



# Identifying the Ideal Habitat Conditions for the Endangered Dwarf Wedgemussel (*Alasmidonta heterodon*)



**Evvy Case, William Crist, Lillian Garfinkel, Isabella Troop**  
**Advisors: Dr. Marja Bakermans, Dr. David Spanagel**  
**PLA: Samantha Grillo**

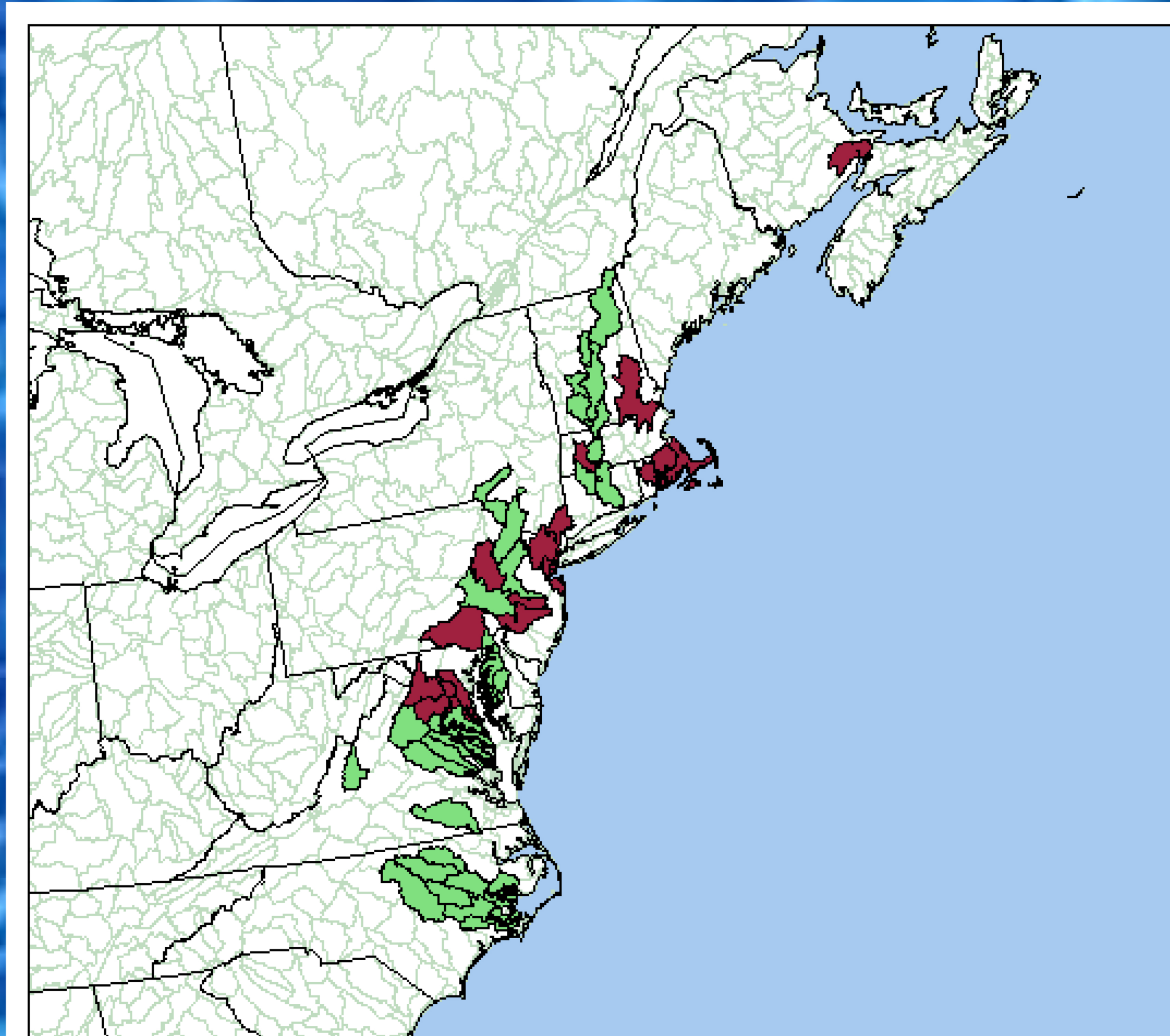
## Abstract

The Dwarf Wedgemussel, or *Alasmidonta heterodon*, is a freshwater mussel with most of its populations in Northeast freshwater systems. The mussels play a vital role in their ecosystem, as they act as filter feeders, with their diet consisting of phytoplankton, bacteria, and organic matter that is toxic to other species. Dwarf Wedgemussel populations have been listed as endangered since 1993, with little to no improvements to population quantities or qualities cover the past 25 years.

