

WHAT MOTIVATES CONSERVATION in Areas of Abundance?

By Matt Forster

“When the well’s dry, we know the worth of water.” —*Poor Richard’s Almanack*, 1746

In the summer of 2015 the drought in California entered its fourth year. It’s not the state’s first drought—water has been scarce in California for decades—and, as a result, the average Californian is motivated to conserve water. But what motivates people to conserve in parts of the country where there is an abundance of water? Why do people in Michigan, let’s say, work toward lowering their water usage?

This is the question being asked by the Abundant Resources Research Group (ARRG) at Michigan State University. Coming from a range of disciplines, the ARRG’s four faculty researchers—Adam Zwickle, Joe Hamm, Sara Fingal, and Bruno Takahashi—are contributing their expertise to researching these motivations.

According to Adam Zwickle, “When it comes to resource management, all the focus has understandably been on areas of scarce resources.” With its focus on areas of abundance, the team’s research is exploring new territory. “When you think about sustainability from a big picture—planetary or continental—perspective, this is a closed system. So conserving water in the Great Lakes is not directly impacting, let’s say, the Central Valley in California, but it’s still good.”

Pilot Study

The first step for the team was to develop a proof-of-concept study. For this, they interviewed facility managers on the campus of Michigan State University. Since water is a relatively cheap resource on campus and there is no shortage of supply, the team wanted to know what motivated these individuals to make decisions to conserve water. The interviews were conducted and analyzed by Media and Information doctoral student Kristen Lynch, who presented a poster on the research in 2015 at the annual Environmental Science and Policy Program Research Symposium.

The research identified four main areas of motivation. The first two areas were expected. Managers felt they had an economic responsibility to conserve as well as a mandate from the University. “The other two had nothing to do with Michigan State University, nothing to do with dollars and cents, nothing to do with job description,” Zwickle said. “It had to do with experiences they had on rivers and lakes as children in Michigan and thinking ahead and wanting their own children to have similar experiences with water in the future.”

The Office of the Great Lakes and the Water Heritage Project

Jon Allan is the director of the Michigan Department of Environmental Quality’s (MDEQ) Office of the Great Lakes. The office is releasing the final

version of its comprehensive water strategy, which lays out a 30-year plan for managing this critical resource in Michigan. In creating the report, *Sustaining Michigan’s Water Heritage: A Strategy for the Next Generation*, the project team at the Office of the Great Lakes talked with residents around the state and asked them what they valued about the Great Lakes. These interviews were documented in the report, but the transcripts have not undergone close analysis.

“The MDEQ has a lot of data, all these transcripts,” said Zwickle, who got in touch with Allan after hearing the director speak on Michigan Radio. “We thought this would be a great way to expand the research. It is secondary data, so there are some issues—we didn’t write the questions—but we analyzed all that data and are already finding similarities with the pilot study conclusions.”

The interdisciplinary make-up of ARRG means that each member of the team not only brings specific expertise, but uniquely benefits from participation. Sara Fingal approaches this research as an environmental historian. She has been working with a graduate student on the Water Heritage project and had several meetings with members of the MDEQ. “These interviews revealed concerns about water diversion from the Great Lakes and the conservation of local and state resources for recreation and drinking water,” she said. “I’m getting critical insight into how ideas about water in the Great Lakes region have changed over time and the concerns that have persisted over multiple generations.”

Director Allan, for his part, is happy to have the team working with his office. “Their work is very complementary to our own,” Allan said. “By applying content analysis, they are identifying the language people use to talk about these issues, which tells us how they think about these issues as well.”

“We like the way they come at this, under the lens of abundance,” he said. “The solution sets you have in areas of scarcity—the politics of scarcity—don’t apply when you live in areas of abundance. The team is helping us develop different solution sets.”

BEHAVIOR

From left to right:
Adam Zwickle, Sara
Fingal, Joe Hamm, and
Bruno Takahashi

Perception Is Everything

As the team looks at how people make decisions about resource allocation from a perspective of abundance or scarcity, how people perceive abundance and scarcity becomes important, explained Joe Hamm. “Some of that will be driven by whether the resource itself is abundant or scarce, but we also know that people can look at the same body of water and see it as relatively abundant or scarce as a function of, for example, the use they have in mind for the water or the metric by which they determine scarcity.”

With that in mind, ARRG is also working with water user groups. This work is being led by Brockton Feltman, a graduate student in MSU’s Community Sustainability program.

“The water user groups that I am studying are a product of Michigan’s adoption of the Great Lakes – St. Lawrence Compact,” Feltman said. “The Compact places minimum flow standards on Michigan waterbodies and recognizes the right for water permit holders and local government officials to collectively design allocation behaviors for satisfying demands while meeting environmental standards. This is basically collaborative governance within watersheds, introducing a degree of authority decentralization that helps ensure rules can be made more congruent with local realities while still meeting other Michigan water laws.”

Feltman is interviewing farmers. “My research centers on the question: What social-ecological variables do Michigan farmers believe to be indicators of water availability?” he said.

It’s an important question. As Feltman explained, “Literature on collaborative governance finds that the likelihood of participants cooperating is the degree to which members share similar beliefs about how water availability should be measured.”

A WaterCube Story

The ARRG team came together under the MSU WaterCube initiative, a unique funding model that promotes interdisciplinary research around water. Unlike grant-funded research, which requires a fully fleshed out proposal, the WaterCube gives its teams more autonomy, allowing them to take an idea and determine how they will approach it as they go.

The program works like this: Faculty members apply to their dean for a token, which represents \$20,000 in research spending over two years. Half of each token is funded by the Environmental Science and Policy Program. The other half is funded through the colleges using a flexible funding mechanism. Three or more collaborators with tokens then come together to create a WaterCube team—they call this *cubation*. Each team must include members of at least two colleges, and one member of the team should be a new partner.



Each member of ARRG brings something unique to the work. Joe Hamm explained, “The reason we identified the team we have is that each of our areas is one we expect to be important for abundant resource management.” In Hamm’s case, he has spent time researching trust. “Trust tends to be predictive of voluntary behavior,” he said. “Historically, this has been done in the scarce resource context where institutions ask people to voluntarily act to prevent scarcity issues but there is good reason to believe that trust would be important in an abundant context.”

One of the four cube members, Bruno Takahashi, summed up the value that comes from the WaterCube approach: “I am a researcher of environmental communication, including the role of journalists. I was trained as an environmental social scientist, so I feel comfortable working with the other members of the cube. I am definitely learning more about the integration of multiple perspectives, especially from a humanities perspective, something that I haven’t been really exposed to in the past.” 🌱

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