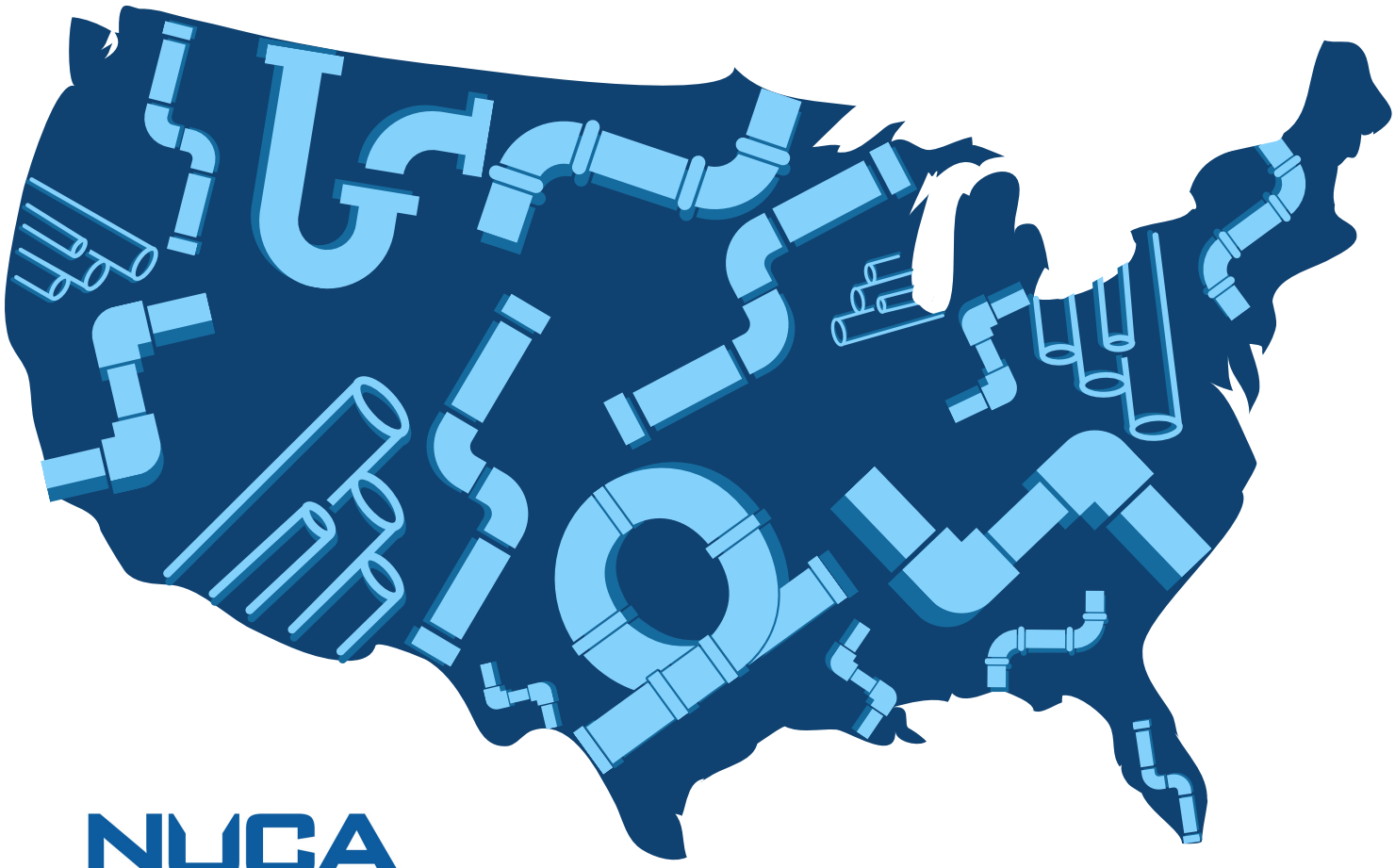


NUCA
We Dig America

Summer 2021

State Water & Wastewater Infrastructure Needs Assessments

A Note from Tom Butler, Chair, NUCA Government Affairs:

Dear Member of Congress:

One of the crowning achievements of the last 150 years was building reliable water and wastewater systems for hundreds of cities in the United States. But after decades of hard use, this infrastructure is aging and failing. In America today, a water main breaks every two minutes. The good news is that federal investment in water and wastewater infrastructure puts people to work and builds a stronger America.

Over the next 20 years, $1 trillion needs to be invested in water and wastewater infrastructure just to maintain these critical systems in a state of good repair. Each Congressional district and U.S. state requires the placement of concrete pipe and steel rebar found in our infrastructure construction projects to maintain a robust economy and a safe community environment. These projects also require federal, state, and private resources to fund their construction, materials, and labor. None of the 50 U.S. states and the District of Columbia are alike, nor are their project needs and funding challenges.

NUCA's latest booklet, "State Water & Wastewater Infrastructure Needs," should be your primary resource for federal funding statistics, future resource needs, and background information in your state. Using primary U.S. government statistical resources, state public works department projects, legislative abstracts, and other resources, this booklet cleanly illustrates what lies ahead and what is needed for water and wastewater projects.

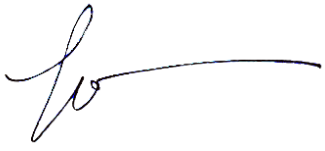
The 117th Congress's Infrastructure Investment and Jobs Act (IIJA, H.R. 3684) provides significant new funding to improve the condition of infrastructure systems across the country. But this bill and its promised resources are only a start. Billions of dollars are needed each year to renew and replace outdated pumps, storage facilities, pipes, and treatment plants that deliver clean water to homes and businesses across the nation, and carry away and safely treat sewage and stormwater. Local, state, and federal funding is meeting a fraction of the current need for resources.

Much of the nation's vast water infrastructure is buried underground. Being out-of-sight our aging pipes are frequently out-of-mind. However, it is hard to overstate how vital these systems are for people's health and the economy. The longer we wait to tackle deteriorating infrastructure, the more difficult and expensive the remedy will be. Our association and industry seek to help lawmakers understand the scope of our infrastructure needs, as well as the economic benefits of investing in solutions.

The most recent report card from the American Society of Civil Engineers assigned drinking water and wastewater infrastructure a D and D+, respectively. Closing the investment gap would be equivalent to the nation's water infrastructure achieving at least a "B" letter grade, reaching a state of good repair, and posing a minimal risk of being unable to function.

NUCA's governmental affairs department stands ready to assist your office with information about your state's water and wastewater infrastructure, the companies building these systems, and our invaluable employees and their unique set of trade skills. This booklet is available for download at **nuca.com/fixwater**. For more information, please reach out to our federal representatives Eben Wyman (**eben@wymanassociates.net**) or Zack Perconti (**zack@wymanassociates.net**).

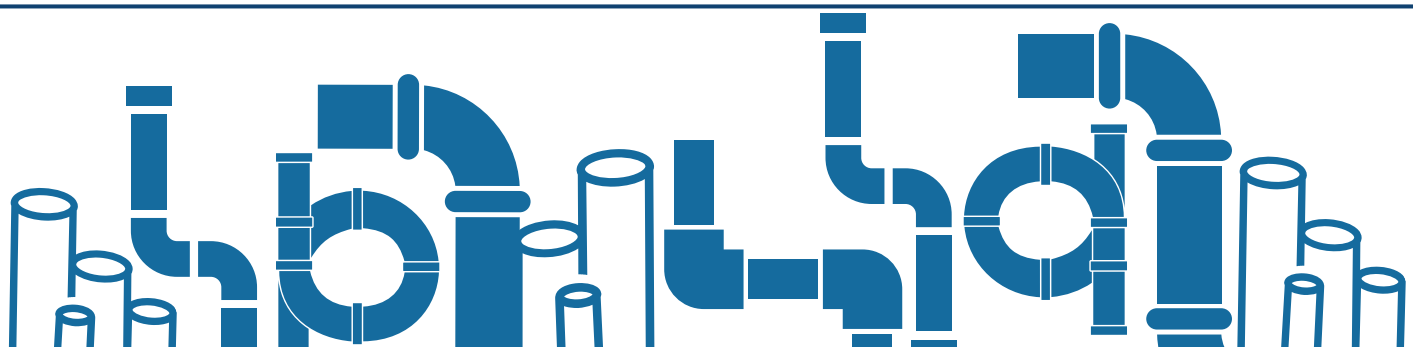
Sincerely yours,



Thomas P. Butler
Chairman, Governmental Affairs Committee
National Utility Contractors Association

NUCA
We Dig America

WYMAN ASSOCIATES



Alabama

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$23,714,000**

Clean Water State Revolving Fund (2021): **$17,946,000**

A Note on Stormwater

In 2020, incorporated post-constuction stormwater management (PCSWM) design was included into the overall roadway design by the Alabama Department of Transportation. PCSWM methods include traditional practices, like detention ponds, that regulate the discharge rate of channelized runoff and implement low-impact development/ green infrastructure (LID/GI).

Room to Improve

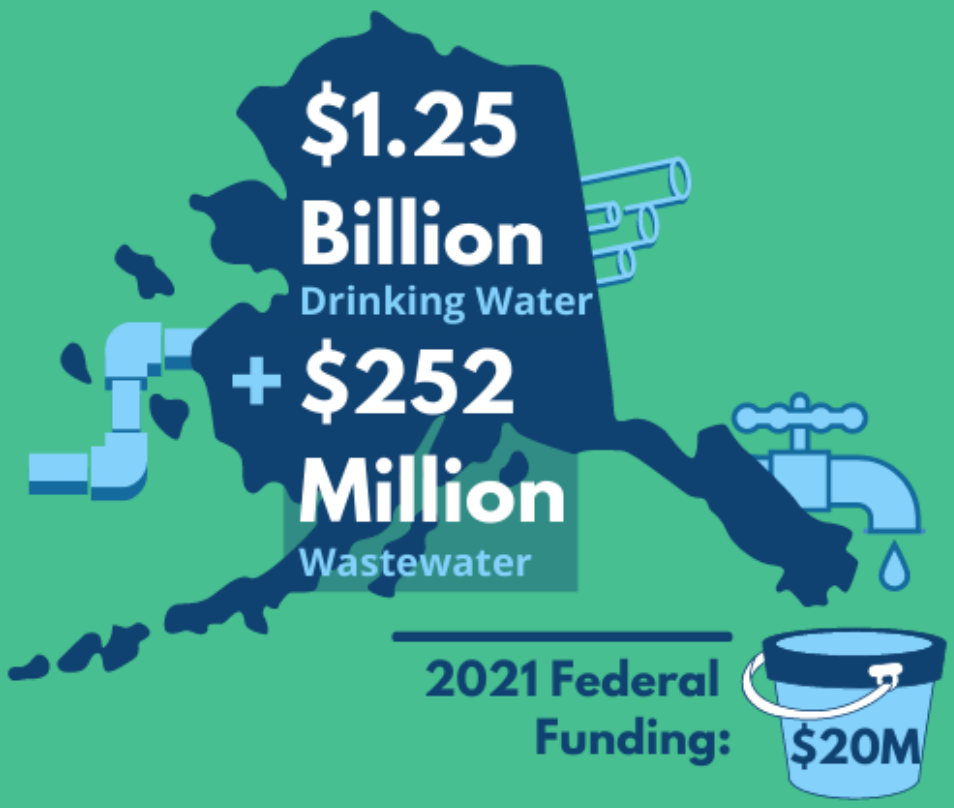
The Black Belt's Septic System

The soil type in Alabama's Black Belt tends to collect sewage, causing a major wastewater issue for communities in the area. 'Normal' septic tank systems will not function properly in the Black Belt community, and private septic tank systems are out of reach for most, costing up to $20,000. Moreover, around 200,000 of the private septic tanks in the area are not connected to municipal systems or are in need of repair or replacement.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Moseley, Brandon. "Sewell Introduces Legislation to Create New Wastewater Grants for Underserved Communities." Alabama Political Reporter. Energy Institute of Alabama, June 14, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. Rogers, Scott, Adrienne Boer, Scott Crafton. "Integrating Stormwater Infrastructure into State Department of Transportation Processes." TR News, July, 2020.

Alaska

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$9,606,000**

A Note on Stormwater

In order to address erosion and sediment control, the Alaska Department of Transportation and Public Facilities created the Alaska Storm Water Pollution Prevention Plan Guide in 2017. This guide holds contractors accountable by requiring a Construction General Permit (CGP) on small and large construction sites.

Room to Improve

Rural Alaskan Homes Need Water Infrastructure Improvements

Alaskan communities are in desperate need of water infrastructure improvements. More than 3,300 rural Alaskan homes do not have running water or a flush toilet, causing problems like severe skin infections and respiratory illnesses. Some Alaskan homes have to collect waste in a bag and dispose of it in a 'sewage lagoon.' In the 2021 ASCE Infrastructure Report Card, Alaska is ranked last among all US states for percentage of homes with complete water and wastewater services.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
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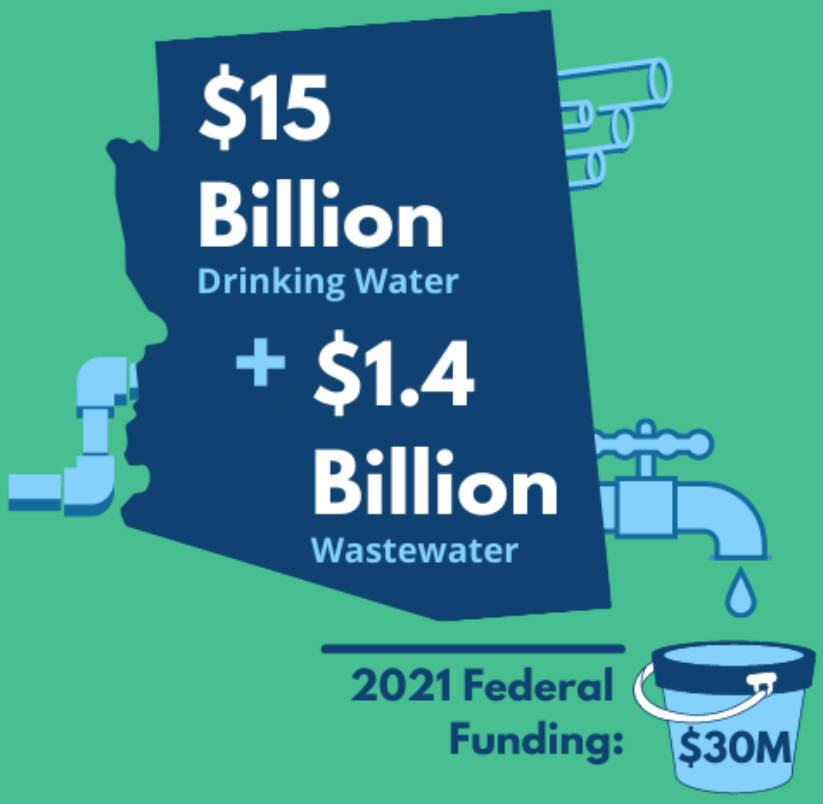
4. "Alaska Water and Sewer Challenge (AWSC)." Alaska Department of Environmental Conservation Division of Water. 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Alaska Storm Water Pollution Prevention Plan Guide." Alaska Department of Transportation and Public Facilities. March 2017.

Arizona

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$19,784,000**

Clean Water State Revolving Fund (2021): **$10,840,000**

A Note on Stormwater

Pima County recognizes the role stormwater management plays in keeping surface water clean and preserving high quality groundwater. For example, the Pima County Department of Environmental Quality encourages construction sites to minimize wastewater from washout of concrete, fuels, oils, solvents and trash from flowing into stormwater.

