

# STORMWATER COALITION



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*Information provided by the Stormwater Coalition, a committee of the Toledo Metropolitan Area Council of Governments (TMACOG).*

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## Great Ditches Make Great Lakes

People living near the Great Lakes may not have the sunshine of Arizona or the climate of California, but we do have the most important natural resource on the planet: we have 20 percent of the earth's fresh water at our doorstep. As neighbors of the Great Lakes, one way we can keep their waters clean is by keeping pollutants out of the ditches and streams that drain into Lake Erie. The Stormwater Coalition recommends that people in the region adopt a simple strategy of maintaining a border of vegetation around our streams and ditches. Vegetated riparian buffers are strips of land adjacent to rivers and streams where grasses, shrubs, and trees are planted or allowed to grow naturally. These small strips of land have a substantial impact on a community's ecology and economy.

### Improve Water Quality

Riparian buffers enhance water quality primarily through a process called biofiltration. Biofiltration uses leaves and roots to capture the silt and pollutants carried by stormwater runoff. The stormwater filters through the vegetated buffer and eventually seeps into the stream cleaner than it was when it came off the road, parking lot, or farm field. Living materials doesn't just trap and hold pollutants; petroleum products, nitrates and other products that affect water quality actually degrade into innocuous substances.

### Prevent Erosion

In addition to improving water quality, a riparian buffer also stabilizes stream banks, protects habitat, and helps prevent floods. Even streams that have been channelized can be improved by planting or otherwise creating vegetated riparian area. The roots of trees and plants growing on stream banks hold that earth together and resist erosion from water flow. Erosion is a significant issue in flat northwest Ohio. The resulting downstream sedimentation has a direct effect on the quality of water in the Maumee Bay and Lake Erie.

### Improve Habitat

Riparian buffers and their plant life provide high quality habitats for wildlife - increasing biodiversity and producing forage for wildlife and livestock. Uninterrupted river miles of riparian buffers form corridors that enable fish, birds, crustaceans, and small mammals to move along river systems. Shade provided by riparian buffers moderates water temperature, enabling a healthier aquatic food web and reducing the presence of aquatic nuisance species.

### **Help Prevent Flooding**

Riparian buffers reduce the likelihood of flooding in three ways. First, riparian buffers encourage the natural meandering of the waterway. This slows the velocity of water during major rain events. Second, riparian buffers prevent sedimentation of the waterway so the stream can hold more water during larger storm events. Finally, riparian buffers also lessen the damage from flooding by holding water, enabling water to soak slowly into the ground, and by absorbing excess flow during flood events.

### **Economic Benefits**

Implementing natural stormwater management techniques produces cost savings in technology and infrastructure over the long term. Water that stays clean does not have to be treated later. Natural habitat also adds to the aesthetic value of the surrounding area and increases property values. A home with a naturally vegetated clean stream in the back yard will be in higher demand than a house with a polluted drainage ditch behind it.

### **How to Establish Useful Riparian Setbacks**

The value produced by the riparian buffer increases with the amount of uninterrupted vegetated land in a continuous riparian corridor. A patchwork of riparian buffers does not produce the same high quality benefits as a continuous vegetated riparian corridor. To establish riparian buffers consistently across property lines, public zoning is practical and efficient. The area of a natural or planted riparian setback can be described in zoning codes just as are other setbacks - such as front, rear, or side setbacks - that are common in zoning codes. The Stormwater Coalition has established model language that townships, counties and other jurisdictions can adopt for their regulations.

To protect water quality in the Great Lakes, start with protecting water quality in the streams and ditches in your own backyard. Smaller streams are in the most need of protection because they are the easiest to modify to the detriment of the drainage system and the easiest to overlook. Support establishment of riparian setbacks in your local zoning regulations. Although long stretches of riparian areas is best, every little bit helps. Private owners can act to preserve riparian lands on their own property by establishing a conservation easement. Private landowners are also generally eligible for tax benefits when dedicating their land to conservation.