

# Subcommittee on Spatial Water Data

## Meeting Details:

Date/Time: September 22, 2017, 1:00 - 3:00 PM Eastern Time

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

Conference Line: 703-648-4848

From non-DOI locations, dial toll free 855-547-8255

Conference code 1712-0464#

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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=0B877MDsx9pIFTmpocGE1d0M4TVE&authuser=0>

## Agenda

All Times Eastern Time Zone

1:00 - 1:10 Introductions for new attendees

1:10 - 1:20 Administration priorities regarding Open Data

1:20 - 1:40 Reclamation Water Information System (RWIS)

1:40 - 2:15 Flood Inundation Modeling Update

2:15 - 2:20 Announcements

2:20 - 2:55 New Issues

1:55 - 2:00 Adjourn

## Attendees:

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

Jerad Bales ([jdbales@cuahsi.org](mailto:jdbales@cuahsi.org))

Lauren Patterson ([lap19@duke.edu](mailto:lap19@duke.edu))

Sue Buto ([sbuto@usgs.gov](mailto:sbuto@usgs.gov))

Sarah Brennan ([brennan\\_sarah@bah.com](mailto:brennan_sarah@bah.com))

Erika Boghici ([e.boghici@austin.utexas.edu](mailto:e.boghici@austin.utexas.edu))

Adel Abdallah (WSWC) ([amabdallah@agqiemail.usu.edu](mailto:amabdallah@agqiemail.usu.edu))

Mark Sondheim (NRCAN rep; colleague of Mike Major)

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

Al Rea ([ahrea@usgs.gov](mailto:ahrea@usgs.gov))

Allison Danner ([adanner@usbr.gov](mailto:adanner@usbr.gov))

Lisa Engelman ([engelman.lisa@gmail.com](mailto:engelman.lisa@gmail.com))  
Bill Samuels ([samuelsw@leidos.com](mailto:samuelsw@leidos.com))  
Mike Eberle ([mbeberle@fs.fed.us](mailto:mbeberle@fs.fed.us))  
Roland Viger ([rviger@usgs.gov](mailto:rviger@usgs.gov))  
Nathan Barber ([nbarber@tva.gov](mailto:nbarber@tva.gov))  
Jim Kreft ([jkreft@usgs.gov](mailto:jkreft@usgs.gov))  
Wendy Norton ([wenorton@usgs.gov](mailto:wenorton@usgs.gov))  
Greg Cocks ([gcocks@usgs.gov](mailto:gcocks@usgs.gov))  
Dean Djokic ([ddjokic@esri.com](mailto:ddjokic@esri.com))  
Jennifer McGee ([jenna.mcgee@amecfw.com](mailto:jenna.mcgee@amecfw.com))  
John McEnery ([john.mcenery@noaa.gov](mailto:john.mcenery@noaa.gov))  
Joseph Kirby ([jkirby@espassociates.com](mailto:jkirby@espassociates.com))  
Michael Tinker, ([mdtinker@usgs.gov](mailto:mdtinker@usgs.gov))  
Kevin McNinch ([klmcninch@usgs.gov](mailto:klmcninch@usgs.gov))  
Carly Hansen (WSWC) ([carly.hansen@utah.edu](mailto:carly.hansen@utah.edu))  
Steve Kopp ([skopp@esri.com](mailto:skopp@esri.com))  
Jane Schafer-Kramer ([jane.schafer-kramer@water.ca.gov](mailto:jane.schafer-kramer@water.ca.gov))  
Dean Tucker ([dean\\_tucker@nps.gov](mailto:dean_tucker@nps.gov))  
Becci Anderson ([rdanderson@usgs.gov](mailto:rdanderson@usgs.gov))  
Tad Slawecki ([tad@limno.com](mailto:tad@limno.com))  
Dwane Young ([young.dwane@epa.gov](mailto:young.dwane@epa.gov))  
Chris Mickle ([christopher.mickle@cardno.com](mailto:christopher.mickle@cardno.com))  
Sara Larsen ([saralarsen@wswc.utah.gov](mailto:saralarsen@wswc.utah.gov))  
Sandra Fox ([sfox@sjrwmd.com](mailto:sfox@sjrwmd.com))  
William Parker ([parker.william@epa.gov](mailto:parker.william@epa.gov))  
Jeff Davis (NGWA) ([rjdavis@lbqguyton.com](mailto:rjdavis@lbqguyton.com))  
Linda Davis  
Steve Nechero ([steven.nechero@ftw.usda.gov](mailto:steven.nechero@ftw.usda.gov))  
Steve Aichele ([saichele@usgs.gov](mailto:saichele@usgs.gov))  
Rob Dollison ([rdollison@usgs.gov](mailto:rdollison@usgs.gov))  
Tommy Dewald ([Dewald.tommy@Epa.gov](mailto:Dewald.tommy@Epa.gov))  
Ed Carter