Room to Improve

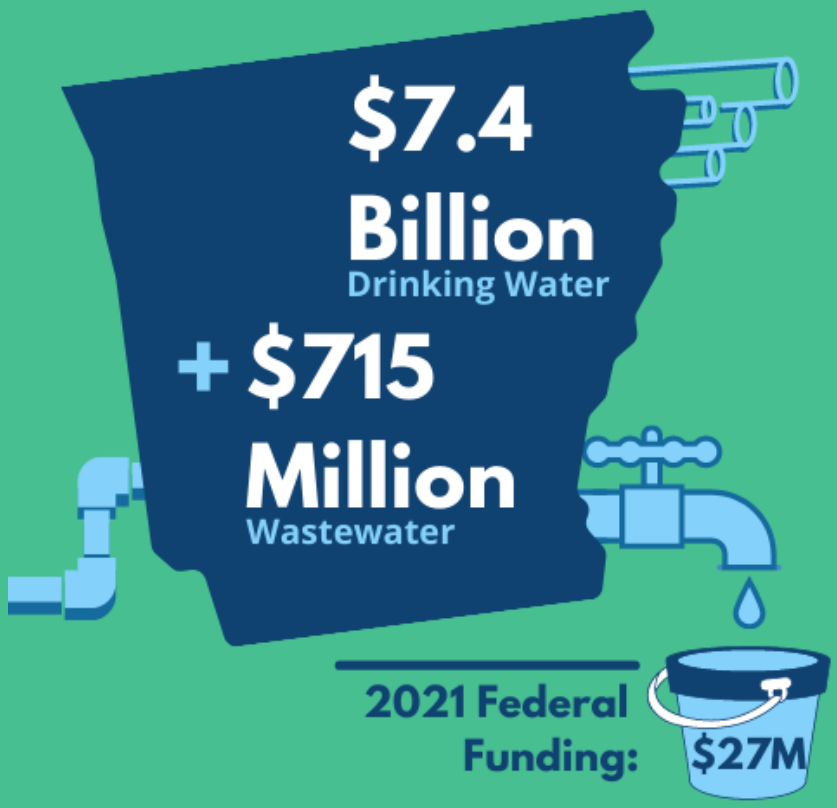
Phoenix Faces Drought and Seeks Long-Term Solution

Phoenix gets less than 8 inches of rain a year, and northern parts of Phoenix still lean on the Colorado River. In an era of climate change and drought, the city is trying to transition away from relying on the river for its water supply. In order to take advantage of Phoenix's alternative water supplies and secure a long-term solution for the city, Phoenix needs to build $500 million of infrastructure to pipe water to communities living in northern parts of the city.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Robbins, Jim. "In Era of Drought, Phoenix Prepares for a Future Without Colorado River Water." Yale Environment 360. Yale School of the Environment, Feb 7, 2019.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Stormwater." Pima County Department of Environmental Quality, 2021.

Arkansas

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$16,551,000**

Clean Water State Revolving Fund (2021): **$10,499,00**

A Note on Stormwater

Disaster was declared in the southeast part of Arkansas after days of heavy rain flooded the state. At least 50 homes were flooded in the City of Dumas, nineteen inches of rain was recorded in a 48-hour period in the City of Rowher, around 5,000 acres of cropland was flooded, and a railroad track was washed out by floodwater.

Room to Improve

Humphrey's Brown Water

Brown water is a growing issue in Humphrey, Arkansas. Community members are forced to pay nearly $75 a week for bottled water and drive at least 11 miles to do their laundry. Although a representative from the Arkansas Department of Health claims that the discoloration is due to an excess of iron and the water is ultimately safe to drink, the Mayor of Humphrey, Cleveland Hatch, admits that he hasn't drank the water in years. At around 80 years old, the water pipes in Humphrey are in desperate need of replacement; and there are many other towns around Arkansas facing similar challenges.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Kreuz, Claire; Noah Delahsaw. "Humphrey residents fed up with city water issues." FOX16, March 24, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Disaster declared in Arkansas County as floodwater swamps homes, roads across region." KATV. ABC7, June 9, 2021.

California

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$97,047,000**

Clean Water State Revolving Fund (2021): **$114,785,000**

A Note on Stormwater

Stormwater management has evolved in California. While the main focus has historically been on flood control, California has adopted new regulations that specifically address each city's discharge quality of stormwater. For example, the Construction Stormwater General Permit regulates every project that clears, grades, stockpiles, or excavates one or more acres of soil in California.

Room to Improve

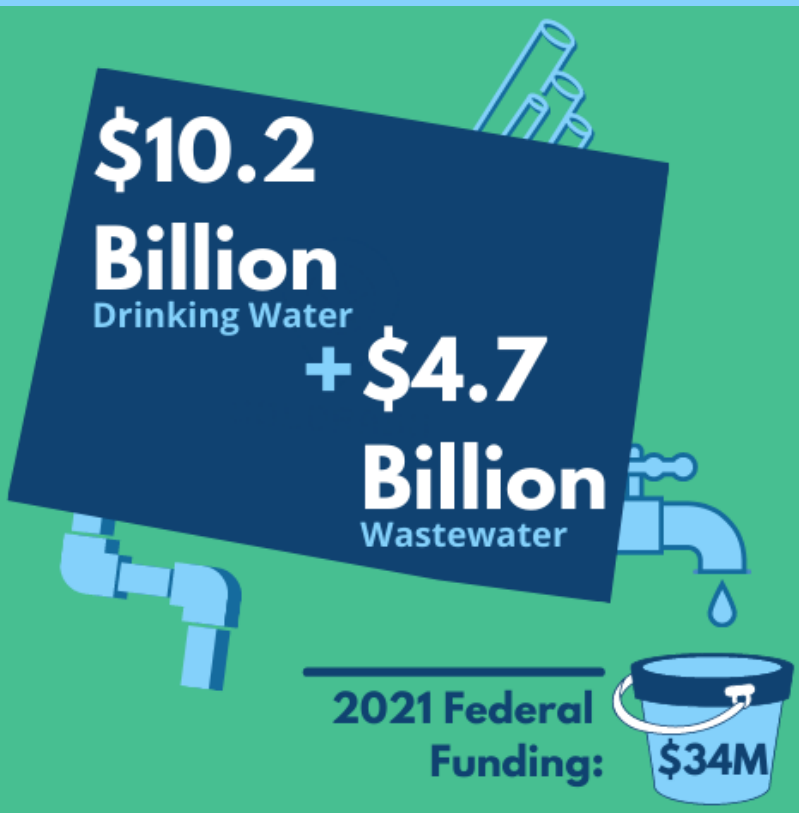
Teviston Loses Running Water During Heat Wave

While temperatures rose to the triple-digits, the only functioning well in Teviston broke in early June of 2021. Without a working back-up well, the rural Central Valley community of 700 residents found itself without running water during a heat wave. Even so, the broken well may have not been the ultimate root of the problem. A Teviston Community Services District board member, Frank Galaviz, feared the well was dried up and suggested incorporating Teviston with the town of Pixley in order to have access to a more reliable water system. Small communities need federal funding more than ever to maintain access to safe and clean water.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Montalvo, Melissa. "An entire California town is without running water - in a heat wave." California Divide. Cal Matters, June 28, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Stormwater Management Program - History." The City of Santa Maria Stormwater Program. The City of Santa Maria, 2021.

Colorado

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$21,735,000**

Clean Water State Revolving Fund (2021): **$12,838,000**

A Note on Stormwater

Fort Collins is a great example of how to rethink stormwater infrastructure in cities. The city's flood mitigation effort revolves around the Poudre River's 100-year flood plain: a slow but successful transition that involved upgrading building code to prohibit new residential construction, offering buyouts for people who own properties at high risk, preserving 66 percent by purchasing natural areas, etc.

Room to Improve

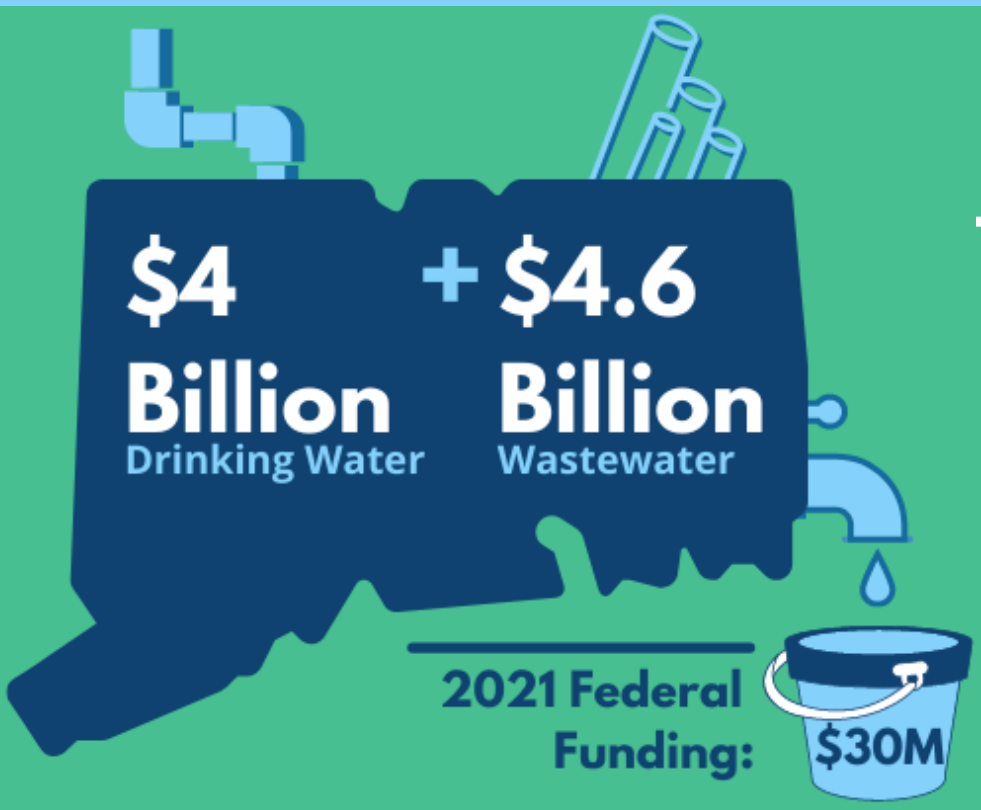
The Cost of Clean Water

Small communities (containing less than 10,000 people) make up 98 percent of Colorado's water systems. Small, rural water providers in Colorado take on a substantial cost: constantly contending with a long list of federally regulated contaminants in order to limit risk of chronic health conditions affecting communities, ranging from kidney and liver disease to cancer. Private well owners are exempt from regulations, but bear the responsibility of operating their own utilities, taking on the cost of constructing their own wells and testing and treating drinking water.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Harvey, Nelson. "The Rural Water Conundrum." Water Education Colorado. October 2, 2016.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Colorado City Revamps Flood Plain Management After Severe Flood." The PEW Charitable Trusts. November 19, 2019.

Connecticut

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$19,662,000**

A Note on Stormwater

From July 2014 to July 2019, sewage discharged into the Black Rock Harbor about every 10 days. In the same timeframe, combined sewage overflow (CSO) pipes discharged 100,000 to 500,000 gallons of stormwater mixed with sewage almost one hundred times. There are thirty active CSO pipes in Bridgeport, CT - only five being in the Black Rock Harbor.

Room to Improve

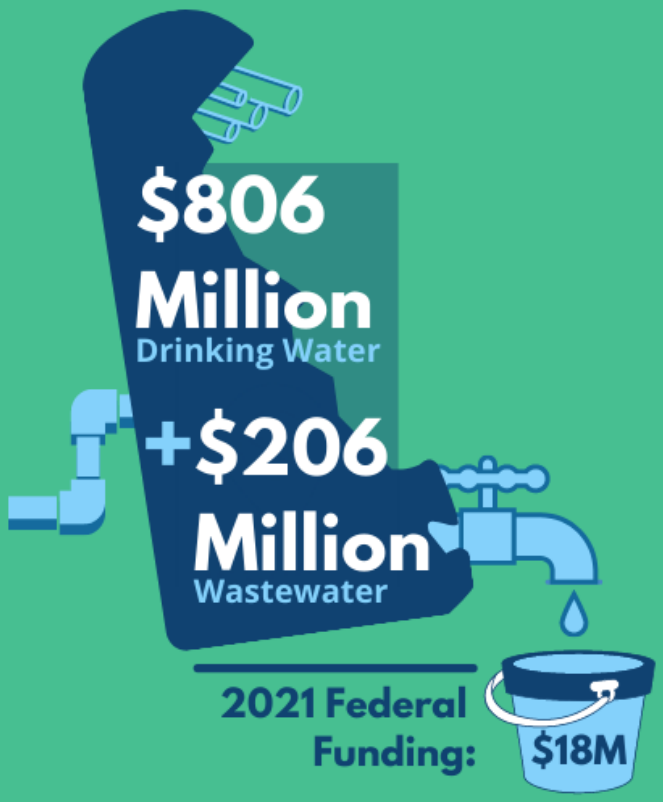
Wastewater: Reactive v Proactive

In July of 2020, Connecticut was reminded of the importance of wastewater treatment when two million gallons of raw sewage spilled out of a collapsed 50-year-old pipe, contaminating Mill River, New Haven Harbor, Long Island Sound and several shoreline town waterfronts. Most of Connecticut's infrastructure is more than 50 years old, waiting for either pipe failure or costly repairs. Perhaps providing federal funding for the much-needed renewal or replacement of the many aging, unreliable pipes in Connecticut would allow for a more proactive approach.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Woodside, Christine. "Black Rock Harbor sewage spills to last decades after infrastructure upgrades." CT Post. October 3, 2019.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. Fournier, Tori. "CT, U.S. Must Invest More in Wastewater Infrastructure." Hartford Business Journal. August 24, 2020.

Delaware

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,0000**

A Note on Stormwater

In July of 2021, the Clean Water for Delaware Act created a $50M Clean Water Trust to protect Delaware's waterways and rebuild its water infrastructure. The Clean Water for Delaware Act will fund stormwater infrastructure improvements, covering programs for drainage, waterway management, conservation reserve enhancement programs, etc.

Room to Improve

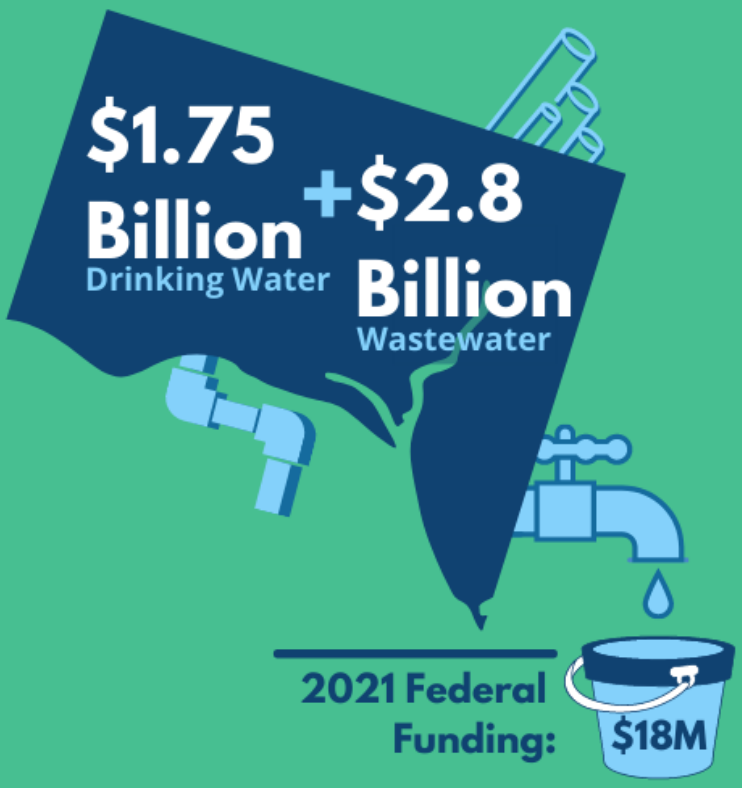
Disproportionate Effects on Drinking Water in Sussex County

Water is unsafe or undrinkable to low-income residents in Sussex County, Delaware. In Ellendale, Delaware, residents have been trying to connect to public water systems for decades. The low-income community members in Ellendale rely on private wells, which provide water that is high in nitrates and (according to residents) smells like rotten eggs. Home filtration systems are costly, so private well contamination is common among low-income residents.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Read, Zoë. "Disconnected: Thousands in Delaware lack access to safer public water." WHYY. PBS, January 27, 2020.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Delaware passes Clean Water for Delaware Act." Water World. July 28, 2021.

Washington, D.C.

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

DC Water used the nation's first Environmental Impact Bond (EIB) to learn how to utilize gray infrastructure while integrating green infrastructure. This hybrid approach was implemented in the Rock Creek sewershed, providing the same degree of stormwater control as the all-gray alternative and lowering capital costs as compared to all-gray or all-green alternatives.

