

'Little' Aquatic Informatics wins software contract to monitor America's waterways

TECHNOLOGY | \$8m deal with US Geological Survey seen as catalyst for B.C. company's global growth

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"Little local company" **Aquatic Informatics Inc.** (AI) has been awarded the contract to replace the United States Geological Survey's (USGS) aging software to monitor the entire country's waterways.

AI's Aquarius software manages streaming real-time data generated from high-tech sensors populating rivers, lakes, oceans and all other water sources. The software provides meaningful data on water flow and quality, as well as general climate conditions. Its software is an early warning system for a long list of potential water worries, including emerging droughts and flood conditions, pollution, turbidity from landslides or rain runoffs, irrigation overuse and troubling levels for dam operators.

The Vancouver company beat out a group of competitors that the company says "most likely" included **Klusters AG** of Germany, the largest software provider in the field.

"This contract is a real source of pride for us. We're this little local company that grew to develop a software system that is now going to manage water in the U.S.," said **Ed Quilty**, president and CEO.

According to **Robert Mason**, deputy chief for USGS' Office of Surface Water, "Aquarius gives the USGS an opportunity to significantly improve the efficiency of our data networks, which is critical given the growing need for water data, even in the face of current budget constraints."

The \$8 million deal includes \$3.8 million for software support and maintenance. Quilty said the remainder is for integration, customization and expansion over five years before the agreement comes up for renewal.

AI was not an unknown quantity,



Aquatic Informatics CEO Ed Quilty: "now having USGS on our whole system, we've got a huge tailwind. It's really about global expansion in the near term" | CARMEN SCHMID / AQUATIC INFORMATICS

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PAUL RICHARDSON
PRESIDENT, RENEWAL2 INVESTMENT FUND

as it already had a successful professional relationship with USGS, having won a small water-flow modelling contract in 2005 (see sidebar). The company used that relationship to position itself for future work, bending over backwards with software add-ons and daily support calls. In the shadow of industry heavyweight Klusters, AI could be viewed as punching above its weight in trying to win over USGS.

Quilty said its approach and energy had some industry insiders comparing the AI-Klusters dynamic to the humorous run of "Mac vs PC" television ads.

"Our market sees us as young, edgy and innovative – in the same way that **Apple** is seen as more humanistic and creative."

That's the same positive vibe that attracted **Renewal2 Investment Fund**, a green-focused venture group that was looking to park some of its money in the growing water management industry.

Renewal2 president **Paul Richardson** said he liked AI's postal code and the company's combination of biology smarts and technical expertise.

"We think that having a Vancouver company that can truly be a world leader in terms of what it's doing is incredibly exciting for us," said Richardson. "We were convinced AI had the best systems and the most dedicated people."

The Vancouver-based fund helped AI grow with two rounds of financings. Along with Quilty, **Renewal2** is AI's majority shareholder. Quilty said AI's priority now is to "knock the USGS out of the park" in terms of deliverables.

The USGS deal will have the company implement one commercial system countrywide, using the same standards, for the agency's more than 3,000 staff.

Quilty said the initial USGS contract has already opened many doors internationally for AI. In North America, the company already counts as clients the **US Army Corps of Engineers**, the **US National Parks Service**, **Water Survey Canada**, **BC Hydro** and the **Manitoba Water Stewardship**.

Overseas, the company has made inroads in countries as diverse as Jamaica, Holland and Tasmania.

Quilty anticipates doubling his company's 40-person team in the next three years.

"We dominate North America now," he said. "Having USGS on our whole system, we've got a huge tailwind. It's really about global expansion in the near term."

Richardson also sees bigger things ahead for the little company that could.

"Basically it's the game-changing contract that Aquatic Informatics has been working on for a while now. And it's not just the size of the contract in terms of the monetary value," said Richardson. "USGS is looked at as the gold standard. So to have successfully competed against the rest of the world positions AI beautifully to grow in North America and internationally on the backs of being able to perform this contract." ■

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The existing software used by USGS, which was installed in 1984 when Commodore 64 was considered cutting edge, had become burdensome and grew "Frankenstein-like" as regional staff across the country bolted on their own unique programming over the years.

Quilty said that the USGS called the software switch "a once in a generation change" in its bid document. For AI, the solution was 20 years in the making. In the '90s, Quilty got his feet literally wet walking in B.C.'s rivers as an aquatic ecologist for both B.C.'s environment ministry and the **BC Conservation Foundation**.

It was during this time that he found himself neck-deep in spreadsheets, unable to make quick and insightful assessments from the volume of on-going data generated by river sensors.

In 2000, Quilty began a PhD at the **University of British Columbia** that focused on developing technology to process real-time water data. In 2003, with a staff of four, he decided to transform his PhD studies into a business case to commercialize the first version of Aquarius.

Quilty's first win was the adoption of Aquarius in 2004 by his former employer, the provincial environment ministry. With this validation in hand, AI then won a small contract with USGS in 2005 to develop a modelling software that converts water-level data to flow rates.

The USGS rolled out the software piece nationally and realized \$2.5 million annually in time efficiencies, said Quilty.

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