

## RIPARIAN BUFFERS

### Overview

Riparian buffers are lands adjacent to a body of water that serve as an interface with the surrounding upland areas. These areas are often comprised of a variety of land cover types; in Lewis County the predominant land cover is forest and farmland. In more urbanized locations, such as county villages, land cover is typically pavements and lawns in residential and commercial areas. Riparian areas are often located in floodplains and, as a result, can be highly productive for many agricultural uses.

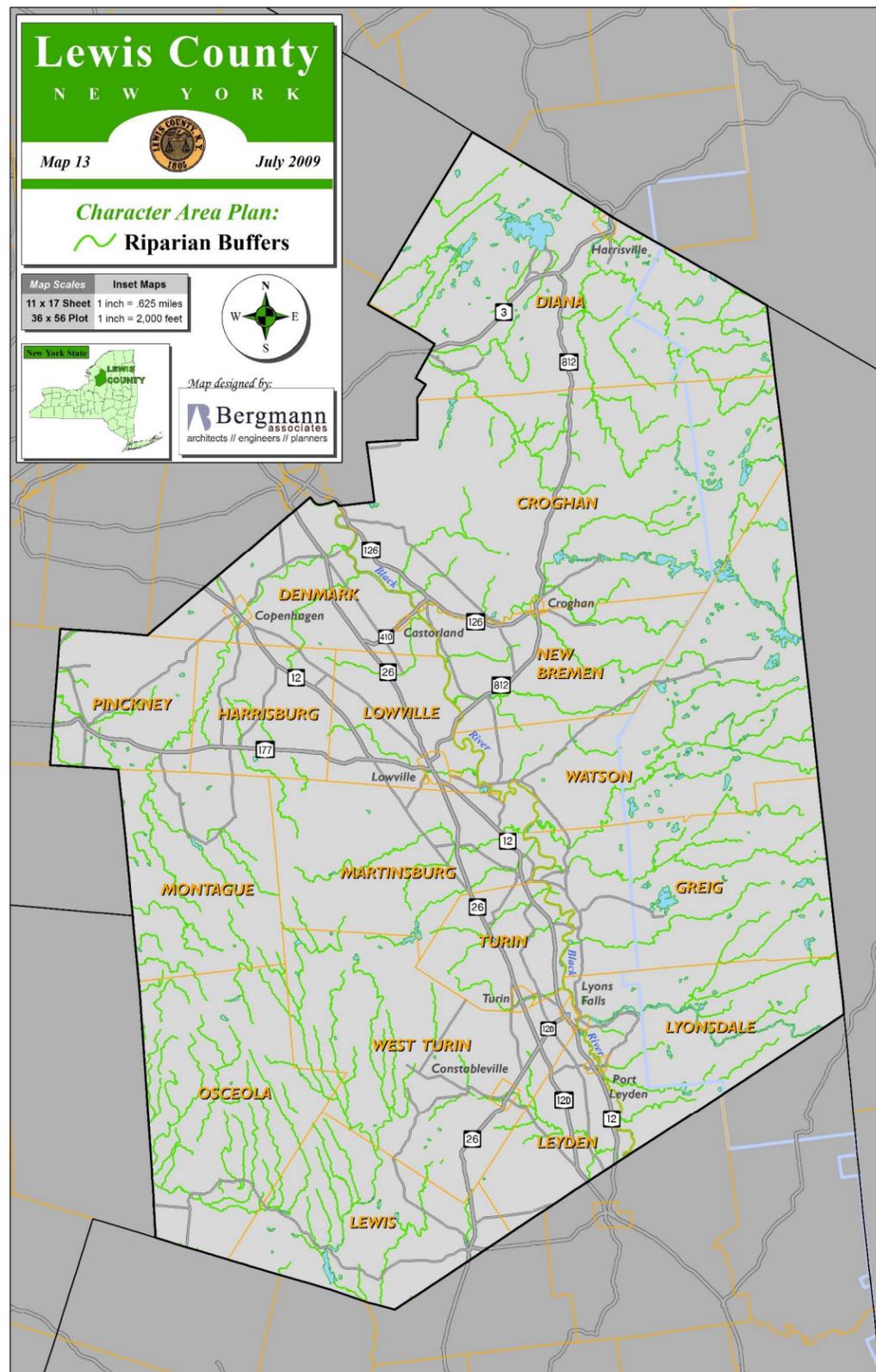
In Lewis County, riparian buffers should be located along all primary rivers and creeks, as well as ponds and lakes to protect water quality. The majority of these buffer areas are located on the Tug Hill Plateau and in the Adirondack Foothills, however the most significant buffer would be along the Black River.

### Design Considerations

Riparian land plays an important role in the protection of water quality and other ecosystem services by trapping soil and sediments, and reducing the amount of siltation and nutrients moving from upslope areas into a given water body. A 50- to 100-foot forested riparian buffer in agricultural areas, for example, can reduce erosion, bank slumping, wetland siltation, stream turbidity, and nutrient loading (e.g. animal waste or fertilizers) that would otherwise result if plowing or grazing were to occur directly adjacent to streams.



An example of a small riparian area in an agricultural setting that lacks any buffering from activity. Notice the bank erosion and the lack of vegetation to absorb and prevent nutrients and silt from entering the creek.



Forested riparian areas also regulate water temperature through shading, keeping rivers, creeks, ponds and lakes cool for aquatic life. In Lewis County, a majority of the rivers and creeks have their headwaters within Forest Character Areas, then traveling through Farmland and Rural Residential areas as they exit the county. As well, most water bodies travel through multiple municipalities, increasing the need for a regionally coordinated effort to protect water quality.

Riparian areas also play an important role in the lifecycle of many native plants and animals by providing food, cover, corridors for movement, and refuge during time of drought or fire. Municipalities should strive to retain a 100-foot buffer of no disturbance around water bodies to protect water quality.

Multiple municipal water systems in Lewis County rely on streams and ponds as their source of potable water. A healthy riparian buffer along these water bodies will help improve water quality, while also potentially reducing the cost of purification. The natural environment is a primary driver of Lewis County's tourism industry, making the protection of water quality for water-dependent and water-enhanced recreation and sight seeing activities an issue of economic importance.



An example of a large riparian area in a forested setting with significant buffering from activity. Notice the amount of shade the trees provide the shallower areas near the shoreline, keeping the water cool for fish and helping ease algae growth.