Background…   How it Works…   What it Will Provide…

Western States Water Council
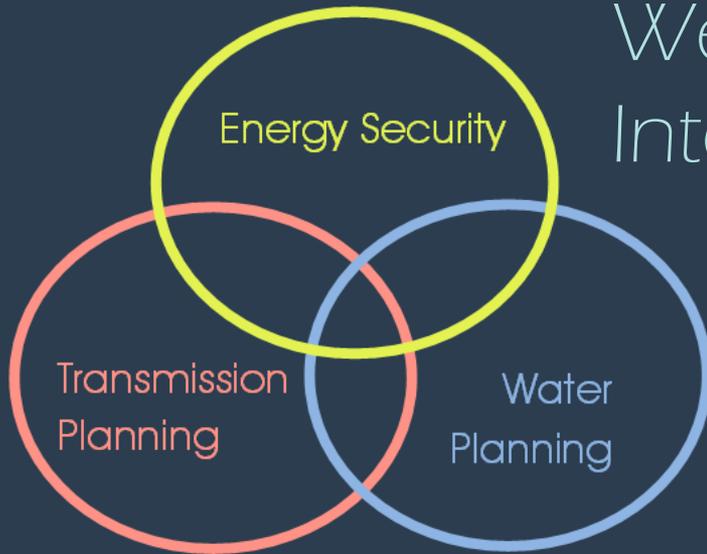## Water Data Exchange (WaDE)

National Water Quality Monitoring Conference

Cincinnati, OH – April 28th – May 1st

Getting the States Plugged In!

Energy-Water Nexus

"Energy and Water in the Western and Texas Interconnects"

Energy Security

Transmission Planning

Water Planning

Sandia National Laboratories

WECC

Argonne National Lab

Electric Power Research Institute

NREL, INL, Pacific Northwest

ERCOT

Data Sharing in the West

Western State Water Agencies

Water Planning is Highly Variable…

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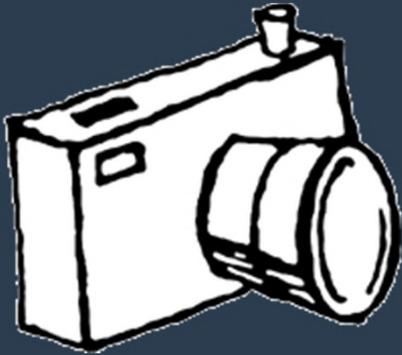Basin Budgets/Water Supply Estimates
Water Availability Estimates
Diversions, Uses, and Return Flows
Allocations (Water Rights/Permits)

Water Data Exchange (WaDE)

What are the Big Picture Goals?

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

ALSO, to improve the sharing of federal datasets with the states, which would facilitate their planning efforts.

On a Smaller Scale…

1) Get a handle on the variability between states

2) Develop a common data schema (common format for planning data)

3) Show how the data exchange will work

4) Encourage other partners to share data by adopting standardized formats

HOW DOES IT WORK?



Western Water Data Exchange (WaDE) Central Portal

A mapping application for discovering water data web services hosted by the states, federal agencies and Sandia National Lab

An state agency sponsored initiative to better share water data was begun in 2008 and has taken on a greater importance in more recent years. Faced with the need to collaborate on regional watershed management issues and the growing requests for access to water data, state agencies have initiated the Water Data Exchange (WaDE) project.

This Central Portal for WaDE

LEGEND

Western 8-Digit HUC Layer
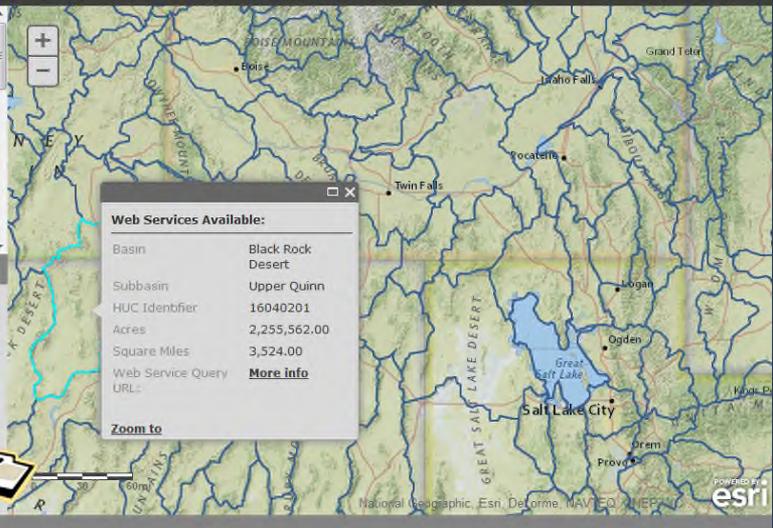
Web Services Available:

