

# Clean Water Act Modernization

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The Water Environment Federation (WEF)[\[1\]](#) is the leading organization dedicated to the quality of our nation's waters. Through the work of WEF members and others, the Clean Water Act has been highly successful in helping achieve national clean water goals. Federal, state, and local governments, as well as the private sector, have contributed enormous financial and technical resources toward solving water quality problems. We have witnessed a rebirth of countless lakes, streams, rivers, and coastal areas. High levels of wastewater treatment are the norm throughout the United States. Public awareness of, and support for, the value of clean water is extremely high. The United States enjoys one of the highest levels of water quality in the world.

The Clean Water Act is currently over 35 years old. The 1972 Act did result in many spectacular successes in redressing the harm that generations of population growth and industrial development had wreaked upon the nation's waterways. However, in its current form, the Clean Water Act is unable to affect significant further advances, nationally, in water quality improvement. This is evidenced by a suite of recent assessments that indicate water quality improvement has plateaued in spite of the current level of public and private resources devoted to water quality and ongoing federal and state program delivery.

The following are some representative issues that now challenge this nation's capability to achieve water quality goals:

- Population growth over the next 35 years will increase the US population to over 400 million people. This will increase pollution loads in treated effluents to 1972 levels or more.
- Urban density will increase, particularly as people locate to minimize personal transportation costs. This will place more pressure on urban stream corridors.
- Climate change will alter precipitation patterns and cause more intense precipitation in some areas, increasing wet weather challenges.
- Aging infrastructure strains the budgets of utility systems to repair and replace, and if not addressed before failure, poses threats to water quality and public health.
- Wastewater treatment plants have spent billions improving their effluent quality and are bumping the technology ceiling to achieve further improvements. Yet, unregulated non-point source pollution continues to degrade water bodies, particularly with nutrients, bacteria, and sediment, and accounts on its own for 40 percent of impaired waters nationally. Intensified agricultural practices for both crops and animal production are of particular water quality concern.
- Local taxpayers/utility customers are questioning ever-increasing fees required to address both aging infrastructure needs and advanced wastewater treatment limits.
- State agencies, the first line of delivery of Clean Water Act programs, are unable to adequately administer mandated activities due to the massive gap in resources needed and provided.

## **WEF Position**

The Water Environment Federation urges action for a national re-commitment to clean water. The Clean Water Act must be updated to incorporate the tools and policies to assure that necessary water quality improvements will occur in all US waters. The overarching principal for a revised Clean Water Act should be employment of a holistic approach to water quality management that integrates water quality and quantity and the benefits provided to the environment, community and economy. With this context, WEF recommends that the following components need to be codified:

**Watershed Management** – Require site-specific Watershed Management Plans where such plans are needed. Site-specific plans should serve as the adaptive management framework for the integration of the disparate programs and acknowledge and quantify pollutional inputs from all sources media (land, air, pesticide application, hazardous waste) and prevail upon the interfacing legislation (i.e. SDWA, FIFRA, Farm Bill, Clean Air Act, etc.) to focus their respective tools and programs on achieving the goals of the plan. Non point sources must be subject to regulation as needed to achieve water quality targets. Trading programs should be affirmatively recognized and provisions incorporated to encourage trading programs. Governance must be created as necessary, particularly for watersheds involving multiple political jurisdictions and states where none exists.

**Achieving Sustainability** – The Act should be revised to formally incorporate sustainability and embrace actions that move water management towards sustainable approaches, including provisions to encourage installation of green infrastructure, water reuse and conservation, energy recovery, and management of storm water as a resource. Further, as applicable, projects and programs should be required to assess associated lifecycle greenhouse gas emissions and triple bottom line (environmental, economic and social) benefits.

**Research and Technologies** – Water quality improvements cannot significantly occur without new and improved cost-effective technologies. Similar to European and Pacific Rim Governments, the United States must renew its commitment to facilitating research. The Act needs to be revised to strengthen support for public-private partnerships in technology development for the marketplace, with particular emphasis on centralized treatment and distributed systems, urban runoff and non point sources, pollution prevention and green infrastructure. Innovative approaches should be encouraged without fear of consequences should the technology not achieve emission compliance.

**Water Quality Standards** – Water quality standards are the foundation for all actions to improve water quality. They are subject to increasing scrutiny as technology controls give way to water quality-based point source controls and Total Maximum Daily Loads analyses and associated strategies. Water quality standards for many waters are out of date or inappropriate in terms of designated uses; for example, existing water quality standards do not adequately reflect wet weather or nutrient concerns. Thus, the Act should be revised to facilitate efficiencies in setting and revising standards, assure goals are attainable and embrace adaptive movement towards achieving established standards.

**Climate Change** – The implications of climate change to the nation's efforts to improve water quality are significant. Effects on stream flows will, in turn, impact water quality status. Revisions to the Act should incorporate an integration of climate change impacts in water quality standards, monitoring programs, wet weather controls, reuse, receiving stream flows, facility planning and design.

**Permitting and Enforcement** – The Clean Water Act's current provisions have created a burden on permitting agencies that are detracting from other more value added activities. Changes are needed that will both reduce administrative burden without compromising efficacy. For example, certain permits need not be renewed every 5 years and enforcement efforts are best focused on actions that will improve receiving water quality. Streamlining provisions are critical given the resources required.

**Funding** – It is well documented that the mandates of the Act are severely underfunded, to the extent it is a major limiting factor in the effectiveness of its mandated programs. The backlog of wastewater infrastructure needs is of the magnitude of \$150 billion to \$400 billion over the next 20 years. States, localities, and the private sector face increasing costs for nonpoint source controls and green infrastructure. Moreover, state agencies estimate current resources at or less than one-half of that needed to adequately administer Clean Water Act programs. It is an unavoidable observation that failure to dedicate resources is directly related to failures to improve water quality. A revised Act must renew federal support to funding levels adequate to assure meeting water quality goals. Alternatively, the timeframe for accomplishing the Act's goals should be adjusted to align with resources provided and/or program streamlining applied to reduce costs. Most importantly, funding is need in the State Revolving Funds and to support state agencies that are delegated the day-to-day responsibility for program implementation. [For more discussion on State Revolving Funds, see the WEF position statement: Financial Sustainability for Water Infrastructure].

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[\[1\]](#) Formed in 1928, the Water Environment Federation (WEF) is a not-for-profit technical and educational organization with 36,000 individual members and 75 affiliated Member Associations representing water quality professionals around the world. WEF and its Member Associations proudly work to achieve our mission of preserving and enhancing the global water environment.