

EXECUTIVE SUMMARY



The Clean Water Act

A Blueprint For Reform

By William L. Andreen and Shana Campbell Jones

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About the Center for Progressive Reform

Founded in 2002, the Center for Progressive Reform is a 501(c)(3) nonprofit research and educational organization comprising a network of scholars across the nation dedicated to protecting health, safety, and the environment through analysis and commentary. CPR believes sensible safeguards in these areas serve important shared values, including doing the best we can to prevent harm to people and the environment, distributing environmental harms and benefits fairly, and protecting the earth for future generations. CPR rejects the view that the economic efficiency of private markets should be the only value used to guide government action. Rather, CPR supports thoughtful government action and reform to advance the well-being of human life and the environment. Additionally, CPR believes people play a crucial role in ensuring both private and public sector decisions that result in improved protection of consumers, public health and safety, and the environment. Accordingly, CPR supports ready public access to the courts, enhanced public participation and improved public access to information. The Center for Progressive Reform is grateful to the Bauman Foundation, the Beldon Fund, and the Deer Creek Foundation for their generous support of its work.

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The 1972 passage of the Clean Water Act marked an important milestone in the nation's environmental history. Motivated by public outrage at oil spills covering hundreds of square miles, massive fish kills caused by pollution, and rivers so laden with pollutants that they actually caught fire, Congress adopted the measure over the veto of President Richard Nixon.

For its time, the bill was genuinely revolutionary, and it has done much to clean up the nation's waterways. The volume of pollutants discharged from factories and sewage treatment facilities has decreased significantly. The rate of yearly wetlands loss has decreased. And, most important, many of the nation's waterways are cleaner today than they were when the CWA was passed.

While the law has accomplished much, much more remains to be done. Almost half of the nation's waters are still "impaired" – too polluted to serve as sources of drinking water, recreational areas, or to support fish and wildlife. Wetlands continue to be lost to pollution and development. Nonpoint source pollution – runoff from farms, for example – is the leading cause of water pollution today, but it is inadequately addressed by the CWA. Industrial facilities, meanwhile, are discharging toxics into sewer systems that then pass into waterways. In addition, the nation's wastewater infrastructure is aging and showing its wear. All the while, enforcement has declined, particularly in the last few years. Since 2001, two Supreme Court decisions – *Rapanos* and *SWANCC* – have thrust the CWA into the spotlight, paring back the CWA's protection of wetlands and other waters.

Meanwhile, as these all-too-familiar problems mount, climate change threatens to put even more stress existing water resources and the ecosystems that depend upon them. Competition for water among agricultural, municipal, industrial and ecological uses will increase. Rising sea levels will threaten already vulnerable salt marshes and other coastal habitats. Heavy precipitation caused by extreme weather events will increase sewer overflows, degrade water quality, and increase the likelihood of water-borne disease.

In short, while the Clean Water Act has brought about significant gains, it is long past time for a wide-ranging update. The Center for Progressive Reform's *Blueprint for Reform: The Clean Water Act*, by CPR Member Scholar William L. Andreen and CPR Policy Analyst Shana Campbell Jones, is a comprehensive analysis that presents a number of specific and meaningful reforms for the CWA that address existing problems and prepare for the new problems climate change will create. This white paper is a summary of that Blueprint, highlighting its key findings and recommendations. On page 11 is a chart of "Key Provisions and Proposed Reforms," mapping the Blueprint's proposed reforms to the applicable statutory provisions. The complete Blueprint is available at the Center for Progressive Reform's website, www.progressivereform.org. Although some endnotes are included in this Executive Summary, more complete citations are available in the Blueprint.

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The CWA's Jurisdiction: Restoring Its Broad Scope

Congress intended the Clean Water Act to be comprehensive and ambitious. The law's stated objective was "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."¹ Because water flows through wetlands, headwaters, streams, rivers, lakes, and estuaries without regard to political boundaries, keeping the nation's waters clean has long been understood to require broad federal protection not just for the mighty Mississippi and other well-known waterways, but also for the comprehensive network of bodies of water that flow into them.

Since 2001, however, two Supreme Court decisions – *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)* and *Rapanos v. United States* – have thrown this longstanding approach into chaos. By stressing the word "navigable" in these decisions, the Supreme Court put many wetlands, headwaters, and intermittent streams arguably outside of the CWA's traditional scope. *Rapanos*, in particular, is highly fractured decision, and great regulatory uncertainty has ensued. The result is that, even as climate change is complicating the ways in which the nation's waters interconnect, the Court's rulings take us backward in a time when proactive and comprehensive efforts to protect wetlands and intermittent streams and rivers from the consequences of climate change are sorely needed. While these decisions arose in the wetlands (§ 404) context, the "issue of what waters are protected is critical to the whole functioning of the CWA."²

Blueprint for Reform: Restore the CWA's Broad Jurisdiction

Delete the term "navigable" from the CWA to make clear that Congress intends the CWA to extend to isolated waters and wetlands, as well as headwaters and intermittent waters. For the CWA to function as it was designed, the term "navigable" must be deleted from the CWA to make clear that Congress intends that the many surface waters and wetlands which have been protected for approximately 30 years under the CWA remain protected. Measures such as the Clean Water Restoration Act would greatly reduce the regulatory and legal uncertainty that has accompanied the *SWANCC* and *Rapanos* decisions and restore the CWA's jurisdiction to its initial scope. The proposed legislation would adopt a statutory definition of "waters (or water) of the United States" based on the longstanding definition in EPA's and the Corps' regulations; clarify that the CWA is principally intended to restore and protect the chemical, biological, and physical integrity of all of the nation's waters, not just navigable waters; and make findings that provide the basis for Congress's assertion of constitutional authority over the nation's waters, as defined in the Act, including so-called "isolated" waters, headwater streams, intermittent waters, small rivers, ponds, lakes and wetlands.³

Strengthen Pollution Controls

The CWA made it illegal for any point source – that is, a specific source of pollution – to discharge any pollutant into the waters of the United States unless specifically authorized by permit. This approach reflects the principle that no person, municipality, or company has the right to pollute waters merely because the waters are capable of assimilating the waste. More specifically, by combining technology-based industrywide regulations (effluent limits) with water quality standards, the CWA created a comprehensive scheme designed to combat the scourge of water pollution.

