



Western Regional Partnership

*Reliable Outcomes for America's Defense, Energy,
Environment and Infrastructure in the West*

May 2015

WRP Vision & Mission



2

WRP Vision

WRP will be a significant resource to proactively identify and address common goals and emerging issues and to develop solutions that support WRP Partners.

WRP Mission

WRP provides a **proactive and collaborative framework for senior-policy level Federal, State and Tribal leadership** to identify **common goals and emerging issues** in the states of Arizona, California, Nevada, New Mexico and Utah and to **develop solutions that support WRP Partners and protect natural resources, while promoting sustainability, homeland security and military readiness.**

WRP Structure

WRP Co-Chairs:



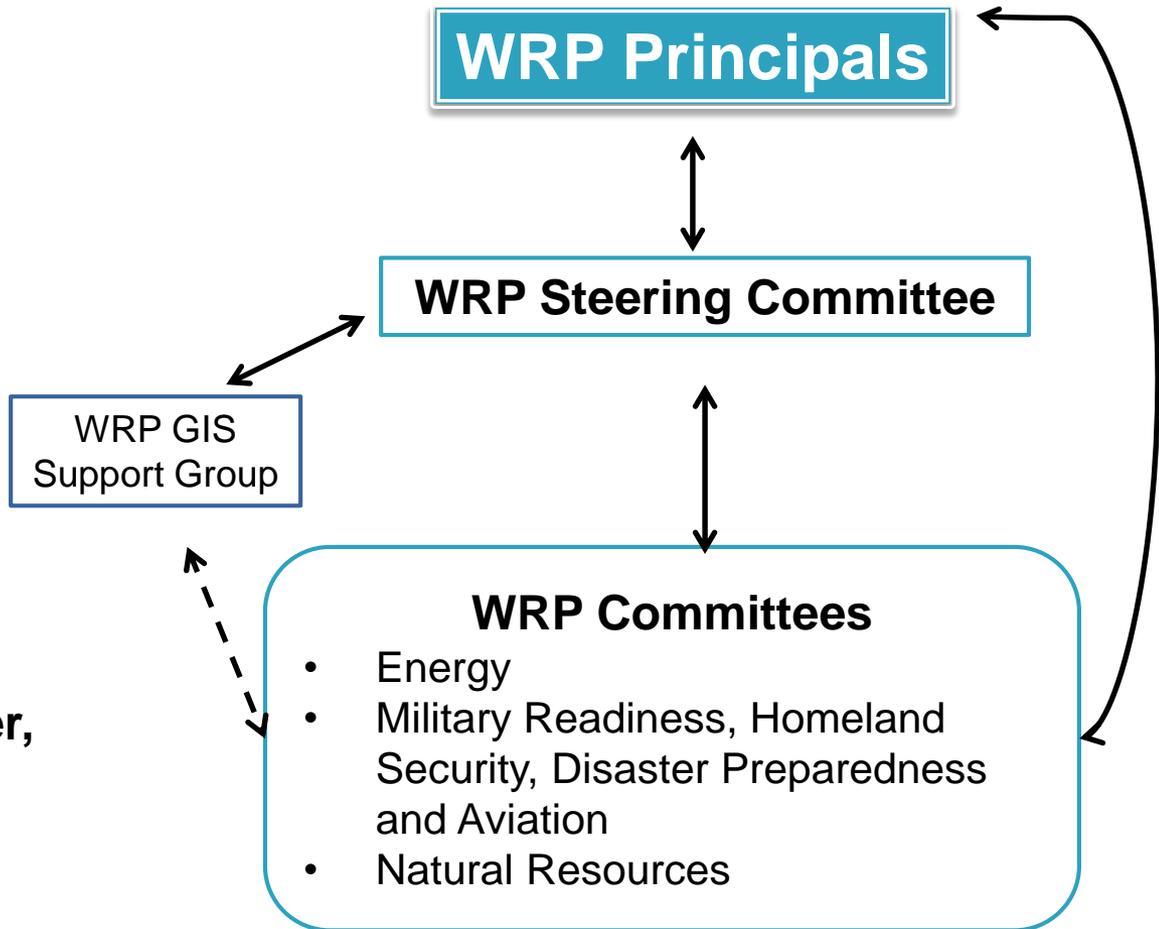
Honorable Gary Herbert, Governor of Utah



Mr. John Conger,
Performing the Duties of the Assistant Secretary of Defense (Energy, Installations and Environment)



Ms. Janice Schneider,
Assistant Secretary, Land and Minerals Management, DOI



- Energy
- Military Readiness, Homeland Security, Disaster Preparedness and Aviation
- Natural Resources

WRP Steering Committee

4



- Representatives of each of the five WRP States:
 - Arizona, California, Nevada, New Mexico and Utah
- Bureau of Indian Affairs
- Bureau of Land Management
- Bureau of Reclamation
- Customs and Border Protection, U.S. Border Patrol
- Federal Aviation Administration
- Federal Emergency Management Agency
- Federal Highway Administration
- National Park Service
- Natural Resources Conservation Service
- National Oceanic and Atmospheric Administration
- Office of Secretary of Defense
- U.S. Air Force Headquarters
- U.S. Army
- U.S. Army Corps of Engineers
- U.S. Department of Energy
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U. S. Geological Survey
- U.S. Marine Corps Installations West
- U.S. Navy
- Native American Leadership:
 - Navajo Nation, Inter-Tribal Council of CA, Inc.
- Western Governors Association Liaison

WRP Natural Resources Committee

Co-Chairs

5

- **John Bullington** , Assistant Director, Arizona Game and Fish Department
- **Thomas M. Finnegan**, Colonel (Retired), Arizona Military Affairs Commission
- **Col John J Gamelin**, USMC, Governmental and External Affairs, MCIWEST-MCB Camp Pendleton
- **Shelley Smith**, Deputy State Director, Resources, Bureau of Land Management, Utah
- **Clayton Honyumptewa**, Director, Department of Natural Resources, The Hopi Tribe

2014-2015 WRP Natural Resources Committee's Priorities

- **Provide information** on new endangered species listings, areas of critical importance, U.S. Fish and Wildlife proposed rules, etc., **develop recommendations** on how WRP Partners might assist with the efforts to **preclude listing of additional species** that may impact Partners' missions and identify pilot projects to foster sustainability of necessary habitat
- Highlight new or expanded transportation corridors and **develop recommendations** on how WRP Partners might assist with the **facilitation of infrastructure while preserving natural resources**
- Work with Partners to **identify implementation methods** for recommendations developed for the **WRP Southeastern Arizona/New Mexico and WRP Mojave projects**
- **Engage** with the **Federal Sentinel Landscapes Coordinating Committee** to assist its designation of Sentinel Landscapes in the WRP region
- **Partner with WGA, WSWC and other WRP Partners to provide input on water sustainability** as part of an ongoing Western dialogue

