

ENDANGERED FRESHWATER MUSSEL SALVAGE AND RELOCATION FOR THE PENNDOT HUNTER STATION BRIDGE REPLACEMENT PROJECT

Clients

PennDOT District 1-0
FHWA
GAI, SAI, Michael Baker

ES Project No. (Multi.)

Locations:

Tionesta, PA (Salvage)
OH, PA, NY, WV, KY, IN, IL,
IA, Seneca Nation of Indians
(Relocations)

Key Services Provided

- Mussel Salvage Plan
- Endangered Mussel Salvage and Relocation
- Coordination and Training of 10 entities and >30 persons

Project Duration

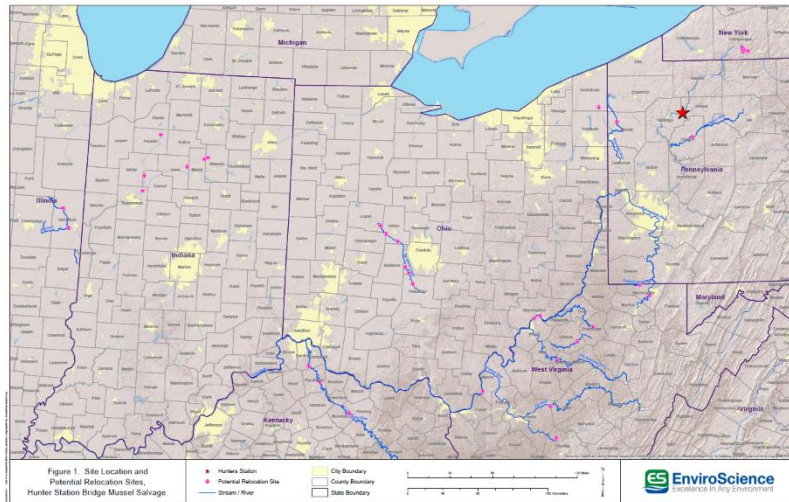
2014 - 2020

ES Project Cost

Estimated \$1,200,000

ES Key Staff

Greg Zimmerman
Dr. Marty Huehner
Ryan Schwegman
Matt Johnson
Dale Dunford
Patrick Evankovich
Nick Shoots
Phil Mathias
Jeff Niehaus
Tim Willaman
Jordan Findley
Nara Souza
Alex Valigosky
Melissa Vaccarino
Carl Burkey
Frank Moger
Jamie Willaman
Joanne Pem



This project likely represents the largest endangered species salvage and reintroduction effort of adult animals ever completed in the world. EnviroScience, Inc. is FHWA and PennDOT District 1-0's lead contractor coordinating and performing the endangered mussel salvage, relocation, and monitoring for the Hunter Station Bridge Replacement Project in northwestern Pennsylvania. The project footprint includes a portion of the largest population of endangered Clubshell and Northern Riffleshell known in the world, including over 190,000 mussels with 70% of those being endangered species. EnviroScience and its partners completed salvaging, relocating, and monitoring federally and state endangered as well as non-listed mussels as a term and condition of the USFWS Hunter Station Biological Opinion. This project is unique in that the federally listed mussel species are being relocated to suitable habitat to re-establish or augment existing populations throughout their historic ranges in PA, OH, NY, WV, KY, IN, IL, IA and including the Seneca Nation of Indians. The mussel salvage effort began in 2015 and continued into 2017, with monitoring of relocated populations continuing for seven additional years, post-relocation.

EnviroScience project manager Greg Zimmerman directed the efforts of over 25 EnviroScience staff, including 5 malacologists, 10 divers, and 10 topside tagging and processing staff. In addition to EnviroScience staff, EnviroScience trained and managed the efforts of 40 additional staff from other agencies, subcontractors and partners, including PennDOT, FHWA, USFWS, Western Pennsylvania Conservancy, U.S. Forest Service, and nine state agencies. Mr. Zimmerman will continue monitoring oversight over the coming years. Key project components included major coordination activities, developing a mussel salvage and monitoring plan, water quality sampling, training and QA/QC of field personnel, mussel salvage (95% diving), processing, data collection, marking and tagging packing and transporting mussels across the country, and reporting. The final count was 130,258 mussels salvaged from the project over the two-year span.