REPORT

State Water Governance: Approaches From Six Western States

Overview

State water governance comprises the policies and laws that impact water users, the economy, public health and the environment and intersects with federal, tribal, local, regional and international governments. Multiple state agencies are involved in various aspects of water governances including: water allocation and water rights; policy and planning; drinking water and wastewater; environmental protection; public health; education; conservation; and more. For example:

- Planning and policy development may include supply protection, flood control, conservation measures, drought response and planning, and more. Engagement with stakeholders and the public is often central to these processes.
- State engineers in Western states often oversee the management or allocation of water resources.
- Drinking water and wastewater systems depend on the supply and quality of water resources and follow utility and public health regulations.
- State water entities may be responsible for education on water issues, including conservation.
- States also address and protect water's important environmental functions through policy options such as instream flows, source water regulations and watershed management.

The multi-faceted nature of water governance also includes coordination of these issues across executive branch agencies and multiple levels of government. For example, agencies (e.g., agricultural, health, wildlife) have missions or mandates that may impact water users, water supply and water quality. State agricultural agencies can encourage or regulate practices that promote water conservation and protect water quality. State natural resource and wildlife programs consider how water policy impacts specific species and ecosystems. For example, the Colorado Division of Parks and Wildlife reviews and makes policy recommendations to the Colorado Water Conservation Board.

REPORT FOCUS AND ORGANIZATION

This policy report provides an overview of how six states—Arizona, Colorado, Nevada, New Mexico, North Dakota and Wyoming—govern water within Western water law frameworks and highlights their shared challenges, including state agency organization, funding and water scarcity. These examples of policy approaches and recent legislation illustrate how states are responding to these challenges, adapting to changing conditions and prioritizing their resources.

Legislatures work with state agencies to understand the funding needs, capacity constraints and other considerations for implementing policies. The report includes summaries for each state along with recent legislation and links to state agency webpages and organizational structures in a supplementary document.

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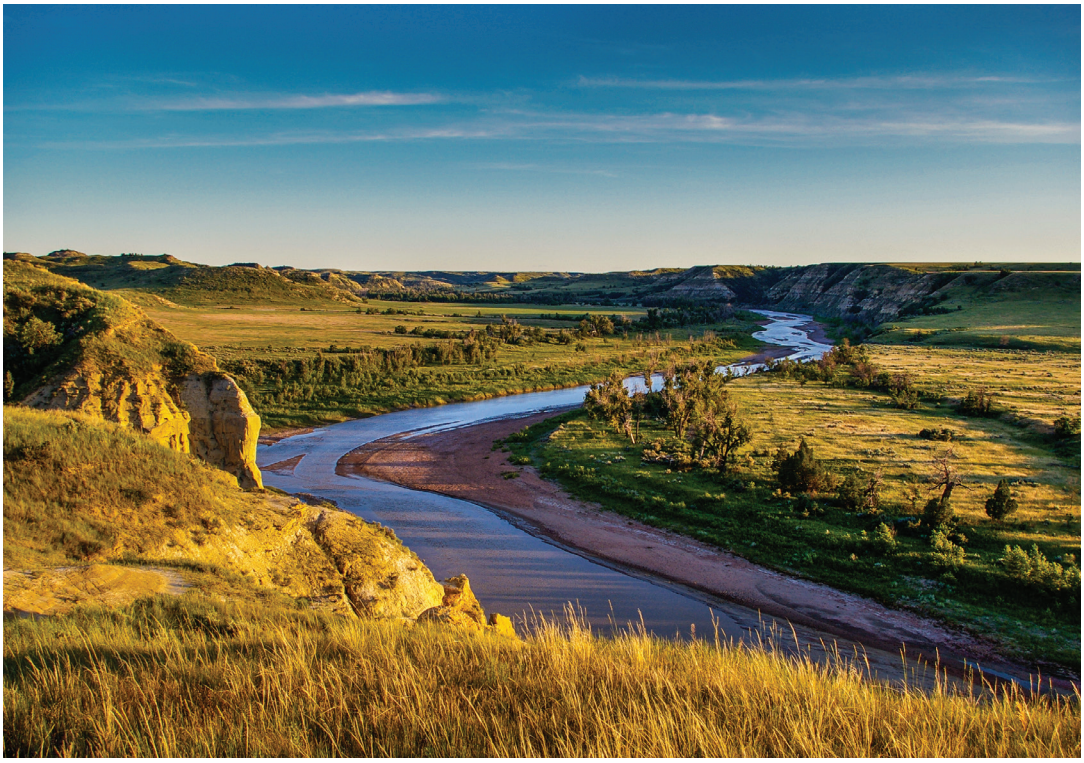


Little Missouri River, National Park, North Dakota.

