

ACWI
Streamflow Information Collaborative (SIC) Conference Call
Monday, April 2, 2018, 2018
10:30am Central

Phone: 1-855-547-8255 (toll free), Access Code 74449#
1-703-648-4848, Access Code 74449#

WEBEX: <https://global.gotomeeting.com/join/137353901>

Call Purpose:

- Overview of National Groundwater Monitoring Network Portal
- Provide input on key elements to characterize portals
- Update on streamflow related activities

Agenda:

- Approval of agenda – additions/deletions
- Approval of previous meeting minutes
- National Groundwater Monitoring Network presentation
- Key elements to characterize portals
- Info exchange – streamflow information related activities

Attendees:

Ryan Mueller, Co-Chair (IN DNR), Mike Woodside, Co-Chair (USGS)
Candice Hopkins (USGS), Sarah Kreitzer (OSMRE), Sara Larsen (Western States Water Council), Sandy Eberts (USGS), Carver Struve (NASA), Dave Goodrich (USDA), Michele Eddy (RTI), and Michael Eberle (USFS).

Approval of agenda – additions/deletions:

Agenda approved.

Approval of previous meeting minutes:

Minutes from 3/5/2018 were adopted.

National Groundwater Monitoring Network Portal– Candice Hopkins (USGS, Idaho):

Candice is a USGS employee. Boise, ID, Water Science Center.

Portal URL: <https://cida.usgs.gov/ngwmn/>

The NGWMN is a product of the ACWI Subcommittee on Groundwater. It is a compilation of selected groundwater monitoring wells from Federal, State, and local groundwater monitoring networks across the Nation. The framework encourages and enables implementation of a long-term national groundwater quantity and quality monitoring network. The network is a curated network, as opposed to being a repository. This means that monitoring points and parameters are intentionally selected for inclusion so that data are comparable and form a nationally consistent network. For example, construction and lithology records are required. See A National Framework for Ground-Water Monitoring in the United States (https://acwi.gov/sogw/ngwmn_framework_report_july2013.pdf) for more details.

The NGWMN Portal provides access to the data and is easing access to data across political boundaries. Data ownership remains with the data provider. For example, if a well is deepened,

the provider updates the records on their end. The Federal agencies don't modify records, although they might point out a potential issue to a data provider. Operations are run by USGS; oversight for design is provided by a Program Board and the Subcommittee itself. The network and portal officially launched in January 2015 (outside pilot). Data can be accessed in three ways: (1) data portal, (2) web services, and (3) the dataRetrieval package in "R". There are currently 25 contributing agencies (6,000+ water level sites, 1,500 water quality sites, 62 principal aquifers). The Portal is hosted by USGS at the EROS Data Center in South Dakota. It operates similar to the Water Quality Portal (presented on an earlier call). Traffic and use are not yet a focus, so there has not been an increase in visitors over time (no more than 200 per week). Network data are most often found directly from Google or water.usgs.gov. There is some indication that people generally spend less than 2 minutes on the site. The site utilizes open data standards (WaterML2.0 Sensor Observation Service) to support external data sharing. Data calls go to the well registry and then a mediator calls data from the various providers nightly.

Question: How are data being used? Ans: Individual state agencies are using it to look at interstate aquifer issues. Members of public use it to find state agency data, because it is easier. Note that Darryl Pope (USGS) gave great talk at NGWA on the network and its use, but it is not that far outside the pilot phase so the use cases are limited right now.

Question: How are data providers obtained? Ans: Data providers can simply provide data, or they can apply for funding to become a data provider. Program funding can be obtained to add sites if a State does not enough coverage ... or ... to make a site a better site (deepening well) ... or ... to set up web services so that they can participate ... or ... to digitize well logs. The application period for the most recent RFP closed Nov 2017. The Program Board went through applications in Jan 2018 to decide which requests represented the most urgent needs and therefore were the funding priorities. In general, the solicitation goes out in Sept on grants.gov.

Question: How far back does the data go? Ans: As far back as 1950s for water-level data; 1970s for water-quality data. USGS data has the longest period of record. There are requirements for how frequently sites need to be visited. For example, water quality sites must be visited at least every 5 years.

Question: What about data quality given the flexibility afforded the data providers? Ans: Data quality is noted on the data provider pages and the NGWMN sets up requirements for any sites that will be included in the network. The USGS develops a crosswalk document for when a new data provider joins the network so that their data is comparable to the other providers. The new provider is then asked if the crosswalk looks correct. This is most complex when water quality data are involved, so providers are encouraged to use the Water Quality Exchange (WQX) format. Note that the NQWMN Portal often pulls data from the Water Quality Portal, which enforces data standards.

Question: How many states are left? Ans: Lots of contributed data for a state are from the USGS, so one can't look at map to see how many more States need to participate. The Program Board approved 26 proposals for 2018, representing ~1.7M in funding. There are now more requests than available funds. Note that a provider can request funding more than once, because funds are needed for maintaining web services etc. However, funding new providers is the Board's priority. Money cannot be used to actually collect water data.

Sara L. offered to help facilitate bringing western states online.

Question: Are they any continuous/realtime data in the Portal. Ans: No, the providers provide data values following directions provided by the Subcommittee. Any continuous or realtime data are converted to daily values.

Question: Are there plans to host in the Cloud. Ans. There has been no discussion of this; the Portal has gone down during Federal shutdowns.

Key Elements to Characterize Portals:

Candice will fill out the portal worksheet.

Info exchange – streamflow information related activities:

Instream Flow Council – [FLOW 2018 workshop](#), April 24-26, Fort Collins, CO.

Managing Rivers, Reservoirs, and Lakes in the Face of Drought

Sue Lowry (Executive Director, Interstate Water Council on Water Policy) will speak on engaging stakeholder support to obtain congressional support for funding hydrologic data collection (advocacy for USGS streamflow network).

USGS and USEPA developed a SWToolbox for computing streamflow statistics and developing flow duration curves. This replaces the USGS SWSTAT as well as the USEPA DFLOW. The user manual and software are available at: <https://pubs.er.usgs.gov/publication/tm4A11>

New report updates federal guidelines for flood flow frequency analysis. The updates include: adoption of a generalized representation of flood data that allows for interval and censored data types; a new method, called the Expected Moments Algorithm, which extends the method of moments so that it can accommodate interval data; a generalized approach to identification of low outliers in flood data; and an improved method for computing confidence intervals. Access the report at: <https://pubs.er.usgs.gov/publication/tm4B5>

MN Department of Natural Resources Produces Weekly Stream Flow Reports

https://www.dnr.state.mn.us/waters/surfacewater_section/stream_hydro/streamflow_weekly.html

SIC members are asked to bring forth examples of realtime streamflow portals, including state-based portals.

Next SIC Meetings:

May Meeting—Monday, May 7, 2018 10:30am central

Sara Larsen, Western States Water Council, presentation on Water Data Exchange (WaDE)

<http://wade.westernstateswater.org>

June Meeting—Monday, June 4, 2018 10:30am central

Dave Goodrich, USDA-ARS, The USDA-ARS Experimental Watershed Network—History, Lessons Learned and Evolution into the Long-Term Agroecosystems Research Network (LTAR)