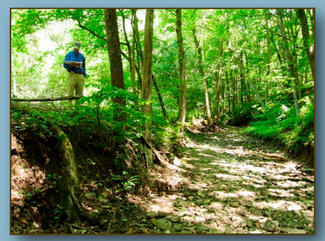
Avey's Run Stream Restoration Project

Why did Avey's Run need restoration?

Over 150 years ago, a healthy stream (a tributary of Avey's Run that flows into the East Fork Little Miami River) meandered through what is now Cincinnati Nature Center. Around 1850, a farmer "channelized" the stream, straightening it to provide more space for fields. Flooding from rain water gouged the channel, making it deeper and wider, and carrying off soil and nutrients. Over time the channel, with its rushing flood waters, became unsafe for aquatic organisms.



Steep edges of the channelized stream before restoration

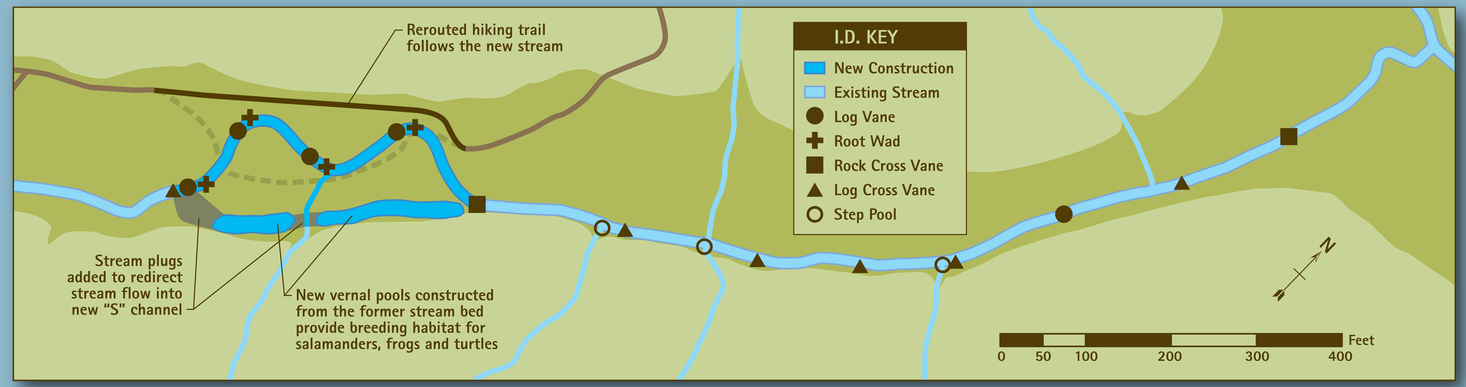
Increased development on nearby lands created more rain water runoff from impermeable surfaces like roads, parking lots and roofs. Development also decreased the permeable land available to absorb this runoff, causing more water to pour into the channel. More and more soil continued to wash away and the silt was deposited downstream. All of this resulted in the stream pictured above and led to a degraded habitat both in the channel and downstream.

How do you restore a stream?

Native wetland shrubs and trees were planted by volunteers along the stream edges.

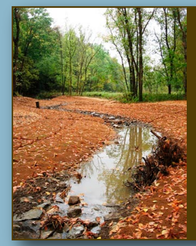
The first step in restoration was to dig a shallow, narrow, S-shaped stream. This replaced the straight, deep channel and allowed it to be filled in. The new stream was designed to allow flood waters to slow down, overflow the banks, and penetrate into the floodplain. Stabilizing structures were installed in and around the new stream to keep it from eroding and to create habitat for aquatic organisms.

Today, the stream is healthy and has increased biodiversity. The streambed is stable and can handle large quantities of water from heavy rains. The water quality both in and downstream will continue to improve over time.



Rock and Log Vanes

Rock and log vanes create deep pools of water, helping stabilize the streambed and allowing a variety of aquatic animals to inhabit the stream.



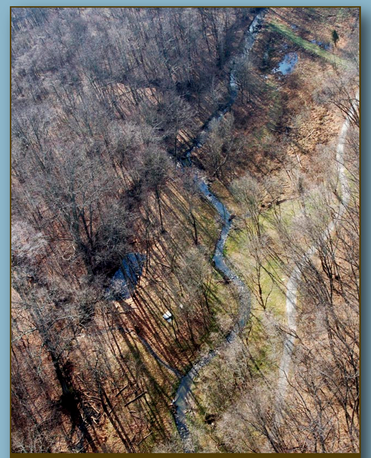
Stream Edges

Stream banks were stabilized with burlap and other biodegradable mesh, grass seed and native plantings. Root wads (tangles of tree roots) were purposefully placed along the bank for stabilization and to provide excellent fish habitat.

Riffles

Local limestone rocks were used to create riffles (shallow, rocky areas) to help the stream properly deposit sediment and to provide important habitat for small aquatic invertebrates.

Photos of the stream taken after a heavy rainfall



Visit this stream!

To experience the results of this stream restoration project firsthand, take a hike! Stop by the Visitor Services Desk for directions and a trail map.

What lives here?

The new meandering stream is healthy and has a lot of biodiversity. Many plants and animals live along the edges of the stream and aquatic organisms, including macroinvertebrates, continue to return to the restored stream.

Workers use an excavator to create a rock vane

Who restored this stream?

This award-winning stream restoration project, completed in 2007, was funded by a 319(h) Nonpoint Source Program Implementation grant from Ohio EPA to improve the water quality of Avey's Run. The restoration team included CNC staff and volunteers, the East Fork Watershed Collaborative, Clermont SWCD and a group of dedicated contractors.

East Fork Watershed Collaborative · Cincinnati Nature Center · Clermont S.W.C.D. Soil & Water Conservation District