

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: November 21, 2014, 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#

JOIN WEBEX MEETING

<https://usgs.webex.com/usgs/j.php?MTID=m1c7c56e638f0b148b216140b41548795>

Meeting number: 711 429 326

Shared document space:

<https://drive.google.com/open?id=0B877MDsx9pIFTmpocGE1d0M4TVE&authuser=0>

Agenda

All Times Eastern Time Zone

- 1:00 - 1:10 More Lean Startup Principles
- 1:10 - 1:15 Introductions for new attendees
- 1:15 - 1:30 NFIE-Geo proposal by David Maidment
- 1:30 - 1:45 Report from NFIE Work Group
- 1:45 - 2:00 Report from Technology Work Group
- 2:00 - 2:15 Initial experiment reports
- 2:15 - 2:20 OWDI Ideals discussion
- 2:20 - 2:30 Report from Regional Water Supply DSS Work Group
- 2:30 - 2:55 Discussion, assign work groups for data sets
- 2:55 - 3:00 Membership roster; Adjourn

Attendees:

New (did not attend 8/28/14, 9/26/14, or 10/24/14 meeting)

Alva Couch, CUAHSI, acouch@cuahsi.org (standing in for Rick Hooper)

Terra Haxton, U.S. EPA ORD, haxton.terra@epa.gov

Kevin Sampson, NCAR, ksampson@ucar.edu

Brenna Mefford, WY SEO, brenna.mefford@wyo.gov

Mathew Mampara, Dewberry, mmampara@dewberry.com

Dean Djokic, Esri Inc., ddjokic@esri.com

David Gochis, NCAR, gochis@ucar.edu

Luke Wang, Hazen and Sawyer, lwang@hazenandsawyer.com

Noel Gollehon, NRCS-USDA, noel.gollehon@wdc.usda.gov
Michelle Tang, California SWRCB, michelle.tang@waterboards.ca.gov
David Maidment, University of Texas, maidment@utexas.edu
Sinan Abood, US Forest Service, sinanayadabood@fs.fed.us
Michael Eberle, US Forest Service, mbeberle@fs.fed.us

Returning (attended 8/28/14, 9/26/14, or 10/24/14 meeting)

Alan Rea, Co-Chair, USGS, ahrea@usgs.gov
Nancy Blyler, USACE, nancy.j.blyler@usace.army.mil
Andrew Burnes, USGS, aburnes@usgs.gov
Marie Peppler, USGS, mpeppler@usgs.gov
Karen Hanson, USGS, khanso@usgs.gov
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Sara Larsen, WSWC, saralarsen@wswc.utah.gov
Tony LaVoi, NOAA, tony.lavoi@noaa.gov
Monty Porter, Oklahoma Water Resources Board, monty.porter@owrb.ok.gov
Brydon Lidle, Susquehanna River Basin Commission, blidle@srbc.net
Jeff Zimmerman, Susquehanna River Basin Commission, jzimmerman@srbc.net
Patrick Lambert, USGS, WSWC Federal Liaison, patlambert@wswc.utah.gov
Michael Tinker, USGS, NHD production, mdtinker@usgs.gov
Dwane Young, EPA OW, young.dwane@epa.gov
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Tod Dabolt, EPA OW, dabolt.thomas@epa.gov
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Chris Mickle, Cardno, Christopher.Mickle@cardno.com
Steve Kopp, Esri, skopp@esri.com
Angela Adams, Bureau of Reclamation, aadams@usbr.gov
Paul Rooney FEMA, paul.rooney@fema.dhs.gov

Meeting Notes:

1:00 - 1:10 More Lean Startup Principles

Objective is to take the “Grand Vision” of spatial water data and break it into its parts. Does the end product address a need of the market?

Each product should be considered an experiment. The experiment will test hypotheses. This would be done with real customers, and, ideally, an assessment of what actions those customers take with the product.

Three experiments are on-going and will be reported on today.