Next WRP Water-related webinar

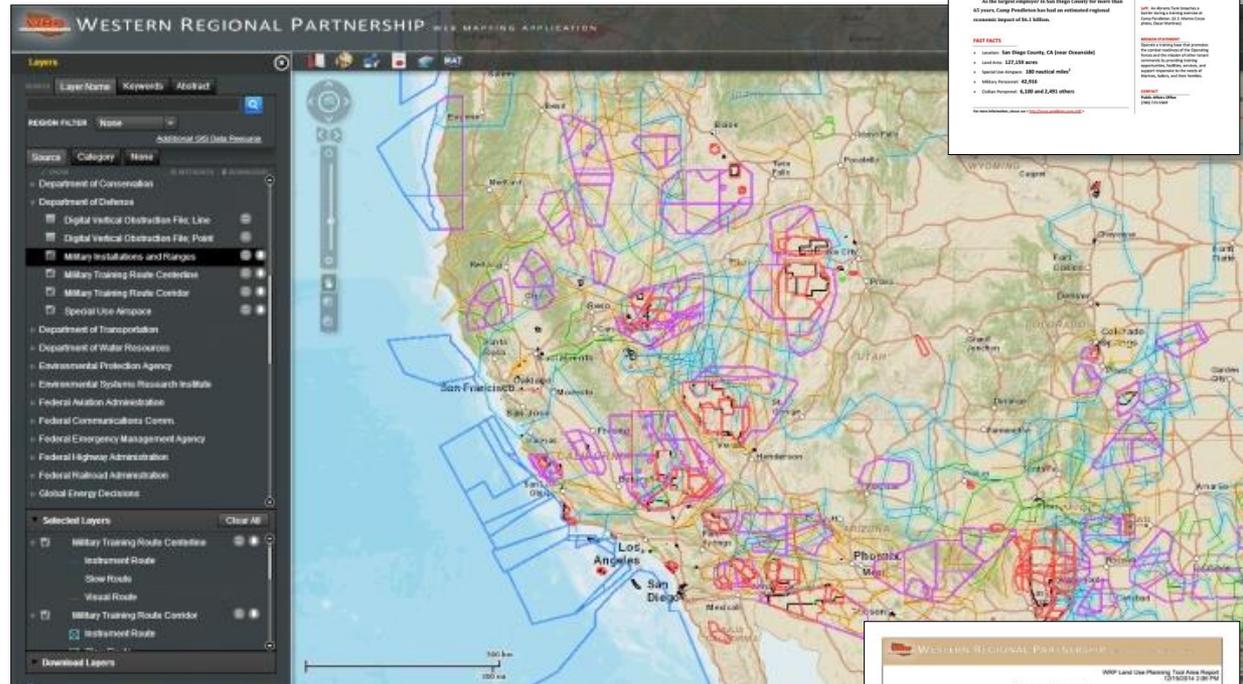
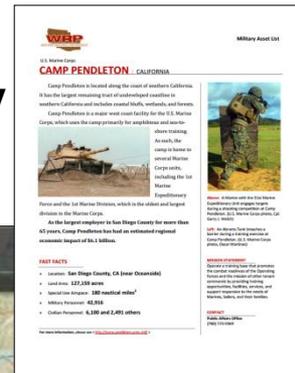
- June 5th at 1 pm Pacific
- WRP Natural Resources Committee Webinar featuring Ann Mills, Deputy Under Secretary for Natural Resources and Environment, on drought

If you do not have a WRP account, please go to www.wrpinfo.org and sign up under “mailing list”

WRP Web Mapping Application

- Query and download spatial data
- Export maps
- Search data from over 50 sources
- Consumable mapping services
- Secured/sensitive data access

Military Asset Tool

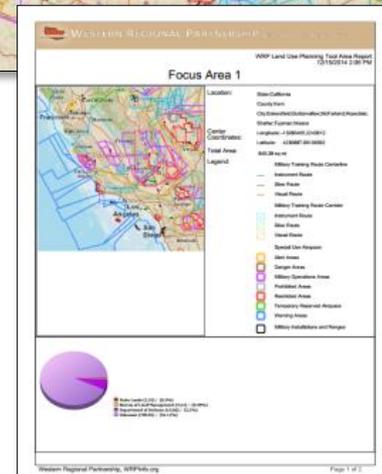


Regional Project Database

- Input project location and information
- Identify needs
- Search for projects
- Reduce redundancies

Land Use Planning Tool

- Spatial data
- Critical habitat
- Regional project database
- Energy point of contact database
- Generate reports



Today's Webinar Presenters

- **Patrick (Pat) M. Lambert, Hydrologist, U.S. Geological Survey, Western States Federal Agency Support Team (*WestFAST*) Liaison**
 - WestFAST is a collaboration among 12 Federal agencies with water management responsibilities in the West. WestFAST was established to support the WSWC and the Western Governors Association in coordinating Federal efforts regarding water resources
- **Tony Willardson, Executive Director of the Western States Water Council (WSWC)**
 - WSWC is an organization consisting of representatives appointed by the governors of 18 western states. Council members and staff work closely with the Western Governors' Association on water policy issues of concern to the governors



WSWC

Western States Water Council

Federal and State Coordination on Water Policy, Water Resources, and Water Quality

The Western States Water Council (WSWC) and the
Western States Federal Agency Support Team (WestFAST)





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
 - * Facilitate correlation of federal activities, and to develop and enhance collaborative partnerships among state and federal agencies.
- * WestFAST is a collaboration of 13 Federal agencies with water management interests in the West
- * These 13 agencies fund a liaison position to work in the WSWC office



Why WestFAST

- * **Facilitate correlation of federal activities, and to develop and enhance collaborative partnerships among state and federal agencies.**
- * Provide a set of principal points of contact for western states managers working through the WSWC.
- * Act as and “exchange interface” facilitating information sharing through participation in WSWC and WGA meetings, conferences, forums and associated work groups and committees
- * Provide opportunities for cross-agency discussions and leveraging of shared knowledge.
- * WestFAST agencies support a federal liaison stationed in the WSWC’s office responsible for coordinating efforts among the agencies with the WSWC.

Who makes up WestFAST?

* Senior-level staff from the following agencies:

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



Things we're working on or will be working on

- * Optimizing (recognizing and implementing best practices in) Federal/State collaboration
- * Open Water Data
 - * Water Use Data Exchange project (WaDE)
 - * Open Water Data Initiative – Subcommittee on Spatial Water Data Case Studies
 - * National Groundwater Data Network/Water Quality Portal
- * Drought Resiliency/Resonse
- * WestFAST gave over 20 presentations in WSWC meetings
- * WestFAST hosts workshops on priority topics (previously on data management, Colorado River Basin Federal programs and assessments)
- * WestFAST sponsors monthly webinar on Federal Agency Water Resources programs and assessments
- * WestFAST monthly newsletter is now received by 126 federal, state, and private sector recipients.

