

## NEORSD TO #11 Thornhurst Sprague Road Bank Stabilization

North Royalton, Ohio



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*The restoration of a previously relocated and severely degraded stream allows for flood control in a strictly residential area, providing water safety against flood threats to the surrounding community.*

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### **SERVICES**

Ecological Restoration  
Water Strategies

**T**he Northeast Ohio Regional Sewer District (NEORSD) launched a series of restoration projects in support of their vision to trailblaze quality of life enhancement and water resource protection in the region. One such project was the restoration of a deteriorated stream on the border between the cities of North Royalton and Palma, OH. For help in developing the restoration concept and design, NEORSD turned to Biohabitats.

Situated between two road crossings and surrounded by existing residential infrastructure, the site presented challenges. Previously relocated to accommodate a roadway plan, the stream contained sharp turns to conform to parcel lines and was rendered with inadequate floodplain access and significant erosion. The site also experienced frequent flooding caused by insufficient sizing of the culvert under the adjacent road with potential additional causes upstream on private property.

Biohabitats began by analyzing available data and performing an assessment to determine baseline conditions and develop restoration concept alternatives that were presented to NEORSD. Biohabitats then prepared a rendering of the selected restoration concept and proceeded to develop the full design package, including estimated construction costs, construction schedules, and applications for necessary permits. After final approval, Biohabitats proceeded with construction oversight and monitoring to ensure successful implementation.

In addition to restoring stability and function to the stream, the project reduced potential flooding in a residential area designed to withstand a 100-year flooding event.