STREAM CORRIDOR PROTECTION

Retain and incorporate natural vegetation as buffers between developed or farmed areas and rivers, streams and creeks.

At the Water's Edge

The link between land and water is a critical zone for natural development and human history, as well as the future health of our waterways. Directly adjacent to the water, this zone has a saturated water table close to the surface and sometimes becomes subject to floods. Often these streamside borders contain the highest diversity of wildlife. They have been referred to as "nature's condominiums."

Streamside plants and forests are crucial to the protection and enhancement of water quality. Many stream corridors have been cleared of vegetation through agricultural and developmental practices. This has compromised wildlife habitats, and led to increased pollution and flooding downstream. Since most streams flow through private property, corrective measures are dependent upon effective education of, and participation by, property owners.

Wooded buffer areas provide multiple benefits.

10 Benefits of Streamside Protection

1. Percolation and groundwater recharge is improved.
2. Sediment is reduced.
3. Excess nutrients and chemical pollutants are filtered.
4. Stream bank erosion is reduced.
5. Nutrients become available for desired plant growth.
6. Flooding is moderated.
7. Water temperatures are lowered for habitat improvement.
8. Woody and leaf debris contribute to aquatic habitat.
9. More visual diversity and beauty.
10. Better habitat and safe corridors for animals.

How to Care for Stream Corridors

Municipalities have significant capacities to protect stream corridors. Zoning can include minimum stream setback requirements. Many communities require that sensitive lands be subtracted in lot yield calculations. Federal floodplain regulations and state and local wetland protection measures can prevent ill advised development in, and adjacent to, wetlands (state-regulated wetlands require a 100-foot buffer setback). Conservation subdivisions (See A1) can be designed to protect water and wildlife resources. By identifying prime wildlife corridors (See D1), towns can add another dimension to their protection strategies. The Dutchess County Soil and Water Conservation District provides technical expertise and has access to funding sources. Local Conservation Advisory Commissions and the Environmental Management Council are also excellent sources for inventory work and implementation plans.

Protection Guidelines

D.C. Environmental Management Council

Towns must determine which waterway corridors are best suited for trails, wildlife routes, or simply aesthetic and water quality buffers.

- Maintain a minimum 60-foot vegetative filter along the stream corridor. Increase widths when:
  - soils are gravelly, sandy, and well drained, or have low phosphorus absorption capacity;
  - slopes are steeper (sometimes even 5 percent);
  - adjacent to sensitive wetlands; or
  - vegetation lacks forest species or grassy strip.
- When possible, implement a three zone buffer design (15 ft. mature tree edge; 60 ft. strip managed trees and shrubs; 20 ft. grass strip) to remove nutrients, sediment, animal-derived organic matter, and pesticides from surface runoff.*
- Establish 100-300 foot buffer when planning for wildlife corridors or to set back from septic systems, manure concentrations, or other potential water contaminants.
- Use a wide variety of native trees, shrubs, and plant species.
- Choose species which are tolerant of flooding.
- Prevent channelized storm water flow into the buffer.

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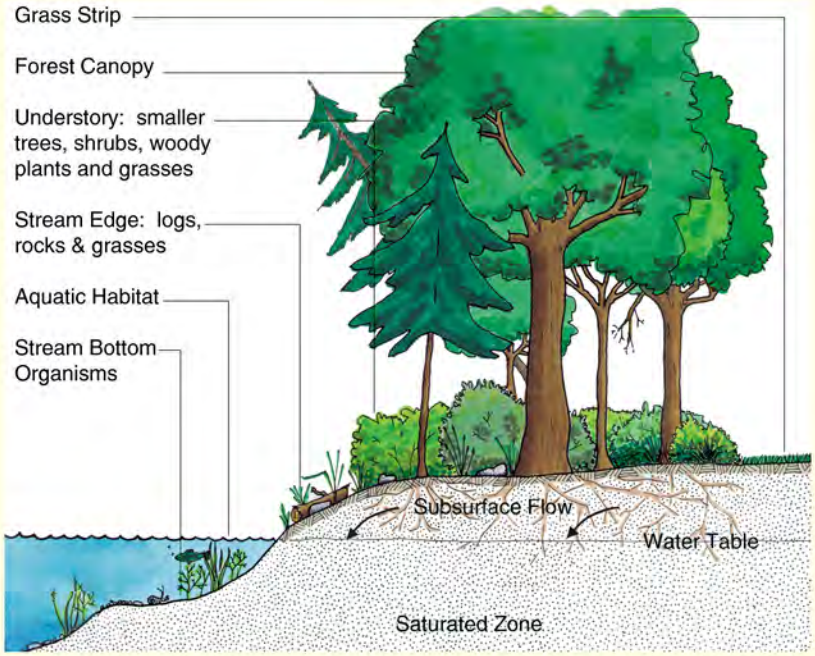

Protected stream corridors should include large trees near the stream's edge to shade the water, maintaining dissolved oxygen for successful fish habitats.

Sources:

R.L. Sneider, *Streamside Protection--Why Bother,* Cornell Cooperative Extension, 1998.

R.L. Sneider, *Streamside Management--Do's and Don't's,* Cornell Cooperative Extension, 1998.

Tjaden & Weber, *Riparian Buffer Management, Fact Sheet 733,* Maryland Cooperative Extension, 1998.

*USDA, *Riparian Forest Buffers,* NA-PR-07-91.