



WSWC

Western States Water Council

The Water Use Data Exchange

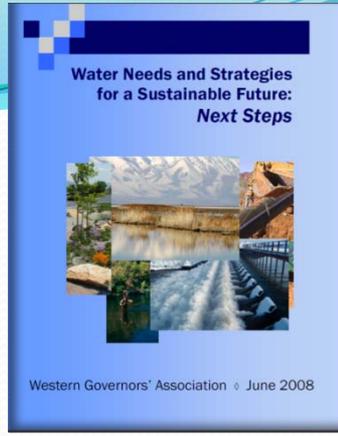
Western States Water Council (WSWC) and
Western States Federal Agency Support Team (WestFAST)
Dwane Young (WestFAST Federal Liaison)
Sara Larsen (WSWC Water Data Exchange Program Manager)
Mountain West Water Institute Meeting
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What is the WSWC?



- Affiliate of the Western Governors' Association
- Created in 1965 and consists of appointed representatives from 18 of the western states
- Purposes include:
 1. Promote effective cooperation among the western states on water management and water resources
 2. Promote state prerogatives while accommodating federal interests
 3. Provide a forum for the exchange of views/perspectives
 4. Provide analysis of federal/state developments to assist member states in evaluating the potential impacts



What is WestFAST?

- 2008 Governors' 'Next Steps' report suggested formation of a federal team to assist the coordination and implementation of the recommendations of the report
- WestFAST is a collaboration of 12 Federal agencies with water management interests in the West
- These 12 agencies fund a liaison position to work in the WSWC office

Who makes up WestFAST?

- Senior-level staff from the following agencies:

- Dept. of Energy
- NASA
- EPA
- Forest Service
- NRCS
- NOAA
- Army Corps of Engineers
- Fish and Wildlife Service
- BLM
- USGS
- Reclamation
- Department of Defense



