Western States Water Council

Water Data Exchange (WaDE)

EN2014

Why it’s Important!

Background...
How it Works...
What it will provide...
Western States Water Council

- Affiliated with the Western Governors’ Association
- Advises Governors on water policy issues
- Provides a collective state voice
- Fosters collaboration between states and with federal agencies
Data Sharing in the West
Western State Water Agencies

Western Water Supply is Highly Variable...

Streamgage Data
Basin Budgets/Water Supply Estimates
Water Availability Estimates
Diversions, Uses, and Return Flows
Allocations (Water Rights/Permits)
Water Data Exchange (WaDE)

What are the Big Picture Goals?

To improve state water management and planning, as well as policy development.

To better enable the states to share important water data with each other, the public and federal agencies.

To improve the sharing of federal data with the states, to assist their planning efforts.
On a Smaller Scale...

1) Identify the variability between states’ data management systems
2) Develop a common data schema (common format for planning data)
3) Demonstrate how the data exchange will work and its benefits
4) Encourage other partners to share data by adopting standardized formats
Hydroinformatics and “Big Data”

How does WaDE fit in with CUASHI, NGWMN, NWIS, WaterML, Etc.?

Policy (WGA)

Decision Applications (Sandia)

Data Sharing & Access (WaDE)

Review & Interpretation (State)

Sensor/Measurement Data “BIG DATA” (Hydroinformatics)
Hydroinformatics and “Big Data”

How does WaDE fit in with CUASHI, WaterML, etc.?
WHY IS IT SO IMPORTANT?

States and Federal agencies, utilities, farmers, journalists, urban planners, politicians, academics… anyone who wants to know more about water…

... questions about water availability will only increase!

With population growth, greater competition, energy security, food security, drought, climate change…
HOW DOES WaDE WORK?

Representational State Transfer (REST) Endpoint

Phase 1 (SOAP): node/service name / parameter
Phase 2 REST: baseURL/service name / parameter

http://www.state.us/webservices/GetSummary
WHAT WILL WaDE PROVIDE?

Water Availability

Availability Summary: 7,550 acre-feet

Water Use

Beneficial Water Use Summary: 2,850 acre-feet

Water Supply Summary: 24,000 acre-feet

Regulatory Summary:
- Groundwater Management Area
- Minimum Instream Flow requirements (aka eFlows)
Allocation Data
- Water Right Owner
- Status (proposed, finalized)
- Priority Date
- Beneficial Use

Diversion Location
- Beneficial Uses (e.g. withdrawal/consumptive)

Return Flow Location
- Consumptive Use
HOW DO YOU IMPLEMENT WaDE?

WaDE is an open source EN-based COT
FY2013 EN Grant
multi-state WaDE deployment

Following the NetDMR grant management and governance structure
• Texas CEQ providing EN grant management
• State partners = OK, WA, OR, ID…..UT was recent addition
• WSWC will provide project coordination, technical assistance and product enhancements

Steering Committee Charter
• Pass-through contracts between TCEQ and grant partners
• Open Source license
• WaDE deployment in partner states
  • IT infrastructure
  • Staff resources / IT contractors
  • EN Node deployment ?
  • WaDE COT deployment (PHP and preferred database schema)
WaDE Project/Product Plans for 2013

- Finalization of WaDE v0.2 XML schema

- Finalization of WaDE MS SQL & Postgres v0.2 database schemas (Oracle is pending)

- Finalization of WaDE v0.2 web services code for both SQL and Postgres database access

- Publication of WaDE Project’s State Capabilities Assessment Report – Final Draft ~ May 2014

- Deploy WaDE in states…UT and WY have already begun deployment

- Volunteer states will deploy without outside funding (NM, NE, WY)
Western States Water Council
Water Data Exchange (WaDE) Project

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For draft items, scheduling, and documentation etc., check out:
www.westernstateswater.org
Click on the “WaDE” tab at the top.
Hopefully, exchangethenetwork.net WaDE webpage in future