Technology can take us only so far, however, if the technology-based limitations are outdated. During the past 15 years, EPA has updated only one of the thirteen effluent

limitations for the greatest industrial discharges of toxic water pollution.⁴ Meanwhile, EPA has yet to develop any effluent limitations for such water-intensive industries as the coal bed methane production industry or the construction and development industry.⁵ Similarly disturbing, in 2005, more than 240 million pounds of toxic chemicals were discharged into the nation's waterways.⁶ Of that, approximately 51 million pounds were released from municipal sewage plants.⁷ Much of that came from indirect industrial dischargers subject to the CWA's pretreatment program, widely regarded as a failure, because many facilities simply fail to meet pretreatment standards, and because enforcement is lax.⁸

It is vital, therefore, to build upon the CWA's initial success to ensure that the technology-based limitations are as comprehensive as possible and that the limits reflect the most modern and effective technologies available. The Blueprint for Reform, therefore, recommends several specific reforms to the CWA's technology-based limitations, so that more pollutants are controlled, technological improvements are incorporated, and technological innovation is promoted.

Blueprint for Reform: Strengthen Pollution Controls

First, Congress should amend § 301(b) to require Best Available Technology (BAT) – a more stringent standard – for conventional pollutants. While gains have been made, conventional pollutants – fecal coliform (bacteria), to name an example – continue to impair water quality. The CWA was designed to impose progressively more stringent controls on pollution. Requiring BAT for conventional pollutants would further the CWA's design of forcing technological innovation.

Second, Congress should amend § 304(b) to make the BAT effluent guidelines apply to conventional pollutants. BPT and BCT effluent guidelines, which apply to conventional pollutants, are subject to some cost-benefit balancing, while the BAT guidelines require the consideration of cost but no comparison of cost to benefits. If we are serious about reaching the Act's zero discharge goal, we should hold conventional pollutants to the same standards as toxic and nonconventional pollutants.

Third, Congress should amend § 301(d) and § 304 to make clear that EPA has a mandatory duty to revise BAT limitations whenever technological improvements meet the factors set forth in § 304(b). BAT cannot be the engine of innovation it was designed to be if limitations are based on old technologies. By amending § 301(d) in this way, EPA will have a mandatory duty to require polluters to keep pace with technological improvements.

Fourth, Congress should provide EPA the funding it needs to allow the agency to thoroughly review existing BAT limitations and permit revisions when necessary. According to a 2007 GAO analysis of EPA's budget and workforce for fiscal years 1997 through 2006, EPA's total budget declined 13 percent in real terms.⁹ In 2004, EPA transferred at least 20 of the approximately 55 employees responsible for developing effluent limitations to another division within the Office of Water, primarily because of budget constraints.¹⁰ Not surprisingly, only two effluent limitations have been revised or issued since this occurred. Without adequate funding, EPA will continue to be placed in the untenable position of choosing between reviewing and updating existing limitations and performing other important regulatory duties.

Fifth, Congress should fund studies to assess in a comprehensive manner the long-term impact of point source regulation across the entire nation. Knowing how well our pollution control strategy has worked over the years is crucial. While EPA has done such a study for organic pollutants, such a study is necessary for other relevant pollutants including bacteria, nutrients, suspended solids, and toxics.

Sixth, Congress should amend § 402(q) to require communities with combined sewer systems to incorporate green infrastructure into their Long Term Control Plans, which are required by the CWA. Green infrastructure techniques such as preserving and restoring vegetated areas, utilizing porous pavements, and creating riparian buffers provide "rain management benefits" akin to many of the natural systems we have lost due to development.¹¹ By incorporating such techniques, combined sewer systems would be taking affirmative and proactive steps to manage and reduce stormwater before it enters the collection system, thus lowering a community's reliance on traditional stormwater structures, reducing costs, and ultimately preventing pollution caused by sewage overflows.

Address Information Constraints

One reason the CWA's National Pollutant Discharge Elimination System (NPDES) permitting program for point sources has been so successful is that Congress authorized EPA to impose substantial monitoring and reporting obligations upon regulated polluters. Determining a violation is thus fairly straightforward, involving a mere comparison of permit restrictions with the discharger's actual performance. The same monitoring and reporting obligations are conspicuously missing in the stormwater and Concentrated Animal Feeding Operation (CAFO) contexts, however.¹² Addressing the information constraints unique to stormwater runoff is critical to the effort to clean up the nation's waters.

Blueprint for Reform: Address Information Constraints

First, Congress should amend § 308(b) to make it clear that Notices of Intent¹³ and permittee-developed plans such as Storm Water Pollution Prevention Plans and Nutrient Management Plans submitted under general permits are subject to the CWA's public availability provisions. The federal circuits are split as to whether the CWA requires public review of management plans developed under general permits, in contrast to NPDES permits.¹⁴ By making it clear that Notices of Intent and permittee-developed management plans submitted under general permits are subject to the CWA's public availability provisions, Congress would ensure that the public is informed about projects that impact their lives and their environment.¹⁵

Second, Congress should authorize EPA to create a meaningful monitoring program for stormwater and CAFO discharges under general permits that is conducted by a governmental agency, whether it be local, state, or federal. Monitoring stormwater and animal waste discharge is not easy, given that the pollution arises intermittently and from a variety of sources. We must recognize the unique difficulties inherent in stormwater and animal waste monitoring and depart from the "self-monitoring" approach utilized with industrial end-of-pipe dischargers. Better information is crucial if we are to hold polluters accountable.