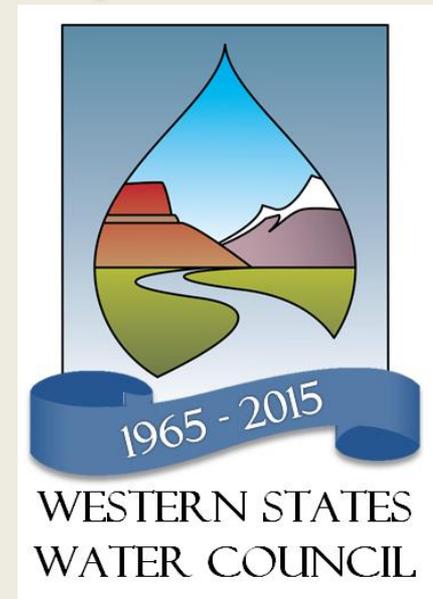
Western State Water Resources: Planning, Policy and Appropriation

Western Regional Partnership

Webinar

May 21, 2015

Tony Willardson
Executive Director

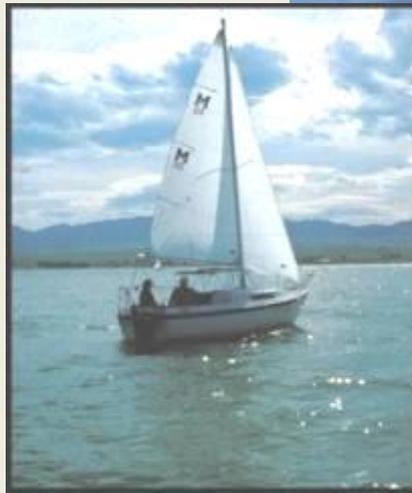
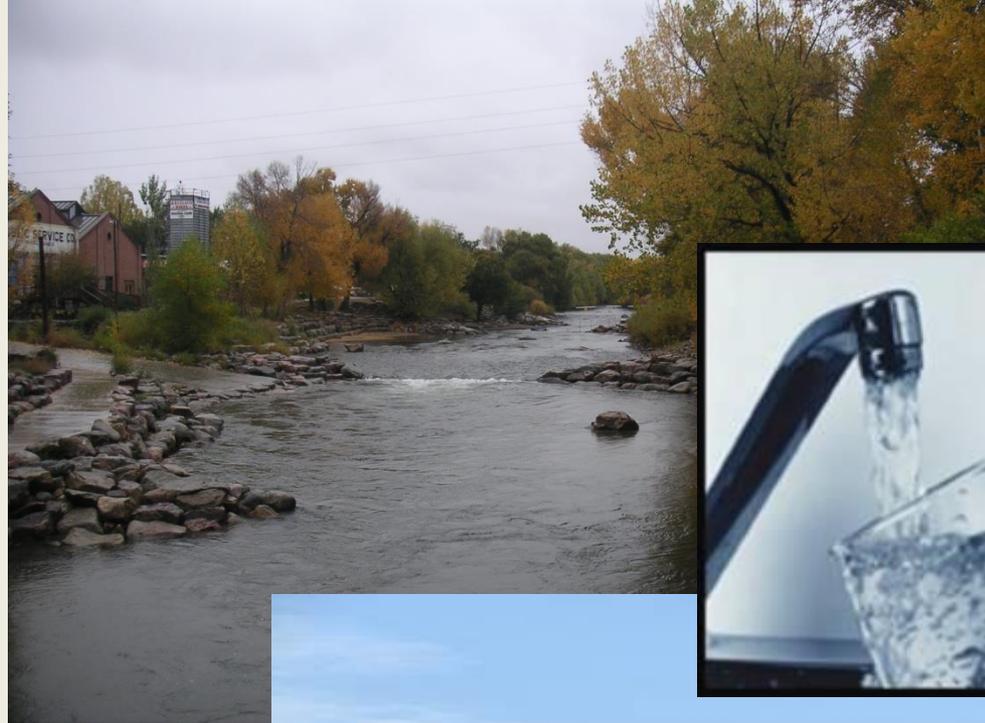


Western States Water Council



- Advisory body to 18 western Governors on water policy issues
- Provides states collective voice
- Fosters collaboration
- Working with the Western Governors' Association (WGA)

The future growth and prosperity of the western states depend upon the availability of adequate quantities of water of suitable quality



Western states have primary authority and responsibility for the appropriation, allocation, development, conservation and protection of water resources.

Deference to State Water Law

The Congress and the U.S. Supreme Court have consistently recognized states' authority

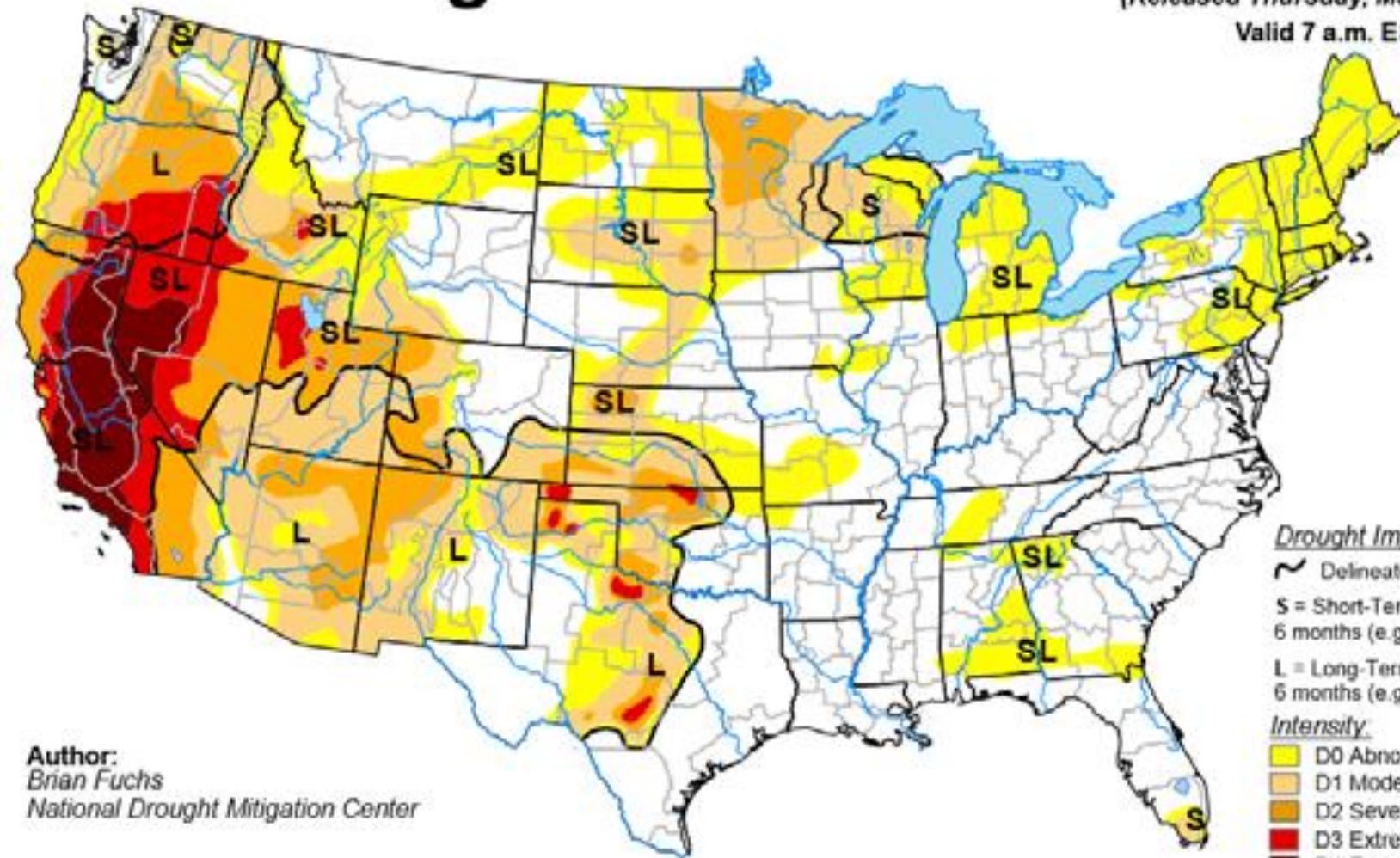
- Desert Land Act of 1877
- Reclamation Act, Section 8 (1902)
- *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U.S. 142 (1935)
- *United States v. New Mexico*, 438 U.S. 696 (1978)
- Clean Water Act, Sections 101(b) and 101(g)
- Federal Power Act, Section 10

