

# U.S. Fish & Wildlife Service

## Lower Great Lakes Fish and Wildlife Conservation Office

### *Aquatic Invasive Species Program*

## Early Detection Monitoring Metabarcoding Surveillance

### Program Objective

Describe program purpose. HPLs are selected based on their increased likelihood for invasion. Sampling focuses on harbors, rivers, and embayments of the Great Lakes as determined by a [risk-based prioritization framework for AIS in the Great Lakes](#).

Touch on following:

1. Describe EMD program.
2. Describe what metabarcoding is?
3. How priority for each purpose (EDM vs Targeted) is chosen.
4. Partnerships and objectives of 2024 sampling.

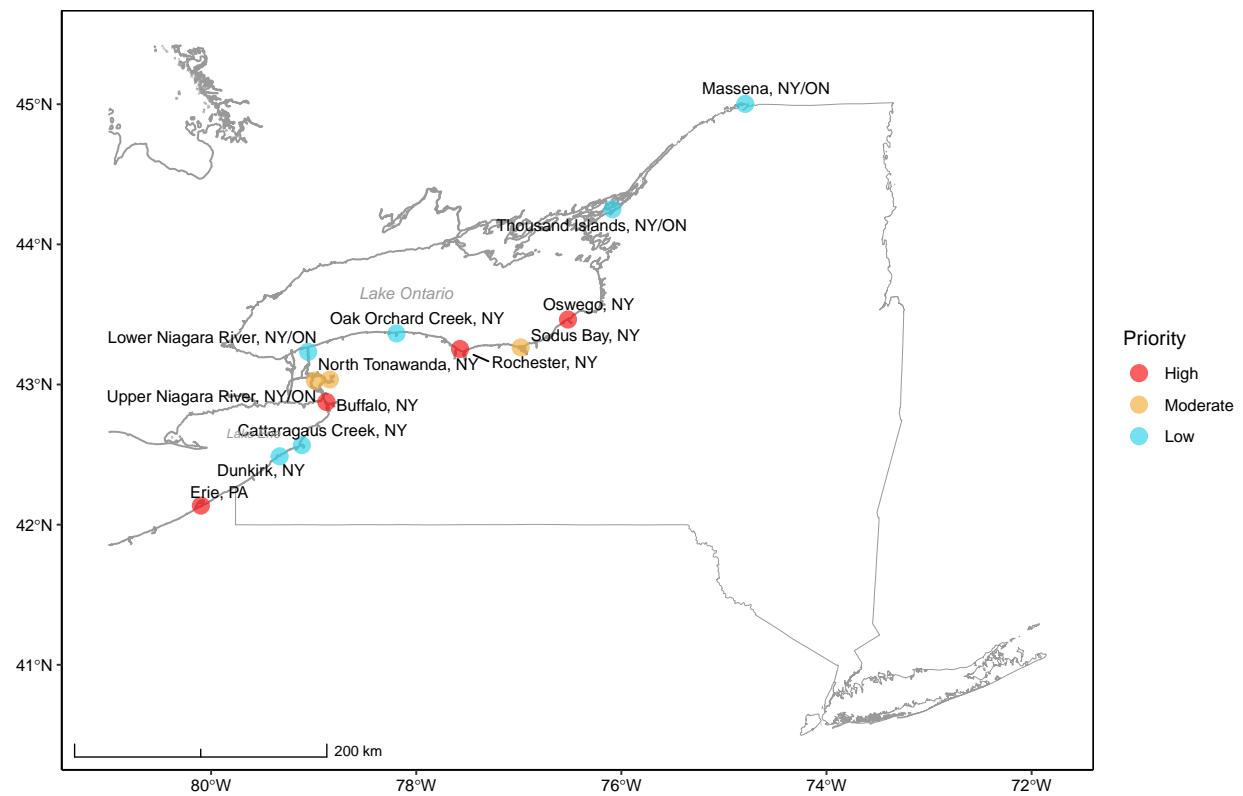


Figure 1: Map of broad-spectrum AIS monitoring locations across the lower Great Lakes with their corresponding priority level (Red: High, Orange: Moderate, Blue: Low).

Table 1: Priority broad-spectrum AIS monitoring locations across the lower Great Lakes.

Location	Ranking out of 388 Locations		eDNA Sample Capacity Scenarios	
	Fish Rank	Priority*	FWS Only	FWS & Partners
<b>Lake Erie</b>				
Buffalo, NY	3	High	20	50
Erie, PA	27	High	20	30
North Tonawanda, NY	29	Moderate	10	20
Upper Niagara River, NY/ON	54	Moderate	10	20
Dunkirk, NY	76	Low		15
Cattaraugus Creek, NY	94	Low		15
<b>Lake Ontario</b>				
Rochester, NY	5	High	20	50
Oswego, NY	6	High	20	50
Sodus Bay, NY	57	Moderate		20
Thousand Islands, NY/ON	71	Low		
Lower Niagara River, NY/ON	81	Low		
Oak Orchard Creek, NY	84	Low		
Massena, NY/ON	124	Low		
Total	-	-	100	270

\* Priority designation was assigned based on rankings from the risk-based prioritization framework.