Strengthen Water Quality Based Standards

Although crucial to improving water quality, point-source control by the use of uniform technology-based standards is only the first step under the CWA's regulatory scheme. The CWA also created a water-quality based program to augment the technology-based scheme.¹⁶ A point source may therefore be subject to more stringent permit conditions if necessary to meet water quality standards. Unlike technology-based standards, which focus on the source of pollution, water quality based standards are based on how the pollution affects the quality of the receiving waters.

The water quality step in the CWA's overall pollution control strategy has not worked as well as the technology-based, effluent limitations approach, but it has the potential to reduce nonpoint source pollution significantly. This is so because the "total maximum daily loads" (TMDL) process under § 303 requires that all sources of pollution in a waterbody be included in its calculations, with reduction allocations then made to both point and nonpoint sources in order to reduce the pollution. In order for this to happen in a comprehensive and uniform manner across the country, however, Congress must clarify § 303 of the CWA in several ways.

Blueprint for Reform: Strengthen Water Quality Based Standards

First, Congress should amend § 303 to ensure that impaired waters are identified in comprehensive fashion. A waterbody is more than its chemistry. Wildlife and biological criteria also constitute important ways to assess a waterbody's health. Under some applications of § 303, however, only pollutant concentration levels are considered when determining violations. Section 303(d) should be amended to clarify that a waterbody is impaired not just when particular chemical criteria are violated, but whenever it cannot meet its designated use. State water quality criteria (§ 303(c)) should be expanded to include biological criteria and minimum flows so that wildlife and aquatic ecosystems are protected.

Second, Congress should fund state agencies adequately to expand the scope and accuracy of water quality monitoring efforts. TMDL development depends on water quality data. Under the CWA, water quality monitoring is largely a state's responsibility. According to one estimate, however, "states are operating their monitoring programs with about one-half of the resources they need."¹⁸ The proper development of TMDLs requires more federal resources than we have committed to date to improve the quantity and quality of water quality monitoring efforts. Accurate and comprehensive water quality monitoring also will be crucial in order for us to understand how climate change is altering flows and the quality of our waters.

Third, Congress should amend § 303 to directly address waters that are impaired, in whole or in part, due to various hydrologic modifications. Hydrologic modifications – dams and channelization activities, for example – are second only to agriculture as the leading cause of water quality impairment for our rivers, lakes, and streams.¹⁹ Despite this, EPA's policy has been to conclude that, for the purposes of TMDLs, "flow, or lack of flow," is not a "pollutant" under the CWA. Consequently, by not requiring TMDLs for flow or hydrologic modifications, "EPA leaves no CWA remedy for one of the most serious problems facing American waters."²⁰ As climate change is predicted to alter water flows and levels throughout the U.S., this gap will only become more serious.

Fourth, Congress should amend § 303 to directly address waters that are impaired, in whole or in part, due to climate change. The prospect of increased precipitation variability and extreme weather events caused by climate change threatens to adversely impact water quality. Accordingly, including the water-quality effects of climate change in the assessment of water resources is important.

Fifth, Congress should amend § 303 to set reasonable deadlines for the establishment of TMDLs. Section 303(d) provides that states shall submit their TMDLs to EPA "from time to time," hardly a fixed deadline. Although some progress has been made, thousands of TMDLs remain to be created. Amending § 303 to create an ultimate deadline, with periodic milestones, for the phased-in establishment of TMDLs would insert much-needed accountability into the TMDL program.

Sixth, Congress should amend § 303 to ensure that TMDLs are translated into stricter permit limits and mandatory nonpoint source controls by a reasonable deadline. If the TMDL process is to be more than an expensive paper exercise, the CWA must be clarified so that it ensures that the pollution reduction targets outlined in TMDLs are actually achieved. TMDLs are particularly crucial if we are to begin to address nonpoint source pollution, but they must be implemented in a way that forces nonpoint sources of pollution to control their pollution.

Control Nonpoint Source Pollution

The CWA's success at controlling point sources of pollution contrasts starkly with its failure to address nonpoint sources of pollution. Unlike point sources, nonpoint sources of pollution fall outside the CWA's permit requirements and enforcement mechanisms. Consequently, nonpoint source pollution is now the dominant cause of water pollution in the United States, "dwarfing all other sources by volume, and in conventional contaminants, by far the leading cause of nonattainment for rivers, lakes, and estuaries alike."²¹

Section 319 of the CWA requires the states to identify waters impaired by nonpoint source pollution as well as the sources of that impairment. The states are then required to develop Best Management Plans (BMPs) for addressing those nonpoint source problems. State's with plans approved by EPA are eligible for federal assistance. One major weakness of the § 319 program stems from the fact that many states adopted non-regulatory approaches, including

voluntary BMPs, to deal with the problem, and § 319 provides EPA with only carrots – no sticks – to prod states toward effective solutions.

Climate change will make the problem of nonpoint source pollution even more difficult to address. Nonpoint source pollution is fundamentally related to climate (storms and precipitation levels, for example) and land use practices. Climate change will surely affect both of these variables. Not only will heavier rainfall events produce more runoff, but some efforts to adapt to climate change could increase sources of nonpoint source pollution by changing land use practices.

Blueprint for Reform: Strengthen Nonpoint Source Management Programs

First, Congress should amend § 319 to require that states update their lists of new waters impaired by nonpoint source pollution every two years. Prior to receiving federal assistance to implement their management programs under § 319(a), states submit to EPA “state assessment reports” that identify waters that cannot reasonably be expected to attain water quality standards. Section 319, however, does not require states to update their assessments.

Second, Congress should amend § 319 to require that states review and submit, when necessary, revised management plans, subject to EPA review, every two years. In order to receive federal funding, states must submit a management program plan identifying best management practices to control nonpoint source pollution, but there is no requirement that these plans be re-evaluated by the states and revised.

