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Role of Government

1.1. Introduction

Government plays a central role in water policy, costs, allocation, delivery and quality. Whether those in charge choose to abdicate their responsibility to a private water company or not, government is the ultimate arbiter between public and commercial interests of all types. It is through government that we either succeed or fail in preserving our country's water resources into the future.

The U.S. currently possesses no national water policy. Rather, our water policy is a hodgepodge of state, local, and federal responsibility/authority. This is the result of state versus federal jurisdiction; initial perceived abundant water supplies in the East as opposed to relative scarcity in the West; the emergence of water quality and habitat preservation embodied in a battery of federal laws; federal (i.e. taxpayer) infrastructure investment; and federal (national) rights on tribal and public lands, primarily in the West. Indeed, in terms of water allocation assigned to state responsibility, a water law analyst describes the situation as “50 different water policies.”⁴³

Outside of elected government and government agencies of various ilks, the court system is yet another purveyor of water law as growing regional conflicts emerge mainly due to increasing scarcity issues and local water quality degradation.

Finally, the United Nations, over a period of time and with eventual acknowledgment of the United States, has emphasized government responsibility in delivering safe, clean water with the adoption of a series of resolutions with respect to the human right to water and sanitation. We mention this because this international principle was applied to the U.S. in the economically depressed City of Detroit (by the UN, not the U.S. government) when the city government began disconnecting service to low-income individuals on a grand scale.

⁴³ “U.S. Water Policy: Trends and Future Directions.” National Agriculture and Rural Development Policy Center (NARDP), circa 2013. http://www.nardep.info/uploads/WaterPolicy_Reimer.pdf

This report surveys the role of government with respect to the following:

- Access to water resources
- Allocation of water resources
- Water quality
- Water infrastructure
- Private water utility operations

1.2. Accessing Water Resources

There are essentially two types of water rights in the United States: *riparian* water rights, primarily in the East, and the *prior appropriation doctrine* in the West. There are also hybrid systems in the West.

1.2.1. Riparian Doctrine

“...[T]he riparian doctrine states that water belongs to the person whose land borders a body of water. Riparian owners are permitted to make reasonable use of this water provided it does not unreasonably interfere with the reasonable use of this water by others with riparian rights.”⁴⁴

However, “[t]he use of the stream or water by each proprietor (landowners whose property borders the water body) is therefore limited to what is reasonable, having due regard for the rights of others above, below, or on the opposite shore.”⁴⁵

Moreover, most Eastern states have developed permit systems to “allocate water usage.”⁴⁶ This is referred to as a “regulated riparian” system.⁴⁷ The riparian rights doctrine is also generally applied to groundwater, such as correlative rights that limit use to a reasonable share.⁴⁸ Permitting can also apply to groundwater.⁴⁹

Also, cessation of a “beneficial use”⁵⁰ of water does not result in losing riparian rights to a water body. Unlike in the West, the right exists whether or not the water is used.

⁴⁴ Definition of Riparian Doctrine on Cornell University Law School web page.

https://www.law.cornell.edu/wex/riparian_doctrine

⁴⁵ “Reasonable Use Theory Law and Legal Definition.” USLegal.com. <http://definitions.uslegal.com/r/reasonable-use-theory/>

⁴⁶ “Water Law: An Overview.” The National Agricultural Law Center. 2017.

<http://nationalaglawcenter.org/overview/water-law/>

⁴⁷ National Agricultural Law Center, 2017.