## New Administration priorities on Open Data:

<https://www.fedscoop.com/open-data-economic-growth-priority-trump-administration/>

<https://www.whitehouse.gov/blog/2017/08/11/fueling-american-innovation-and-economic-growth-open-data>

<https://www.datacoalition.org/press-releases/update-senate-passes-open-government-data-act/>

None of these items are big changes from previous Administrations and all seem to be in line with the charge that SSWD has been pursuing for the last 3 years.

Excerpts from <http://reports.opendataenterprise.org/OpenDataRT1-EconomicGrowth-Takeaways.pdf>:

Companies in this [Geospatial] sector need more and better geospatial data. They would like government data providers to develop feedback mechanisms for correcting inaccuracies, improve mapping coverage, make the data more timely, and find ways to combine authoritative measurements with crowdsourced input.

The U.S. Government should **make open data a priority and support it by investing in a modern data infrastructure**. While open data has been identified as [a Federal policy goal since 2013](#), it has generally been an underfunded effort.

For **data access**, a critical need, which is still unmet, is to **keep up-to-date data catalogs and inventories** and **make data more discoverable**. Businesses and other users need to know what data government agencies have in order to access and apply it. Government agencies should also ensure that their data is technically easy to access and use. They should **provide APIs for high-value government data** as a matter of course, and should **host government data in the cloud** for ease of access (particularly important for large data collection like geospatial or genomic data).

Regarding **data quality**, government agencies should **focus on providing high-quality data, not on building new applications**: If government provides the data, the private sector can build the apps. Business participants see a need to **improve data quality across the board**, making government open data more timely, accurate, standardized, and granular. As part of the commitment to quality, government agencies should **develop feedback loops** so data users can help improve government data with their input.

Finally, improving **data interoperability** will require standard-setting and other efforts. Business leaders stressed that the government should **encourage interagency cooperation and data sharing** to solve the most challenging problems. In addition, businesses stressed the need to **standardize and link data across States and between State and Federal data systems**.

## RWIS Announcement

The Reclamation Water Information System (RWIS) is a pilot version of a Reclamation-wide system for viewing, accessing, and downloading Reclamation's data via a centralized data portal. The RWIS pilot serves representative time-series water data from each Reclamation region. <https://water.usbr.gov/>

## RWIS Presentation

- Allison Danner (Bureau of Reclamation) shared slides, available [here](#).
- Joint effort -- BOR, USGS, others -- thinking about the idea of open data and its benefits.
- Founded a Reclamation Data Council focusing on data management, including open data.
- Reclamation Water Information System (RWIS) @ <https://water.usbr.gov/aboutrwis.php>
- Reclamation Information Sharing Environment (RISE) @ <https://water.usbr.gov/docs/RISE.pdf>
- Open Reclamation Data System Pilot Project.
- Data was previously available from disparate systems, with little or no data sharing across regions or nationally. Recognized the value in having data available centrally (through web services) in consistent machine-readable formats. The data don't cover every site or every parameter, but there are plans to expand the data in the future.
- There are various interfaces available, including map-based queries.
- Enhancing RWIS and expanding to RISE: Currently working on improvements to functionality of the web portal. Also hoping to add hydropower and environmental data, and perhaps infrastructure or asset data. Also want to move beyond time series data to geostationary data, documents, and other resources. Also exploring the question of how to share large volumes of data, adding more features to the map interfaces, ensuring the response time of map-based queries is quick, etc.