Basin	Black Rock Desert
Subbasin	Upper Quinn
HUC Identifier	16040201
Acres	2,255,562.00
Square Miles	3,524.00
Web Service Query URL:	More info

Zoom to

Web Services/Catalog

Web Services/Catalog

Web Services/Catalog

Web Services/Catalog

Representation
http://www.sta

USGS
science for a changing world

Sandia National Laboratories

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

WHAT WILL IT PROVIDE?

Summaries of Data

Availability Summary: 7,550 acre-feet

- Surface Water
- Groundwater
- Brackish Groundwater
- Water Reuse

Water Use Summary: 2,850 acre-feet

- Agricultural
- Municipal
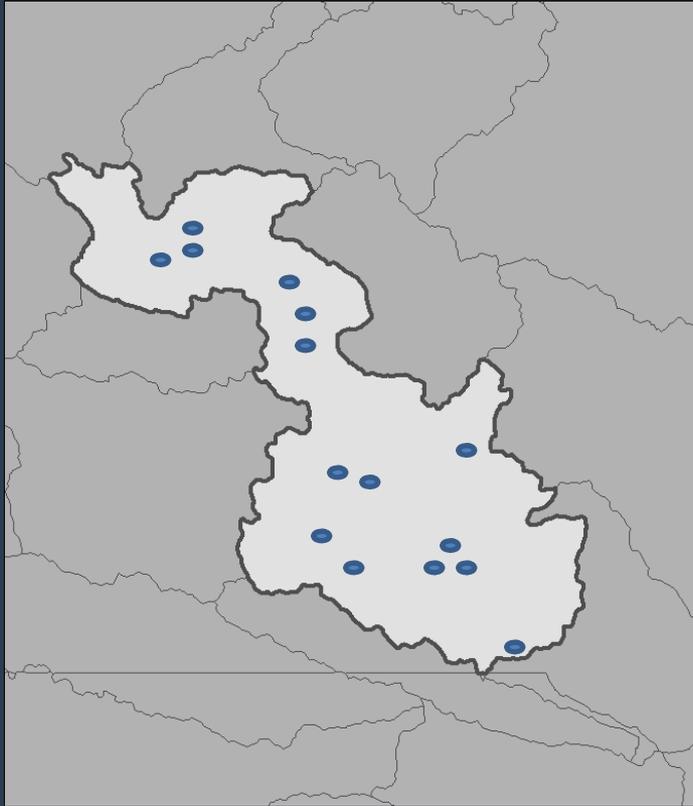- Industrial
- Thermoelectric
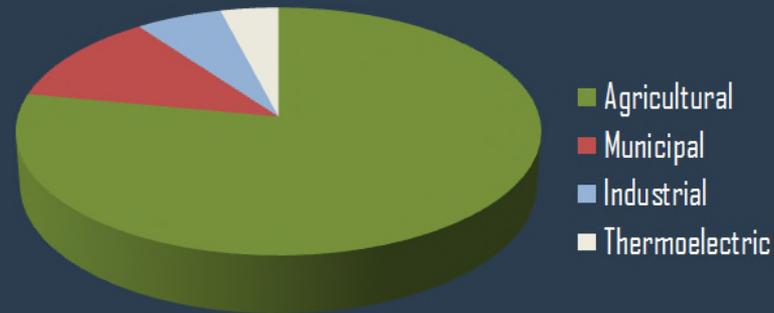
Water Supply Summary: 24,000 acre-feet

Regulatory & Allocation Summaries:

- Groundwater Management Areas
- % of Allocations by Beneficial Use Category

WHAT WILL IT PROVIDE?

