

## Hinckley Stables Stream Restoration

Hinckley Township, Ohio



from top: Volunteers help by installing live stakes and native trees and shrubs; Initial conditions—headcut looking upstream into pasture

Along the “emerald necklace” of nature preserves that encircle Greater Cleveland, at the southern end, where a pendant would hang, sits the 2,682-acre Hinckley Reservation. In addition to a 90-acre lake and its network of glacial ledges, the reservation features Hinckley Stables, where horses from Cleveland Metroparks’ mounted ranger unit had been kept.

When a small, ephemeral stream that flows through one of the stables’ pastures developed a severe headcut that

*Creative, and adaptive re-use of on-site materials helps restore a headwater stream and reforest a former pasture while reducing construction costs and engaging volunteers.*

began migrating upstream and contributing sediment to a downstream tributary that supports a population of State threatened brook trout (*Salvelinus fontinalis*), the Cuyahoga Soil and Water Conservation District and Cleveland Metroparks turned to Biohabitats for help.

For this design-build effort, Biohabitats crafted a restoration design that aimed to stabilize the headcut and restore the pasture to forest. Rather than relying on costly materials that need to be brought to the site, the design adaptively re-uses ash trees previously decimated by the emerald ash borer and boulders from an old farm road structure, to stabilize banks and provide instream and terrestrial habitat. These materials were also repurposed to create a log-step bio-engineering structure

that addressed the headcut, while invasive species were removed and replaced with vernal pool habitat.

Biohabitats worked closely with Cleveland Metroparks’ Watershed Volunteer Program, to train and coordinate volunteer efforts to harvest and later install native willow and dogwood live stakes, as well as, potted native trees and shrubs that will stabilize the banks of the stream and restore the pasture while enhancing both aquatic and terrestrial habitat.

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