

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: January 23, 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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When it is time to attend the meeting, please visit this link:

<https://usgs.webex.com/usgs/j.php?MTID=mb37d0fcb3c61049dcb8100e45f453ad6>

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 - 2:15 Work Group Reports

2:15 - 2:30 Jessica Lucido/Sara Larsen on NGWMN and WaDE

2:30 - 2:50 Dave Blodgett on Water Theme of climate.data.gov

2:50 - 2:55 Feedback from Jon Goodall and students on WATERS web services

2:55 - 3:00 Membership roster; Adjourn

Attendees:

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

Jeff Donze, ESRI

Pravin Rana, EPA, rana.pravin@epa.gov

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

Alan Rea, Co-Chair, USGS, ahrea@usgs.gov

Ed Clark, co-Chair, NWS, edward.clark@noaa.gov

Sara Larsen, WSWC, saralarsen@wswc.utah.gov

Angela Adams, BOR, aadams@usbr.gov

David Maidment, UT Austin maidment@utexas.edu

Jessica Lucido, USGS, jlucido@usgs.gov

Kevin McNinch, USGS, klmcninch@usgs.gov

Bill Samuels, Leidos, samuelsw@leidos.com

Emily Read, USGS, eread@usgs.gov

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Rob Dollison, USGS, rdollison@usgs.gov
Dean Tucker, NPS, dean_tucker@nps.gov
Jeff Davis, NGWA, jeffrey.davis@cardno.com
Andrew Burnes, USGS, aburnes@usgs.gov

1:10 - 2:15 Work Group Reports

NFIE Work Group

Slides are at:

<http://www.caee.utexas.edu/prof/maidment/NFIE/Visual/NFIESSWD23January.pptx>

AI raised the question of how the data would be used, noting that HighResolution NHD is available for download. Dr Maidment reflected that that is exactly what is requested. The intent is to use the SPRINT model framework to resolve the St Venant equs (leveraging cross sections data) to dynamically generate water surface elevations.

Action: smaller group discussion will be held to explore the requirements and resources necessary to reference the 24K steam lines with the 100K streamlines. (Rea, Clark, Maidment, Peppler & other interested parties.)

Drought Work Group

Angela Adams

- Short term deliverable: information tool, evolving into a decision support tool
- Possible mtg w/USGS CIDA in Las Vegas - mid/late February
- Discussions w/Drought Community (NIDIS, NDMC)
 - **Action:** Angela call Ed Clark - information about GRACE/NLDAS, disconnect to reservoir storage/transbasin diversions (he has a contact name to provide)
- Discussion w/NASA - Drought Monitors (GRACE, NLDAS)

Spill Response Work Group

Bill Samuels

Members: Kernell Reis, USGS; Rachel Carlson, EPA; Chris Mickle, Cardno; Terra Haxton, EPA; Tom Clifford, BLM

- Some work underway to upgrade modeling capabilities (contract support through EPA)

Preliminary list of spill response organizations – primarily focused on riverine and estuarine domains:

Upper Mississippi River Basin Commission

<http://www.umrba.org/>
Interstate Commission on the Potomac River Basin
<http://www.potomacriver.org/pollution/spills-notification>
<http://www.potomacriver.org/fs/spillfs.pdf>
Duke Energy – Dan River Response
<http://www.duke-energy.com/dan-river/>
Susquehanna River Basin Commission
http://www.srbcc.net/programs/docs/EWSGeneral01_09.pdf
Delaware River Basin Commission
<http://www.state.nj.us/drbc/about/public/publications/>
Great Lakes Commission
<http://glc.org/files/main/resolutions/FINAL-20120911-Emergency.pdf>
Ohio River Valley Water Sanitation Commission
<http://www.orsanco.org/emergency-response-program>

Links to two papers

Water Contamination Modeling—A Review of the State of the Science
http://www.scrip.org/journal/PaperInformation.aspx?PaperID=27683#.VMJZ2_63rWE
Modeling the Fate and Transport of a Chemical Spill in the Elk River, West Virginia
<http://ascelibrary.org/doi/abs/10.1061/%28ASCE%29EE.1943-7870.0000930>

EPA study

Comparison of ICWater's main features and the application/functional differences with the ORSANCO's RSMS (Riverine Spill Modeling System) model - potential upgrades to RSMS can perhaps compliment ICWater or be incorporated into ICWater

Chemical spill tool kit (similar to end goal of the OWDI use-case) has been identified in the IWRSS stakeholder meetings held in the Ohio Basin - Email from Ed Clark

Integrated Water Resources Science and Services Ohio River Basin Stakeholder Report
June 25 and 26, 2014

- Upper Basin (Cincinnati) - Project #2: (Water Quality) Develop a decision support system initially focused on spill response.
 - Having access to high-quality water-velocity data for tributaries would improve spill responses. This could be accomplished with new gages
 - More information is needed to implement management changes in reservoir storage, releases, and dam operations to mitigate spills. Should more water be stored to lower flows during a spill? Or should higher flows be used to dilute the spill?
 - Decision 1: Are policies for preparation and emergency response to upstream spills/accidental releases adequate? Gaps:
 - Better knowledge of downstream travel time, contaminant concentrations, and resulting impacts (i.e., human and aquatic community health effects, treatability, etc.) of upstream spills.
 - Spatial information on potential sources of spills (e.g., high risk land uses, transportation crossings, key outfall/discharge locations).
 - Better understanding of downstream vulnerability (e.g. at drinking water intakes, sensitive habitats).
 - Pilot Project: Develop a decision support system initially focused on spill response
- 5 members of the work group: Bill Samuels, Kernell Ries, Chris Mickle

Technology Work Group

Dave Blodgett [Slides are shared with the group.](#)

NHDPlus Framework Data Work Group (NFIE #1+2+3+4?)

