

**Water Information and Data Subcommittee
Combined Workgroup 3 and Workgroup 4 Conference Call**

Minutes – March 20, 2013

Attendees: Sara Larsen (WSWC), Dwane Young (EPA), Steve Tessler (USGS), Nathan Morris (NE), Jeff Hogan (NE), Molly Maupin (USGS), Dave Cole (UT), Levi Brekke (Reclamation), Tim Schneider (NOAA/IWRSS)

Administrative: Sara welcomed the group back from a long break and confirmed some changes in workgroup leadership. Dwane will remain the WG3 Lead even though he has transitioned back to his home office with the EPA. The minutes from the August 9th, 2012 meeting were approved. Action Items were reviewed. 1) Suggestions for the “Issues & Recommendations” document from the August 9th meeting were incorporated into the final draft. 2) Final “Issues & Recommendations” document was presented as a deliverable at the WSWC Fall Council Meeting in San Antonio, TX. 3) WaDE data schema was updated with all changes gathered during “Outreach” meetings and WIDS workgroup calls. A new version under the name “v0.2” was released on the WaDE website. 4) A preliminary draft of the Flow Configuration Document (FCD) was written and used as part of the Exchange Network grant application. All Action Items were addressed.

Workgroup Discussion: Molly asked a question about differentiating between hydrologic data and other sorts of data that were generated by the states. Sara answered that the WaDE schema had focused on the derived data products that the states are generating in reports, etc., and was recommending the WaterML 2.0 data schema for the states that host their own hydrologic measurement data. It was anticipated that both types of data would be hosted within the data exchange in the future. Dwane clarified that the schema also allowed each data element to be marked as a value that was “reported”, “measured”, or “estimated.”

Sara gave an update on the various components of the project that had been developed since the last meeting, databases, web services and a prototype mapping portal, and talked about giving a demonstration of the WaDE functionality at the WSWC Fall Council meeting in San Antonio, TX. A brief demonstration of the prototype portal was given to the workgroup. An account of various funding opportunities was discussed, including a partnership grant application to the EPA’s Exchange Network (EN) submitted in the fall of 2012. Recipients of the grant would be announced in April or May of 2013. Web service code was updated to conform to the new Exchange Network REST specification, which changes the formatting of the URL addresses. This, and registering the web services within the ENDS system of the EN program, were items that were recommended in the “Issues & Recommendations” document. The web service code had been updated to use the EN REST specification to access data within both Postgres and SQL databases, but the Oracle database was still under development. WSWC had also met with several of the states in the interim to evaluate their costs for deploying WaDE. WSWC staff reported that they’d been working with Sandia National Lab on mapping applications specific to their data, as per the Council’s contract with Western Governors’ Association. Sara also invited all workgroup members to attend an Energy-Water Workshop, either in person or via webinar, that would be hosted by WSWC in Denver, CO on April 2nd. Registration for the workshop was available on the WSWC website.

The finalized “Issues & Recommendations” document was reviewed by the group. Comments from the last meeting had been incorporated, including requests to make URLs visible to the user, eventually making the web service code available via GitHub, and adopting a GPL license for the project. Finally, as per a comment from Steve Malers, a version number was incorporated into the new URL format.

Dwane walked the workgroup through the new Flow Configuration Document (FCD) that would serve as a guide for potential WaDE partners on how to deploy the components within their IT environment. He talked the group about how to register WaDE with the Exchange Network via the ENDS system. The central portal would then be able to pull the catalog information from the nodes. He also talked about the different services that are specified in the FCD and how they were written to work within the EN framework, but won't necessarily have to adhere to EN specifications if the EN grant is not awarded to the WSWC. WaDE services could be implemented as either SOAP or REST, but were written as SOAP for the grant proposal. Dwane described the flow of the requests from end-users to data retrieval. Steve asked for an explanation on how to avoid duplicating the data given the diagram in the FCD document. Dwane explained that the master dataset resides at the state node, and the only thing that is transferred between partners and the central portal is the catalog. GetSummarybyLocations and GetDetailbyLocations are the two services that are described within the FCD. Dwane described the parameters that come after the initial service request and the overall URL construction. Dwane recommended looking at the FCD document and see if the approach would work for the workgroup members. He also talked about the "Future Services" section that contains services that the workgroup will consider hosting in the future.

Tim mentioned how federal agencies are trying to integrate some of their water resource program services. He asked if this was a way for data to be transferred from machine to machine. Dwane answered that the whole idea of using XML as the framework for transferring data was so you can take advantage of that machine-to-machine process. Sara talked about how the WQX uses authentication between clients and that IWRSS may need that added authentication. Dwane also mentioned that what works for WaDE may not work for larger datasets.

Sara showed the changes that were made for version v0.2 on a diagram of the XML schema, available on the WaDE website under "Draft Items," with changes for the new schema using orange text. Explanatory notes were also attached to the data elements for clarification. Dwane mentioned that, besides the schematic, if any workgroup members would like to access a template database that they could do that. Steve T. asked if Sara or Dwane had an entity-relationship diagram (ERD) of the database. Dwane said that that was in the works.

Sara said she was hoping they would be ready for another meeting the first week of May. By that time we would likely have heard back from the EPA on the status of the EN grant for WaDE. She would send out a Doodlepoll and the minutes for the current meeting as soon as possible so that the meeting time could be settled upon. Dwane suggested a chat with Molly and Steve about the new version of the SWUDS database so that they could compare changes. Molly agreed and Sara suggested adding something to the next meeting's agenda to look at the latest version of SWUDS and compare the two schemas. Molly asked about whether a login was needed to look at the map application. Sara explained that Sandia has asked that the data not be made public at this time. Tim asked if the workgroup members could access the application. Sara explained that there was a license limitation. Only four logins were available and they were being used by the state agency members who were reviewing the Sandia water data. The workgroup then adjourned.

Action Items:

- A review of the flow configuration document (FCD) by workgroup members
- Generate an ERD of the WaDE database