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Issue Brief

Water Recommendations to the Next President

The United States faces several severe and worsening water problems. Continuing to neglect these problems will impoverish and sicken this and future generations, destroy beneficial aquatic ecosystems, and threaten our economy and food supply. Smart water policies will create hundreds of thousands of jobs, improve public health, and speed our economic recovery. In this letter, we offer a short assessment of four key problems and specific recommendations for addressing them.

Problem 1: Tens of millions of Americans do not have access to safe, affordable drinking water and sanitation. The COVID-19 pandemic has revealed the stark health and economic consequences of this failure.

Solution: Improve federal water programs to expand access to water services and protect public health, especially in low-income communities and communities of color. Priorities include expanded federal funding for better water infrastructure, improved enforcement of water laws and regulations, and updates to those laws.

Problem 2: Climate changes are already negatively affecting U.S. water resources and the consequences will worsen in coming years.

Solution: The impacts of climate change must be integrated into water planning and management at all levels. Emphasis must be on both reducing greenhouse-gas emissions associated with our nation's water systems and helping to adapt to the now-unavoidable impacts of climate change.

Problem 3: Water resource problems pose threats to U.S. national and international security.

Solution: Appropriate federal agencies, including the defense and intelligence communities, should expand efforts to identify and analyze threats to vital U.S. interests related to water and commit appropriate diplomatic, technical, and other resources to address them.

Problem 4: The lack of a U.S. National Water Strategy threatens the reliability and quality of water supply and wastewater services and ultimately public health, ecosystems, and our economy.

Solution: The next president should immediately create a new National Water Commission for the 21st Century to evaluate and recommend specific federal actions to improve national water policy.

To the Next President of the United States,

The United States faces several severe water problems.

Every human being needs safe and affordable water, but in the richest country on Earth, tens of millions of people still lack it. As the ongoing COVID-19 pandemic has so starkly revealed, poor water infrastructure and the failure to provide universal access to safe water and sanitation threaten public health. Water shortages, poor management, and antiquated water systems threaten our food supply, ecosystems, and economy. Worsening climate changes are increasing the risks to our water resources. Conflicts over water around the globe threaten our national security.

Smart water policies can address all these challenges. As the nation strives to recover from a devastating pandemic and economic downturn, we have an opportunity to rebuild our public water system, create hundreds of thousands of jobs, support our agricultural communities, strengthen our diplomatic standing and national security, and improve our health and quality of life. We have the money, knowledge, and technology to overcome these challenges. What we lack is leadership.

The American people recognize the impact water has on their daily lives. Protecting water is a top priority for the American people, independent of political persuasion.[1] Solving our water problems will require special attention from you and senior members of your administration, but our current challenges demand nothing less.

Below, we offer a short assessment of four key problems and specific recommendations for addressing them.

IMPROVE FEDERAL WATER PROGRAMS TO PROTECT PUBLIC HEALTH, ESPECIALLY IN LOW-INCOME COMMUNITIES AND COMMUNITIES OF COLOR

The Problem

Every American should have safe, affordable drinking water and sanitation, yet tens of millions do not.[2] Major U.S. cities have deteriorating water infrastructure and old pipes contaminated with lead. Residents in rural areas often depend on unreliable, untested, or unsafe wells. Over the past two decades, the cost of water and wastewater has risen at twice the rate of the Consumer Price Index.[3]

The impact of this neglect is felt disproportionately by low-income communities and communities of color. Thousands were poisoned in Flint, Michigan. Farmworkers and others in California's Central Valley receive water polluted with arsenic and agricultural chemicals. Children across the country cannot safely drink from their school water fountains. A legacy of racial and economic discrimination in infrastructure investments has led to cycles of poverty and disparate health impacts in water just as it has for air quality, chemical exposure, and other environmental threats.

Although thousands of chemicals can be found in U.S. waters, almost no new water-quality regulations are under review, and it has been two decades since the Environmental Protection Agency added new contaminants to the toxic chemicals covered by the Safe Drinking Water Act. Many proposed regulations have been delayed or ignored in recent years, including protections from "forever chemicals" (PFAS), perchlorate, and others.

The federal scientific, regulatory, and management institutions that keep America's water safe have been neglected or undermined. Public data on natural resources — including water — have been withdrawn, hidden, or destroyed. Federal institutions that study, report, regulate, enforce, or invest in water have been gutted. Protective regulations, enforcement, scientific oversight, and funding have been cut.

Recommendations

Many water challenges are local, but local authorities are not equipped to solve them alone. National policies and resources are needed to ensure universal access to safe and affordable water services and to protect the economic health of water utilities and service providers. Priorities should include expanded federal support for water infrastructure, improved enforcement of current water laws and regulations, and updates and improvements to those laws.

