

# We are iUTAH

SCIENCE  
FOR UTAH'S  
WATER FUTURE





**LOGAN**



**OGDEN**



**SALT LAKE CITY**



**CEDAR CITY**



**BLANDING**



**PROVO**



**OREM**



**ST. GEORGE**



**EPHRAIM**



Dear Friends of iUTAH,

What follows is a collection of reflections about what iUTAH has meant to all of you. My favorite quote that has come out of all of this contemplation came from Courtney Flint as she said, “We expanded our horizons to include each other’s science.”



iUTAH has been doing water science research, education, training, and outreach in Utah for five years, thanks to the generous support of the National Science Foundation through the Established Program to Stimulate Competitive Research (EPSCoR). As our eligibility in this program comes to a close, we are now considered a graduate state, joining the ranks of Iowa and Tennessee, and no longer eligible for new EPSCoR awards.

We have worked hard over the past five years building capacity for further funding, sharing knowledge, inspiring dialogue, and have seen the broader impacts of our efforts to reach a diverse audience through education, training, and outreach. Before we move on and go our separate ways, we should reflect on this success and find ways to continue to be included in each other’s science for Utah’s water future.

Sincerely,

Michelle Baker  
iUTAH EPSCoR Project Director



# iUTAH Milestones 2012-2017

*How did we get where we are today?*



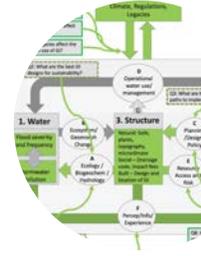
NSF EPSCoR **awards funding** to the iUTAH project beginning on August 1 for five years

SUMMER 2012

Household **survey conducted** to learn public perceptions of water use in the state



SUMMER 2014



**Published iSAW** model, an integrated framework for human-water system sustainability

SPRING 2015

Collaborations brought Alan Alda Center for **Communicating Science** to Utah



FALL 2016

FALL 2013



**Data from** GAMUT network of three study streams first available online

FALL 2014



The Leonardo museum opens long-running **water exhibit** engaging over 270K visitors

SUMMER 2015



Researchers and students engage in "**synoptic sampling**" of two study streams

# BUILDING CAPACITY

**\$29.5 million**  
in funding  
from **80**  
research  
proposals as  
a result  
of award



# We are iUTAH

“Building bridges that strengthen connections

“Building bridges that strengthen connections among Utah’s outstanding universities and colleges has been the highlight of my iUTAH experience. It is so rewarding to see outstanding inter-institutional and interdisciplinary research and training emerge. And it is even more gratifying to know that such connections will persist in coming years as new opportunities emerge.”



**JIM  
EHLERINGER**

**UNIVERSITY  
OF UTAH**

Faculty/Researcher



**JACKIE GRANT**

**SOUTHERN UTAH UNIVERSITY**

Faculty/Researcher

“Able to bring water conservation programming to the local community in Cedar City

“Participation in iUTAH helped set the direction for my teaching-through-research program at Southern Utah University. Through iUTAH I was able to develop research partnerships that benefited undergraduate students in and out of the classroom. Because of iUTAH’s strong emphasis on education, outreach, and diversity, I was also able to bring water conservation programming to the local community in Cedar City through outreach at the Garth and Jerri Frehner Museum of Natural History.”

“Over the past five years I have built much of my research program around the iUTAH project. The monitoring infrastructure and outreach program have been a critical foundation for getting additional research grants to study snowpack, air quality, and water quality in northern Utah. iUTAH has given me the opportunity to network with students, researchers, and water managers across the state, which will continue to provide benefits long after the project is finished.”

