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To the Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment

The Clean Water Act at Fifty: Highlights and Lessons Learned from a Half Century of Transformative Legislation

September 20, 2022

Chairs DeFazio and Napolitano, Ranking Members Graves and Rouzer, and members of the Subcommittee, thank you for the opportunity to testify today. It is an honor.

My name is Dave Ross. I am currently a partner at Troutman Pepper LLP in our Washington, DC office, but I live just north of Lake Mendota near Madison, Wisconsin. I appear before this Subcommittee in my personal capacity and offer my perspectives from a career spent navigating the many complexities of the Clean Water Act (CWA). While I did not know it then, my first job out of college was created by the CWA's secondary treatment standards for wastewater, as San Diego, California was looking for innovative ways to reuse wastewater and reduce future capacity demands at its main wastewater treatment plant. I was hired to research various technologies for reclaiming wastewater and looking back now I owe my professional lifelong interest in water reuse to the CWA. I have counseled clients in the private sector on CWA compliance, served as the lead water quality attorney for the State of Wyoming, prosecuted water quality violations for the State of Wisconsin, and managed the nation's CWA program for the federal government. I therefore offer the Subcommittee a fairly unique perspective on CWA implementation, at least based on my lessons learned over the past quarter century.

I want to begin by congratulating the Subcommittee on holding this hearing. In a world that seems drawn to the negative like mosquitos to exhaled breath, it is nice to pause for a moment to celebrate the vision of your predecessors and the hard work of countless Americans who have worked to implement the CWA over the past fifty years. The title of this hearing characterizes the CWA as "transformative." It many ways it was. And it continues to be one of the most significant pieces of legislation this institution has ever passed.

I was born in 1971, the year in which the 92nd Congress was crafting and debating this transformative legislation. It was an era filled with vivid imagery of rivers on fire and water devoid of life. I grew up near the banks of the Fox River in Appleton, Wisconsin. We would play along the river and in the ravines that cut into our neighborhoods. There were vines hanging from the trees that would allow you to swing out over the water, but unlike those idyllic images of plunging into the water cannonball style, we were terrified that the vines would break before returning to the shore. The river was a flowing cesspool.

Thanks to the passage of the CWA, over time the industrial discharges were controlled, the wastewater treatment plants were upgraded, and stormwater and watershed management plans were implemented. Now bald eagles nest and hunt along its banks, people recreate on its waters, and communities celebrate the river for its contribution to the quality of life in the valley.

This story is not unique, as rivers and lakes throughout this country have been revitalized and protected thanks to the multiple program elements included in the Water Pollution Control Act Amendments of 1972, as the CWA is more formally known. Cormorants now fish in the Anacostia, the Milwaukee Riverwalk is a weekend destination, and we are having serious discussions about swimming in the Potomac, an unthinkable concept when I first moved to Washington, DC twenty years ago.

These restorative highlights owe their success to the rather ingenious structure of the CWA. Rather than focus on a single issue or solution, Congress crafted a complex and yet interrelated suite of programs that tackled water pollution on multiple fronts. The Act provided funding mechanisms for communities to invest in infrastructure, incentives for watershed-based planning, water quality-focused standard setting and permitting designed to achieve those standards, technology-forcing provisions and more nuanced recommended criteria, anti-backsliding, adaptive management, enforcement, institutionalized modernization, and public participation. Congress also recognized the careful legal balance between the traditional land and water use authority of the states and the commerce power of the federal government, both explicitly and implicitly. Rare is the statute that uses both regulatory and non-regulatory programs with equal success and intention. In that regard, the CWA should be a model for generations to come. The statute also provides immense planning and implementation power to the states while ensuring a cabined but powerful role for the federal government. In short, Congress did an admirable job back in 1972, and in later amendments, crafting a remarkably balanced and innovative piece of legislation.

But as with all things, the CWA has some imperfections. Anyone who has spent more than a passing moment with the Act will wish Congress had invested a bit more time defining the term "navigable waters." And only a law school professor enjoys figuring out the definitional distinctions between "navigable waters" and "navigable waters of the United States." Also, what did Congress mean when it wrote the phrase "any other appropriate requirement of State law," why did it clearly authorize partial program delegation under Section 402 and remain silent under Section 404, and why craft a structure where folks need to figure out whether a ditch is a point source or a water, or both? Perhaps it was lawyers creating more work for future lawyers, but it does demonstrate how difficult it is to craft clean and unambiguous legislation.