Through our research, we identified the most important aspects of the mussels habitat that seem to be lacking, and we created a three- part plan to try bring Dwarf Wedgemussel populations back to health, and get them off the endangered species list.

## The Problem

Dwarf Wedgemussel populations are unstable due to their scattered locations and the varying threats and pollutants to their natural environments.



*Alasmidonta heterodon*  
 Dwarf Wed gemussel  
 Map created April 2010

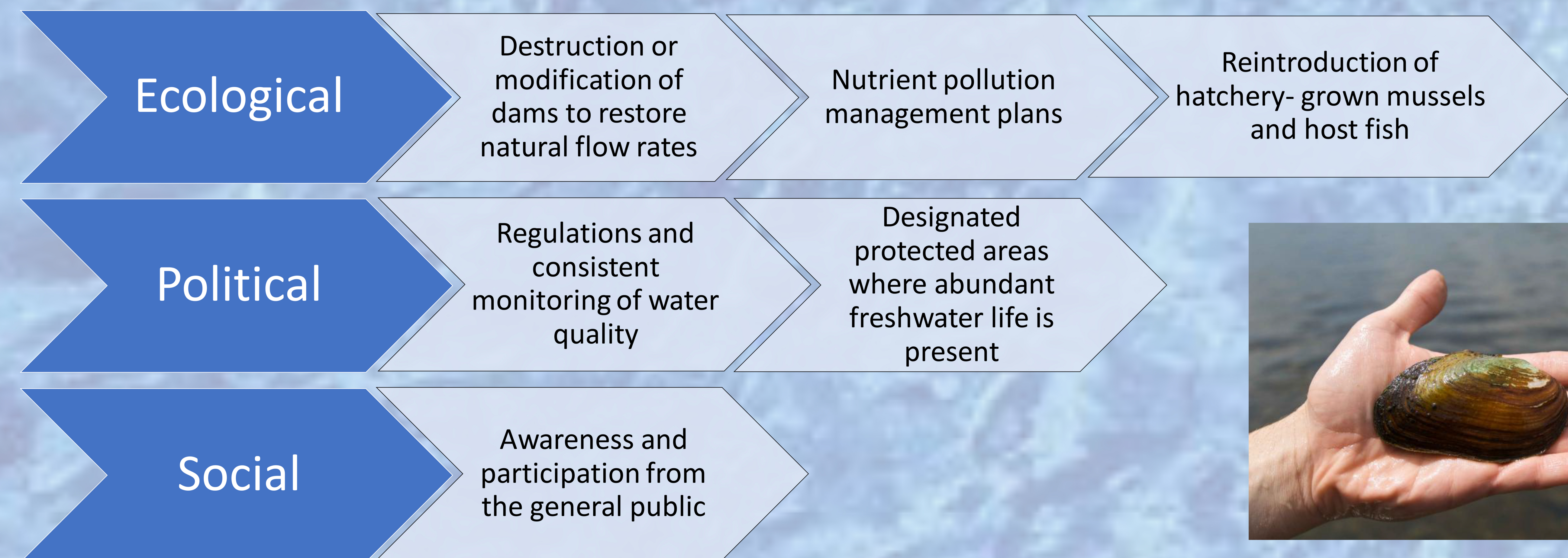
The map was created in 2010 and shows the past (red) and present (green) locations of the mussel.

## Ideal Habitat

	Water	Host Fish	Sediment	Pollution
<b>Current Conditions</b>	Variations in water temps and flow rates	Low populations to aid in reproduction	High silt production due to pollution from drainages	High levels of nitrogen and phosphorus
<b>Ideal Conditions</b>	~24°C and moderate flow rate	High populations of Darters and Sculpin	Mixture of silt, gravel, clay in shallow pools	Clean water with low pollutants

## Proposed Solutions and Implementation

There are three parts to our ideal habitat implementation plan. Other than considering each part a separate step, all factors intertwine and must work together to create successful environmental health, protection, and awareness:



## Resources

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