Water Withdrawals by Category

Livestock



Less than 1 percent

Self-Supplied Domestic



1 percent

Public Supply

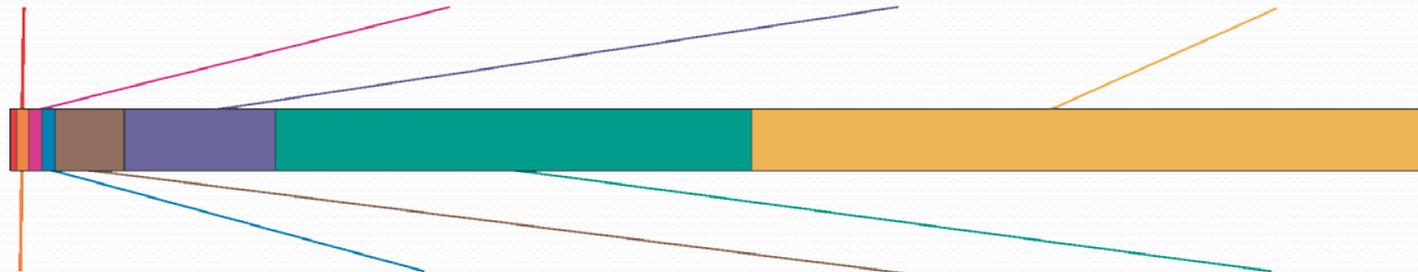


11 percent

Thermoelectric Power



49 percent



1 percent



Mining

2 percent



Aquaculture

4 percent



Self-Supplied Industrial

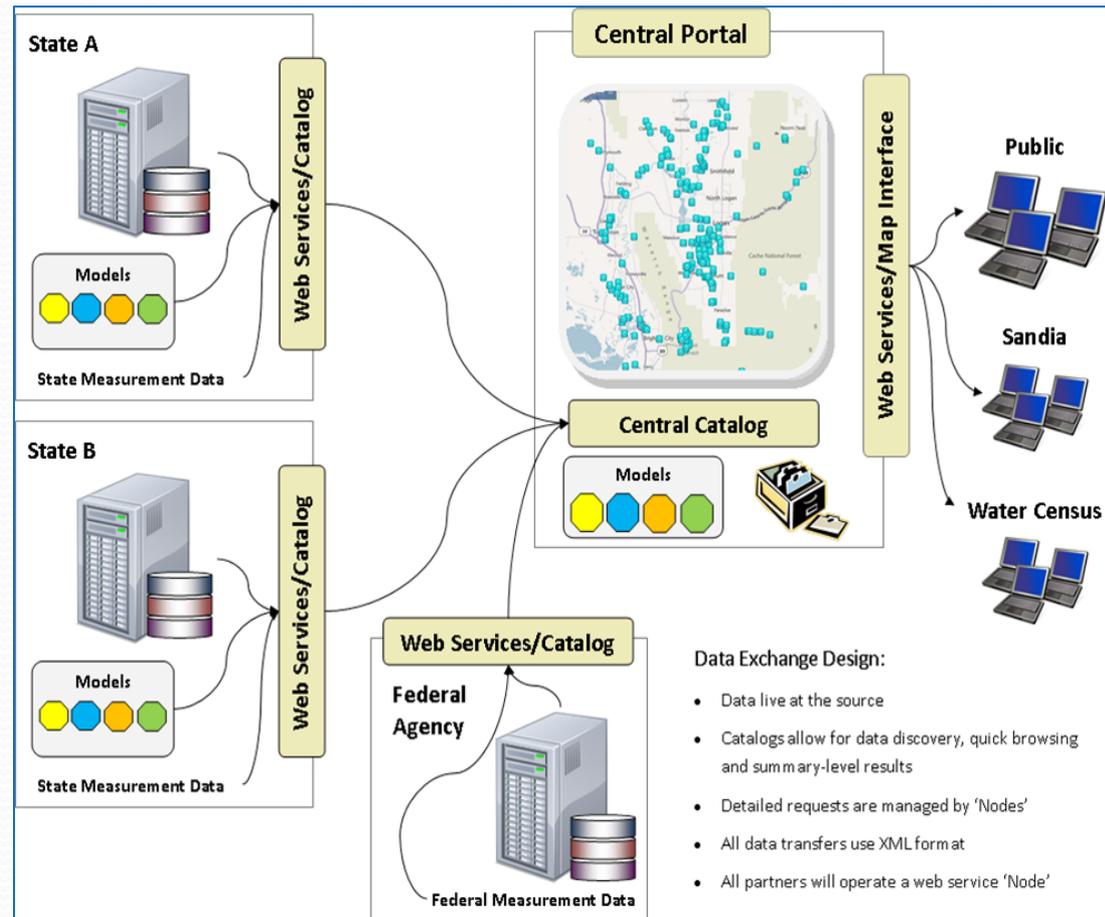
31 percent



Irrigation

What is the Water Use Data Exchange?

The Water Use Data Exchange is a project that will focus on better enabling the western states to share water use, water allocation, and water planning data with one another and with the Federal Government. It will also seek to improve the sharing of Federal data that supports state water planning efforts.



