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EDUCATION > Wed., July 18, 2018

University of Iowa, Iowa State among recipients of \$1 million water quality grant

Researchers will gather water quality information from Upper Mississippi River basin states



the Iowa Water Quality Information System in Tiffin on Tuesday, Mar. 20, 2018. (Stephen Mally/The Gazette)

A test strip from Clear Creek near Half Moon Avenue sits on a clipboard of results as Bill Waldie tests for nitrates for

IOWA CITY — The University of Iowa is leading a \$1 million federal grant to gather and share water quality information from five states along the Upper Mississippi River.

"You don't want to create the same algorithm 10 times," said Ibrahim Demir, a UI assistant

professor of civil and environmental engineering. "Reusing the data for multiple studies is

The three-year grant, shared with Iowa State University and the University of Illinois at Urbana-Champaign, is part of the National Science Foundation's big data program to get researchers to collaborate and share what they know to push scientific discovery further.

good for the public." The UI will get \$600,000 of the grant to create a web-based information system gathering all data that exists on water quality from Iowa, Illinois, Minnesota, Wisconsin and Missouri.

The university has a jump start on this goal with its **lowa Water Quality Information System**, a network of more than 70 sensors on streams and rivers that gather information, including nitrate levels, pH, and dissolved oxygen concentrations, discharge rates, and temperature.

The sensors provide real-time data shared online. This will be combined with occasional water readings from volunteer citizen scientists and other data from the U.S. Geological Survey and Environmental Protection Agency, Demir said.

"We'll take what we learned from IWQIS, but much larger," Demir said.

ISU, which will get \$100,000, will create computer modeling of how nutrients, inluding nitrate and phosphorus — flow through the Upper Mississippi watershed, Demir said.

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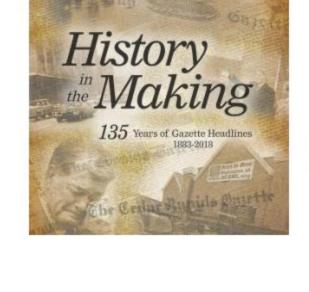
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High levels of nitrate can cause algae blooms in lakes, streams and oceans that can produce toxins harmful to people and animals. The bulk of these nutrients wash from Midwest farm fields.

The University of Illinois, the home of the National Center for Supercomputing Applications,

will get \$300,000 of the grant to handle data communication and storage for the project.

The grant will get underway this fall, with data available for public viewing and use likely in 2020, Demir said. Other UI researchers include Chris Jones, Witold Krajewski, Keith Schilling and Larry Weber.

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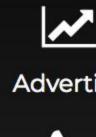
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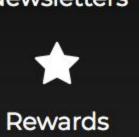






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