EPA Policies Concerning Integrated Planning and Affordability of Water Infrastructure

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Summary

For several years, the Environmental Protection Agency (EPA) has been working with states and cities to develop and implement new approaches that will achieve water quality goals cost-effectively and in a manner that addresses the most pressing water infrastructure problems first. Two recent EPA initiatives are an integrated planning policy and a framework policy for assessing a community’s financial capability to meet objectives and requirements of the Clean Water Act (CWA).

Pressed by municipalities about the challenges and costs that they face in addressing needs for wastewater and stormwater control projects, in 2012 EPA issued an integrated permitting and planning policy. The intention of the policy is to provide communities with flexibility to prioritize and sequence needed water infrastructure investments so that limited public dollars can be invested in ways that each municipality finds most valuable.

Water utilities and municipalities have welcomed the opportunity for flexibility under the integrated planning policy. But they have sought clarification of a number of issues, including EPA and state roles in developing integrated plans. A major point of contention between EPA and local government stakeholders has been the agency’s reliance on administrative orders or judicially approved consent decrees to codify integrated pollution reduction plans, rather than through modification of CWA permits. City and town officials say that they would prefer that EPA allow compliance flexibility through permits, rather than subjecting cities and towns to legally binding consent decrees with penalties and fines for noncompliance. The agency takes the position that both enforcement and permits are necessary, depending on individual circumstances.

While integrated planning may be helpful in identifying communities’ relative priorities, a long-standing concern for local governments is EPA’s process for evaluating how much communities can afford for CWA-mandated and other water infrastructure improvements. EPA has worked with communities to refine how the agency determines when a project is affordable for individual communities, because affordability considerations can influence schedules established for a community to meet CWA requirements. In 2014, EPA released a Financial Capability Assessment Framework that identifies a range of information related to a community’s financial strength that may help provide a complete picture of cities’ financial capability in relation to water infrastructure investments.

State and local governments generally support EPA’s efforts to encourage ways for communities to prioritize their CWA infrastructure investments and to consider a wide range of factors that affect affordability. Nevertheless, cities and states have continuing concerns with aspects of both policies. For example, some criticize EPA for relying in part on Median Household Income (MHI) as a measure of community affordability. Further, cities are critical that integrated plans that have been approved so far have been incorporated only into new or amended consent decrees, not CWA permits.

EPA’s integrated planning process and water infrastructure affordability are issues of interest to legislators. For example, bills have been introduced in the 114th Congress that propose to codify an integrated approach to permitting and planning of water infrastructure projects (H.R. 1093/S. 2358, H.R. 1705, S. 2768, and S. 2848). House and Senate committees have held hearings on EPA’s integrated planning policy and the agency’s approach to determining a community’s ability to afford water infrastructure projects.
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According to the U.S. Conference of Mayors, cities spend 6-7 cents of every tax dollar collected from their citizens on water and sewer systems, making it the third-biggest expense for cities behind education and emergency personnel. Many state and local governments face difficult economic challenges with limited resources and financial capability to meet their obligations to assure safe and clean water for their citizens.

For several years, the Environmental Protection Agency (EPA) has been working with states and cities to develop and implement new approaches that will achieve water quality goals cost-effectively and in a manner that addresses the most pressing water infrastructure problems first. This report examines two such recent initiatives by EPA, an integrated planning policy and a framework policy for assessing a community’s financial capability to meet objectives and requirements of the Clean Water Act (CWA).

**EPA’s Integrated Planning Policy**

The prominence of these issues is due in part to EPA’s use of governmental enforcement to achieve compliance by the municipal sector with CWA requirements. Since 1998, and more intensely since 2008, EPA has focused national enforcement actions on keeping raw sewage and contaminated stormwater discharges out of the nation’s waters as part of the agency’s National Enforcement Initiatives. It is estimated that approximately 70 communities are under federal consent decrees or administrative orders, and many others are under state consent decrees or orders requiring them to address uncontrolled discharges from combined sewer systems (combined sewer overflows, or CSOs) and separate sewer systems (separate sewer overflows, or SSOs). Consent decrees typically specify deadlines for complying with the CWA and involve significant investments from ratepayers to bring about compliance and to achieve associated improvements in water quality infrastructure. Construction associated with consent decrees frequently involves long timeframes—more than a decade in many cases, according to EPA. Other communities are not specifically subject to court-approved enforcement schedules, but are required by CWA permits to take actions, including infrastructure upgrades, to maintain their compliance status.

For some time, municipalities have pressed EPA for greater flexibility to meet the financial and compliance challenges that they face for wastewater, stormwater, and other CWA infrastructure improvements. Correcting CSO problems typically represents the most expensive CWA compliance issue. Cities and towns have urged regulators to recognize how difficult and expensive it can be for them to implement wastewater upgrades, stormwater improvements, and related infrastructure projects, while also providing a range of other necessary municipal services on a day-to-day basis.