At the international level, the U.S. must expand participation in efforts to reach the water-related goals set by the United Nation's Sustainable Development Goals (SDGs) to improve health and well-being by meeting the basic needs for water and sanitation for all. This requires playing an active role as a member of the international community and contributing expertise, technology, and financial resources at home and abroad. The U.S. should play a global leadership role on water.

Key recommendations include:

- Shift federal water funding to state and community investments in modern water infrastructure, including both a low-income home assistance program and a rural water improvement program.
- Support programs that require the complete removal of all lead pipes in the United States.
- Implement new standards under the Safe Drinking Water Act to protect drinking water quality from contaminants, and under the Clean Water Act to protect watersheds from pollution, inappropriate use, and poor land policies.
- Restore and expand public access to science- and water-related data at agencies including the Environmental Protection Agency, U.S. Geological Survey, and Department of the Interior.
- Shift federal water funding from large physical infrastructure projects to projects that restore and protect natural systems.
- Improve water efficiency for urban and agricultural users to reduce the cost of water and wastewater service, as well as energy costs.
- Refocus and expand U.S. international aid spending toward meeting basic water needs in partnership with efforts of international non-governmental organizations and the private sector.

ADDRESS THE ACCELERATING RISKS OF CLIMATE CHANGE FOR WATER RESOURCES

The Problem

Measurable impacts of climate change on fresh water are worsening. The science, as shown in the long series of U.S. National Climate Assessments,[4] reports from the U.S. National Academies of Science,[5] and other national and international scientific reviews, is unambiguous: climate changes are already affecting water resources and these impacts will intensify in coming years.

Rising temperatures mean more water is needed for household, industrial, and agricultural needs. Rapidly melting snow and ice mean floods in spring and droughts in summer and new threats to our hydropower production. Rising sea levels threaten coastal communities, groundwater, and coastal wetlands. Hurricanes, floods, and droughts – already the nation's most destructive natural disasters – are getting worse. By failing to address climate change, we threaten our economy, security, health, and the environment.

Recommendations

The impact of climate change must be integrated into water planning and management at all levels. Emphasis must be given to two simultaneous efforts: (1) reduce greenhouse gas emissions associated with the use of water and (2) adapt to the unavoidable impacts of climate change on water. Key recommendations include:

- Support the ongoing U.S. National Climate Assessments, as required by law. These reports provide the best scientific assessment of the risks of climate change.
- Require all federal agencies to integrate climate resilience and risk mitigation into water programs, including infrastructure investments, disaster planning, insurance programs, agricultural and industrial commitments, and military and national security assessments.
- Provide funding and resource options for states, counties, cities, and tribal communities to establish key partnerships, develop climate change risk reduction and resilience programs, and enhance protection from disasters.
- Revise and modernize the federal National Flood Insurance Program to increase protections from changing flood risks and discourage development or redevelopment in vulnerable areas.
- Develop federal water- and energy-efficiency programs and greenhouse-gas emissions reductions strategies that reduce the energy cost of providing, treating, delivering, using, and cleaning water, and boost soil carbon.
- Reaffirm U.S. commitments to the Paris Agreement and the World Health Organization.

ASSESS AND PREPARE FOR NATIONAL SECURITY THREATS ASSOCIATED WITH WATER

The Problem

Water resources are vital to human health and commerce and will continue to be a source of intra- and inter-state conflict. In 2012, the U.S. Intelligence Community released an assessment of national security threats associated with water resources.[6] Among their conclusions: "During the next 10 years, many countries important to the United States will experience water problems — shortages, poor water quality, or floods — that will risk instability and state failure, increase regional tensions, and distract them from working with the United States on important US policy objectives." These conclusions have unfortunately been borne out with water-based conflicts affecting U.S. global interests in countries around the world.

Similarly, the U.S. Department of Defense and the U.S. Intelligence Community have described environmental disruptions as "threat multipliers" that contribute to failed states and heightened threats of warfare or terrorism. The 2014 U.S. Quadrennial Defense Review also identified resource issues as threat multipliers that pose significant challenges for the U.S. and the world at large.[7] The May 2017 statement of the Director of U.S. National Intelligence to the Senate Select Committee on Intelligence noted, "[h]eightened tensions over shared water resources are likely in some regions."[8]

Recommendations

- U.S. State Department and Defense Department should expand efforts to identify and analyze threats to vital U.S. interests related to water and commit diplomatic and other resources to address them.
- The National War College system, State Department, Intelligence Community, Department of Homeland Security, and other agencies should conduct a series of integrated workshops on critical water security challenges, including the vulnerability of U.S. water systems to terrorism and cyber-attacks.
- U.S. foreign policy should place greater emphasis on reducing the risks of water-related conflicts around the world.
- A variety of approaches to reduce water-related tensions should be implemented, including legal agreements, technology-based solutions, conflict-resolution institutions, and innovative water management.[9] These approaches hold great promise for reducing water-related conflicts but have not yet been adequately adopted.
- Federal agencies and Congress should assist local water agencies to identify security threats to water systems and put in place improved physical barriers, real-time chemical and biological monitoring and treatment, cyber-security strategies, and smart, integrated responses.

