Safe Drinking Water Act 50th Anniversary

The Future of Drinking Water in America

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Water & Health Advisory Council

The Future of Drinking Water in America

Fifty years ago, President Gerald Ford signed the Safe Drinking Water Act (SDWA), the principal law regulating tap water quality in the United States. The SDWA was an inflection point: for the first time, the nation's water systems were subject to binding health-based standards, rooted in scientific research and jointly administered by federal and state authorities. Bolstered by amendments in 1986 and 1996, the SDWA propelled significant advances. Today, thanks to the SDWA, drinking water is safer, water utilities are more professional and accountable, and Americans enjoy some of the world's best tap water.

Challenges remain, however. Millions of Americans still face significant risk from unreliable or contaminated drinking water. Microbial and chemical contaminants still threaten public health in parts of the country. Aging infrastructure and persistent failures erode public health and public trust. Our communities deserve better.

THE CHALLENGES

1

A REGULATORY TREADMILL

The SDWA's framework drives a continuous search for and subsequent regulation of contaminants. Initial SDWA implementation focused on the most harmful contaminants, leading to marked improvements in health over its first three decades. However, a regulatory regime that prioritizes identifying and regulating new contaminants over eliminating known risks and maintaining health gains can only do so by imposing ever-greater costs for ever-smaller advances in public health. Vigilance is important, but advancing public health requires a focus on the most serious problems.

2

MISSING RISKS

Today America's most pressing drinking water challenges include aging and failing infrastructure, unsafe premise plumbing, a lack of access, workforce shortages, cybersecurity, and a burgeoning bottled water industry that siphons billions of dollars from the nation's least affluent. New, unknown challenges are sure to arise in the decades ahead. Existing policy frameworks have proven inadequate to address these and other emerging dangers.

3

UNDERINVESTMENT

Elected officials too often are unwilling to invest adequately in their facilities and organizations, prioritizing low rates at the expense of health and environmental quality. When facing the consequences of chronic underinvestment, many advocate for the federal taxpayer to rescue failing water systems. But federal funding is unreliable, vulnerable to manipulation by politicians, pits water against other national priorities, and creates perverse disincentives for locally led investment.

4

INJUSTICE

Drinking water safety, reliability, and affordability are not uniform across the United States. America's fragmented water sector is unsustainable, with tens of thousands of utilities operating nearly 50,000 community water systems, plus 100,000 non-community systems. Most of these lack the technical, managerial, and financial capacity to operate effectively and affordably. Systems that serve rural, lower-income, and racial/ethnic minority communities are disproportionately likely to experience contaminated drinking water. Regulators have been too slow to enforce the SDWA and too tolerant of ongoing failures.

5

OPACITY

The American public poorly understands tap water quality, water system infrastructure, and the organizations that operate, regulate, and govern water. SDWA-mandated Consumer Confidence Reports fail to improve public knowledge and may even reduce public trust in high-quality water systems. This information vacuum invites fearmongering and exploitation.

These challenges demand a strategic shift in the decades ahead.

A VISION FOR THE NEXT FIFTY YEARS

To deliver on the promise of safe tap water for every American, we envision:

PRIORITIZING RISK

Regulatory regimes must center on the most serious threats to drinking water. Utilities must build and maintain resilient infrastructure that prevents contamination and take measures to protect source water. Policymakers must weigh regulation of novel contaminants against these priorities and emerging concerns. Rules that compel communities to invest limited resources must be guided by the best available science on risks and achieve the greatest benefits.

BUILDING CAPACITY

Great drinking water requires great organizations. Investments in human capital must accompany investments in infrastructure. Water utilities need sustainable funding through service rates and other local sources. Although federal funding can be a useful complement in some cases, we reject simplistic calls for the federal taxpayer to pay for America's drinking water systems.

