

**NATIONAL DEBATE TOPIC FOR HIGH  
SCHOOLS, 2021-2022**

**Resolved: The United States Federal  
Government Should Substantially  
Increase Its Protection of Water  
Resources in the United States**

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Pursuant to 44 U.S.C. Section 1333

Compiled by the Congressional Research Service  
Library of Congress



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U.S. Government Publishing Office  
Washington, DC 2021

44 U.S.C., SECTION 1333

CHAPTER 13—PARTICULAR REPORTS AND DOCUMENTS

Sec. 1333. National high school and college debate topics

(a) The Librarian of Congress shall prepare compilations of pertinent excerpts, bibliographical references, and other appropriate materials relating to:

- (1) the subject selected annually by the National University Extension Association as the national high school debate topic and
- (2) the subject selected annually by the American Speech Association as the national college debate topic.

In preparing the compilations the Librarian shall include materials which in his judgment are representative of, and give equal emphasis to, the opposing points of view on the respective topics.

(b) The compilations on the high school debate topics shall be printed as Senate documents and the compilations on the college debate topics shall be printed as House of Representative documents, the cost of which shall be charged to the congressional allotment for printing and binding. Additional copies may be printed in the quantities and distributed in the manner the Joint Committee on Printing directs.

(P.L. 90-620, Oct. 22, 1968, 82 Stat. 1270)

Historical and Revision Notes

Based on 44 U.S. Code, 1964 ed., Supp. III, Sec. 170 [Sec. 276a] (Dec. 30, 1963, Pub. L. 88-246, Secs. 1, 2, 77 Stat. 802)

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## Foreword

The 2021–2022 high school debate topic is: “Resolved: The United States federal government should substantially increase its protection of water resources in the United States.”

In compliance with 44 U.S.C., Section 1333, the Congressional Research Service (CRS) and the Law Library of the Library of Congress prepared this bibliography to assist high school debaters in researching the topic. This bibliography is intended to assist debaters in the identification of further references and resources on the subject. In selecting items for inclusion in this bibliography, the Library of Congress has sampled a wide spectrum of opinions reflected in the current literature on this topic. No preference for any policy is indicated by the selection or positioning of articles, books, or websites cited, nor is the Library’s disapproval of any policy, position, or article to be inferred from its omission.

The bibliography was prepared by Audrey Crane-Hirsch, Ben Leubsdorf, Nik Taylor and Anna Price, under the direction of project team leaders Caitlin Curran and Laura Deal, with assistance from Angela Jones.

We wish the best to each debater as they research, prepare, and present arguments on this year’s topic.

Mary B. Mazanec, Director  
Congressional Research Service





NATIONAL DEBATE TOPIC FOR HIGH SCHOOLS, 2021-2022

RESOLVED: THE UNITED STATES FEDERAL GOVERNMENT  
SHOULD SUBSTANTIALLY INCREASE ITS PROTECTION OF  
WATER RESOURCES IN THE UNITED STATES.

AN ANNOTATED BIBLIOGRAPHY ON THE 2021-2022 HIGH  
SCHOOL DEBATE TOPIC

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July 2021



## **Introduction**

The 2021-2022 high school debate topic is: “Resolved: The United States federal government should substantially increase its protection of water resources in the United States.” The topic is selected annually by ballot of the delegates from the National Catholic Forensic League, the National Debate Coaches Association, and the National Speech and Debate Association, all organized under the umbrella organization, the national Federation of State High School Associations.

This selective bibliography, with brief annotations, is intended to assist debaters in identifying resources and references on the national debate topic. It lists citations to journal articles, books, congressional publications, legal cases, and websites.

## **Summary**

The purpose of the bibliography is to provide students with a brief overview of information related to the 2021-2022 high school debate topic.

This compilation is not intended to provide complete coverage of the topic. Further research on the topic may be accomplished at high school, public, and research libraries.

In addition to the resources included in this bibliography, there are many more international organizations, U.S. government agencies, and non-governmental organizations that provide information on the debate topic and sub-topics on their websites. Debaters are encouraged to consult library resources as well as the internet for their research.

## Water Science and Water Quality

### Water Science Background and Overviews

#### Reports

Vandas, Stephen J., Thomas C. Winter, and William A. Battaglin. *Water and the Environment*. Alexandria, VA: American Geological Institute, 2002.

Available at <http://www.agiweb.org/environment/publications/water.pdf>.

This report provides background information on water science, water-resources management, and related environmental challenges. Some statistics and information may be out-of-date.

#### Websites

U.S. Department of the Interior. U.S. Geological Survey. "Water Science School."

Available at <https://www.usgs.gov/special-topic/water-science-school>.

This educational website, which is available in Spanish and Chinese as well as English, provides basic information on water science. It also provides links to recent U.S. Geological Survey publications on water issues.

U.S. Department of the Interior. U.S. Geological Survey. "Water Resources of the United States."

Available at <https://water.usgs.gov/index.html>.

Water Resources of the United States is a hub for information from the U.S. Geological Survey on topics including flooding, droughts, water quality, water pollution, and the science of water. The website also provides access to data from the National Water Information System, including state-level statistics.

U.S. Environmental Protection Agency. "Healthy Watersheds Protection: Basic Information and Answers to Frequent Questions."

Available at

<https://www.epa.gov/hwp/basic-information-and-answers-frequent-questions>.

This website provides basic information on watersheds and their interconnectedness with streams, lakes, rivers, and other waters.

## Water Pollution and Potential Human Health and Environmental Risks

### Articles

Falcone, James A., Jennifer C. Murphy, and Lori A. Sprague. "Regional Patterns of Anthropogenic Influences on Streams and Rivers in the Conterminous United States, From the Early 1970s to 2012."

*Journal of Land Use Science* 13, no. 6 (2018): 585-614.

Available at <https://www.tandfonline.com/doi/pdf/10.1080/1747423X.2019.1590473>.

This article by three U.S. government scientists examines how human activity has affected the quality of water in rivers and streams across different regions in recent decades. The authors identify trends such as growing urban sprawl, more widespread use of fertilizer, and increased dam construction.

Keiser, David A., and Joseph S. Shapiro. "U.S. Water Pollution Regulation over the Past Half Century: Burning Waters to Crystal Springs?" *Journal of Economic Perspectives* 33, no. 4 (Fall 2019): 51-75.

Available at <https://www.aeaweb.org/articles?id=10.1257/jep.33.4.51>.

The authors, both economists, analyze the costs and benefits of U.S. laws intended to protect water resources. They argue the Clean Water Act and the Safe Drinking Water Act have successfully reduced water pollution, but also suggest that other regulatory approaches—including a greater reliance on market-based measures—could have accomplished the same outcome at a lower cost.

### Books

Fares, Ali (ed.). *Emerging Issues in Groundwater Resources*. Cham, Switzerland: Springer International Publishing, 2016.

Available at <https://doi.org/10.1007/978-3-319-32008-3>.

This book contains essays on a number of environmental issues that affect groundwater supplies including sea level rise, hydraulic fracturing ("fracking"), and contamination by pharmaceuticals. It is the first volume in Springer's *Advances in Water Security* series.

Theodore, Mary. K. *Introduction to Environmental Management*. Boca Raton: CRC Press, 2021.

This book provides an overview of environmental issues and related regulations including a section of water-related topics such as drinking water quality, water conservation, and water pollution.

Younos, Tanim, and Caitlin A. Grady (eds.). *Climate Change and Water Resources*. Berlin: Springer-Verlag, 2013.

