

EWN In-Action FY13 IPR

Ashtabula Breakwater Tern Habitat

Thomas J. Fredette

- **Problem**

Design of infrastructure such as breakwaters, locks, dams, river training structures, and shore protection typically focuses on achieving the primary project objective, while rarely considering whether additional social or environmental benefits, or sustainability, can also be incorporated using minor design modifications.



- **Objective**

Demonstrate potential environmental enhancements conducted as part of a routine breakwater repair project in order to encourage application of the EWN concept on other projects. Specifically, this project will develop nesting habitat for the common tern on part of the Ashtabula, OH breakwater. A second part of the project involves repeating the toe block modifications also being tested in Cleveland Harbor.

- **Approach**

- Design breakwater modification.
- Contract for modified breakwater elements.
- Construct site.
- Encourage tern colonization.
- Monitor success.

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- Planned Funding by Year

- FY13: 50K
- FY14: 225K
- FY15: 250K
- FY16: 130K

- Major Project Deliverables

- FY13 Draft Tech Note
- FY14 Draft Tech Note
- Conference Paper
- EWN ProMap Site
- FY15 Conference Paper
- FY16 Technical Report
- Journal Paper



- Benefits to Navigation Program

- Increase societal support for USACE infrastructure projects and reduce social friction during project review
- Increase sustainability and benefits of USACE infrastructure assets

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- FY13 Products
 - Draft TN: Invertebrate habitat development on Great Lakes breakwaters using modified material designs

