**Water Information and Data Subcommittee**

**Combined Workgroup 3 and Workgroup 4 call**

Minutes – June 21, 2012

**Attendees**: Steve Malers (Riverside), Sara Larsen (WSWC), Dharhas Pothina (TX), Dave Cole (UT), Laura Paeglis (NE), Dwane Young (WSWC-WestFAST)

**Next Call:**  Week of July 9th or Week of July 16th (look for a Doodle Poll)

**Administrative:** The minutes were approved. Sara completed a draft of the Glossary and that was shared with the group. Steve Malers provided a number of comments on the glossary, with particular comments on the definition of the term ‘Availability’. Steve offered to share some graphics that he’s used to describe how all the different definitions of the term ‘Availability’ add up. Sara mentioned that Sandia is defining ‘Availability’ as ‘Legally available water,’ which may drive the ultimate definition that we use. Steve had additional comments on the glossary that he will send. Sara will update the glossary based on Steve’s comments. In particular, he’d like to see a specific definition on the ‘Prior Appropriation Doctrine’, the ‘Riparian Doctrine’. Dwane thought this was a good idea, and that we should also add a definition for the ‘Right of Capture Doctrine’ as well. Sara will make these changes to the glossary.

The group also discussed the write-up of the three options for addressing the ‘temporal-scale’ issue. This issue deals with how the states will report the time scales for the summary data in the schema. The three options presented in the write-up are:

1. Choose one time-scale (recommend Calendar Year) and require that all data be organized by calendar year.
2. The time-scale could be variable, and the data provider would specify what type of time-scale they are using.
3. Allow time-scale to be reported for each summary.

The group agreed with these three options, and with option 1 being the preferred option. The workgroup will forward this issue to the Water Information and Data Subcommittee for them to discuss and arrive at a conclusion during the next Subcommittee call, which will be held on July 16th.

**Summary Data XML Example File:** Dwane shared with the group an example XML file that represented the summary data that had been loaded in the database. He showed how the information would be represented based on the schema in its current state. Dwane will post the XML document to the Google Docs folder. **Action Item: Load example XML file and other documents into Google Docs**

**Detail Database Design:** Dwane shared with the group the design for the detail tables in the database:

All of the detail data are organized under the Organization and Report table. These same tables are used for the Summary data (see prior meeting minutes for a discussion on these tables).

The first detail table is DETAIL\_ALLOCATION. This table stores all of the information necessary to define the allocation, including the name of the allocation owner, the priority date, the legal status, and the geospatial information for the allocation. Dwane mentioned that one of the issues that he discovered in loading the sample data into the database was that there were a few cases where it appeared as if the allocations had more than one priority date. Dwane asked the group if this was a viable scenario. The group felt that an allocation would almost always have only one priority date. Another issue was that allocations have the potential to have more than one geospatial area (i.e. they may cross HUC, County, or Reporting Unit boundaries). Dwane recommended that the schema be changed to allow for the relationship between Allocation and its geospatial components to be a 1:many relationship instead of a 1:1 relationship. This would require those columns in the ALLOCATION\_DETAIL table to be split out into a new table. A change would also need to be made to the XML schema. Dwane felt that this change was pretty minor. The group didn’t have strong feelings one way or the other on this change.

Steve Malers mentioned that they have many cases where a point of diversion may have many water rights associated with it. Dwane felt that the schema can handle this current scenario. What would happen is that the different allocations would have a diversion that had the same location. Laura Paeglis asked if we were looking at capturing both surface water and groundwater rights. Dwane said that we’d like to have both if we can.

The next set of tables are the D\_ALLOCATION\_USE table and the D\_ALLOCATION\_FLOW table. These tables allows for the reporting of the beneficial uses associated with the allocation and the amount water allocated for each of those uses. For most water rights, this information would not be provided, but rather would be provided for each diversion. However, there may be cases where an allocation doesn’t have a diversion (i.e. and instream flow). For these cases, the D\_ALLOCATION\_USE table and its companion table D\_ALLOCATION\_FLOW would be used to report the amount of water allocated for those particular uses.

The next set of tables are the DIVERSION tables (DETAIL\_DIVERSION, DIVERSION\_USE, and DIVERSION\_FLOW). These tables allow the reporting of all of the information surrounding an individual diversion associated with an allocation. There can be many diversions associated with an individual allocation. For a diversion, a state can report the location of the diversion, the type of water, and the source of the water, the beneficial uses associated with the diversion, and the amount of water allocated for each use. The state can also report the actual amount of water diverted at each diversion for each use.

The next set of tables are the USE tables (DETAIL\_USE, D\_CONSUMPTIVE\_USE, D\_COMMUNITY\_WATER\_SUPPLY, D\_THERMOELECTRIC, and D\_IRRIGATION). These tables are used for reporting consumptive use for an individual allocation. Information that can be included are location of the use, type of water used, beneficial uses, the amount use, the population served for community water supply uses, the amount of power generated for thermoelectric uses, and the crop type and acres irrigated for irrigation uses. Dwane mentioned that Uses have the same spatial issue as Allocations in that they can cross HUCs, Counties, or Reporting Unit lines. Because of this, he recommended that a similar change to the schema be made to allow for a 1:Many relationship between a Use and its location information.

The last table is the RETURN FLOW table (DETAIL\_RETURN\_FLOW). This table allows for the reporting of return flow locations and return flow amounts that are associated with a specific allocation.

Dwane also mentioned that this database design is designed for reporting purposes, and not necessarily day-to-day operation of a state’s water rights system. The problem is that it is setup to capture a snapshot of data, and all of the relative pieces, for a particular point in time (i.e. calendar year). For each year, that entire snapshot would be stored. Although this is efficient for reporting purposes, it may not be for day-to-day management because you end up repeating a lot of information that doesn’t really change much from year to year (i.e. allocation name, priority date, etc.).

Lastly, Dwane mentioned that he’d like to load more example data into the database to test the design. If any of the state members of the workgroup would be willing to provide data, Dwane would load that data into the system. Dharhas offered to provide some Return Flow data. **Action Item: Workgroup members provide example detail data.**

**Call Schedules:**  Next call will be the week of June 9th or June 16th .