Available at <https://link.springer.com/book/10.1007/978-3-642-37586-6>.

This collection explores the varied effects of climate change on water, including implications for agriculture and drinking water. Most of the case studies come from outside the United States, though Sarah Lawson's chapter on "Mitigating Climate Change in Urban Environments: Management of Water Supplies" uses data from five big U.S. cities. It is the 25<sup>th</sup> volume in Springer's *The Handbook of Environmental Chemistry* series.

## Reports

Center for Sustainable System, University of Michigan. “Environmental Justice Factsheet.” Pub. No. CSS17-16. Sept. 2020.

Available at <http://css.umich.edu/factsheets/environmental-justice-factsheet>.

This factsheet provides an overview of the environmental justice movement in the United States and the range of issues covered by it.

## Websites

Natural Resources Defense Council. “Water Pollution: Everything You Need to Know.”

Available at <https://www.nrdc.org/stories/water-pollution-everything-you-need-know>.

The Natural Resources Defense Council, an advocacy group that favors greater regulation to protect water, provides background information on different kinds of water pollution and their effects.

U.S. Department of Health and Human Services. National Institutes of Health. National Library of Medicine. “Water Pollution.”

Available at <https://medlineplus.gov/waterpollution.html>.

The National Library of Medicine's MedlinePlus website rounds up authoritative information on topics related to human health. The Water Pollution page provides access to background information, statistics, and journal articles on the health effects of water pollution.

U.S. Environmental Protection Agency. “Drinking Water Requirements for States and Public Water Systems.”

Available at <https://www.epa.gov/dwreginfo>.

This website provides information on public water systems, national standards for safe drinking water, requirements for states, and other drinking water resources.

U.S. Environmental Protection Agency. “Polluted Runoff: Nonpoint Source (NPS) Pollution.”

Available at <https://www.epa.gov/nps>.

This website provides information on nonpoint source pollution, which is caused when rainfall or snowmelt moves over and through the ground, and carries pollutants to nearby waters. It also provides information on the difference between point source and nonpoint source pollution.

U.S. Environmental Protection Agency. “Nutrient Pollution.”

Available at <https://www.epa.gov/nutrientpollution>.

This website provides information on nutrient pollution, one of the United States’ most widespread and costly water quality problems.

U.S. Environmental Protection Agency, “Source Water Protection (SWP): Common Considerations.”

Available at <https://www.epa.gov/sourcewaterprotection/common-considerations>.

This website provides information on how point and nonpoint source pollution, among other things, may impact the quality of a water source used by a drinking water treatment plant.

U.S. Geological Survey. “A Primer on Water Quality.”

Available at <https://pubs.usgs.gov/fs/fs-027-01>.

This primer provides a basic introduction to how water quality is measured and the factors that affect it.

## State of Water Quality in the U.S.

### Articles

Stets, Edward G., Lori A. Sprague, Gretchen P. Oelsner, Hank M. Johnson, Jennifer C. Murphy, Karen Ryberg, Aldo V. Vecchia, Robert E. Zuellig, James A. Falcone, and Melissa L. Riskin. “Landscape Drivers of Dynamic Change in Water Quality of U.S. Rivers.” *Environmental Science & Technology* 54, no. 7 (Apr. 7, 2020): 4336-4343. Available at <https://doi.org/10.1021/acs.est.9b05344>.

The researchers analyze data on U.S. rivers and streams to track trends over time. They identify salinization, which can cause metal corrosion leading to lead poisoning, as a growing threat. They also argue that little progress has been made outside urban areas in addressing nutrient overenrichment from overuse of sources such as fertilizers.

### Books

Crossman, Jill, and Chris Weisener (eds.). *Contaminants of the Great Lakes*. Cham, Switzerland: Springer Nature, 2020.

Available at <https://doi.org/10.1007/978-3-030-57874-9>.

This scholarly collection examines sources and effects of water pollution in the Great Lakes, the five massive freshwater lakes near the U.S. border with Canada. It is volume 101 in Springer's *The Handbook of Environmental Chemistry* book series.

### Reports

President's Council of Advisors on Science and Technology. *Science and Technology to Ensure the Safety of the Nation's Drinking Water*. Washington, DC: Executive Office of the President, President's Council of Advisors on Science and Technology, Dec. 2016.

Available at

[https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast\\_drinking\\_water\\_final\\_report\\_20161221.pdf](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_drinking_water_final_report_20161221.pdf).

This report from the Obama Administration's science and technology advisory group discusses the state of drinking water in the United States, describing it as generally safe but subject to recent high-profile and confidence-shaking problems. It discusses relative health risks and makes recommendations for better monitoring and treatment of drinking water contaminants to better ensure the safety of public water supplies.

U.S. Environmental Protection Agency. *National Lakes Assessment 2012: A Collaborative Survey of Lakes in the United States*. EPA 841-R-16-113. Washington, DC, Dec. 2016.

Available at [https://www.epa.gov/sites/production/files/2016-12/documents/nla\\_report\\_dec\\_2016.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/nla_report_dec_2016.pdf).

This report presents the results of an evaluation of the biological, chemical, physical, and recreational condition of lakes in the United States.

U.S. Environmental Protection Agency. *National Rivers and Streams Assessment 2013-2014: A Collaborative Survey*. EPA 841-R-19-001. Washington, DC, Dec. 2020.

Available at [https://www.epa.gov/sites/production/files/2020-12/documents/nrsa\\_2013-14\\_final\\_report\\_2020-12-17.pdf](https://www.epa.gov/sites/production/files/2020-12/documents/nrsa_2013-14_final_report_2020-12-17.pdf).

This report presents the results of a nationwide statistical survey that provides information on the quality of perennial rivers and streams across the United States.

U.S. Environmental Protection Agency. *National Wetland Condition Assessment 2011: A Collaborative Survey of the Nation's Wetlands*. EPA-843-R-15-005. Washington, DC, May 2016.

Available at [https://www.epa.gov/sites/production/files/2016-05/documents/nwca\\_2011\\_public\\_report\\_20160510.pdf](https://www.epa.gov/sites/production/files/2016-05/documents/nwca_2011_public_report_20160510.pdf).

This report presents the results of an evaluation of the ecological condition of the nation's wetlands.

U.S. Environmental Protection Agency. *National Coastal Condition Assessment 2010*. EPA-841-R-15-006. Washington, DC, Jan. 2016.

Available at

[https://www.epa.gov/sites/production/files/2016-01/documents/ncca\\_2010\\_report.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/ncca_2010_report.pdf).

This report provides information on the condition of coastal waters of the United States, including estuarine, Great Lakes, and coastal embayment waters.

U.S. Library of Congress. Congressional Research Service. *Drought in the United States: Causes and Current Understanding*, by Peter Folger. R43407.

Available at <https://crsreports.congress.gov/product/details?prodcode=R43407>.

This Congressional Research Service report provides background and historical information on water shortages and drought in the United States, including effects on river flows.

## Websites

U.S. Environmental Protection Agency. "ATTAINS."

Available at <https://www.epa.gov/waterdata/attains>.

This website provides information on EPA's Assessment Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS). ATTAINS is an online system for accessing information about the conditions in the Nation's surface waters, which includes data reported by states.



U.S. Environmental Protection Agency. “Ground Water and Drinking Water.”

Available at <https://www.epa.gov/ground-water-and-drinking-water>.

This website provides information on federal regulations for drinking water, and related topics. It also enables access to statistics and annual quality reports from local water systems.

