Tracking Invasive Species With eDNA

Our waters face growing threats from **non-native species** that spread quickly and disrupt balance. With cutting-edge **environmental DNA (eDNA)**, we can spot invaders early and give the Great Lakes a fighting chance.

Research in Partnership with SLELO PRISM

Who is SLELO PRISM?

The St. Lawrence-Eastern Lake Ontario Partnership for Regional Invasive Species Management works to **protect native habitats** by preventing, detecting, and managing invasive species. They bring together partners and communities to safeguard the region's lands and waters.

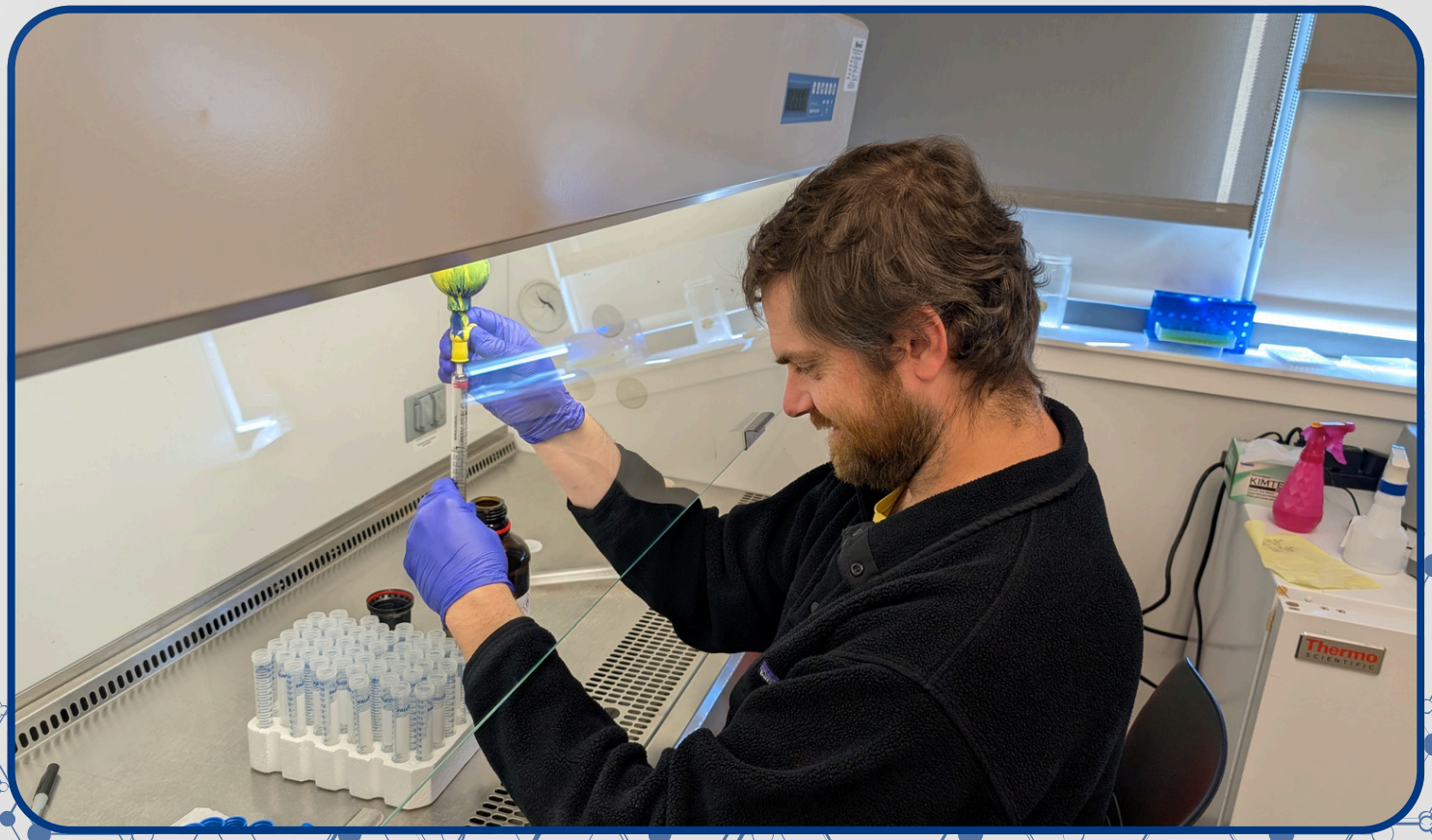
INVASIVE SPECIES MANAGEMENT
SAINT LAWRENCE EASTERN LAKE ONTARIO

Why Are Invasive Species Harmful?