Critical foundation for getting additional research grants



**GREG CARLING**

**BRIGHAM YOUNG UNIVERSITY**

Faculty/Researcher



# SHARING KNOWLEDGE

AGU PUBLICATIONS

## Earth's Future

### RESEARCH ARTICLE

10.1002/2014EF000295

## iSAW: Integrating Structure, Actors, and Water to study socio-hydro-ecological systems

Rebecca L. Hale<sup>1</sup>, Andrea Armstrong<sup>2</sup>, Michelle A. Baker<sup>3</sup>, Sean B. Buahin<sup>6</sup>, Martin Buchert<sup>7</sup>, Todd Crowl<sup>8</sup>, R. Ryan Dupont<sup>9</sup>, James Endter-Wada<sup>11</sup>, Courtney Flint<sup>2</sup>, Jacqueline Grant<sup>12</sup>, Sarah Hinn Jackson-Smith<sup>2</sup>, Amber S. Jones<sup>6</sup>, Carlos Licon<sup>13</sup>, Sarah E. Null<sup>5</sup>, Pataki<sup>10</sup>, David Rosenberg<sup>6</sup>, Madlyn Runburg<sup>15</sup>, Philip Stoker<sup>7</sup>

#### Key Points:

- Interdisciplinary framework for human–water system sustainability.
- Water system components include structure, actors, and water.
- Framework can be applied to any natural resource issue.

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communicating  
science  
through 210  
publications in  
peer-reviewed  
journals



**ZACH AANDERUD**

**BRIGHAM YOUNG UNIVERSITY**

Faculty/Researcher

“iUTAH has provided a platform for my research to flow into rivers and lakes

“As a microbial and ecosystem ecologist, much of my research used to center around water, more in the direction of bacterial responses to water in soils. iUTAH has provided a platform for my research to flow into rivers and lakes. I am committed to water quality research and will

continue in this research vein for years to come. I am indebted to the people of iUTAH, and am continually impressed by the knowledge, willingness to share, and enthusiasm for high-quality research expressed by my collaborators.”

**VIVIANE BAJI**

**UTAH STATE UNIVERSITY**

Undergraduate & iFellow



“As an iFellow, I studied human-environment interactions, and learned all about research methods, data collection, and analyses. I also had a few really fun and interesting days of working with iUTAH researchers in other areas, learning how to sample water and understand river hydrology. My research became part of my honors thesis on water scarcity concerns in the Utah population. I am so grateful for the wonderful opportunities I received through iUTAH.”

I studied human-environment interactions, and learned all about research methods, data collection, and analyses

**COURTNEY FLINT**

**UTAH STATE UNIVERSITY**

Faculty/Researcher



“An unsung success from iUTAH has been the cultural shift among researchers to recognize and engage a vast array of ideas, methods, data, and possibilities across water science disciplines. I don’t think it’s stretch to say that most iUTAH researchers think

“Cultural shift among researchers to recognize and engage a vast array of ideas

more broadly about the water system and what can be done when we integrate social, built, and natural structures and processes.”

We are

iUTAH

# INSPIRING DIALOGUE

**543** scholarly  
presentations  
and posters  
and **155**  
collaborations



*Credit: University of Utah Office  
of Undergraduate Research*

# We are iUTAH



**RYAN  
DUPONT**

**UTAH STATE  
UNIVERSITY**  
Faculty/Researcher

“The power in iUTAH has been in facilitating interdisciplinary interactions that have led to some great work and a number of externally funded proposals to EPA and USDA that have been very well received. Without iUTAH, this interdisciplinary interaction and these projects would not have happened.”

The power in iUTAH has been in facilitating interdisciplinary interactions”

**JULIE KELSO**

**UTAH STATE UNIVERSITY**  
Graduate Research Assistant



“Conduct research and discuss watershed management with such a broad interdisciplinary group

“It has been great to conduct research and discuss watershed management with such a broad interdisciplinary group like iUTAH. It has prepared me to work with similar large groups working to solve watershed management issues in the future.”



**SARAH HINNERS**

**UNIVERSITY OF UTAH**  
Faculty/Researcher

“Perhaps the greatest impact of iUTAH for me has been the opportunity to connect with faculty, students and stakeholders from around the state, creating opportunities to learn from one another, collaborate, and in my case, even co-teach a course across two campuses.”