This report highlights several key issues that states are facing, such as groundwater management, instream flows, agricultural use and municipal water conservation. The examples of state legislation and agency initiatives are not exhaustive, and multiple legal analysis and other reports provide deeper dives on these topics. Additional resources are provided at the end for further exploration.

Prior appropriation

The doctrine of prior appropriation—often referred to as "first in time, first in right"—guides water administration in each of the six states highlighted in this report.

In addition to the states that are the focus of this report, other states can offer insights and policy options to consider. Maine, for example, reestablished the Water Resources Planning Committee through LD 199 in 2019, and Minnesota studied its water governance in 2013 and 2014. Legislation from other states is included in the appendix and can also be accessed in NCSL's Environment and Natural Resources State Bill Tracking Database.

State Roles: Water Administration and Allocation

In the West, water administration and usage follow the principles of prior appropriation—often referred to as "first in time, first in right"—and beneficial use. Several resources are provided at the end of this report on the evolution of Western water law and specific policy approaches.

Three Basic Tenents of Nevada Water Law

1	**The Rule of Priority:** "First in time, first in right."
2	**The Need to Maintain Beneficial Use:** "Use it or lose it."
3	**Public Ownership:** "The water of all sources of all water supply within the boundaries of the State whether above or beneath the surface of the ground, belongs to the public."

Source: Nevada Legislative Counsel Bureau

SURFACE WATER ADMINISTRATION

State policy considerations include the staffing and organization of state agencies, administration of instream flow programs and compliance with interstate water compacts. Increasingly, policies are under scrutiny and need to adapt to changing weather conditions such as drought, flooding and wildfires. Compliance with interstate compacts is another key aspect of state agency authority, responsibility and programs.

Arizona and North Dakota have each created a department of water resources and reconfigured the role of state engineer. These departments include multiple programs to assist in the management of water resources and allocation of water supply.

Arizona: Legislation in 1980 gave the duties of state water engineer to the state Department of Water Resources. As of 2022, the department has 24 programs protecting the state's water supplies, including conservation, dam safety, permitting and wells, recharge, rural programs, surface water and others.

North Dakota: House Bill 1353 in 2021 reorganized the State Water Commission and Office of the State Engineer as the newly named Department of Water Resources. The department director is now a governor appointee and cabinet member.

In Colorado and Nevada, the state engineer oversees a division of water resources, which is part of a larger department.

Nevada: The Division of Water Resources is part of the Department of Conservation and Natural Resources and includes programs or sections for engineering, planning, dam safety, flood, drilling regulations, adjudications, water rights, hydrology and a branch office for Las Vegas.

Colorado: The Division of Water Resources is part of the Department of Natural Resources.

The organization of state agency roles in New Mexico and Wyoming include the state engineer's office along with other entities responsible for water resource management:

New Mexico: The Office of the State Engineer oversees water rights allocation and administration. The state Interstate Stream Commission implements the Strategic Water Reserve, which the Legislature created in 2005.

Wyoming: The State Board of Control, comprising the state engineer and the superintendents for each state water division, has jurisdiction over adjudication, administration and amendment of water rights. The State Engineer's Office regulates and administers water resources. The Water Development Office oversees the planning, selection, financing, construction, acquisition and operation of projects to develop and preserve the state's water resources.