Third, Congress should amend § 319 to require that management plans include enforceable conditions and requirements. Put simply, § 319 does not require states to implement their management plans. No enforcement mechanism exists. As long as EPA’s role is one of “advice and encouragement” instead of active enforcement of specific criteria, our approach to nonpoint source pollution will remain unsuccessful.

Fourth, Congress should amend § 319 to give EPA the authority to promulgate all or a portion of a state’s nonpoint source management plan in the event EPA disapproves of the state’s plan, in whole or in part, and the state fails to remedy the problem. As § 319 is currently written, EPA has a choice: fund a state nonpoint source management program, no matter how inadequate, or deny funding, with the result being that a state is deprived of the very funds that might allow it to make some progress. There is no reason why § 319 should not look like other CWA programs, which give EPA the authority to take action when the states fail to do so.

Fifth, Congress should amend § 319 to require states to factor climate change in their management plans. Climate change and our efforts to adapt to climate change threaten to worsen nonpoint source pollution. States must plan for how climate change will affect their efforts to control nonpoint source pollution by taking into account, for example, the way in which increased rainfall and extreme weather events will increase runoff and erosion.

Invest in Sewage and Stormwater Treatment Infrastructure

Sewage contains all manner of bacteria, pathogens, hormones, medicines and other drugs, some of it excreted by humans, some of it simply disposed of in toilets or sinks. Some of those chemicals and organisms end up in the nation’s waterways, the result of sewage overflows. In fact, approximately 850 billion gallons of raw sewage from combined sewer systems – typically older systems collecting both sewage and stormwater in a single system – overflow into the nation’s waters yearly.²² In addition, 51 million pounds of toxic chemicals were released from municipal sewage plants in 2005.²³

When Congress passed the CWA, it did more than create pollution controls – it invested in local communities by building and upgrading sewage treatment plants. An estimated \$390

billion, however, will be required over the next 20 years to replace existing systems with new ones to meet increasing demands.²⁴ Despite these great needs, the Clean Water State Revolving Fund (SRF), which funds the construction of waste treatment facilities, is now at its lowest funding level in a decade. The Natural Resources Defense Council estimates that the gap between current funding levels and actual needs falls in the range of \$17 to \$20 billion per year.²⁵ And these estimates do not take into account climate change, which is predicted to affect sewage treatment facilities and collection systems significantly. Unless current funding levels increase, however, the nation's sewage treatment infrastructure will not be prepared for tomorrow's climate.

Blueprint for Reform: Invest in Sewage and Stormwater Treatment Infrastructure

First, Congress should provide direct federal grants to municipal treatment facilities (including collection systems) for construction and upgrades and/or expand funding for the State Revolving Fund. “Unless investment in wastewater infrastructure substantially increases and treatment efficiency improves, EPA predicts that by 2025 sewage pollution will exceed 1968 levels — the highest in our nation's history.”²⁶ Increased investment is necessary. Otherwise, pre-CWA sewage pollution levels will return.

Second, Congress should amend Title II of the CWA to require that any loans for sewage treatment plant construction and upgrades must comply with the National Environmental Policy Act (“NEPA”) to ensure that funds will not have undesirable and avoidable environmental impacts. According to NRDC, about “20 percent of SRF funds paid out [in 2006] built new sewer systems that fuel sprawl development, which has well documented adverse impacts on water resources.”²⁷ While direct grants to construct sewage treatment plants require NEPA compliance, SRF loans do not. All sewage construction funding should be reviewed vigorously in order to ensure that funding decisions do not, for example, contribute to urban sprawl or encourage growth in sensitive areas.

Third, Congress should require public notification when sewage spills (overflows such as bypasses and upsets) occur. Although NPDES permits require sanitary sewer systems to report sewage spills to the government, public notification is not required, and spills are rarely publicized.²⁸ Just as “code red” days alert us to dangerous air pollution, mandating that POTWs notify the public whenever sewage spills occur will allow citizens to protect themselves by avoiding contact with untreated sewage. S. 2080 and H.R. 2452, both Sewage Overflow Right-to-Know Acts, are examples of legislation that would achieve this purpose.

Fourth, Congress should fund a taskforce to study and recommend how we should address pharmaceutical contamination in wastewater. Standard wastewater treatment does not effectively remove pharmaceuticals from wastewater effluent. Although it appears that more advanced treatment methods remove chemicals such as hormones and antibiotics from wastewater, much is not known about how these chemicals interact with each other, what treatment works best, and if they disrupt the treatment process.

Fifth, Congress should require EPA to issue guidance that contains model stormwater ordinances for cities and other communities. Many local communities across the United States are implementing effective stormwater measures, but more should be done to improve stormwater management and to support, instead of discourage, the use of green infrastructure. Guidance providing model stormwater, erosion, and sediment control ordinances would help municipalities and states implement better management practices and stronger enforcement measures.

Protect Wetlands and Aquatic Habitats

Section 404 of the CWA is the primary federal provision regulating wetlands. Under its terms, those who wish to discharge dredged or fill material into “waters of the United States,” including many wetlands, must obtain a permit from the U.S. Army Corps of Engineers (“Corps”). Until recently, “waters of the United States” had been read expansively, thus protecting most surface waters and wetlands.²⁹ But two recent Supreme Court decisions have narrowed § 404's jurisdictional scope by stressing the term “navigable” in the Act.³⁰ *Rapanos*, in particular, did much to confuse and little to resolve how a “navigable

waters” test should be applied, and the lower courts, citizens groups, the Corps, and EPA will be grappling with the decisions for years to come.³¹