[rwis.usbr.gov](https://water.usbr.gov) -- Please provide feedback.

- <https://water.usbr.gov/> - portal
- a. <https://water.usbr.gov/query.php> - query selection
- b. <https://water.usbr.gov/RWISmap.php> - map selection
  
- Hope there's comment on <https://www.usbr.gov/research/challenges/datavis.htm>! (Colorado River Basin Data Visualization Challenge)
- Can you share the technology stack - i.e. what are the existing software building blocks?
- Question: Do you have anyone on the RISE team who is also working with the Open Geospatial Consortium, to ensure the standards and crosswalking line up with what they're trying to do? Answer: No, but some people are from the BORGIS team, and they're very aware of OGC standards.
- Comment: Jim Kreft (USGS) would like to talk further with Allison and the RISE team about interoperability.

- Comment: (Dwane Young/EPA) Please also consider the WQX standard, which is used for all the data already available through the Water-Quality Portal. We need to make sure we're not duplicating too.
- Feedback: The RWIS has been very helpful to my research. Could you please add "methods" /metadata description to how the time series data is measured/calculated? For example, reservoir storage, elevation, inflow, release. How each of these was estimated? I'm guessing some of them are derived while others are actually measured.

## Flood Inundation Mapping update - Dr. David Maidment

- Slides are available [here](#).
- Presentation for Congress on Hurricane Harvey impacts on Monday, 25 September 2017 -- Texas Division of Emergency Management -- UT-Austin.
- 9.2 million address points compiled, which are used for dispatch by emergency response vehicles. This helps with inundation map overlays for response and rescue.
- Our annual cycle of innovation, research, assessment helps to refine the process.
- Real-time inundation maps are required now more than ever. Library of inundation polygons needs to be available in advance of flooding. We need short reach lengths for this (i.e., about a mile); Dean Djokic suggested that we should also look at slopes, not just length, since some slope values might warrant splitting the reach.
- Use of first responders to help with real-time inundation mapping.

Various issues were raised during discussion following this presentation, and those issues will be discussed further offline. (Accessibility of Lidar data, SSWD or USGS assistance to University of Texas, etc.) People will go back and discuss internally, and we'll revisit this issue during our October meeting.

Can SSWD assist University of Texas with this project? The main limiting factor would be that the members are volunteers and have limited time to devote. Perhaps SSWD could devote a "use case" working group to this topic. (i.e., cartography / catchment based hydrology ---> river hydraulics for applied use/s such as flood modelling, and how can the datasets available - including NHDPlusHR & 3DEP / LiDAR - be "pushed" to those sorts of uses?)

Question: Is anyone gathering SAR data during these events, and will this system work in Florida, if flat terrain is a problem? Answer: Yes, Florida hydraulics is different. There is an interconnected [inaudible] routing system that is used there. Yes, SAR data is available. Dartmouth Flood Observatory group built a dataset of inundation extent for Harvey from SAR data.

For whatever it's worth, some USGS folks are at the very beginning of bringing together topo/bathy data. All are welcome. See

<https://my.usgs.gov/confluence/display/cdi/ETWG+Elevation+Focus+Group> for more info. (Contact Roland Viger [rviger@usgs.gov](mailto:rviger@usgs.gov) if you would like to get credentials to edit/contribute within this wiki system; default is publicly readable. Jason Stoker ([jistoker@usgs.gov](mailto:jistoker@usgs.gov)) and JC Nelson ([jcnelson@usgs.gov](mailto:jcnelson@usgs.gov)) are POCs for this work).