U.S. Environmental Protection Agency. “National Aquatic Resource Surveys.”

Available at <https://www.epa.gov/national-aquatic-resource-surveys>.

This website provides information on National Aquatic Resource Surveys, which are designed to assess the quality of the nation’s coastal waters, lakes and reservoirs, rivers and streams, and wetlands.

U.S. Geological Survey, “National Water-Quality Assessment (NAWQA).”

Available at

[https://www.usgs.gov/mission-areas/water-resources/science/national-water-quality-assessment-nawqa?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/mission-areas/water-resources/science/national-water-quality-assessment-nawqa?qt-science_center_objects=0#qt-science_center_objects).

This website provides information on the NAWQA project, which is designed to provide information on the current condition of the nation’s streams, rivers, and groundwater; to track trends in these conditions over time; and to examine how natural features and human activities affect these conditions.

## **Water Quality Policy and Regulation: Federal, State, Tribal, and Local Water Quality Laws, Regulations, and Standards**

### **Articles**

Allaire, Maura, Haowei Wu, and Upmanu Lall. “National Trends in Drinking Water Quality Violations.” *Proceedings of the National Academy of Sciences of the United States of America* 115 no. 9 (Feb. 27, 2018): 2078-2083.

Available at <https://www.pnas.org/content/115/9/2078>.

The authors analyze health-based violations in 17,900 community water systems from 1982 to 2015.

Keiser, David A., Catherine L. Kling, and Joseph S. Shapiro. “The Low but Uncertain Measured Benefits of US Water Quality Policy.” *Proceedings of the National Academy of Sciences of the United States of America* 116, no. 12 (Mar. 19, 2019): 5262-5269.

Available at <https://www.pnas.org/content/116/12/5262>.

The authors’ research finds that most government and academic benefit-cost analyses of federal water-quality regulations have estimated benefits that would be *smaller* than their costs, i.e., *negative* net benefits. However, the authors explain why this research finding is less than meets the eye: Current analyses exclude or simply cannot estimate potentially important benefits. The authors conclude that, due to their analytic biases, current cost-benefit analyses of water-quality regulations cannot be accepted at face value.

Reilly, Mary. "Local Government has an Important Role for Water Quality Protection." Michigan State University Extension. (Dec. 2019).

Available at

[https://www.canr.msu.edu/news/local\\_government\\_has\\_an\\_important\\_role\\_for\\_water\\_quality\\_protection](https://www.canr.msu.edu/news/local_government_has_an_important_role_for_water_quality_protection) (Part One),

[https://www.canr.msu.edu/news/local\\_government\\_has\\_an\\_important\\_role\\_for\\_water\\_quality\\_protection\\_part\\_tw](https://www.canr.msu.edu/news/local_government_has_an_important_role_for_water_quality_protection_part_tw) (Part Two), and

[https://www.canr.msu.edu/news/local\\_government\\_has\\_an\\_important\\_role\\_for\\_water\\_quality\\_protection\\_part\\_3](https://www.canr.msu.edu/news/local_government_has_an_important_role_for_water_quality_protection_part_3) (Part Three).

Observing that no single level of government can be effective on its own, the author contends that federal and even state laws are not enough to protect water quality on their own. Local governments must coordinate to address water issues as well. Because water and water contaminants travel back and forth between wetlands, surface waters, and ground waters, local jurisdictions must ensure minimum "greenbelt buffers" along lakes and rivers, through zoning ordinances, minimum "setback" requirements, and similar measures.

Youngman, Julie F. "Water, Water, Anywhere?: Protecting Water Quantity in State Water Quality Standards." *Indiana Law Journal* 94, no. 4 (Fall 2019): 1614-1650.

Available at <https://www.repository.law.indiana.edu/ilj/vol94/iss4/8>.

The article argues that as usable water is becoming scarcer, more states should adopt regulations that protect water quantities. As a measure, the author argues, states should use quantitative numeric criteria rather than qualitative narrative criteria, which can be vague and harder to enforce. The author discusses court decisions that protect water quantity, including the 1994 Supreme Court decision *Public Utility District No. 1 of Jefferson County v. Washington Department of Ecology*, which recognizes the regulation of water quantity as a factor affecting water quality and authorizes states to regulate water quantity.

## Books

Carruth, Russel S. and Bernard D. Goldstein. *Environmental Health Law: An Introduction*. San Francisco: Jossey-Bass, 2013.

This book provides an overview of U.S. environmental laws and regulations including the Clean Water Act and the Safe Drinking Water Act.

Getches, David, Sandra Zellmer, and Adell Amos. *Water Law in a Nutshell*, 5<sup>th</sup> edition. St. Paul, MN: West Academic Publishing, 2015.

This compact study guide provides an overview of laws that govern water. It discusses the three main systems of water allocation; special types of water that fall outside of the three main systems, public rights, and intergovernmental problems.

## Reports

U.S. Congress. House. Subcommittee on Environment and Climate Change. Committee on Energy and Commerce. *There's Something in the Water: Reforming Our Nation's Drinking Water Standards*, hearing. 116<sup>th</sup> Cong., 2<sup>nd</sup> sess., July 28, 2020. Available at <https://energycommerce.house.gov/committee-activity/hearings/hearing-on-theres-something-in-the-water-reforming-our-nations-drinking>. (Key documents, prepared testimony, and video of hearing).

Available at <https://docs.house.gov/meetings/IF/IF18/20200728/110952/HHRG-116-IF18-Transcript-20200728.pdf>. (Prepublished, unedited transcript).

The Safe Drinking Water Act (SDWA) requires the Environmental Protection Agency (EPA) to set standards for contaminants in the public water supply. This hearing reviews the SDWA standard-setting process and looks at why federal standards fail to develop. For SDWA to be more effective, witnesses recommend a number of improvements including that EPA: set standards in a reasonable timeframe and meet deadlines; collaborate with the states; consider site-specific differences in water systems; adequately train state and federal regulatory workforces to understand new requirements; make drinking water regulations more understandable for the public; protect the standard-setting process from political pressure; and work to protect vulnerable populations. Witnesses also recommend that Congress increase funding for EPA programs and modify parts of the SDWA that have allowed EPA to avoid issuing regulations for a number of toxic contaminants appearing in drinking water.

U.S. Library of Congress. Congressional Research Service. *Clean Water Act: A Summary of the Law*, by Laura Gatz. RL30030.

Available at <https://crsreports.congress.gov/product/pdf/RL/RL30030>.

The principal law governing pollution of the nation's surface waters is the Federal Water Pollution Control Act, or Clean Water Act. This report presents a summary of the law.

U.S. Library of Congress. Congressional Research Service. *Drinking Water State Revolving Fund (DWSRF): Overview, Issues, and Legislation*, by Mary Tiemann. R45304.

Available at <https://crsreports.congress.gov/product/pdf/R/R45304>.

EPA's most recent assessment found that \$472.6 billion needs to be invested in public water system infrastructure improvements over the next 20 years. Of this amount, \$57.6 billion is needed to comply with Safe Drinking Water Act (SDWA) requirements. The report surveys the Drinking Water State Revolving Fund (DWSRF), which combines federal and state moneys for drinking water projects, typically subsidized loans.

U.S. Library of Congress. Congressional Research Service. *Selected Federal Water Activities, Agencies, Authorities, and Congressional Committees*, by Betsy A. Cody, Judy Schneider, and Mary Tiemann. R42653.