Wetlands policy is in turmoil in other areas as well. Mitigation projects – restored or created wetlands areas designed to compensate for wetlands loss caused by development – are also woefully inadequate to protect wetlands as currently implemented under EPA and Corps policy. Many mitigation projects, although planned for, are either never begun or completed. The Corps rarely monitors or inspects mitigation projects, contributing to the problem. In addition, thousands of acres of wetlands are lost yearly because of a regulatory gap resulting from *National Mining Association v. Army Corps of Engineers*,³² a D.C. Circuit decision that invalidated the requirement of a § 404 permit for excavation channelization activities that redeposited dredged or excavated material into wetlands or other waters of the United States.³³ Finally, climate change is likely to create serious threats to wetlands. Rising sea levels caused by climate change are predicted to accelerate wetlands loss and increase flooding of coastal and estuarine areas.³⁴

Blueprint for Reform: Protect Wetland and Aquatic Habitats

First, Congress should amend the CWA to delete the term “navigable” from § 404 to make clear that Congress intends the CWA to extend to all waters of the United States, including isolated waters and wetlands, as well as headwaters and intermittent waters. SWANCC and *Rapanos* have created havoc with our wetlands policy. Deleting the term “navigable” from the Act and adding “waters (or water) of the United States” would make it absolutely clear that Congress intended the Act to protect all waters of the United States from pollution.

Second, Congress should amend § 404 to clarify that Congress intends that the CWA not only regulates discharges into wetlands but also regulates activities that drain them. Every year, thousands of acres of wetlands are lost because, unless a discharge of dredged or fill materials is involved, the act of draining wetlands is not subject to CWA jurisdiction. “A policy focused squarely on wetland conservation and the goals of the CWA would seek to regulate this activity.”³⁶ This would ensure that our wetlands were comprehensively protected from destruction regardless of the activity involved.

Third, Congress should amend § 404 to set forth explicit criteria and guidance to assess whether mitigation plans adequately compensate for wetlands loss. Mitigation efforts have simply not been carried out well in most Corps districts. While Corps’ oversight could be stronger under its own regulations, the CWA does not provide explicit criteria and guidance for the Corps to use in assessing whether the mitigation plans actually provide an adequate and verifiable level of compensation for the proposed loss of wetlands. Amending § 404 to establish concrete criteria and guidance for evaluating mitigation plans would improve greatly the likelihood of their success.

Fourth, Congress should amend § 404 to provide that the discharge of dredged material includes any addition, including any redeposit, of dredged material, into waters of the United States which is incidental to any activity, including mechanized land-clearing, ditching, channelization, or other excavation. This action is necessary to close a regulatory gap that has resulted from a court decision that has resulted in the loss of thousands of acres of wetlands to drainage and excavation every year.

Fifth, Congress should provide additional staffing resources for the Corps to analyze § 404 permit applications and to monitor and enforce its § 404 permits, as well as to EPA and the Fish and Wildlife Service to exercise their § 404 oversight responsibilities. The Corps has been routinely criticized for inadequately reviewing permit applications and enforcing the resulting permits, but new resources have not been added to address these well-documented problems. Similarly, EPA and the Fish and Wildlife Service cannot fully exercise their § 404 oversight responsibilities without adequate funding for staff. Additional staffing resources are essential if we want to protect our wetlands.

Sixth, Congress should amend § 404 should to require the Corps to factor in climate change when designing or permitting water projects such as dams and levees and other projects involving wetlands. Wetlands act as natural barriers to protect communities from flooding caused by severe storms, yet Corps projects often end up destroying wetlands. Section 404 should be amended to ensure that the Corps considers climate change when issuing all § 404 permits.

Recommit to Enforcement

At its heart, the CWA's enforcement strategy centers on the NPDES permitting system: it is illegal to either discharge a pollutant without a permit or in violation of a permit. Section 309 provides for EPA's primary enforcement options.³⁵ In addition, states that have been authorized to administer the NPDES program within their borders have concurrent enforcement power, a purposefully redundant back-up to EPA's enforcement authority. Citizens also play an integral role in the CWA's enforcement scheme, both in supplementing government enforcement efforts and spurring EPA to act.³⁷

The CWA's enforcement tools are robust, but even the strongest tools are rendered ineffective by disuse. Between 1997 and 2002, for example, the number of CWA cases EPA referred to

Blueprint for Reform: Recommit to Enforcement

First, Congress should fund an adequate enforcement staff. Enforcement has declined over the past ten years, primarily because of decreases in funding to EPA. From 1997 to 2007, the GAO reports that enforcement funding to EPA regions decreased 8 percent in inflation-adjusted terms, and regional officials report that they reduced the number of enforcement staff by about 5% to address funding shortages.⁴³ Adequately funding enforcement will send a message that Congress is serious about both law enforcement and the improvement of water quality.

Second, Congress should set aside more funding for state inspection of stormwater sources and enforcement of stormwater regulations. Thousands of previously unregulated stormwater sources are now regulated and, therefore, must be inspected and held to their permit requirements. Funding for CWA enforcement on the state level, however, has remained stagnant.

Third, Congress should amend § 505 to allow citizen suits for “wholly past” violations. A significant barrier constraining citizen enforcement is due to the fact that citizens cannot sue for wholly past violations of the CWA. The Clean Air Act, in contrast, allows citizens to sue for wholly past violations if evidence exists that the alleged violation has been repeated. Congress should amend § 505 to give citizens the ability to hold polluters accountable for a past discharge, if they can produce evidence showing that the violation as recurred.

Fourth, Congress should amend § 309 to require that EPA report annually on its enforcement achievements and those of the states from the prior year. Although EPA typically issues such a report, the variables reported often change, making year-to-year comparisons difficult. In addition, detailed data on state enforcement is often missing. Congress should specifically require the preparation of a detailed annual report so that EPA enforcement activity is transparent.

Fifth, Congress should amend § 313 to expressly waive federal sovereign immunity for civil and administrative penalties so that EPA, the states, and citizens groups can hold federal facilities accountable for polluting our waters. Congress has known for many years that the CWA needs its own Federal Facility Compliance Act (FFCA), as no environmentally sound reason exists for the CWA not to be on the same footing as Resource Conservation and Recovery Act (RCRA) or the Safe Drinking Water Act with respect to holding federal facilities accountable for their pollution.