Room to Improve

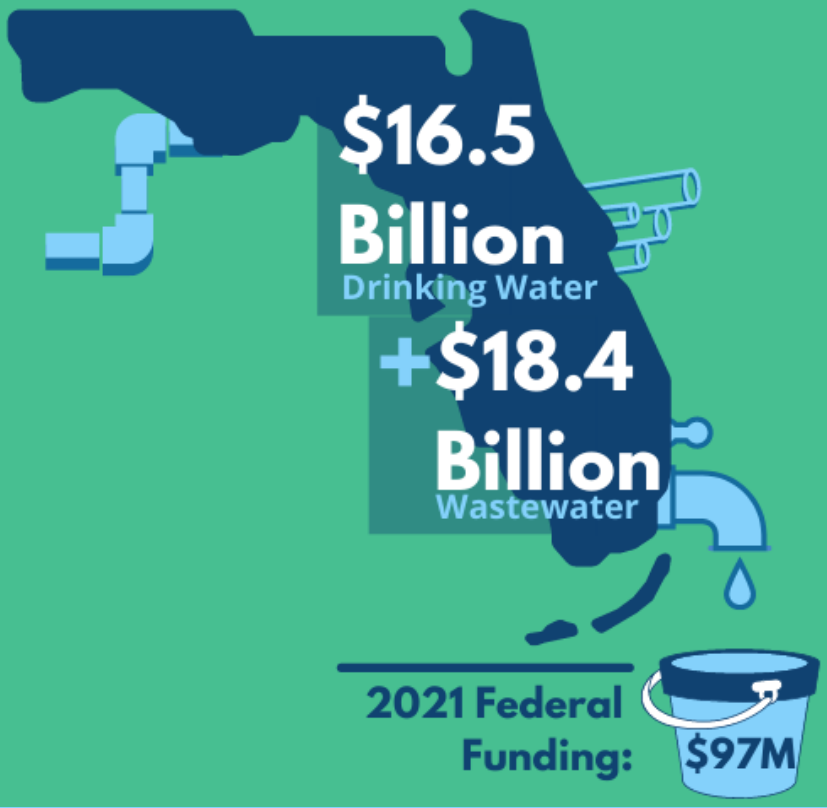
One Step Forward, Two Steps Back

Although DC has been making progress cleaning up the Anacostia and Potomac rivers through the Clean Rivers project, DC's water and sewer authority management is considering scrapping a major part of the project in order to save ratepayers money. The vast majority of this project is being paid for by residents with a Clean Rivers fee (about $21 a month), which is driving low-income people out of the city. Carving out this piece of the Clean Rivers project would mean putting 600 million gallons of sewage into the Potomac each year. Failed state attempts to fix aging water infrastructure highlight the ever growing need for federal funding in projects like Clean Rivers.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Fenston, Jacob. "Why A Plan To Keep Sewage Out Of The Potomac Was On The Chopping Block." WAMU 88.5 American University Radio. NPR, February 20, 2020.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "DC Water's Pioneering Environmental Impact Bond a Success." Quantified Ventures. May 27, 2021.

Florida

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$43,304,000**

Clean Water State Revolving Fund (2021): **$54,175,000**

A Note on Stormwater

The Florida Department of Economic Opportunity's (DEO) Rebuild Florida Mitigation General Infrastructure Program awarded nearly $150 million to local governments developing large-scale infrastructure projects to make storm-impacted communities more resilient to future disasters.

Room to Improve

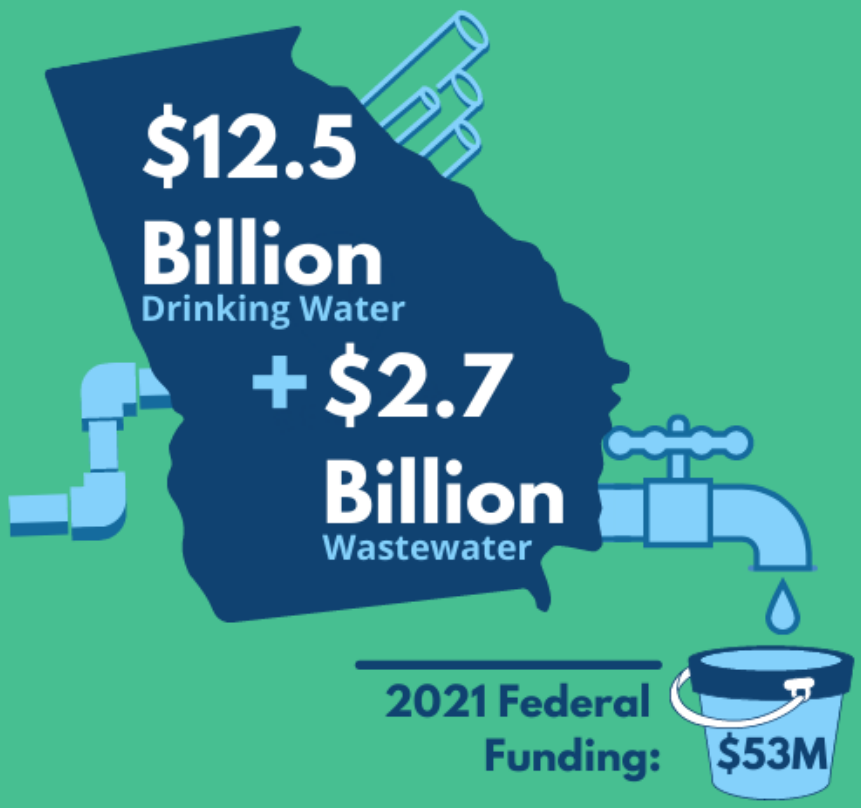
Failed Sewer Systems Leak Human Waste into Waterways

The sewer systems in Florida are deteriorating. Since 2009, Florida's sewers have failed nearly 23,000 times, releasing over one and a half billion gallons of wastewater (including more than 370 million gallons of untreated wastewater) into the state's estuaries and oceans. The failing sewer systems leaked enough human waste to fill 2,400 Olympic-sized swimming pools. With wastewater infrastructure nearing 80 years old in some communities, funding has never been more crucial.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Chen, Daphne. "Sewer crisis in the state of Florida.' The Florida Times-Union. April 13, 2019.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Governor Ron DeSantis Announces Nearly $150 Million in Awards to Florida Communities for More Resilient Infrastructure." Florida Government. April 16, 2021.

Georgia

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$25,924,000**

Clean Water State Revolving Fund (2021): **$27,136,000**

A Note on Stormwater

The Environmental Protection Agency projects that Georgia residents need to pay $85 per capita per year towards new or renovated stormwater infrastructure. Residents currently pay a median of $6 per capita per year, and with Georgia's growing population, additional funding will be needed to protect water quality.

Room to Improve

Underfunded Septic Systems

Georgia faces slow progress in addressing overflows from sanitary sewer systems, aging wastewater infrastructure and the demands of a growing population. The Georgia Water & Wastewater Report found that 45% of the 373 local government water or wastewater agencies in 2017 did not generate enough revenue to cover their operations and maintenance costs and account of future capital costs. Nearly half of Georgia residents do not have access to public sewers and rely heavily on these underfunded septic systems.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. UNC Environmental Finance Center, 2017 Georgia Stormwater Fees Survey and Dashboard
8. 'Clean Water Needs Survey.' EPA. 2012.

Hawaii

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$12,430,000**

A Note on Stormwater

In recent years, Hawaii has experienced an increase in extreme flooding. Hawaii's stormwater infrastructure must accommodate an increase in rainfall and extreme storms in order to prevent future flooding of highways, businesses, and residences.

Room to Improve

Cesspool Leaks Compromise Groundwater Wells

Across Hawaii's eight major islands, there are 88,000 cesspools seeping sewage into ocean waters, thus threatening Hawaii's drinking water, the health and life of coral reefs, and the famous beaches fueling the state's tourist economy. More than 90% of the state's drinking water comes from groundwater wells, and cesspools are depositing 53 million gallons of raw sewage into the ground every day. One groundwater well in Hawaii has nitrate levels of 8.7 milligrams a liter - the legal limit is 10 milligrams, and it is estimated that some parts of this aquifer are already over the limit. High levels of nitrates can be deadly, especially for infants.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
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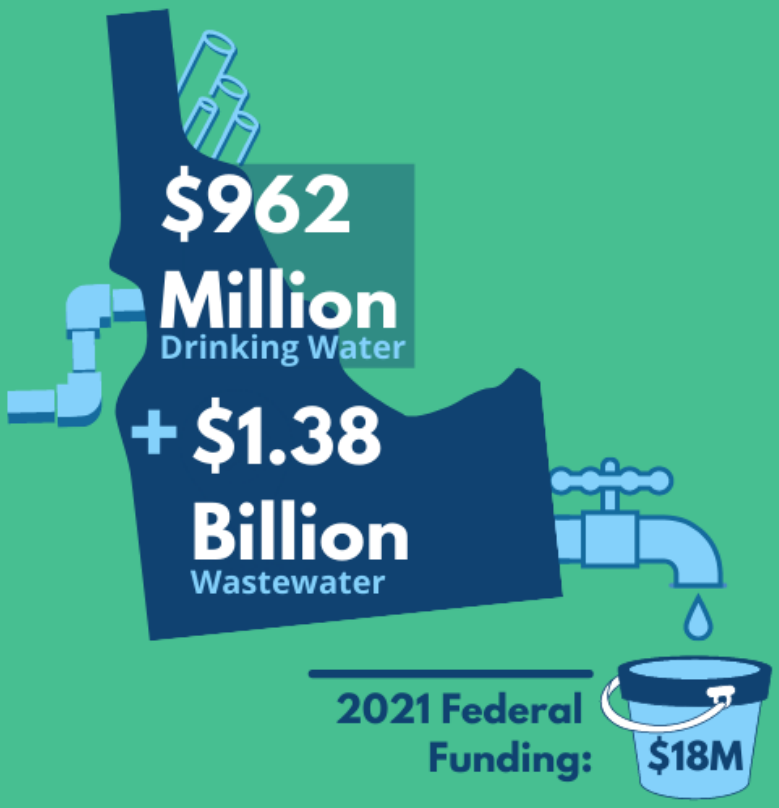
Idaho

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

Drought in Idaho is only getting worse as the climate continues to change. On June 27, 2021, all wells had to be shut off due to water shortage, causing the near loss of 23,000 acres of farmland. Idaho relies on agriculture for the success of its economy, so the lack of stormwater could have an increasingly severe effect on the physical and economic health of the state.

Room to Improve

$570 Million Sewer Bond

Instead of relying on federal funding or impact fees to cover the project, the City of Boise is asking residents to approve a $570 million sewer bond that would be repaid using years of increases to rates. If the residents of Boise approve, the bonds would help cover roughly $1 billion worth of improvements to the system to replace aging infrastructure. Essentially, this bond would cover projects that federal funding has not been able to cover for the City of Boise, like the 1940s era Lander Street Wastewater Treatment facility, build new plants to accommodate the growth in the region, meet new regulatory requirements, and water recycling.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Carmel, Margaret. "You Asked: Can the city use impact fees or federal grants instead of sewer bond?" Boise Dev. November 1, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Illinois

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$41,505,000**

Clean Water State Revolving Fund (2021): **$72,587,000**

A Note on Stormwater

Urban flooding has become an issue for Illinois. Most common in older sections of communities, urban flooding happens when stormwater infrastructure is not designed for present-day standards. From 2007 to 2014, $2.319 billion was documented in damages, of which $1.240 billion were private claims, representing sewer backup.

Room to Improve

Eroding Infrastructure in Small Community Leads to Humanitarian Crisis

A "humanitarian crisis" is happening in Centreville, Illinois. Community members in Centreville have suffered from extreme flooding and sewage problems for years, leading to health issues, costly damages to homes and eroded infrastructure. Centreville's community of about 5,000 residents is 95% black and one of the poorest in the nation.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. "Report for the Urban Flooding Awareness Act." Illinois Department of Natural Resources. The State of Illinois, June 2015.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Indiana

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$16,815,000**

Clean Water State Revolving Fund (2021): **$38,679,000**

A Note on Stormwater

On June 18, 2021, the city of Bloomington received more rain than the city receives on average for the month of June. The deluge of rain was paired with older infrastructure at Sixth and Indiana streets' stormwater entry point, thus causing closed traffic and forcing businesses to close.

Room to Improve

Septic Systems Fail to Provide Proper Sewage Treatment

Due to Indiana's outdated wastewater infrastructure, septic systems are wreaking havoc on the health of the environment and communities statewide. Many times, septic systems are the only open available for sewage disposal in rural communities, in fact, over 700 communities in Indiana are lacking proper sewage treatment. For example, 15% of the La Grange County drinking water wells are contaminated with dangerous amounts of nitrates from septic systems, and another county in Indiana has over 10,000 failed septic systems that are discharging to ditches and streams.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Turner, Brock. "Bloomington Mayor John Hamilton Has Not Requested 'Disaster' Declaration Following Flooding." Indiana Public Media. June 21, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
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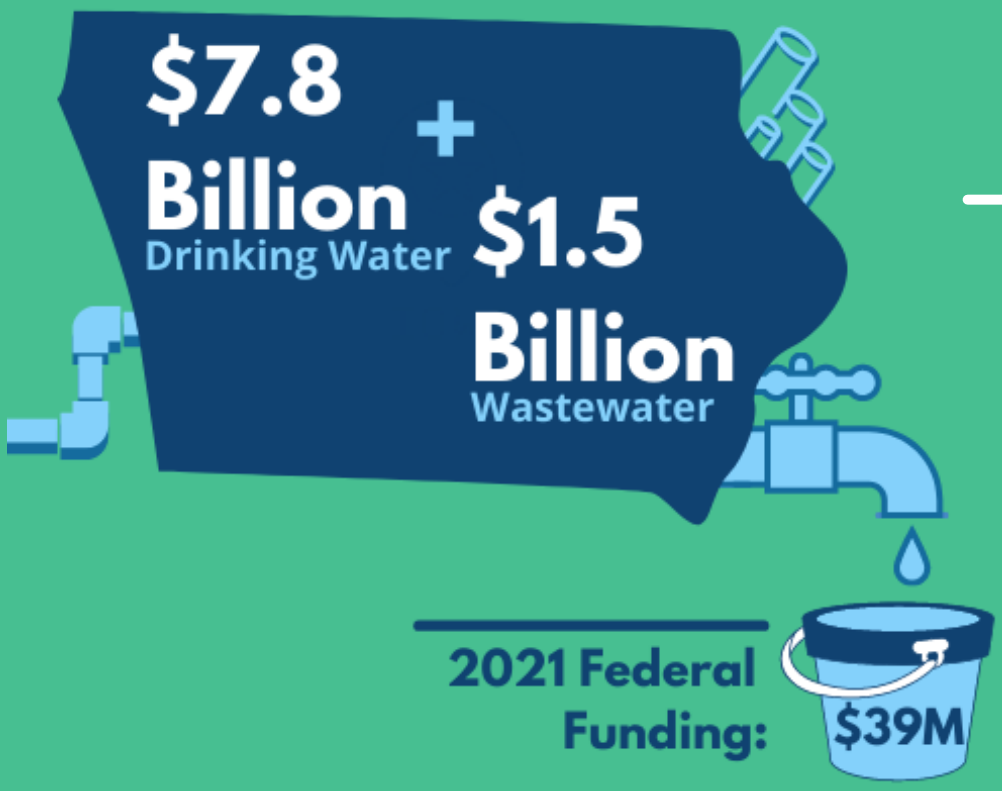
7. Grant, Bill. "Septic system crisis looms in Indiana." KPC News. November 25, 2012.

Iowa

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$17,427,000**

Clean Water State Revolving Fund (2021): **$21,722,000**

A Note on Stormwater

The Riverfront Crossings Master Plan is a successful example of prioritizing stormwater infrastructure. After the 2008 Iowa River floods, Iowa City worked with the EPA to protect against future flooding by creating a resilient riverfront community park, utilizing flood mitigation measures and stormwater best management practices.