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2 A consent decree is a negotiated settlement between the enforcing agency and the permittee. The consent decree can include injunctive relief, which requires actions to bring the defendant back into compliance, and monetary penalties.

In response to such concerns, EPA officials in 2011 issued a memorandum describing the agency’s support for an integrated approach to wastewater and stormwater management. Such an approach, the memorandum said, would allow communities to “maximize their infrastructure improvement dollars through appropriate sequencing of work.” Implementing the integrated approach would require coordination between permit and enforcement actions and supplementary state actions.4

EPA also began a round of talks with municipal officials about the costs of CWA requirements facing local governments. The talks resulted in a framework policy issued in 2012 for communities to pursue integrated planning to manage wastewater and stormwater and thus implement the approach outlined in the 2011 EPA memorandum.5 The policy’s intention is to reduce overall a community’s compliance costs by considering all wastewater and stormwater management obligations in an integrated fashion. It allows communities to prioritize water management goals—such as water conservation or lower wastewater treatment costs—so that limited public dollars can be invested in ways that each city finds most valuable. The policy allows cities and towns to voluntarily seek modification of consent decrees and the terms of CWA discharge permits, and to gain the flexibility to prioritize water quality and infrastructure projects based on affordability. Under this integrated approach, municipalities can evaluate how best to meet all of their CWA obligations within their financial capability, while maintaining existing regulatory standards that protect public health and water quality, and to sequence wastewater and stormwater projects in a way that allows the highest-priority environmental projects to come first.

The policy identifies six elements of an integrated plan. Flexibility is the final element.

- Description of the water quality, human health, and regulatory issues to be addressed in the plan.
- Description of existing wastewater and stormwater systems under consideration, including description of current performance.
- A process for enabling public participation in development and implementation of the plan.
- A process for identifying, evaluating, and selecting alternative means of compliance, such as use of green infrastructure.
- A process for identifying, evaluating, and selecting proposed new projects or modifications to ongoing or planned projects and implementation schedules based on changing circumstances.

A major point of contention between EPA and local government stakeholders has been the agency’s reliance on administrative orders or judicially approved consent decrees, including plans approved under the integrated planning policy, rather than through modification of CWA permits. Mayors, represented by the U.S. Conference of

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Mayors, have stated that they would prefer that EPA authorize compliance flexibility through permits, rather than subjecting cities and towns to legally binding consent decrees with penalties and fines for noncompliance. The agency takes the position that both enforcement and permits are necessary, depending on individual circumstances.

The 2012 policy provides that all or part of an integrated plan can be incorporated into a CWA discharge permit. For example, innovative practices for managing stormwater as a resource—green infrastructure practices and technologies—can be considered and incorporated into permits where such practices provide sustainable solutions for municipal wet weather control.\(^6\)

The policy further provides that all or part of an integrated plan may be incorporated into the remedy of a federal or state enforcement action to address noncompliance with the CWA. EPA initially focused the policy on new enforcement, meaning that cities already subject to consent decrees were unable to take advantage of flexibility to modify existing plans to resolve enforcement actions.\(^7\) However, in 2012, EPA, the Department of Justice, and officials of one city, the District of Columbia, agreed to consider extending compliance deadlines in that city’s 2005 consent decree in order to allow the city to test green infrastructure technologies. To address sewer overflows, the original consent decree called for the city to construct by 2025 three large tunnels capable of holding 31 million gallons of diluted sewage at any one time, allowing the city’s wastewater treatment plant to process the effluent after storms. The 2012 agreement contemplated extending deadlines for some of the new construction required by the consent decree. Further it potentially would allow the city to avoid some construction project elements (constructing one tunnel as planned, but reducing a second tunnel’s size and eliminating the third tunnel), if implementation of a green infrastructure program can reasonably be expected to lead to CSO reductions required by the consent decree, while also satisfying the city’s responsibility to mitigate stormwater runoff.\(^8\) The DC plan illustrates integrated planning because it allows the city to compare the effectiveness of alternatives—green infrastructure and constructed tunnels—to reduce rainwater flows into storm drains enough to stop overflows into nearby waterways.

Under terms of the 2012 agreement, EPA indicated that it would support reopening the consent decree only if it were convinced that green infrastructure will perform as well as construction of tunnels that are designed to capture combined stormwater and wastewater and hold it until it can be processed by the city’s wastewater treatment plant. EPA agreed to support DC’s research into whether the extensive use of green infrastructure could reduce rainwater runoff into sewers enough to eliminate the need for the planned tunnel projects.

In May 2015, EPA, the Department of Justice, and the DC Government revised the 2005 consent decree with the modifications outlined in the 2012 agreement. The revised consent decree also extends the deadline for compliance by five years, to 2030. Officials in other cities have hoped that the EPA-DC agreement could provide a model to be applied elsewhere. Some environmental groups criticized EPA for granting DC additional compliance time for green infrastructure projects that the city could already have pursued, under the existing consent decree.

