

# Protecting Water Quality: A Guide for Horse Owners



Good water quality is important for humans, wildlife, agriculture, and the environment. In order to perform for us and more importantly, to be healthy, horses require good water quality. *Stream bank fencing* and *riparian buffers* are two best management practices you can use to improve water quality on your farm.

## What is a riparian buffer?

A riparian buffer is a zone of vegetation along a stream or other body of water. The vegetation can be grass, wildflowers, trees or shrubs or a combination of these. In Pennsylvania the best and most natural riparian buffers are forested.

Forested riparian buffers have many benefits. Shade from the trees cools the stream, preventing the growth of algae in the water and keeping oxygen levels high. (Fish and other animals that live in the stream require high levels of dissolved oxygen.) The tree roots hold the soil and minimize erosion into the stream. The roots also act as a filter, capturing pollutants that may be carried by runoff from farm fields to the stream. Riparian buffers are also great wildlife habitat, offering food and cover to a variety of species.

## How can I create buffers on my farm?

One of the most important ways to create and protect a riparian buffer is with stream bank fencing. Horses that are allowed access to a stream can cause problems ranging from manure getting into the water to horses trampling the stream banks and causing erosion. Horses can also be harmed when they are allowed access to a stream. They may be injured when going from the bank to the stream, or even become sick because of their own manure and soil in the water. Also, older, arthritic or lame horses may become dehydrated if they cannot get to the stream to get water.

Riparian buffers can be enhanced with plantings, preferably of native vegetation. Establishing plants of your choice will improve the quality of the buffer and prevent invasive species like multiflora rose from taking over.

## If I fence my horses out of the stream, where will they get water?

Many horse owners that are considering getting stream bank fencing are concerned about where their horses that once relied on the stream for water will drink. Luckily,



*This is a square spring development used in a cow pasture. Round troughs are available, which are safer for horses.*

fields have underground streams that can be captured with a spring development. This means that a permanent water trough can be installed into the pasture. These are usually large, cement units that fill naturally with water from the spring. The benefit of a spring development is that fresh water always goes into the trough. The water is also cool because it came from underground. The water isn't still, like it would be if you just filled a trough from a hose. The water moving minimizes the growth of algae in the trough. Overflow is channeled to the stream. The footing around the trough is reinforced to prevent creating a "mud hole" as often happens around troughs.

Stream crossings are another thing horse owners can do for the benefit of the stream and the horses. The crossing is built across the stream so that horses and other stock can reach the other side. The crossing may be built so that water runs shallowly across it. This allows horses to drink directly from the stream without harming the environment. The crossing is built up to provide good footing and prevent erosion. Crossings do not cause erosion or change the flow pattern of the stream. Large rocks support the crossing. Water flows through the cracks in the rocks and only a small amount of water is actually on top of the crossing.



*A stream crossing.*

### **How can I install stream bank fencing and related practices, and how can I afford it?**

The United States Department of Agriculture's Natural Resources Conservation Service (USDA-NRCS) can help horse owners make needed improvements to their property. If you contact your local USDA-NRCS office, a resource professional will arrange a visit to your farm. After evaluating your site, a plan will be made specific to your property that will include all improvements necessary to best benefit the environment and your horses. Funding is available through programs offered under the Farm Bill such as the Conservation Reserve Enhancement Program (CREP), Environmental Quality Incentive Program (EQIP), and the Wildlife Habitat Incentive Program (WHIP). Some of these require your farm to be an agricultural producer. For more information, contact your local USDA-NRCS office.



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