

Subcommittee on Spatial Water Data

Meeting Details:

Date/Time: September 26, 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#

Agenda

All Times Eastern Time Zone

- 1:00 - 1:10 Lean Startup Principles & Inspiration
- 1:10 - 1:20 Introductions - new attendees
- 1:20 - 1:25 Agenda Overview
- 1:25 - 1:35 OWDI Overview and Timeline
- 1:35 - 2:35 Use Case Proposals
- 2:35 - 2:45 What are we missing with these use cases?
- 2:45 - 2:55 Membership/Terms of Reference
- 2:55 - 3:00 Next steps; Adjourn

Attendees:

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

Rob Dollison, National Map Delivery Services Lead, rdollison@usgs.gov

Tad Slawecki, LimnoTech, tslawecki@limno.com, Data Management and Communications lead for Great Lakes Observing System (www.glos.us)

Steve Kopp, Esri Program Manager for Geoprocessing and Spatial Analysis, skopp@esri.com

Rakesh Bahadur, Leidos

Jon Nystrom, Esri FEMA, jnystrom@esri.com

Brydon Lidle, SRBC

Jeff Zimmerman, SRBC

Satish Sankaran, ESRI

Bill Samuels, Leidos, ICWater

Chris Mickle, Cardno

Peter Colohan, OSTP

Returning (attended 8/28/14 meeting)

Alan Rea, Co-chair, NHD Co-manager, USGS-NGP, ahrea@usgs.gov

Ed Clark, Co-chair, Flash Flood Services Leader, NWS, edward.clark@noaa.gov

Wendy Norton, USGS-ACWI, wenorton@usgs.gov
Angela Adams, Bureau of Reclamation - Lower Colorado Region, aadams@usbr.gov
Thomas Dabolt, Director USEPA Office of Water Project Management Office
Camille Calimlim Touton, Counselor to AS/W&S, DOI, camille_touton@ios.doi.gov
David Raff, Science Advisor, Bureau of Reclamation, draff@usbr.gov
David Blodgett, USGS-OWI, dblodgett@usgs.gov
Dave Briar, USGS-NWIS
James Kreft, USGS-OWI, jkreft@usgs.gov
Jeff Simley, USGS - National Hydrography Dataset
Jeff Davis, NGWA
Karen Hanson, USGS WBD Product Lead, khanson@usgs.gov
Kernell Ries, USGS National StreamStats Program Coordinator, kries@usgs.gov
Kevin Gallagher, USGS
Paul Rooney, FEMA, paul.rooney@fema.dhs.gov
Sara Larsen, Western States Water Council, Coordinate WSWC Water Data Exchange (WaDE) program, saralarsen@wswc.utah.gov
Wendy Blake-Coleman, USEPA, Blake-Coleman.Wendy@epa.gov
Pete Steeves, USGS (StreamStats, NHD, WBD, GIS Specialist)
Dwane Young, USEPA, young.dwane@epa.gov
Jessica Lucido, USGS-OWI, jlucido@usgs.gov

Lean Startup Principles & Inspiration

- Al Rea began the meeting with some inspirational materials about “Lean Startup” from Todd Park, former Chief Technical Officer of the Federal government. Lean Startup is the idea that startups can shorten their product development cycles by adopting a combination of business-hypothesis-driven experimentation, iterative product releases, and “validated learning.” Case studies include three major government initiatives (including the Health Data Initiative) that provided government data in open, machine-readable format, then invited developers to develop useful applications in a series of challenges and contests. This has resulted in a virtuous cycle of open data inspiring the development of useful applications at low cost or no cost to the government, which in turn makes federal data managers more motivated to share more data. The OWDI seeks to create a similar virtuous cycle for water data.
- The roadmap for Lean Startup is “Build - Measure - Learn” -- a continuous iterative cycle.

Introductions - new attendees

- Introduction of new attendees.

Agenda Overview

- Al Rea reviewed the agenda for this meeting, including goals.
- Our goals and processes are still evolving, and we’re open to suggestions.