CREATE A NEW NATIONAL WATER PLAN

The Problem

The United States has no national water strategy. More than 20 federal agencies have overlapping and conflicting responsibilities for water management, and current water programs are incomplete, haphazard, and inconsistent.[10] Basic water data are not collected or analyzed,[11] and fundamental science remains undone. As a result, our freshwater resources are used inefficiently and ineffectively.

Without a national strategy, the reliability and quality of water and wastewater services are deteriorating. Some, especially those living in low-income communities and communities of color, receive poor-quality, costly, or unreliable water and wastewater services. Water in U.S. rivers, streams, and lakes is inadequately protected from contamination or overuse by outdated, weak, or poorly enforced regulations, leaving fish and wildlife in decline. Farms and food production are threatened by unsustainable sources of water. Continuing to neglect these water problems will impoverish and sicken this and future generations, destroy irreplaceable aquatic ecosystems, and threaten our economy and food supply.

Conversely, smart water policies can address these challenges. As the nation strives to recover from a devastating pandemic and economic downturn, we have an opportunity to invest in comprehensive improvements in public infrastructure and institutions, including our water systems. This will create

hundreds of thousands of new jobs and improve our health and quality of life. We have the money, knowledge, and technology to overcome these challenges. What we lack is leadership.

Recommendation

The next president should immediately create a new **National Water Commission for the 21st Century** to evaluate and recommend specific federal actions to improve national water policy. We have had no national water commission since 1973. Such a commission would reorganize and streamline the diverse and uncoordinated federal water responsibilities and laws. Recommendations should be produced within 12 months and include executive branch actions, congressional actions, and legal/judicial actions. The National Water Commission should address the entire range of national water challenges, be non-partisan, and consist of scientists, legal and policy experts, and non-governmental and community representatives who can speak to the on-the-ground realities facing American communities.

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Notes

1 In Gallup's regular poll of environmental issues, water pollution and the safety of drinking water are routinely the top two issues of concern among Americans: https://news.gallup.com/poll/207536/water-pollution-worries-highest-2001.aspx

2 Holmes, Lillian, Morgan Shimabuku, Laura Feinstein, Greg Pierce, Peter H. Gleick, and Sarah Diringer ."Water and the COVID-19 Pandemic: Equity Dimensions of Utility Disconnections in the U.S." July 2020. https://pacinst.org/publication/equity-dimensions-of-disconnections/

3 American Water Works Association. "AWWA's 2019 Water and Wastewater Rate Survey reveals increasing utility costs boosting rates." May 9, 2019. https://www.awwa.org/AWWA-Articles/awwas-2019-water-and-wastewater-rate-survey-reveals-increasing-utility-costs-boosting-rates

4 U.S. Global Change Research Program. "National Climate Assessments." Accessed September 11, 2020. https://www.globalchange.gov/what-we-do/assessment

5 The National Academies of Science Engineering Medicine. "Climate at the National Academies." Accessed September 11, 2020. https://sites.nationalacademies.org/sites/climate/index.htm

6 Office of the Director of National Intelligence of the United States of America. "Global Water Security: Intelligence Community Assessment." February 2, 2012. https://fas.org/irp/nic/water.pdf

7 Department of Defense. *The U.S. Quadrennial Defense Review*. 2014. http://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf

8 Office of the Director of National Intelligence of the United States of America. "Worldwide Threat Assessment of the U.S. Intelligence Community: Senate Select Committee on Intelligence." May 11, 2017. https://www.intelligence.senate.gov/sites/default/files/documents/os-coats-051117.pdf

9 Gleick, Peter H., Charles Iceland, and Ayushi Trivedi. "Ending Conflicts over Water: Solutions to Water and Security Challenges." https://pacinst.org/wp-content/uploads/2020/09/Ending-Conflicts-Over-Water-Pacific-Institute-Sept-2020.pdf

10 Christian-Smith, Juliet, Peter H. Gleick, Heather Cooley, Amy Vanderwarker, Lucy Allen, and Kate A. Berry. "A Twenty-First Century US Water Policy." 2012. Oxford University Press, New York.

11 See the recommendations on data collection in this study: "Water and the COVID-19 Pandemic: Equity Dimensions of Utility Disconnections in the U.S.," accessible at https://pacinst.org/publication/equity-dimensions-of-disconnections/.

More information on these issues can be found at www.pacinst.org.