



# Ensuring Environmental Sustainability: A Spotlight Report

*Academy Staff 2021*

*Working Paper:*

**Create Modern Water Systems**

**Steward Natural Resources and Address Climate Change**



## Spotlight Report on Ensuring Environmental Sustainability:

### Introduction

In November 2019, the National Academy of Public Administration (the Academy) announced 12 Grand Challenges in Public Administration after a year of intense research under the guidance of a Steering Committee from across the field.

**Table 1. Grand Challenges in Public Administration**

Focus Area	Grand Challenge
<i>Managing Technological Changes</i>	<ul style="list-style-type: none"> <li>• Ensure Data Security and Privacy Rights of Individuals</li> <li>• Make Government AI Ready</li> </ul>
<i>Protecting &amp; Advancing Democracy</i>	<ul style="list-style-type: none"> <li>• Protect Electoral Integrity and Enhance Voter Participation</li> <li>• Modernize and Reinvigorate the Public Service</li> <li>• Develop New Approaches to Public Governance and Engagement</li> <li>• Advance National Interests in a Changing Global Context</li> </ul>
<i>Strengthening Social &amp; Economic Development</i>	<ul style="list-style-type: none"> <li>• Foster Social Equity</li> <li>• Connect Individuals to Meaningful Work</li> <li>• Build Resilient Communities</li> <li>• Advance the Nation’s Long-Term Fiscal Health</li> </ul>
<i>Ensuring Environmental Sustainability</i>	<ul style="list-style-type: none"> <li>• Steward Natural Resources and Address Climate Change</li> <li>• Create Modern Water Systems for Safe and Sustainable Use</li> </ul>

This spotlight report focuses on the two Environmental Sustainability Grand Challenges: (1) Steward Natural Resources and Address Climate Change; and (2) Create Modern Water Systems for Safe and Sustainable Use. This working paper is a follow-up to the Election 2020 reports produced by Academy Fellows and documents some illustrative actions underway at the state, local, and Tribal levels. This paper is a work-in-progress that will be expanded upon in 2022, especially through a greater focus on non-federal actions.

## The Current State

Ensuring environmental sustainability continues to be a significant challenge to communities around the globe. In 2021 alone, the U.S. has seen several natural disasters generated or amplified by drained natural resources and accelerated climate change including:

- Droughts and heat waves in the American West;
- Severe winter storms across the Midwest and Northeast;
- Severe floods across multiple states affecting both rural and metropolitan areas including those in Tennessee, Louisiana, and New York;
- Wildfires in the Pacific Northwest, Arizona, and California; and
- A violent hurricane season.

Because these trends will most likely continue into the foreseeable future, the U.S. must engage in mitigation and adaptation actions, secure and properly use its natural resources, and modernize its water systems to deliver clean water to all communities and to drain stormwater.

### **STEWARD NATURAL RESOURCES AND ADDRESS CLIMATE CHANGE**

The United States is blessed with incredible natural resources, including public lands, that have made enormous contributions to our economy, health, environment, and society. Since the 1970s, when Congress passed numerous landmark environmental laws, the nation has made significant progress in reducing air and water pollution, managing waste materials, and preserving threatened species and habitats.

And yet, the nation continues to grapple with how to sustainably steward its forests, lakes, rivers, wildlands, mineral deposits, and fossil fuels. As the nation's industry and population grow, the public, nonprofit, and private sectors must collaborate effectively to steward natural resources and protect the environment for current and future generations. Communities throughout the United States must reconcile strongly held, but sharply differing, views regarding jobs, habitat protection, private property rights, open space, recreation, and cultural values. While domestic greenhouse gas emissions have generally decreased, this decline is insufficient to avoid significant future adverse effects on public health, ecosystems, and infrastructure due to climate change. Another emerging issue is the rising levels of microplastics and pharmaceuticals in our food and drinking water.