⁴⁸ “United States Groundwater Law.” Wikipedia. https://en.wikipedia.org/wiki/United_States_groundwater_law

⁴⁹ “United States Groundwater Law.” Wikipedia. https://en.wikipedia.org/wiki/United_States_groundwater_law

⁵⁰ Beneficial use is generally defined as domestic, agricultural, recreational, municipal, or industrial uses of water

1.2.2. The Prior Appropriation Doctrine

The prior appropriation doctrine was created because water in the West had to be transported. People didn't generally live on a water body. It was a first come, first served doctrine in terms of water rights.⁵¹ Still today, farmers may have their allotment cut if they do not use the entire amount, which leads to wasteful use to preserve ownership.⁵²

As explained by the National Agricultural Law Center:

“The prior appropriation system is based on priority. The most senior appropriator has the highest priority and can defeat all other less senior appropriators in times of shortages. Unlike riparianism, there is no requirement that a senior appropriator use less water in times of a shortage. Water users may take in order of their respective priorities, each taking their full appropriative right until the water is gone.”⁵³

This system has led to serious problems in the West, where water shortages and drought are more common.

Most states have implemented a permit system for water diversions and establishing seniority in water rights to better manage water resources and regulate withdrawals.⁵⁴

In terms of groundwater, aquifers connected to a surface water body—known as “tributary groundwater”—are treated legally the same as the surface water, for purposes of establishing senior water rights. However, those aquifers not connected to a surface water body are considered “non-tributary” and are not tied to senior water rights. However, most prior appropriation states have permitting systems in areas that rely predominantly on groundwater.⁵⁵

1.2.3. Ensuring Safe, Clean, Affordable Water

Over the course of 35 years, the United Nations passed a series of resolutions supporting the human right to water and sanitation. In these, the UN emphasizes affordability, clean and adequate amounts of water, and accountability for those providing water services, i.e. ultimately government. (See Appendix D for a list of the UN resolutions.)

It is unclear how the UN resolutions on water and government responsibility will play out in the U.S. in the future. However, it is important to note here that these resolutions were invoked in Detroit in response to an instance of government, at every level, not living up to its responsibilities to provide safe, clean, affordable water to the public.

⁵¹ “Water Wars: Who Controls the Flow?” NPR, June 15, 2013. <http://www.npr.org/2013/06/15/192034094/rivers-run-through-controversies-over-who-owns-the-water>

⁵² “Use or Lose Law Worsens Western Water Woes.” Scientific American, June 9, 2015. <http://www.scientificamerican.com/article/use-it-or-lose-it-laws-worsen-western-u-s-water-woes/>

⁵³ National Agricultural Law Center, 2017.

⁵⁴ National Agricultural Law Center, 2017.

⁵⁵ “Water Rights Law: Prior Appropriation.” FindLaw.com. <http://corporate.findlaw.com/business-operations/water-rights-law-prior-appropriation.html>

1.2.4. Detroit Water and the UN

The UN right to water and sanitation has recently been applied in the United States, setting a precedent of sorts. National and local organizations raised the issue of extreme rates of water service disconnections in Detroit, a city facing financial collapse in the wake of the Great Recession, and the inability of thousands of people to pay their water bills. UN experts criticized the city government's practices with respect to due process and shutting off people who could not afford to pay. The City of Detroit has retreated from its previous practices in response to local and international criticism and is working to expand budget plans and notification rights.⁵⁶

⁵⁶ See "Detroit: Disconnecting Water From People Who Cannot Pay—An Affront to Human Rights, Say UN Experts." UN Office of the High Commissioner for Human Rights, June 25, 2014. <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=14777>, "United Nations Says Turning Off Poor Detroiters' Water Violates Human Rights." Huffington Post, June 26, 2014. http://www.huffingtonpost.com/2014/06/26/united-nations-detroit-water-shutoffs_n_5533901.html, and "Here's How Detroit is Trying to Make Sure Massive Water Shutoffs Don't Happen Again." Huffington Post, March 20, 2015. http://www.huffingtonpost.com/2015/03/20/detroit-water-shutoffs-department-_n_6909730.html

1.2.5. Private Water Utility Operations

Whether public or private, government ultimately approves water utility rates and establishes standards of service. Moreover, private water companies, which only serve about 15% of the U.S. population, continue to seek federal public dollars, with some success.⁵⁷

At the local level, private water utilities rely on ratepayer dollars in the same way that public water utilities do. They may also access public dollars through bonding.⁵⁸

Essentially, operation of a system by a private utility service does not diminish at all the authority or responsibility of government in ensuring clean water, adequate service, and fair rates.