Room to Improve

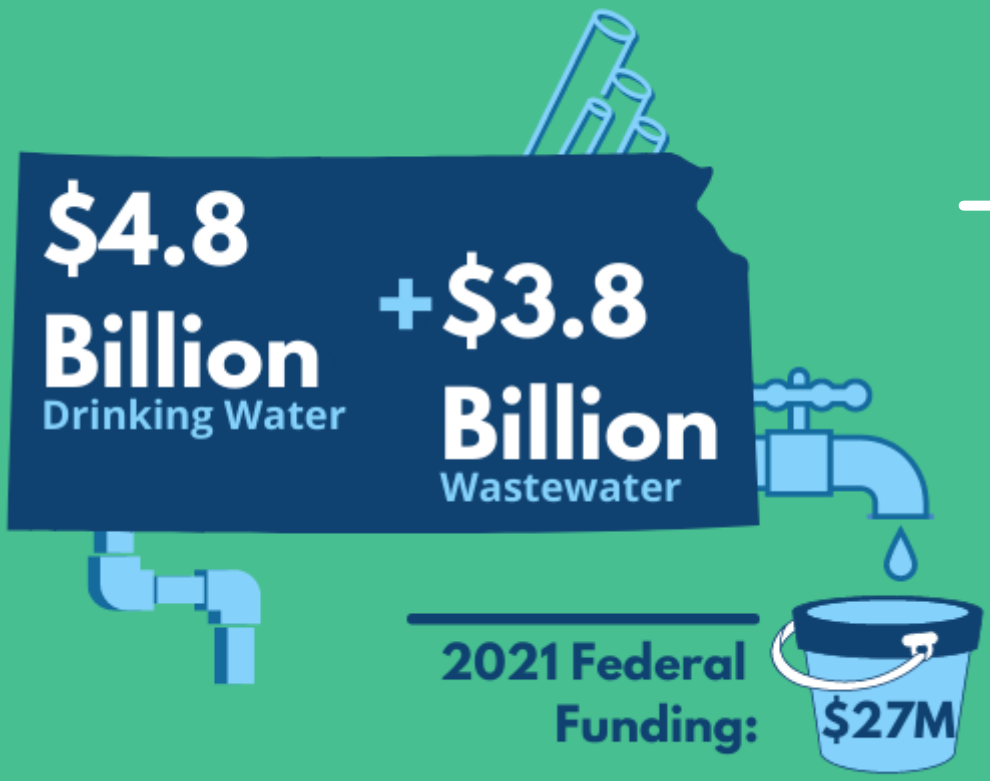
Des Moines Water Works Turns to Residents for Help

A 70-year-old water treatment plant is the only thing keeping Des Moines away from a daunting list of harmful nitrates that come from Iowa's rich farmland. Keeping the central region of 500,000 people safe is not an easy task for the Des Moines Water Works, but it often goes unnoticed or overlooked. With bursts in water mains happening hundreds of times every year, rivers becoming increasingly polluted, revenues down and maintenance costs up, residents don't know how Des Moines will pay for repairing or replacing the community's treatment plant.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Foley, Ryan J., "Drinking water systems imperiled by failing infrastructure." AP News. September 26, 2015.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. Lorenzen, Brett. "Iowa fails to fix water problems - for 80 years." Des Moines Register. June 3, 2016.

Kansas

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$12,763,000**

Clean Water State Revolving Fund (2021): **$14,487,000**

A Note on Stormwater

In the Environmental Protection Agency Clean Watersheds Needs Survey, last released in 2012, Kansas reported $547 million of necessary capital costs to prevent combined-sewer overflow events, where stormwater and untreated wastewater overflows, untreated, into nearby bodies of water.

Room to Improve

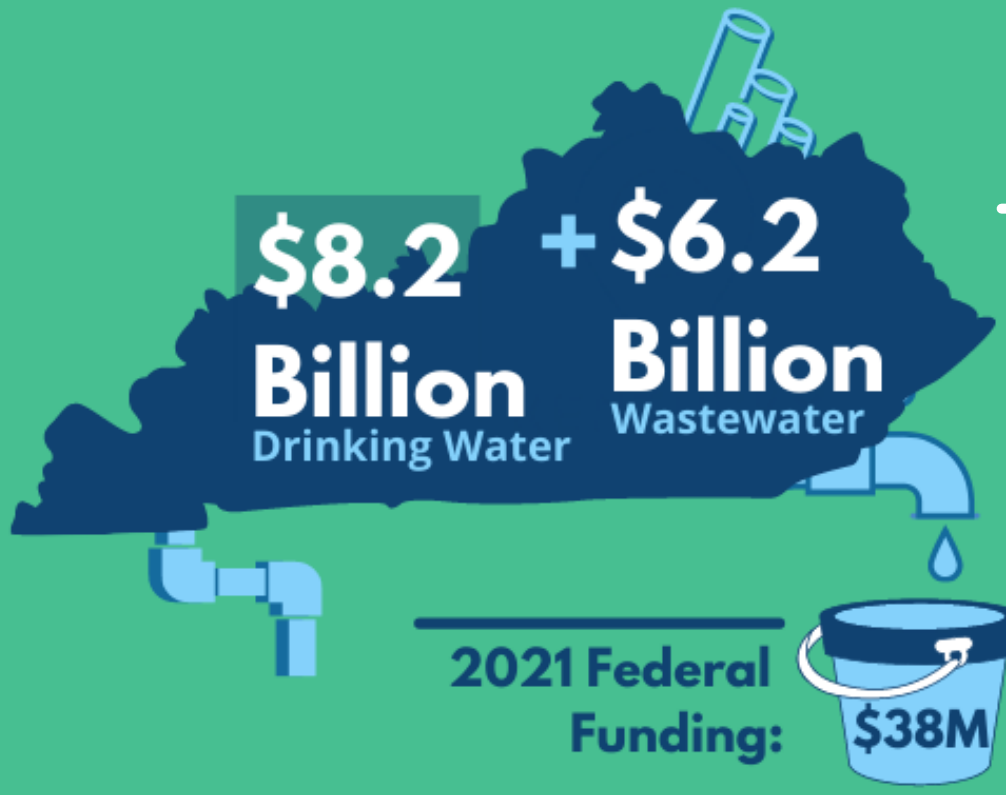
Smaller Communities Need Interconnective Solutions

Drinking water treatment utilities and facilities in Kansas are struggling to meet new water quality federal and state standards. Smaller communities are at the highest risk for noncompliance to federal guidelines because treatment costs can't be spread over multiple customers. Drinking water capacity is also becoming an increasingly alarming issue in Kansas as aquifer levels decrease. The 2018 ASCE Kansas Report Card suggests that regional solutions and interconnections between water supply systems will help ensure the longevity of Kansas water supply.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. "Report Card of Kansas' Infrastructure." American Society of Civil Engineers. 2018.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Kentucky

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$18,127,000**

Clean Water State Revolving Fund (2021): **$20,427,000**

A Note on Stormwater

On February 11, 2021, President Biden declared a major disaster in Kentucky and ordered federal assistance in areas affected by severe winter storms. Heavy rain, hail, sleet, freezing rain, ice and bitter arctic air caused massive power outages and water system failures. At the height of the storm, 154,000 Kentucky homes were left without power.

Room to Improve

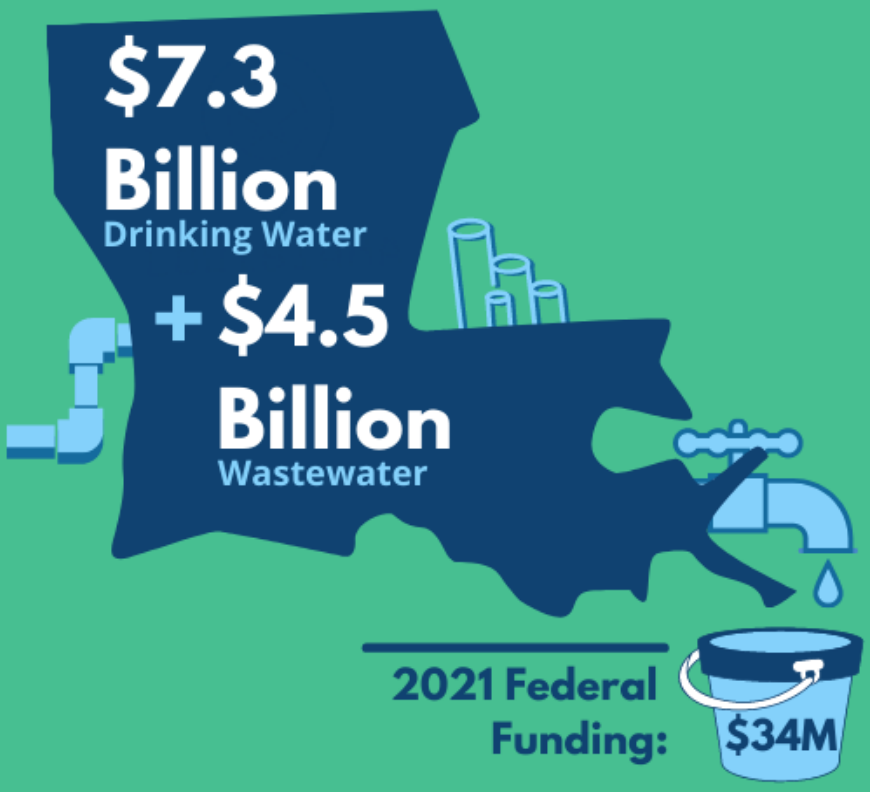
Straight Pipes Need To Go

Even after decades of Kentucky spending hundreds of millions of dollars to build contemporary treatment systems, straight pipes are still flushing raw human waste directly into waterways in economically disadvantaged regions of Kentucky. Straight pipes, along with malfunctioning treatment plants and failing septic systems, are fueling a sewage crisis in eastern Kentucky that is worse than the water contamination from coal mining. The solution to eliminating straight pipes is unclear, as county health departments are not actively searching for straight pipes because they are responsible for septic system permits and “don’t get paid to walk the creeks."

1. U.S. Environmental Protection Agency, Office of Water, “Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress,” 2015.
2. U.S. Environmental Protection Agency, “Clean Watersheds Needs Survey 2012, Report to Congress,” Table A-1. 2016.
3. Bureau of Transportation Statistics, “State Transportation by the Numbers.” Accessed February 28, 2021.
4. Latek, Tom. “Disaster declaration approved on federal level for Ky.” Kentucky Today. April 1, 2021.
5. “2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories.” EPA. Environmental Protection Agency, April 9, 2021.
6. “FINAL 2021 CWSRF Allotments.” EPA. Environmental Protection Agency, 2021.
7. Walton, Brett. “Straight Pipes Foul Kentucky’s Long Quest to Clean Its Soiled Waters.” Circle of Blue. February 28, 2018.

Louisiana

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$16,465,000**

Clean Water State Revolving Fund (2021): **$17,643,000**

A Note on Stormwater

The safety of Louisiana's residents, 19,000 square miles of land, and the state's economy, depend on the performance of levees. Local taxes and state appropriations are currently insufficient to pay for the operation, maintenance, repair, rehabilitation and replacement that goes into stormwater infrastructure.

Room to Improve

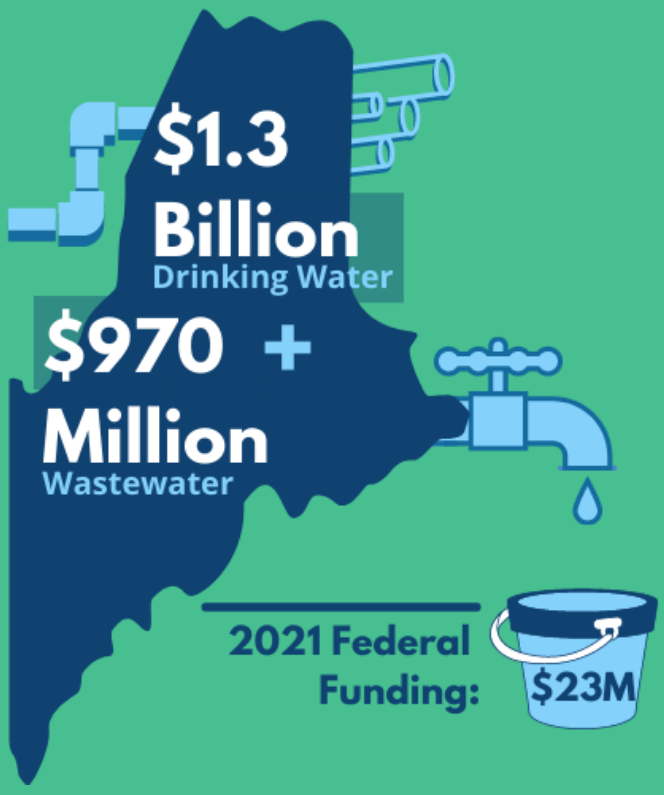
Falling Groundwater Levels Leave Residents Not Prioritized

Tallulah, a small city in northeastern Louisiana, is a prime example of the failing drinking water infrastructure in Louisiana. In the city, water outages, discolored water and backups that cause water to drain slowly have become a normal part of life. Tallulah is among the worst in Louisiana when it comes to frequent water disruptions, but these problems in drinking water infrastructure are not unique. Boil water notices - usually caused by a pipe break - range from 1,600 to 1,700 per year across the state of Louisiana. The longest boil water notice happened in Caldwell Parish and lasted over 9 months.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Sneath, Sara. "Louisiana boil water notices paint a picture of the state's failing drinking water infrastructure." Louisiana Illuminator. May 13, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Maine

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$12,424,000**

A Note on Stormwater

More significant than in any other U.S. region, extreme precipitation events increased by 70% in Maine within the past five decades. Funding is critical for proactive projects towards resilient stormwater infrastructure.

Room to Improve

Swimming with Sewage

When nearly 4 million gallons of wastewater discharged into Casco Bay, it got Maine's attention. Unfortunately, this event is not unfamiliar. Combined sewer overflows (CSOs) from old pipes dump more than 4 million gallons of partially treated wastewater (not disinfected with chlorine) into Maine's waterways after major rain storms. For example, In 2016, nearly 69 million gallons of stormwater mixed with raw sewage, debris and polluted runoff flowed into Back Cove, Portland Harbor and other local waterways following a 4-inch rainstorm.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Graham, Gillian. "Nearly 4 million gallons of wastewater discharged into Casco Bay." Press Herald. July 24, 2020.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
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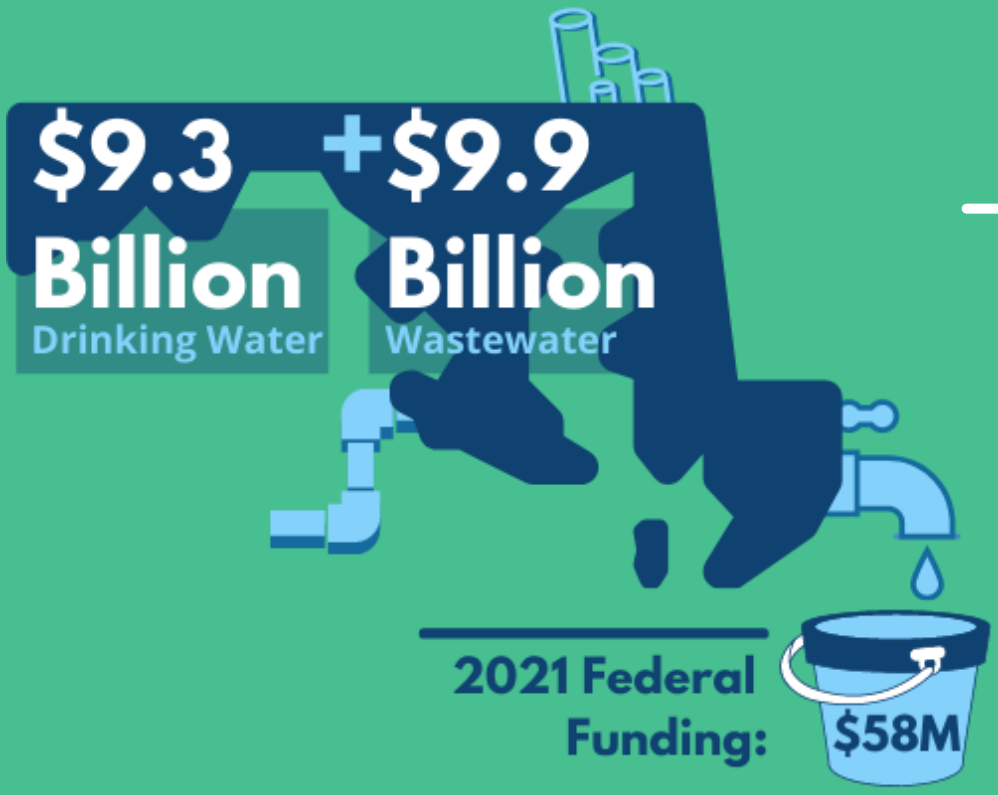
Maryland

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$20,152,000**

Clean Water State Revolving Fund (2021): **$38,817,000**

A Note on Stormwater

The Chesapeake Bay water quality has been steadily declining over the last few decades. In 2010, the state created new limits on the amount of pollutants that can enter the body of water, but statewide stormwater costs to comply with these regulations are projected to be more than $3 billion.