1:10 - 1:15 Introductions for new attendees

1:15 - 1:30 NFIE-Geo proposal by David Maidment

Proposal:

Compile and serve (ftp) zipped packages by Water Resource Region (HUC2):

1. WBD Subwatersheds (12-digit with attribution to give 10-digit and 8-digit drainage areas)
 2. NHD Flowlines (with the mean annual discharge attributed onto them, possibly some other attributes as well)
 3. NHD Catchments
 4. NHD Waterbodies
 5. FEMA National Flood Hazard Layer
 6. USACE National Inventory of Dams
 7. USGS Stream gage locations and real-time gage data for water watch points
 8. NWS forecast points and basins
- First data package, next web services
 - Shapefiles are good (NHDPlus data model, but flattened with key attributes)
 - Need this all by March 31, 2015
 - Need it to be authoritative dataset with documented workflow
 - Angela Adams: These will be useful for the regional water supply decision support system use case as well.
 - Suggesting a Geoplatform Theme for NFIE. Jerry Johnston is in favor of that.
 - National Inventory of Dams: USACE policy is NID can't be downloaded in its entirety. There are other datasets regarding dams that are available from the Corps of Engineers. The NHD also has locations of dams indexed to the NHD.
 - Contacts on CUAHSI side: David Maidment and David Tarboton, Ed Clark NWS
 - Hoping to have everything running in time for the December AGU
 - Will need to rework processing for May

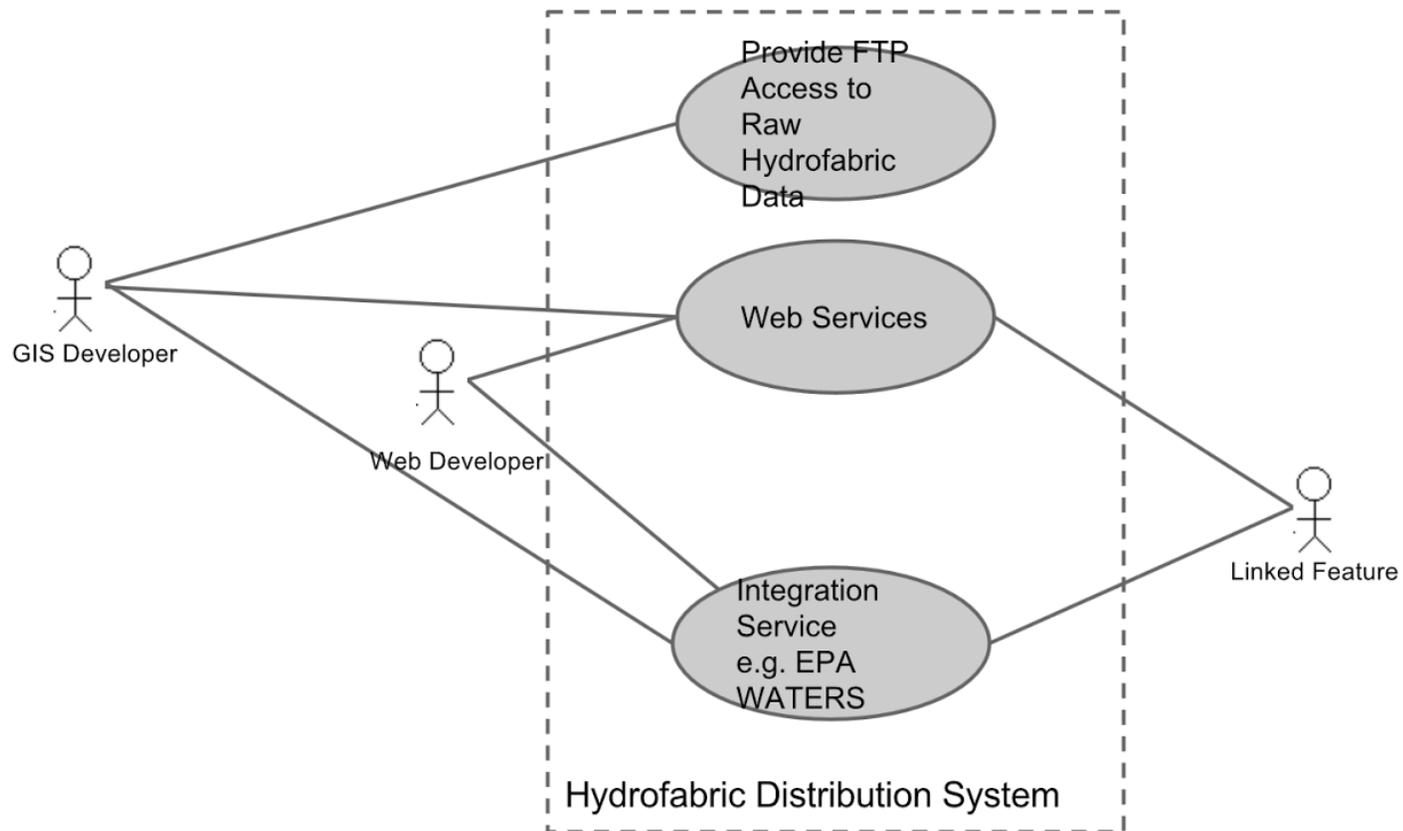
1:30 - 1:45 Report from NFIE Work Group

Nobody from the group was able to report.