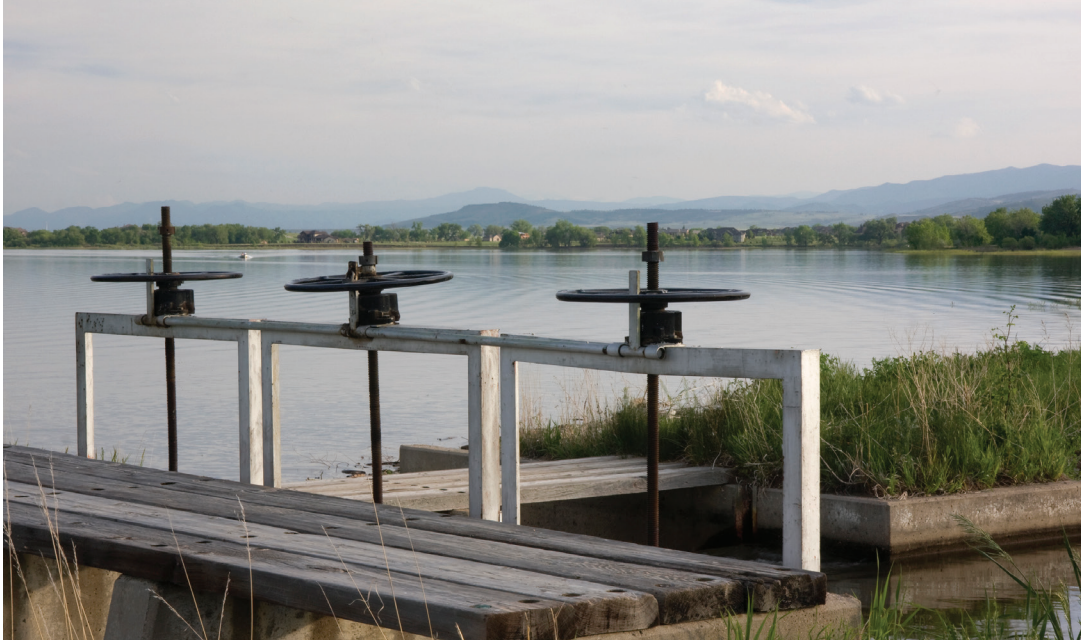
As part of surface water administration, Western states have considered the environmental benefits of these water systems and how to protect their uses. One policy option is using instream flow rights and associated programs to protect the levels in rivers, streams or other bodies of water. The focus of these programs varies by state. Wyoming law allows the state to hold instream flow water rights for the benefit of fish.

States continue to develop and refine these policies. For example, Colorado enacted two bills in 2020:

- HB 1157: Expands the Water Conservation Board's ability to use loaned water for instream flows to improve the natural environment.

- HB 1037: Concerns the Water Conservation Board's authority to augment stream flows with acquired water rights that have been previously decreed for augmentation use; authorizes the board to augment stream flows to preserve or improve the natural environment.

Multiple legal analyses describe the history of these programs and how laws have been interpreted or amended. See the additional resources section more information.



Headgates and outlet to Lonetree Reservoir in Colorado.

GROUNDWATER MANAGEMENT

State agencies responsible for surface water rights administration often also handle groundwater management. For example, the Arizona Department of Water Resources administers laws and implements groundwater plans in the designated Active Management Areas. Some states, such as Arizona, have a longer history of groundwater management, while other states, such as California and Colorado, are establishing new approaches.

Examples of recent state legislation:

Colorado: SB 28 (2022) creates the Groundwater Compact Compliance and Sustainability Fund and appropriates $60 million from the federal American Rescue Plan Act to finance groundwater use reduction efforts in the Rio Grande and Republican river basins.

HB 1199 (2018): Establishes a process for the Ground Water Commission to use for approving aquifer storage and recovery plans; requires that the commission promulgate rules governing the application process and the conditions an aquifer storage and recovery plan must meet to be approved.

Nevada: SB 140 (2019) requires the state engineer to reserve a certain percentage of the remaining groundwater available for use in certain basins; prohibits the use of such groundwater.

California's Sustainable Groundwater Management Act

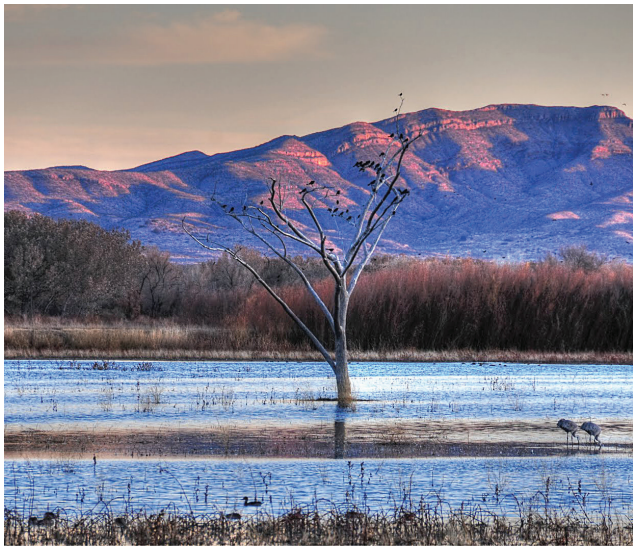
The State Assembly enacted a three-bill package in 2014 (AB 1739, SB 1168, SB 1319) and provided the framework for groundwater protection. The Sustainable Groundwater Management Act laid out a new structure for groundwater management at the local level through establishing Groundwater Sustainability Agencies and planning processes.

