stream fencing eliminates livestock access to surface waters.. Fencing materials can be electric, barbed wire or high-tensile and are installed according to Natural Resources Conservation Service (NRCS) specifications. Fencing also protects streambank vegetation from trampling and helps reduce erosion. Crumbling streambanks can be restored.



## 3. Provide stream crossings

An improved crossing may be necessary where pasture exists on both sides of a stream. In these cases, either a culvert crossing or a ford (pictured right) may be used. Crossings may also serve as emergency water ramps if off-stream water supplies experience problems. Crossing are constructed according to NRCS specifications.



## 4. Maintain vegetated buffer strips

Vegetated areas between pasture and streams serve to filter runoff, reduce erosion, and stabilize streambanks. An average 15' buffer width (required) accomplishes these benefits, and even wider buffers are encouraged. Buffers can sometimes be grazed occasionally to aid in maintenance and serve as additional forage.

# Benefits for farmers and Livestock

There are many economic and herd health advantages of separating livestock from surface waters, particularly streams. Many of those described below are documented by the Cooperative Extension in VA in *Streamside Livestock Exclusion: A tool for increasing farm income and improving water quality* (VCE # 422-766).

## 1. Increased productivity of herd

Research demonstrates that like people, livestock prefer drinking cleaner water. Exclusion and alternative water systems improve water quality, allow for better footing, and provide for a more desirable water temperature. This same research also indicates increased milk production and increased weight gain in beef cattle.

## 2. Improved quality of pastures

A system of distributed waterers (troughs and tanks), combined with rotational grazing (using cross fencing to produce multiple paddocks) can improve pasture quality and increase forage. Additionally, nutrients from manure are also more evenly distributed throughout pastures for better forage production.



photo by NRCS

## 3. Decreased incidence of disease and injury

Pathogens (bacteria and viruses) in streams can cause disease in animals and cause foot rot. Exclusion and alternative water sources limits contact with these potential threats. Physical injury associated with entering and exiting surface water sources is also reduced.

## 4. Alternative uses of buffer strips

Farm income may be supplemented by harvesting timber and firewood from buffers that are allowed to regenerate to a forested state. Such forested buffers may also be eligible for cost share programs under the Conservation Reserve Enhancement Program through the U.S. Department of Agriculture. It is also possible that buffers may be used for specialty crop production to diversify farm income.