Stream Restoration

Saucon Valley Country Club **Bethlehem, Pa. 18015**
Jim Roney, superintendent

The Problem

Streams are critical components of the environment that form important ecosystems and can serve as vital water sources for communities. Streams on golf courses often provide water for irrigation and function as strategic hazards that add beauty and interest. Saucon Creek – classified as a cold-water fishery that supplies the area with a large population of wild brown trout – runs 2.3 miles through Saucon Valley Country Club, affecting as many as 60 golf holes. After several years of unusually severe erosion, many of the creek's banks were significantly degraded, comprising the integrity of the stream and reducing its benefit to wildlife.

The Solution

Superintendent Jim Roney desired to restore the portion of Saucon Creek running through the golf course. Roney obtained a $65,262 Growing Greener Grant from the State of Pennsylvania that allowed the stream to be properly assessed through three methods: Fluvial Geomorphic Characterization Stream Assessment, Embeddedness and Trout Habitat Assessment, and Streambank Restoration and Stabilization Plan. Once the quality of the stream was assessed, environmental engineers and the Saucon Valley Sanctuary Committee identified and prioritized six locations of streambank erosion and habitat degradation.
Of the six sites identified, the area with the greatest amount of degradation was selected for restoration. In effort to alleviate some of the construction costs, Saucon Valley Country Club applied for another grant through phase two of Pennsylvania's Growing Greener Grant initiative. Upon approval of the grant, restoration began August 25, 2008 and was completed September 25, 2008. Because Saucon Creek is a cold-water fishery and to ensure the restoration did not interfere with the spawning of brown trout, it was critically important that all construction be completed by October 1. Grants from the Growing Greener Grant program funded $325,600 of the total $482,896 project cost.

The Results

Successfully restoring 1,700 linear feet of Saucon Creek provided many benefits. The objectives of restoring the streambank to its natural floodplain, removing excessive sediment and reestablishing native riparian plantings all were achieved. Furthermore, the project was completed well ahead of the deadline. Aesthetics have been improved, wildlife habitat has

been restored and water quality has improved. Additionally, the improved stream flow has reduced the occurrence of flooding events and sediment movement.

When asked if there was anything that he would have done differently, Roney responded, "I would have pushed to do more work along the stream bank as there are still some areas in need of repair."

Figure 1 - The project is underway, sediment is being removed and the area is being prepared for planting.

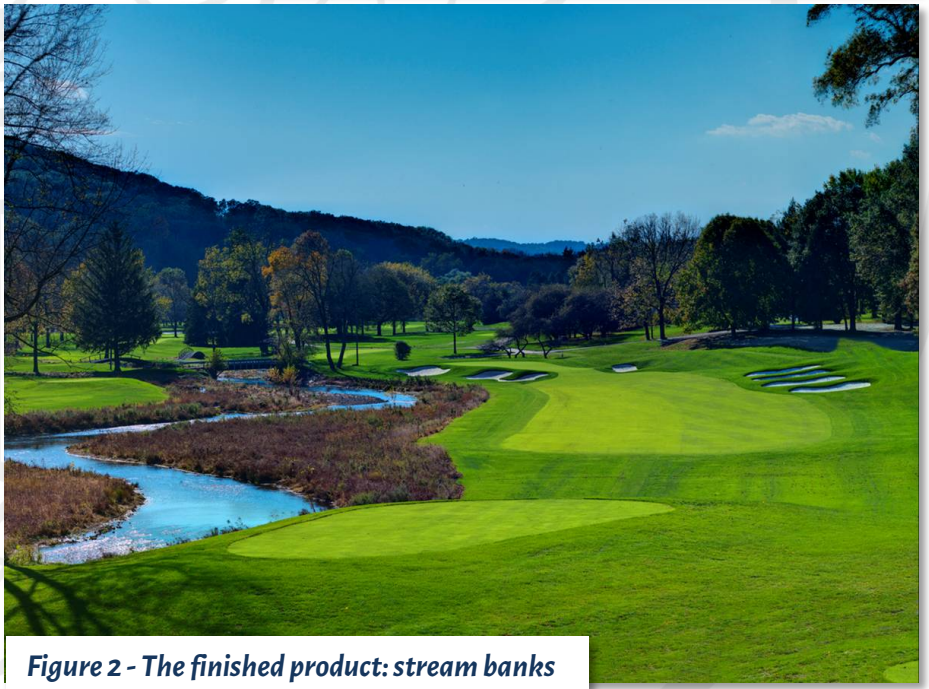

Figure 2 - The finished product: stream banks are restored and wetland plants added.