

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: June 26, 2015, 1:00 - 3:00 PM Eastern Time

Location: Teleconference only (administered from USGS Headquarters, 12201 Sunrise Valley Drive, Reston, VA 20192)

Conference Line: (760) 569-6000 Code 1063271#

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<https://usgs.webex.com/usgs/j.php?MTID=m9d6f264cf4268301448e8625ad8ea6a8>

Meeting number: 716 325 658

Shared document space:

<https://drive.google.com/open?id=0B877MDsx9plFTmpocGE1d0M4TVE&authuser=0>

Agenda

All Times Eastern Time Zone

1:00 - 1:10 Introductions for new attendees

1:10 - 1:40 Discussion

1:40 - 2:10 Work Group Reports

2:10 - 2:20 New Issues

2:20 - 2:30 Adjourn

Attendees:

New (did not attend 8/28/14 or later meeting)

Jim Dorsch, National Association of Clean Water Agencies, JDorsch@mwr.dst.co.us

Jonathan Navarro, Cardno, jonathan.navarro@cardno-qs.com

Returning (attended 8/28/14 or later meeting)

Al Rea, USGS, ahrea@usgs.gov

Kernell Ries, USGS, kries@usgs.gov

David Blodgett, USGS, dblodgett@usgs.gov

Wendy Norton, USGS, wenorton@usgs.gov

Brenna Mefford, Interstate Council on Water Policy, brenna.mefford@wyo.gov

Mitch Bergeson, FWS, mitch_bergeson@fws.gov

Bill Samuels, Leidos, samuelsw@leidos.com

Kevin McNinch, USGS, klmcinch@usgs.gov

Sara Larsen, Western States Water Council, saralarsen@wswc.utah.gov

Ed Clark, NOAA, edward.clark@noaa.gov

Jim Kreft, USGS, jkreft@usgs.gov

Wendy Blake-Coleman, EPA, Blake-Coleman.Wendy@epa.gov

Angela Adams, Bureau of Reclamation, aadams@usbr.gov

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Jon Nystrom, Esri, jnystrom@esri.com
Paul Rooney, USGS / FEMA, prooney@usgs.gov or paul.rooney@fema.dhs.gov
Linda Davis
Dean Djokic, Esri, ddjokic@esri.com

Discussion

Next meeting: July 24 Cancel? - Conflicts with ESRI User Conference - is it possible for a subset of this group to meet during the ESRI conference? Perhaps Tuesday at 5pm or at the conclusion of the paper sessions. Room number TBA -- Al Rea will send information to the entire SSWD mailing list, as soon as we know what the room number is. This is most likely to be an informal brainstorming session and get-to-know-you event, rather than an official meeting, since there won't be enough people present for a quorum.

Will be at the Esri Conference:

Wendy Blake-Coleman, Mitch Bergeson, Dean Djokic, Angela Adams, Bill Samuels, Al Rea

In-person meeting? September 2nd in Reston, VA, at USGS HQ? Or at Main DOI? Or at Silver Spring, MD, NOAA office?

A number of people say the Sept 2 date is good for them. Tentative meeting start time: 11:00 a.m. Al Rea and Ed Clark will discuss possibilities for having the meeting at NOAA's Silver Spring office, and will issue details to the rest of the group soon.

There will not be an August meeting. The Sept 2 in-person meeting will substitute for the regular August teleconference.

[What is the goal of the Open Water Data Initiative? What would success look like in 1/3/5 years?](#)

Goal: To enable easy and automated access to the wide variety of water data being collected by government agencies and others, and to place those data in a geospatial context, complete with stream network and groundwater flowpath connectivity. [add enabling applications to the goal; add interoperability]

1 year: Demonstration of NHDPlus framework with ability to link information to it, and to use upstream/downstream tools to trace the network and discover other data linked to the NHDPlus framework. Establishment of linked data catalog to enable this.

3 years: Evolution of the NHDPlus framework to high resolution, with generalization capability, complete for CONUS. Establishment of most large water data collections (USGS, BOR, USACE, NOAA, etc.) within this surface-water NHDPlus-HR framework, such that active data collection sites are all referenced to the geospatial framework, serve data in WaterML2, and the tools for network trace and data discovery are in common use. Numerous examples exist of modeling at many scales using this framework and data.