Goals

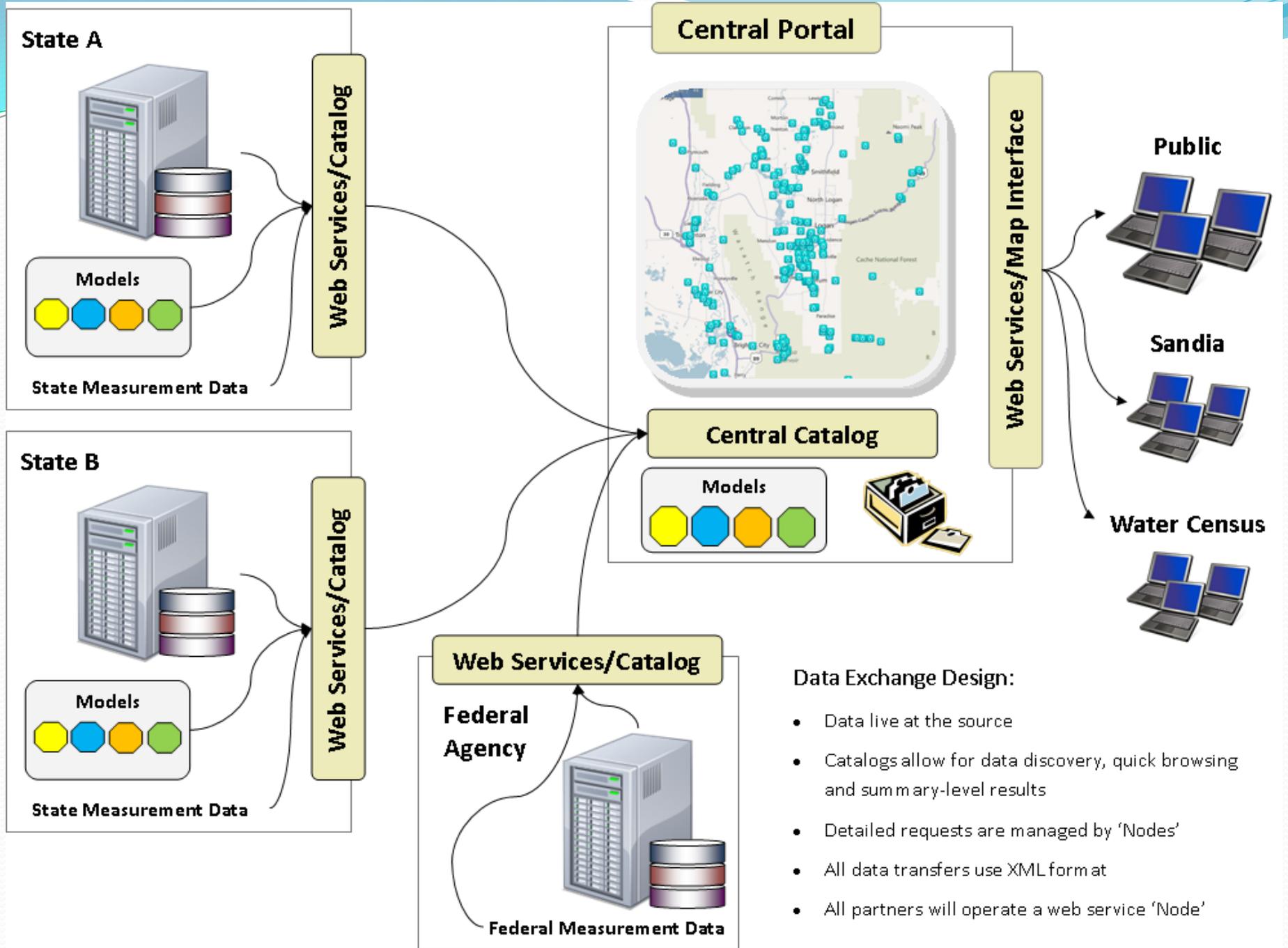
1. Gain a better understanding of the variability between state water planning programs.
2. Provide documentation for the various consumptive use and water availability estimation methods that the states currently use.
3. Develop a common 'Schema' or format that can be used for sharing these data.
4. Encourage the adoption of standard approaches for sharing 'time-series' data.
5. Assist ongoing efforts in gaining access to state data.

Fitting it together

- Numerous moving pieces that need to be considered as part of this project:
 - DOE National Labs' Water-Energy Project
 - USGS Water Census
 - Subcommittee on Water Availability and Quality (SWAQ)
 - Advisory Committee on Water Information (ACWI)
 - USACE Federal Toolbox and NOAA Integrated Water Resources Sciences and Services (IWRSS)
 - Data.gov
 - Existing State data sharing efforts
- WestFAST will assist in coordinating with each of these efforts to help make sure that all of the pieces are moving in the same direction

Fitting it together (cont.)

- The Water Use Data Exchange is a pilot project with the primary focus of:
 - Supporting the DOE National Labs' Water-Energy study
 - Identifying future needs for the Water Census and demonstrating the value of such an exchange
- The WSWC can play the role of a governance body in defining the standards by which these data can be exchanged.
- The states would run the services defined by the WSWC and thereby support numerous studies and purposes.



