Developed through a project design award, the team, co-led by the University at Buffalo-SUNY and Cornell University, will pilot new passive sediment management strategies at river mouths that will create critical wetland habitat, improve water quality, support local economies, and greatly reduce the cost and environmental impacts from dredging. Specifically, working with the US Army Corps of Engineers, a number of medium-sized port authorities and the Ohio EPA, the team will pilot passive sediment management (PSM) strategies in Ashtabula, Ohio creating over forty acres of new, publicly accessible wetland habitat. A second pilot port community will be added once Ashtabula is underway. If successful basin-wide, this project will result in the adoption of landscape-based strategies and practices for PSM in the over forty medium-sized port communities through all states in the Great Lakes Basin.

Ports and harbors are located at river mouths, formerly rich ecosystems, that are still some of the most ecologically productive and sensitive areas in the region. Managing sediment is a significant challenge in these systems, one that is currently approached with a limited set of tools – conventional dredging, confined and open lake disposal, and very limited beneficial reuse. PSM directs sediment through natural processes to shorelines and shallow zones and out of deep channels. This creates healthy wetland and benthic habitat benefiting both aquatic and terrestrial wildlife, creates recreational and tourism opportunities in the ports, and greatly reduces the need for dredging.

The team identified recreational and medium-sized ports as ripe for this type of innovation, owing in part to movement in these communities to develop their recreational and ecological resources and the uncertainty of federal funding for dredging. And, while focusing on medium-sized ports, the PSM strategies the team will develop will have scale-up opportunities for larger ports and scale-down opportunities for smaller ports.