1.2.6. Emerging Water Risks in Investment Decisions

An increasing number of corporations are beginning to consider access to adequate amounts of water of adequate quality.⁵⁹ The U.S. military has been working to educate and set expectations for its suppliers with respect to maintaining adequate water supplies.⁶⁰ Analysts recently reported that the Security and Exchange Commission may be moving to have publicly traded companies report their water risks for potential investors.⁶¹

1.3. Allocation of Water Resources

1.3.1. Federal Authority

Government authority in the allocation of water resources in the U.S. has been established and immutable, stretching back into the 19th century in the West and, still earlier, with English Common Law in the East.

Although the role of the states and federal government has evolved through decades of litigation and Congressional initiatives to develop the nation's water resources, it is government at the federal or state level that has ultimate authority over water allocation issues.

The Bureau of Reclamation (within the Department of Interior) and the Army Corps of Engineers (within the Department of Defense) have significant authority delegated to them by Congress to control water resources.

⁵⁷ "Troubled Waters: Misleading Industry PR and the Case for Public Water." Corporate Accountability International, June 2014.

⁵⁸ For a discussion of these issues see Boston Action Research, January 7, 2016

⁵⁹ "Water Scarcity is Altering the Global Economy and Stranding Billions of Investor Dollars." Circle of Blue Webinar, August 30, 2016

⁶⁰ Defense, National Security and Climate Change: Building Resilience and Identifying Opportunities Related to Water, Energy and Extreme Events. (Conference) June 25-26, 2012, Washington, DC

⁶¹ Circle of Blue Webinar, August 30, 2016.

With the passage of the Reclamation Act of 1902, the federal government created the Bureau of Reclamation within the Department of Interior and expanded its authority to water storage (reservoirs), dams, and transporting water, primarily in the West.⁶²

The Bureau of Reclamation built over 600 dams and reservoirs in the western U.S. The agency is the largest wholesaler of water in the country, supplying 31 million people and providing irrigation water to 20% of farmers in the West. The farmers supplied by the Bureau produce 60% of U.S. vegetables and 25% of fruit and nuts.⁶³

The Army Corps of Engineers, created by the military in the early 19th century, was primarily responsible for navigable waterways under the Interstate Commerce Clause of the Constitution. Since then, its responsibilities have expanded considerably. An article concerning the Corps' responsibilities describes the expanse of its operations:

“The scope of the expansion of Corps' projects and their diversity is quite considerable. In addition to its many flood control efforts, the enumerated activities of the Corps include 75 hydropower facilities that generate one quarter of all hydropower in the United States (3% of all electric generation), 235 locks that create 12,000 miles of inland waterways, and the Corps' 463 projects provide water recreation at almost 5,000 separate sites (some of the sites are operated by state and local governments) that support an estimated 360 million annual visits by 25 million different users each year. Corps dams have a storage capacity of 329.9 million acre-feet of water (MAF).⁶⁴ Those reservoirs supply municipal water to nearly 10 million people in 115 cities. Of the total storage, 55.9 MAF is allocated to irrigation storage, all of which is located in the 17 western and plains states.”⁶⁵

As competition for water has increased in the West and East, states have formed multi-state, regional compacts to allocate water collaboratively. These compacts are approved by Congress,⁶⁶ and a U.S. government representative sits on each compact government body.⁶⁷ Regional commissions can also be created. Compacts assign existing state agencies to administer their provisions and commissions create a regional agency to administer interstate compacts.⁶⁸

⁶² NARDP, 2013.

⁶³ U.S. Bureau of Reclamation web site. <http://www.usbr.gov/main/about/>

⁶⁴ One acre foot of water is equivalent to 325,851 gallons.