5 years: Completion of NHDPlus-HR including Alaska, including much ultra-high-resolution integrated Lidar elevation-hydro data. Openly sharing water data using WaterML2 and referencing it to the NHDPlus-HR has become the norm, and most/all entities collecting water data are working toward openly sharing their data in this manner. Groundwater connectivity is being incorporated into this, forming a holistic water-resource information system.

Accomplishments:

Dr. Maidment showed a slide illustrating what he feels is a major accomplishment of the NFIE effort, and which has been aided by the OWDI effort. The slide showed WaterML2 data for USGS streamflow data and NWS forecast data for the same location (Onion Creek at Highway 183) near Austin, TX. These two data streams are a good example of the objective of OWDI being realized. The data are open and interoperable, and both USGS and NWS now have the capability to serve these data streams in real time. Hence, the past and present flow data are accessible from USGS and the anticipated future flow from NWS, as services in a consistent language at several thousand locations in the continental U.S.

NWS and USGS data in WML2
NHDPlus national dataset and services
USGS gages linked to NHDPlus web services
NWS forecast points linked to NHDPlus
FEMA National Flood Hazard layer web services
OWDI special sessions track at AWRA national meeting Nov 2014
JAWRA journal featured collection of papers on OWDI
JAWRA journal featured collection of papers on NFIE
OWDI special sessions track at AWRA national meeting Nov 2015

Discussion on drainage areas for USGS gages and NWS forecast points: USGS has been piloting a project in 16 states to develop standardized drainage area polygons for USGS gages. These polygons consist of NHDPlus DEM-derived boundaries from the gage up to the nearest divides in the WBD, then use the WBD lines for the rest of the basin. The WBD lines have been thoroughly reviewed and vetted by local working groups and are considered the most accurate drainage basin boundaries available. These are being packaged, and will be distributed as part of the WBD dataset. Al and Ed will discuss offline the possibilities of using this approach to develop drainage area boundaries for the remaining active USGS gages and NWS forecast points.

Working Groups

NFIE Work Group

- NFIE is in its fourth week. Progress in being made on 12 different projects leveraging the NFIE geo, hydro and web services.

Drought Work Group

- Lower Colorado River Basin Drought visualization development underway; initial draft possible in July.
- Discussions ongoing with USGS about incorporating groundwater component.
- Working on ideas for longer term deliverable.
- Phone call with Bechtel Foundation to discuss Open Water Data activities.
- USGS Nate Booth presented at the Western Governor's Association Drought Forum meeting this week.

- Session on Data Collection and Analysis for Drought Management.
- Topics: (1) Organizations' efforts to collect water- and drought-related data, (2) Efforts to analyze different datasets in context with one another and present analyses in user-friendly formats; (3) Suggestions for how Western Governors could engage as partners, supporters of ongoing drought data and analysis initiatives.
- Drought Forum details are available here: <http://westgov.org/drought-forum/meetings>.
- Info on Drought Use Case at ESRI in July, in USGS Congressional briefing series in D.C. at the end of July.
- Possible opportunity to submit ideas to Water-Energy Nexus Hackathon.
 - Sponsored by California American Water.
 - Website: <http://www.waterinnovationproject.com/event/waterenergy-nexus-hackathon/>.
 - Looking for suggestions on sets of (water-related) problems, app ideas to be tackled by participants by leveraging data to help create better understand water/energy issues.
 - Ideally ideas would pertain to CA/EPA Region 9.
 - Looking for Open Water Data suggestions.
 - POC: Charles Kovatch, EPA.