Available at <https://crsreports.congress.gov/product/details?prodcode=R42653>.

The authors break down federal water-related activities into four categories: (1) "Water Resources Development, Management, and Use"; (2) "Water Quality, Protection, and Restoration"; (3) "Water Rights and Allocation"; and (4) "Research and Planning," and then further divide each category into a list of topics. Each topic is presented in a table that includes the federal department or agency responsible for its activities or programs, its primary legal authority, and the congressional committees with jurisdiction. The reports stress the complexity of federal activities that affect water resources.

## Websites

Association of State and Territorial Health Officials. “Water Policy Guides.”

Available at

<https://astho.org/Programs/HiAP/Environmental-HiAP/Water/?terms=water>.

The Association of State and Territorial Health Officials (ASTHO) has created a series of policy guides that identify federal, state, and local policies and programs that incorporate a “health in all policies” approach to improve water quality. Topics include Source Water Protections, Water Security, and Water Justice. ASTHO is a national nonprofit that represents public health agencies in the United States.

The National Agricultural Law Center. “Water Law.”

Available at <https://nationalaglawcenter.org/research-by-topic/water-law>.

Provides an in-depth overview of water law in the United States. Includes links to major federal statutes, regulations, and case law; center reports; federal resources, state water statutes, U.S. organizations and resources; and international organizations and resources.

North Dakota State University. “ND Water Law.”

Available at [www.ag.ndsu.edu/ndwaterlaw](http://www.ag.ndsu.edu/ndwaterlaw).

This website focuses on water law in North Dakota, but provides a general introduction to water law including relevant legal doctrines; legal issues that can arise when attempting to secure water rights; interstate water issues; federal reserved and tribal water rights; and state and federal laws that address the disposal of unwanted water. It also links to the water law statutes of many states.

U.S. Department of Health and Human Services. Centers for Disease Control and Prevention (CDC). “Public Water Systems.”

Available at <https://www.cdc.gov/healthywater/drinking/public/index.html>.

The CDC works to address drinking water issues that impact public health through research and policy recommendations. The website includes sections on “Drinking Water Standards and Regulations” and “Policy & Recommendations,” with links to current and historic policy statements and reports developed by the Council of State and Territorial Epidemiologists (CSTE), the American Academy of Pediatrics (AAP), and the National Institutes of Health (NIH).

U.S. Environmental Protection Agency. “Analyze Trends: State Water Dashboard.”

Available at

<https://echo.epa.gov/trends/comparative-maps-dashboards/state-water-dashboard>.

This website gives users several tools to examine enforcement data and information submitted by states, territories, and tribal authorities to EPA under the Clean Water Act and the Safe Drinking Water Act (as well as the Clean Air Act and other statutes administered by EPA). The data tools let users specify the type of jurisdiction (or identify a single jurisdiction) of interest, data topics, and filter types. Where available, results are shown pictorially, as bar charts and pie diagrams. Users can drill all the way down to the most disaggregated data, which will provide a hyperlinked list of individual reports. Reports can then be reviewed or downloaded individually.

U.S. Environmental Protection Agency. “Drinking Water Requirements for States and Public Water Systems.”

Available at <https://www.epa.gov/dwreginfo>.

A resource for federal and state laws related to drinking water. Connects readers to information about water systems, federal statutes such as the Safe Drinking Water Act, and agency regulations. This page also contains information about a federal-state partnership called the Drinking Water State Revolving Fund with links to reports to Congress, guidance documents, and *Federal Register* notices on this program.

U.S. Environmental Protection Agency. “Regulatory Information by Topic: Water.”

Available at

<https://www.epa.gov/regulatory-information-topic/regulatory-information-topic-water>.

The U.S. Environmental Protection Agency and states are primarily responsible for enforcing federal clean water and safe drinking water laws. This website provides links to information on the relevant federal laws and regulations; compliance and enforcement mechanisms; and policy and guidance. Topics include drinking water, ground water, hydraulic fracturing, impaired waters, mercury, mining, oceans, stormwater, surface water, wastewater, watersheds, and wetlands.

U.S. Environmental Protection Agency. “Safe Drinking Water on Tribal Lands.”

Available at <https://www.epa.gov/tribaldrinkingwater>.

Provides information about Environmental Protection Agency efforts to ensure tribal lands have access to safe drinking water. Includes information about federal partnerships, assistance to tribes, compliance data, and tribal utilities.

U.S. Environmental Protection Agency. “Standards for Water Body Health.”

Available at

<https://www.epa.gov/standards-water-body-health/what-are-water-quality-standards>.

Water quality standards describe a specific water body’s desired condition and how that desired condition will be protected or achieved. This website explains the principal components of water quality standards: the water body’s designated uses (*e.g.*, protection of fish, shellfish, and wildlife; public drinking water supply); criteria (such as maximum permitted pollutant concentration levels); and antidegradation requirements (to protect existing water body uses and to protect and maintain water quality in high-quality waters).

U.S. Environmental Protection Agency. “Summary of the Clean Water Act.”

Available at <https://www.epa.gov/laws-regulations/summary-clean-water-act>.

The webpage provides a summary of the Clean Water Act (CWA), which provides the principal framework for regulating pollution in the surface waters of the United States. The Environmental Protection Agency (EPA) is the agency with the primary responsibility for implementing and enforcing the CWA, but works with state environmental agencies and the U.S. Army Corps of Engineers. This EPA summary includes information on the history of the act and compliance monitoring.

U.S. Environmental Protection Agency. “Ground Water and Drinking Water.” Available at <https://www.epa.gov/ground-water-and-drinking-water>. A federal government website providing access to resources on drinking water. Includes information about major federal legislation and agency regulations, water systems across states and tribal lands, and water quality reports.

U.S. Environmental Protection Agency. “Water Quality Standards: Regulations and Resources.”

Available at <https://www.epa.gov/wqs-tech>.

This website provides information on federal water quality standards and regulations; minimum criteria for state and tribal water quality standards; and the EPA review and approval process. It identifies priorities for state and tribal water quality standards programs. One webpage provides hyperlinks for all state, territory, and authorized tribal water quality standards.

U.S. Environmental Protection Agency. “Basic Information about Your Drinking Water.”

Available at <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-your-drinking-water>.

A collection of articles on the Safe Drinking Water Act (SDWA) and drinking water regulations in the United States.

## Drinking Water and Wastewater Infrastructure

### Local Water Infrastructure Framework

#### Reports

Bipartisan Policy Center. *Understanding America’s Water and Wastewater Challenges*. Washington, DC: 2017.

Available at <https://bipartisanpolicy.org/wp-content/uploads/2019/03/BPC-Infrastructure-Understanding-Americas-Water-and-Wastewater-Challenges.pdf>.

This report provides a primer on water and wastewater utilities in the United States. It begins with background on water infrastructure and related federal legislation and grant programs. Other covered topics include water funding and financing needs, pricing and affordability, and inefficiencies from deferred infrastructure maintenance.

Kane, Joseph W. *Investing in Water: Comparing Utility Finances and Economic Concerns across U.S. Cities*. Washington, DC: Brookings Institution, 2016.

Available at <https://www.brookings.edu/research/investing-in-water-comparing-utility-finances-and-economic-concerns-across-u-s-cities>.

A brief focusing on local investment in water resources and the major factors that can lead to infrastructure issues. Includes a comparison of water investment across different cities, with tables and diagrams summarizing the data and findings. The report also links to resources and studies to support the author’s conclusions.

