

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: November 17, 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#

JOIN WEBEX MEETING

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 WBD and NHD Governance

1:30 - 2:00 Continued discussion on bathymetry data

2:00 - 2:20 Discussion on SSWD organization and approach

2:20 - 2:30 New Issues

2:30 - 2:35 Announcements

1:35 - 2:40 Adjourn

Attendees:

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

Al Rea (ahrea@usgs.gov)

Terra Haxton (haxton.terra@epa.gov)

Wendy Norton (wenorton@usgs.gov)

Jennifer McGee (jenna.mcgee@amecfw.com)

Greg Cocks (gcocks@usgs.gov)

Sue Buto (sbuto@usgs.gov)

Steve Kopp (skopp@esri.com)

Ed Clark (edward.clark@noaa.gov) (Will drop off at 2 PM EST)
Pete Steeves (psteeves@usgs.gov)
Sara Larsen (saralarsen@wswc.utah.gov)
Lisa Engelman (engelman.lisa@gmail.com)
Becci Anderson (rdanderson@usgs.gov)
Steven Nechero (steven.nechero@ftw.usda.gov)
Adel Abdalla, WSWC (amabdallah@aggiemail.usu.edu)
Christopher Round, Booz Allen Hamilton (round_christopher@bah.com)
Dean Djokic (ddjokic@esri.com)
Mark Sondheim (mark.sondheim@canada.ca)
Joseph Kirby (JKirby@espassociates.com)
Rob Dollison (rdollison@usgs.gov)
Tad Slawewski (tad@limno.com)
Linda Davis
Mark Sondheim

1:10 - 1:30 WBD Steering Committee and Hydrography Governance

Sue Buto

Quick history:

WBD and NHD became companion datasets in 2012 when USGS assumed primary responsibility for managing and distributing the data. Between 2012 and the present, WBD and NHD were governed by separate groups with heavily overlapping membership. The WBD Steering Committee was organized and chartered as an SSWD working group in September of 2012. The NHD Management Team was never formally organized or chartered within ACWI.

Future plans:

A joint meeting of the two management groups was held last December (2016) and the members agreed to align the groups into a single, unified hydrography program area governance process that encompasses the individual datasets as well as the NHDPlus HR and associated systems and services. The structure of the new governance group has been developed over the course of the past several months and is ready to take shape so it is time for the existing groups to be disbanded. The co-chairs of the new group would like to propose that the SSWD is updated semi-annually to allow this group opportunities to weigh in on the activities and direction of the USGS hydrography program.

The Chairs of the WBD Steering Committee are requesting that the SSWD issue a vote to terminate the Steering Committee under the article XI of the [charter](#).

Vote procedures:

Voting members have been identified. AI will email those members and request a vote on proposal to dissolve WBD steering committee.

1:30 - 2:00 Continued discussion on bathymetry data

Notes from AI Rea's conversation with Molly Wood and Ryan Fosness, USGS Idaho Water Science Center:

ACWI Subcommittee on Sedimentation proposal for a Geomorphology Data Exchange



"Developing a National Stream Morphology Data Exchange: Needs, Challenges and Opportunities", on April 27-28, 2011, Workshop in Middleton, Wisconsin

- AGU-EOS Forum Summary
- Citation reference: Collins, M.J., Gray, J.R., Peppler, M.C., Fitzpatrick, F.A., and Schubauer-Berigan, J.P., 2012, Developing a national stream morphology data exchange: Needs, challenges, and opportunities: EOS, Transactions, American Geophysical Union, Forum, doi:10.1029/2012EO200005, Vol. 93, No. 20, p. 195,



"REServoir SEDimentation Database, RESSED"

USGS Powell Center forum??

USACE Reservoir Sedimentation Information (RSI) database

- USACE and BoR reservoirs
- Perhaps not public?

There is a strong need for a **repository for bathy data**. Bathy data are huge and it is a constant problem for those who collect data to have a place to post/share their data.