Room to Improve

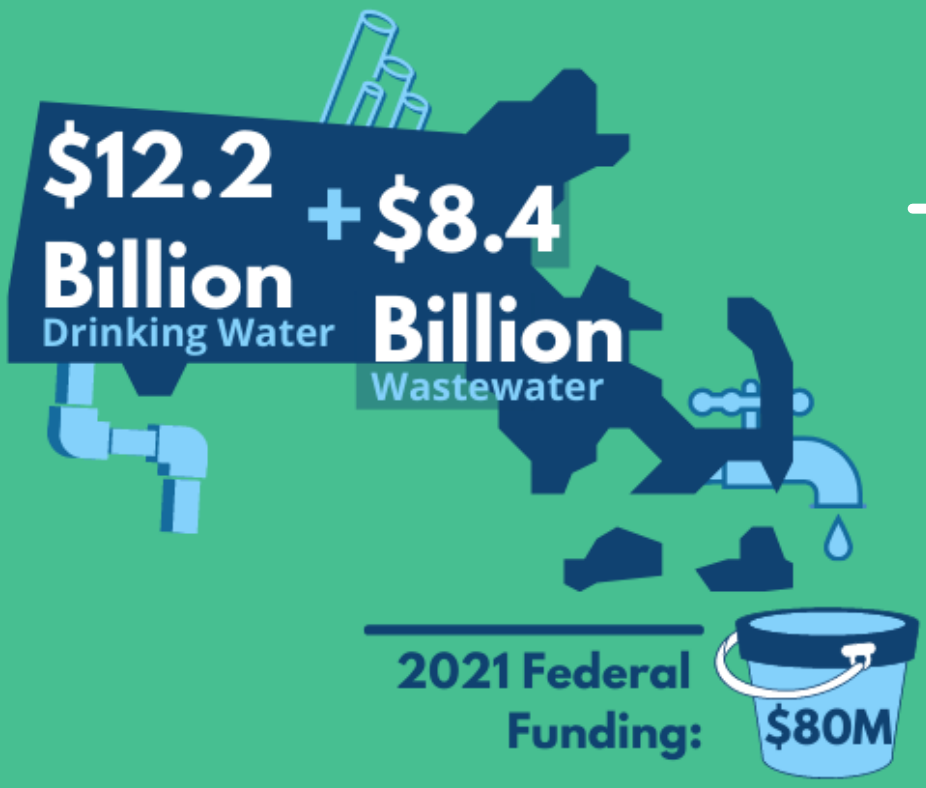
Baltimore in Need of Proactivity

Sewage overflows continue to pollute waterways and threaten human health in Baltimore. It has been 100 years since the city upgraded to a 'modern' sewage disposal system. Overflows commonly occur after a heavy rain, illegal connections mix sewage with stormwater, and even in dry weather, the system leeches sewage into storm drains. The health of Baltimore residents is an obvious concern, but the city is beginning to see concern on a financial level. The US District Court or the District of Maryland entered an amended Modified Consent Decree in 2017, but most of the funding provided through the first consent decree did not go towards proactive solutions to water infrastructure - it went towards identifying problems and engineering solutions.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. https://www.cbf.org/about-cbf/locations/maryland/issues/baltimore-city-sewage-overflow.html
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Massachusetts

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$25,526,000**

Clean Water State Revolving Fund (2021): **$54,491,000**

A Note on Stormwater

The EPA has identified land disturbance and polluted stormwater runoff as a major source of water pollution in 260 other Massachusetts communities, requiring each community to adopt a Stormwater Management Bylaw.

Room to Improve

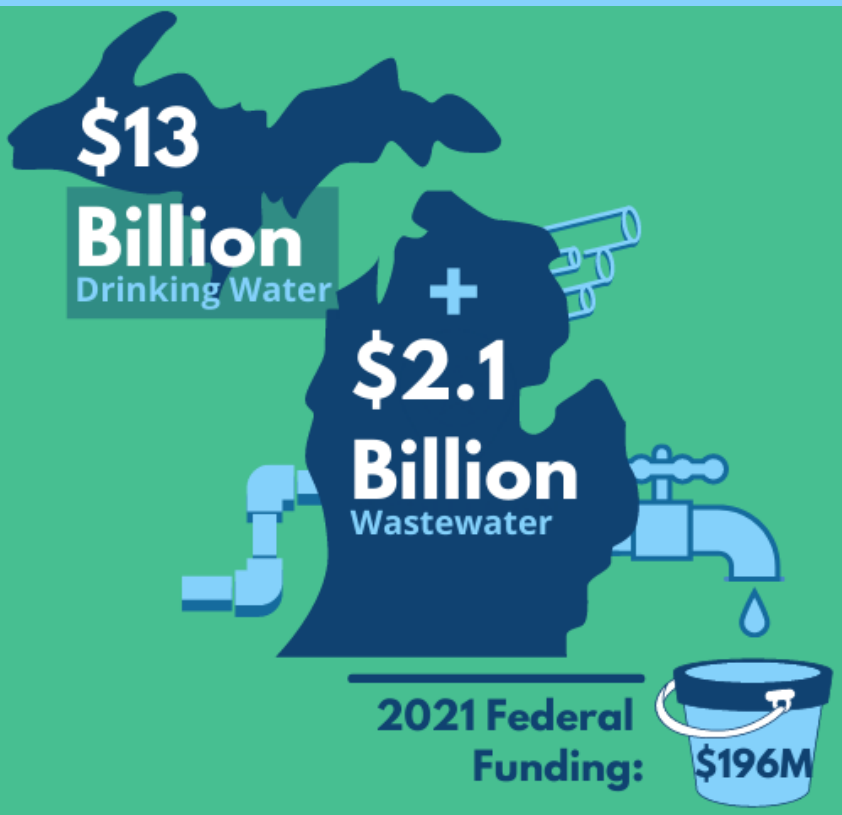
Combined Sewage Overflow Events Increase in Severity

On April 29, 2021, a wastewater treatment plant in Lowell discharged 84 million gallons of rainwater and wastewater into the Merrimack River during a heavy storm. Sewage-filled water rushed into the river for 12 hours - the typical timeframe is about two or three hours, at most. This instance was more than twice as bad as the combined sewage overflow from the Duck Island Clean Water Facility four years prior, where 32 million gallons of sewage water was dumped into the river.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Ottolini, Meghan. "Lowell wastewater treatment plant dumps 84 million gallons of untreated sewage water in Merrimack River during April storm." Boston Herald. June 4, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Stormwater, Hazard Mitigation and Climate Resiliency Efforts." The Town of Lincoln Massachusetts. 2019.

Michigan

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$27,004,000 + $100,000,000 (Flint Supplemental)**

Clean Water State Revolving Fund (2021): **$69,010,000**

A Note on Stormwater

June flooding in 2021 ravaged through Southeast Michigan. Sewers overflowed in Detroit, along with freeway pump stations and basements across the region. Michigan's leaders fear the state's stormwater infrastructure is not prepared to handle future threats.

Room to Improve

The Inevitability of the Flint Michigan Water Crisis

Many are familiar with the Flint Water Crisis that took place on April 25, 2014, when the city switched its water supply from Detroit's system, which ultimately caused lead poisoning, skin rashes, and carcinogens in Flint's water supply. Although the Flint Water Crisis shook the nation, lead pipes may have been the beginning of a much larger problem for Flint. The Flint River has been polluted and neglected for a century, and Flint has not had proper wastewater storage for decades. A water crisis was seemingly inevitable, for leading up to Flint's water crisis, heavy rains, snow melts and power outages regularly deposited raw sewage directly into the Flint River.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Carmody, Tim. "How the Flint River got so toxic." The Verge. February 26, 2016.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. Forrest, Julia. "As SE Michigan rebuilds after flooding, how can the state better prepare for future disasters?" Michigan Advance. July 14, 2021.

Minnesota

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$16,792,000**

Clean Water State Revolving Fund (2021): **$29,499,000**

A Note on Stormwater

The largest wastewater facility in Minnesota is able to handle additional flows. The Metropolitan Wastewater Treatment Plant, located on the Mississippi River in St. Paul, pursued a sewer separation program in the early 2000s that separated combined sewers into separate stormwater and sanitary sewer systems. With the proper funding, additional capacity can be achieved.

Room to Improve

Asset Management in Rural Communities

About 75% of Minnesota's drinking water is sourced from groundwater, and about 79% of Minnesota residents are served by community water systems. Far less is known about the conditions in rural Minnesota, where the remaining 21% of the population rely on private wells for drinking water. In the 2018 ASCE Infrastructure Report Card, it is encouraged to use asset management and development of asset management plans at a local level. Asset management will provide more valuable information on the needs of drinking water systems statewide by focusing resources as need towards improving operations, maintenance, and delay loss of condition within drinking water systems.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. "Report Card for Minnesota's Infrastructure." Minnesota Section of American Society of Civil Engineers. 2018.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Mississippi

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,842,000**

Clean Water State Revolving Fund (2021): **$14,460,000**

A Note on Stormwater

Researchers at the University of Mississippi have decided to take stormwater infrastructure improvements into their own hands. Ole Miss students are working to improve the state's resilience in the Mississippi Delta through the use of green infrastructure and urban flood control.

Room to Improve

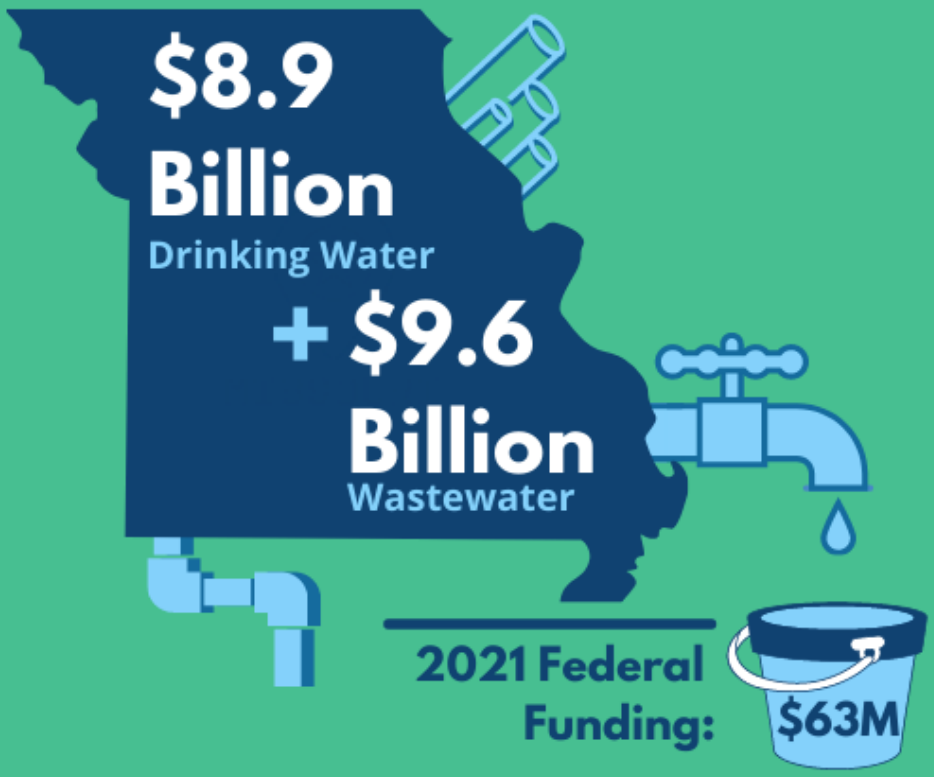
Jackson Faces Clean Water Issues during Covid-19 Pandemic

In February of 2021, a storm caused 80 water main breaks, leaving Mississippi's largest cities without safe drinking water. In Jackson, there was a statewide order to boil water before use and some residents didn't have running water at all. Having a major water infrastructure failure event during the Covid-19 pandemic raised concerns for residents, especially considering hygiene, cooking, cleaning and bathing. Businesses were also forced to close, which left the Mississippi economy stalled until clean water was restored.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. Yang, John; Courtney Norris; Lynsey Jeffery. "Water crisis in Jackson, Mississippi highlight 'dire state' of city's infrastructure." PBS NewsHour. PBS, March 9, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. Paton, Alex. "Ole Miss group looks to improve Mississippi's disaster resilience." Super Talk Mississippi Media. May 31, 2019.

Missouri

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$19,394,000**

Clean Water State Revolving Fund (2021): **$44,492,000**

A Note on Stormwater

One solution for reducing combined sewage overflows, suggested by the American Society of Civil Engineers in Missouri's 2018 Infrastructure Report Card, is to integrate green stormwater infrastructure into community-wide infrastructure planning and stormwater management.

Room to Improve

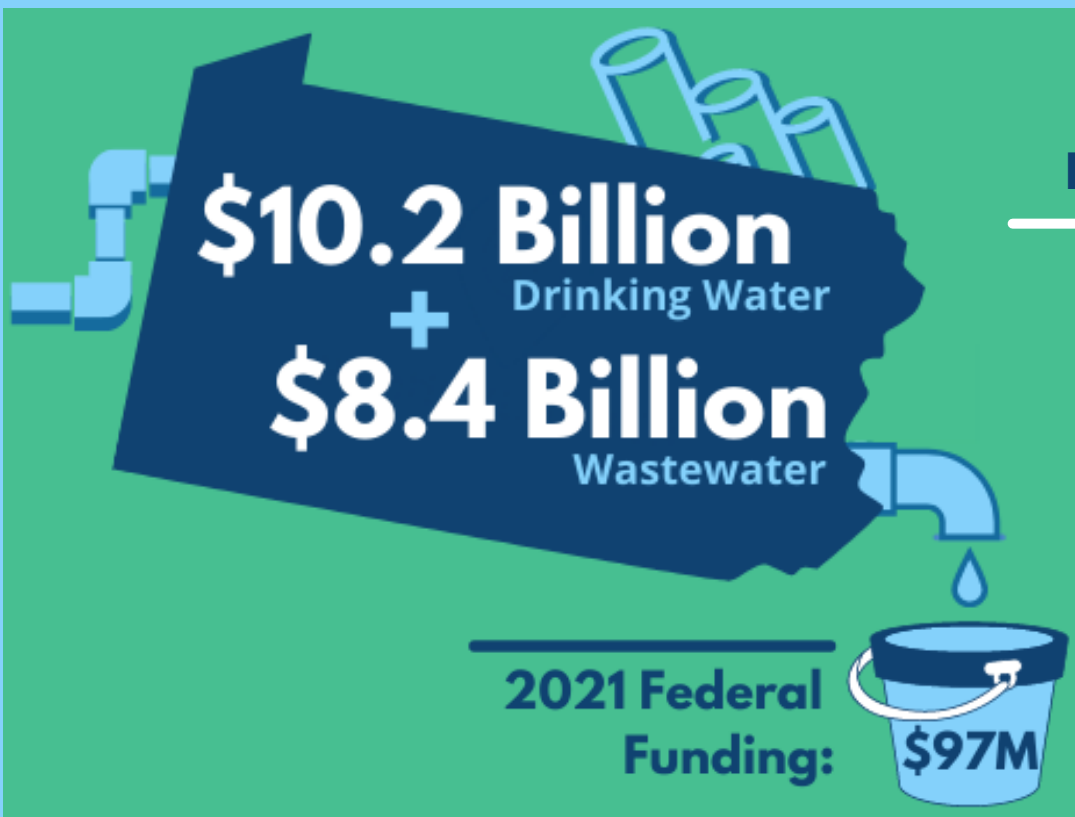
Obsolete Infrastructure

Wastewater infrastructure throughout large municipalities and small towns in Missouri is approaching the end of its expected life, resulting in leaks and failures within sewer systems. Combined sewer systems made out of brick that date back to the 1800s are still in operation in Missouri communities. Missouri's drinking water infrastructure is also reaching the end of its expected lifespan, causing systems to be plagued with service interruption from main breaks, microbial contamination and inadequate capacity.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. "Report Card for Missouri's Infrastructure." American Society of Civil Engineers. 2018.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Pennsylvania

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$33,873,000**

Clean Water State Revolving Fund (2021): **$63,575,000**

A Note on Stormwater

From 1996 to 2014, flash flooding in Pennsylvania caused an estimated $91.6 million loss per year. Luckily, the City of Lancaster's 25-year $140 million plan is expected to save the city $5 million annually and prevent over one billion gallons of combined sewer overflows from polluting the Conestoga River.