The state's Division of Water Resources has played several key roles in the implementation of this law—developing educational toolkits and other guidance documents; collecting data and making this data accessible to the public. Groundwater sustainability continues to be a state priority. The 2021-2022 state budget provides $18 million for enhanced groundwater monitoring and survey to improve management of drinking water, groundwater recharge, and relevant ecosystems.

Increased awareness and data on the interconnections between surface water and groundwater has led to coordination with state water planning processes and policymaking. For example, the South Carolina Department of Natural Resources manages the water resources and planning for the state, including river basin plans and hydrologic models for both surface water and groundwater.

State Roles: Water Quality and Environmental Protection

Each of the six Western states has agencies related to environmental protection that oversee and administer water quality programs, including permitting, drinking water and clean water state revolving funds, and source water protection. These agencies are separate from the state agencies responsible for water resource allocation and water rights administration. In some states, such as New Mexico, the state department of health also plays a role in regulating and educating the public about drinking water standards. Further study could examine the mechanisms by which these agencies coordinate across the executive branch.



U.S. ARMY CORPS OF ENGINEERS

The Clean Water State Revolving Fund can address water quality needs through a variety of projects, including nonpoint source pollution management, watershed protection and water reuse. In several states, the environmental protection agency administers this federal funding along with other water quality programs. These agencies may also collaborate with financing authorities as well as agricultural, energy, and transportation agencies to address water quality concerns.

Examples of state agency responsibilities:

Arizona: The Department of Environmental Quality's Water Quality Division oversees implementation of the Safe Drinking Water Act, protects groundwater and surface water and issues recycled water permits. The Water Infrastructure Finance Authority of Arizona administers the state revolving funds.

Colorado: The Department of Public Health and Environment's Water Quality Control Division administers the state revolving funds.

Nevada: The Division of Environmental Protection administers water infrastructure grant and loan programs, such as state revolving funds, and oversees several water quality programs, including source water and drinking water standards.

North Dakota: The Department of Environmental Quality's Division of Water Quality oversees groundwater and surface water quality protection, including through the Watershed Management Program. The state Public Finance Authority administers the state revolving funds.

New Mexico: The Environment Department implements and enforces water quality standards to protect groundwater and surface waters from contamination. The Water Quality Control Commission establishes water quality standards, permitting and abatement regulations under the state Water Quality Act. The department administers the clean water state revolving fund and partners with the state Finance Authority to administer the drinking water state revolving fund.

Wyoming: The Department of Environmental Quality's Water Quality Division protects surface and groundwater and administers state revolving funds.

State	Clean Water and Drinking Water State Revolving Funds Administration	Surface Water and Groundwater Protection
Arizona	Water Infrastructure Finance Authority	Department of Environmental Quality
Colorado	Department of Public Health and Environment	Department of Public Health and Environment
Nevada	Department of Environmental Protection	Department of Environmental Protection
New Mexico	Environment Department (NMED) for clean water; the Finance Authority and NMED co-administer for drinking water	Environment Department
North Dakota	Public Finance Authority	Department of Environmental Quality
Wyoming	Department of Environmental Quality	Department of Environmental Quality

Minnesota's Evaluation of Water Governance

In 2011, the Minnesota Legislature authorized an evaluation of water governance, including the related statutes, rules and structures, to address sustainable water management. The Minnesota Pollution Control Agency along with other state water management agencies, the Metropolitan Council and the University of Minnesota developed recommendations. Their report focuses on three levels—state, regional and local—and recommended implementing water management at a watershed scale at all levels of government. As recommended in the report, the Board of Water and Soil Resources administers the One Watershed, One Plan program (Minn. Stat. §103B.801).

State Approaches to Water Planning

State water plans provide an opportunity to present a vision for the future of water management in the state. The processes to develop these plans also provide opportunities to engage with stakeholders and educate the public.