Sixth, Congress should amend § 313 to authorize EPA to issue administrative penalties against other federal agencies for CWA violations. When Congress gave EPA the authority to issue administrative enforcement actions against federal facilities violating RCRA, it gave EPA powerful enforcement leverage to bring federal facilities into compliance. EPA should have this same leverage in the water pollution context.

Seventh, Congress should amend § 502 to include the United States in the CWA's definition of a person. In *Department of Energy v. Ohio*, part of the Supreme Court's rationale that federal facilities were immune from civil penalties under the CWA's citizen suit provisions centered on the fact that the United States was not included in the CWA's definition of “person.”⁴⁴ Congress should amend § 502 to include in its definition of “person” each department, agency, and instrumentality of the executive, legislative, and judicial branches of the United States.

A sediment
plume
polluting a
river.



DOJ fell 55 percent.³⁸ The number of people convicted for environmental crimes dropped from 738 in 2001 to 470 in 2006.³⁹ During 2005, more than 3,600 major dischargers (57 percent of about 7,000)⁴⁰ exceeded their permit discharge limits at least once.⁴¹ Meanwhile, the federal government is itself a notorious polluter, with the Departments of Defense and Energy creating some of the largest and most polluted sites in the country.⁴² While this is so, enforcement against federal facilities for violations of the CWA has been difficult for citizen groups, states, and EPA because of the way the Supreme Court has interpreted the CWA's sovereign immunity provision and its definition of "person."

The CWA's Institutional Framework: Strengthen a Fragmented Approach

Although the goal of the CWA – "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" – is broad and seemingly all-encompassing, the nation's strategy for protecting aquatic resources is badly fragmented. While EPA has primary authority over point source pollution, nonpoint source pollution is primarily left to the states. While the Corps tackles wetlands, the Fish and Wildlife Service is responsible for protecting endangered and threatened aquatic species. Flood control management, led primarily by the Corps, reflects a policy formulated out of a "hodgepodge of highly discretionary Flood Control Acts, coupled with piecemeal funding of pet projects through Water Resources Development Acts and other earmarks[.]"⁴⁵ By creating these artificial boundaries, taking a piecemeal approach to protecting water resources, and focusing on "the effects of individual impairments," the current approach has made it difficult to protect the aquatic ecosystem as a whole. A more comprehensive, watershed-oriented approach is needed – one that reflects the way the nation's water resources actually work.

The tremendous impact climate change is likely to have on aquatic ecosystems only makes the need for a more comprehensive and collaborative approach more urgent. Mitigating and adapting to the consequences of climate change will require new ideas, nimble responses, and unprecedented cooperation among federal agencies, states, and local governments. Although states and local governments have been and will continue to make important innovations, as the 35 state members of the Coastal States Organization have put it, "a clear federal strategy for intergovernmental coordination" is necessary if we are to address and adapt to climate change.⁴⁶ The global nature of climate change demands that various governments, institutions, and groups listen to new voices and work together in new ways.⁴⁷ Strengthening the CWA's institutional framework to accompany these new demands is therefore necessary.

Developing such a comprehensive approach will not be easy. We have spent decades creating specialized disciplines and separate legal systems to govern land use, water use, and water pollution, and it will take considerable effort to demonstrate to voters, economic interests, and decisionmakers at all levels of government precisely how land use and water are inextricably connected throughout the whole of a watershed. Nevertheless, action is

required. It is, after all, fundamental that activities that occur in one place in a watershed will have an inevitable impact on water quality and quantity elsewhere in that watershed.

Blueprint for Reform: Strengthen the CWA's Institutional Framework

First, Congress should appoint and fund a commission to conduct a comprehensive study of existing watershed management institutional structures, both in the United States and around the world. The commission should also conduct a review of the problems of fragmentation which have plagued our attempts to comprehensively manage and protect the ecological resources of our watersheds. Drafts of both the study and the review should be made available for public comment. Once the study and review have been completed, the commission should make recommendations regarding the way in which § 303 should be amended in order to create watershed-level institutions that would better coordinate and manage the activities that impact the health and well-being of our nation's waters. Those recommendations should also be made available for public comment in draft form.

Second, Congress should amend § 303 to create watershed-level institutions that would better coordinate and manage the wide range of activities that adversely affect the biological, physical, and chemical integrity of our waters. While we have done a fair job of tackling individual sources of water pollution, we have not succeeded in protecting the aquatic system as a whole. A comprehensive, watershed-oriented approach would reflect the way in which our water resources actually work; would promote the broad action and cooperation needed to protect our waters; and would help to prepare for and adapt to the challenges which climate change will bring about.

Conclusion

The Clean Water Act is an extraordinary and valuable piece of legislation. It has served the nation well, but it is showing its age and is in need of updating. Neither its design nor its implementation was or has been perfect. If it is to achieve its objective of “restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters,” and if it is to adequately address the problems caused by climate change, reforms are needed. Point-source controls must be strengthened. New technological innovations must form the basis of 21st century environmental protection. Nonpoint source pollution must be addressed. Congress must make it clear that the Act extends to intermittent and isolated waters, including wetlands. Increased funding for wastewater infrastructure and EPA enforcement is crucial.

Americans care about clean water. More than half of Americans believe it is a right. Ninety-one percent are “concerned that America's waterways will not be clean for their children and for their grandchildren.”⁴⁸ Thousands of citizens participate in state and local water protection groups. Millions of people vacation at beaches and lakes. An affirmative agenda for clean water must build upon the CWA's success and make the needed reforms to bring the Act into the 21st century. By doing so, Congress will send a clear message that it is committed to the nation's public health, natural beauty, and one of its most precious and valued resources: clean water.

