

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: December 2, 2016, 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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When it is time to attend the meeting, please visit this link:

<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 - 1:30 Work Group Reports

1:30 - 1:55 New Issues

1:55 - 2:00 Adjourn

Attendees:

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

Greg Cocks, USGS, gcocks@usgs.gov
Daniel Wieferich, USGS, dwieferich@usgs.gov
Carly Hansen carly.hansen@utah.edu (on behalf of Sara Larsen from the Western States Water Council)
Dave Wolock, USGS, dwolock@usgs.gov
Joe Kirby, ESP Associates, jkirby@espassociates.com

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

Al Rea, USGS, ahrea@usgs.gov
Kernell Ries, USGS, kries@usgs.gov
Wendy Norton, USGS, wenorton@usgs.gov
Steve Aichele, USGS, saichele@usgs.gov
Tommy Dewald, EPA, dewald.tommy@epa.gov
Sandra Fox, SJRWMD, sfox@sjrwmd.com
Michael Tinker, USGS, mdtinker@usgs.gov
Pete Steeves, USGS, psteeves@usgs.gov
Steve Kopp, Esri, skopp@esri.com
Ellen Finelli, USGS, elfinelli@usgs.gov
Chris Mickle, Cardno, christopher.mickle@cardno.com
Steve Nechero, NRCS, steven.nechero@ftw.usda.gov
Angela Adams, USBR, aadams@usbr.gov
Allison Danner, USBR, adanner@usbr.gov
Tad Slawecki, LimnoTech, tad@limno.com
Terra Haxton, US EPA, haxton.terra@epa.gov
Rob Dollison, USGS, rdollison@usgs.gov
Jim Nagode, Reclamation, JBNagode@usbr.gov
Steve Malers, Open Water Foundation, steve.malers@openwaterfoundation.org

Items of interest:

Work Group Reports

NLDI - Lead Dave Blodgett (dblodgett@usgs.gov)

A couple group meetings were held, [meeting minutes here](#).

- Looking for people interested in a shared repository strategy for the water community. Potentially draft a white paper or similar outlining status quo and value of a planned direction for open source collaboration.

- Working on catchment characteristics services and basin boundary services. Should be ready early next calendar year. If anyone wants to help document and test, we would appreciate the assistance! Total vs divergence routed flow, “enhanced” routing tables vs original NHDPlus V2, etc.

Drought Use Case Work Group

- Working primarily on [Reclamation’s water datasets](#)
- Web services or downloads
- Planned launch of web portal is early spring 2017, coinciding with [World Water Day](#) (March 22, 2017)

Spill Response Work Group

- Finishing up exploratory Research and Development Project on use of remote sensing data for hydrological modeling and spill response
- Submitted chapter to book edited by Jeff Simley on NHD and GIS applications for surface water hydrology (ESRI Press)
- Submitted paper on spill model calibration to the Journal of Environmental Engineering
- Presentation waterborne contaminant spill modeling at Consequence Assessment Conference, Charlottesville, VA (November 18, 2016)

New Issues and Discussion

Aquatic Ecology Use Case Discussion - [Sandra Fox](#)

Hydroperiod Tool

- Models depth, duration, and frequency of inundation (wetlands)
- Data needs:
 - DEM
 - Stage gage data (time series) or water surface model
- Model outputs:
 - Depth, duration, frequency, spatial extent of inundation
 - Habitat polygons

Other aquatic ecology use cases and data needs?

- Species presence (plants, animals, benthos, plankton, etc.)
 - eDNA data
 - <https://maps.usgs.gov/edna/#> (USGS Fisheries Program developed this tool to help bring data into a common framework)
 - USGS Biodata - Peter Ruhl
 - <https://ccviewer.wim.usgs.gov/FishVis/#> - Jana Stewart, Wieferich and many others
- Habitat variables, substrate, etc...
- Water quality parameters, e.g. water temperature
- Fish passage barriers
 - <http://www.cafishpassageforum.org/statewide-barrier-inventory>

- <https://www.sciencebase.gov/drip/> - Wieferich/Jeff Duda USGS
- Spatial Features Registry (in production and open API is planned, has a number of barrier datasets available): Biogeographic Characterization Branch USGS – Wieferich
- Erik Martin TNC Several East Coast Datasets: example <http://maps.tnc.org/seacap/>
- Brad Potter USFWS Midwest LCC co-leading NE and MW connectivity community
- http://scholarworks.umass.edu/fishpassage_archive/
- Pete McIntyre UW: <https://greatlakesconnectivity.org/login>
- Waterfalls - In Progress (<https://www.sciencebase.gov/catalog/item/54944c2ce4b093dbe3016977>)
- Wieferich - I've got a list of efforts from a general review a few years ago above are just a few
- Anthropogenic effects (land use, impervious cover, altered canopy, etc.)
 - This might come in part from the StreamCat dataset presented at the 2/16 call (<ftp://newftp.epa.gov/EPADataCommons/ORD/NHDPlusLandscapeAttributes/StreamCat/WelcomePage.html>) - Scott Leibowitz / Marc Weber (EPA)
 - NFHP (<http://assessment.fishhabitat.org/>) and USGS NAQWA also have datasets available
 - CDI coordinated effort is working to bring above three efforts closer in line for future efforts - PI Wieferich and others (<https://my.usgs.gov/confluence/pages/viewpage.action?pageId=537495444> ; Public Access soon)
- Parameters used in ecological flows models?
- Streamflow (gage time series)
- Streamflow (modeled/forecast)
 - <https://ccviewer.wim.usgs.gov/FishVis/#> - Jana Stewart, Wieferich and many others
- Streamflow (StreamStats/Sustainable Yields)
- Stream temperatures (observations and models)
 - <https://ccviewer.wim.usgs.gov/noreast/> - Jana Stewart
 - <http://www.fs.fed.us/rm/boise/AWAE/projects/NorWeST.html> - Dan Isaak
 - <https://ccviewer.wim.usgs.gov/FishVis/#> - Jana Stewart, Wieferich and many others
- Nutrients (observations and models)
 - Trip Hook - EPA?
- Reference condition flows (observations and models)
- Withdrawals, water use, etc.
- Groundwater exchanges, in/outflows
- Sediment (observations and models)
- Biogeochemistry
- Geomorphology/geomorph characteristics (Robb Jacobson - USGS Ecosystems is a possible contact: rjacobson@usgs.gov)
- Examples of categories: <https://www.sciencebase.gov/drip/>

Water Use Work Group (OWDI) site: <https://viewer.nationalmap.gov/apps/owdi/>

NYSDEC SOP for Biological Monitoring of Surface Waters:

http://www.dec.ny.gov/docs/water_pdf/sop20814final.pdf

NYSDEC Stream Biomonitoring: <http://www.dec.ny.gov/chemical/23847.html>

Establishing a Use Case:

- Identify group members
 - Sandra Fox (initial group lead)
 - Chris Mickle
 - Someone from ESRI (Steve Kopp to identify)
 - Daniel Wieferich
 - Andrea Ostroff or designee
 - Mitch Bergeson or someone from USF&WS
 - Dan Isaak or someone from his group?
 - Tad Slawecki (as contact for other colleagues)
 - Ed Clark (as contact for some others)
 - Jana Stewart (USGS)?
- General scoping

AWRA National Conference, Orlando, Nov 14-17

Takeaways?

1:55 - 2:00 Adjourn

Next meeting Friday, January 27 at 1:00-3:00 ET