⁶⁵ Abrams, Robert Hasekell. 2009. “Water Federalism and the Army Corps of Engineers’ Role in Eastern States Water Allocation.” *UALR L. Rev.* 31: 395.

⁶⁶ “Water Federalism and the Army Corps of Engineers’ Role in Eastern States Water Allocation.” University of Arkansas at Little Rock Law Review, 2009. <http://lawrepository.ualr.edu/cgi/viewcontent.cgi?article=1117&context=lawreview>

⁶⁷ “Interstate River Compact Commissions.” Texas Commission on Environmental Quality. <https://www.tceq.texas.gov/permitting/compacts/interstate.html>

⁶⁸ “An Overview of the Structure and Governance of Environment and Natural Resource Compacts.” U.S. Government Accountability Office (GAO), May 3, 2007. <http://www.gao.gov/products/GAO-07-519>

Competition for water is driven by increased population, increased irrigation, intrusion of saline water into freshwater supplies along the coasts (particularly the eastern U.S.), and climate change.⁶⁹

Initially, the federal government derived its authority over water allocation through the Commerce Clause in the Constitution, ensuring that waterways remained navigable. Federal allocation authority later extended to federal property rights along rivers (known as the Property Clause) and eventually to Indian reservations; national forests and federal parks; wildlife refuges; and wild and scenic rivers, where federal water rights are reserved to adequately serve these federally managed areas.⁷⁰ Initiative-specific responsibilities expanded in the 20th century to flood control, hydropower (under the Federal Power Act), recreation, irrigation, and municipal water supply.⁷¹ In terms of the Corps of Engineers, many of these projects “had strong state support.”⁷²

Federal authority trumps state authority when Congress authorizes projects and designates the specific functions for those projects (such as federal dams) and where general authority authorizes allocation to municipal and industrial purposes in specific instances, such as during drought.⁷³ The federal government’s power over water allocation is limited only by Congressional action determining the intent in federal statutes, not by strict Constitutional dividing lines between state and federal authority.⁷⁴

A similar conclusion was reached in a *University of New Mexico Natural Resources Journal* article in 1989. Here the author states, “[W]here the congressional intent is more clearly directed at establishing a federal program—as for example, in the comprehensive development of river basins for hydroelectric and other purposes—deference to state law has been less noticeable.”⁷⁵

The author goes on to assert, “There is little doubt that Congress could, if it chose, create a federal system of water law completely displacing all existing state systems.”⁷⁶

⁶⁹ Abrams, 2009.

⁷⁰ “Selected Federal Water Activities: Agencies, Authorities, and Congressional Committees.” Congressional Research Service, August 7, 2012. <http://aquadoc.typepad.com/files/crs-federal-water-activities-agencies-authorities-and-congressional-committees.pdf> The Bureau of Indian Affairs and the National Park Service are also housed within the Department of Interior

⁷¹ Abrams, 2009.

⁷² Abrams, 2009.

⁷³ “Reallocation of Water Storage at Federal Water Projects for Municipal and Industrial Water Supply.” Congressional Research Service, October 31, 2012. <https://www.fas.org/sgp/crs/misc/R42805.pdf>

⁷⁴ Benson, RD. “Deflating the Deference Myth: National Interstate vs. State Authority under Federal Laws Affecting Water Use.” *Utah Law Review*, 2006. <https://repository.unm.edu/bitstream/handle/1928/7021/Benson-Deflating%20the%20Deference%20Myth.pdf?sequence=1>. However, government relationships with respect to conflict over allocation may be complicated by the Supreme Court’s decision in 2010 to allow a private party to intervene in a dispute between North and South Carolina over such allocations, which will be addressed in the water challenges report. See “The High Court Wades into State-Law Water Allocation.” *Duke Law Journal*, 2013. <http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=3385&context=dlj>

⁷⁵ MacDonnell, Lawrence. 1989. “Federal Interests in Western Water Resources: Conflict and Accommodation.” *Nat. Resources J.* 29: 389.

