

Stream Management for Southwest Wisconsin

Why are streams important?

Streams provide many benefits to both wildlife and people. Many species depend on Southwest Wisconsin's streams and the adjacent land for feeding, shelter, reproduction, and travel. This includes fish, insects, birds, reptiles, and amphibians. Streams provide opportunities for fishing, hiking, bird watching, relaxing, exercising, and enjoying nature. Trout fishing opportunities are particularly strong in Southwest Wisconsin.

Streams can also be important to human health and local economics. They provide a water source for agriculture, support recreational tourism, and influence water quality all the way down to the Gulf of Mexico, including any fishing or boating corridors along the way. That's right; how you manage your little stream ultimately influences water quality along the entire length of the Mississippi River.

Why do streams need to be managed?

Streams need management, like any natural system, because they experience many negative impacts from human activities resulting in a loss of the potential benefits. The biggest impact is an increase in non-point surface runoff from the loss of vegetation, both on the stream banks and throughout the watershed, due to agriculture, houses, roads, and other development. In the past people have straightened streams, drained wetlands, and tilled fields, and we still add pollution through the improper use of pesticides and fertilizers.

These all can lead to erosion, flooding, excess algae, excess sedimentation, increased water temperature, and overall degraded habitat and recreational opportunities. Excess sediment in streams is a major cause of degradation. It can cause streams to become wider and shallower, which leads to warmer water. The sediment also results in poor habitat because it can fill in pools, cover and suffocate fish eggs and invertebrate larvae, and make the water cloudy and difficult for visually hunting fish species, like trout, to find prey.

How do I know if my stream has problems?

Signs of a damaged stream include vertical, bare stream banks, a silty or mucky streambed, lots of algae, and a lack of fish or insects.

Should I plant or cut down trees?

In Southwest Wisconsin, most small streams are spring fed, so shade from trees is not needed to keep the water cool. In fact, trees can increase erosion if they shade out grasses, sedges, and flowers. Tree cover along the banks should be limited to encourage grass and sedge establishment. If trees are going to be removed, any bare soil should be seeded with native plant species. Box elders are particularly harmful because they are extremely invasive, leaf-out early, cast heavy shade, and can out-compete all other vegetation.

What can I do about an eroded stream bank?

Stream bank erosion can often be cured with the right kind of plants. Tree removal often allows enough sunlight for grasses and broadleaf plants to grow. Sometimes the banks need to be graded to a flatter slope and then planted. In more severe situations, especially when infrastructures are at risk, erosion matting or rock riprap might need to be installed.

What can I do to keep my stream as healthy as possible?

Continued management is key. Streamside vegetation should be mowed or burned often to inhibit trees and weeds and encourage native species growth. Habitat structures may eventually need

to be replaced and new erosion problems may arise that need to be addressed. Repairs may be needed along buffers to fix any gullies and remove sediment buildup.

Is it okay to farm or have lawn up to the stream bank?

Lawns and plowed fields can lead to excess runoff, pollution, and erosion along streams if they are too close. One of the best practices for a stream is to install and maintain a buffer of native vegetation that is at least 50 feet wide. This will help slow down runoff and filter out some of the pollution and sediment. Other Best Management Practices, such as no-till, can reduce soil loss.

Should I graze my cattle along the stream?

Livestock grazing and watering should be limited, as cattle can trample vegetation and destroy the banks. Occasional light grazing is encouraged and is a good way to keep trees, brush, and weeds from taking over.

What can I do to improve fish populations?

Along with reducing runoff, erosion, and pollution, habitat structures can be installed in the stream. These include “lunker” structures, weirs, and strategically placed logs and rock to create deep pools and provide cover. Planting native grasses and flowers along the stream bank will attract insect populations that trout feed on.

How can I benefit other wildlife?

Other wildlife will benefit from a mix of native grasses, sedges, and forbs growing along the stream. This vegetation should be at least 50 feet wide to improve basic water quality, but wider is better as some species require more space. Structures can also be installed that will benefit amphibians and reptiles, such as snake hibernacula, turtle “lunkers”, sunning logs, or small wetlands.

I only need to worry about the land right next to the stream, right?

Actually, the key to a healthy stream is a healthy watershed. The slopes and fields above streams can be a source of chemical and sediment pollution, and have a large influence on whether water soaks into the ground or runs off into the stream. In Southwest Wisconsin, the soil tends to be shallow, and underneath it is limestone bedrock, which dissolves easily. Cracks and dissolved tunnels allow water to move rapidly from uplands to ground and surface waters, often carrying pollutants from agriculture and urban land uses. Practices that reduce runoff, erosion, and pollution from uplands will greatly benefit streams.

Are there any laws or regulations I should be aware of?

Stream alterations might require permission from government agencies. Activities such as grading and installing rock riprap would likely require permits through the Department of Natural Resources. Vegetation cutting is regulated by shoreland zoning standards that are administered by county and local offices.

Who can help me?

Many organizations can help private landowners manage their streams, including the Department of Natural Resources, U.S. Fish and Wildlife Service, Trout Unlimited, Natural Resources Conservation Service, County Land Conservation Departments, University Extension, and private contractors. Some programs may provide cost sharing or incentives for the work. It may be possible to sell an easement to or create a management agreement with some of these organizations.