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Key Provisions and Proposed Reforms

Section of Act	Statutory Reference	Description	Proposed Reform	Reform Result
<i>End-of-pipe Controls Plus Water Quality Standards</i>				
402	33 U.S.C. § 1342	NPDES Permit Program. In order to discharge a pollutant into our waters, every point source discharger must obtain a permit and comply with its terms. Permits incorporate effluent limitations unless more stringent permit limitations are necessary to meet water quality standards.		
		Long Term Control Plans. Combined sewer systems must implement certain controls and develop a Long Term Control Plan (LTCP) to meet state water quality standards as part of their NPDES permits.	Section 402(q) should be amended to require communities with combined sewer systems to incorporate green infrastructure into their Long Term Control Plans.	Prevent pollution caused by sewage overflows and save money on storm-water management costs.
301	33 U.S.C. § 1311	Effluent Limitations. Effluent limitations are industry-wide regulations established by EPA that set performance limits for pollution discharge. Existing industrial discharges must meet the following: Best Conventional Pollutant Control Technology (BCT) and Best Available Technology (BAT). POTWs must implement “secondary treatment.”	Section 301(b) should be amended to require BAT for conventional pollutants. Section 301(d) should be amended to make clear that EPA has a mandatory duty to revise BAT limitations whenever technological improvements meet guideline factors set forth in § 304(b).	Force technological innovation and reduce the level of conventional pollutants in the nation’s waters. Require polluters to keep pace with technological improvements.
304	33 U.S.C. § 1314	Effluent Guidelines. Effluent limitations are established by reference to the effluent guidelines which are promulgated under § 304. Section 304 references factors that EPA is to consider in setting effluent limitations.	Section 304(b) should be amended to hold conventional pollutants to the same effluent guidelines as apply to toxic and nonconventional pollutants (BAT).	Force technological innovation and reduce the level of conventional pollutants in the nation’s waters.
303	33 U.S.C. § 1313	Water Quality Standards & TMDLs. Every three years, states must review water quality standards subject to EPA approval. States must also identify which waters will remain polluted after technology-based standards are implemented, prioritize these waters, and establish “total maximum daily loads” (TMDLs) so that the waters meet applicable water quality standards.	Section 303(d) should be amended to ensure impaired waters are identified in comprehensive fashion. Section 303(d) should clarify that a waterbody is impaired not just when particular chemical criteria are violated, but whenever it cannot meet a designated use. Section 303(c) should be amended to include biological criteria and minimum flows so that wildlife and aquatic ecosystems are protected. Section 303 should be amended to directly address waters that are impaired, in whole or in part, due to climate change. Section 303 should be amended to set reasonable deadlines for the establishment of TMDLs.	Protect wildlife and aquatic ecosystems, not just water chemistry. Make it clear that TMDLs must address waters whose biological or physical integrity is impaired by hydrological modifications. Respond to climate change. Insert accountability into the TMDL program

Key Provisions and Proposed Reforms (continued)

Section of Act	Statutory Reference	Description	Proposed Reform	Reform Result
303	33 U.S.C. § 1313	(continued)	Section 303 should be amended ensure that TMDLs are translated into stricter permit limits and mandatory nonpoint source controls by a reasonable deadline.	Ensure that pollution reduction targets outlined in TMDLs are actually achieved.
308	33 U.S.C. § 1318	Public participation. Copies of NPDES permit applications and copies of issued permits must be made available to the public. The federal circuits are split as to whether Notices of Intent and Stormwater Pollution Prevention Plans and Nutrient Management Plans submitted under general permits are subject to these public availability provisions. NPDES permit holders are required to monitor discharges regularly.	Section 308(b) should be amended to make it clear that Notices of Intent and Stormwater Pollution Prevention Plans and Nutrient Management Plans submitted to public availability provisions. Because of the unique difficulties inherent in stormwater and animal waste monitoring, EPA should be authorized to create a meaningful monitoring program for stormwater and CAFO discharges under general permits that is conducted by a governmental agency, whether it be local, state, or federal.	Ensure the ability of the public to monitor permit issuance and scrutinize agency enforcement. Address information constraints.
\$\$\$			EPA's authorization and appropriation bills should contain adequate funds to permit it to thoroughly review existing BAT limitations and and permit revisions when necessary. State agencies should be funded adequately to expand the scope and accuracy of water quality monitoring efforts.	Force technological innovation and require polluters to keep pace with technological improvements. Proper development of TMDLs; better understanding of how climate change is altering water quality.

Nonpoint Source Pollution

319	33 U.S.C. § 1329	Nonpoint Source Management Programs. This provision requires states to identify waters impaired by nonpoint source pollution, to identify sources of that impairment, and to develop Best Management Plans (BMPs) for addressing the problems. States having BMPs approved by EPA are eligible for federal assistance.	Section 319 should be amended to require that states submit updated lists of waters impaired by nonpoint source pollution every two years. Section 319 should be amended to require that states review and submit, when necessary, revised management plans, subject to EPA review, every two years. Section 319 should be amended to require that management plans include enforceable conditions and requirements. Section 319 should be amended to give EPA the authority to promulgate all or a portion of a state's nonpoint source management plan in the event EPA disapproves of the state's plan, in whole or in part, and the state fails to remedy the problem.	Better and up-to-date data. Better and up-to-date BMPs. Insert accountability into BMPs. Insert accountability into BMPs.
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Key Provisions and Proposed Reforms (continued)

Section of Act	Statutory Reference	Description	Proposed Reform	Reform Result
319	33 U.S.C. § 1329	(continued)	Section 319 should be amended to require states to factor climate change into their management plans.	Respond to climate change.