While the CWA should be viewed as a success through a reflective lens, it is by no means complete in its work. In fact, we have a long way to go to achieve the full vision of the Act. There may be some waters that will never be fishable or swimmable, but we have far too many waters that remain legitimately impaired, and I suspect that as method detection limits continue to drop and our public health sciences continue to advance, the net list of impairments is likely to grow at least for the foreseeable future. And for all our success reducing heavy metals and other conventional pollutants in surface waters, our greatest challenge, at least in terms of specific pollutants, remains excess nutrients. The CWA has limitations in how it addresses non-point sources of pollution, but we have creative tools that can be applied to make significant progress in tackling this challenge. We have not yet meaningfully adopted watershed-based permitting strategies, environmental markets remain underutilized, and water quality trading lacks regulatory certainty. I also believe the Section 319 program has untapped and extremely valuable potential, but at current funding levels it lacks the critical mass to make meaningful improvements in water quality or to be applied more creatively.

As we look to the future, Congress and our state and federal regulators need to remain vigilant in ensuring that the CWA and its programs adapt to our changing needs. For example, we are finally having a national discussion about water affordability, water security, and aging infrastructure. Congress has provided a much-needed infusion of capital to address our aging water and wastewater infrastructure, including in our tribal and environmental justice communities, but there is a disconnect between providing the capital and understanding how that capital is deployed at the community level and the resources that it will take to operate and maintain the new assets. Communities are also looking to secure new sources of water, including embracing water reuse, stormwater capture and desalination technologies, as they design and plan for more resilient

futures. But these communities must also plan and adapt to a surge of new regulations coming at both the federal and state level. All these developments impact affordability, and we must be cognizant that with each new requirement, the price of providing water and wastewater services increases and invariably is paid by individual rate payers, many of whom already struggle with monthly bills. This country needs to be much more intentional about embracing integrated planning and recognizing that individual regulatory decisions, while reasonable in a vacuum, have broader societal implications.

As we modernize our way of thinking, we must continue to embrace and deploy modern technology. The water sector is entering the era of digitalization, and we need to incentivize the deployment of real-time monitoring and related systems to optimize the performance of our infrastructure. But we must also recognize that cybersecurity is of paramount importance in our interconnected society and that the wastewater sector needs to take cyber risks as seriously as the drinking water sector.

It is also time we modernize the way we plan and budget for future infrastructure investments. We need to institutionalize, annualize, staff, and fund the needs survey process, and ensure that we are gathering actionable intelligence about the state of our water and wastewater infrastructure using the most advanced asset surveillance techniques. While I am deeply concerned about our generation's apathy for the financial security of future generations, my bias for the water sector allows me to call for increased funding on an annualized basis to ensure that we close the funding gap in what I consider to be the most critical lifeline sector in our society. But to do that, we rationally need better and more timely data.

I want to close with what I believe is likely the most overlooked, or at least most under-appreciated, risk to the water sector. Over the next decade, an unacceptably high percentage of

water and wastewater operators will retire. The same holds true for the skilled trades, engineers, analysts, and other professionals who support that critical workforce. There is no doubt in my mind that we would not be celebrating the success of the CWA if not for the dedicated professionals who operate our nation's wastewater treatment plants, stormwater control features, and related infrastructure. The water sector workforce does not receive the recognition it deserves in our communities, in our state and federal regulatory agencies, and in the halls of Congress.

Over the past year, we have been quick to praise the much-needed investments in our water and wastewater infrastructure. But without a skilled workforce to operate our treatment facilities, the investments in brick and mortar will be wasted. Compounding the problem is the acceleration of technology in this sector. The technology is outpacing our training and development pipeline and will only accelerate as we continue to see the convergence of drinking and wastewater operations through water reuse strategies and the growing interest and need in harvesting stormwater. Congress needs to think about what the water sector looks like a decade from now and help state and local communities plan for the retirement surge that is already occurring.

To the dedicated professionals within the Office of Water at the U.S. Environmental Protection Agency, the thousands of experts working within state agencies across the country, and the hundreds of thousands of people who make the water sector the backbone of our way of life, thank you. The success of the past fifty years is your accomplishment, and the hope for the next fifty is your charge.

To the members of the Subcommittee, thanks again for the opportunity to testify today. I look forward to answering any questions you may have.