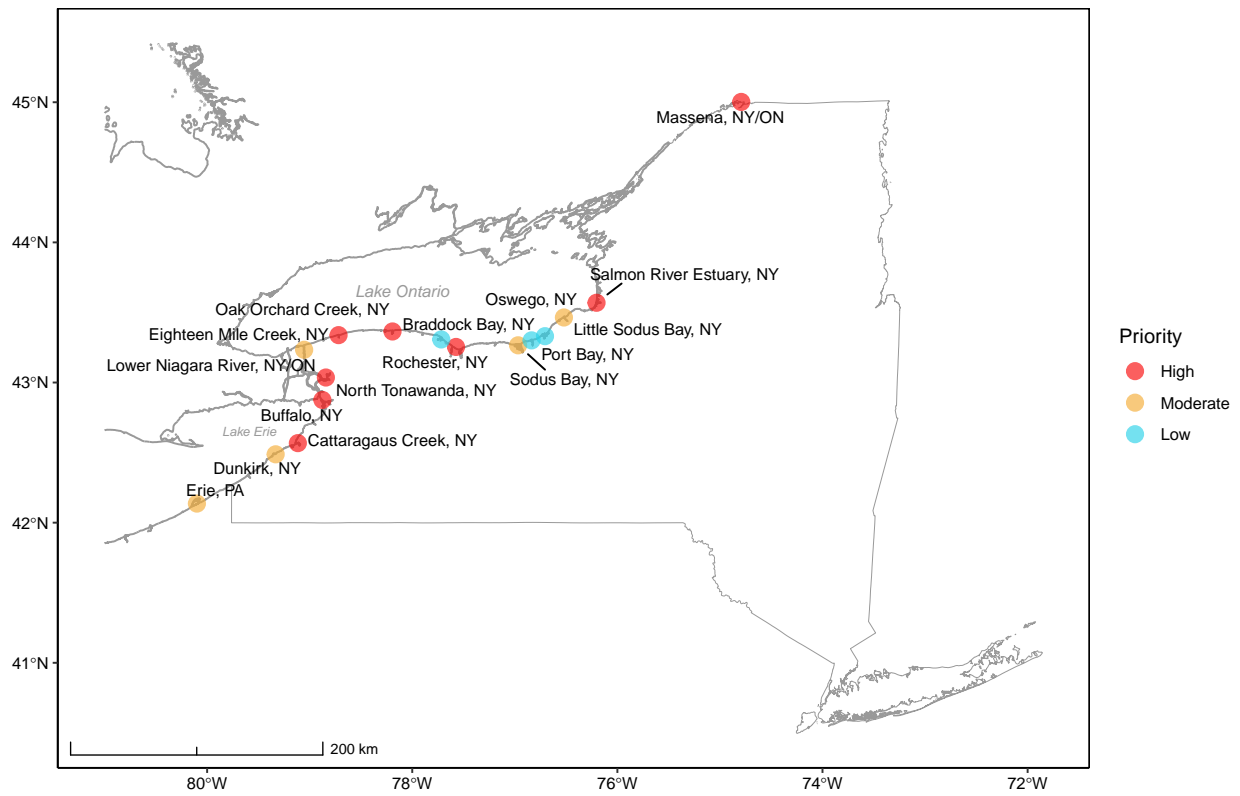


Figure 2: Map of targeted AIS species specific locations across the lower Great Lakes with their corresponding priority level (Red: High, Orange: Moderate, Blue: Low).

Table 2: Priority targeted species-specific AIS monitoring locations across the lower Great Lakes.

Location	Priority*	eDNA Sample Capacity Scenarios		Target Species	Partnerships
		FWS Only	FWS & Partners		
Lake Erie					
Buffalo, NY	High	10	10	Grass Carp	
North Tonawanda, NY	High	10	10		
Cattaraugus Creek, NY	High				
Erie, PA	Moderate				
Dunkirk, NY	Moderate				
Lake Ontario					
Rochester, NY	High	10	10		
Oak Orchard Creek, NY	High	10	20		
Massena, NY/ON	High	110	110	Eurasian Tench	New York Field Office
Eighteen Mile Creek, NY	High	10	10	Grass Carp	
Salmon River Estuary, NY	High	10	20		
Oswego, NY	Moderate	10	20		
Sodus Bay, NY	Moderate		10		
Lower Niagara River, NY/ON	Moderate	10	20		
Braddock Bay, NY	Low				
Port Bay, NY	Low				
Little Sodus Bay, NY	Low				
Total	-	190	240	-	-

\* Priority designation was assigned based on rankings from the risk-based prioritization framework.