Examples of state planning efforts:

Arizona: The Department of Water Resources' Statewide Planning Section oversees the Arizona Water Initiative, which published the 2014 Strategic Vision for Water Supply and Sustainability and described 22 planning areas as part of a five-year process. As part of these efforts, the Governor's Water Augmentation, Innovation and Conservation Council considers policies to ensure sustainable water supplies. The council includes four legislators.

Colorado: Colorado established nine basin roundtables in 2005. The interbasin roundtables provide ongoing forums for engagement. The General Assembly's Water Resources and Agriculture Review Committee holds public hearings on the draft state plan and provides feedback to the Water Conservation Board along with legislative recommendations.

Nevada: As the state began to update the 1999 State Water Plan, the Division of Water Resources conducted a water resource public survey in 2021.

New Mexico: The state has 16 regions as part of the Office of the State Engineer's Regional Water Planning Program.

North Dakota: The state water development planning process includes commissioner-hosted meetings in each of the eight major basins. With SCR 4009 in 2019, the Legislature directed a study to consider establishing water resource boards in each drainage basin to form a joint board for the purposes of planning and constructing water conveyance projects.

Wyoming: The state's seven major river basins provide opportunities for public and stakeholder engagement. In 2005, the Legislature authorized funding for the Statewide Framework Water Plan, which was released in 2007.

EXAMPLES OF STATE LEGISLATIVE INVOLVEMENT IN WATER PLANNING POLICY

State legislatures engage in water planning processes in a variety of ways, including executive branch task forces and commissions and legislative studies. For example, Arizona legislators serve on multiple boards, including the Water Infrastructure, Finance Authority Board, Water Banking Authority Commission, and the Governor's Water Augmentation, Innovation and Conservation Council. For state water plans, legislatures often provide funding, engage in regional planning or approve the final plan (e.g., the Nevada Legislature approved the 1999 plan).

The following table provides examples of 2022 legislative committees that typically met out of session for review or study purposes. (This information is not intended to be a comprehensive representation of all the ways legislatures may be involved.)

State	Examples of 2022 Interim and Review Committees
Arizona	Joint Legislative Water Committee
Colorado	Water Resources and Agriculture Review Committee
Nevada	Legislative Committee for the Review and Oversight of the Tahoe Regional Planning Agency and Marlette Lake Water System (Previous interim studies on water resources, including Assembly Bill 198 in 2015 that directed a study of water conservation and alternate sources of water.)
New Mexico	Interim Water and Natural Resources Committee
North Dakota	Water Drainage Committee
Wyoming	Select Water Committee

FUNDING FOR IMPLEMENTATION AND LOCAL GOVERNMENT SUPPORT

The development and implementation of and ongoing engagement with water planning processes require state agency capacity and funding.

Examples of recent state legislation:

Wyoming: HB 73 (2022) appropriated funding to the Water Development Commission for multiple initial studies to support rehabilitation and development of projects, such as dams and reservoirs. The bill also appropriated funding to the University of Wyoming Office of Water Programs.

Colorado: HB 1260 (2021) appropriated $20 million from the state generation fund to implement the state water plan.

Local governments play key roles in the administration of state water plans. States have considered legislation that requires implementation of the state plan and provides support through funding and state agency assistance.

Examples of recent state legislation:

Nevada: SB 150 (2019) required local governments to develop and maintain water resource plans and provided grants to support the plans. The Nevada Division of Water Planning assists local governments, local watershed planners and others through technical assistance, training sessions and other activities.

Colorado: HB 1095 (2020) directed local government master plans to include water conservation policies as part of water supply planning. Local governments may include goals from the state water plan to support conservation and water development requirements. The bill also appropriated funding for the Department of Local Affairs to provide educational resources and assistance.

North Dakota: The state supports local governments in developing sustainable water-related programs through its Cost-Share Program. The State Water Commission also supports local planning through commissioner-hosted meetings, and the Legislature enacted HB 1088 (2021), which added additional drainage basins to these meetings.

State Responses to Drought and Water Supply Concerns

State policymakers are considering options to address water scarcity and related supply concerns. Conservation policies can support these goals by reducing municipal and residential water use through indoor and outdoor efficiency practices. Statewide response efforts typically engage with multiple industries and stakeholder groups.

