

WHITLATCH & CO.

Creekside Stream Restoration and Wetland Mitigation

Twinsburg, Ohio



top: Tinker's Creek with
rootwad revetment
bottom: Wetland mitigation site

Biohabitats relocated and restored approximately 1,000 feet of Tinker's Creek, the largest tributary to the Cuyahoga River. The project also involved the creation of four acres of palustrine forested wetlands and the development of water quality best management practices.

After assessing the stream and its riparian conditions, performing pre-construction monitoring, and conducting hydrological modeling, Biohabitats designed a new channel planform for Tinker's Creek that increased aquatic

The new creek alignment increased channel stability and aquatic habitat while ensuring the installation of the stormwater quality practices of a large commercial development.

habitat and carried projected stormflow without excessive erosion or sedimentation. The restoration included the use of rootwads, log vanes and live branch layering. Soil and groundwater characteristics were also obtained by field measurements and used to design a forested wetland incorporating wetland hydrology, hydric soils, and hydrophytic vegetation. With the proper wetland hydrology and soil in place, a variety of native plants typical of a forested wetland were planted.

Biohabitats also developed a 10-year wetland mitigation and stream restoration monitoring protocol and conducted several years of post-construction monitoring. The stream monitoring included water

quality, channel morphology, and fish and macroinvertebrate sampling. Wetland mitigation monitoring included groundwater monitoring, water quality sampling, soil sampling, and bi-annual vegetation sampling. Throughout this process, Biohabitats worked with state and federal regulatory agencies to ensure compliance with regulatory permits.

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