Room to Improve

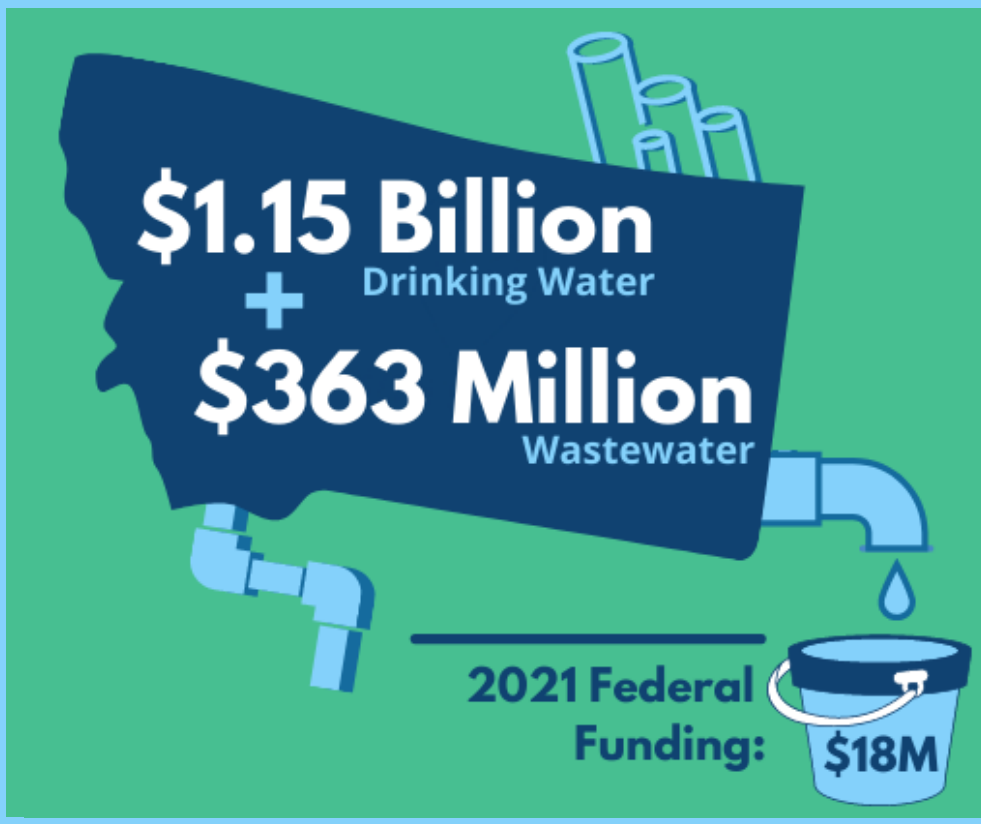
Weather Changes Challenge Aging Stormwater Infrastructure

Pennsylvania's infrastructure was designed for the precipitation events of decades ago. The state has seen a 10% increase in precipitation over the last 50 years and by 2050, precipitation will be 8% higher than it is now. Pennsylvania's stormwater management must be updated to divert rain from overflowing sewers, which can flood streets, lawns, and homes, and overwhelm soil infiltration and groundwater regeneration.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Bureau of Transportation Statistics, "State Transportation by the Numbers." Accessed February 28, 2021.
4. "The Economic Benefits of Green Infrastructure: A Case Study of Lancaster, PA." United States Environmental Protection Agency. September 15, 2018.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. "Restore Pennsylvania: Storm Preparedness and Disaster Recovery." Governor Tom Wolf's Office. An Official Pennsylvania Government Website, June, 2019.

Montana

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

The City of Bozeman has set a good example for the state of Montana, spending $5 million to replace nine miles of storm sewer system pipes in the past 10 years. Still, Montana needs an $18 million investment in all state stormwater infrastructure, more quality-based projects, and broader regulations.

Room to Improve

Quilt Shop Teaches MT a Lesson

Aging water infrastructure can be detrimental to American businesses and homes. Many times, water and wastewater infrastructure repairs are left to the last minute; solutions are reactive, rather than proactive, and leave residents with devastating outcomes. For example, when a fire suppression pipe burst underneath a woman's quilt shop in Great Falls, Montana, the business had a dramatic drop in sales, losing sewing machines, fabric, books and cabinets to water damage and being forced to relocate away from a prime location for tourism traffic. The pipes running beneath the town were built as far back as the 1920s, proving a broken pipe and subsequent repairs to be a regular cause of detrimental economic impacts on community members.

1. EPA Clean Water Needs Survey, 2012. January 2016.
2. Ragar, Shaylee. "Legislature OKs Infrastructure Bonding for First Time in Nearly a Decade." Great Falls Tribune. Great Falls Tribune, April 21, 2019.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
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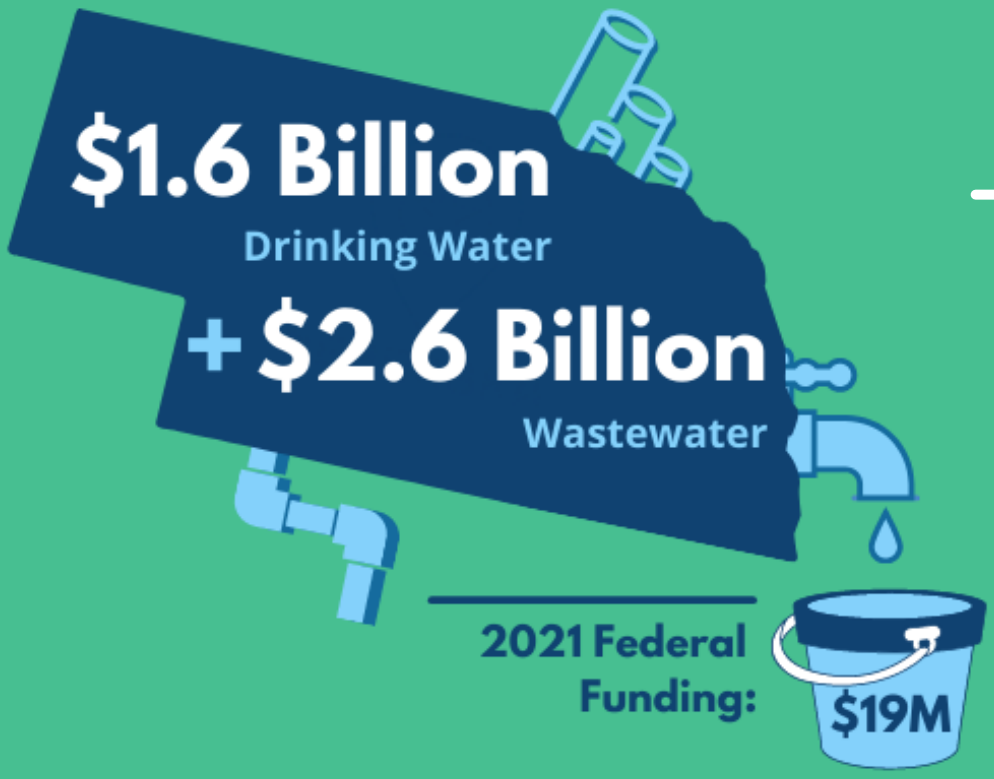
Nebraska

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$8,209,000**

A Note on Stormwater

The Nebraska Water Funding Task Force is currently recommending $50 million in annual funding to supply the $900 million total needed for the state's proposed water sustainability projects, including flood control and aquifer recharge.

Room to Improve

Flooding is a Public Health Issue

Flooding not only destroys roads, bridges, homes and water infrastructure, but it's a public health issue. 95% of Nebraska's population is affected by flooding, causing total economic losses to approach $1 billion, with $400 million lost to agriculture and more than $400 million lost to public infrastructure. Six of Nebraska's public drinking water systems have gone offline, and dozens of wastewater treatment facilities have failed. Raw sewage is being discharged into streams and rivers, creating a dangerous situation for rural residents who get their water from private wells. Visits to the emergency room for gastrointestinal issues increase after heavy rainstorms, which have increased by 29% over the past 60 years across the Great Plains.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
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4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. "Climate Change Is Overwhelming Our Crappy Water Infrastructure." Grist. Grist.org, March 21, 2019.

Nevada

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$12,752,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

Nevada needs a $400 million investment over the next 10 years for flood mitigation projects.

Room to Improve

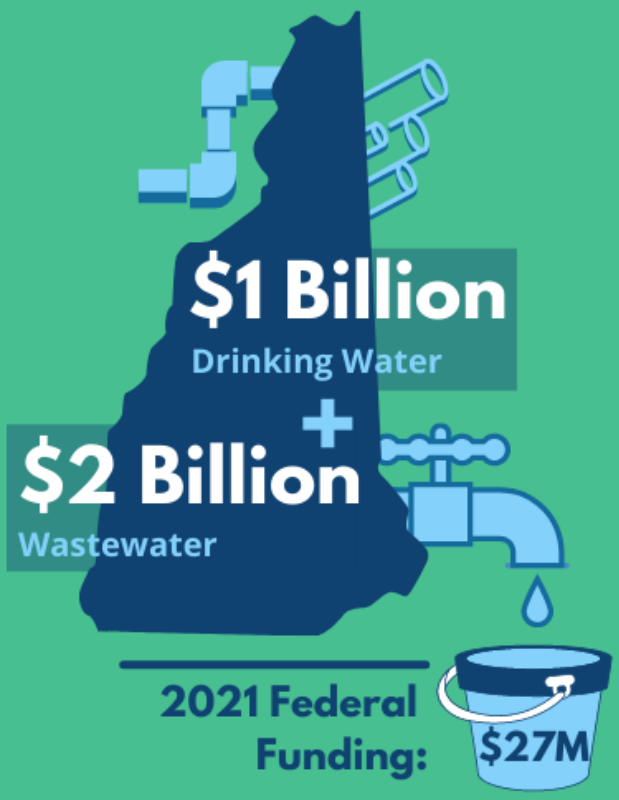
Contamination Above Health and Legal Limits Found in Las Vegas Water Supply

Although Las Vegas tap water looks clean and healthy, an independent nonprofit organization, called Environmental Working Group, found 23 contaminants across the state's water supply, nine of which being above either health or legal limits. The drinking water infrastructure in Las Vegas needs to be replaced or repaired in order to keep residents safe from harmful contaminants, developmental issues in children, problems in pregnancy and other serious health conditions.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Western Kentucky University, "Western Kentucky University Stormwater Utility Survey 2020," Table A-1. 2020.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. Semler, Jen. "Nasty Pollutants in Las Vegas Drinking Water Put Your Health at Risk." Patch. July 26, 2017.

New Hampshire

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$16,039,000**

A Note on Stormwater

New Hampshire needs a $272 million investment over the next 10 years for stormwater infrastructure projects.

Room to Improve

Lead Pipes in Concord

Concord, New Hampshire removed an 18-inch long lead pipe from a household in 2016. The lead pipe was connected to a copper line within the home and the water line running down the street. The City of Concord claims that this was the last lead pipe left in the city, but there is still a possibility that others are hiding between house and street lines, especially in older homes or buildings. Lead pipes are not something to be taken lightly, as they can lead to dangerous health and cognitive problems and can be especially damaging to children.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Western Kentucky University, "Western Kentucky University Stormwater Utility Survey 2020," Table A-1. 2020.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. Brooks, David. "Concord Has Removed the Last Lead Pipe in Its Water System." Concord Monitor. Concord Monitor, April 18, 2016.

Summer 2021

New Jersey

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$18,775,000**

Clean Water State Revolving Fund (2021): **$131,170,000**

A Note on Stormwater

90% of New Jersey's rivers, streams, and lakes are polluted by stormwater runoff, flooding contaminants into waterways.

Room to Improve

NJ Residents Face Lead Contamination in Drinking Water During Covid-19 Pandemic

Aging tap water pipes led to possible lead contamination in New Jersey's drinking water. The water became such a risk that students in Camden, New Jersey got used to relying on water bottles, which is not an uncommon outcome. Cities like Paterson and Glassboro also have to deal with lead contamination risks, and pipe breaks in Hoboken, Jersey and across the state left households without clean drinking water during the Covid-19 pandemic.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Longo, Mark. "Op-Ed: Fixing Our Aging Water Systems Can Jump-Start Our Economy." NJ Spotlight News, August 4, 2020.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
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New Mexico

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

In the New Mexico regional water plans from 2018 through 2020, about $360,459 was allocated towards 50 stormwater infrastructure projects.

Room to Improve

Well Falls $30,000 Short Causing a "Train Wreck"

Over the last decade, New Mexico made more grant and loan funding available for water projects than any other state in the US, but one-third of the state-funded local water projects did not meet their intended purpose. For example, $1 million was spent to drill and equip a new drinking water well in Maxwell. Maxwell's new well could have been used in times of drought, but due to a $30,000 shortfall, the well wasn't hooked up to electricity. The project was left unfinished and unable to yield any public benefits. Representative Larry Scott of Hobbs described this disappointing situation in Maxwell as a "train wreck." Adequate funding - and federal oversight - are necessary to ensure desirable outcomes.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Abbey, David. "Program Evaluation: State-Funded Water Projects (Report #21-02)." New Mexico Legislative Finance Committee, July 23, 2021.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
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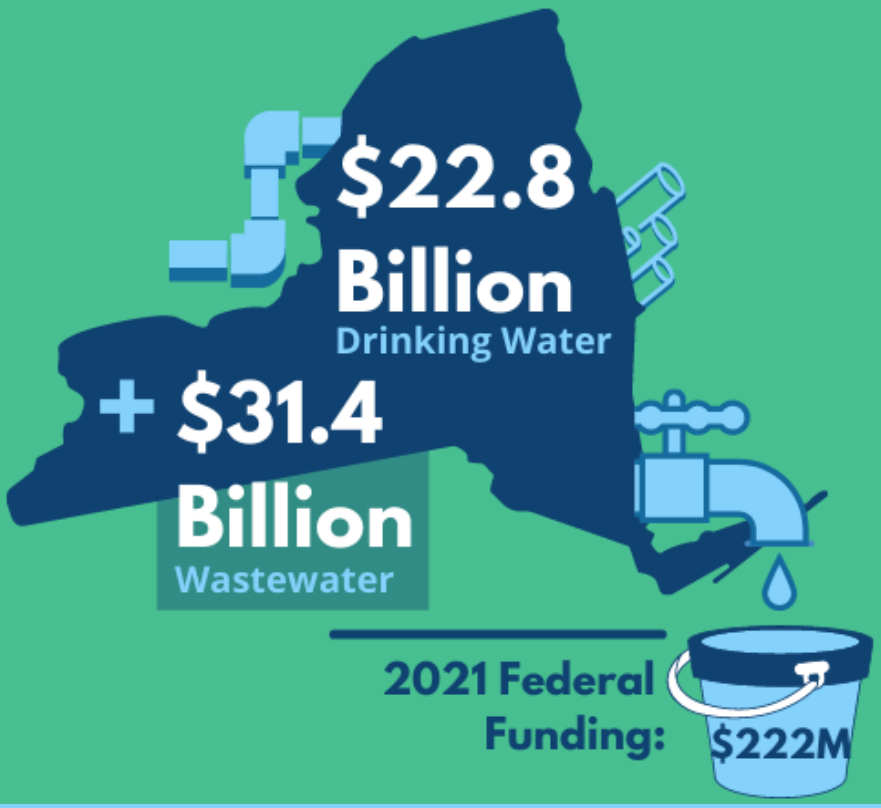
6. Bryan, Susan Montoya, and Associated Press. "New Mexico Struggles with Funding Drinking Water Projects." KRQE NEWS 13, June 23, 2021.

New York

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$44,926,000**

Clean Water State Revolving Fund (2021): **$177,146,000**

A Note on Stormwater

Twenty seven billion gallons of raw sewage and polluted stormwater discharge into the New York Harbor each year. The state of New York has about 10% of the nation's combined sewage overflows (CSOs) with about sixty municipalities recorded containing CSOs.