U.S. Drought Monitor

May 12, 2015

(Released Thursday, May. 14, 2015)

Valid 7 a.m. EST



Drought Impact Types:

~ Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

Yellow D0 Abnormally Dry

Light Orange D1 Moderate Drought

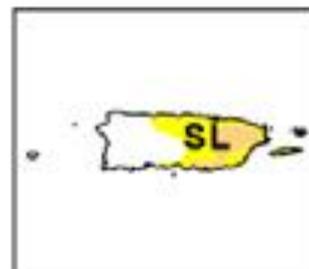
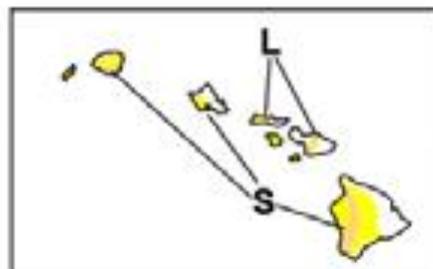
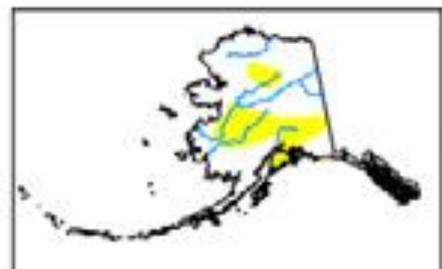
Dark Orange D2 Severe Drought

Red D3 Extreme Drought

Dark Red D4 Exceptional Drought

Author:
Brian Fuchs
National Drought Mitigation Center

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>

Water Needs and Strategies for a Sustainable Future

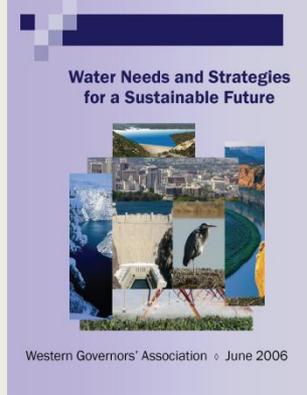


1. Growth and Water Policy
2. Meeting Future Water Demands
3. Water Infrastructure Needs and Strategies
4. Resolution of Indian Water Rights Claims
5. Climate Change Impacts
6. ESA & Protecting Aquatic Species

2006 WGA Water Report

To encourage sustainable growth policies and plans, states should identify the water demands and impacts associated with future growth.

Additionally, states should develop integrated growth and water resource scenarios so that the consequences of various growth scenarios can be evaluated for both the near and long term.



Water Needs and Strategies for a Sustainable Future



Western Governors' Association ♦ June 2006

Water Needs and Strategies for a Sustainable Future: *Next Steps*



Western Governors' Association ♦ June 2008

Decisions about where and how to grow are rarely influenced by water policy or by the availability of water



Water Policy and Growth

Population growth is continuing at an unprecedented rate in the West with ramifications not only for cities but rural communities and agricultural areas.

Changing demographics and values placed on various water uses are transforming the future of water management.

In the future, we may not be able to sustain unlimited growth and still maintain our current quality of life. Difficult political choices will be necessary....