Climate change has become a significant threat to our planet and our way of life and a major multiplier of existing social and economic systems of stress. In the national security arena, for example, climate change not only destabilizes sensitive and vulnerable regions of the world, but also threatens Defense missions, operational plans, and installations. Additionally, through deforestation and other forms of habitat destruction, climate change has inevitably increased the

frequency of close interspecies contact involving humans, leading to a society far more susceptible to zoonotic viruses such as SARS-COV-2. Climate change presents an existential threat to humanity itself, and therefore mitigation, if not resolution, becomes an intrinsic responsibility of governments at all levels.

Public agencies and administrators have a critical role to play in addressing these issues.

- Nearly 15,100 public agencies and nongovernmental organizations manage over three billion public land and marine acres found in 200,000 separate parks and protected areas.<sup>1</sup> The federal government itself owns and manages about 650 million acres (30 percent of the nation's landmass), mostly in the Western part of the country.<sup>2</sup> These lands can help combat climate change by absorbing millions of tons of carbon—but they also contain valuable minerals, energy resources, and other industrial opportunities that can offer economic benefit.
- Federal, state, and local environmental organizations develop and enforce regulations for water; chemicals and toxins; land, waste, and cleanup; health; and lead, mold, and radon. They are responsible for shaping, executing, and enforcing myriad federal, state, and local laws that govern everything from how we generate electricity to what chemicals we put on our crops.
- Public agencies at all levels of government have a role in funding clean energy R&D and spinning new technologies off to the private sector.<sup>3</sup> These technologies can help reduce carbon dioxide emissions and mitigate climate change risks.

## **CREATE MODERN WATER SYSTEMS FOR SAFE AND SUSTAINABLE USE**

Across the nation, America needs collaboration from all levels of government to address the pressing environmental issues endangering safe drinking water, effective stormwater drainage, and efficient distribution to industry, agriculture, and the public. Recent droughts in the American West have exacerbated water challenges that also include overwhelmed stormwater drainage systems and even emerging threats from cyberwarfare on communities' water supplies:

- The Pacific Northwest is currently experiencing droughts that are forecast to continue through 2021. The droughts this year have been near record-breaking. Nearly 77 percent of Oregon's population is living in extreme drought, while Washington has had its 4<sup>th</sup> driest August in 120 years.<sup>4</sup>
- Colorado's reservoirs throughout the state are nearing their lowest levels. Water accessibility for consumption and sanitation continues to be an issue for underserved communities.<sup>5</sup> Droughts have drastically limited water supplies for Navajo Nation states, the majority of whom rely on the Colorado River basins. The limited supply of water most affects citizens in lower socioeconomic classes as they cannot afford the rise in prices of this life-sustaining resource. This decrease in supply has coincided with an increase in demand for water during the COVID-19 pandemic as sanitation solutions require more water than usual.<sup>6</sup>

Severe storms and hurricanes have continually stressed stormwater drainage systems across the country. Flooding from Hurricane Ida in Louisiana caused significant property damage but also left many without access to clean drinking water for several days. Hurricane Ida also caused flooding in New Jersey, Pennsylvania, Connecticut, and in New York, where it damaged infrastructure and left over 800 people stranded on highways and in trains. Aside from hurricanes and major storms, states across the country are dealing with severe flash floods similar to those in Middle Tennessee when its drainage systems were overwhelmed by rain in August and in areas surrounding Flagstaff, Arizona where floods caused at least \$5 million in damage to public infrastructure.

Cybersecurity emerged as a relatively new challenge for water systems in 2021. In February, cyber criminals infiltrated a Florida water treatment plant and attempted to increase the regular dosage of chemicals in the drinking water to toxic levels.<sup>7</sup> Although the attack failed, it showed that water systems—like other critical U.S. infrastructure—is vulnerable. Protecting treatment plants from such attacks is a difficult task given the decentralized national water network where many small municipalities and jurisdictions do not have dedicated water security teams or sufficient IT staff.<sup>8</sup>

The COVID-19 pandemic also spotlighted water inequity across the nation’s communities. Communities with more expensive water services or limited access to water had more difficulty creating safe and sanitary environments than those with direct access and more affordability.<sup>9</sup>

All of these problems have further emphasized and complicated the need for modern water systems.