⁷⁶ MacDonnell, 1989.

However, litigation continues among states and is also initiated by states against federal management of water resources to ascertain how water resources are allocated and the extent to which federal agencies are authorized to change this allocation.⁷⁷ But again, the ultimate disposition of these suits depends on Congressional approval of specified water uses from a federal project (a dam in many cases). State law is not a factor.⁷⁸

The Clean Water Act, administered by the U.S. Environmental Protection Agency, and the Endangered Species Act, administered by the Fish and Wildlife Service under the Department of Interior, can also impact water allocations, since river flows can impact water quality and habitat.⁷⁹

⁷⁷ Congressional Research Service, October 31, 2012.

⁷⁸ Although federal authority in allocation of water resources is significant, it does not mean that states cannot leverage allocation issues through the courts. Moreover, courts may not arrive at uniform decisions. See Congressional Research Service, October 12, 2012.

⁷⁹ Benson, 2006.

1.3.2. State Authority

In general, states have the authority to allocate water resources among users within their boundaries. However, the federal government, as described, can override state authority. Due to the regional nature of water flows, states have also created state compacts, with approval of Congress, to coordinate water allocations with other states in a region, such as the Colorado River Compact or the Delaware Basin Commission.⁸⁰ Within a state, departments of natural resources, state water commissions, and other agencies can have authority over water allocation.⁸¹ States may delegate this authority to local governments, as in the case of California.

Most states have also initiated permitting systems for the withdrawal of groundwater, instead of relying only on the traditional riparian or prior appropriation regimes.⁸²

1.4. Water Quality

All levels of government are involved in water quality. However, the federal government drives water quality standards.

1.4.1. Federal Government and Water Quality

Beginning in the 1970s, water quality became a national priority along with a growing emphasis on preserving habitats. Congress passed the Clean Water Act, Safe Drinking Water Act, the Endangered Species Act, the National Environmental Policy Act, the Wild Scenic Rivers Act, all of which assisted with shifting the balance of authority to the federal government on water quality issues.⁸³

The U.S. Environmental Protection Agency is mainly concerned with water quality. Water quality is also a concern of the Fish and Wildlife Service under the Department of Interior, as it administers the Endangered Species Act.⁸⁴

The Clean Water Act is concerned with point sources of pollution: that is, direct discharges of regulated pollutants into water bodies, for instance, from manufacturing facilities or municipal wastewater treatment facilities. The federal approach to non-point source pollution—such as runoff of pesticides and fertilizer from farms into streams and lakes—has been to provide financial support to states to assist in reducing such runoff. These programs are administered by the EPA, the U.S. Department of Agriculture (USDA), and the National Oceanic and

⁸⁰ For a list of interstate water compacts go to: <http://www.fws.gov/laws/lawsdigest/compact.html>

⁸¹ For a list of state agencies that have authority of water go to:
http://www.waterwebster.com/state_framebottom.htm

⁸² Abrams, 2009.

⁸³ NARDP, 2013.

⁸⁴ “Selected Federal Water Activities: Agencies, Authorities, and Congressional Committees.” Congressional Research Service, August 7, 2012. <http://aquadoc.typepad.com/files/crs-federal-water-activities-agencies-authorities-and-congressional-committees.pdf>

Atmospheric Administration (NOAA). NOAA requires state coastal management plans to control non-point source pollution.⁸⁵

The federal government has also contributed billions to restoration efforts in larger ecosystems such as “the Chesapeake Bay, the Great Lakes, Everglades, and the California Bay-Delta.”⁸⁶

In terms of groundwater, the EPA regulates deep well injection of toxins in addition to setting standards for contaminants in drinking water.

1.4.2. State and Local Governments and Water Quality

States and local governments implement federal standards for water quality and drinking water quality. States may adopt more stringent regulations than EPA standards but may not adopt standards that are less stringent than federal regulations require.

