



HydroAI

HydroAI combines high-resolution video cameras with AI-powered, cloud-based software to provide hydropower sites with accurate, real-time fish along with species identification. By replacing manual counting with automated precision, sites can collect accurate, high-quality data, to maximize power generation, streamline compliance and meet regulatory demands.



Seamless setup

HydroAI cameras easily integrate with new or existing fish passage infrastructure. Installation takes place during a single visit, with no interruption to site operations.

Benefits of HydroAI

- Improves the quality and quantity of fish monitoring data at hydro dams
- Enhances mitigation efforts using real-time data
- Ensures regulatory compliance
- Eliminates the need to manually count fish or review video footage
- Maximizes power generation by improving transparency for regulators

Proven technology

HydroAI was created as part of an initiative with Canada's Ocean Supercluster (OSC). Trained on thousands of hours of real fish footage, today, the system can achieve up to 95% accuracy.



Fish Tracking

Key components

Custom insert installs into existing infrastructure to house the camera.



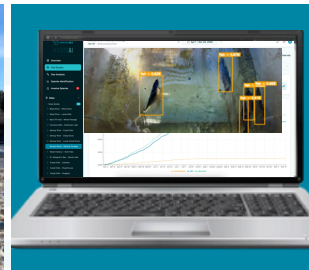
High-resolution camera captures 24/7 footage of migrating fish.



Edge box installed onsite feeds camera data to the cloud.



Cloud-based software delivers data to a web-based dashboard.



Automate eel counts

HydroAI's use of infrared light allows for night-vision capability to count and monitor eels or other nocturnal fish, when they're most active. Gain a better picture of how they interact with the infrastructure and what impacts their migration.

Pair with:

Innovasea's acoustic telemetry solutions and fine-scale positioning tools for greater insights.

HydroAI quantifies the population dynamics of a migration (peak migration times, total fish ascending or descending a ladder) while telemetry reveals larger-scale behaviors such as distance traveled, spawning timing, and route choice.

Together, these technologies deliver a full characterization of the studied species migration.



Who we are

Fueled by a commitment to a more sustainable future, Innovasea is at the forefront of pioneering technologies that transform our industry, protect the oceans, and feed our world. We deliver fully integrated solutions, backed by a team of experts, to ensure users get the most out of their equipment. Together, this work advances our mission of blending innovation with environmental stewardship and global advocacy.