America's drinking water systems must consolidate. We cannot deliver safe, reliable, resilient, and affordable water through tens of thousands of tiny, unsustainable organizations. Congress recognized this reality when it passed the SDWA in 1974. Water sector leaders repeated the call for consolidation on the SDWA's 25th Anniversary in 1999. We take up this call with renewed urgency and specific targets: America should consolidate into fewer than 6,500 utilities—through physical and/or organizational mergers—with a minimum size of 20,000 customer connections.

RIGOROUS ENFORCEMENT

Regulators can no longer tolerate failure. Authorities must anticipate and prevent systems at risk of failure, and respond to serious or ongoing violations of the SDWA's health protections with swift and effective enforcement. We must level the regulatory field so that SDWA protections and enforcement apply to all public, private, and nonprofit water systems. Commercial drinking water sources, including bottled water and vending machines, must meet the standards, protocols, and reporting requirements that apply to community water systems.

JUSTICE

Rulemaking, enforcement, investment, and pricing must foster safe, reliable, resilient, and affordable tap water for all. We must eliminate racial, ethnic, and socioeconomic disparities in tap water access, quality, and reliability. As American society and economy evolve, drinking water regulation also must evolve to protect vulnerable populations.

TRANSPARENCY & TRUST

Utilities and regulators must lavishly share information about drinking water in clear and understandable terms. We must replace ineffective and antiquated Consumer Confidence Report rules with more effective, rigorously tested methods of communication.

TOWARD MORE PERFECT DRINKING WATER

The nation has taken great strides to ensure safe drinking water for all, but there is more work to be done. The challenges ahead are principally organizational, financial, and political; we can overcome those challenges with prudent, visionary leadership. With appreciation for past accomplishments and confidence in the promise of future achievements, we celebrate this 50th anniversary of the SDWA and dedicate ourselves to ensuring that its 100th anniversary will be a triumph.

Authors

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Rob Renner led the Water Research Foundation from 2005- February 2019. Prior to joining WRF, Robert was the Executive Director of the International Society of Automation and served as Deputy Executive Director of the American Water Works Association. He has more than 20 years of experience as a consultant optimizing water treatment plant performance.

Manny Teodoro

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Manny Teodoro currently serves as the Robert F. and Sylvia T. Wagner Distinguished Professor of Public Affairs at the University of Wisconsin-Madison, working at the intersection of politics, public policy, and public management. Manny has developed novel methods for analyzing utility rate equity and affordability, and he works on these issues directly with governments and water sector leaders across the United States.

Chad Seidel

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Chad Seidel is President at Corona Environmental Consulting, LLC where he brings his more than 15 years of consulting experience serving the drinking water community. He has been engaged with California water utilities regarding groundwater and inorganic contaminant treatment. Chad has a diverse range of experience providing large and small drinking water utilities with process and design engineering services.

Janet Anderson

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Dr. Janet Anderson is a Principal with GSI Environmental Inc. with 15 years of experience providing toxicology, risk assessment, and risk management support to federal agencies, private industry, and municipal clients. She is an expert in emerging contaminants such as per- and polyfluoroalkyl substances (PFAS), 1,4 dioxane, and 1,2,3-trichloropropane, and the translation of human health toxicology into state and federal environmental regulations.

Joseph Cotruvo

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Joseph Cotruvo served as the Director of the EPA Drinking Water Standards Division from 1976-1990. He was also the Vice President for Environmental Health Sciences, NSF International and a member of the Board of Directors for the DC Water and Sewer Authority. He is currently the President of Joseph Cotruvo & Associates and is active international water quality and health business.

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Dr. Joyce Dinglasan-Panlilio joined the UW Tacoma faculty in 2007. She is on the state of Washington Department of Ecology advisory board for PFAS. As an environmental organic chemist, her research focuses on investigating sources, transport and fate of emerging organic contaminants in the environment.

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Kathryn Sorensen oversees the research efforts of the Kyl Center for Water Policy, teaches Arizona Water Policy for the Watts College of Public Service and Community Solutions, and contributes to the Global Futures Laboratory. As Director of Phoenix Water Services until October 2020, she was responsible for the reliable delivery of safe, clean drinking water in a desert city of nearly 1.7 million inhabitants.