

## About Riparian Buffers

A riparian buffer is the land area that borders a stream or wetland. Land use and management practices in a riparian buffer influence water quality and wildlife habitat. For example, excessive removal of streamside vegetation or the mismanagement of agricultural lands can accelerate soil erosion that can in turn affect instream and terrestrial habitat. Development that increases impervious surfaces, decreases infiltration capacities and increases runoff, elevating stream flow quantities and the energy that accelerates soil erosion. Poor agricultural practices and roads can contribute nutrient- and sediment-laden runoff directly into streams, impairing wildlife habitat.

Vegetated riparian buffers offer land management options for mitigating these impacts. They have proven to effectively remove excess nutrients, particularly nitrogen and sediment-attached phosphorus, and are moderately effective at removing excess metals and other nutrients from overland and subsurface stormwater. In addition, vegetated buffers control erosion by stabilizing stream banks and wetland edges and by promoting infiltration. Proper planning and management of riparian buffers will also foster diverse native plant and animal habitats, improving the overall ecological health of a watershed. (*Spring Creek Rivers Conservation Plan, 2001*)

## About ClearWater Conservancy

The mission of ClearWater Conservancy is to promote conservation and restoration of natural resources in central Pennsylvania through land protection, water resources protection, and environmental outreach to the community.

ClearWater's Riparian Conservation Program is working on stretches of Spring Creek that have been determined to be impaired by the PA Department of Environmental Protection to educate landowners about better land management practices in riparian buffers, to create conservation plans, to restore degraded riparian buffers with tree plantings and invasive species removals, and to work with willing landowners to permanently protect the natural resource values of their land with conservation easements.

***Everyone working together to conserve natural beauty  
and the environment in the heart of Pennsylvania***

Special thanks to project partners: Dave Williams, State College Elks Club, U. S. Fish & Wildlife Service, Centre County Conservation District, USGS PA Cooperative Fish & Wildlife Research Unit  
[www.statecollege-elks.org](http://www.statecollege-elks.org)



ClearWater Conservancy

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## ClearWater Conservancy

# Stories of Land, Water, and People

## Golfing Greener

### Riparian Restoration at the State College Elks Country Club



**For some conservationists**, the words “golf course” may immediately elicit a rolling of the eyes. And with good cause; golf courses have had a somewhat notorious reputation for their negative effects on water quality and wildlife. But as Dave Williams, superintendent of the Elks Country Club golf course in Boalsburg would have you know, this isn't always the case.



*Spring Creek crosses the State College Elks Country Club golf course parallel to Route 322 east of Boalsburg. Including a small tributary, ClearWater is helping to restore approximately 3,000 feet of this impaired stretch of stream as part of our Riparian Conservation Program.*

“One bad apple spoils the bunch,” says Williams. “Not all golf courses have a detrimental effect on the environment.” And Williams should know. His golf course, for one, is working to improve and protect the natural resources around it.

Following a Pennsylvania Department of Environmental Protection report in 2001 stating that parts of Spring Creek, which runs through the Elks course, were impaired, or not supporting aquatic life as they should, the ClearWater Conservancy of Central Pennsylvania helped the Spring Creek Watershed Community publish a special edition of their “*Springs & Sinks*” newsletter, detailing the damages.

Williams came across a copy of the newsletter and became concerned. Though the risk that the Elks Club itself posed was not explicitly known, Williams recognized that there was certainly room for improvement. “I didn’t know where to start,” he said. “I needed help figuring out what role the Elks could play in improving the watershed.”

He decided to place a call to ClearWater Conservancy. A partnership quickly developed



*Spring Creek signs were installed at several cart crossings and along Elks Club Road to remind golfers that the headwaters of Spring Creek flow through the course.*

and with the help of Katie Ombalski, the Conservancy’s Conservation Biologist, the U.S. Fish and Wildlife Service soon became part of the effort to improve the Elks Club’s stretch of Spring Creek.

“We’re hoping to foster a healthier marriage between this recreational activity and the environment. The two can peacefully coexist,” says Ombalski.

The first step, in some cases, was to simply stop mowing. Williams has created several “no mow,” or out-of-play areas where instead of neat, carefully manicured lawn, natural vegetation now grows freely. This allows a more biodiverse habitat to recreate itself in the buffer zones surrounding the creek.

“Some golfers don’t like it that way,” says Williams. “But some prefer it and recognize its value. It’s a matter of personal choice, but it’s what is right for this initiative.”

Another overdue measure was to place signs explicitly labeling Spring Creek at several cart crossings and on Elks Club Road. “We knew there was a problem when some members of the Elks Club referred to Spring Creek as “the ditch,” says Ombalski. Installing stream crossing signs on the course was an easy way to let people know that this is a resource that needs protection.

The next step was to develop a long-term plan to ensure that further actions would be taken to conserve and restore the creek and its

surrounding areas. ClearWater Conservancy and the U.S. Fish and Wildlife Service are currently developing a plan to restore Spring Creek’s riparian and stream habitats and to



*Early in the project, USGS Pennsylvania Cooperative Fish and Wildlife Research Unit partnered on the project by electrofishing Spring Creek at the Elks Club to evaluate the fish community.*

decrease the impact of the golf course on the stream. This plan also includes the restoration of a tributary that flows into Spring Creek on Elks’ property.

In addition to guidance from ClearWater and the U.S. Fish and Wildlife Service, Williams is ensuring that he will be able to maintain the property efficiently and in an environmentally sensitive way on his own for years to come.

Through Williams’ initiative, the Elks Club also will be certified as a Cooperative Sanctuary through Audubon International, which requires that the course operate with high standards in the following six categories:

“The course will be more aesthetically pleasing for golfers, and we will be contributing to the revival of Spring Creek.”

~ Dave Williams

environmental planning, wildlife habitat management, chemical use reduction and safety, water conservation, water quality management, and outreach and education.

He plans for the Elks Club to be fully certified by the end of this summer and hopes that the program will help the club to continue to act as a good steward of the land. “The course will be more aesthetically pleasing for golfers, and we will be contributing to the revival of Spring Creek,” he says. “I really think this is a win-win situation.”



Swamp milkweed (*Asclepias incarnate*).