

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: February 27, 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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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 - 1:25 JAWRA call for papers on OWDI/NFIE
- 1:25 - 1:30 Feedback from Jon Goodall and students on WATERS web services
- 1:30 - 2:50 Work Group Reports
- 2:50 - 2:55
- 2:55 - 3:00 Membership roster; Adjourn

Attendees:

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

Trent Schade, NWS, trent.schade@noaa.gov

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

Alan Rea, Co-Chair, USGS, ahrea@usgs.gov
Ed Clark, Co-Chair, NOAA/NWS, edward.clark@noaa.gov
Wendy Norton, USGS, wenorton@usgs.gov
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Chris Mickle, Cardno, Christopher.Mickle@Cardno.com
Tad Slawecki, LimnoTech, tslawecki@limno.com

1:10 - 1:25 JAWRA call for papers on OWDI/NFIE

JAWRA is planning a thematic featured collection of papers on OWDI and NFIE. The call for papers is [here](#). The deadline for extended abstracts is March 30, with final papers due by June 1.

What type of topics do we want to make sure get represented in the papers for this JAWRA collection?

- the idea of using hydrofabric and NHD+ framework as a means to relate multiple agencies' water resource data where it exists (including an explanation of why it's designed the way it is)
- Hydro Events Catalog
- Web service implementation issues
- Analytical web services, e.g. upstream/downstream services - future role of WPS?
- data quality and reporting, and including more heterogeneous partners in the OWDI (this relates to the January talk by Lucido and Larsen: <https://drive.google.com/file/d/0B877MDsx9pIFYU9qUEJzNUMxV3M/view?usp=sharing&pli=1>)
- Overarching governance of OWDI, climate.gov, NGDA
- COGO (Coalition of Geospatial Organizations) [Report](#) on NSDI framework layers
- articulation of what SSWD thinks are the key data sets for the OWDI, and why (how do we see the three major use cases we've been discussing, in terms of framing this question and determining initial priority data sets)
- something about Climate.gov themes (and how they relate to OWDI?)
- May be hard given that NFIE Summer Institute would not yet have results, but design for projects within NFIE Summer Institute.

Note: There's an AWRA conference scheduled for November that everyone should consider attending because it's applicable to the issues we've been discussing. See conference website here: <http://www.awra.org/meetings/Denver2015/>

1:25 - 1:30 Feedback from Jon Goodall and students on WATERS web services

We talked with professors at last November's AWRA meeting about OWDI and asked them to request that their students give us some feedback on these web services. Feedback included some useful suggestions on documentation, python versus java script, and general reactions. This seems to be a good way to get people to test our web services and other products, and we may want to use this same method in the future. Al Rea will put a summary of the feedback on our GoogleDocs site, and will include a link in the minutes ([link](#)).

1:30 - 2:50 Work Group Reports

NFIE Work Group

- NWS River Forecast Centers are implementing workflows to extract constituent information from the operational river forecasting system.
- UofAL establishing the Flood Early Warning System (FEWS) services to receive and serve RFC data in WaterML2
- USGS is linearly referencing the NWS forecast locations that are not USGS gages to NHDPlus streamlines
- CUAHSI conducting routine webinars for prospective participants in the Summer Institute and will convene a meeting of the technical steering committee the week of March 16th.
- Standing Issues:
 - Establish hosting service and data subsetting for NFIEGeo (Ongoing)
 - Request for high-resolution stream made last month has been retracted.

Drought Work Group

- Team met on February 25-26 to brainstorm aspects of the short-term deliverable; concept is visualizing drought in the lower Colorado River (CR) basin.
- Participants: Allison Danner (BOR), Camille Touton (DOI), Cedric David (JPL), Charles Kovatch (EPA), Dan Bunk (BOR), Emily Read (USGS CIDA), Nate Booth (USGS CIDA), Alan Butler (BOR), Sara Larsen (WSWC), Bret Bruce (USGS), Pat Lambert (USGS), Forrest Melton (NASA), Kernell Ries (USGS), Gabriel Senay (USGS), Jeff Morisette (USGS)
- USGS CIDA will help with the software engineering for the deliverable.
- Timeframe for data would be 2000-2014.
- Concepts brainstormed were varied - included elevation changes in Mead; closing the water budget for the lower CR basin; agriculture changes in the basin; plumbing system in the basin and diversions; a flyover along the lower reaches of the river; RAPID model output for the upper basin showing flows into the reservoirs; a recreational impacts layer, and others.
- Will be reaching out to NRCS and CBRFC for their datasets.
- Notes for meeting to be uploaded to the OWDI link on the ACWI page (<http://acwi.gov/spatial/index.html>).

NOTE TO ALL WORKGROUPS: we want to bring the SSWD official website up to date, so each workgroup should prepare an informal 1-page statement of what your workgroup

does, who is a member, etc. Send that information to Wendy Norton (wenorton@usgs.gov) and we'll upload it onto the website.