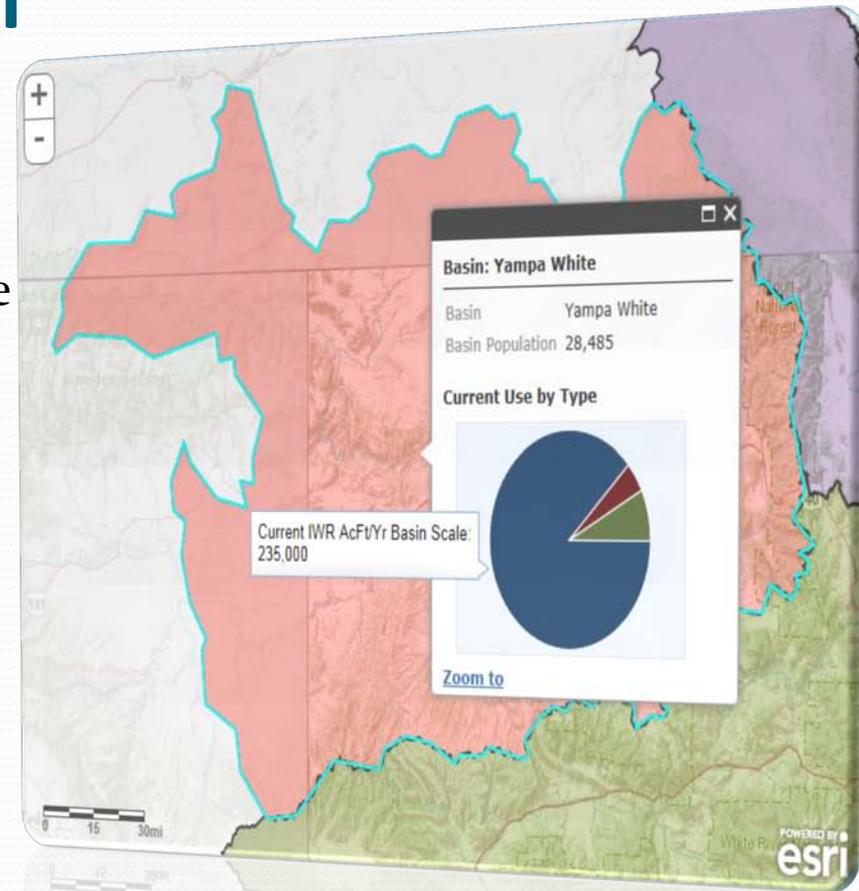
Data Exchange Design:

- Data live at the source
- Catalogs allow for data discovery, quick browsing and summary-level results
- Detailed requests are managed by 'Nodes'
- All data transfers use XML format
- All partners will operate a web service 'Node'

The Central Portal

The Central Portal would be a map-based interface that would compile data and provide summary-level information for that area. Some things that it could show would be:

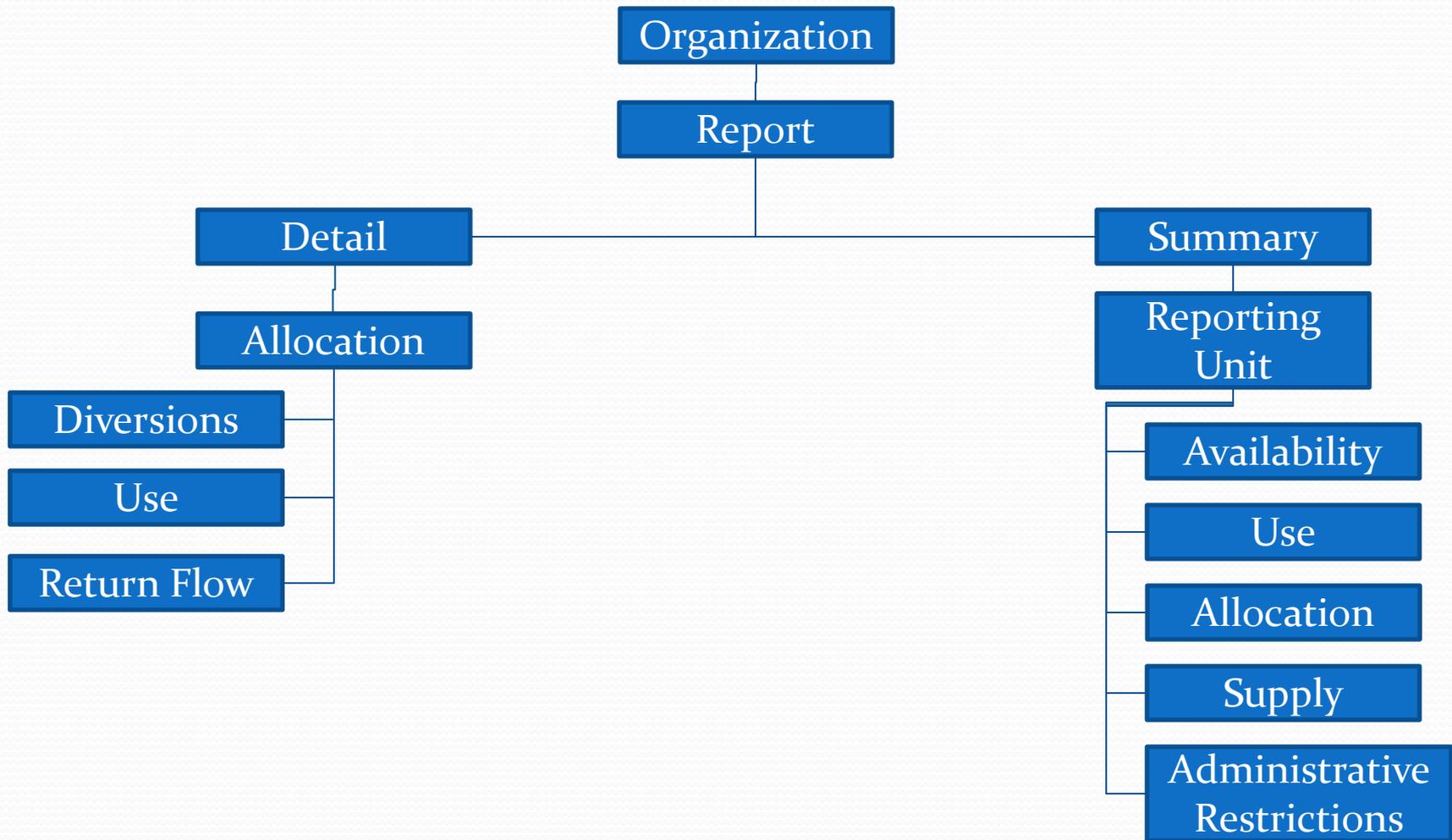
- Water appropriations
- Consumptive use
- An indication of water availability
- Provide access to the underlying data and methods used to make those determinations