## Actions Underway

All levels of government—and their private and nonprofit sector partners—are undertaking actions intended to address this Grand Challenge. This section highlights a few illustrative actions, but it is in no way an exhaustive list. It is intended to show some of the types of actions being undertaken.

### **FEDERAL**

#### **E.O 14008: Tackling the Climate Crisis at Home and Abroad<sup>10</sup>**

- Establishes climate considerations as an essential element of U.S. foreign policy and national security
- All agencies are directed to develop strategies for integrating climate considerations into their international work.
- Directs the USDA to work with farmers and other stakeholders to develop guidelines for more sustainable farming practices, as well as to develop a plan to better supply the emerging biofuels industry.

- Conveys the President’s firm belief that a “whole-of-government” approach must be taken when addressing the climate crisis.<sup>11</sup>
  - This initiative is to be aided by the National Climate Task Force, which brings together leaders from over 21 federal agencies and departments to help coordinate a consistent and unified approach to climate change.
- Conveys the President’s desire to double renewable energy production from offshore wind by 2030
- Conveys the President’s belief that significant infrastructural investments are necessary to revitalize the American economy and to make it more climate-resilient
- Commits to the goal of conserving at least 30 percent of our lands and oceans by 2030
- Conveys “the President’s existing goals” to eliminate all carbon emissions from the power sector by 2035.<sup>12</sup>
- Conveys the President’s commitment to revitalize energy communities and include their economies in the transition to renewable energy
- Pledges to make America carbon neutral by 2050.
- Directs federal agencies to eliminate fossil fuel subsidies as consistent with applicable law and identify new opportunities to spur innovation, commercialization, and deployment of clean energy technologies and infrastructure
- Directs steps to ensure that every federal infrastructure investment reduces climate pollution and that steps are taken to accelerate clean energy and transmission projects under federal siting and permitting processes in an environmentally sustainable manner
- Directs the federal agencies to procure American-made, carbon pollution-free electricity and clean, zero-emission vehicles to create good-paying, union jobs and stimulate clean energy industries
- Directs federal agencies to coordinate investments and other efforts to assist coal, oil and natural gas, and power plant communities during the transition to clean energy
- Establishes the position of the Special Presidential Envoy for Climate

Some parts of this E.O. correspond with the recommendations of the Academy’s Working Group on Steward Natural Resources and Address Climate Change to:

- Coordinate and expedite renewable energy siting decisions to accelerate decarbonization of the power sector, including a focus on siting on degrading lands, and
- Improve federal coordination across federal agencies with states, tribes, and local governments.

**E.O. 13990: Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis<sup>13</sup>**

- Revokes Permit for TransCanada Keystone XL Pipeline
- Pauses energy leasing in Alaska's Arctic National Wildlife Refuge
- Reinstates Obama-era order to prevent oil and gas drilling in "certain offshore areas in Arctic waters and [the] Bering Sea"<sup>14</sup>

- Directs the Secretary of the Interior to pause on entering new oil and natural gas leases on public lands or offshore waters to the extent possible. The order does not restrict “energy activities on lands that the United States holds in trust for Tribes”.<sup>15</sup>
- Establishes an Interagency Working Group on the Social Cost of Greenhouse Gasses

#### **E.O. 14007: President’s Council of Advisors on Science and Technology<sup>16</sup>**

- Re-establishes the President's Council of Advisors on Science and Technology
- Establishes the White House Office of Domestic Climate Policy
- Establishes the National Climate Task Force
- Establishes the Civilian Climate Corps Initiative, which aims to put a new generation of Americans to work conserving and restoring public lands and waters, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate.
- Establishes an Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization. This will be co-chaired by the National Climate Advisor and the Director of the National Economic Council

There are also several initiatives facilitating the development of a research agenda in this area including:

- Through E.O. 14013, the President directs a report on “climate change and its impact on migration, including forced migration, internal displacement, and planned relocation.”<sup>17</sup>
- Through E.O. 14008, the President. directs relevant agencies to report on ways to expand and improve climate forecast capabilities – helping facilitate public access to climate related information and assisting governments, communities, and businesses in preparing for and adapting to the impacts of climate change<sup>18</sup>

At the agency level, the Department of Defense (DoD) has increased their efforts to incorporate climate concerns into other areas of their national security work. Colin Kahl, the defense undersecretary for policy, stated that DoD “will have a senior person who deals with the whole range of these (climate) issues.” DoD stated that climate change presents an existential threat to the U.S. and specifically to DoD operations, as many of the nation’s military bases are subject to increasingly severe weather conditions.<sup>19</sup>

The Administration formed a new executive branch interagency working group to strengthen U.S. preparedness for climate change and natural disasters. Executive Order 14008, mentioned in more detail previously in this paper, strengthens the U.S. response to climate change, emphasizes strengthening clean water protections including conserving water with cooperation from state and local governments.<sup>20</sup> This action is consistent with the Academy Working Group’s recommendation to “collaborate with other levels of government to make short- and long-term decisions for water delivery and wastewater systems and to take advantage of the experience that other levels of government bring.” There have been other legislative proposals related to the Academy’s Election 2020 paper on the topic, but as of October 2021, none have passed.

While state and local governments enact most policies concerning water systems, the federal government establishes a minimum policy and regulatory framework that the states are free to exceed. The federal government can also be a valuable financial partner to state and local governments. At the beginning of his administration, President Biden proposed \$111 billion in upgrades to the country's water systems.<sup>21</sup> The CARES Act allotted \$150 billion to state and local governments to cover water expenditures that occurred in response to the COVID-19 pandemic.<sup>22</sup> Water relief funds were also allotted through ARPA. The act authorized \$55 billion in federal spending to be used on wastewater and water infrastructure.<sup>23</sup> Recent relief and infrastructure packages at the federal level, enacted in response to the COVID-19 pandemic and ensuing economic recession, include some of this funding; there may be more funding in the future. The federal government's distribution of those funds and effective state and local application of those funds are critical in making progress toward safe, sustainable, and equitable water supplies.

The Academy Working Group on the Water Grand Challenge also recommended that the Administration in 2021 “connect issues of water quality and water supply to national infrastructure challenges, mainly the aging water systems.” Congress is debating proposed legislation in its Infrastructure Investment and Jobs Act (IIJA) in the different areas of water systems including water accessibility, stormwater drainage, contamination, and cyberattacks.<sup>24</sup>

The IIJA includes the following proposals:<sup>25</sup>

- \$14.65 billion in funding under the Drinking Water State Revolving Fund, which provides grants to states to provide loans for waste system infrastructure projects.
- An additional \$8.3 billion for infrastructure in the Western U.S.
- \$10 billion in grants for mitigating perfluoroalkyl and polyfluoroalkyl substances (PFAS) in drinking water and wastewater systems.
- \$11.73 billion for lead service line replacement projects.
- \$200 million to address lead in school drinking water systems.

Other federal initiatives include the American Jobs Plan, in which Biden proposes investment in apprenticeship programs to rebuild American infrastructure, with the potential creation of up to 1 million new jobs in the sector. This action aligns with the Academy Working Group's recommendation to “strengthen the water supply and water treatment workforce through an overall water workforce imitative for current and future needs.”<sup>26</sup>

## **STATE AND LOCAL**

State and local government must also connect with their communities and promote effective practices to address environmental concerns in their jurisdictions. Recent state actions on this issue include:

- Colorado enacted the Wildfire Risk Mitigation Act, which directed funds from the wildfire mitigation fund to support the development of the workforce on this issue, including the engagement of the Department of Corrections State Wildland Inmate Fire Teams.<sup>27</sup><sup>1</sup>
- Illinois enacted the Climate and Equitable Jobs Act (CEJA) in September of 2021. The package includes a mandate that “generation facilities fired by coal, oil, and natural gas must eliminate carbon emissions by 2045.”<sup>28</sup>
- New Mexico enacted the Environmental Database Act in April of 2021. It directs the creation and development of a database, which will include information from seven state agencies on waterways, location of oil and gas wells, and rates of childhood asthma.<sup>29</sup>

Because the U.S. water systems are decentralized, state and local governments have major roles in delivering safe, sustainable, and equitable water systems. They can enact legislation, shift budgetary structures, enforce regulation, and spark collaboration with other governments and private entities.

Some actions intended to address water system issues in states include:

- To combat and prepare for more and longer-lasting droughts, Washington enacted a statute in March of 2020 to “facilitate interagency cooperation, ease the flow of money from the legislature to the agency... and expand the types of projects [Washington] can help fund during a drought emergency.”<sup>30</sup> The law also established “drought advisory warning(s)” to help state entities improve readiness and communication.
- To increase water accessibility, the Arizona legislature in April of 2020 appropriated \$40 million to the Water Supply Development Revolving Fund to aid communities in Arizona who cannot obtain necessary water supplies, in addition to helping those that need financial assistance in obtaining adequate water supplies.<sup>31</sup> Subsequently, Arizona was able to supply more affordable water, a critical asset to proper sanitation during a pandemic, to its residents.
- North Dakota enacted a bill to increase the state’s pledge to the Fargo flood-prevention endeavor from \$750 million to \$870 million. The investment would cover new efforts to divert and control floods, while also loaning money to cities and counties for infrastructure.<sup>32</sup>

Many of these state and local efforts are new, and the Academy staff will track their outcomes over time.

## **PRIVATE AND NON-PROFIT SECTORS**

There are private efforts to raise money to improve modern water systems, especially in smaller communities often left behind in major infrastructure funding. The Water Finance Exchange, an investing platform located near the St. Lawrence River Valley, supports small and mid-sized

---

<sup>1</sup> Colorado General Assembly, “Wildfire Risk Mitigation,” Colorado.gov, 2021, <https://leg.colorado.gov/bills/sb21-258>.

utilities serving 100,000 people or fewer.<sup>33</sup> They aim to bridge public and private funding and bring in new capital by expanding fundable deals and managing risk.<sup>34</sup>

## **CONCLUSION**

The purpose of this staff working paper is to follow-up on the Election 2020 Working Group reports for the federal government by highlighting key actions intended to address this Grand Challenge. The Academy staff welcomes Fellow input and advice, especially on steps being undertaken by especially states, localities, and Tribes. Over the next year, this paper will update information on federal actions based on the latest information and place a greater emphasis on non-federal actions.

## ACADEMY STAFF AUTHORS

**Joe Mitchell**, *Director of Strategic Initiatives and International Programs*. Dr. Mitchell has worked with a wide range of federal cabinet departments and agencies to develop higher-performing organizations, implement organizational change, and strengthen human capital and teams. He currently leads the Academy's thought leadership activities, including its Grand Challenges in Public Administration, and co-leads its Agile Government Center. Most recently, he served at the General Services Administration to stand up the Office of Shared Solutions and Performance Improvement within the Office of Government-wide Policy, where he led a team that performed multi-functional, cross-agency projects and initiatives in support of the President's Management Agenda. Previously, he led and managed the Academy's organizational studies program, providing strategic direction and project oversight to all of its congressionally-directed and agency-requested reviews and consulting engagements. He holds a Ph.D. from the Virginia Polytechnic Institute and State University, a Master of International Public Policy from the Johns Hopkins University School of Advanced International Studies, a Master of Public Administration from the University of North Carolina at Charlotte, and a B.A. in History from the University of North Carolina at Wilmington.

