April 10, 2019 — Utah Water Research Lab Faculty Dr. Jeff Horsburgh, an Associate Professor of Civil and Environmental Engineering at Utah State University, recently issued a challenge to USU students called the Cyberinfrastructure for Intelligent Water Supply (CIWS) Data Visualization Challenge. Beginning in December of 2018, and ending March 1st 2019, the goal was to have students develop a visualization of high resolution water use data. These visualizations were focused on creating displays that would be helpful for either water users or water providers.

After reviewing the submissions three USU students, Mahyar Aboutalebi, Esther Davis, and Ahmed Gharib, were awarded money for their research and efforts.

Mahyar Aboutalebi, a grad student at the UWRL, developed a procedure and code for disaggregating the water use data for a residence into component uses and then created a software program that enables a user to visualize water used by each of those components.

Esther Davis, an undergraduate student in Mechanical Aerospace Engineering, and Ahmed Gharib, a visiting graduate student in the College of Civil and Environmental Engineering from Egypt, both developed innovative ways of slicing and aggregating the data to highlight the timing and volume of water use. Their approaches highlighted the timing of water use behavior, which can be important for water managers to better understand when water demands are highest.

Results of the challenge can be viewed in the challenge GitHub repository.