Sewage Treatment Infrastructure

201-219 601-607	33 U.S.C. §§ 1281-1301, 1383-87	Grants and loans for waste treatment plants and runoff control. Provisions by which Congress has funded the construction and upgrades of thousands of sewage treatment plants.	<p>Congress should provide direct federal grants to municipal treatment facilities (including collection systems) for construction and upgrades and/or expand funding for SRF.</p> <p>Title II should be amended to require that any loans for sewage treatment plant construction and upgrades must comply with the National Environmental Policy Act (“NEPA”).</p> <p>Require public notification when sewage spills (overflows such as bypasses and upsets) occur.</p> <p>Require EPA to issue guidance that contains model stormwater ordinances for cities and other communities.</p>	<p>Improve wastewater infrastructure and stop the billions of gallons of sewage that overflow into waters each year.</p> <p>Ensure that, like grants, loans for sewage treatment plant construction and upgrades will not have undesirable and avoidable environmental impacts.</p> <p>Allow citizens to protect themselves by avoiding contact with untreated sewage.</p> <p>Promote effective stormwater laws and ordinances.</p>
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Regulating Wetlands

404	33 U.S.C. § 1344	Permits for dredged and fill material. The primary federal provision regulating wetlands. Those who wish to discharge dredged or fill material into the waters of the United States must obtain a permit from the U.S. Army Corps of Engineers.	<p>The term “navigable” should be deleted from the CWA to make clear that jurisdiction extends to all waters of the United States, including isolated waters and wetlands, as well as headwater intermittent waters.</p> <p>Section 404 should be amended to clarify that Congress intends that the CWA not only regulates discharges into wetlands but also regulates activities that drain them.</p> <p>Section 404 should be amended to set forth explicit criteria and guidance to assess whether mitigation plans adequately compensate for wetlands loss.</p> <p>Section 404 should be amended to provide that the discharge of dredged material includes any addition, including any redeposit, of dredged material, into waters of the United States which is incidental to any activity, including mechanized land-clearing, ditching, channelization, or other excavation.</p>	<p>Make it clear that Congress intended the CWA to protect all waters of the United States from pollution.</p> <p>Protect wetlands from draining.</p> <p>Insert accountability into wetlands mitigation policy.</p> <p>Close a regulatory gap that resulted from a court decision that has resulted in the loss of thousands of acres of wetlands to drainage and excavation every year.</p>
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Key Provisions and Proposed Reforms (continued)

Section of Act	Statutory Reference	Description	Proposed Reform	Reform Result
404	33 U.S.C. § 1344	(continued)	Section 404 should be amended to require the Corps to factor in climate change when designing or permitting water projects such as dams and levees and other projects involving wetlands.	Respond to climate change.
\$\$\$			Provide additional staffing resources for the Corps to analyze § 404 permit applications and to monitor and enforce § 404 permits, and for EPA and the Fish and Wildlife Service to exercise their § 404 oversight responsibilities.	Insert accountability into permit oversight.
			Fund a taskforce to study and recommend how pharmaceutical contamination in wastewater should be addressed.	Understand and respond to pharmaceutical contamination.
<i>Enforcement</i>				
505	33 U.S.C. § 1365	Citizen Suits. The CWA empowers citizens to commence civil actions against any dischargers alleged to be discharging without a permit, in violation of a permit, or in violation of an EPA or state administrative order.	Section 505 should be amended to allow citizen suits for “wholly past” violations.	Hold polluters accountable for past discharges.
309	33 U.S.C. § 1319	Enforcement. Section 309 provides for EPA’s primary enforcement options: it may issue an administrative compliance order; it may assess administrative penalties; it may refer civil cases to the United States Department of Justice for penalties and injunctive relief; and it may refer criminal cases to DOJ for prosecution.	Section 309 should be amended to require EPA report annually and comprehensively on its enforcement achievements and those of the states from the prior year.	Spotlight EPA enforcement efforts.
313	33 U.S.C. § 1323	Federal Facilities Pollution Control. Although federal facilities are subject to the CWA, the Supreme Court has held that the CWA’s sovereign immunity waiver provision applies only to fines designed to induce future compliance instead of penalties for past violations. This deprives states of a powerful tool to hold federal facilities accountable for water pollution. In addition, EPA is not authorized to issue administrative penalties against other agencies for CWA violations.	Modeled on the Federal Facility Compliance Act that amended RCRA, § 313 should be amended to expressly waive federal sovereign immunity for civil and administrative penalties and to authorize EPA to issue administrative orders and penalties against other agencies for CWA violations.	Hold federal facilities accountable for past discharges.
502	33 U.S.C. § 1362	Definitions. The CWA currently defines “person” as an “individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.”	Section 502 should be amended to include each department, agency, and instrumentality of the United States in the CWA’s definition of a person so that federal facilities are subject to civil penalties under the CWA’s citizen suit provisions.	Hold federal facilities accountable for past discharges.
\$\$\$			Fund adequate enforcement staff.	Make the CWA work.
			Set aside more funding for state inspection of stormwater sources and enforcement of stormwater regulations.	Hold sources of stormwater pollution accountable.

Key Provisions and Proposed Reforms (continued)

Section of Act	Statutory Reference	Description	Proposed Reform	Reform Result
<i>Strengthen the CWA's Institutional Framework</i>				
303	33 U.S.C. 1313	Water Quality Standards & TMDLs.	<p>Congress should appoint and fund a commission to conduct a comprehensive study of existing watershed management institutional structures, both in the United States and around the world.</p> <p>Section 303 should be amended to create watershed-level institutions that would better coordinate and manage the wide range of activities that adversely affect the biological, physical, and chemical integrity of our waters.</p>	<p>Plan for better coordination and management of activities that affect water quality.</p> <p>A comprehensive, watershed-oriented approach to water quality that reflects the aquatic system as a whole.</p>

End Notes

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- ⁴ Brief of Amici for Natural Resources Defense Council and Waterkeeper Alliance at 4, *Our Children's Earth Foundation v. EPA*, 506 F.3d 781 (9th Cir. 2007).
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