**James Higgins**, *Senior Research Associate*. Mr. Higgins joined the Academy in March 2020. He currently supports the Academy's strategic initiatives, including the Grand Challenges in Public Administration, the Agile Government Center, and the Management Matters: Where Policy Meets Practice podcast. He supported the Academy Fellow Election 2020 Working Groups and has been a key staff member of the Agile Government Center. He holds a Master's in Global Policy from the University of Maine's School of Policy and International Affairs and a B.A. in International Studies from Dickinson College.

**Jillian McGuffey**, *Research Associate*. Ms. McGuffey joined the Academy's Strategic Initiatives Team in December 2020. She manages the Academy's federalism website, conducted a wide range of research for the Grand Challenges in Public Administration, and helped produce the Management Matters podcast. During her undergraduate career, Jillian was selected as a fellow of the Global Fellows Program, which gave her various opportunities to learn from experts specializing in international relations and conflict resolution. She also worked with the United States Census Bureau, where she recorded and analyzed data from the 2017 Criminal Juvenile Resident Placement Survey, and the USCIS supporting efforts to formulate DHS emergency preparedness plans. Ms. McGuffey graduated from the University of Maryland with a Master of Public Policy after earning a Bachelor of Arts in Government and Politics and a Minor in Creative Writing.

### **Additional Assistance Provided by Academy Interns:**

**Madison Garofalo**: Junior at Illinois Wesleyan University getting her B.A. in Political Science with a minor in Psychology.

**Julian Green:** Freshman at College of William and Mary, majoring in Public Policy.

**Ethan McGonagill:** Sophomore at Vanderbilt University, studying Political Science and History.

---

<sup>1</sup> USGS, "Explore the Diversity of National Public Lands With Maps," Protected Areas Database of the United States, July 31, 2017, <https://www.usgs.gov/news/mapping-public-lands-united-states>.

<sup>2</sup> Ibid.

<sup>3</sup> IEA, "Clean Energy Innovation," IEA, 2020, <https://www.iea.org/reports/clean-energy-innovation>.

<sup>4</sup> National Integrated Drought Information System, "Drought Status Update for the Pacific Northwest," Drought.gov, September 24, 2021, <https://www.drought.gov/drought-status-updates/drought-status-update-pacific-northwest-3>.

<sup>5</sup> Drew Kann, Renee Rigdon, & Daniel Wolfe, "The Southwest's most important river is drying up," CNN, August 21, 2021, <https://www.cnn.com/interactive/2021/08/us/colorado-river-water-shortage/>.

<sup>6</sup> Debra Utacia Krol, "Navajo Nation's water shortage may be supporting COVID-19 spread," AZ Central, April 18, 2020, <https://www.azcentral.com/story/news/local/arizona-health/2020/04/18/navajo-nation-water-shortage-contributing-covid-19-spread/2992288001/>.

<sup>7</sup> Kate Elizabeth Queram, "Hackers Tried to Poison a City's Drinking Water Supply," Route Fifty, February 9, 2021, <https://www.route-fifty.com/tech-data/2021/02/hackers-tried-poison-citys-supply-drinking-water-officials-say/171957/>.

<sup>8</sup> Kevin Collier, "Lye-poisoning attack in Florida shows cybersecurity gaps in water systems," NBC News, February 9, 2021, <https://www.nbcnews.com/tech/security/lye-poisoning-attack-florida-shows-cybersecurity-gaps-water-systems-n1257173>.

<sup>9</sup> Debra Utacia Krol, "Navajo Nation's water shortage may be supporting COVID-19 spread," AZ Central, April 18, 2020, <https://www.azcentral.com/story/news/local/arizona-health/2020/04/18/navajo-nation-water-shortage-contributing-covid-19-spread/2992288001/>.

<sup>10</sup> Whitehouse.gov, "FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Created Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies," April 22, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> Whitehouse.gov, "Executive Order on Protecting the Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," January 20, 2021, <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate-crisis/>.

<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> Federal Register, "President's Council of Advisors on Science and Technology," National Archives, February 1, 2021, <https://www.federalregister.gov/documents/2021/02/01/2021-02176/presidents-council-of-advisors-on-science-and-technology>.

