

Streamflow Information Collaborative – Subcommittee to ACWI-SOH
Conference Call Notes
November 7, 2016

Call started at 3PM Eastern/2 PM Central/1 PM Mountain/Noon Pacific

Agenda

Roll Call
Schedule next call
Discussion on objectives/finalization of Charter

Call started at 3PM Eastern/2 PM Central/1 PM Mountain/Noon Pacific

Attendees:

Doug Yeskis, USGS
Robert Mason, USGS
Brian Beucler, Federal Highway Administration
Jack Felbinger, Pittsburgh Office, OSM
Meredith Carr, NRC
Sara Larsen, WSWC
Ryan Mueller, Interstate Council on Water Policy
Ben Pratt, Susquehanna River Basin Commission
Wil Thomas, Michael Baker International
Mike Muse, USEPA
Michelle Eddy, RTI
Dwane Young, USEPA
Dong Soo Kim, NWS, NOAA
Julie Kiang, USGS
Ed Thomlinson
Bob Boyd, BLM

Notes

First Item was to confirm time for future calls:

Consensus was that time worked well for this call, and will in the future try and set to this time.

Second Item to confirm plan for January call:

The January conference call would normally be scheduled for Monday, January 2, which is a Federal Holiday. We discussed having the call on Monday, January 9 but several people requested a morning call instead of afternoon.

Third item on Objectives for Workgroup:

We began discussing what the collaborative objectives for this workgroup. Prior to the conference call, Doug had sent out some ideas for the discussion about a week before the call:

What should a national collaborative streamflow network have, such as:

- Are there additional parameters that all or many streamgages should have to provide "information" that is needed nationally, such as temperature, rainfall, specific conductance, etc.?
- Are there minimum standards for operation, such as continuous flow for a certain period (6 months, 9 months, 1 month)?

- Should we include qualitative or quantitative errors?
- Should we include stage only, discharge only, or exactly what parameters should be included?
- Are there limitations to what agencies/companies/etc. that should provide the streamgages (USGS, only agencies, do we include universities, do we include private companies)?

This is a streamflow "information" workgroup, so what other information should we consider, such as:

- Should we build a national portal for a network? Or should we consider a national site that points to other sites that have data? Should we partner with CUASHI?
- Should we consider having a site or part of a site for information products?
- Should we integrate or coordinate our work with other parts of the water cycle, such as with the National Groundwater Monitoring Network (<http://cida.usgs.gov/ngwmn/>).
- There are other networks/entities that are inter-related, such as SNOTEL for Snow, etc.

Or should we rename the workgroup and just focus on streamgages only?

Is there an educational component?

Also, are there some prioritization in network components that we should consider if there are increases or decreases in the funds available for a network for the USGS Federal Priority Streamgages? In USGS Cooperative Matching Funds?

The discussion began with Bob Boyd raising the issue of the scope of whether we should focus just on streamgages along larger rivers, but should we also include smaller streams or estimating flows. Michelle Eddy suggested before we decide what to do about estimating ungaged streamflows, could we have a compilation of these methods, and where to target these gages. Wil Thomas stated gaging in small streams is of concern. Would this expand the network? Is this a focus area of our Collaborative? Ryan Mueller suggested that we refine this objective to identify stakeholder needs and national priorities.

We had a discussion on ungaged streams, and Bob Boyd says this needs more discussion. Julie Kiang (Office of Surface Water, USGS) agreed to provide a 20-30 minute overview on streamflow estimations in ungaged streams on the January 9 conference call. Julie will send some links to Doug prior to that call. This topic needs to be discussed further.

Wil Thomas raised the issue of errors and quantifying streamflow error records - quantification of errors. How do we communicate the error(s)?

Dwane Young, EPA asked about a portal, could demonstrate it. Is it a priority for the collaborative? Dwayne can give it a demo. Sara Larsen stated finding ways of sharing data is important. The question is how best to encouraging data sharing vs. a portal. Charter how to share data between many users. Appropriate metadata and sharing among stakeholders also need to be addressed. Doug presented some concerns that Claudia Hoefl had raised about portals in duplication of efforts (several existing portals out there), and how we address the specific needs vs. general data delivery.

Call lasted the full hour, and adjourned.

Final Item: The Annual ACWI meeting is scheduled:

Location: Reston, VA TBD
Details Coming soon!!

Dates: Feb. 22-23, 2017
Time: 8:00-4:30 each day

more details should be forthcoming on this website: <http://acwi.gov/>.

Bibliography

USGS Streamflow Network Evaluations:

Bales, J.D., J.E. Costa (chair), D.J. Holtschlag, K.J. Lanfear, S. Lipscomb, P.C. Milly, R. Viger, and D.M. Wolock), 2004, Design of a National Streamflow Information Program -Report with Recommendations of a Committee, Open File Report 2004-1263, <http://pubs.usgs.gov/of/2004/1263/>

Benson, M.A., and R. W. Carter, 1973, A National Study of the Streamflow Data-Collection Program, USGS Water Supply Paper 2028, <http://pubs.usgs.gov/wsp/2028/report.pdf>

Kiang, J.E., Stewart, D.W., Archfield, S.A., Osborne, E.B., and Eng, Ken, 2013, A national streamflow network gap analysis: U.S. Geological Survey Scientific Investigations Report 2013-5013, 79 p. plus one appendix as a separate file, <http://pubs.usgs.gov/sir/2013/5013/>

