

GROUNDED IN CONSERVATION

AGREN'S SOFTWARE HELPS PROTECT WATER, SOIL QUALITY

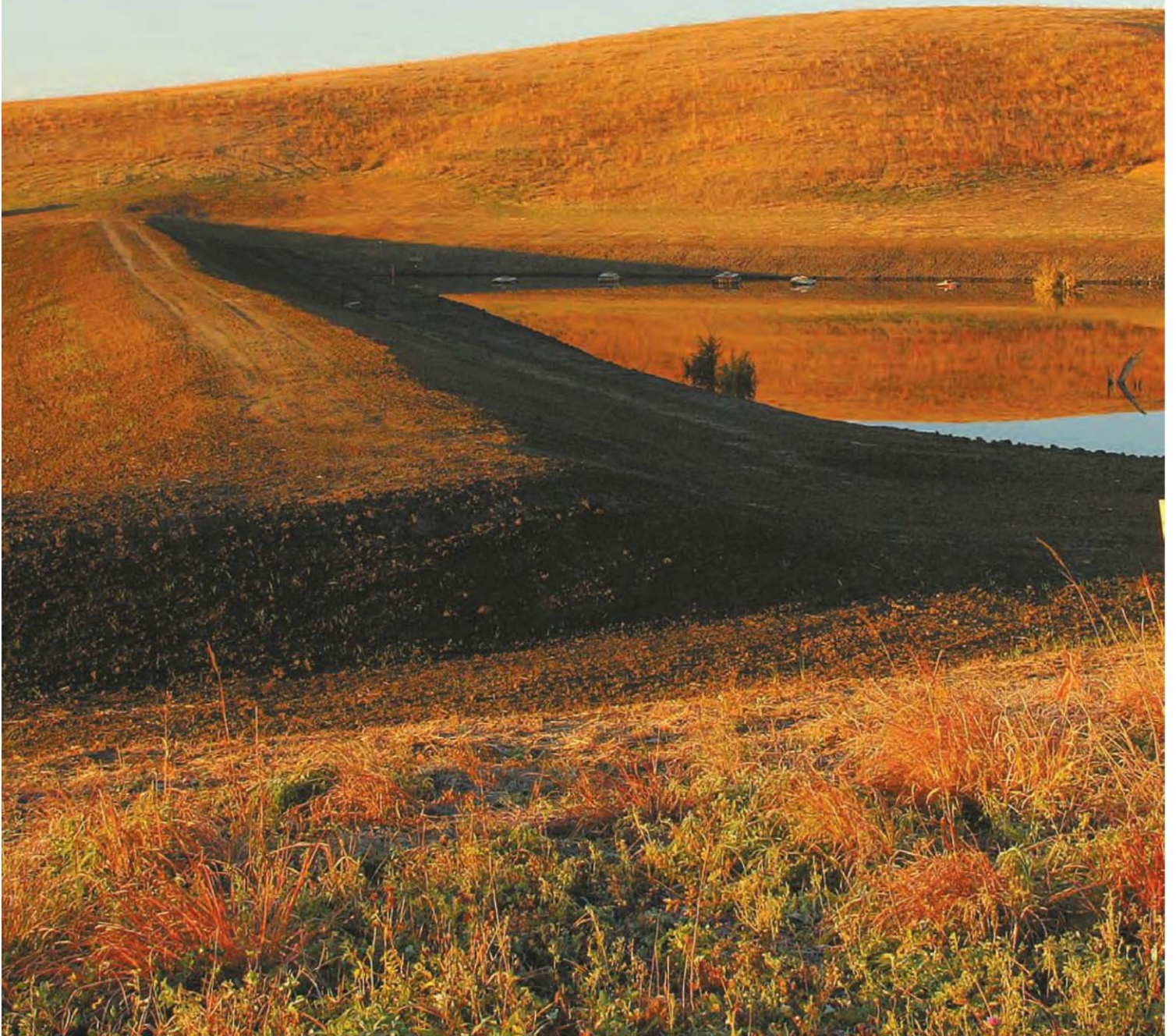


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Although farmers are ahead of the technology curve, thanks to their rapid adoption of precision agricultural equipment, Tom Buman and his brother, Stan, saw a tremendous need for software that can help conservation catch up with modern agriculture.

"Farmers and landowners are looking for a way for conservation to plug into all this technology they have today," said Tom Buman, president of Agren Inc., a private consulting company in Carroll. "Getting more conservation on the ground is what drives us."

Agren has created a number of online tools that can help contractors design ponds, sediment control basins, wetlands and waterways in minutes, rather than hours, while offering landowners a variety of options.

"In the past, conservation required time to meet with landowners and operators, time to create and consider alternatives, time to select the best option for any given situation and time to create additional options if the first one isn't right for the landowner," said Stan Buman, Tom's brother, who serves as vice president of Agren. "We are developing an online suite of tools to get more planning, options and accurate cost estimates done in less time, which leads to more completed projects."