<sup>17</sup> Federal Register, "Rebuilding and Enhancing Programs to Resettle Refugees and Planning for the Impact of Climate Change on Migration," National Archives, February 9, 2021,

---

<https://www.federalregister.gov/documents/2021/02/09/2021-02804/rebuilding-and-enhancing-programs-to-resettle-refugees-and-planning-for-the-impact-of-climate-change>.

<sup>18</sup> Whitehouse.gov, "FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Created Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies," April 22, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.

<sup>19</sup> Jacqueline Feldscher. "Pentagon Will Add a Climate-Policy Czar. Defense One. October 29, 2021. <https://www.defenseone.com/threats/2021/10/pentagon-will-add-climate-policy-czar/186502/>

<sup>20</sup> Ibid.

<sup>21</sup> US Water Alliance. "President Biden Introduces Plan for \$111 Billion Water Infrastructure Investment. May 2021. <http://uswateralliance.org/news/president-biden-introduces-plan-111-billion-water-infrastructure-investment>

<sup>22</sup> United States Environmental Protection Agency, "Water Utility Resources for the COVID-19 Pandemic", EPA, 2021, <https://www.epa.gov/coronavirus/water-utility-resources-covid-19-pandemic>.

<sup>23</sup> Dave Cox, "American Rescue Plan Act (ARPA) And Drinking Water Infrastructure Opportunities," Water Online, September 27, 2021, <https://www.wateronline.com/doc/american-rescue-plan-act-arpa-and-drinking-water-infrastructure-opportunities-0001>.

<sup>24</sup> Irma Esparza Diggs, "What the Senate Infrastructure Bill Means for Local Governments," National League of Cities, August 10, 2021, <https://www.nlc.org/article/2021/08/10/what-the-senate-infrastructure-bill-means-for-local-governments/>.

<sup>25</sup> Ibid.

<sup>26</sup> Whitehouse.gov, "FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Created Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies," April 22, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.

<sup>27</sup> Colorado General Assembly, "Wildfire Risk Mitigation," Colorado.gov, 2021, <https://leg.colorado.gov/bills/sb21-258>.

<sup>28</sup> JD Supra, "Illinois Enacts Comprehensive Climate and Clean Energy Legislation," Mayer & Brown, October 19, 2021, <https://www.jdsupra.com/legalnews/illinois-enacts-comprehensive-climate-1531135/>.

<sup>29</sup> Hannah Grover, "Governor signs Environmental Database Act," NM Political Report, April 8, 2021, <https://nmpoliticalreport.com/2021/04/08/governor-signs-environmental-database-act/#:~:text=Related-,Environmental%20Database%20Act%20aims%20to%20increase%20transparency%20for%20publicly%20available,is%20awaiting%20the%20governor's%20signature.>

<sup>30</sup> Department of Ecology, "New law improves capabilities for drought response and preparedness," State of Washington, April 9, 2020, <https://ecology.wa.gov/Blog/Posts/April-2020/New-law-improves-capabilities-for-drought-response>.

<sup>31</sup> Water Infrastructure: Finance Authority of Arizona, "Water Supply Development Revolving Fund," Arizona.gov, 2021, <https://azwifa.gov/programs/funding-type/w sdf>.

<sup>32</sup> StateNet, "2021 ND H 1413," April 21, 2021,

[https://custom.statenet.com/public/resources.cgi?id=ID:bill:ND2021000H1431&ciq=ncsl29&client\\_md=cd4c35a01d03ea12b94afe1f6395535b&mode=current\\_text](https://custom.statenet.com/public/resources.cgi?id=ID:bill:ND2021000H1431&ciq=ncsl29&client_md=cd4c35a01d03ea12b94afe1f6395535b&mode=current_text).

<sup>33</sup> Water Finance Exchange, "The Need," 2021, <https://waterfx.org/the-need/>.

<sup>34</sup> Ibid.