Tommy Dewald (lead), Al Rea, Karen Hanson, Kevin McNinch, Cindy McKay, Brad Cooper, Barb Rosenbaum, Steve Kopp

Cindy McKay produced a “straw-man” geodatabase having virtually the full content of NHDPlus in a flattened data model that will be national in a file geodatabase. This dataset will serve as the base from which NFIE will extract the data they need, and will also serve many other purposes, including a base from which datasets will be extracted for specific web services. Cindy loaded just Region 06 for an initial review by the work group and NFIE people. Based on feedback from those reviews over the next couple weeks she’ll make some modifications to the model and then load the rest of the country.

FEMA NFHL (NFIE #5)

Paul Rooney

Improved documentation on the NFHL data download site. D. Maidment requested a simplified extract. They are working on providing this.

USGS Gages, Dams, and NWS Forecast Points (NFIE #6+7+8)

Mike Tinker, Nancy Blyler, Al Rea, (others TBD)

Gages indexed to NHDPlus V2--Craig Johnston (NHDPlus team) plans to have final dataset published next week. We then will load to ScienceBase and publish web services.

Dams indexed to NHDPlus V2--Craig Johnston and others working on updated and QA-ed data, target mid-February release. Will only include NID-ID. A separate table of NID attributes may be available for government users only.

NWS Forecast Points indexed to NHDPlus V2--Ed Clark provided points to Al Rea. Need to get NHDPlus V2 data loaded to FGDB to enable use of HEM tools. Subsequent to delivery, an error was found that will be corrected before the USGS indexes the data. Then Mike Tinker (USGS) will index to NHDPlus.

Water Use Data Work Group (Regional Water Supply)

Sara Larsen, Brenna Mefford, Jeff Simley, Krissi Linsey, Molly Maupin, Dave Blodgett, Dwane Young, Karen Hanson, more people in this realm? someone from the BOR?

We had a meeting earlier in Jan. Introductions and a presentation by Kernell Ries. Kernell presented on how SWUDS water use data is accessed through the Delaware River Basin Focus Area Study website. Of note, website uses web services to retrieve the data from intermediary database. Most of our group’s members are from USGS. Need more people who are interested in water use data. BOR? for Angela’s case study. We will have another meeting next week and hear more about how the Water Census incorporates water use data. Access workgroup info in the SSWD folder - please check out our starting list of w.u. datasets and add to it.

2:15 - 2:30 Jessica Lucido/Sara Larsen on Data Quality Reporting

- [Presentation](#) on NGWMN's and WaDE's approach to data quality in distribute data systems
- NGWMN is a network of hand-selected groundwater wells that represent either background or trends in water quantity or quality
- NGWMN data is distributed but aggregated and served out through a standard set of web services
- Data quality is handled by requiring data providers to use common methodology for data collection, which is documented. Also, data quality plans are required to write and implement a data quality plan
- NGWMN data providers are not required to grade their data in the interest of lowering the barrier to participation of cooperators, though it is their responsibility to provide high quality data and to implement their data quality plans
- The benefit of this approach is that common methods for data collection and processing (QA/QC) at a program level should lead to consistent to data quality, though it is not as easy for data consumers to understand the quality of individual data sets
- WaDE minimally requires partners to provide sources and methodology of their datasets
- The value of the data products that are provided hinges upon its quality and on description of the quality

Related Question: How do we provide consistent and reliable data streams from a distributed data system, which the Open Water Web is envisioned to be?

For next meeting, discuss Data Quality Questions:

1. Should OWDI enforce a data quality reporting structure?
2. If so, what is the requirement for data providers?
3. Are there any other metrics we could use to evaluate data quality.

2:30 - 2:50 Dave Blodgett on Water Theme of climate.data.gov

data.gov - an index of datasets

data that have map services in data.gov are harvested to geoplatform.gov

How does data get into data.gov water theme?

1. agency maintains a metadata catalog/gateway
2. common format of metadata in json is one output from the agency catalog
3. the json gets harvested to data.gov
4. data.gov catalog gets harvested to Geoplatform.gov

Please go to climate.data.gov/water Water Theme, look at the datasets that are there. Let Dave Blodgett know of anything that should be changed, added, etc. Also check out the Resources tab as well.

http://catalog.data.gov/dataset?groups=climate5434&vocab_category_all=Water#

2:50 - 2:55 Feedback from Jon Goodall and students on WATERS web services - Moved to next month

3:00 Adjourned