Room to Improve

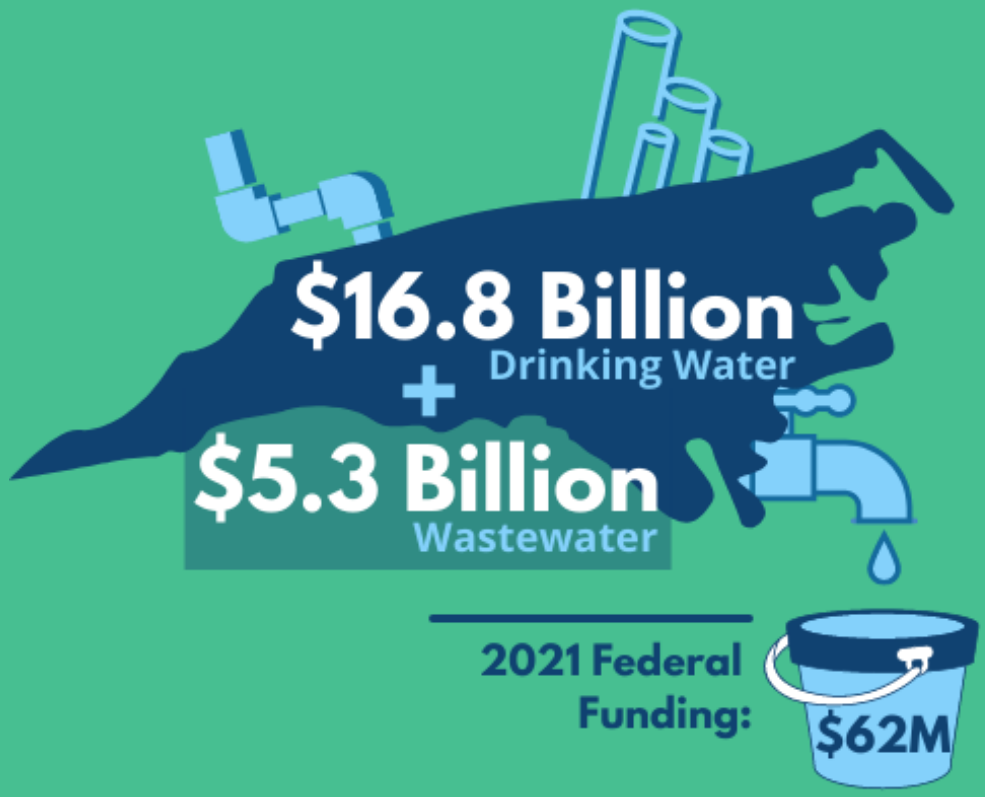
New York City's Vulnerable Underground Labyrinth

New York City's underground infrastructure consists of nearly 7,000 miles of water mains, 97,607 miles of underground electric lines, 4,416 miles of gas mains, 104 miles of steam pipes, thousands of miles of telephone and cable-television lines and a huge, intertwined system of train tunnels. The close proximity of the NYC underground labyrinth was underscored when within the same month, two water mains on the Upper West Side broke, paralyzing multiple subway lines for hours, and another water main on the Lower East Side broke, closing streets and gushing water for hours. New York City recorded 459 water main breaks in 2020, which is about 1.2 per day.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Spitzer, Eliot & Grannis, Pete. "Wastewater Infrastructure Needs of New York State." New York State Department of Environmental Conservation, March, 2008.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. Barron, James. "Water Mains Are Bursting All Over New York. Can They Be Fixed?" The New York Times. The New York Times, February 12, 2020.

North Carolina

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$33,782,000**

Clean Water State Revolving Fund (2021): **$28,966,000**

A Note on Stormwater

The University of North Carolina makes a compelling case for working with and accounting for green infrastructure (GI) to help solve the combined sewer overflow (CSO) issue. By causing stormwater to slow down, infiltrate the soil, and not enter the sewage system, GI serves to reduce CSOs and spares municipalities the water quality problems and fines.

Room to Improve

NC's Water and Sewer Systems Are "Old and Deteriorating"

NC Health News says it's no secret that many of the municipal water and sewer systems in North Carolina are old and deteriorating. The Johnston County town of Benson began replacing its sewer lines along Main Street two years ago. The county discovered 71 year old pipes; some were made out of clay, and some weren't even hooked up. Municipalities in North Carolina are required to report sewer overflows whenever 1,000 gallons or more of untreated wastewater escapes from their sewer treatment plants, clogged or broken sewer pipes, etc. In 2020 alone, more than 74 million gallons of raw sewage was deposited into North Carolina's surface waters.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. "Crosswalking between Gray and Green Infrastructure for Budget Officers." UNC Environmental Finance Center. October, 2014.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. Barnes, Greg. "N.C. communities set to get relief from water and sewer woes, but is the money being appropriated fairly?" North Carolina Health News. September 23, 2021.

North Dakota

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

North Dakota's House Bill 1066 allocates up to $115,000,000 to cities in non oil-producing counties for "essential infrastructure projects" based on population and taxable property value. Two examples of qualifying capital construction projects under stormwater infrastructure are curb and gutter construction.

Room to Improve

Age-Old Water Supply Project Struggles to be Fulfilled

With North Dakota in the midst of drought, North Dakota officials are promoting a decades-long idea of piping Missouri River water across the state to central and eastern North Dakota. The state has struggled to fund the project because flood control projects within North Dakota have taken priority over drought mitigation projects, and there is an ongoing fight over management of the Missouri River. Backers of the water supply pipeline from the Missouri River have set a goal to complete the project by the end of 2021.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. "Municipal Infrastructure Fund." North Dakota Office of State Treasurer. 2019.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. MacPherson, James. "Project promoted to pipe river water across North Dakota." AP News. August 2, 2021.

Ohio

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$27,666,000**

Clean Water State Revolving Fund (2021): **$90,352,000**

A Note on Stormwater

Although Ohio currently spends around $500 million every year on stormwater infrastructure, at least $600 million of federal funding is still needed to keep pace with the estimated $1.2 billion required to manage existing stormwater infrastructure and future projects.

Room to Improve

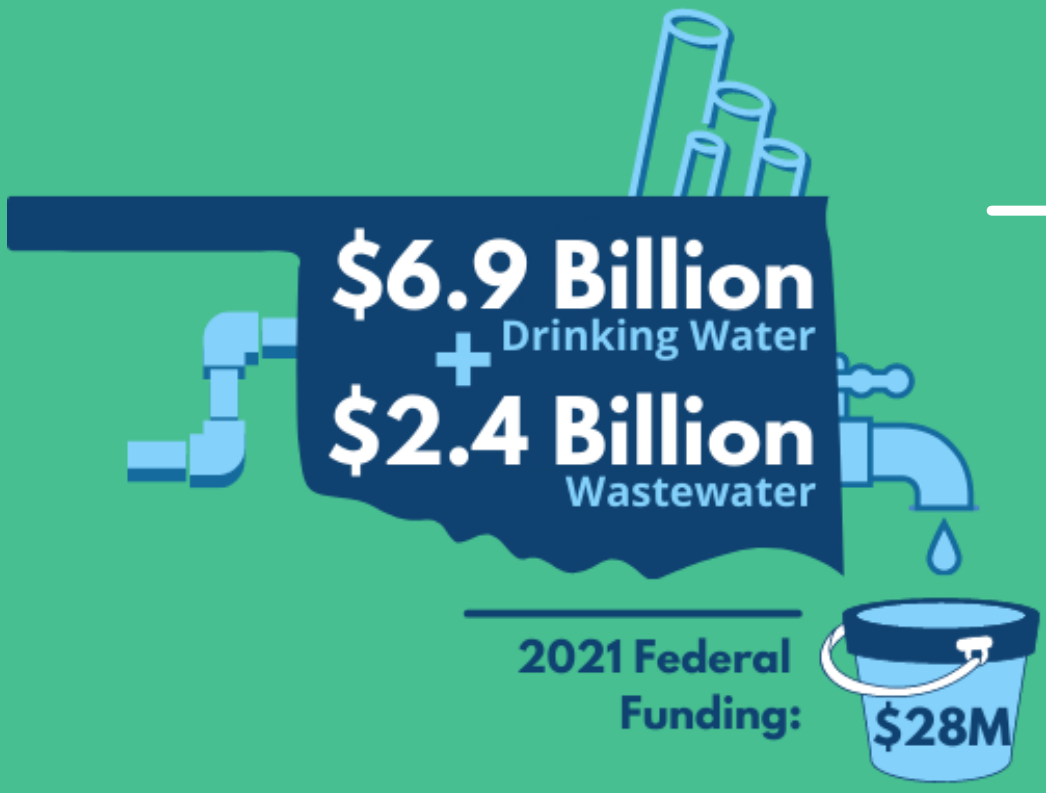
The City of Cincinnati's Crumbling Water Pipes

On top of the $40 million spent annually to replace about 1% of the system's worst pipes, Cincinnati had 18,000 water main breaks from 2005 to 2015, costing the Greater Cincinnati Water Works more than $75 million. To make matters worse, around 40% of Cincinnati's water pipes are over 105 years old.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. "2018 Sewer and Water Rate Survey." Ohio EPA Office of Fiscal Administration, Economic Analysis Unit. December, 2019.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
6. Jerome, Sara. "Cincinnati On Brink Of Infrastructure Disaster." Water Online. July 15, 2015.

Oklahoma

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$15,596,000**

Clean Water State Revolving Fund (2021): **$12,967,000**

A Note on Stormwater

In 2016, Oklahoma City was chosen as one of six communities to receive assistance from 'Greening America's Communities,' an EPA program designed to help cities and towns develop an implementable vision of environmentally friendly neighborhoods that incorporate innovative green infrastructure to address stormwater runoff, flooding and connectivity issues.

Room to Improve

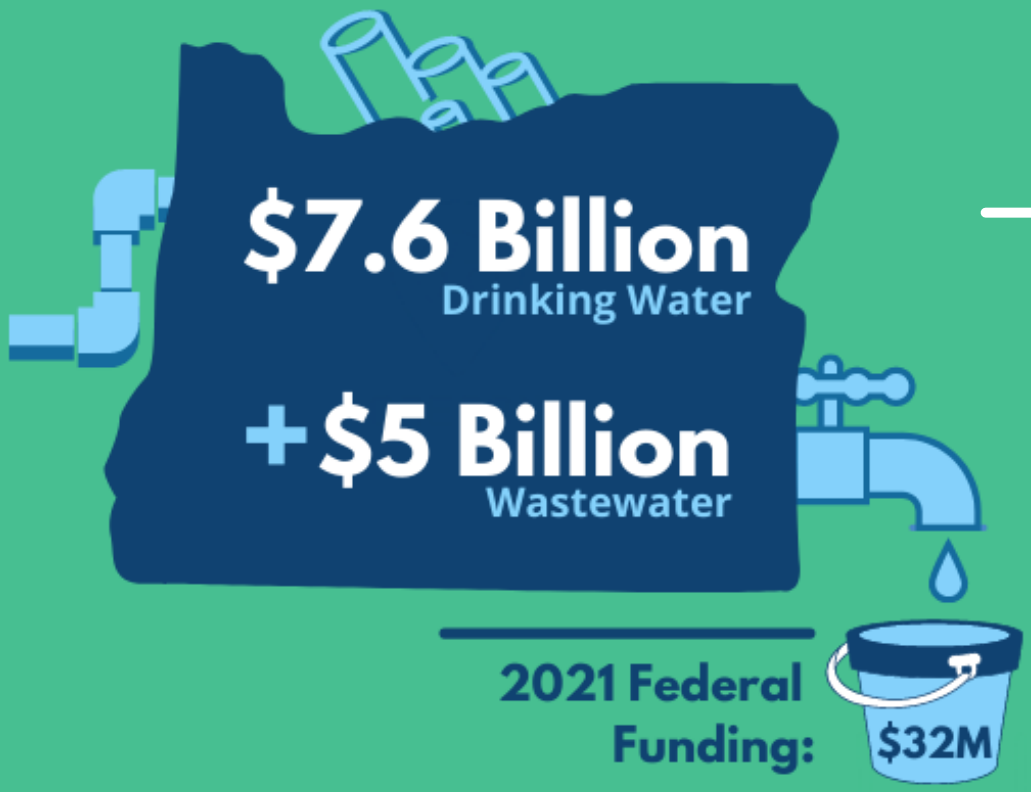
Public Water and Wastewater Systems Impacted by Severe Winter Storms

Seventy seven counties in Oklahoma were covered in the 2021 federal major disaster declaration. Cities, counties, utilities and tribal governments across Oklahoma were being asked to assess and report damages from the February winter storms in order to trigger federal financial aid. On February 23, 2021, FEMA reported 227 public water systems and 29 wastewater systems had been impacted by severe winter storms and extreme cold.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. 2U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. "Greening America's Communities: Oklahoma City." US EPA Smart Growth.
4. "Winter Storms and Extreme Cold Impacting Critical Infrastructure, including Water and Power Services - Updated March 2, 2021." WaterISAC. March 02, 2021.
5. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
6. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
7. Wasinger, Jennifer. "Public Entities in Oklahoma Urged to Report Storm Damage to Help Access Recovery Funding." Freese and Nichols. March 08, 2021.

Oregon

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$14,474,000**

Clean Water State Revolving Fund (2021): **$18,130,000**

A Note on Stormwater

Oregon needs an estimated $4.4 billion investment in repair, replacement, and capacity expansions for stormwater facilities, water reuse, etc. in the next 20 years.

Room to Improve

The Tribes of Warm Springs

The Confederated Tribes of Warm Springs simultaneously had a water shortage and a dramatic spike in Covid-19 cases in July of 2020. For over a month, the tribes managed one of the highest Covid-19 infection rates in the state while thousands of people did not have tap water and couldn't flush their toilets. Boil-water notices occur regularly to the tribes, in fact, during the summer of 2019, the water line broke in the same area and caused water shortages for months. The Covid-19 pandemic heightened the severity of the water shortage in 2020: leaving the tribe's health clinic, senior housing, business and thousands of people without safe water to drink or use to wash their hands.

1. "League of Oregon Cities' 2016 Infrastructure Survey (Water) Report." League of Oregon Cities. 2016.
2. "Water, Wastewater and Stormwater Rate Survey." League of Oregon Cities. March 2015.
3. Brauns, Laurel. "Broken Pipes, Broken Promises." Source Weekly. Bend Source, July 29, 2020.
4. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Rhode Island

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$10,777,000**

A Note on Stormwater

The Rhode Island Infrastructure Bank provides upfront capital for green stormwater infrastructure projects through a program called the Stormwater Project Accelerator (SPA). These projects will eventually be funded through state and local reimbursement grants.

Room to Improve

Shrinking Shoreline

Rhode Island's shoreline is shrinking, putting vital infrastructure at risk and drowning essential ecosystems. The encroaching sea is putting natural systems, people, property and vital infrastructure, like drinking water suppliers and utilities, at risk. Cities in Rhode Island are making efforts to update antiquated stormwater infrastructure that is designed to handle rainfall of the 1950s - efforts that will require additional federal funding in order to be successful.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. Clean Watersheds Needs Survey 2012, US Environmental Protection Agency, January 2016
3. Detz, Jo. "Mother Nature, Humans Do Battle Along R.I.'s Battered Coast." Shifting Sands. May 10, 2021.
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5. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
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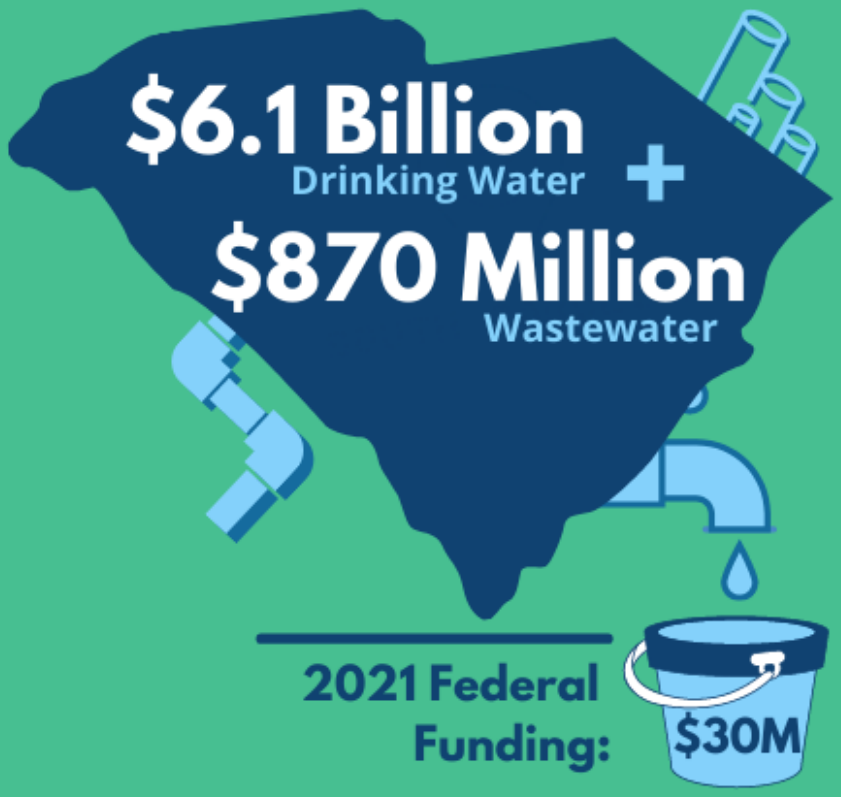
Summer 2021

South Carolina

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$14,247,000**

Clean Water State Revolving Fund (2021): **$16,442,000**

A Note on Stormwater

In 2021, the South Carolina Disaster Recovery Steering Committee awarded $4.05 million to Florence and $2.85 million to Lake City to combat flooding, $9.96 million to Charleston, $4.98 million to Manning, $4.85 million to Sumter, $2.48 million to Horry County and $939,529 to Georgetown County to improve stormwater infrastructure.

