# PROJECT INFORMATION SHEET

**U.S. ARMY CORPS OF ENGINEERS** **BUILDING STRONG**

## C-Green Breakwater, Milwaukee, WI

**Description**

The USACE Detroit District completed the process of repairing the deteriorated breakwater at Milwaukee Harbor. The repair involved placing armor stone on the exterior and interior sides of the existing sheet pile enclosed crib structure. In addition the USACE Green Breakwater team, consisting of members from the Engineer Research and Development Center (ERDC) and the Buffalo and Detroit Districts, developed a plan in coordination with the Wisconsin Department of Natural Resources to create fish spawning habitat as part of the breakwater repair. The plan which was implemented, involved making modifications to the project design through selection of stone size and slope to create fish spawning beds on the side slope of the interior armor material.

**Congressional Interest**

Moore (WI-4); Senator Johnson (WI), Senator Baldwin (WI)

**Location Map & Picture**

**Non-Federal Project Sponsor**

N/A

**Project Authority**

O&M

**Funding**

| | Total | Federal | Non-Federal |
|---|---|---|---|
| Current Working Estimate: | $ 677,100 | $ 677,100 | $ 0 |
| Funds Allocated prior to FY16: | $ 327,381 | $ 327,381 | $ 0 |
| E and W Funds Allocated prior to FY16: | $ 0 | $ 0 | $ 0 |
| GLRI Funds Allocated prior to FY16: | $ 327,381 | $ 327,381 | $ 0 |
| FY16 Energy and Water Allocation: | $ 0 | $ 0 | $ 0 |
| FY16 GLRI Allocation: | $ 0 | $ 0 | $ 0 |
| FY17 Budget: | $ 0 | $ 0 | $ 0 |
| Funds required to complete (>FY17): | $ 0 | $ 0 | $ 0 |

**Stage**

Monitoring

**Status**

Detroit District constructed the breakwater modification in Spring of 2014. ERDC and the University of Wisconsin (UW) - Milwaukee will be monitoring the modification for 5 years to evaluate and determine if this is viable for USACE to modify more structures to include habitat configurations. A 500 lineal foot section of north breakwater was configured as a shallow sloped spawning shelf. The targeted fish species are lake trout, walleye and suckers. Staff from UW - Milwaukee collected a gravid female lake trout using a gill net adjacent the shelf in September 2015. The staff set 40 egg mats in fall of 2015 on the spawning shelf but did not collect any lake trout eggs. The spawning shelf monitoring will include eletroshocking for lake trout fry in spring of 2016, as electroshocking covers a more extensive area than using egg mats.


**U.S. ARMY CORPS OF ENGINEERS - DETROIT DISTRICT**

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