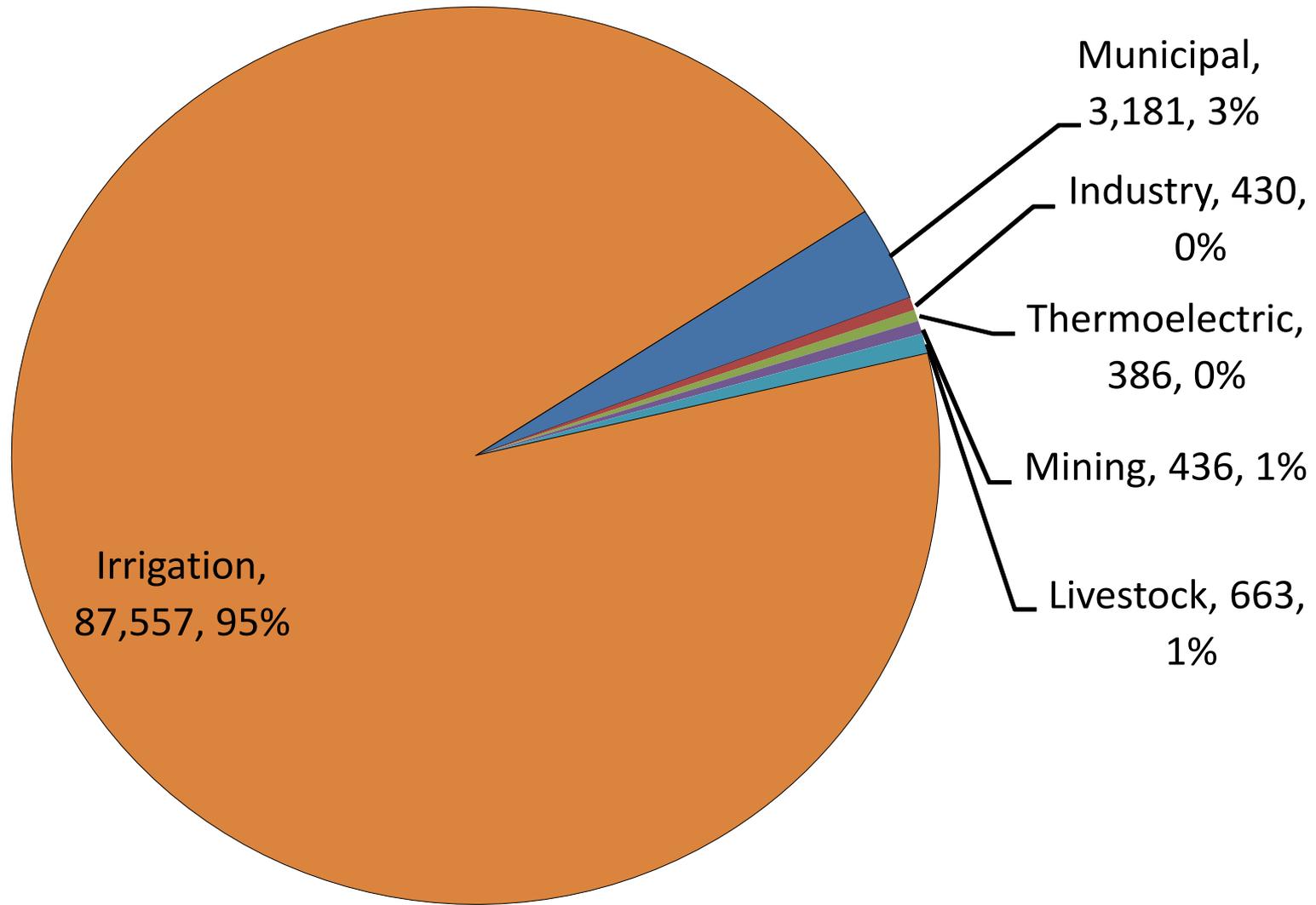
Water Rights & Transfers

- Many future needs will be met by acquiring existing rights
- Water rights are constitutionally protected private property rights subject to “takings” only with compensation (regulatory/physical)
- Water rights may be bought, sold, leased, and/or bequeathed
- Only the “consumptive” water use is available for transfer and agricultural use is often seasonal
- Challenge of “quantifying” rights & use of remote sensing
- Rights may or may not “attach” to the land and transfers may not lead to an expansion of rights
- Rise of “water ranching” and impacts of transferring water out of the basin of origin

Consumptive Use

- Uses may be consumptive or non-consumptive
- Most water rights based on consumptive use, not diversions or withdrawals
- Consumptive use not widely measured
- May require costly case-by-case analysis
- USGS national water use report dropped estimates of consumptive use as unreliable
- Agriculture is the predominant western water use measured both by diversions and consumption
- Recoverable losses and irrecoverable losses
- Basinwide v. individual water use efficiencies

2010 Water Consumption (MGD)



Water Policy and Growth

- States , working with interested stakeholders, should identify innovative ways to allow water transfers from agricultural to urban uses while avoiding or mitigating damages to agricultural economies and environmental values.
- Irrigation has transformed the West forever. Water is moving from agriculture to urban and other uses.



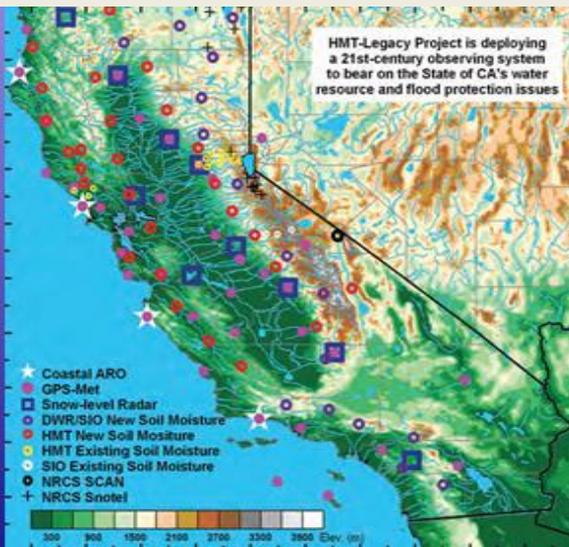
The United States:

- should accurately assess the quantity and quality of its water resources;
- should accurately measure how water is used;
- should know how water supply and use change over time;
- should measure water resources more strategically and efficiently.

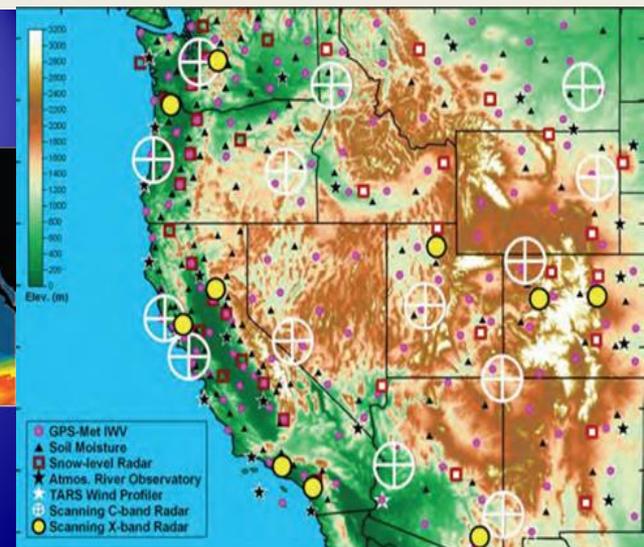
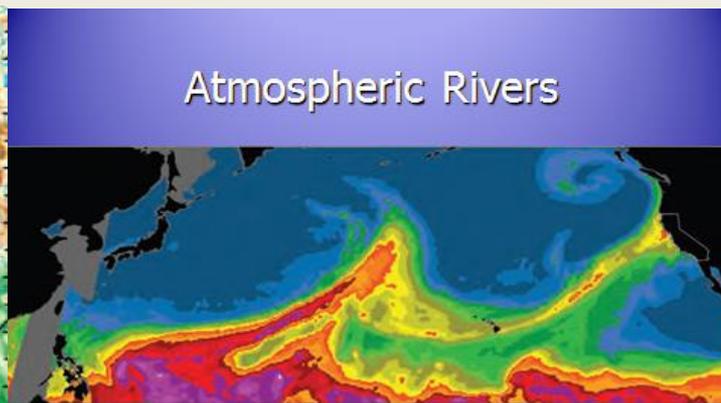


Priority Water Information Needs

- Gather and disseminate real-time data
- Increase support and funding for data
- Identify data gaps and ways to close gaps
- Foster remote sensing capabilities
- Reduce costs through technological innovation

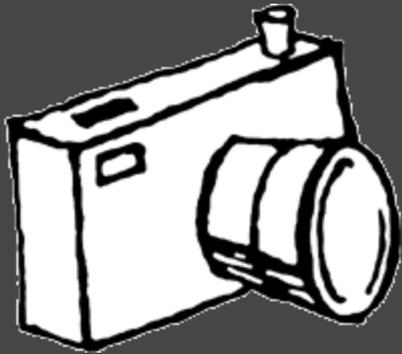


Atmospheric Rivers



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.

