

Red Clay Creek Restoration

Kennett Square Golf and Country Club
Paul Stead, CGCS, superintendent

Kennett Square, Pa. 19348

Issue

The Red Clay Creek watershed is one of four watersheds in the Christina Basin, an area that encompasses 565 square miles of three states: Pennsylvania, Delaware, and Maryland. The Christina Basin is vital for these three states because it provides 100 million gallons of drinking water daily and generates nearly \$300 million annually in water-supply, ecological and recreational value.

Kennett Square Golf and Country Club is located in the northern portion of the Red Clay Creek watershed and a section of Red Clay Creek runs through the golf course. Unfortunately, during flood events, the portion of the creek flowing through the golf course began eroding the creek banks. This erosion jeopardized the 13th green, 14th tee and parts of the irrigation system.

Action

Certified golf course superintendent, Paul Stead, knew that addressing these issues required consulting with experts in stream restoration. Mr. Stead partnered with the Chester County Conservation District and Brandywine Red Clay Alliance, a local watershed association, to develop a restoration plan. Additionally, Kennett Square Golf and Country Club hired an engineering firm to carry out the stream restoration design.

The restoration project involved stabilizing the creek channel and its banks, creating a functional floodplain and adding instream wildlife habitats. Riparian buffers and boulder revetments were installed to stabilize the creek corridor. In addition to repairing and reinforcing the creek's structure, the project also enhanced wildlife habitats and improved water quality.

Results

As a result of the restoration project, the destructive flooding effects along Red Clay Creek at Kennett Square Golf and Country Club have been mitigated. Once water enters the golf course property, the new creek design slows the water to prevent erosion. The slow-moving water provides an improved habitat for fish and aquatic invertebrates. Furthermore, the riparian buffer provides additional terrestrial habitats and improves downstream water quality.

Golfers have also benefited from the creek restoration. Golf course features are protected from erosion and holes are no longer closed due to flood events. Native plantings, new bridges, two new tee boxes, and an improved layout of the 14th fairway have also created a more enjoyable golf experience.

Restoring 1,300 linear feet of the Red Clay Creek has benefited both the Kennett Square Golf and Country Club and the Christina Basin. Superintendent Paul Stead, CGCS, continues to enhance the creek's environmental value by monitoring invertebrate populations, testing water quality, and removing problematic non-native plants to promote native plant health. Additionally, Mr. Stead credits much of the success of his honeybee hives on the golf course to the creek restoration, which provides the bee colonies with an essential source of water and nectar.



Restoring the section of Red Clay Creek that passes through Kennett Square Golf and Country Club has enhanced wildlife habitat and improved the golf experience.