

Engineering With Nature

Project Fact Sheet



Title

Ashtabula Breakwater Tern Nesting Habitat Demonstration Project

Background

The US Army Corps of Engineers has responsibility for over 150 miles of Great Lakes breakwaters and other coastal structures that are periodically maintained and repaired. This project is intended to broaden the environmental and social benefits provided by the structures and the benefits can be easily integrated as part of ongoing maintenance or new construction activities.

Objectives

The Ashtabula breakwater tern nesting demonstration project is designed to help biologists determine whether suitable habitat can be created on the harbor breakwater by making simple, low-cost modifications to the concrete blocks used to repair the breakwater. The design includes incorporation of suitable nesting substrate (gravel) and predator deterrence features. If the demonstration is successful, it will provide a means of returning the common tern (*Sterna hirundo*) to the local avian community. Historically, the common tern nested in the area, but has not been recorded locally for decades due to the lack of suitable habitat.



Figure 1. Tern nests with eggs and plywood chick shelters on a created nesting area.

Approach

Construction of the tern nesting habitat will be completed in the summer of 2013 in coordination with USACE Buffalo District. Decoys and electronic call boxes will be installed at the site to encourage colonization of migrating terns in the spring of 2014. Monitoring of tern presence, nesting pairs, and egg hatching will be conducted throughout 2014 and 2015 to document success. Nesting area maintenance needs and success in excluding competing species (gulls and cormorants) as well as predators (mink and owls) from the site will be recorded.



Figure 2. Tern nesting block prior to installation and the addition of gravel substrate.

Outcomes

FY14 – Technical Note: Breakwater tern habitat design and installation.

Progress Report: Preliminary monitoring results.

EWN ProMap Database: Create and upload initial project description.

FY15- Progress Report: Nesting & fledging success monitoring results.

FY16 - Technical Report: Evaluation and monitoring of tern habitat development on the Ashtabula, Ohio breakwater.

Journal Paper: Establishment of tern habitat in Ashtabula, Ohio in association with breakwater repairs.

EWN ProMap Database: Revise and finalize project description and results of monitoring efforts.

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