Bathy data are in many different formats

- BAG (Bathymetry Attribute Grid?) (raster) - an industry standard for gridded data metadata
 - HDF5 plus XML metadata
 - BAG files have two or three image bands representing Elevation (band 1), Uncertainty (band 2) and Nominal Elevation (band 3) values for each cell in a raster grid area.
 - http://www.gdal.org/frmt_bag.html
 - Example of coastal bathy BAG based open image services from NOAA National Centers for Environmental Information (NCEI) and National Ocean Service (NOS)
<http://noaa.maps.arcgis.com/home/item.html?id=26ee4c6159b842219cb9729b9ef1b881>
 - https://gis.ngdc.noaa.gov/arcgis/rest/services/bag_bathymetry/ImageServer
- LAZ - compressed LAS format used for lidar point clouds
- XYZ ASCII - very large data files, but easy to read
- Old Arc/Info contour coverages
- Metadata often present for newer data, often not for older

ADCP data for USGS gages

- Detailed bathymetric cross sections
- Not always georeferenced
- Sometimes done upstream or downstream of gage; repeat measurements not always done at the same place
- Gage datums often not tied to a real-world datum
- QREV software used for all ADCP measurements - a possible place to implement standards like requiring georeferencing, standard output format, etc.

Multibeam data

- RAW format - huge

- Generally use CUBE method to reduce raw data to XYZi data

Contacts

- Rick Huizinga is a good contact with the USGS (huizinga@usgs.gov)
- Paul Clouse USACE. He manages the survey group at the St. Louis office and has been involved in maintaining their bathymetric database for many years Paul.Clouse@usace.army.mil
- Bureau of Reclamation Ronald L. Ferrari (possibly retired. If so, Technical Service Center (TSC) director Tom Luebke TLuebke@usbr.gov)

Resources

- Bureau of Reclamation Reservoir Surveys
<https://www.usbr.gov/tsc/techreferences/reservoir.html>
- USGS Bathymetric Elevation Forum
<https://my.usgs.gov/confluence/display/cdi/Bathymetric+Elevation+Forum> (MyUSGS ID required - see <https://my.usgs.gov/resources/>)
- Reservoir Sedimentation Database (RESSED) <https://water.usgs.gov/osw/ressed/>

Others - Fishing community and suppliers

- Lowrance, Hummingbird, Garmin
- Fish finder “crowd sourcing”
- Navionics subscription

Ed Clark - NOAA Office of Coastal Charting - he will invite someone to present at a future meeting

RiverML - CUAHSI effort? Follow-up with CUAHSI folks on RiverML status and hosting in HydroShare. There is also ArcRiver (A GIS-based relational data model for multi-dimensional representation of river hydrodynamics and morphodynamics)

<https://pdfs.semanticscholar.org/9b6b/4a9127b27a51f83ffa67f5cf501b3fa15f58.pdf>

Venkatesh Merwade interpolation methods for estimating bathy (synthetic bathy)

<http://web.ics.purdue.edu/~vmerwade/research.html>

EPA Narragansett Lab study on lake bathy regression approach to estimate bathy used to develop time of travel for NHDPlus V2 (Richard Moore, USGS; Jeffrey W. Hollister, EPA) -

https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=489670

2:00 - 2:20 Discussion on SSWD organization and approach

Drought Use Case Work Group

Get email list for work group and see if we can revive the group.

Potential interaction with NIDIS, old drought use case workgroup, WSWC and CRB pilot study

Example of Topical Data Catalog, maybe use for a bathymetry or aquatic ecology work group

Water Use Dataset Status Maps: <https://viewer.nationalmap.gov/apps/owdi/> - Rob Dollison will take a look at.

2:20 - 2:30 New Issues

AWRA call for topical sessions due Dec 1

https://awra.org/meetings/Orlando2018/docs/Flier_Call_for_Topical_Sessions_2.pdf

Bathymetry topical session?

Get a room for lunch for a Birds of a Feather session?

Abstracts due Jan 9

2:30 - 2:35 Announcements

CALL FOR ABSTRACTS; Submission Deadline **1/9/18**. AWRA 2018 Spring Specialty Conference: GIS & Water Resources X: Spatial Analysis of Watersheds: Ecological, Hydrological and Societal Responses.

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

1:35 - 2:40 Adjourn

Next meeting: January 26, 2018