Local governments have also been involved in restoration efforts along streams and lakes to protect water quality and habitats. Local county and municipal governments generally have zoning authority to control development that can impact water quality and water supply. However, there are limitations to zoning authority in terms of outright prohibition of economic development.⁸⁷ This authority differs from state to state and locality to locality.

Outside of the deep well injection program, state governments have been responsible for groundwater protection.⁸⁸

State environmental agencies are generally responsible for implementing EPA and state water and drinking water quality standards. Municipal and private water utilities are responsible for drinking water standards locally. Local public health departments are also involved in protecting water quality, in terms of water testing and raising water quality issues for municipalities and counties.⁸⁹

1.5. Water Infrastructure

⁸⁵ “Selected Federal Water Activities: Agencies, Authorities, and Congressional Committees.” Congressional Research Service, August 7, 2012. <http://aquadoc.typepad.com/files/crs-federal-water-activities-agencies-authorities-and-congressional-committees.pdf>

⁸⁶ Congressional Research Service, August 7, 2012.

⁸⁷ For examples and a general discussion on these issues go to: “West Virginia American Water and the Case for Public Ownership and Operation.” Boston Action Research (a Campaign of Civil Society Institute), January 7, 2015. <https://assets.documentcloud.org/documents/2678243/WV-Water-Report-Jan-2016.pdf> and “Communities at Risk: Frac Sand Mining in the Upper Midwest.” Boston Action Research (a Campaign of Civil Society Institute), September 2014. <http://www.civilsocietyinstitute.org/media/pdfs/092514%20csi%20bar%20frac%20sand%20mining%20report%20final2%20-%20embargoed.pdf>

⁸⁸ “The Government Role in the Protection of Groundwater.” National Groundwater Association, March 26, 2015. http://www.ngwa.org/Documents/PositionPapers/Role_of_Govt_in_GW_Protection_2015.pdf

⁸⁹ For a list of local health departments go to: <http://www.naccho.org/resources/lhd-directory#>

Government is also the ultimate arbiter when it comes to water infrastructure in terms of funding, management and operations of water utilities and, as demonstrated, managing vast amounts of water through federally mandated dams and water diversion projects for irrigation and public supply.

Government has the final say over water rates and standards of operation of local water utilities regardless of whether the system is private or public.

1.5.1. Federal Government and Water Infrastructure

As noted, the federal government has control over vast water resources in both the western and eastern United States. The federal government's role in local water infrastructure has been primarily to assist with funding for water and wastewater systems.

The EPA has provided financing in the form of loans for wastewater and drinking water infrastructure under the Clean Water Act and Safe Drinking Water Act respectively. These are referred to as the Clean Water State Revolving Funds and the Drinking Water State Revolving Funds. The previous administration proposed \$1 billion for each.⁹⁰

In 2014, Congress adopted the Water Infrastructure Finance and Innovation Act (WIFIA) modeled on the Transportation Equity Act passed in 1998. It provides “credit assistance” (secured loans or loan guarantees) for a range of water and wastewater projects.”⁹¹ WIFIA is meant to leverage private financing for larger water and wastewater projects, \$20 million and above in urban areas and projects of at least \$5 million in communities with populations of at least 25,000. The Obama Administration requested \$20 million for 2016 for the program. Of that, \$15 million would be earmarked for financial support of projects. The EPA estimates that these dollars could leverage \$200 million in loans.⁹²

Since WIFIA has not been funded or implemented, it is uncertain what impacts it may have. There are protections in the Act for the safe drinking and wastewater revolving loan funds. However, there is still the question of whether WIFIA would negatively impact those funds. Moreover, the jury is still out as to the overall impacts on the federal budget and other programs. Any shortfalls would be made up “by reducing spending or raising revenues.”⁹³ Some analysts believe that local, publicly run utilities will continue to rely mainly on tax-exempt bonding and EPA safe drinking water funds.⁹⁴

The Congressional Research Service sums up the potential impacts of WIFIA in a recent report:

⁹⁰ Testimony of Gina McCarthy (US EPA Administrator) before the Subcommittee on Energy and Power and the Subcommittee on the Environment and Economy of the House Committee on Energy and Commerce. March 22, 2016. <http://docs.house.gov/meetings/IF/IF03/20160322/104715/HHRG-114-IF03-Wstate-McCarthyG-20160322.pdf>

⁹¹ “Water Infrastructure Financing: The Water Infrastructure Financing and Innovation Act.” Congressional Research Service (CRS), February 9, 2016. <https://www.fas.org/sgp/crs/misc/R43315.pdf>

⁹² Congressional Research Service, February 9, 2016.

⁹³ Congressional Research Service, February 9, 2016.

⁹⁴ Congressional Research Service, February 9, 2016.

“Most stakeholders in the debate about water infrastructure financing acknowledge that there is no single solution or alternative that will fit all needs for all communities and all types of projects. Most also recognize that financing is not new revenue. Investment via a particular financing tool, such as WIFIA, could simply displace existing mechanisms rather than increase total investment in water infrastructure. Whatever the source of funds for a project, communities and other sponsors must still identify a stream of revenue to repay whatever debt is incurred for a given investment. One of the challenges going forward is to ensure that financing is available for all needed projects.”⁹⁵

The USDA administers a program to assist with rural wastewater and water infrastructure for populations of 10,000 or less. Housing and Urban Development provides Community Block Grants for a variety of purposes including to address water supply. Health and Human Services provides funding to Indian reservations for water infrastructure.⁹⁶

1.5.2. State Government and Water Infrastructure

State government may also assist with funding and is involved with determining water rates and setting standards for operation under state utility law. State public service commissions (PSCs) are charged with overseeing rates and operations of local water utilities.⁹⁷ States differ in PSC jurisdiction over local water utilities. States also administer the loans provided by the EPA.⁹⁸

1.5.3. Local Government and Water Infrastructure

Over 90% of local water utilities are operated by local government. In these instances, local government can set rates and manage and operate its systems. However, local public water systems may also be under state PSC jurisdiction when it comes to setting rates. City Councils or local utility departments may be responsible for the management of public water utilities.⁹⁹ Ratepayers in PSC proceedings are represented by state consumer counselor or advocate agencies.¹⁰⁰

Local government uses primarily bonding and ratepayers to support water infrastructure financing.¹⁰¹ Tax-exempt municipal bonds are the primary water infrastructure financing mechanism for local government. Almost \$30 billion were issued in 2011 for water, sewer, and sanitation projects, primarily for refinancing existing bonds.¹⁰²

⁹⁵ Congressional Research Service, February 9, 2016.

⁹⁶ Congressional Research Service, August 7, 2012.

⁹⁷ For a general discussion see: Boston Action Research (a Campaign of Civil Society Institute), January 7, 2015

⁹⁸ Congressional Research Service, August 7, 2012.

⁹⁹ See Boston Action Research (a Campaign of Civil Society Institute), January 7, 2015 and for a list of state public service commissions go to: https://en.wikipedia.org/wiki/Public_utilities_commission

¹⁰⁰ For a list of consumer advocate agencies go to: <http://nasuca.org/members/>

¹⁰¹ Congressional Research Service, August 7, 2012.

¹⁰² Congressional Research Service, February 9, 2016.

