

NAME: Thunder Bay Reef Habitat Restoration

LOCATION: Alpena County, Thunder Bay, Lake Huron, Michigan

ACRES: 0.5 acres

NON-FEDERAL SPONSOR:

Michigan Department of Environmental Quality (MDEQ)

PROJECT DESCRIPTION:

This project aims to mitigate for reef habitat lost by the past deposition of cement kiln dust (CKD) along Thunder Bay shoreline and lake bottom. CKD waste, a by-product of cement production, was historically stockpiled and disposed of on adjacent shoreline and the bottomlands of Lake Huron beginning in the early 1950s. Precipitation runoff at the site resulted in the creation of erosion channels in the CKD pile that directed surface runoff and eroded CKD material into Thunder Bay. In addition, wave action along the shoreline eroded the CKD pile, resulting in the further transport of CKD into Thunder Bay. The project entails construction of 12 artificial reefs in Thunder Bay, Lake Huron. Each reef will be 30 m long x 4.5 m wide and either 1.5 or 3 m high. The plan for restoration is to add cobble/rubble material adjacent to but not contiguous with the impacted area to duplicate natural reef conditions. Observations to date indicate that the location of the underwater CKD material is stable and will not impact the proposed reef. An adjacent reef with natural cobble will be used as a reference site.

EXPECTED BENEFITS:

Thunder Bay is the only nearshore location in Michigan waters of Lake Huron where lake trout are known to reproduce successfully. They have been extirpated from the lower four Great Lakes since the 1960s and are now the focus of restoration efforts by U.S. and Canadian federal, state, and provincial agencies. This project will increase habitat available for spawning lake trout and other native fish species and remediate loss of habitat due to degradation.

STATUS: Post-Construction Monitoring