Lins, H.F., USGS Hydro-Climatic Data Network 2009 (HCDN-2009), USGS Fact Sheet 2012-3047, <http://pubs.usgs.gov/fs/2012/3047/pdf/fs2012-3047.pdf>

Thomas, W.O. Jr. and Wahl, K.L., 1993, Summary of the nationwide analysis of the cost effectiveness of the U.S. Geological Survey Stream-Gaging Program (1983-88), WRIR 93-4168, <http://pubs.usgs.gov/wri/1993/4168/report.pdf>

USGS, 1998, A New Evaluation of the USGS Streamgaging Network – A Report to Congress November 30, 1998, <https://water.usgs.gov/streamgaging/report.pdf>

USGS, 1999, Streamflow Information for the Next Century, Open-File Report 99-456, <http://pubs.usgs.gov/of/1999/ofr99456/>

Streamgaging Evaluation within a State:

Maryland - Cleaves, E.T., and Doheny, E.J., 2000, *A strategy for a stream-gaging network in Maryland*: Maryland Geological Survey Report of Investigations No. 71, 72 p. http://www.mgs.md.gov/reports/RI_71.pdf or <http://md.water.usgs.gov/publications/mgs-ri-71/mgs-ri-71.pdf>

Massachusetts and Rhode Island - Zarriello, P.J., and Socolow, R.S., 2003, The U.S. Geological Survey Streamflow and Observation-Well Network in Massachusetts and Rhode Island: U.S. Geological Survey Open-File Report 03-277, 120 p.

Pennsylvania –Currently a report is in development, close to Bureau approval. Report was of the streamgaging network in PA and the entire Susquehanna River Basin identifying potential gaps in the network and also streamgages with high substitution potential (i.e., redundancy).

Virginia – nothing since the 1980's.

Washington - Konrad, Christopher, and Sevier, Maria, 2013, Physiographic and land cover attributes of the Puget Lowland and the active streamflow gaging network, Puget Sound Basin, Washington: U.S. Geological Survey Data Series 815, <http://dx.doi.org/10.3133/ds815>

Streamgaging Evaluation within a Basin or Region:

Susquehanna River –Currently a report is in development, close to Bureau approval. Report was of the streamgage network in PA and the entire Susquehanna River Basin identifying potential gaps in the network and also streamgages with high substitution potential (i.e., redundancy).

Upper Colorado River - Terry A. Kenney, Susan G. Buto, David D. Susong, 2011, USGS Scientific Investigations Report 2011-5081, <https://pubs.er.usgs.gov/publication/sir20115081>

Others:

Norris, J.M., Lewis, Michael, Dorsey, Michael, Kimbrough, Robert, Holmes, R.R. Jr., and Staubitz, Ward, 2008, Qualitative comparison of streamflow information programs of the U.S. Geological Survey and three non-Federal agencies: U.S. Geological Survey Open-File Report 2007–1426, 11 p., <http://pubs.usgs.gov/of/2007/1426/>

Web Links

USGS

<https://www.usgs.gov/>

Main USGS Web Page

<https://www.usgs.gov/science/mission-areas/water>

USGS Water Mission Area

Groundwater and Streamflow Information Program

<https://www.usgs.gov/science/mission-areas/water/groundwater>

Groundwater and Streamflow Information Program

<http://cida.usgs.gov/ngwmn/index.jsp>

National Groundwater Monitoring Network Portal

<http://water.usgs.gov/nsip/>

National Streamflow Information Program (what is now known as the Federal Priority Streamgages (FPS))

<http://waterdata.usgs.gov/nwis/rt>

NWIS Daily Streamflow Conditions

<http://water.usgs.gov/osw/hcdn-2009/>

USGS Hydro-Climatic Data Network (HCDN-2009)

Water Availability and Use Science Program

<http://water.usgs.gov/watuse/>

Water Use

<http://water.usgs.gov/wausp/>

Water Availability and Use Science Program

Water Resources Research Institutes (WRI) Program

<http://water.usgs.gov/wrri/index.php>

Main WRI page

OTHER LINKS TO DATA AND CURRENT CONDITIONS

<http://www.wcc.nrcs.usda.gov/snow/>

NRCS Snow Telemetry (SNOTEL) and Snow Course Data and Products

<http://mvs-wc.mvs.usace.army.mil/dresriv.html>

U.S. Army Corps of Engineers Lake and River Stage

<http://www.usbr.gov/main/water/>

Bureau of Reclamation Water Operations

<http://www.usbr.gov/watersmart/>

Bureau of Reclamation WaterSMART

<http://hydrodesktop.codeplex.com/>

CUAHSI Hydro Desktop

<http://droughtmonitor.unl.edu/>

US Drought Monitor

OTHER LINKS OF INTEREST

<https://www.weforum.org/reports/the-global-risks-report-2016/>

The Global Risks Report 2016 by the World Economic Forum

<http://water.usgs.gov/swaq/docs/strengthening-scientific-understanding-aug-2011.pdf>

Report to Congress Strengthening the Scientific Understanding of Climate Change Impacts on Freshwater Resources of the United States

<http://www.wcc.nrcs.usda.gov/ftpref/support/drought/dmrpt-20160707.pdf>

Example of a weekly newsletter from the NRCS that you can subscribe to.

<http://acwi.gov/spatial/owdi/>

Open Water Data Initiative