U.S. Congress. Congressional Budget Office. *Federal Support for Financing State and Local Transportation and Water Infrastructure*. 2018.

Available at

<https://www.cbo.gov/system/files/2018-10/54549-InfrastructureFinancing.pdf>.

A review outlining how local government infrastructure projects have used different funding mechanisms, and what their corresponding impacts have been on federal spending. Provides examples of infrastructure projects and methods for their funding, including tax-exempt bonds, state revolving funds, tax credit bonds, and direct federal credit programs. This resource focuses on the economic and tax consequences of funding infrastructure projects.

U.S. Government Accountability Office. *Drinking Water and Wastewater Infrastructure: Information on Identified Needs, Planning for Future Conditions, and Coordination of Project Funding*, GAO-17-559. Sept. 20, 2017.

Available at <https://www.gao.gov/assets/gao-17-559.pdf>.

This report summarizes federal and state regulation of water utilities, federal funding and assistance for drinking water and wastewater infrastructure projects, and the responsibilities and programs overseen by eight federal agencies. Conditions that may affect water infrastructure needs in the future are also discussed. Includes specific examples and case studies from drinking water and wastewater projects across the United States.

U.S. Water Alliance, The Council of State Governments, and the National Governors Association. *One Water for America: State Policymakers' Toolkit*. Washington, DC: U.S. Water Alliance, 2019.

Available at

<http://uswateralliance.org/sites/uswateralliance.org/files/State%20Policymakers%20Toolkit%20Digital.pdf>.

This report suggests that state policymakers have the unique opportunity to address water management issues and provides specific recommendations. It highlights the difficulty of maintaining Clean Water and Drinking Water State Revolving Funds (SRFs) in the face of declining federal appropriations. Recommendations for states include the removal of affordability challenges for lower-income individuals, such as by authorizing water utilities to restructure their rates and cost-sharing.

## Websites

University of North Carolina, School of Government. "Public vs Private: A National Overview of Water Systems."

Available at <https://efc.web.unc.edu/2016/10/19/public-vs-private-a-national-overview-of-water-systems>.

A brief analysis of public and private water systems across the United States. Information addressed includes the prevalence of different types of water systems and their respective core attributes. Links provide access to data regarding public and private water systems throughout the United States.

U.S. Environmental Protection Agency. “Things Local Officials Should Know about Sustainable Water Infrastructure.”

Available at <https://www.epa.gov/sustainable-water-infrastructure/things-local-officials-should-know-about-sustainable-water>.

A website with information about water systems throughout the United States. Topics covered include water infrastructure challenges across the country, descriptions of sustainable water systems, and benefits related to implementing sustainable water infrastructure. This page also links to resources describing different types of water systems.

## Federal Assistance Programs

### Reports

U.S. Congress. House. Subcommittee on Water Resources and Environment. Committee on Transportation and Infrastructure. *The Clean Water State Revolving Fund: How Federal Infrastructure Investment Can Help Communities Modernize Water Infrastructure and Address Affordability Challenges*, hearing. 116<sup>th</sup> Cong., 1<sup>st</sup> sess., Mar. 7, 2019: Washington, DC: U.S. Government Publishing Office, 2019. Available at

<https://www.govinfo.gov/app/details/CHRG-116hhrg35383/CHRG-116hhrg35383>.

Select witnesses provided testimony which praised infrastructure projects supported by the Clean Water State Revolving Fund, and urged Congress to reauthorize the legislation or make the State Revolving Fund permanent. Witnesses stressed the importance of green technologies in clean-water projects, while observing particular difficulties, such as developing such projects near contaminated brownfield or Superfund industrial sites.

U.S. Congress. Senate. Committee on Environment and Public Works. Subcommittee on Fisheries, Water, and Wildlife. *Innovative Financing and Funding: Addressing America’s Crumbling Water Infrastructure*, hearing. 115<sup>th</sup> Cong., 1<sup>st</sup> sess., July 20, 2017. Washington, DC: U.S. Government Publishing Office, 2017.

Available at

<https://www.govinfo.gov/app/details/CHRG-115shrg27094/CHRG-115shrg27094>.

A hearing before a Senate subcommittee which debated ways to finance improvements to water infrastructure systems across the United States. Witnesses included an engineer, a municipal government council member, and a participant in a federal program to improve drinking water. In addition to prepared statements, the hearing includes supplemental documents in support of the witness statements.

U.S. Environmental Protection Agency. *Drinking Water State Revolving Fund: Helping Protect America’s Public Health Since 1997: 2019 Annual Report*. 2020.

Available at [https://www.epa.gov/sites/production/files/2020-10/documents/2019\\_annual\\_report\\_final\\_508compliant.pdf](https://www.epa.gov/sites/production/files/2020-10/documents/2019_annual_report_final_508compliant.pdf).

This annual report offers background details on the history and purpose of the Safe Water Drinking Act’s Drinking Water State Revolving Fund. It includes examples of recent infrastructure loans and projects, as well as information about related federal legislation and loan programs, including the State Water Infrastructure Finance and Innovation Act.



U.S. Government Accountability Office. *Water Infrastructure: Technical Assistance and Climate Resilience Planning Could Help Utilities Prepare for Potential Climate Change Impacts*. Washington, DC: United States Government Accountability Office, Jan. 2020.

Available at <https://www.gao.gov/assets/gao-20-24.pdf>.

The Government Accountability Office analyzed the current state of federal assistance to local water utilities to help them prepare for the effects of global warming. The report makes recommendations for future outreach and planning.

U.S. Indian Health Service. *Annual Report to the Congress of the United States on Sanitation Deficiency Levels for Indian Homes and Communities: Fiscal Year 2019*. 2020.

Available at [https://www.ihs.gov/sites/newsroom/themes/responsive2017/display/objects/documents/FY\\_2019\\_RTC\\_Sanitation\\_Deficiencies\\_Report.pdf](https://www.ihs.gov/sites/newsroom/themes/responsive2017/display/objects/documents/FY_2019_RTC_Sanitation_Deficiencies_Report.pdf).

A mandatory annual report submitted to Congress by the Indian Health Service regarding sanitation deficiency levels on tribal lands. Includes an accounting of American Indian/Alaskan Native homes with inadequate sanitation facilities and no access to a safe water supply. An appendix lists the Indian Health Service sanitation projects throughout the country, along with their corresponding costs and other data.

U.S. Library of Congress. Congressional Research Service. *Federally Supported Projects and Programs for Wastewater, Drinking Water, and Water Supply Infrastructure*, by Jonathan L. Ramseur. R46471.

Available at <https://crsreports.congress.gov/product/details?prodcode=R46471>.

The author provides information and background on federally funded projects and programs addressing water supply and infrastructure needs.

## Websites

U.S. Environmental Protection Agency. “Clean Water State Revolving Fund (CWSRF).”

Available at <https://www.epa.gov/cwsrf>.

This website provides access to resources related to the Environmental Protection Agency’s Clean Water State Revolving Fund. Includes basic information, a background on the fund, needs surveys, financial reports, handbooks, laws, and policies, among other resources.

U.S. Environmental Protection Agency. “Drinking Water State Revolving Fund (DSWRF).”

Available at <https://www.epa.gov/dwsrf>.

This website provides access to resources related to the Environmental Protection Agency’s Drinking Water State Revolving Fund. Includes basic information, a background on the fund, needs surveys, financial reports, handbooks, laws, and policies, among other resources.

