**Water Information and Data Subcommittee**

**Data Exchange Template Workgroup (Workgroup #3)**

Minutes – January 31, 2012

**Attendees**: Steve Tessler (USGS), Laura Paeglis (NE), Paul Houser (Reclamation), Dave Cole (UT), Steve Malers (Riverside), Sara Larsen (WSWC), Dwane Young (WSWC-WestFAST)

**Next Call:** Week of February 20th or 27th look for a doodle poll

**Administrative:** The minutes from the prior call were approved. Action items #1-#7 were closed. We also introduced Sara Larsen, who is a new hire with the WSWC. She will be working almost exclusively on the Water Use Data Exchange. Before joining the WSWC, she was a research engineer at Los Alamos National Laboratory in the Energy and Infrastructure Analysis Group, which models municipal water and energy infrastructure interactions and vulnerabilities during natural hazard events and scenarios. She has also worked for the State of Utah’s Division of Water Resources as an analyst, and for the Provo River Water Users Association – operator of the Deer Creek Division of the Provo River Project in Utah – as their GIS coordinator. She acquired a B.S. in Geography and a M.S. in Civil Engineering, with a water resources emphasis, from the University of Utah. She has written a thesis, several technical reports, and a book chapter on water and energy topics. The WSWC is fortunate to have her involved in this important project.

**Data Exchange Template Discussion:** The group discussed the three data models that had been loaded into the workgroup Google Docs. Steve Tessler (USGS) started by discussing the ‘Conveyance Model’. This model provides for a detailed accounting of where water is diverted, how much water was diverted, where it is transferred to, how much is used, where it returns to, and how much is returned. It is built upon a network model where water can either move ‘from’ or ‘to’. This model has been successfully used in New Jersey as well as a number of New England States. It can accommodate either point-type data or larger scale data. It also has the ability to identify water sources. Steve also explained that the USGS State Water Use Database (SWUDS) model is very similar to this conveyance model. Laura Paeglis (NE) discussed the Nebraska data model for storing water rights data. Laura explained that within her system, they’re able to track all of their permits for withdrawing water, as well as identify which permits required metering. Some questions were asked about what type of locations NE captured. Laura said that they had locations for all their permitted withdrawals. These locations are stored in an ArcSDE database as locational data. Dwane asked if there was any sensitivity around the data. He explained some of the WSWC thinking on drinking water intake locations and that the thinking is that we couldn’t show exact locations. Dwane asked if Nebraska showed that information. Laura said that their locations for the drinking water intakes were sensitive, and that they didn’t share that information with the public. Laura also said that she would check to see how or if they tracked consumptive use in their database. Dwane then explained his model. The model that he put together describes an XML schema. It currently captures water allocations and water use, but Dwane recognizes that a new section needs to be added to capture water availability measurements. The model is based on the USGS AWUDS model. The data are organized by ‘Reports’ that can be a representation of any state-defined grouping of allocations or uses. An individual report is required to have either a HUC or a County, but can also have its own geographic extent as defined by georss. The allocation data can either be reported as individual allocations or allocations at a grouped scale. The same is true for consumptive use. Additional data elements would be provided for specific beneficial uses (i.e. Acres Irrigated for irrigation use). The data model also provides for the ability of identifying the locations of individual diversions and return flows by making use of the NHD. Dwane stated that he didn’t think a lot of states would have this information, but that we’d at least allow for that type of capability.

Dwane explained that the WSWC thinking on the data model has evolved some over the past month or so. The current thinking is that the data model would represent a more summary-level type information. For example, the application would show an 8-digit HUC. For that HUC, it would show the amount of water coming into the HUC (either flow or precipitation), the amount of water allocated and to which uses, the amount of water consumed and for which uses, a measure of water availability (provided by the state), and the amount of water leaving the HUC. The WSWC is also considering providing information on who the water is appropriated to, and how much.

**Draft Data Elements:** The next step is to begin compiling a list of draft data elements. Dwane proposed that he and Sara would begin developing a list of data elements. The format would be very similar to what Dwane proposed in his data model, with an element name, description, and some indication of whether or not that element is required. The group can discuss this draft further on the next call. Molly Maupin offered to see if she couldn’t get the SWUDS data model to Dwane for consideration as part of the data element effort.

**Action Item: WSWC draft list of data elements**

**Action Item: Molly Maupin acquire SWUDS data model for sharing with the group**

**Call Schedules:**  Dwane proposed the week of February 20th or February 27th. Dwane will send out a Doodle poll for times during those weeks.

**Other Items:**  Dwane mentioned that the WSWC will begin a series of outreach meetings. Our first meeting is scheduled with Oregon. We plan on discussing with the states the list of draft data elements as well as proposed data structures. Dwane also mentioned that he’d like to meet with Reclamation when the WSWC went to Colorado (likely the end of February). Dwane will discuss how best to approach this meeting with Paul Houser (Reclamation).