2023 National Water Use Data Virtual Summit

Wednesday, February 15th | 9:00amMT-11:30amMT

Hosted by:

SUMMARY

Background:

The 2023 National Water Use Data Virtual Summit was held on Wednesday, February 15th at 9amMT/11amET. Hosted by the Interstate Council on Water Policy , Western States Water Council, US Geological Survey, and the Lincoln Institute for Land Policy-Center for Geospatial Solutions/Internet of Water Coalition. This 2.5-hour virtual summit was designed to address important topics to further evaluate state and interstate water data interests and needs. It was a virtual convention following up on productive conversations held at the 2022 National Water Use Data Workshop on August 16-18 in Salt Lake City, Utah.

We welcomed more than 80 attendees from across the country, representing state, local, regional and interstate water management agencies as well as IT and technical/water data management professionals.

The Summit was divided into two sessions where the first session focused on the topic of Water Data QA/QC and the second topic focused on water data sharing limitations and policies. Each session included two guest speakers and six breakout groups that discussed the topic among a smaller group. The agenda is available online at https://icwp.org/opportunities/2023-national-water-use-data-virtual-summit-registration-info/

Session 1: Water Data Quality Assurance/Quality Control

Presentations by:

1. Tara Moran – *California Water Data Consortium*

   The Consortium is a nonprofit organization that supports state agency implementation of the open and transparent water DATA Act, which was passed in 2016. It is a venue for state and non-state partnership around data governance

decisions. In California, like so many other states, and internationally, there is an increasing interest in water and water data but there's often still insufficient recognition around the importance of data QA, QC protocols, and really the investments necessary to support high-quality data collection, the infrastructure to support it, and data standards. As a result, the Consortium has prepared a report aimed at developing a better understanding of the data challenges and data and the impacts that those data challenges had on a broad range of users across California.

After visiting with a long list of stakeholders, the first takeaway is that there are critical data gaps that are really hindering people's ability to operate and make water management decisions. The second takeaway is that there are insufficient data quality and QA/QC processes and inconsistency in the data format and collection practices associated with the collection of those data. There is a growing sense of urgency considering climate change and its impacts on water, therefore lending to greater need to improve data quality through improved data QA/QC.

2. Greg Gearhart –*California Water Resources Control Board*

CWRCB is made up of 10 Water Boards in California, of which nine are regional hydrographic areas and the tenth Board where Greg works has independent authority on oversight of water quality data and regulatory practices, water rights, drinking water, and financial assistance. Greg's division serves as an interface between the data stewards within CWRCB's various 2500 employees, 100 plus programs, and 30 plus legacy data systems as well as engage with public entities such as USGS and Western States Water Council.

Through its stakeholder engagement experience, Greg's division has learned that do a lot of engagement in order to understand what data are the most important and where improvements can be made in the data pipelines and lifecycles. CRWBC has a dedicated Data Quality Assurance officer for this purpose. The integrated reports team has helped to improve the value-add of water quality data to aid in decision-making.

Session 1 Breakout Groups
Prompt Questions:

1. What is your QA/QC process for water use data?
2. Sometimes prescriptive data structures are useful, but they can also be challenging to comply with. What are some examples of data structure systems that allow for flexibility within the QA/QC process?
3. Can data QA/QC processes be standardized? What would be the pros or cons of doing so?

Responses:

- Emphasis on how quality of data at the initial entry into the system is important. Good quality data is very important.
- What is the truth in the data?
- There is interest in more standardized methodologies but standardization may be a challenge – guidelines for best practices would be helpful.
- Documentation is key. How do we ask for the right documentation from those that are reporting data, so that we can really have a good understanding of how it was collected?
- Standard checklist/script-based process would be useful
- Standardization would bring challenges; would take dedicated resources and need room for flexibility and customization.
- Need to invest in data infrastructure.
- Prescription of standards across a large body of reporters should have states talk to the local levels to find out what works and create trust.

Session 2: Water Data Sharing Limitations & Policies

Presentations by:

1. Stacy Timmons – *New Mexico Bureau of Geology and Mineral Resources*

   With the passage of the Water DATA Act in 2019, specific state agencies are required to collaborate with each other and regional and other national efforts to better share, integrate and manage all of New Mexico's water data. The state Geological Survey is the convening agency. There are four other agencies required to participate: the State Engineer's Office, Interstate Streams Commission, Environment Department, and Energy, Minerals, and Natural Resources. All of them hold a different piece type feature of water data within them but they are not entirely comprehensive of all the data of New Mexico.

   Over the past 3 ½ years, the agencies have built their water data governance, created working groups, and made various efforts to build a water data catalog that helps the State to take a good look at the water data that's currently available. They set up a website and a variety of other means to communicate with people who hold or want water data. They have also developed a data structure and standards. All of this has helped them to develop a number of tools and applications that help everybody from the technical water data user to the general public to access the water data. One of the big limitations is the need to build the staff capacity and improve their workflow and data management processes, all of which require some funding that is difficult to procure in today's political climate.

2. Taylor Christian – *Texas Water Development Board*

   The Texas Water Data Hub's mission is to create an intuitive system to index documents search and access Texas water and data. Unlike New Mexico, and California, Texas doesn't have legislation to drive the effort; it is voluntary and cooperative. The Hub is focused on human-centered design to understand users' needs, and has undergone iterative user testing to narrow down the metadata and the interaction and how people would go about using the hub. This is really a partnership model, where they are relying on state agencies and different entities across the state to fill out and provide standard metadata so that their data can be indexed in the hubs.

   One of the challenges that they have recognized is that there are users with different technological needs, and how do you balance the two? Taylor's team has spent a long time narrowing that down to encourage best practices as we start to think about both meeting users' needs in the world of big data but also ensuring consistent standards.

Session 2 Breakout Groups

Prompt Questions:

1. What are your data sharing needs? What are the limitations?
2. How to make water use information public
3. Have you made any changes to your water data sharing policies, and if so, what are your reactions?

Responses:

- Legislative mechanisms are a kickstart to get us all on the same page. This is very helpful in the context of multi-state situations.
- Organizations must decide to have an open data ethic (intra-departmental and to the public). Open data policies can help set parameters around what is/is not shared.
- How to communicate data – portals & ESRI products get data into usable formats. Consider the use of open formats and put more effort into data visualization for end users.
- New ideas – respond to the people that are trying to use the data, make best practices for stewardship of data.
- Recognition of public records request challenges. We should use disclaimers to explain and interpretation of data.
- Make considerations for managing sensitive data.

Conclusion

Key takeaways:

- Resources -- Standardization would take dedicated resources; there is widespread agreement on the need to invest in data infrastructure. – How?
- Communication is key – Data accessibility helps build communities between data managers and end users.
- Trust – this is important for collaboration at state and local levels.
- Legislation and policies -- What does the community need to do? Where should the data community start? – Getting together to characterize where we are is just as important.

Next steps

1. **Keep convening** -- There seems to be a "thirst" to continue this conversation and sharing ideas, tools, methods. Despite the geography, agencies are facing very similar issues. We need to continue to build the community.
2. **Continue to break down silos** -- There's disconnect between Congress/legislatures vs implementation and use.
3. **Communicate** -- This group is uniquely positioned to communicate the needs of the water resources community, as well as the limitations and what we're capable of. Remember the motivation about what is needed, what is useful and communicating that message effectively is important.

The hosts of this year's summit greatly appreciate your participation. We evaluate your feedback and determine how to structure the next opportunity to continue these important water data conversations. Thanks again for your incredible insights!