

Maintaining excellence: Dalhousie's Aquatron invests in ongoing upgrades

Dalhousie's Aquatron offers support to accommodate almost any lab-based aquatic experiment. The largest university aquatic research facility in Canada, it is comprised of six large tanks holding a combined volume of more than 2,000 cubic metres, as well as a wide variety of smaller tanks, research spaces and equipment.

The facility attracts a wide range of university, government and industry researchers who come from across the country and around the world and have completed thousands of successful projects with support from the Aquatron's team since the facility first opened in 1974.

John Batt, the Aquatron's Managing Director, who has been at the facility for approaching 25 years, says researchers come year-round for the Aquatron's temperature-controlled sea- and freshwater environments and support from the professional team of biologists and mechanical operators who run its systems. He says the mechanical operations of aquatic systems offer an unmatched research environment to those studying underwater life.

"Aquatron has a broader range of facilities than just about any other lab. We have small wet labs where we can do really finely controlled experiments in tanks down to a liter, and then we have the very large tanks in excess of 600,000 liters," says Batt. "We are continually visited from scientists from around the world. To date, no one has ever identified another facility surpassing the broad range of services we have."

The facility is currently supporting projects with the aquaculture industry, Parks Canada, Department of Fisheries and Oceans and research based at Dalhousie's Faculties of Medicine, Engineering, Science and Agriculture. They are supporting researchers investigating everything from endangered species to climate change.

Batt notes that serving the Aquatron's large clientele, and ensuring the facilities offer the level of support and sophistication necessary, takes continual maintenance and improvement. He says the Dalhousie's Research Support Fund is essential to the operation's ability to maintain the high-quality environment required by Dalhousie scholars and the larger community.

"We have to remember that the level and standards of research are constantly evolving, and we need to keep up with those standards," says Batt. "Without support from the Research Support Fund, we would not be able to keep up and our world class reputation would be in jeopardy."

And their work is critical. For example, in December of 2018 the Aquatron took in 25 Atlantic whitefish from Canada's Department of Fisheries and Oceans which would have been released to the wild and may have died. The fish are endangered and thought to exist in only one river system in Nova Scotia. Batt says it was believed that there were less than 300 of the animals left in existence. The Aquatron has played a key role in strengthening their numbers.

“The whole Dalhousie community got behind the project which injected new life into the Atlantic whitefish community. Now, three and a half years later we have a small, funded program with 105 Atlantic Whitefish which bred this spring. With a little luck, we could be returning some young Atlantic Whitefish to the wild this summer or fall.”

Research Support Fund

Established in 2003, the Research Support Fund (RSF) helps Canadian universities and colleges, along with their affiliated health research institutes and research hospitals, with the indirect costs associated with federally funded research.

At Dalhousie, the RSF, which includes both the RSF Grant and Incremental Project Grant (IPG), supports maintenance and renewal of the Aquatron facility.

In 2021-22, the RSF/IPG is providing \$9,399,276 to support the indirect costs of research at Dalhousie and affiliate hospitals.