To improve the sharing of federal data with the states, to assist their planning efforts

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

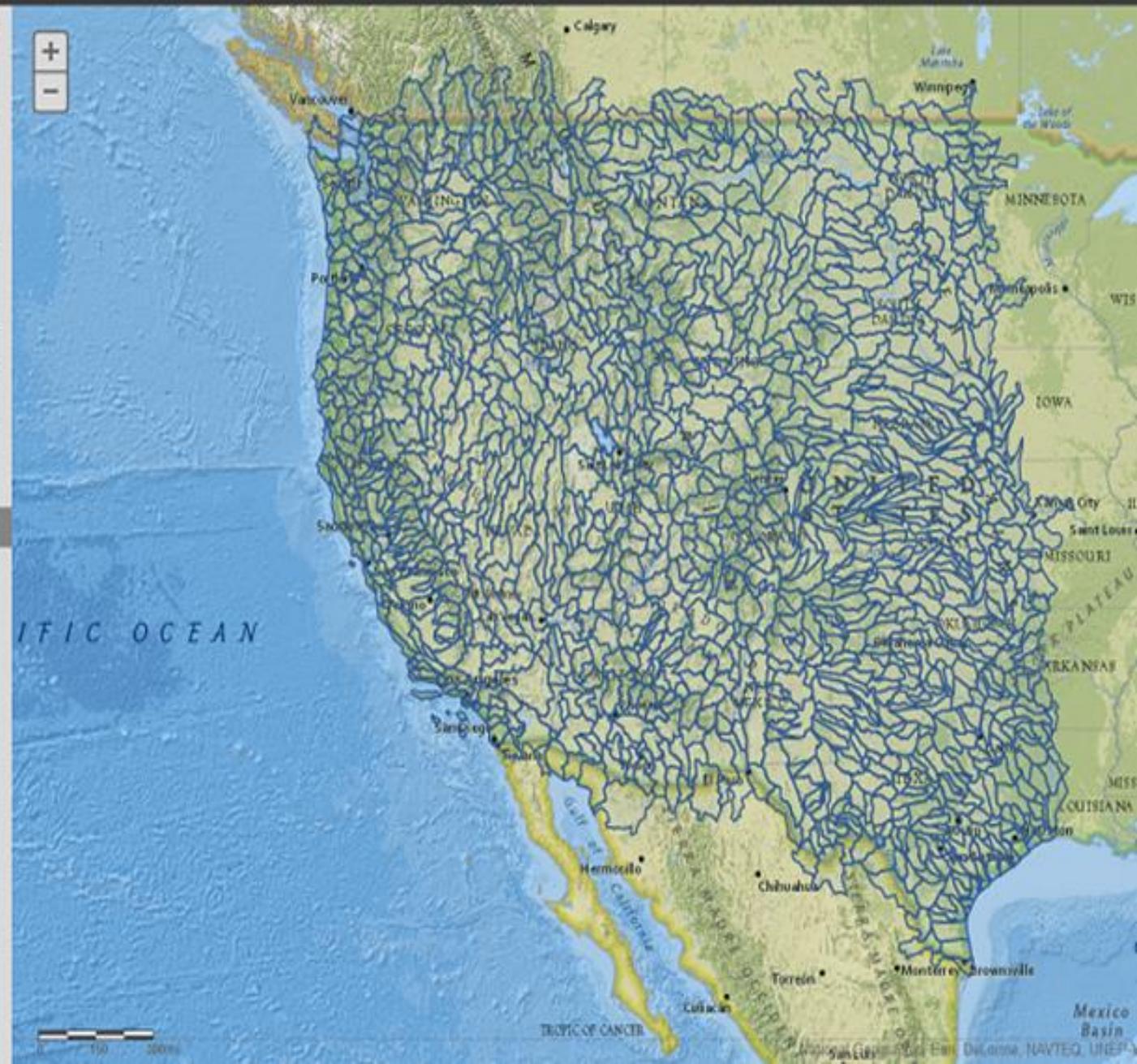
An state agency sponsored initiative to better share water data was begun in 2008 and has taken on a greater importance in more recent years. Faced with the need to collaborate on regional watershed management issues and the growing requests for access to water data, state agencies have initiated the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

This Central Portal for WaDE provides access to state water data (pictured on the left), such as water planning, availability, use and allocation data, as well as summary water availability results from Sandia National Laboratory's Water/Energy Nexus Study (pictured on the right).

To use the portal, zoom and pan to find your area of interest. Both maps will adjust to the same location. Click on either of the maps to see summary information about the hydrologic unit (HUC) and for a link that queries active web services running at each of the state nodes and for Sandia National Laboratory. The hyperlink sends parameter information to the various databases and brings back the information requested in a new browser window.

LEGEND

Western 8-Digit HUC Layer



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

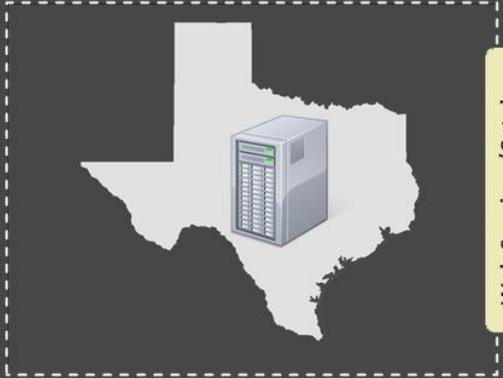
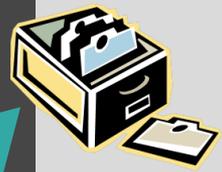
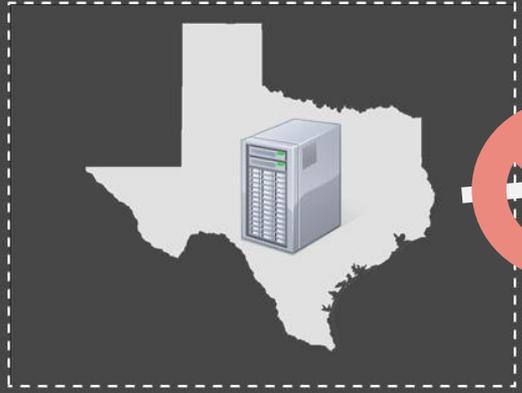
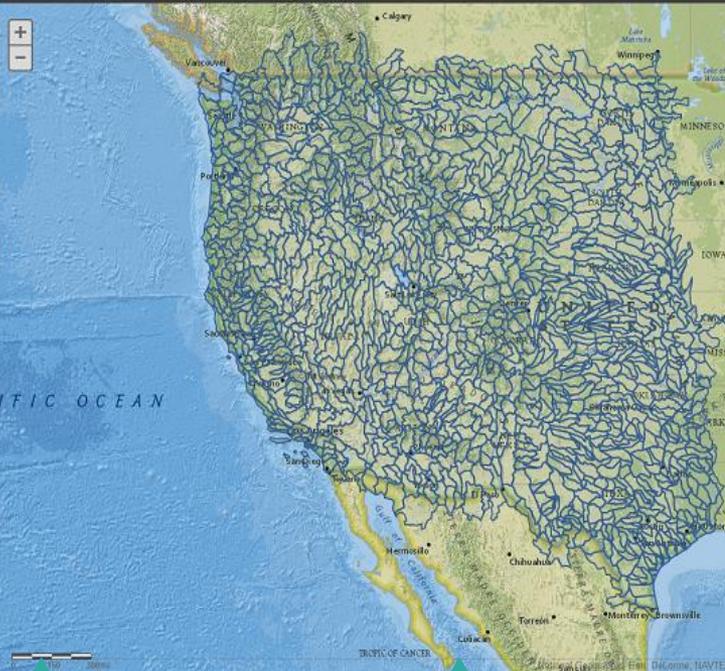
An state agency sponsored initiative to better share water data was begun in 2008 and has taken on a greater importance in more recent years. Faced with the need to collaborate on regional watershed management issues and the growing requests for access to water data, state agencies have initiated the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

This Central Portal for WaDE provides access to state water data (pictured on the left), such as water planning, availability, use and allocation data, as well as summary water availability results from Sandia National Laboratory's Water/Energy Nexus Study (pictured on the right).