SOLUTIONS LEVERAGE LIDAR AND OTHER TECHNOLOGY

If a landowner wants to install a pond, for example, a contractor or conservation technician can use Agren's PondBuilder software to create multiple options for pond depth, size and cost. The program will then generate an aerial photo with the conservation practice shown. This process, which used to take 40 hours or more using soil maps, aerial photography, paper elevation and contour maps to create a single option, now can be completed in just 30 minutes.

At the heart of Agren's suite of planning tools is a geographical information system (GIS) that leverages Light Detection and Ranging (LiDAR) technology to pinpoint elevations across the Iowa landscape. "The landowner gets input on options, and you can quickly generate every possible pond that could be built on this land," Stan Buman said.

This technology was a tremendous help to Terry Axman, a Carroll resident, who wanted to install a pond on 235 acres of Audubon County land he purchased in 2008. PondBuilder expedited a process that had made little progress during the first few years.

Axman began working with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) Audubon County office in 2008 to discuss options for a pond. By 2010, an initial plan had been developed, but Axman realized he could save some trees on his land by moving a dam slightly. "I now realize the change I requested required a full new design and new drawings," said Axman, who was discouraged and frustrated by the process.

“GETTING MORE CONSERVATION ON THE GROUND IS WHAT DRIVES US.”

Tom Buman
president, Agren Inc.

When he heard about Agren's PondBuilder, he could see its merits immediately. "This program makes the calculations to give you what you need to know about building a pond," said Axman, who worked with Stan Buman.

In less than 30 minutes, Axman could evaluate a variety of options for his pond. He also received a computerized drawing of how his original pond would fit on his land and how the pond would fit if the dam were moved to save trees. "The beauty of PondBuilder was that I could choose different sizes and various locations for the pond. In just minutes I got good cost estimates, along with a drawing of the pond area on an aerial map."

Not only did PondBuilder's results match up with NRCS specifications, but the cost estimates were pretty close as well, according to Axman. "I really appreciate this technology," he said. "Having PondBuilder's options up from the beginning might have avoided our 'false start,' which could have saved NRCS the time of developing a second drawing and would have allowed me to start fishing in my pond sooner."



PHOTO SUBMITTED BY AGREN, INC

AGREN, INC. CO-OWNERS, LEFT TO RIGHT: STAN BUMAN, JAMIE RIDGELY, TOM BUMAN

TECHNOLOGY ATTRACTS A WIDE RANGE OF PROPONENTS

The slow pace of conservation implementation that Axman experienced was the driving force behind Tom Buman's decision to create Agren in 1996. What began as a fledgling company in his basement has grown into a thriving small business that began offering software to clients in late 2009 and early 2010.

Today, Agren offers six different information technology (IT) solutions, ranging from PondBuilder to a soil loss calculator. Agren's software is used in 59 of Iowa's 100 soil and water conservation districts and is also used in Minnesota, Nebraska and Ohio.

The Agren team, which contracts with software developers to create these products, takes conservation personally. "We grew up with an appreciation for nature," said Stan Buman, who was raised on a farm near Harlan. "Dad would take us fishing and hunting, and he instilled the importance of conservation in us from an early age."

Agren's commitment to adding more IT options to farmers' conservation toolbox has been praised by a number of organizations, including the NRCS, the Iowa Department of Agriculture and Land Stewardship, Des Moines Water Works, the Iowa Natural Heritage Foundation, the Iowa Farm Bureau Federation, the Iowa Corn Growers Association and the Iowa Land Improvement Contractors' Association (LICA).

"To me, this is where farmers and contractors need to go to get faster, more precise results that lead to more conservation practices," said Tim Recker, a farmer, past LICA president and owner of Recker Excavating Inc. in northeast Iowa. "I see tremendous potential with Agren's technology."

PUTTING TECHNOLOGY TO WORK

In an era of cash-strapped state and federal budgets, conservation agencies are not likely to add more staff to help farmers and landowners implement practices to protect soil and water quality, noted Stan Buman, a former NRCS employee.

To fill the gap, Agren continues to develop new software that makes it easier and faster for farmers and landowners to find the solutions they need. The team works with subject-matter experts, including university researchers and NRCS engineers, to provide practical, useful tools.

"There are endless opportunities with software development for conservation," said Jamie Ridgely, a co-owner of Agren. "We want to lead the way by working with local government agencies to make conservation planning easy and encouraging the private sector to get involved."

Conservation technicians and contractors across Iowa are taking advantage of Agren's online solutions, as well as Agren's training and customer service support. "We're using the program to advise landowners and farmers about their options on pond sizes and waterway sizes," said Denis Schulte, an NRCS district conservationist who serves Sac and Calhoun counties.

Agren's work is attracting attention beyond the ag community. Angel investors from various organizations have been working with the company to finance continued growth. That's inspiring to Stan Buman. "There's always more than can be done to improve conservation, and we want to facilitate farmers' success," he said. "Technology is helping Agren put the right conservation practices in place to maximize environmental benefits." ■