1.6. Recommendations

- a. Given the importance placed on clean, adequate supplies of water by the public and local leaders, it is reasonable to make water a high-profile priority for the new administration. An openly public campaign by the administration on water would mobilize communities across the nation in support of needed infrastructural improvements and water system and planning modifications that secure future supplies.
- b. Planning for climate change and water system resiliency cannot be avoided indefinitely. An auditing model is in place and being used by individual water utilities or has been adopted by states. The new Administration can provide technical assistance in this area, but it is Congress that should make federal funding to municipal water utilities contingent upon the parent state's adoption of truly forward-looking asset management methodologies. Uniform data is critical to assessing actual funding needs nationally and for individual utilities. Further, such mandates are ineffective without providing assistance in the form of expertise and funding.
- c. The fostering of public-public partnerships should be continued and prioritized. These will assist with the costs of distribution system upgrades, planning, and affordability.
- d. There should be a program equivalent to the Low-Income Home Energy Assistance Program (LIHEAP) in place for water bills. Congress must adopt legislation that either allows or mandates states to establish rate reductions for low-income customers regardless of past restrictions in state law.
- e. Regional, holistic management of water resources should be prioritized. The starting point for this is the Principles and Requirements for Federal Investments in Water Resources and Interagency Guidelines,¹⁰³ written by the past administration. A priority for the administration should be to have Congress lift the prohibition on U.S. Army Corps of Engineers implementation.
- f. Regional water authorities should be modified or created through legislation in areas where no federal projects, such as reservoirs, currently exist, or where federal projects exist but there is no compact, as in the Southeast. States could be enticed to form these coordinating bodies through infrastructure funding and technical support for asset management.
- g. Tiered rate structures, such as increasing block rates, should be encouraged to drive water conservation efforts.
- h. One way to engender greater acceptance of federal action on water issues is to create a trust fund with dedicated funding to provide grants or interest-free loans to communities (depending on a community's financial capabilities) to replace lead service mains. This is an estimated \$30 billion endeavor, and many communities simply cannot replace them without outside assistance.

¹⁰³ The White House. 2013. "Principles and Requirements for Federal Investments in Water Resources." <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/PandG>

- i. The U.S. Environmental Protection Agency (EPA) currently tests residential tap water once per household. To gauge the true lead impact, multiple samples should be taken. The lead in older pipes will flake off periodically and during line replacement.¹⁰⁴ Such an effort would emphasize asset management, as the number of lead service lines in a community would have to be assessed in order to establish proper funding levels. Additionally, it would engage the public in the discussion of necessary upgrades in the water system, leading to community support for the effort.
- j. New federal dollars for capital investment (e.g. replacing mains, treatment plants) are absolutely necessary. Generally, communities are already financially stressed and are seeing their rates increase. A Water Infrastructure Trust Fund with dedicated funding is a sound approach to overcome this barrier to action.

1.7. Conclusions

Government is involved in and holds a central role in the allocation, service, cost, and quality of water in the U.S.

Every level of government is involved in water issues. A major question is how the relationships between local, state, and the federal government will evolve, with the courts continuing to play a crucial role in water allocation issues between states and federal government management of water infrastructure. However, the federal government could potentially have significant influence over water allocations when/if Congress decides to exercise that power.

The federal government indisputably plays the central role in water quality. The EPA sets minimum standards for discharges into water bodies and for drinking water that the states implement. Various federal agencies influence state decisions on non-point source pollution, such as agricultural runoff, through incentives and funding.

Local and state governments play the central role in quality of service and water rates, with avenues also open to federal financing for communities and rural areas. Local and state responsibility and authority are undeterred by privatization of local water utilities.

Moreover, the UN's resolutions pertaining to government responsibility in delivering safe, clean water may impact U.S. government decisions in the future. Essentially, the UN filled a vacuum left by federal and state government in Detroit. Citizens in Detroit opposed mass disconnections of water service in low-income areas and invited the UN's involvement. They highlighted and elevated the crisis, forcing the city to eliminate the practice.

Finally, the preeminent position of government in water policy and issues underscores the undeniable importance of sound and consistent government action and oversight in preserving the adequate supply, quality, and affordability of water for current uses and into the future. Given

¹⁰⁴ In Chicago, it's been found that replacing mains and not the service lines disturbs the lead in the service lines, which spikes lead content in water.

the future uncertainties around water quality and quantity issues, proper planning is crucial for all levels of government to ensure the delivery of affordable and safe drinking water.