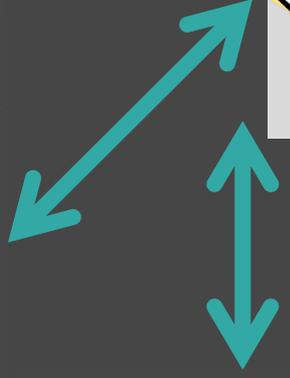
To use the portal, zoom and pan to find your area of interest. Both maps will adjust to the same location. Click on either of the maps to see summary information about the hydrologic unit (HUC) and for a link that queries active web services running at each of the state nodes and for Sandia National Laboratory. The hyperlink sends parameter information to the various databases and brings back the information requested in a new browser window.

LEGEND

Western 8-Digit HUC Layer



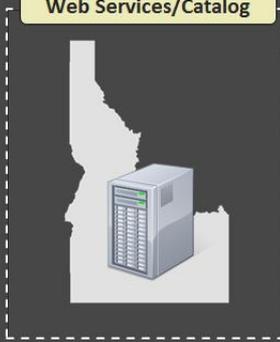
Web Services/Catalog



Web Services/Catalog



Web Services/Catalog



Web Services/Catalog



United States Department of Agriculture
Natural Resources Conservation Service



Representational
State Transfer (REST)
Endpoint

<http://www.state.us>

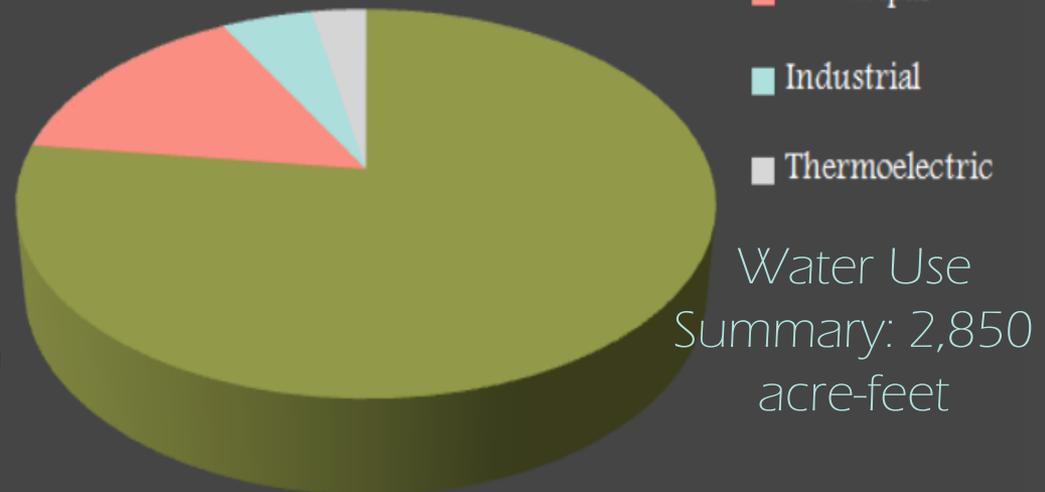
WHAT WILL IT PROVIDE?



Water Availability



Water Use



Water Supply Summary:

24,000 acre-feet

Regulatory Summary:

- Groundwater Management Area
- Minimum Instream Flow Requirements

REPORT – 2013 – Details

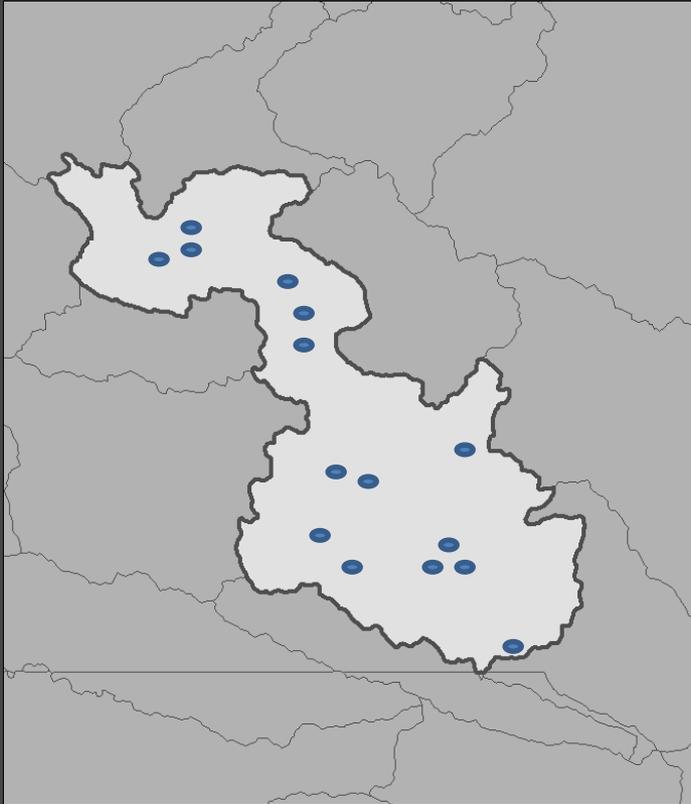
Allocation Data

- Owner
- Beneficial Use
- Status
- Priority Data

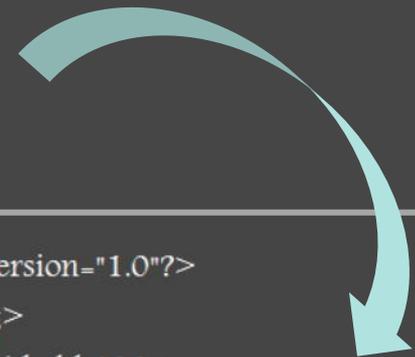
Diversions

Uses (withdrew)

Return Flows



```
<?xml version="1.0"?>
<catalog>
  <book id="bk101">
    <author>Gambardella, Matthew</author>
    <title>XML Developer's Guide</title>
    <genre>Computer</genre>
    <price>44.95</price>
    <publish_date>2000-10-01</publish_date>
    <description>An in-depth look at creating app
with XML.</description>
  </book>
  <book id="bk102">
    <author>Ralls, Kim</author>
    <title>Midnight Rain</title>
    <genre>Fantasy</genre>
    <price>5.95</price>
    <publish_date>2000-12-16</publish_date>
    <description>A former architect battles corpor.
an evil sorceress, and her own childhood to bec
```



FUTURE STEPS:
States plugged in,
streamgauging,
etc. federal data,
too.

Questions?