Invasive species can **outcompete native fish**, disrupt food webs, and even directly prey on valuable species. In the Great Lakes, they endanger a **multi-billion-dollar fishing industry** and cause lasting ecosystem damage. Once established, invaders are nearly impossible to remove—making prevention critical.

Our Solution? eDNA.

Environmental DNA is genetic material left behind in the water. With just a **simple water sample,** we can detect fish, plants, or even invertebrates without needing to catch them. Think of it as **forensic science for the ecosystem**—a faster, smarter way to track life below the surface.



Why Early Detection Works

Traditional surveys often catch problems too late. eDNA gives managers an early warning system, detecting species at low levels long before they're seen. The sooner we know, the more tools we have—from **rapid surveys to targeted removals.**

Early Detection → Rapid Response → Healthy Lake

Who Are We Tracking?

9 Species on Our Radar

Right now, our eDNA assays are screening for:

🦞 Rusty Crayfish

🐟 Bighead Carp • Silver Carp

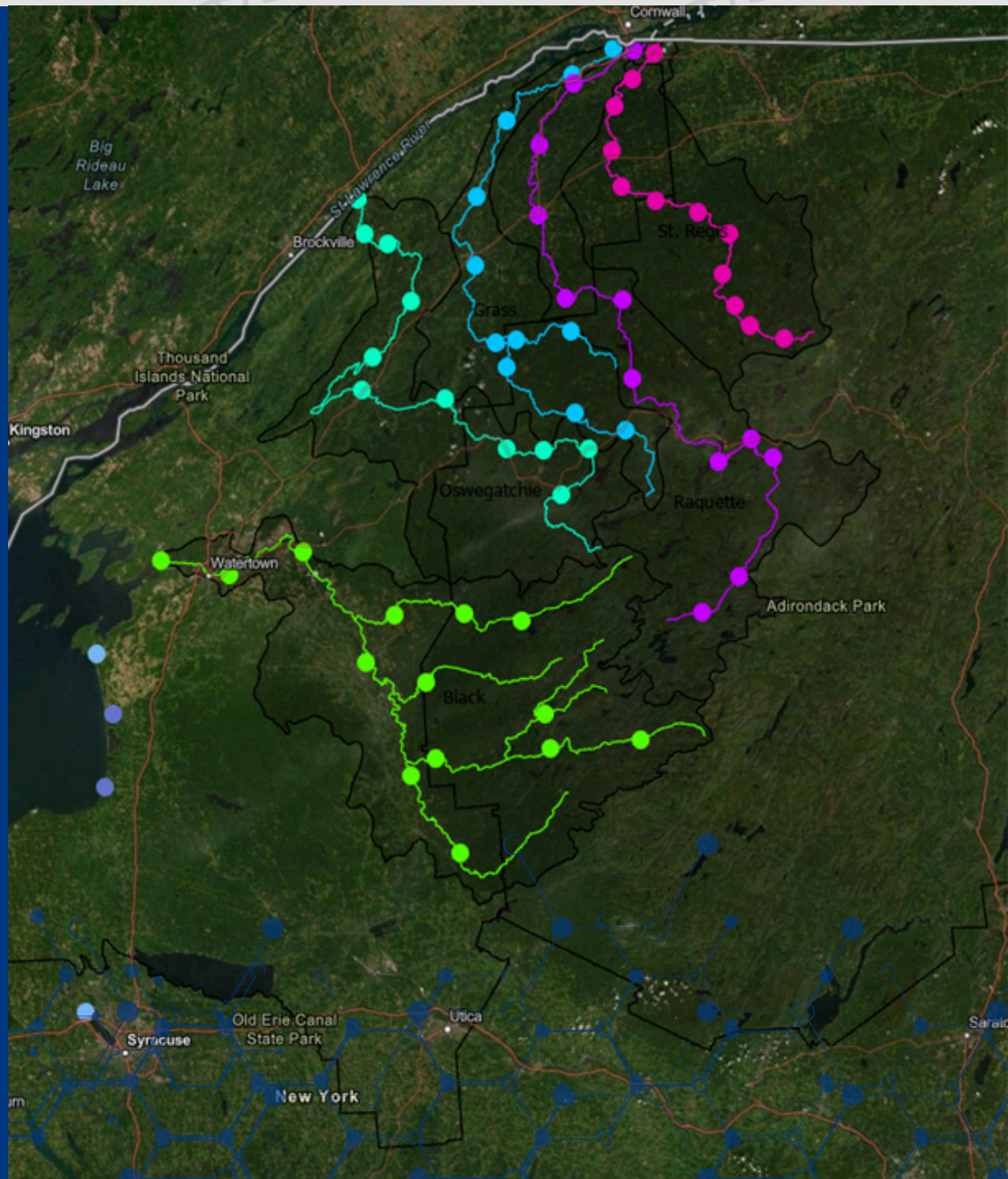
• Northern Snakehead • Tench

• Round Goby • Tubenose Goby

🌿 Hydrilla • Eurasian Watermilfoil

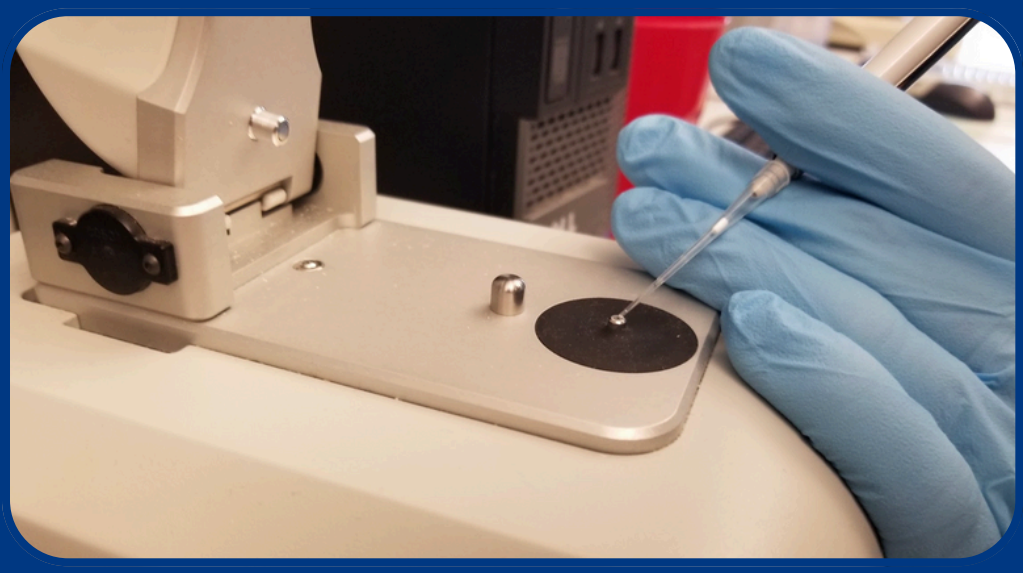
Where We're Sampling

Our eDNA surveillance spans **streams and rivers across the Lake Ontario watershed.** The points on the map indicate a sample site where we collect water samples.



Next Steps

This eDNA Analysis project is part of an ongoing surveillance effort across the Lake Ontario watershed. Our lab processes water samples collected by partners at SLELO PRISM, constantly refining techniques to add more species and improve speed. The vision: a **permanent early warning system for the Great Lakes.**



Protecting Our Great Lakes Together

Combining innovative science with community action keeps invasive species from rewriting the future of our lakes. Learn more at **sleloinvasives.org,** follow **@sleloprism,** and stay engaged.