1:45 - 2:00 Report from Technology Work Group

- AWRA conference with OWDI track plus side meeting on NFIE
- Dave Blodgett described the Hydro-fabric Distribution System/Use Case diagram. Looking for help from folks involved with the other use cases.

Dave if you have templates you want the Three Use Cases to follow please pass them to the use case leads.



2:00 - 2:15 Initial experiment reports

2:15 - 2:20 OWDI Ideals discussion

- Information owner is responsible for and maintains control of data.
 - suggestion: minimum criteria for quality control standards
 - is some commitment required from provider to provide in standard format?
 - ACWI's Subcommittee on Groundwater has put a lot of thought into this
 - Sara Larsen: WSWC also grappling with this question, standard schema?
 - Jessica: provide translation capability? Jessica and Sara will provide a short presentation next meeting
 - For future discussion - Representing uncertainty; propagation of QC flags/status through OWDI?
 - NGWMN Framework Document:
http://acwi.gov/sogw/ngwmn_framework_report_july2013.pdf
 - services require a long term commitment (Service Level Agreements) (sustainability)
 - Can services be separated from the data itself
- Data is available in common formats requiring no license or fee for access.
 - not necessarily exclusively available in those format
 - common formats not necessarily an OGC format, for example
 - alternative formats/downloads can help
 - data vs format licensing
- Machine interfaces are generalized according to a standard where possible.
 -
- Data uses machine interpretable documentation
 - *(is there a metadata requirement/expectation?)*

2:20 - 2:30 Report from Regional Water Supply DSS Work Group

2:30 - 2:55 Discussion, assign work groups for data sets

- **NHDPlus Work Group (NFIE #2+3+4?) (WBDs also?)**
Al Rea, Karen Hanson, Kevin McNinch, Tommy Dewald
- **FEMA NFHL (NFIE #5)**
Paul Rooney,

USACE NID (NFIE #6)

_____, _____
There is a group in USGS working on a set of dam locations linked to the NHDPlus V2 stream network and water bodies. Al Rea will recruit someone from that group to serve on this work group.

- **USGS Gages and NWS Forecast Points (NFIE #7+8)**

_____, _____
There is a group in USGS working on a set of gage locations linked to the NHDPlus V2 stream network and water bodies. The NWS forecast points are probably a subset of this larger group of gages. Al Rea will recruit someone from that group to serve on this work group.

- **Water Use (Regional WaterSupply)**

Sara Larsen, Brenna Mefford

- Info on human withdrawals, consumptive use, including diversion, consumptive use and return flow data);
- Best states for that data: CO, UT, WY

2:55 - 3:00 Membership roster; Adjourn

Update from David Maidment after the meeting:

(1) We succeeded for the first time today in computing flows dynamically through time for a 14 day period across all the 2.67 million stream reaches in the NHDPlus dataset using as an input the runoff computed from the WRF-Hydro model developed at the National Center for Atmospheric Research. We used a 1-minute time step in the flow computations and summarized the results for each reach at hourly intervals during the computational period. WRF-Hydro does the vertical land-atmosphere water exchange and the RAPID model is used to compute the flows in all the stream reaches. I think this is the first time that flows have ever been computed dynamically on the NHDPlus at the continental scale. Of course, there are many things wrong with these results and the computation is inefficient at present but the principle is established that the NHDPlus geospatial data infrastructure can be used as a foundation for high spatial resolution flow computation at the continental scale for the nation.

(2) Subsequent to our Nov 21 meeting, I examined the NHD Dams dataset suggested by Jeff Simley and I think it will be very suitable for use in the National Flood Interoperability Experiment and that we should set aside consideration of the National Inventory of Dams for this purpose.