OWDI Overview and Timeline

- We had a small workgroup meeting a couple of weeks ago to talk about next steps (see discussion of use cases, below).
- After we review the use cases, we'll take inventory and figure out where the gaps are.
- We need to define use cases that respond to societal needs and cover a broad range of water resources sectors.
- These use cases will focus our attention on the critical data inputs we need. The goal of this group is NOT to solve these use cases. We will work on creating the open data infrastructure needed.
- What data streams are needed?
- Where several agencies have similar data sets, they will need to work together to integrate the data.
- When we talk about building a minimum viable product (MVP), the product doesn't need to be a fully realized system. It can be a plan on paper -- at least at first. The key is that the MVP enables us to measure useful information about user needs, learn from that, and improve the product in another iteration.

Use Case Proposals

- National Flood Interoperability Experiment (NFIE) -- National Water Center in Tuscaloosa, AL, in a collaboration among NOAA, COE, FEMA, others. Ed Clark is the lead on this case.
- Regional Water Supply Decision Support System -- an integrated water portfolio. Angela Adams is the lead on this case.
- Chemical Spill Response -- West Virginia chemical spill from January 2014 affected a wide area and a lot of people; this case involves predictive modeling that could be made available on the internet, to allow communities to predict the path of contaminants as they spread through the landscape.
- Taken together, these three cases deal with flooding, water quantity and drought, and water quality.
- Today's meeting will revolve around discussion of the use cases, and perhaps a decision regarding which priority use cases we want to focus on immediately. Then we will assign teams to focus on each case. **We also want a broader survey of the whole subcommittee to identify high priority data sets and the current state of that data availability.** If your particular data set doesn't fit with one of the use cases we're discussing, perhaps you can identify the type of use case that your data **would** fit into.
- By **late October, we want to be able to compare use case data needs and identify overlaps.** At that point, we will assign teams to develop existing services and systems for data service requirements.
- See presentation slides (http://acwi.gov/spatial/minutes/SSWD_20140926.pdf) for the remainder of the schedule.
- *Question:* Does the schedule apply to all of the use cases? *Answer:* The NFIE case is the most urgent because it depends on getting some services up and running by late May 2015. The others are less urgent.

- *Comment:* We need to recognize that these use cases are nothing new. There are existing programs and mission statements that already deal with these issues (National Water Census, Water SMART, others). **So these use cases will help with implementation of existing programs. If we could find a clear vision that can help us with all of these use cases, that would help us focus our efforts.**
- *Comment:* It's possible to accomplish these use cases without following an Open Water Data Initiative approach. Would it be helpful to **have a group that puts together a high level concept of what it means to have open water data** (common formats, data services, etc.). *Response:* That's a good point, and it's something we need to deal with. There will be a short list of the types of data we want to promote, and once we look at the types of data we need, we may find opportunities to develop common data formats.
- *Comment:* It would be **useful to come up with principles (regarding types of info exchange, etc)** that we will use in developing the OWDI. If we look at the RM-ODP as a model to formulate our work, it will help us be consistent logically. ie. what we mean by 'open data' *Response:* Do we want to distill that into a template for the use cases? *Response:* Maybe. Some formalization of language would be helpful, at least. And we need to tie business requirements to technology requirements. **Are there volunteers for this task?**
 - Tad Slawewski
 - Dave Blodgett (leader)
 - Dwane Young
 - someone from NHD+ team
 - Sara Larsen or Pat Lambert (new WestFAST liaison might be interested in being on this group)
 - Rob Dollison - will also bring in USGS NGTOC and OGC participation

NFIE Use Case

- Downscaling data sets to NHDPlus catchments
- Modeling flood flows in real time, with forecasts
- This effort was born from the interagency IWRSS effort.
- There was an opportunity to look at an experiment where we would demonstrate **higher resolution water resources information** by coupling together some of these datasets and models. What we're really doing is **taking existing data sets that are a component of the river forecast centers and downscaling them and using a supercomputer algorithm to overlay NHD catchments.**
- The goal isn't to design how we'll do hi res forecasting in the future, but to **get the necessary information in machine readable format and make it available to external groups.**
- We (NWS?) would welcome participation on this team by COE.
- Volunteers: Marie Peppler, Paul Rooney, Andy Rost

Are materials at http://www.isg.utexas.edu/ciess/files/session2_David_maidment.pdf relevant?

