Benefits of
Stream Bank Fencing
And Riparian Buffers

To Farmers...

- ***Improved herd health:*** Clean, dry cattle are healthier cattle. Wet, muddy conditions increase the risk of udder infections, foot problems and numerous other diseases spread by these conditions. Controlled access at stabilized crossings also reduces leg injuries from steep, slippery banks. Better water quality means better drinking water.

- ***Options for pasture management:*** Stream bank fencing splits a typical pasture into two sub-units. Once the electrified stream bank fence is in place, creating additional sub-units is cheap and easy. By improving management options, farmers can significantly increase the efficiency of pasture use by grazing cattle.

- ***Good public relations:*** Farmers are increasingly under pressure to consider how their management affects others. Stream bank fencing is a big step in protecting a shared resource, and maintaining good public relations.

- ***Other Benefits:*** Additional benefits include improved wildlife habitat for a host of species from songbirds to waterfowl to game animals. Improvements to fish habitat are enormous, and important to many landowners. Reduced bank erosion protects property such as buildings and bridges.

To Local Communities...

- ***Improved water quality:*** Stream bank fencing reduces the amount of nutrients, sediments, farm chemicals and bacteria entering streams. This protects water uses of many types, from fisheries to contact recreation like swimming to public water supplies. An Iowa State University study showed 90% nutrient removal and 80% sediment removal for native grass buffers as narrow as 20'.

- ***Improved watershed function:*** Stream fencing and buffers improve important aspects of watershed function. Flood frequency and severity decrease, as does associated damage to life, property and infrastructure. Groundwater recharge increases. Bank erosion and corresponding sedimentation is reduced, protecting property and reducing maintenance issues. When a substantial portion of a watershed has buffers, these benefits can be of major economic importance in terms of damage prevention and avoided maintenance costs.

- ***Enhanced fish habitat:*** Of the many benefits of fencing, effects on fish habitat are among the fastest and most profound. Several studies document impressive recovery after fencing – streams became narrower, increased in velocity, and regained gravel bottoms needed for spawning. The quantity and variety of aquatic invertebrates increased, with a corresponding increase in total fish weight – over 400% in one case. The benefits of forested buffers include reduced temperature extremes, addition of

leaf litter to feed invertebrates and production of large woody debris to provide cover. Woody buffers also provide a variety of intricate ecosystem functions such as creating the woody vegetation above the stream needed in the life cycle of key species like stone flies and mayflies.

- ***Wildlife Habitat:*** Riparian buffers and wetlands provide much-needed wildlife habitat in many areas. Roughly two-thirds of PA's threatened or endangered species use wetlands for some part of their life cycle. Stream corridors are wildlife magnets used by a wide variety of animals from small game species to waterfowl to songbirds. A Penn State study found sixty different species using fenced buffers in SE PA.

- ***Wetland Restoration:*** Most farmers recognize that having cattle in wet, muddy areas is bad for both cattle and the land. As such, farmers routinely fence cattle out of wetlands as part of stream bank fencing. To date, for each mile of stream bank fenced in Chester County, an average of four acres of wetlands is restored by fencing out cattle. This is an often-overlooked, but enormous benefit of stream bank fencing. These restored wetlands provide documented benefits for water quality and wildlife, as well as watershed function as described above.

To the Entire Region...

- ***Overall ecosystem health:*** Pennsylvania streams are headwaters that eventually feed critical estuaries in the Chesapeake and Delaware Bays, the Gulf of Mexico and the Great Lakes system. By reducing the input of excess nutrients, sediments and other non-point source pollutants, stream fencing helps restore the overall health of these systems and the human residents that depend on them for food, water and income.

- ***Enhanced fish and wildlife habitat:*** The health and sustainability of many populations of fish and wildlife depend on clean water. The famous blue crab, striped bass, oyster and waterfowl populations of the Chesapeake Bay show the point. Continued progress at keeping excess nutrients and sediment out of the bay's tributaries like the Susquehanna is critical for their recovery. Each region has its own particulars – Lake Erie with its salmon runs, the Gulf of Mexico with its shrimp fishery, the Delaware Bay with its enormous horseshoe crab population and the critical link between their spawning and the migration of countless shorebirds which rely on the eggs for fuel for the journey.

- ***Human benefits:*** It is difficult to overstate the value of these vast ecosystems to humans, from the economic boost of tourism on the Chesapeake, to the lifestyle of the Tangier waterman, to the taste of a softshell crab, to the pull of a hooked striped bass on the angler's line. Riparian buffers and stream bank fencing provide benefits all the way from the pastured headwaters to the estuaries they feed.

For information on financial or technical assistance for creating stream buffers contact:

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