



**Great Lakes Protection Fund**

1560 Sherman Avenue, Suite 1370, Evanston, Illinois 60201

Tel 847-425-8150 Fax 847-424-9832 [glpf.org](http://glpf.org)

**Funded Project**

# Characterizing the Risk-Release Relationship for Aquatic Invasive Species in the Great Lakes

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Project No.	960
Timeline	2011 – 2015
Award Amount	\$1,027,000
Team Leader	Allegra Cangelosi, Northeast-Midwest Institute, <a href="mailto:acangelo@nemw.org">acangelo@nemw.org</a>
Project Website	<a href="http://www.greatshipsinitiative.org/tests.html#5">http://www.greatshipsinitiative.org/tests.html#5</a>

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[Invasive Species Prevention – Learning from the Lakes from Great Lakes Protection Fund on Vimeo.](#)

In this project, the team was trying to answer the question, “how clean is clean enough?” regarding ships’ ballast water. The team wanted to determine how the risk of invasion varies when different numbers of a species are released. This is a key barrier identified by the National Research Council of the National Academies of Sciences and the team included many of the experts from that panel. With guidance from a panel of international experts on invasion biology the team developed the experimental designs, analytic protocols, and statistical data treatments for two types of assessments: lab assays using large-scale mesocosms (housed at the Great Ships Initiative (GSI) facility in Superior, WI) and field surveys.

This work continues under a [second grant](#). These efforts provide the first direct scientific data on the risk-relationship for the Great Lakes.