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USU Symposium concludes 5-year, NSF-funded water science effort

By Kevin Opsahl staff writer Jul 13, 2017

Jeff Horsburgh speaks at the iUtah Symposium on Thursday at USU.
Eli Lucero/Herald Journal

USU professor Jeff Horsburgh remembers being on a committee years ago with his colleagues from USU and other Utah schools trying to come up with a proposal to get money from the National Science Foundation.

“It was really kind of interesting. We were trying to feel out people from the other institutions because there can only be one proposal like this from the state when we became eligible for this pot of funding from NSF,” said Horsburgh, assistant professor of civil and environmental engineering, before the iUTAH Symposium, July 13 and 14, at Utah State University. “We emerged with a great proposal.”

That proposal was the basis for iUTAH, which stands for innovative urban transitions and aridregion hydro-sustainability, a five-year, $24 million effort funding from NSF to advance water science research.

On Wednesday and Thursday, more than 120 participants of iUTAH — including university students and researchers, partners from industry, government agencies and nonprofit organizations — came together on USU’s campus for a symposium to discuss the outcome of this NSF-funded effort.

iUTAH is currently on a no-cost extension from the NSF to finish up any existing research and an assessment of the project.

Jeannine Huenemann, communications specialist for iUTAH, reflected on iUTAH’s efforts since 2012.

"It started five years ago with the idea that water research and education were lacking in the state," she wrote in an email to The Herald Journal. "Now we have a large contingent of scientists, researchers, and students all working on the problem of water and air and what to do about it. This really is an exciting and unprecedented happening."

According to a USU news release, over 800 people at all 11 of Utah's higher education institutions have participated in iUTAH. In addition, over 100 organizations have partnered on the research, training and education involved in the project.

What's more, iUTAH has generated $30 million in external funding, over 500 presentations and over 200 papers, the news release stated.

In an interview, Michelle Baker, a USU professor who directs iUTAH, spoke about the importance of having a project like iUTAH.

"Water is one of our most limited resources for our economic development and wellbeing of Utah's population," she said. "Our goal is to really enable people who are interested in science for Utah's water future. We have programs to stimulate research discovery and training students."

Baker believes iUTAH's biggest accomplishment was "lowering barriers for collaboration across the state."

"iUTAH doesn't think of itself as a USU project," she said. "The people from USU who participated in it always tell me the thing they think is the best thing is getting to know their colleagues in Salt Lake City, Cedar City and things like that."

Lance Houser, an engineer who works for Logan, remembers five years ago when engineers were trying to evaluate the city's water quality without using extra staff.

Houser heard about iUTAH and it turns out USU researchers were curious about many of the same things Logan officials were regarding the city's water. So Logan provided USU areas in the city were researchers could do sampling and monitoring for water flow and quality.

Houser is pleased iUTAH has yielded results he can actually use.

"It's nice to have a program that's focused on Utah instead of just back east," Houser said. "A lot of the decisions that have been made in the past have been made on studies and research done in … a lot of areas back East, decisions on management procedures. So, dealing with EPA, we now have another data source that says, 'Maybe this is not the best approach in this part of the country.'"

Caleb Buahin, a USU doctoral student in civil and environmental engineering who attended the symposium on Wednesday, said he heard about iUTAH through his adviser.

"Water issues transcend several research disciplines, so the opportunity to work and collaborate with different researchers, I thought, was a great opportunity," he said. "I've built a lot of collaborations that I can leverage going forward in my career."

Horsburgh told conference attendees on Wednesday his success is closely tied to iUTAH.

In an interview, he elaborated on that point, saying he was able to go from being a USU research associate to having a tenure-track position at the school.

His career at Utah State University hinged on iUTAH, Horsburgh said.

Horsburgh's research with iUTAH dealt with tracking what happens to water quality and quality across Utah's "mountain to urban gradient." His team put sensors to track data on the Red Butte Creek and the Provo and Logan rivers.

"We learned a lot about water quality, how people are using water, managing water," Horsburgh said. "We've learned about people's relationship with water, how they feel about water, what they know about water and their individual water use."

Horsburgh believes iUTAH was well worth the time and effort over the last few years.

"We've worked hard, made a lot of relationships, and now I see a bright future coming out of this," he said.

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