



Riparian Forest Buffers

in the Chesapeake Bay Watershed

Stream Corridor Protection and Restoration

Many local governments in the Chesapeake Bay watershed are on the front lines for protecting local natural resources and environmentally sensitive lands. Local streams and rivers provide a link that connects local governments to the Bay. Protecting these streams and rivers and the riparian lands adjacent to them can play an important role in restoring the Bay and its rivers by providing buffers for pollution, improving stream health, and enhancing community open space.

Stream Corridor Facts

Over 100,000 miles of interconnected streams, rivers, wetlands and their riparian areas serve as a "circulatory system" for the Chesapeake Bay. A riparian area is the area of land adjacent to a body of water, stream, river, marsh, or shoreline. In the Bay watershed, forests are the natural vegetation in these riparian areas, which serve as a link between the land and water and perform a number of functions that are critical to the health of the streams and the Bay. Thus, stream corridor protection by local governments involves protecting not only the stream itself, but also the adjacent riparian land that interacts with the stream.

Stream Corridor Protection Options for Local Governments

Establish protective measures for the preservation and conservation of stream corridors.

- Establish riparian buffer protection measures, such as forested buffers, to protect stream health.
- Establish protection measures for sensitive environmental lands adjacent to stream corridors.
- Maintain forest cover within the watershed, particularly along streams, through local ordinances.
- Develop watershed plans and/or stream corridor restoration and protection programs.
- Riparian forest buffers and open space design concepts in stormwater management.

Coordinate and support the efforts of individuals, community associations, local conservancies, watershed associations, and private interests to protect, enhance, and restore wetlands, forest buffers and stream corridors important to water quality, fish and wildlife.

- Assist federal and state partners in removing obstructions to fish passage in local streams.
- Encourage and support citizen assessment and monitoring programs that measure the water quality and condition of local streams and rivers.

- Foster stream corridor protection and restoration by providing citizens with educational and informational assistance.
- Establish and manage greenways as components of "natural infrastructure."
- Integrate natural stream corridors in the environmental education curriculum of community schools.

Model Local Government Effort

A number of excellent examples of local government stream corridor protection efforts are underway in each of the Bay States. One recent effort can be found in Montgomery County, PA. Many municipalities in Montgomery County have developed open space plans that identify riparian corridors as essential open space features in their communities. Prompted by this interest in riparian corridors as open space areas and the water quality benefits of natural riparian corridors, the Montgomery County Planning Commission has developed the Guidebook for Riparian Corridor Preservation. This guidebook describes the basic information local governments need to protect the riparian corridors in their communities.

The guidebook has three parts. The first describes the benefits and ecological functions performed by riparian corridors, provides a set of fundamental principles for designing and using riparian corridors, and evaluates the various methods local governments can use to implement stream corridor protection. The second part of the guidebook contains a model local ordinance, the Riparian Corridor Conservation District, that local governments can adopt to protect riparian corridors. The reasons for including specific requirements in the ordinance are noted, and suggestions for tailoring the requirements to the goals of an individual municipality are provided. The final section of the guidebook provides local governments and landowners with the information needed to implement the Riparian Corridor Conservation District.

Several municipal planning commissions in Montgomery County are currently working to adapt the model stream corridor protection ordinance for adoption by their jurisdictions. Many more local governments in the county are expected to adopt some form of the ordinance in next few years.

Several educational activities are underway to complement the guidebook and demonstrate its practical applications. The Montgomery County Planning Commission is in the process of developing a slide show to illustrate the importance of stream corridor protection and the use of the model ordinance. In addition, the County Planning Commission, in conjunction with the County Parks Department and a local watershed association, has planned a demonstration project for stream corridor restoration in a local municipal park for April 1997. Plans for another restoration project in the Spring of 1998 are underway as well.

For More Information

For more information about stream corridor protection or the Chesapeake Bay Program, please contact the Local Government Advisory Committee at (800) 446-5422 or the Forestry Workgroup of the Chesapeake Bay Program at (800) YOUR BAY.

Benefits to Protecting Stream Corridors

● *Flood Protection*

Undeveloped stream corridors serve as storage areas for flood waters, reducing flood peaks and flow and lessening the impact of flood waters downstream.

● *Erosion Control*

The natural vegetation in stream corridors reduces erosion of the streambank and floodplain. In addition, much of the sediment and attached pollutants from adjacent land uses are filtered out of runoff in the riparian areas before reaching the waterway.

● *Water Quality*

The vegetated riparian area serves as a natural filter for sediment, nutrients, and other pollutants, removing them from runoff and shallow groundwater before they reach the stream. In addition, the canopy and shade provided by forested riparian areas help regulate stream temperatures, a critical function for the health of the stream and its inhabitants.

● *Habitat*

The corridors created by streams and their adjacent lands provide stretches of land for wildlife to move safely from one location to another. The riparian corridor is also a critical habitat for many species of songbirds, amphibians, animals and plants. When riparian corridors are forested, the leaves and woody debris provide food and habitat for creatures in the stream. Tree roots stabilize streambanks while providing cover for aquatic insects and fish as well.

● *Recreation and Education*

Riparian zones offer many recreational opportunities, such as places for hiking, horseback riding, or simply a place of respite from busy lives. Stream corridors offer residents a chance to experience and appreciate nature in th their neighborhood. Anglers can enjoy these areas as well. Stream corridors and riparian areas can also serve as "outdoor classrooms," giving local students opportunities for nature study.

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