

Exploring Water Complexity and Uncertainty With Practitioners and the Public Using WaterSim.

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Thurs, February 26 - 10:30 a.m. - 12:00 p.m. - Marshall 531

The Decision Center for a Desert City (DCDC), a center with the Julie Anne Wrigley Global Institute of Sustainability at Arizona State University, is a National Science Foundation (NSF) center funded under its Decision Making Under Uncertainty (DMUU) program since 2004. The goals of NSF's DMUU have been to support research, education, and outreach that increase basic understanding of decision-making processes and of the information needed by decision makers; to develop tools to support decision makers and increase their ability to make sound decisions; and to facilitate interaction among researchers and decision makers. DCDC is structured as a boundary organization between academic science and practice, focusing on decision making under uncertainty for issues related to water resources, regional growth, and climate change. DCDC organizes and funds both academic research and extensive stakeholder engagement. DCDC philosophy is that better research and practice occur when researchers and stakeholders collaborate on key science and policy questions.

Much of our research and engagement is related to the application of an anticipatory governance approach to decision making under uncertainty. One of our primary tools for such efforts is exploratory scenario analysis. We have an urban water and demand model for central Arizona, WaterSim, that is spatially explicit to the 32 water utilities in the Phoenix Active Management Area. The model includes a wide range of water resource demand and supply management strategies including demand reduction, effluent reuse, water banking, water transfers, and new supply development (such as desalination). WaterSim includes simulations of the Colorado River and Salt River storage and rights allocation as well as the region's aquifer system so that various external factors such as drought and climate change can be modeled. We have four primary clients in our work using WaterSim, university water policy researches, secondary and university educators, the general public, and water managers.

We will present details about the WaterSim model, various methods for accessing and using the model, including our new web interface, discuss how the model is used (or is hope to be used) with our targeted clients, and discuss opportunities for partnering with UA researchers.

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