Types of Data

- Two Categories of Data:
 - Measured Data (i.e. streamgaging data)
 - Derived Data (i.e. water availability estimates)
- We're interested in both types of data
- Measured data that we're targeting include:
 - SNOTEL Data, Precipitation Data, Reservoir Height Data, Streamgage Data, and Groundwater Data
- Derived data that we're targeting include:
 - Information on water appropriations
 - Information on consumptive use
 - Information on water availability
 - The methods used to derive all this information

The Proposed Data Model



Schedule

Work Plan Item	Schedule	Complete?
Establish Workgroups	Nov. 2011	
Develop Survey	Jan. 2012	
Develop Data Elements	Feb. 2012	
Outreach to States	Feb. 2012	In Progress
Develop XML Schema	Mar. 2012	In Progress
Develop Draft Services	Oct. 2012	
Beta Release of System	Jan. 2013	
Initial Release	May 2013	

Discoveries so far

- Most states are already publishing some detailed information about their water rights.
- Some states are conducting water supply analyses and availability estimates as part of their water planning processes. Most are doing these analyses on a local scale.
- Many of these supply and availability estimates are not captured in any data system.
- Although there are differences in how the states manage their water and share information, there are a number of significant similarities.

Challenges

- Each state is operating at a different spatial/temporal scale. This creates challenges for west-wide analysis.
- Very few states have consumptive use data state wide.
- There are a number of methods used for determining water availability. In addition to that, the states define water availability differently.

A Way Forward

- Continue in defining a common model that the states can build towards (focus on the similarities).
- Keep the system flexible to account for the variability between the states.
- Document the current approaches for determining consumptive use, and encourage the development of this information.
- Demonstrate capability, while documenting the challenges.

Why Participate?

- The WSWC has a strong history of protecting the interests of the states.
- States are often bombarded with questions or requests for their data. By making the data available, in a common well-defined format, they can save time in dealing with multiple requests.
- Many other third parties are asking the question of ‘How much water is available?’ The states should be the ones giving the answer to that question.
- Using a common framework for exchanging and displaying the state data, the western states will be in a strong position to participate in national questions on water use or water availability.

Why Participate (cont.)

- States are struggling with the same issues of determining the best approach for determining water availability.
- States are struggling maintaining staff to support home-grown models. Need a more sustainable approach.
- Help states get 'beyond their own boundaries'. Allow for better regional collaboration.

For More Information

Water Use Data Exchange Project Website:

<http://www.westgov.org/wswc/wateruse>

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