U.S. Environmental Protection Agency. "Ground Water and Drinking Water." Available at <https://www.epa.gov/ground-water-and-drinking-water/drinking-water-grants>. A website summarizing different federal grants available for water infrastructure improvement projects, including grants for public water systems and infrastructure projects impacting American Indian communities. Each summary links to a new page with additional information about individual grant programs.

## State of Water Infrastructure in the U.S.

### Articles

Sedlak, David. "How Development of America's Water Infrastructure Has Lurched Through History." *Trend Magazine* (Mar. 3, 2019). Available at <https://www.pewtrusts.org/en/trend/archive/spring-2019/how-development-of-americas-water-infrastructure-has-lurched-through-history>. A discussion of the history of America's water infrastructure systems, along with information about funding. This article provides examples of how some municipalities, including New York City, have responded to water system issues attributed to population growth and other factors. This publication offers theories about how inaction on modifying local water systems could impact future generations.

### Reports

American Society of Civil Engineers. *2021 Report Card for America's Infrastructure: Drinking Water*. 2021. Available at <https://infrastructurereportcard.org/wp-content/uploads/2020/12/Drinking-Water-2021.pdf>.

A report card from a civil engineering industry group evaluating the current state of water infrastructure across the nation. Includes data related to drinking water and wastewater revenue, usage, structural issues, funding sources, and assessments of future needs. Offers a list of recommendations for general improvements to infrastructure, with expansive endnotes.

American Society of Civil Engineers. *The Economic Benefits of Investing in Water Infrastructure*. 2020. Available at [http://www.uswateralliance.org/sites/uswateralliance.org/files/publications/The%20Economic%20Benefits%20of%20Investing%20in%20Water%20Infrastructure\\_final.pdf](http://www.uswateralliance.org/sites/uswateralliance.org/files/publications/The%20Economic%20Benefits%20of%20Investing%20in%20Water%20Infrastructure_final.pdf). This publication outlines the economic and social costs of not increasing investments in water infrastructure. Topics discussed include the impact of the coronavirus pandemic on water utilities, the water infrastructure gap, effects of population growth on water systems, and an overview of water infrastructure in the United States.

American Water Works Association. *State of the Water Industry*. 2020.

Available at <https://www.awwa.org/Professional-Development/Utility-Managers/State-of-the-Water-Industry>.

Based on an annual survey of water professionals, this report outlines the state of the water industry, as well as its challenges and their underlying causes. Discusses some of the top issues identified among survey respondents, including renewal and replacement of aging water and wastewater infrastructure, financing for capital improvements, and long-term water supply availability. To view the report, visitors must enter an email address on the Association's website, and successfully complete a challenge-response authentication.

U.S. Environmental Protection Agency. *Clean Watersheds Needs Survey 2012: Report to Congress*.

Available at [https://www.epa.gov/sites/production/files/2015-12/documents/cwns\\_2012\\_report\\_to\\_congress-508-opt.pdf](https://www.epa.gov/sites/production/files/2015-12/documents/cwns_2012_report_to_congress-508-opt.pdf).

This survey, conducted every four years, provides an assessment of the capital investments needed to meet the goals of the Clean Water Act.

U.S. Environmental Protection Agency. *Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress*. 2018.

Available at [https://www.epa.gov/sites/production/files/2018-10/documents/corrected\\_sixth\\_drinking\\_water\\_infrastructure\\_needs\\_survey\\_and\\_assessment.pdf](https://www.epa.gov/sites/production/files/2018-10/documents/corrected_sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf).

A federal agency assessment of drinking water resources and infrastructure needs for Congress. Includes sections on different types of drinking water systems and categories of needed infrastructure projects across all states, territories, and tribal lands.

U.S. Government Accountability Office. *Drinking Water: Approaches for Identifying Lead Service Lines Should Be Shared with All States*. Washington, DC: United States Government Accountability Office, Sept. 2018.

Available at <https://www.gao.gov/assets/gao-18-620.pdf>.

This report provides information and recommendations to identify on lead pipes that carry drinking water in certain places.

U.S. Government Accountability Office. *Water Infrastructure: Technical Assistance and Climate Resilience Planning Could Help Utilities Prepare for Potential Climate Change Impacts*, GAO-20-24. Jan. 16, 2020.

Available at <https://www.gao.gov/assets/gao-20-24.pdf>.

This report examines the federal government's ability to provide technical and financial assistance to water utilities in both preparing for and responding to extreme weather events related to climate change. The report focuses on the work of four federal government agencies/departments: the Environmental Protection Agency; the Federal Emergency Management Agency; the Department of Housing and Urban Development; and the Department of Agriculture. Includes recommendations for improving coordination across these four agencies, as well as changes to specific programs that these agencies administer, in order to put a larger emphasis on climate resilience.

## Water Resources and Water Supply Management

### Water Scarcity Management and Policy Framework

#### Reports

Brekke, Levi D., Julie E. Kiang, J. Rolf Olsen, Roger S. Pulwarty, David A. Raff, D. Phil Turnipseed, Robert S. Webb, and Kathleen D. White. *Climate Change and Water Resources Management: A Federal Perspective*. Reston, VA: U.S. Geological Survey, 2009.

Available at <https://pubs.usgs.gov/circ/1331/Circ1331.pdf>.

This government report discusses how climate change may affect U.S. water resources from the perspective of four federal agencies with responsibility for water issues: the Army Corps of Engineers, the Bureau of Reclamation, the National Oceanic and Atmospheric Administration, and the U.S. Geological Survey.

U.S. Library of Congress. Congressional Research Service. *Bureau of Reclamation: History, Authorities, and Issues for Congress*, by Charles V. Stern and Anna E. Normand. R46303.

Available at <https://crsreports.congress.gov/product/details?prodcode=R46303>.

The report's authors summarize the history and current activities of the Bureau of Reclamation—an agency within the Department of the Interior that manages and develops several large federal dams, reservoirs, and water diversion structures in the western United States.

U.S. Library of Congress. Congressional Research Service. *Drought Response and Preparedness: Policy and Legislation*, by Nicole T. Carter and Charles V. Stern. IF10702.

Available at <https://crsreports.congress.gov/product/details?prodcode=IF10702>.

The authors discuss local, state, and federal drought preparedness; federal drought assistance programs; and potential steps federal programs can take to further prepare drought.

U.S. Library of Congress. Congressional Research Service. *Management of the Colorado River: Water Allocations, Drought, and the Federal Role*, by Charles V. Stern and Pervaze A. Sheikh. R45546.

Available at <https://crsreports.congress.gov/product/details?prodcode=R45546>.

This report provides a comprehensive overview of the Colorado River Basin and the laws, treaties, court decisions, and federal agencies that govern the management of the river. The report also covers state allocation issues, wildlife concerns, and tribal water rights.

U.S. Library of Congress. Congressional Research Service. *Water Resource Issues in the 117th Congress*, by Charles V. Stern, Nicole T. Carter, Pervaze A. Sheikh, Anna E. Normand, Eva Lipiec, and Peter Folger. R46712.

Available at <https://crsreports.congress.gov/product/details?prodcode=R46712>.

Discusses water infrastructure issues and projects of concern to the 117th Congress. Provides an overview of the federal agencies involved in water resource management and their funding, and discusses issues related to Indian water rights settlements and international waters shared with Canada and Mexico.

## State of Water Supply in the U.S.

### Articles

Berkowitz, Bonnie, and Adrian Blanco. "Mapping the Strain on Our Water." *Washington Post*, Aug. 6, 2019.

