ION WORKS INC

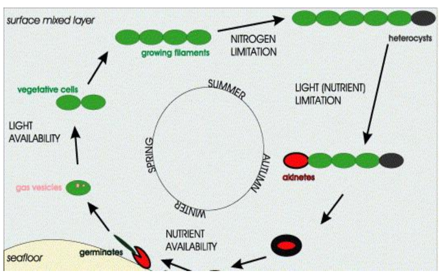
Safe, Cleaner, Lake Water

OXYBOT

Robotic phosphorus extraction and algae control unit

OXY**BOT** by Ion Works is an autonomous, AI-driven robotic platform designed to safeguard recreational lakes and water bodies against harmful algae (HAB's), bacteria, swimmer's itch, and nutrient-driven blooms. This integrated motorized buoy system combines real-time monitoring, preemptive action, and tactical physics-based water remediation to maintain lasting clarity and safety.

OXYBOT

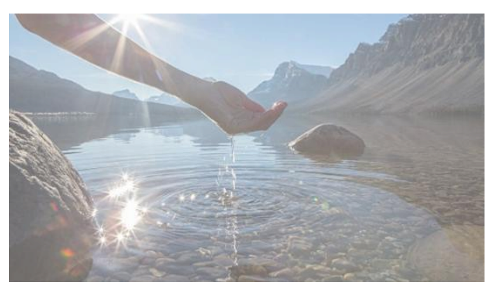


The key strategic advantage of OXY**BOT** is the pro-active, early spring deployment strategy. OXY**BOT** is designed to be sailed in lakes before visible green algae forms, attacking the problem at its root rather than reacting after a bloom has already occurred.

OXY**BOT** intervenes during the most vulnerable stage of the algae lifecycle, when rising vesicles and filaments are just beginning to form, and subsequently by extracting up to 99% of bioavailable phosphorus to reduce explosive algal growth during peak summer months, addressing the *cause* rather than just the symptoms.

Technology Overview

OXY**BOT** disrupts harmful algae and bacteria using a multi-stage process of hydraulic cavitation which ruptures cell walls and neutralizes algal vesicles. In addition, plasma oxidation halts photosynthesis, destroying cyanobacteria and pathogens. OXY**BOT** subsequently releases free iron (Fe^{++}) ions into the water, which rapidly bind with phosphate ions to form insoluble vivianite, efficiently extracting phosphorus from the water preventing bloom recurrence. All treatment actions are managed adaptively by dynamic AI algorithms, using real-time sensor data to optimize OXY**BOT** patrol and interventions—under the supervision and remote control of a smartphone interface for instant status, alerts, and adjustments.



Autonomous Lake Robotics

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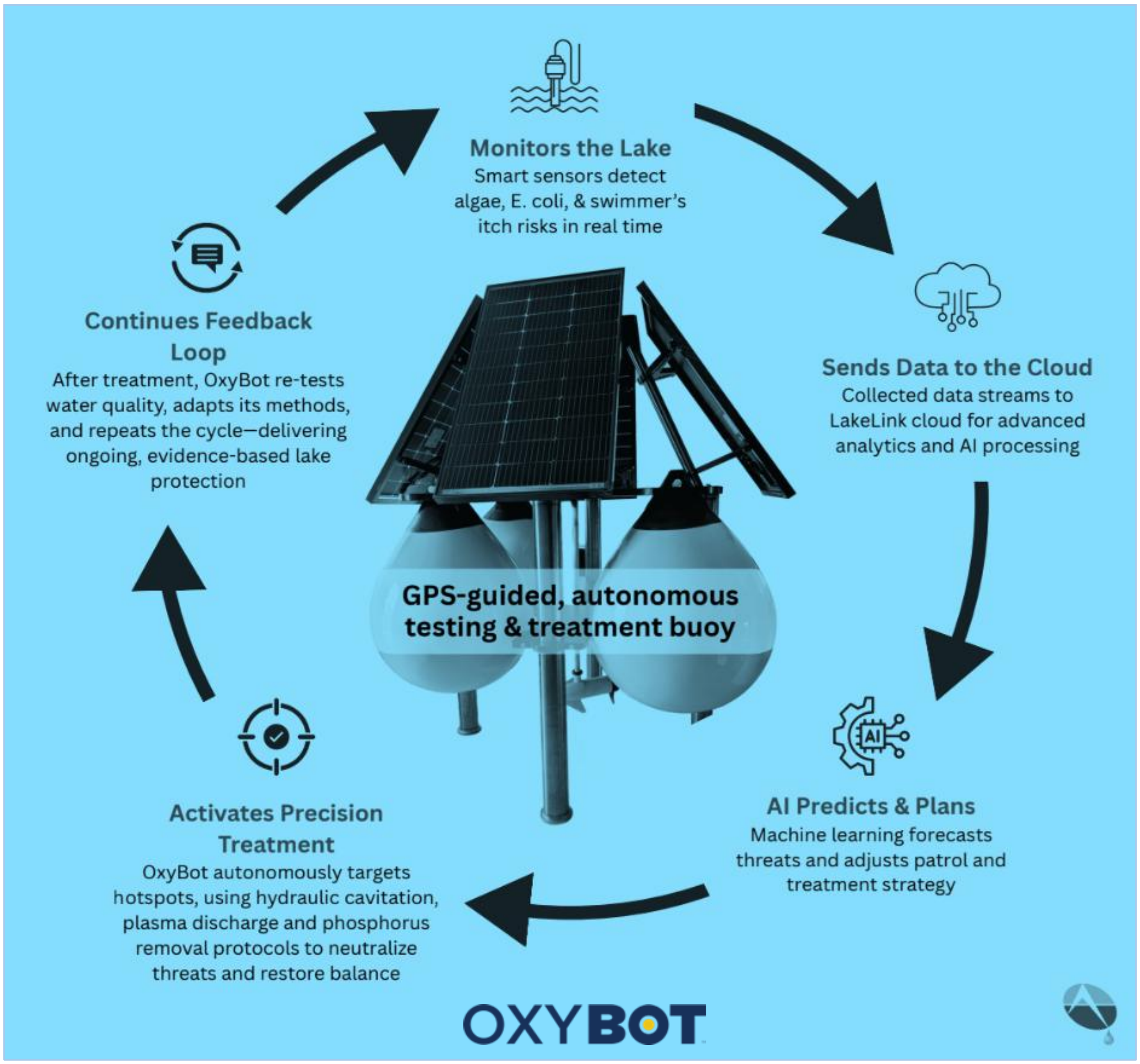

Imagine the difference: while traditional lake management often gets bogged down in endless bureaucracy, costly engineering studies, and reactive, short-lived interventions, OXY**BOT** brings a game-changing solution—autonomous, continuous, and targeted protection for your lake. OXY**BOT** not only neutralizes algae and harmful microorganisms at their source but also removes the excess phosphorus that drives recurrent blooms through a dedicated nutrient removal cell—delivering results that aren't just immediate, but enduring.

With OXY**BOT** patrolling the waters 24/7, every dollar is invested in real, decisive action—not paperwork. Instead of pouring resources into outdated chemical treatments or complex infrastructure with high maintenance and labor costs, OXY**BOT** delivers measurable results, slashes operational expenses, and eliminates the cycle of "study today, treat tomorrow, repeat next season." For lakefront property owners and communities determined to protect their lakes—and their budgets— OXY**BOT** is not just a smarter choice, but the only one that truly turns intent into impact.