



Willow Creek Stream and Wetland Restoration

Lorain County Community Development Department

Funding provided by USEPA under the Great Lakes Restoration Initiative

The Lorain County Community Development Department received a grant from USEPA funding the Willow Creek Restoration Project, which is located in the Black River Area of Concern. The USEPA granted the County \$600,000 in Great Lakes Restoration Initiative funding to restore approximately 800 linear feet of Willow Creek and associated riparian areas within Eaton Township Community Park. The grant also funded wetland and riparian native plantings along Fortune Ditch at the Margaret Peak Nature Preserve. Coldwater assisted Lorain County in completing the grant application, and performed site assessment, permitting, design, bidding, and construction management services. Construction of this project was completed in 2017, and Coldwater will continue to assist Lorain County with monitoring, public outreach, and grant management tasks for the project.



Pre-construction: Willow Creek had been channelized and deepened to the point that it lost all connection to the adjacent floodplain.

The restoration work is designed to improve stream and riparian habitat by installing in-stream riffle structures, constructing bankfull benches, and excavating an active floodplain that will allow for storage of flood flows and improvement to water quality through assimilation of sediment and nutrients during high flows when loading is most prevalent. A floodplain basin was excavated adjacent to the restored channel, with an outlet connecting it to Willow Creek. The project was designed so that the majority of the excavated floodplain will develop into wetlands that have active hydrological connection with the stream. Native plantings will restore functioning riparian and floodplain areas, and provide high quality habitat for aquatic and terrestrial wildlife.



Restored Willow Creek channel and floodplain wetland basin, immediately after construction.

To stabilize Willow Creek, vertical and erosive banks were graded back and a rock toe was installed to secure the slope. The rock toe was densely planted with native live stakes to stabilize the bank and improve aquatic habitat and cover. In-stream features include two riffles installed within the channel. The submerged rock toe and riffles provide habitat for fish, macro-invertebrates, and other aquatic organisms.