Available at <https://www.washingtonpost.com/climate-environment/2019/08/06/mapping-strain-our-water>.

Drawing on research by the World Resources Institute, this article summarizes stresses on the availability of water stores in different regions of the United States.

Brown, Thomas C., Vinod Mahat, and Jorge A. Ramirez. "Adaptation to Future Water Shortages in the United States Caused by Population Growth and Climate Change." *Earth's Future* 7, no. 3 (Mar. 2019): 219-234.

Available at <https://doi.org/10.1029/2018EF001091>.

This article projects that population growth and climate change will cause the United States to experience significant water challenges in coming decades. The authors suggest that water supply adaptations of the past may be ineffective going forward and that new alternatives should be considered.

Di Baldassarre, Giuliano, Maurizio Mazzoleni, and Maria Rusca. "The Legacy of Large Dams in the United States." *Ambio* (2021).

Available at <https://doi.org/10.1007/s13280-021-01533-x>.

In this study, the authors summarize the history of water infrastructure development in the southwest United States. They argue that the construction of large dams and reservoirs have directly contributed to significant agricultural expansion and urban growth.

Gray, Tim. "As Fresh Water Grows Scarcer, It Could Become a Good Investment." *New York Times*, July 11, 2019.

Available at

<https://www.nytimes.com/2019/07/11/business/fresh-water-shortage-invest.html>.

This article discusses the growth of various business and investment opportunities that could exist as a result of limited fresh water in the United States.

Kehl, Jenny. "Moving Beyond the Mirage: Water Scarcity and Agricultural Use Inefficiency in USA." *Water* 12, no. 8 (2020): 2290.

Available at <https://doi.org/10.3390/w12082290>.

Using Geographic Information System (GIS) mapping and other data sources, Kehl argues that crops requiring significant amounts of water are being grown in water-scarce regions of the United States. The author suggests that new agricultural practices could benefit water efficiency and regional agricultural economies.

Perrone, Debra, and Scott Jasechko. "Dry Groundwater Wells in the Western United States." *Environmental Research Letters* 12, no. 10 (2007): 104002.

Available at <https://iopscience.iop.org/article/10.1088/1748-9326/aa8ac0>.

This study examines the collected groundwater well records from throughout the western United States. The research of the authors shows that wells for domestic use are shallower than wells used for agricultural purposes and are therefore more susceptible to drying.

Smith, Milan D. “A Blast from the Past: The Public Trust Doctrine and Its Growing Threat to Water Rights.” *Environmental Law* 46, no. 3 (Summer 2016): 461-480. Available at <https://law.lclark.edu/live/files/22556-46-3smithpdf>.

The author, a Ninth Circuit Court of Appeals Judge, examines the history of water rights in the United States as it relates to the public trust doctrine. The public trust doctrine holds that some resources are so important to citizens that they should be protected by the state and maintained for the public good. The public trust doctrine has traditionally been a state law matter and used by courts to protect public access to navigable waters, not to protect the use of fresh water. However, with parts of the United States facing severe water shortages, Judge Smith suggests that courts may start to play a larger role in addressing the water crisis by applying the public trust doctrine.

Tidwell, Vincent C., Barbie D. Moreland, Calvin R. Shaneyfelt, and Peter Kobos. “Mapping Water Availability, Cost, and Projected Consumptive Use in the Eastern United States with Comparisons to the West.” *Environmental Research Letters* 13, no. 1 (2018): 014023.

Available at <https://doi.org/10.1088/1748-9326/aa9907>.

In consultation with water managers throughout the country, the authors summarize and compare issues, challenges, and areas of concern between the eastern and western United States.

## Books

Adler, Robert W., Robin Kundis Craig, and Noah D. Hall. *Modern Water Law: Private Property, Public Rights, and Environmental Protections*, 2nd edition. St. Paul, MN: Foundation Press, 2018.

This casebook looks at legal issues and doctrines that affect private and public water use rights, including tribal rights, interstate water disputes and U.S.-Mexico water diplomacy.

Bateman, Brenda, Pat Fridgen, Scott Kudlas, and Alyssa Mucken, eds. *State Water Plans: Monographs from 17 States*. Middleburg, Virginia: American Water Resources Association, 2018.

Available at [https://www.awra.org/Members/Publications/AWRA\\_Reports.aspx](https://www.awra.org/Members/Publications/AWRA_Reports.aspx).

This publication is the product of an American Water Resources Association National Leadership Workshop for state officials. It provides uniform reporting and narrative information on the state water plans of 17 states in varied stages of development. The chapter on each state plan summarizes its legal context and statutory foundation; current status and future development; resulting components; resolved and persisting challenges; and scope and budget. The final chapter synthesizes the information and spotlights common themes among the diverse states.

Reisner, Marc. *Cadillac Desert: The American West and its Disappearing Water*. Revised and updated edition. New postscript by Lawrie Mott. New York: Penguin Books, 2017.

This book tells the history of westward expansion in the United States and the role government agencies, politicians, farmers, business interests, and others in addressing and managing limited water resources.

## Reports

Center for Sustainable System, University of Michigan *U.S. Water Supply and Distribution Factsheet*. Pub. No. CSS05-17 (Oct. 2020).

Available at [http://css.umich.edu/sites/default/files/US%20Water%20Supply%20and%20Distribution\\_CSS05-17\\_e2020.pdf](http://css.umich.edu/sites/default/files/US%20Water%20Supply%20and%20Distribution_CSS05-17_e2020.pdf).

This factsheet contains several statistics on the uses, sources, and treatment of water in the United States.

Dieter, Cheryl A., Molly A. Maupin, Rodney R. Caldwell, Melissa A. Harris, Tamara I. Ivahnenko, John K. Lovelace, Nancy L. Barber, and Kristin S. Linsey. *Estimated Use of Water in the United States in 2015*. Reston, VA: U.S. Geological Survey, 2018. Available at <https://pubs.usgs.gov/circ/1441/circ1441.pdf>.

This report provides official estimates for water use in the United States, in the aggregate and broken down by type of use.

U.S. Bureau of Reclamation. *Colorado River Ten Tribes Partnership, Colorado River Basin Ten Tribes Partnership Tribal Water Study Report*. Dec. 2018

Available at <https://www.usbr.gov/lc/region/programs/crbstudy/tws/finalreport.html>.

The Ten Tribes Partnership is a coalition of ten federally recognized tribes with federal Indian reserved water rights in the Colorado River Basin. This Bureau of Reclamation study examines how partnership tribes use their water and the impediments they face. It includes an overview of the Colorado River Basin; background on federal Indian reserved water rights; assessment of current tribal water use and projected future water development; challenges and opportunities related to development of tribal water; and future considerations and next steps.

U.S. Library of Congress. Congressional Research Service. *Indian Water Rights Settlements*, by Charles V. Stern. R44148.

Available at <https://crsreports.congress.gov/product/details?prodcode=R44148>.

Many tribes have reserved water rights that date to their reservations' establishment and, thus, have senior water rights under the prior appropriation water law systems used in many western states. This arrangement has led to dozens of water-rights settlements among tribes, the federal government, states, water districts, and private water users, among others. This report provides background and discusses federal laws that have funded such settlements to date, as well as proposals for extending federal water-settlement funding in perpetuity.

## Websites

University of Nebraska-Lincoln. National Drought Mitigation Center.

Available at <https://drought.unl.edu>.

The National Drought Mitigation Center website hosts the U.S. Drought Monitor and other resources on drought education, planning, and research.

