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Barnali Dixon's groundbreaking research recognized at national NIH conference

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Barnali Dixon, Ph.D., in the Geo-Spatial Analytics Lab. Photo by Rebecca Johns.

Barnali Dixon, Ph.D., associate professor of [environmental science, policy and geography](#) at USF St. Petersburg, recently returned from a national conference organized by the [National Institutes of Health](#) about the impact of nitrogen on human health.

Dr. Dixon, director of the USF St. Petersburg Geo-Spatial Analytics Lab, was the only groundwater and soil scientist invited to the conference, “Impacts of Excess Nitrogen in the Environment on Human Health,” held Nov. 13 and 14 at the NIH campus in Bethesda, Md.

The conference focused on the impact of excessive nitrogen on human health and brought together environmental, biomedical researchers and public health experts.

Dr. Dixon made an oral presentation on statistical regional modeling of nitrate in groundwater, based on her innovative research published in *Hydrogeology Journal* in 2009. The research was funded by the *Florida Water Resources Research Center*.

“It was an honor to be invited to the conference as the only soil and groundwater scientist,” Dr. Dixon said.

“Dr. Dixon’s work is an exemplar of the importance of integrating knowledge about our environment and human health,” said Norine Noonan, Vice Chancellor for Academic Affairs. “It is a tribute to Dr. Dixon and to USFSP that her work is acknowledged by her peers.”

The goal of the conference was to gather experts across disciplines to review the state of the science of the effects of excess nitrogen in the environment. Excess nitrogen can be harmful to humans, and Dr. Dixon’s research can help focus limited resources on areas of highest risk.

“Her research is a very good example of the use of statistical methods to predict the risk of nitrate contamination in rural wells,” said Tom Nolan of the [U.S. Geological Survey](#).

Excess nitrogen in groundwater is a very serious problem in the U.S., Dr. Dixon said, particularly in states like Florida with a large number of septic tanks, or states where intensive agriculture and high fertilizer application rates.