Room to Improve

Unprepared for Intense Rainfall

When South Carolina receives above average rainfall, the state's stormwater infrastructure remains unprepared and unable to handle the increasing frequency and intensity. For example, the Midlands area of South Carolina received 17 to 24 inches of rain in less than a 24-hour period in 2015, and other regions around the state received 6 to 15 inches within the same period. This intense precipitation was followed by several weeks of above average rainfall that landed on already saturated soils and riverine systems that were near capacity. Due to unprepared and aging stormwater infrastructure, the deluge resulted in historic flooding, damaging critical infrastructure in South Carolina, inundating 160,000 homes, and leading to the loss of 19 lives.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. On June 6, 2019, the President signed P.L. 116-20, the "Additional Supplemental Appropriations for Disaster Relief Act, 2019: (ASADRA). The Act provided funding for resiliency-focused projects at drinking water facilities and wastewater treatment works impacted by Hurricanes Florence and Michael. NC Session Law 2019-250 appropriated the necessary State Match.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. Schaumburg, Jason. "Drinking Water, Wastewater Projects Awarded Nearly $300M in North Carolina Funding." The Center Square. February 23, 2021.
6. Flynn, Stephen E. "The South Carolina Deluge: Lessons from a Watershed Disaster." Digital Repository Service. October 5, 2015.
7. Christian, Matthew. "Florence receives $4 million storm water infrastructure improvement grant." SC NOW. March 9, 2021.

South Dakota

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

In 2018, The Sisseton Wahpeton Oyate Tribe in South Dakota received a $116,000 loan from the US Department of Agriculture (USDA) to help finance stormwater infrastructure improvements for a new housing development for the tribal members.

Room to Improve

Winter Storms Cause Frozen Pipes

Communities in South Dakota live with the dangers of winter storms. A major winter storm can be deadly for water and wastewater infrastructure. Living in South Dakota means having the utmost awareness and preparedness before, during and after a storm. To keep pipes from freezing, the City of Sioux Falls suggests that South Dakota residents wrap their pipes with insulation or layers of old newspapers covered with plastic to keep out moisture, let faucets drip a little to avoid freezing, and, at times, shut off water valves all together.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Schone, Tammi. "USDA Invests $3.9 Million in Water Infrastructure in Rural South Dakota Communities." USDA. July 16, 2018.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. "Winter Preparedness Tips." City of Sioux Falls South Dakota. September 24, 2019.

Tennessee

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$19,108,000**

Clean Water State Revolving Fund (2021): **$23,315,000**

A Note on Stormwater

For a couple of years, the Tennessee Stormwater Association (TNSA) offered a grant program to help local governments fund stormwater management projects. In 2014, the state association was able to allocate $103,080 in grant funds.

Room to Improve

Freezing Temperatures Impact the Memphis Light Gas & Water System

When water pipes burst due to freezing temperatures, large quantities of water can flood into households causing property damage that is costly to repair. In March of 2021, freezing temperatures strained Memphis Light Gas & Water system, and pipes began to freeze, leading to multiple broken water mains, decreased pressure across the system, and overall reduced reservoir levels. Repairing and replacing broken water infrastructure is a constant and crucial necessity in communities that experience extremely cold temperatures.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. "Tennessee Announces Green Infrastructure Grants." WEF Stormwater Report. September 2, 2014.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
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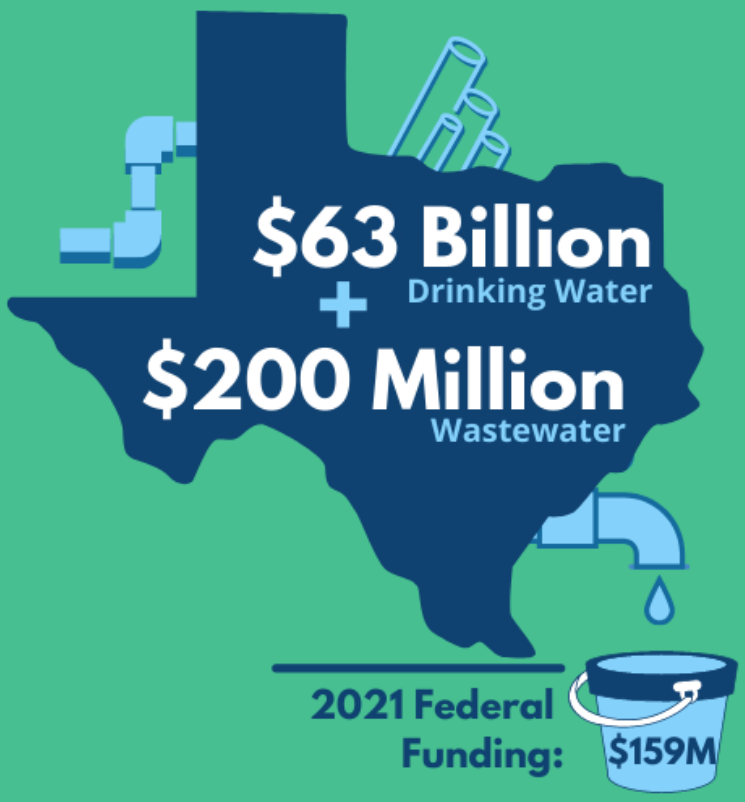
5. "Winter Storms and Extreme Cold Impacting Critical Infrastructure, including Water and Power Services - Updated March 2, 2021." Emergency Response & Recovery. March 02, 2021.
6. "Frozen Pipes Negative Effect - Potential Damage & How to Prevent it." All City Plumbing. November 28, 2014.

Texas

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$86,202,000**

Clean Water State Revolving Fund (2021): **$73,356,000**

A Note on Stormwater

Texas needs an estimated $31.5 billion investment in flood risk mitigation projects over the next 10 years.

Room to Improve

Boil Water Notices

On February 25, 2021, over 1.4 million people in Texas were reported as experiencing 'water disruptions' due to extreme cold weather. More than 20,000 people were completely without running water because of water main breaks, mechanical failures, and frozen or broken water lines. About 600 communities with populations less than 500 people were under boil water notices, and about 360 more with populations under 3,300 people were also telling residents to boil water before consumption.

1. "2017 State Water Plan." Texas Water Development Board. February 25, 2021.
2. "Infrastructure Texas Report Card 2021," ASCE Texas Section, Wastewater. 2021.
3. "2019 Texas State Flood Assessment Report to the 86th Texas Legislature." TWDB. 2019.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. "Winter Storms and Extreme Cold Impacting Critical Infrastructure, including Water and Power Services - Updated March 2, 2021." Emergency Response & Recovery. March 02, 2021.

Utah

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$8,457,000**

A Note on Stormwater

Depending on stormwater utility fees and limited state-level funding, general upkeep and compliance with stormwater standards is becoming more challenging. Funding the increasingly stringent standards is likely going to fall on stormwater system owners due to lack of state funding. For example, in 2020, Utah only had $1 million to contribute to innovative stormwater projects

Room to Improve

Out of Sight, Out of Mind

Local utilities in Utah are looking for ways to save the millions of gallons of water lost from their own systems. Stephanie Duer, water conservation manager at the Salt Lake City Department of Public Utilities recognizes that "just as we ask customers to save water, we have to do the same." Leaks and breaks in drinking water infrastructure waste Utah's precious water supply without a single Utahn being able to see it. For example, about 10% of the Granger-Hunter Improvement District's water goes unaccounted for. Despite the growing need to address drinking water infrastructure improvements, digging up the land around pipes in order to detect and repair leaks is too costly for most utilities.

1. U.S. Environmental Protection Agency, "6th Drinking Water Infrastructure Needs Survey." US EPA. 2018.
2. CWNS. "2012 Documented Needs by State," 2012.
3. Utah Section of the American Society of Civil Engineers. "2020 Report Card for Utah's Infrastructure," 2020.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. Mesch, Shelley. "With an eye toward conservation and cost-reduction, Utah's water utilities look underground." The Salt Lake Tribune. Sept. 27, 2021.

Vermont

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

Vermont needs an estimated $2.3 billion investment in stormwater infrastructure projects over the next 20 years.

Room to Improve

Tropical Storm Irene

Over the course of two days in 2013, Tropical Storm Irene brought 40 mile per hour winds and over seven inches of rain to parts of Vermont. As a result, 963 pipe culverts were damaged, destroyed, or blown out. Hundreds of pipe culverts were blown out because of the sheer force of the water and debris carried by the flooding. This disaster caused Vermont to rethink their water infrastructure, replacing washed out pipe culverts with larger, more advanced open bottom structures which would be able to withstand the next huge storm.

1. American Society of Civil Engineers Vermont Section. "2019 Report Card For Vermont's Infrastructure," 2019.
2. "Vermont Culvert Rebuilding after Tropical Storm Irene." Adaptation Clearinghouse. December 2013.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Summer 2021

Virginia

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$17,949,000**

Clean Water State Revolving Fund (2021): **$32,846,000**

2021 Federal Funding:

A Note on Stormwater

Virginia's Stormwater Local Assistance Fund provides grants for updating stormwater infrastructure, financing projects that alleviate flooding and keep polluted runoff out of the Chesapeake Bay. An additional $80 million investment in the program would help localities accelerate these stormwater infrastructure projects.

Room to Improve

Climate Change Impacts Drinking and Wastewater Infrastructure

The impact of climate change on water and wastewater infrastructure is clear in Virginia. Climate change is causing rising sea levels, increasing the frequency, severity, and duration of extreme temperature and precipitation, degrading water quality by decreasing stream flows leading to higher treatment costs, and creating the need for capital improvements to treat wastewater before discharging it from wastewater treatment facilities to meet regulatory requirements in Virginia. Increased federal funding will be necessary for Virginia to meet resiliency requirements.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. Sanner, Peggy. "Infrastructure investments can help the environment, improve health and create jobs." Virginia Mercury. July 30, 2021.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. United States Government Accountability Office, "Water Infrastructure: Technical Assistance and Climate Resilience Planning Could Help Utilities Prepare for Potential Climate Change Impacts," January 2020.

Washington

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$24,576,000**

Clean Water State Revolving Fund (2021): **$27,910,000**

A Note on Stormwater

Without taking into consideration the cost of maintenance, Olympia alone spends about $6.6 million per year just to manage and carry stormwater runoff through 160 miles of underground pipe, 7,400 catch basins, 1,400 manholes, 167 flow control structures, and 129 stormwater treatment facilities.

Room to Improve

West Point Wastewater Treatment Plant

On February 9th, 2017, employees fled as fifteen million gallons of untreated wastewater (including raw sewage) swamped the West Point Treatment Plant, pouring down stairs, smashing doors, flooding tunnels and hallways, and drowning millions of dollars of equipment. Upon further investigation, The Seattle Times found that this disastrous flood at West Point was led by errors in judgement, poor communication, a lack of training, equipment failures and faulty maintenance. The flood at West Point was one of the biggest wastewater infrastructure failures in regional history.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2004, Report to Congress," 2004.
3. "Clean Water Act Amendment May Enhance Local Governments' Ability to Meet Unfunded Water Quality Mandates." Jordan Ramis PC. March 14, 2019.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. Willmsen, Christine, and Lynda V. Mapes. "A Disaster Years in the Making." The Seattle Times. April 28, 2017.

Summer 2021

West Virginia

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$25,019,000**

A Note on Stormwater

West Virginia needs an estimated $1.6 billion investment in combined sewer overflow control projects.

Room to Improve

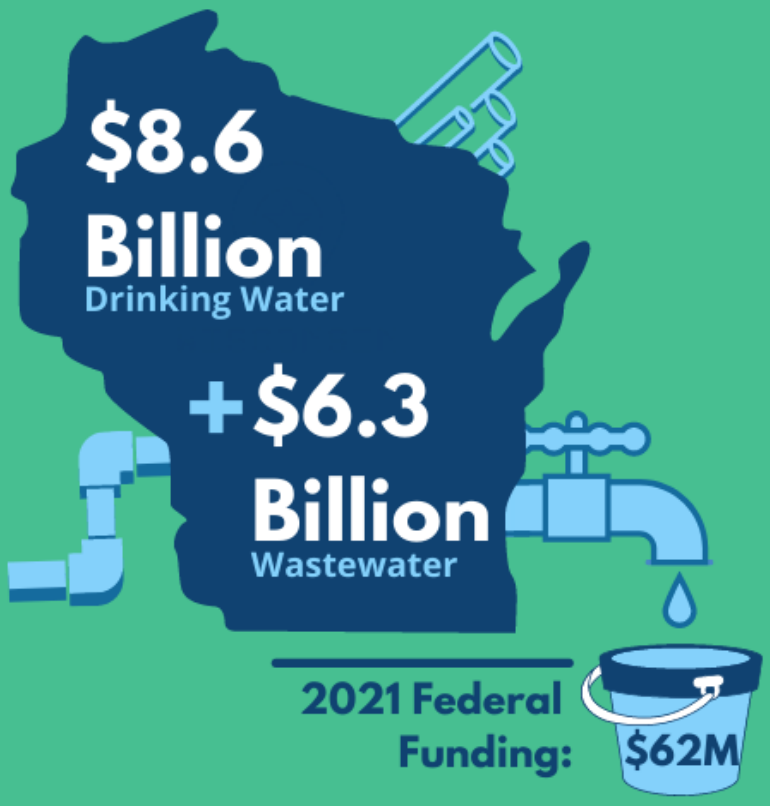
Blood Lead Levels Found in Kids

In lieu of recent lead levels found in drinking water infrastructure throughout Clarksburg, West Virginia, the senior strategic director for health at the Natural Resources Defense Council (NRDC), Erik Olson, asked, "how many more communities must face a lead contamination crisis and poison their children before we get every lead pipe out of the ground across the nation?" Elevated blood lead levels found in the bloodstreams of children residing in Clarksburg triggered the state to collect drinking water samples. Lead levels in Clarksburg drinking water are tens or hundreds times higher than the federal standard. Despite the Water Board serving Clarksburg reporting no lead pipes in March of 2019, the NRDC reported that West Virginia still had 20,000 lead pipes throughout the state.

1. WV ASCE. "2020 Report Card for West Virginia's Infrastructure." 2020.
2. West Virginia Infrastructure and Jobs Development Council. "2017 Needs Assessment." 2017.
3. Kelly, Margie. "Lead Found at Exceedingly High Levels in West Virginia Drinking Water." NRDC. July 15, 2021.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Wisconsin

State Water & Wastewater Infrastructure Needs:



Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$18,749,000**

Clean Water State Revolving Fund (2021): **$43,389,000**

A Note on Stormwater

Wisconsin needs an estimated $560 million investment in stormwater infrastructure projects.

Room to Improve

Pipe Break Causes Sinkhole

A broken water pipe caused a sinkhole in Madison, Wisconsin. About 300 residents had to be evacuated from the River's Edge Apartments as three vehicles were swallowed into a water-filled sinkhole. The broken pipe also left two buildings without electricity or running water. Aging water infrastructure often goes unnoticed because it is 'out of sight, out of mind,' but seeing three cars submerged in a sinkhole outside of an apartment complex was unfortunately what grabbed resident's attention to the lack of federal funding for replacement or repair of old drinking water and wastewater infrastructure.

1. USEPA. "Drinking Water Infrastructure Needs Survey and Assessment." 2015.
2. USEPA. "Clean Watersheds Needs Survey." 2012.
3. "Water pipe break creates Madison sinkhole that swallows cars (UPDATE)." The Daily Reporter. August 14, 2015.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.

Wyoming

State Water & Wastewater Infrastructure Needs:

Federal Funding Breakdown

Drinking Water State Revolving Fund (2021): **$11,001,000**

Clean Water State Revolving Fund (2021): **$7,879,000**

A Note on Stormwater

All construction sites in Wyoming that are disturbing one or more acres of land require stormwater permit coverage.

Room to Improve

Gas Development Falls in Line with Water Degradation

In a study that was done by the Wyoming Oil and Gas Commission on gas wells, it was discovered that 52% of the 169 wells in the Pavilion area had incomplete casings. Any of these wells could be leaking methane into groundwater aquifers. More funding is needed for environmental clean-up to ensure that both water supplies and gas fields are kept safe.

1. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Infrastructure Needs Survey and Assessment: Sixth Report to Congress," 2015.
2. U.S. Environmental Protection Agency, "Clean Watersheds Needs Survey 2012, Report to Congress," Table A-1. 2016.
3. "Stormwater Pollution Prevention Plan." Wyoming Department of Environmental Quality.
3. "2017 - 2021 Allotment of Federal Funds for States, Tribes, and Territories." EPA. Environmental Protection Agency, April 9, 2021.
4. "FINAL 2021 CWSRF Allotments." EPA. Environmental Protection Agency, 2021.
5. "Fracking Cover Up Continues Groundwater Contamination Disaster in Pavillion, Wyoming." Western Organization of Resource Councils. February 21, 2019.

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