More Detailed Data

Allocation Data

- Owner
- Beneficial Use
- Status
- Priority Date

FUTURE STEPS:
States plugged in, grants, accessing federal data too

```
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        <WC:Report>
                <WC:ReportIdentifier>2012ALL</WC:ReportIdentifier>
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Hydroinformatics and "Big Data"

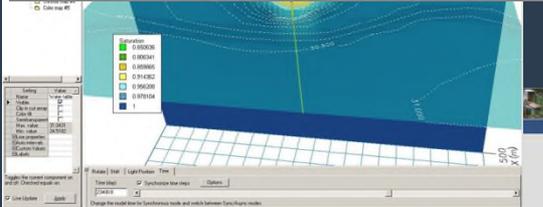## How does WaDE fit in with CUASHI, WaterML, Etc.?

Policy (WGA)

Decision Applications (Sandia)

Data Sharing & Access (WaDE)

Review & Interpretation (State)

Sensor/Measurement Data
"BIG DATA" (NGWMN, NWIS)

Hydroinformatics and "Big Data"

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

POLICY

↑

POLICY TOOLS

↑

RESEARCH & ANALYSIS

↑

DATA

WaDE Project Progress for 2013 -2014

- Finalization of WaDE Version 0.2 schema
- Finalization of WaDE SQL/Postgres Version 0.2 (Oracle is pending)
- Finalization of WaDE web services code for Version 0.2 for both SQL and Postgres access
- DEPLOY to the STATES...

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

WaDE Deployment Progress for 2014

- Due to limited state resources, WSWC staff agreed to assist states as much as possible in securing funding for WaDE
  - Lead by TCEQ, WaDE-EN Partners are TX, OK, WA, OR, ID
    - Database installation, licensing, datasets, etc.
    - WSWC Coordination
  - Four volunteer pilots states that will proceed without funds (UT, NM, NE, WY)
  - UT and WY have begun the process!

WaDE Project Milestones – 2014 +

	2014 Jan	2014 July	2015 Jan	2015 July	2016 Jan	2016 July
Development						
Publication of State Capabilities Assessment Report	▓					
Finalize WaDE v.0.2 schema for deployment	▓					
Finalize WaDE v.0.2 databases and infrastructure components	▓					
Deployment						
Deployment with volunteer pilot states (UT, WY, NM, NE)	▓	▓				
Deployment with NEIEN grant partners (TX, OK, WA, OR, ID)		▓	▓	▓		
Proceed with deployment for remaining WSWC members			▓	▓	▓	
Phase II						
Incorporation of state generated "hydrologic measurement" data			▓	▓	▓	▓
Engage with federal agencies for addition of federal web services				▓	▓	▓
Add shared water planning datasets from federal partners					▓	▓

WHY IS IT SO IMPORTANT?
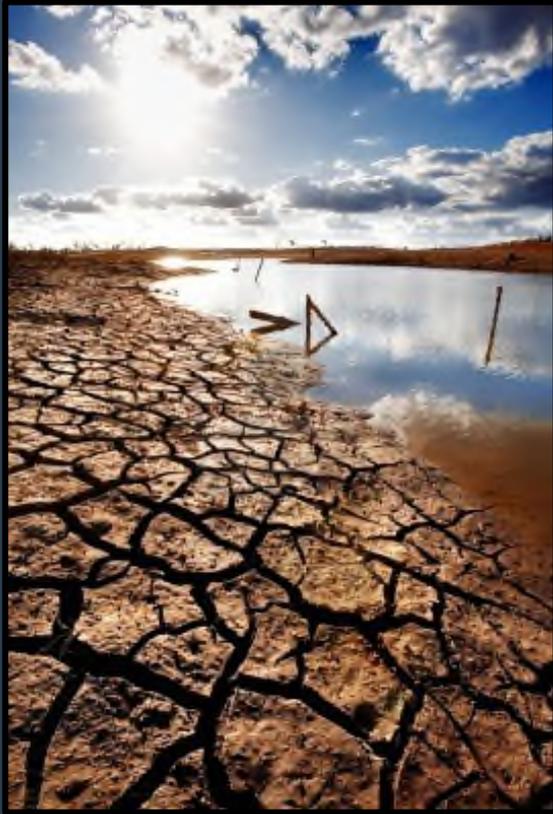
With population growth, greater competition, energy security, food security, drought, climate change...

Federal agencies, farmers, journalists, politicians, academics... anyone who wants to know about their water...

... questions about water availability will only increase!

Western States Water Council
Water Data Exchange (WaDE) Project

For more information, draft items, scheduling etc., check out:

www.westernstateswater.org

Click on the "WaDE" tab at the top.

w00t!

Or contact Sara Larsen at:
saralarsen (at) wswc.utah.gov

QUESTIONS?