Spill Response Work Group

Members: Bill Samuels (Leidos), Kernell Ries (USGS), Rachel Carlson (EPA), Chris Mickle (Cardno), Trent Schade (NOAA), Terra Haxton (EPA), Tom Clifford (BLM)

Recruiting new members: Sam Dinkins (ORSANCO), Kerry Guy (EPA Region 8 Spill Response Unit)

Teleconference and webex held on February 10

- overview of WV chemical spill response and modeling - paper in Journal of Environmental Engineering link
- StreamStats briefing
- USGS meeting and discussion on time of travel work and dye studies
- Background on EPA Drinking Water Mapping Application for Protecting Source Waters

Our next meeting in March will focus on Ohio River Forecast Center and ORSANCO modeling; Drinking Water Maps, EPA Region 8 Spill Response Unit

[Gulf of Mexico Restoration Initiative](#) annual conference took place recently, including numerous presentations and side meetings: marsh erosion, impacts on marsh species, data management, historical data sets. GRIIC (data store) <https://data.gulfresearchinitiative.org/> Environmental Disasters Data Management (EDDM) Working Group

<http://crrc.unh.edu/workshops/EDDM> has lots of good information and presentations on typical types of environmental data collected during environmental disasters and the data management systems and data collection protocols used.

Are there other data sets the group can think of, that should be included in this use case?

- NHDPlus
- realtime streamgage data
- forecast data from River Forecast Centers
- list of diversion points (drinking water, agricultural, industrial) below the spill -- note that some data sets, such as locations of drinking water intakes, are sensitive information and are not publically sharable
- locations of highway bridge crossings, rail lines, and pipelines can help determine sites of potential future spills
- discharge points, e.g. facilities registry system (FRS-EPA db)
- residence times for reservoirs, estimates by Rich Moore, USGS SPARROW team, sometime this year(?)

Technology Work Group

Reviewed the group's purpose and what we plan on delivering.

Settled on 1) setting up a template and helping the application work groups define the general system for their data types and 2) Hosting a series of "show and tells" of existing systems, highlighting how they fit into the "open water data infrastructure" generically.

We will start to engage the other work groups soon to start getting the templates we have designed filled in.

Dave Blodgett will return for the March meeting, and he'll be able to give us more details then.

EVERYONE: Please look at the SSWD Tech Diagrams document that's in the workgroups area on the GoogleDocs working site.

Water Use Data Work Group (Drought? NFIE?)

Workgroup met in Feb. and talked about goals of the workgroup and what we could return to the SSWD subcommittee as deliverables. We are thinking of providing a "value-added" listing of water use related datasets, which includes spatial/temporal information, and status regarding publishing/availability/links and interoperability of those datasets, possibly in a mapped format. Once we know that status, we (the WU workgroup/larger SSWD members) can work with the owners to start to formulate plans on how to get from Point A to B (openly published in a common format). We also had a presentation from Dave Blodgett on how to navigate the USGS Water Census portal and access the water use information it contains (and how cool Madison, WI, is... thanks, Dave!). Talked to Paul Matuska about BOR participation.

Data Quality/Reporting, 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?

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 national file geodatabase having virtually the full content of NHDPlus in a flattened data model. 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. A sample of the flattened dataset was reviewed by the NFIE folks, and based on their recommendations Cindy made a few changes and is loading the entire national database. The data will be available very soon, hopefully by the middle of March.

FEMA NFHL (NFIE #5)

Paul Rooney

We resolved the download issues Dr. Maidment had with the NFHL (National Flood Hazard Layer), and his team has a copy.

Originally our FTP download for the NFHL was pretty informal.

Dr. Maidment's experience helped us realize we needed to make some basic improvements in documentation and usability - which seems consistent with the overall goals of the OWDI initiative.

No recent feedback on other needs.

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

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

Gages indexed to NHDPlus V2--These have been included in the flattened GDB of the NHDPlus data mentioned above. We will load this to ScienceBase and publish web services in the near future.

Dams indexed to NHDPlus V2--The USGS effort has run into funding difficulties, and a letter is being drafted to request permission from the Corps of Engineers to publically share the data. Until this is sorted out, the effort is on hold. (This issue will be addressed at a meeting in May [no exact date yet]. If anyone has questions related to this, contact Marie Pepler.)

NWS Forecast Points indexed to NHDPlus V2--Mike Tinker (USGS) is working on indexing these to NHDPlus V2.1.

NHD HighRes Flowlines (NFIE #9)

Al Rea

Ed Clark noted during the meeting that the NFIE group is withdrawing this request, but this is already done, so a national snapshot of the HiRes NHD from earlier this month is now available in a file geodatabase. Anyone is welcome to give it a try and give us feedback. It is a large download (10 GB), and we advise using an ftp client such as [FileZilla](#), which allows you to resume a transfer in case of a failure. This file geodatabase includes just the basic NHD feature classes and tables in a slightly modified data model. It is available for download at ftp://hdfp.cr.usgs.gov/Custom/NHD_All_Feb_2015.zip. Note the USGS does not currently provide a national snapshot such as this on a regular basis. Please provide feedback via email to ahrea@usgs.gov on whether this type of national database would be useful to you, in addition to the current subregion (4-digit HUC), subbasin (8-digit HUC), and state downloads.

2:50 - 2:55

3:00 Adjourn

Next meeting Friday, March 27