States have established new entities, such as task forces, and new programs or funding mechanisms to address these changing conditions. Arizona SB 1822 (2021) established the Drought Mitigation Board and the Drought Mitigation Revolving Fund. The New Mexico Governor's Drought Task Force has met since 2003, bringing together multiple sectors to focus on planning and response. The New Mexico Legislature also enacted a bill in 2003 that led to the State Engineer's Office adopting Active Water Resource Management regulations in 2004.

State policy approaches often involve other state agencies, such as agriculture departments, and local governments for implementation. To support agricultural producers impacted by drought, Colorado enacted HB 1242 (2021), which created the Agricultural Drought and Climate Resilience Office in the state Department of Agriculture. The North Dakota Department of Agriculture also provides several resources to agricultural producers. States also engage with local governments and water utilities. For example, the New Mexico Environment Department also provides key resources for public water systems experiencing the impact of drought.

Demand Management

States in the Upper Colorado River Basin are exploring demand management programs as one option to meet compact obligations to downstream states. These programs would compensate water users for voluntary, temporary reductions in consumption.

The Colorado Water Conservation Board directed the Demand Feasibility Investigation, resulting in a draft framework and decision-making road map in 2021.

Wyoming conducted an Economic Assessment of a Water Demand Program in the Wyoming Colorado River Basin in 2021.

Additional State Responses to Drought

Recently enacted legislation in California, Maine and Washington:

California SB 552 (2022): Requires small water suppliers and certain water systems that serve schools to develop and maintain an abridged Water Shortage Contingency Plan that includes specified drought-planning elements. Requires suppliers serving fewer than 1,000 service connections to add drought-planning elements to their emergency notifications or response plans and submit the plans to the state board.

Maine SB 717 (2022): Establishes and funds the Farmers Drought Relief Grant Program to help farmers overcome the adverse effects of drought.

Washington HB 1622 (2020): Authorizes the Department of Ecology to act during drought emergencies to alleviate hardship on water users and the natural environment and provides grants to public entities to reduce current or future hardship caused by water unavailability.

PROMOTING WATER CONSERVATION AND EFFICIENT PRACTICES

In addition to water resource management responses to drought and water scarcity, states are considering related policy options to support water conservation and efficient use. See NCSL's Environment and Natural Resources Bill Tracking Database for examples.

Examples of legislation related to municipal and residential outdoor water use:

Colorado: HB 1151 (2022): Creates the turf-replacement fund in the state treasury; appropriates funds to the Department of Natural Resources for use by the Colorado Conservation Board.

Nevada: AB 356 (2021): Prohibits, with certain exceptions, the use of water from the Colorado River to irrigate nonfunctional turf on certain property; requires the board of directors of the Southern State Water Authority to develop a plan for the removal of nonfunctional turf on certain property; creates and sets forth the duties of the Nonfunctional Turf Removal Advisory Committee; requires the Legislative Committee on Public Lands to study water conservation.

AB 163 (2019): Revises provisions governing water conservation plans; revises minimum standards for plumbing fixtures in new construction and expansions and renovations in certain structures.

Conclusion

State approaches for water resource management continue to adapt with changing social, economic and environmental conditions. Policymakers will continue to evaluate programs, as conditions increasingly impact water supplies and new technologies and data become available. State legislatures play important roles in establishing the frameworks for water governance, ensuring funding is available and engaging with state agencies.

Additional Resources

NCSL Resources

- NCSL Environment and Natural Resources State Bill Tracking Database.
- NCSL State Policy Options for Green Infrastructure
- NCSL State Policy Options for Small and Rural Water Systems

External Resources

Please note that NCSL takes no position on state legislation or laws mentioned in linked material, nor does NCSL endorse any third-party publications; resources are cited for informational purposes only.

- Environmental Law Institute, Western Water in the 21st Century: Policies and Programs that Stretch Supplies in a Prior Appropriation World, 2009.
- Montana Watercourse, Status of Western States' Water Planning: A Survey of Western States Water Council Members, 2014.
- Stanford University Water in the West, Environmental Water Rights Transfers: A Review of State Laws, 2015.
- University of Arizona Water Resources Research Center, Groundwater Governance and Management
- Utton Transboundary Resources Center, A Comparative Analysis of State Water Planning Efforts Part I: Arizona, Utah & Colorado, 2016

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