Regional Water Supply Decision Support System Use Case

- This probably isn't of the same scale of the NFIE.
- Develop integrated data retrieval tool for Colorado River basin. Users would be state and local water agencies, academia, the public.
- Output would be map-based website that allows layering of data sets. There's probably a platform already in existence that we could use/leverage.
- There is already a list developed of potential data sets and their sources.
- Data.gov can ideally host all machine-readable data under the theme of a climate-related initiative. **CEQ would like to help this group.**
- **Water quality data sets** would be useful to add to this use case (Angela will add it).
- **National Water Census** is another possible data source (Angela will talk with Dave Blodgett).
- We should seek feedback from our own organizations, to start. Then we can move beyond, to organizations who are not involved in SSWD and OWDI. In the end, **we still need to make sure the data sets we put on these platforms are driven by the stakeholders' needs.** In reaching out to private industry, local governments, NGOs, or academia, organizations like NGWA can help us. Many of these organizations are members of ACWI, so it should be easy to contact them. We have already gotten good response through those channels from several organizations. What we're *still lacking is State government involvement.*
- We need to make sure **groundwater** is taken into account.
- **State water agencies** may have technical staff that want to participate in this use case. **We will reach out to them also.**
- State of California is working to develop a vision for management of **environmental data**, and that definitely relates to this. Similar efforts are underway in Colorado.
- **NGWA rep** mentioned that the ACWI Subcommittee on Ground Water met last week and had **several States represented, which they could reach out to.**
- In addition to real-time data, **historical data** are needed; **USGS has much of that information in NWIS.** Some of these types of data are also available through **StreamStats**, along with some tools that might be useful (such as tools to estimate streamflow at ungaged sites).
- Is there a way to incorporate data gathered by humans? Human-reported observations?
- **Volunteers:** Kernell Ries, Sarah Larsen, [someone from NASA? -- some possibilities are Krista Peters, Jared Entin, Matt Rodell, Vanessa Escobar], Jay Famiglietti (JPL), [someone working on evapotranspiration at EROS Data Center -- Jim Verdin or Gabriel Senay], Camille Touton, Marie Kessler, Dave Blodgett.

Chemical Spill Response Use Case

We will discuss this at a later meeting.

Volunteers: Bill Samuels, Chris Mickle

What are we missing with these use cases?

Questions to consider considering (for me):

Geography /spatial scale- NFIE is national - Colorado R is SW US, balance elsewhere?

Time scales - are these emergency response (spill?) or long-term planning (Colorado?)

Users - public, operations managers, planners, ??

Types of services

Membership/Terms of Reference

SSWD Terms of Reference document is available here: <http://acwi.gov/spatial/spatial.terms.html>

ACTION: Membership list on the website (http://acwi.gov/spatial/spatial_members.html) is extremely out of date and we're proposing to wipe the slate clean. In order to start a new membership roster, we need each **organization** that's interested in participating in SSWD/OWDI to send a letter to Wendy Norton at USGS, 417 National Center, Reston, VA 20192, expressing the desire of your organization to participate, and giving the name and contact information of your organization's representative to SSWD. Please note that it must be a letter from your organization; it's the **organizations** who are members of the Subcommittee, **not individuals**.

Next steps; Adjourn

- Please identify who your key technical people are -- the people who would actually be involved in designing web services and data services, so we can start tapping into their expertise. We will be ready to start talking to those people in a month or two. Also, think about who can help us with testing.
- **ACTION:** Each workgroup member, please contact your volunteers.
- **Next meeting is Oct 24 from 1:00 - 3:00 p.m. Eastern Time.** Meetings are generally on the fourth Friday of each month, but for November and December we will meet on the third Friday of the month, due to where the holidays fall this year.