



Internet of Water

State Agency P2P

Spotlight



Challenges, Solutions, and Lessons Learned with **Adel Abdallah**

Western States Water Council

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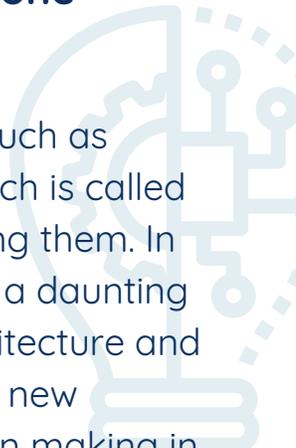
What are challenges facing your agency in regard to its management or use of water data?

Our mission in WaDE is to assist agencies in our eighteen member states in sharing their water administration, use, and planning data in a consistent formats and terminologies to enable regional analysis and inform water planning efforts. There is a vast difference in how water data across the eighteen western states can be accessed, structured, and described. Agencies even within the same state may have different protocols and policies in publicly sharing their water data. So as you can imagine, supporting all these differences into a coherent platform can be challenging.



But what is even more challenging is the pace of change in policies, data sharing protocols, and technologies not only among all the member states but also within our own program too. What was the state-of-art technology in our field just five years ago has gone outdated today.

In addition to technology change, there is also a change in the way users such as researchers and decision makers want to access and analyze the data which is called use cases. Use cases evolve over time and we need to keep up in supporting them. In response to this rapid change in technology and use cases, we have taken a daunting task over the past year and half in completely overhauling our WaDE architecture and database into a 2.0 system. We are very excited about this update and the new possibilities it will bring to support regional water data analysis and decision making in space and time across the west.



What are lessons your agency has learned regarding water data management and use?

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The WaDE Program was founded within a long standing and trusted broker among the western states, the Western States Water Council (WSWC). The WSWC thus provided the environment for WaDE to flourish important relationships and allow WaDE staff to work closely with both water and IT managers within our member states. Although enabling streamlined access, management, and analysis to water data appears to be an IT solution for a technical problem, **we quickly learned in WaDE the importance of relationships with the institutions and stewards of the data.** Building those relationships and having a shared understanding of the process can take years and it is important to listen to and accommodate the unique differences in technology and policy among our member states agencies. Data sharing is not necessarily a top priority to an IT or water managers busy schedules. It is also important to keep in mind that data sharing should be a two way street where we are not only ask for data (lots of it), but we also provide both technical and financial assistance to the data providers as much as possible. More importantly, its important to engage the data providers with the decision-making process on how their data is being used and what new insights we can offer them to learn from their data.

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What potential solutions is your agency exploring to meet its challenges?

Our WaDE approach in addressing the inherent differences in our state agencies' data has been to focus on a common denominator among them. It is tempting to try to support all their unique data and metadata structures but that is a fool's errand. We hired energetic and smart interns to help us in writing code to import many state water datasets into WaDE and to offer assistance to our state agencies as well. It is exciting to see the interns apply and polish their skills in a real-world application. In addition, it has been very satisfying to collaborate with other notable organizations who work on similar problems where we can exchange ideas and solutions with them, such as the Internet of Water (IoW) and the Consortium of Universities if Advancement of Hydrologic Sciences Inc. (CUAHSI). The successes we had with WaDE 1.0 led to more funding that allowed us to hire an IT contractor that advises us and implements the latest technologies for WaDE 2.0. We hope to continue to work with them on developing a front-end portal for WaDE to allow the public to access its data in a friendly manner. There is always more work to do than we have time for, and we are fortunate to have interns, collaborators, and the IT contractor to help us accomplish our goals and help them along the way.

Get in touch with Adel to learn more about WaDE's collaborations with states to help modernize their water data Infrastructure!

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12 Years of Experience in Water

Skills: Modeling water systems, designing databases to manage disparate water data, crafting use case to communicate insightful data stories, and herding cats :)