Water Law 101

- Law of Prior Appropriation (surface/groundwater)
- Water is a complex public/private good
- Establish a private right to use a public resource
- Origin in western mining/agricultural practices
- Developed to promote orderly development of the arid West by allowing the movement of water
- Abandoned common law and riparian law
- Intended to provide certainty given significant uncertainty regarding annual water supplies
- Provides for economic development and markets while also considering the public interest
- Accepted institution for over 150 years

Groundwater Rights Doctrines

- Prior Appropriation
- Reasonable Use
- Correlative Rights
- Absolute Ownership

- Definition – Tributary and Non-Tributary
- Special Management Areas
 - Basins closed to further appropriation
 - Regulation – well spacing, limited withdrawals
 - Safe yield/Mining (40-100 years)
 - AZ Active Management Areas and Irrigation
 - Non-Expansion Areas

State Water Rights Administration

- “State Engineer” often oversees administration and may employ “water masters”
- Responsibility falls under different agencies
 - Arizona Department of Water Resources Director
 - California Water Resources Control Board
 - Colorado and New Mexico State Engineers
 - Colorado and Utah Division of Water Rights Director
 - Within the Department of Natural Resources

State Water Rights Permitting

- Requires determination that water is available, though perhaps not every year and may include conditions and limitations
- Proposed use must be “beneficial” and reasonable (means of diversion and carriage)
- May not cause undue injury to others
- Requires consideration of ability to put water to proposed use within a reasonable time
- Requires public notice and usually a hearing
- Generally includes some type of state public interest review, though often not well defined
- May be temporarily expedited due to drought
- Administration of permits/rights may include designation of a “watermaster” or ditch rider to assure rights are used as permitted

Who can hold a state water right?

- Almost any legal entity
- Individuals, corporations, and trusts
- Water, irrigation and conservation districts
- Acequias or community ditches
- Cities and towns
- State and federal agencies
- Military bases
- In some cases non-profits and NGOs

First in Time, First in Use

- Simple and fair initial water allocation system
- Senior water right(s) and uses have priority and may “call” for their water during shortages
- Water physically instream may not be legally available for use due to senior rights downstream
- Maximize private economic benefits
- Streams and aquifers may or may not be fully appropriated
- Fully appropriated v. over allocated
- Non-consumptive public and private uses

Use it or Lose it!

- Requires reasonable, beneficial, consumptive use of water – often in state constitutions
- Intended to limit speculation and monopolies
- Often misunderstood as a disincentive to conservation (no right to waste water)
- Modified water salvage/conservation laws
- Rights vest after water is put to beneficial use
- Water diverted but unused becomes someone else source of supply – water reused repeatedly
- Generally accepted use practices culturally

Prohibits Waste

- Critical component of Appropriations Doctrine
- Beneficial use is the measure and limit of rights
- No right to “waste” water, i.e., divert more than can be beneficially used
- Could be basis for forfeiture of right, or a portion
- Little if any legal incentive to “waste” water, because waste does not create any legal right
- Extensive westwide water conservation practices
- Wasting water is not economic or judicious given scarcity and possible forfeiture

No Injury

- Subsequent water use permits may be denied to protect senior surface or groundwater users
- Changes in use also require evaluation of impact on other water rights, senior & junior
- Groundwater use protections vary to allow for maximum beneficial use
- State can require reasonable means of diversion
- Intent to minimize conflicts and maximize certainty

Priority Dates and Water Duties

- Priority based on date water is first put to use
- Generally requires diversion out of stream
- Permit applications and vested rights
- Period of time allowed to perfect rights
- Once vested becomes private right to use
- Water duties for irrigation generally 2-4 acre feet per acre annually
- Based on consumptive use, not diversions or withdrawals

Forfeiture and Abandonment

- Statutes vary by state
- Applies to vested rights
- Requires roughly 10 years of non-use
- Not generally enforced actively
- Courts have limited some attempts to enforce
- Almost requires intent to abandon use
- Difficult to prove intent
- Can be partially applied in cases of waste
- Use of information to determine past use

Public Interest Review

- Every state but Colorado has public interest review authority as part of their regulation of water rights
- Public interest generally not well defined in statute
- Focus on public interest from the state's point of view

Non-Consumptive Uses

- Instream flow protections vary by state
- Publically or privately recognized rights
- Protected under state law
- Generally for fish and wildlife purposes, but also recreation (Colorado kayak parks/courses)
- Hydropower generally subordinated by states to other beneficial uses
- May be part of public interest review

Storage Rights

- State permits required to store water, both surface reservoirs and aquifer storage and recovery
- Right to once-fill (and/or refill?)

Questions?

Interstate Compacts & International Treaties

- Colorado River Compact of 1922 (7 basin states)
- Mexican Treaty of 1944
- Rio Grande Compact (CO, NM, TX)
- Republican River Compact (CO, KS, NE)
- Platte River Compact (CO, NE, WY)
- Arkansas River Compact (CO & KS)
- Pecos River Compact (NM & TX)

Water Rights Adjudications

- General stream adjudications in state courts
- McCarran Act amendment waives federal sovereign immunity in general adjudications
- May require assertion of federal reserved rights
- Reserved rights based on statutes and courts
- 1906 Winters Doctrine – Supreme Court decree
- States can't assess fees for adjudication of federal claims
- Once decreed forever, subject to “res judicata”

Indian Reserved Water Rights

- Federal government trustee for Indian tribes
- Tribal reservations as permanent tribal home
- Difficult issues related to quantifying rights – doesn't require past use/practical irrigable acreage
- Priority date? Reservation? Time immemorial?
- Checkerboard history, moccasin rights
- Use generally limited to the reservation
- Conflict between existing uses and tribal rights
- Groundwater use generally not recognized
- WSWC/NARF partnership on negotiated settlements of tribal claims mutually beneficial

Non-Indian Federal Water Needs

- US Forest Service and national grasslands
 - * subject to US v. NM/primary purposes)
- Bureau of Land Management
- National Park Service
- US Bureau of Reclamation/Army Corps of Engineers
- Military reservations
- Wilderness and Wild & Scenic Rivers
- National wildlife refugees
- WSWC/WestFAST working group

Federal Environmental & Other Regulation

- National Environmental Policy Act
- Endangered Species Act
- Other fish and wildlife protections
- Clean Water Act (WOTUS)
- USFS Groundwater Directive
- Federal Power Act (& FERC hydropower licenses)
- Corps of Engineers' Surplus Water Rule
& Water Pricing Policies

State Consultation

- States are sovereign entities and have unique roles and responsibilities in partnership with the federal government.
- States deserve consultation separate and apart from the general public.
- Information-sharing alone is not meaningful consultation consistent with an authentic partnership with the states.

Conclusions

Federal agencies should:

- Identify the inherent federalism implications of their actions and impact on state water rights
- Include robust and meaningful state participation and consultation
- Consider alternate ways of meeting federal objectives
- Give full force and effect to Congressional directives and Supreme Court decisions

Western States Water Council

Tony Willardson, Executive Director

801-685-2225

twillardson@wswc.state.ut.us

www.westernstateswater.org