Spill Response Work Group

- June 9 GIS Tools-Demonstration
 - Organized by Jon Gulch, EPA region 5, Regional Response Team.
 - demonstrate various tools that already exist that may be able to be utilized in EPA Region 5.
 - Bill Samuels (ICWater)
 - Rachel Carlson (Water Division GeoPlatform Tools – Drinking Water maps)
 - Stuart Eddy (new Upstream/Downstream Tool – Great lakes Commission – sea lamprey project)
- June 24 – work group meeting
 - NOAA Oil spill modeling tools, GNOME, ADIOS, TAP, GOODS
 - Water Distribution Modeling – EPANET and PipelineNet
 - Storm Water and Waste Water Collection Modeling Tools (SWMM and SewerNet)
 - Tool Integration – Integrated Water Quality security System (IWQSS)
 - Consequence Assessment Tool Set (web based GIS emergency modeling framework)
- Feedback from Talbot Brooks – Delta State University – Director, Center for Interdisciplinary Geospatial Information Technologies
 - I know the emergency response world would like a toolset similar to EPA's CAMEO (plume modeling) for spills. That's a tall order, so a graphic/decision tree that might help us figure out what tool is appropriate to the problem we're facing in the EOC/on scene and who to call to help get a model running would be a fantastic intermediate.
 - I would love to facilitate a workshop or at least a presentation or two on this topic as it related to pipeline operations at our (GITAs) Pipeline Week conference this October in Houston.

- The Coast Guard is always a major player in any emergency response for me in this domain – are they involved as they have some great modelers looking at similar processes?
- I would like to work with you to help lay out how this needs to fit into the emergency response structure of things – the incident command system and within a state emergency operations center. My goal would be to identify a series of initial, baseline questions from the different functional areas working in this arena and help map out how to get the right model output/information to the right person. What would be the best way to proceed?
- Can this effort be moved/mirrored up as a community within the Geospatial Platform – this type of thing might be an ideal way to collaborate, though Jerry could better comment.
- The layers and concepts shown with CATS is a great approach to mitigation model at the community level. All they have – and they have to contract services for it – is HAZUS. Would be great to see FEMA grasp the ease of use and clarity of this tool – particularly the web interface – and either bring this into the fold or vice versa.
- How clued in the NGA (R3) – can I help connect?

Technology Work Group

- No meetings; nothing to report.

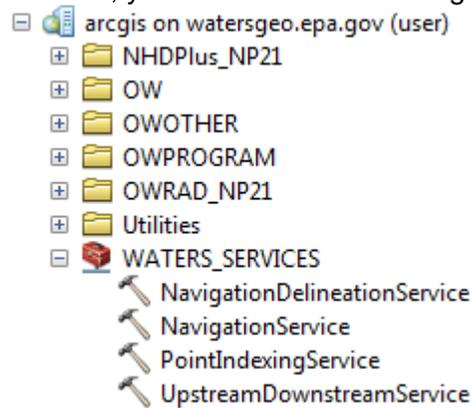
Water-Use Data Work Group

- Have updated our inventory of significant water use datasets, including eastern states' groups like Susquehanna River Basin, Great Lakes Basin Commission, and the Delaware River Basin. The workgroup is also collaborating with the National Water Use Information Program (NWUIP) and the Interstate Council on Water Policy (ICWP) on developing a survey of statutory authorities, data-gathering and storage techniques, and water use reporting methods used by states at a series of stakeholder meetings (held in late August - mid October?), related to the new Water Use Data and Research (WUDR) program.
- WUDR program - some funding for water use data development from USGS through the SECURE Water Act. Please talk to your local USGS Water Science Center for more details.
- The group also reviewed another platform for conveying water use dataset status information called Sciencebase. This is a repository for data and information about data used by USGS that would work well for this type of inventory. The group decided to transfer their current inventory to this program, as well as the survey results once they are available.

NHDPlus Data Work Group

- Work group mission is nearly done, in terms of getting the flattened national version of NHDPlus done.
- Also trying to set up upstream/downstream web services. These currently exist on an EPA web server, but the server doesn't have the needed performance/power for the long haul. Attempting to do testing, but running into problems with the timing of transitions between cloud computing contracts, so it's probably best to wait until that transition is complete (at that point we'll have a server that can handle a heavier load). In the meantime, we can do testing and explore the possibilities, using the lower-capacity server. For use by those who are interested in doing some of the testing, in ArcCatalog,

click on Add ArcGIS Server, connect as a User, and put in <http://watersgeo.epa.gov/arcgis/rest/> as the Server URL. Then in ArcCatalog under GIS Servers, you should see something like this:



Next Meeting -

July meeting canceled. Several members are attending the ESRI User Conference and will gather there. August meeting will likely be replaced by an in-person meeting September 2nd at NOAA in Silver Spring.

See Discussion section above for more details.