**Silver Jackets** - Flood Risk Management Program - <https://silverjackets.nfrmp.us/> - "Federal participation typically includes the U.S. Army Corps of Engineers and the Federal Emergency Management Agency and often others such as the National Weather Service and the U.S. Geological Survey."

**Those interested in discussing this (a national river *hydraulic* framework) further, please notify Al Rea ([ahrea@usgs.gov](mailto:ahrea@usgs.gov)) so your name can be added to this list:**

Roland Viger ([rviger@usgs.gov](mailto:rviger@usgs.gov); 303-541-3075)

Jeff Davis ([rijdavis@lbqguyton.com](mailto:rijdavis@lbqguyton.com))

Jennifer McGee ([jenna.mcgee@amecfw.com](mailto:jenna.mcgee@amecfw.com))

William Parker ([parker.william@epa.gov](mailto:parker.william@epa.gov))

Jim Kreft ([jkreft@usgs.gov](mailto:jkreft@usgs.gov))

Steve Kopp [skopp@esri.com](mailto:skopp@esri.com)

Erika Boghici ([e.boghici@austin.utexas.edu](mailto:e.boghici@austin.utexas.edu))

## Blog entry on Linked Data

Dave Blodgett has posted on the USGS OWI blog a very complete description and "How-To" document on the Hydro Network-Linked Data Index.

<https://owi.usgs.gov/blog/nldi-intro/>

Note that all the functionality currently available through the NLDI is based upon the existing NHDPlus Version 2 geospatial framework, but USGS plans to stand up similar services for the NHDPlus HR in the future, after more high resolution data are developed. The NHDPlus (V2 or HR) and the NLDI are two major components of the OWDI. A third major component is all your data. We will talk on future calls about how you can make your data searchable and usable within this framework. We have designed this system so that you can do this right now using the NHDPlus V2 framework, and easily switch to the NHDPlus High Resolution framework in the future.

## NHDPlus High Resolution Release and Status

[https://nhd.usgs.gov/NHDPlus\\_HR.html](https://nhd.usgs.gov/NHDPlus_HR.html)

Update on which regions are available and which ones are almost finished.

## Work Groups

NFIE - National Flood Interoperability Experiment - Concluded

Drought - (need someone to help get this group restarted)

Spill Response - No update.

[NLDI](#) - Network-Linked Data Index [Jim Kreft is taking over some of the NLDI coordination work]

Possible new groups:

Aquatic Ecology

Inland Bathymetry

Real-time inundation / flood response tools (see discussion above with David Maidment)

## New issues

**2017 AWRA Annual Conference**

**November 5 – 9, 2017**

**Portland, OR**

<http://www.awra.org/meetings/Portland2017/oral.html>

<http://www.awra.org/meetings/Portland2017/index.html>

### Internet of Water technical sessions

**2018 AWRA GIS and Water Resources Specialty Conference X**

**Orlando April 22-25, 2018**

Conference link

<https://awra.org/meetings/Orlando2018/index.html>

Call for topical sessions and workshops due December 1, 2017

[https://awra.org/meetings/Orlando2018/docs/Flier\\_Call\\_for\\_Topical\\_Sessions\\_2.pdf](https://awra.org/meetings/Orlando2018/docs/Flier_Call_for_Topical_Sessions_2.pdf)

Call for abstracts due January 8, 2018

[https://awra.org/meetings/Orlando2018/docs/Flier\\_Call\\_for\\_Abstracts\\_3.pdf](https://awra.org/meetings/Orlando2018/docs/Flier_Call_for_Abstracts_3.pdf)

January issue of *AWRA Impact: National Water Model*  
(Free access issue)

## Next Meeting:

October 27, 2017, 1:00 - 3:00 p.m. Eastern