Connect with faculty, students and stakeholders from around the state, creating opportunities to learn from one another”

# CREATING BROADER IMPACTS

engaging  
diverse  
audiences  
through  
education,  
training, and  
outreach



*Credit: University of Utah Office  
of Undergraduate Research*



## DYLAN DASTRUP

BRIGHAM YOUNG UNIVERSITY

GAMUT Technician

“I have enjoyed connecting with state and agency groups, and am actively involved in working on harmful algal blooms in Utah Lake

agency groups, and am actively involved in working on harmful algal blooms in Utah Lake.”

“You could say that I have grown up with iUTAH. I started my experience with iUTAH as an undergrad at UVU working on a research catalyst grant.... Currently, I am the Provo Watershed GAMUT Technician. In this role, I have enjoyed connecting with state and agency groups, and am actively involved in working on harmful algal blooms in Utah Lake.”



## MADLYN RUNBURG

NATURAL HISTORY MUSEUM OF UTAH

Education/Engagement Advisor

“iUTAH has been a unique and rewarding professional experience. Being part of a diverse team of participants to better understand and communicate an important area of scientific research – with a strong focus on local issues – itself has been fulfilling.”

Being part of a diverse team of participants to better understand and communicate an important area of scientific research

## ADRIENNE ANDREWS

WEBER STATE UNIVERSITY

Diversity Enhancement Advisor



“I have learned a great deal about the complexity of water and the impacts it has on all of our communities, with a special emphasis on communities of color. Perhaps most importantly, I have developed relationships with educators and practitioners across the state who are interested, willing and ready to come together to solve the problems we all face – together!”

I have developed relationships with educators and practitioners across the state who are interested, willing and ready to come together to solve the problems we all face – together



## SIMONE KA-VOKA JACKSON

UNIVERSITY OF UTAH

Undergraduate/Graduate Researcher

“Through my experience with iUTAH, I have gained knowledge and skills in ecology and hydrology

“Through my experience with iUTAH, I have gained knowledge and skills in ecology and hydrology. New opportunities have arisen with conferences, collaborations with other scientists, and graduate school. All of these have helped me develop my career path and goals for the future.”

**SARAH NULL**

**UTAH STATE UNIVERSITY**

Faculty/Researcher



“My favorite part of the iUTAH project has been meeting and working with water resources experts throughout the state. In fact, I continue to collaborate with water researchers that I have met through iUTAH for ongoing projects funded by the Environmental Protection Agency and National Science Foundation. I will most miss working with the diverse group of students involved in iUTAH’s water sustainability research.”

My favorite part of the iUTAH project has been meeting and working with water resources experts throughout the state

**DAN BEDFORD**

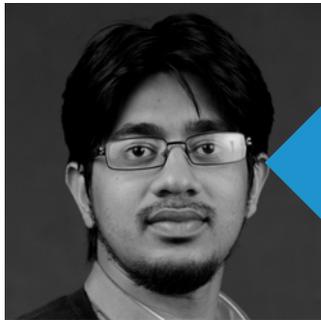
**WEBER STATE UNIVERSITY**

Faculty/Researcher



iUTAH really helped me become a part of a culture of collaboration

“iUTAH really helped me become a part of a culture of collaboration, at all levels. Because of the project, I have collaborative relationships with colleagues in multiple disciplines at institutions all up and down the Wasatch Front, as well as on my own campus.”



**YUSUF JAMEEL**

**UNIVERSITY OF UTAH**

Graduate Research Assistant

iUTAH has provided me with a chance to look at research questions from different points of view

“Besides helping me in my own scientific research, support from iUTAH has provided me with a chance to look at research questions from different points of view, and allowed me to appreciate the importance of collaboration and holistic approaches to answer real life research problems.”

**MAURA HAHNENBERGER**

**SALT LAKE COMMUNITY COLLEGE**

Faculty/Researcher



“Participating in iUTAH has given me opportunity to connect and collaborate with colleagues at a variety of institutions. These cross-institution relationships have allowed me to get involved with large-scale projects that focus on research.”

Cross-institution relationships have allowed me to get involved with large-scale projects that focus on research



## CONTACT US

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NSF support:

NSF EPSCoR  
Research Infrastructure Improvement Award

NSF #OIA-1208732