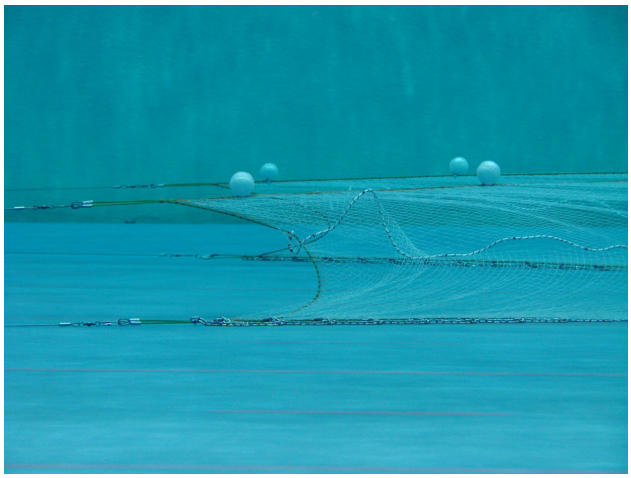
Trawl Design Workshop Significant for Great Lakes Fisheries

Management of the $5 billion Great Lakes fisheries (>$600 million for Lake Ontario) depends on reliable fish abundance estimates derived from bottom trawls. During the past 20 years, biologists suspect that fish abundance estimates from trawling data may have been affected by mussels clogging current trawl designs and fish habitat shifts. Unfortunately, trawl design and operation expertise has been limited among Great Lakes biologists - until 2011.

In partnership with the US Geologic Survey and the Memorial University of Newfoundland (MUN), New York Sea Grant (NYSG) convened an intensive 3-day trawl design workshop for 35 biologists and vessel personnel representing state, federal and provincial agencies from the Great Lakes. The workshop trained participants about trawl design and design effects on fish capture. Video simulations of a scale model Lake Ontario trawl conducted at MUN's flume tank - the world's largest - were presented. Flume tank simulations approximate results of field trials by 95%, saving months of intensive field testing of full-size trawls.

The flume tank trials enabled Great Lakes biologists for the first time to visualize underwater trawl behavior and better appreciate the dynamics of trawl design. The workshop participants recognized how operational and design modifications affect trawl efficiency.

All workshop participants indicated in an exit survey that they found the workshop to be highly beneficial and planned to apply the information to their current and proposed trawling programs, especially for forage and invasive fish assessment. Three new vessels will begin operation in 2012, and the workshop information will be used to design or modify new trawls to outfit those vessels.



Lake Ontario scale model trawl being tested in the Memorial University of Newfoundland flume tank, the largestin the world. Photo: MUN Centre for Sustainable Aquatic Resources

Workshop Meets Significant Need

Sustainability of the $5 billion Great Lakes fisheries depends on accurate biological information from trawling. The November 2011 trawl design workshop was organized by NYSG, USGS and the MUN. The workshop featuring internationally renowned experts enabled participants to better understand trawl design, vessel operation, and fish capture. Moreover, the workshop will ensure that quality fisheries data information is obtained for managing Great Lakes fisheries.

This groundbreaking international initiative placed NYSG in the leadership role in trawl design outreach in the Great Lakes.

A Great Lakes Regional Research Information Network (GLRRIN) grant to NYSG funded the workshop.

This project meets the performance measures of Sea Grant's Healthy New York Coastal Ecosystems focus area.

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