U.S. Centers for Disease Control and Prevention. “Drought and Health.”

Available at <https://www.cdc.gov/nceh/drought/implications.htm>.

According to the CDC, drought can contribute to several public health issues. This site summarizes several adverse effects due to drought, including impacts to food supply, air quality, sanitation, and certain diseases.

U.S. Environmental Protection Agency. “Drought Resilience and Water Conservation.”

Available at

<https://www.epa.gov/water-research/drought-resilience-and-water-conservation>.

This site hosts information and resources on several water supply-related issues, including aquifer recharge, water reuse, desalination, drought resilience, and watershed sustainability.

U.S. Geological Survey. “Drought and Groundwater Levels.”

Available at [https://www.usgs.gov/special-topic/water-science-school/science/drought-and-groundwater-levels?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/special-topic/water-science-school/science/drought-and-groundwater-levels?qt-science_center_objects=0#qt-science_center_objects).

This site contains several resources, publications, and tools related to drought and groundwater issues.

U.S. Geological Survey. “Groundwater Use in the United States.”

Available at

<https://www.usgs.gov/special-topic/water-science-school/science/groundwater-use-united-states>.

Similar to the site above, this page provides a variety of resources, publications, and tools related to groundwater supply in the United States.

U.S. National Weather Service. Climate Prediction Center. “U.S. Drought Information.”

Available at <https://www.cpc.ncep.noaa.gov/products/Drought>.

The National Weather Service predicts and tracks drought events in the United States. The Drought Information webpage provides links to several maps and other resources on the topic.



## SUBJECT BIBLIOGRAPHY

**This section of the bibliography was compiled by the U.S. Government Publishing Office Library Services and Content Management.**

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“Resolved: The United States federal government should substantially increase its protection of water resources in the United States.”

**Analysis of Remedial Scenarios Affecting Plume Movement Through a Sole-source Aquifer System, Southeastern Nassau County, New York**

Available at: <https://purl.fdlp.gov/GPO/gpo147852>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Years/Pages: 2020; vi, 83 p.

Print price: N/A

**Assessment of Containment Trends in Plumes and Wells and Monitoring Network Optimization at the Badger Army Ammunition Plant, Sauk County, Wisconsin**

Available at: <https://purl.fdlp.gov/GPO/gpo153467>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Years/Pages: 2021; x, 80 p.

Print price: N/A

**Assessment of Dissolved-Selenium Concentrations and Loads in the Lower Gunnison River Basin, Colorado, as Part of the Selenium Management Program, 2011-17**

Available at: <https://purl.fdlp.gov/GPO/gpo143811>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Years/Pages: 2020; v, 21 p.

Print price: N/A

**Assessment of Microscopic Pathology in Fishes Collected at Sites Impacted by Wood Tar in Pennsylvania**

Available at: <https://purl.fdlp.gov/GPO/gpo156456>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Years/Pages: 2020; vi, 14 p.

Print price: N/A

**Assessment of Water Quality and Fecal Contamination Sources at Hook Pond, East Hampton, New York**

Available at: <https://purl.fdlp.gov/GPO/gpo154408>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Years/Pages: 2020; viii, 58 p.

Print price: N/A

**Bathymetry of New York City's East of Hudson Reservoirs and Controlled Lakes, 2017-2019**

Available at: <https://purl.fdlp.gov/GPO/gpo157133>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2021; viii, 46 p.

Print price: N/A

**Boundary Waters Wilderness Protection and Pollution Prevention Act: Report Together with Dissenting Views (to Accompany H.R. 5598)**

Available at: <https://purl.fdlp.gov/GPO/gpo150103>

Publisher: U.S. Government Publishing Office

Year/Pages: 2020; 14 p.

Print price: N/A

**Building Back Better: the Urgent Need for Investment in America's Wastewater Infrastructure**

Available at: <https://purl.fdlp.gov/GPO/gpo154068>

Publisher: U.S. Government Publishing Office

Year/Pages: 2021; xi, 80 pages

Print price: N/A

**Chemical Constituent Concentrations in Stream Water, Streambed Sediment, and Soils of Fort Belvoir, Virginia--a Characterization of Ambient Conditions in 2019**

Available at: <https://purl.fdlp.gov/GPO/gpo150182>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2021; vi, 20 p.

Print price: N/A

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Available at: <https://purl.fdlp.gov/GPO/gpo154117>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2020; vii, 57 p.

Print price: N/A

**Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities**

Available at: <https://purl.fdlp.gov/GPO/lps93632>

Publisher: U.S. Environmental Protection Agency

Year/Pages: 2008; 110 p.

Print price: \$8.50

**Executive Summary and Annotated Bibliography of Selected References from "Microbial and Viral Indicators of Pathogens and Human Health Risks From Recreational Exposure to Waters Impaired by Fecal Contamination" with Related Project Ideas for Gwinnett County, Georgia**

Available at: <https://purl.fdlp.gov/GPO/gpo154124>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2021; v, 10 p.

Print price: N/A

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Available at: <https://purl.fdlp.gov/GPO/gpo156839>

Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2021; vii, 20 p.

Print price: N/A

**Local Water Protection Act: Report (to Accompany H.R. 2008)**

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Publisher: U.S. Government Publishing Office

Year/Pages: 2021; 15 p.

Print price: N/A

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Available at: <https://purl.fdlp.gov/GPO/gpo156270>

Publisher: U.S. Government Publishing Office

Year/Pages: 2021; 9 p.

Print price: N/A

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Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2021; vi, 51 p.

Print price: N/A

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Publisher: U.S. Department of the Interior, U.S. Geological Survey

Year/Pages: 2021; ix, 51 p.

Print price: N/A

**Taking Stock of Your Water System: a Simple Asset Inventory for Very Small Drinking Water Systems**

Available at: <https://purl.fdlp.gov/GPO/LPS63032>

Publisher: U.S. Environmental Protection Agency

Year/Pages: 2004; 45 p.

Print price: \$4.25

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Available at: <https://purl.fdlp.gov/GPO/gpo144265>

Publisher: U.S. Government Publishing Office

Year/Pages: 2020; x, 142 p.

Print price: N/A

**The Bureau of Reclamation: Origins and Growth to 1945 (vol. 1); from Developing to Managing Water, 1945-2000 (vol. 2)**

Available at: <https://purl.fdlp.gov/GPO/lps118238>

Publisher: Bureau of Reclamation, U.S. Department of the Interior

Year/Pages: 2006; multi-volume set

Print price: \$34.65 (v. 1); \$70.00 (v. 2)

**The Comprehensive Everglades Restoration Plan and Water Management in Florida**

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Publisher: U.S. Government Publishing Office

Year/Pages: 2021; x, 63 p.

Print price: N/A

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Available at: <https://purl.fdlp.gov/GPO/gpo157795>.

Publisher: Department of the Army, Army Corps of Engineers

Year/Pages: 2018; xii, 170 p.

Print price: N/A

**Water Measurement Manual: a Water Resources Technical Publication**

Available at: <https://purl.fdlp.gov/GPO/LPS15119>

Publisher: U.S. Department of the Interior, Bureau of Reclamation

Year/Pages: 2001; 42 p.

Print price: \$26.50

**Water Quality Protection and Job Creation Act of 2021: Report Together with Minority Views (to Accompany H.R. 1915)**

Available at: <https://purl.fdlp.gov/GPO/gpo157030>

Publisher: U.S. Government Publisher Office

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