\(^6\) Green infrastructure uses or mimics natural processes to infiltrate, evapotranspire, or reuse stormwater runoff on the site where it is generated. It includes green roofs, rain gardens, and permeable pavements. For information, see CRS Report R43131, Green Infrastructure and Issues in Managing Urban Stormwater, by Claudia Copeland.

\(^7\) Many consent decrees are modified to reflect new information, improved design, or other factors. These modifications often result in extended compliance timelines.

Utilities and municipalities have welcomed the opportunity for flexibility under the integrated planning policy. But they sought clarification on a number of issues, such as how communities can proactively ensure that the plan they develop will be acceptable to regulators; who determines a community’s most pressing water quality needs; and whether a municipality can include ongoing needs for infrastructure rehabilitation under an integrated planning approach. Some stakeholders believe that clarification is needed regarding state and EPA roles. The agency’s position is that it is the responsibility of cities to work and coordinate with state permitting agencies to develop integrated plans. However, states are uncertain what EPA’s oversight role would be if a state and municipality agree on a plan, but EPA disagrees.9

Some states believe that examples of integrated stormwater and wastewater plans are needed, in part to serve as models for states and communities. To do so, in October 2014, EPA awarded grants to five communities to assist them in developing integrated plans, as well as to provide transferable tools for other interested communities. Funding was awarded to Burlington, VT; Durham, NH; Santa Maria, CA; Springfield, MO; and Onondaga County, NY. The five were selected from 28 communities that had expressed interest in technical assistance from EPA.

With the planning policy in place, a number of communities have developed plans pursuant to it (e.g., Kansas City, KS; Seattle and King County, WA; and Cincinnati, OH). EPA officials have had discussions with other cities about writing and implementing integrated plans to manage stormwater and wastewater. But, nearly four years after the framework policy was announced, the biggest concern to many is that, so far, integrated plans have been incorporated only into new or amended consent decrees, not in CWA permits. Some believe that EPA (especially at the EPA Regional level) is hesitant to approve integrated plans in permits. EPA officials reject such criticism, saying that the agency fully supports use of integrated plans and will work with cities to develop the best approach in individual cases.

**Determining Community Affordability**

While integrated planning may be helpful in identifying communities’ relative priorities, a long-standing concern for local governments is EPA’s process for evaluating how much communities can afford for CWA-mandated and other water infrastructure improvements. Affordability considerations can influence schedules established by EPA and states for communities to meet CWA requirements. In assessing municipalities’ capability to finance infrastructure upgrades, EPA relies significantly on guidance issued in 1997.10

This guidance is intended to provide general boundaries to aid EPA, states, and cities in negotiating reasonable and effective schedules for implementing infrastructure upgrades. It uses a two-phase approach to assess financial capability. First, EPA identifies the combined impact of wastewater and CSO control costs on individual households, calculating average costs per household as a percentage of the local median household income (MHI). This phase analyzes the residential share of current and planned controls needed to meet CWA requirements using a value

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9 In all but four states (Idaho, Massachusetts, New Hampshire, and New Mexico) and the District of Columbia, EPA has delegated CWA permitting to state permitting authorities. However, under Section 402(d) of the act (33 U.S.C. §1342(d)), EPA retains an oversight role and may review individual permits that a state proposes to issue, and it may object to a permit outside the guidelines and requirements of the act. If the state does not revise the permit to meet the agency’s objections, EPA may issue a permit that meets the act’s requirements.

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range of whether the costs impose a “low” (less than 1% of MHI), “mid-range” (1%-2% of MHI), or “high” (more than 2% of MHI) financial impact on residential users, yielding a Residential Indicator. Second, EPA develops Financial Indicators to evaluate the debt, socioeconomic, and financial conditions that affect the community’s financial capability as “weak,” “mid-range,” or “strong.” The combined indicators measure a community’s ability to afford compliance with CWA regulations. Many local government officials contend that EPA regions use the 2% of MHI measure as an absolute benchmark, or minimum threshold for determining that affordability is an issue for a given community.

For several years, municipal officials have urged EPA to revise the guidance, arguing that it should take into consideration a larger set of factors and that MHI is a misleading indicator of a community’s ability to pay. In some cases, they say, cost impacts for an entire community may be in EPA’s “mid-range,” although impacts in portions of the community (e.g., low-income neighborhoods) are more than 2% of MHI. Alternative household affordability metrics could include average water rates as a percentage of income for potentially vulnerable populations, or expected future water rate increases, or using other indicators of economic need such as the unemployment rate or poverty rate, or percentage of households receiving public assistance. Further, they say that affordability should be tailored to each local government.

Municipal officials also favor having EPA look at the overall financial impacts of both CWA and drinking water projects (which are not addressed in the 1997 guidance), rather than considering them separately. In 2013, local government officials issued a report with recommendations on alternative analyses that cities can present to federal and state regulators with data and information that demonstrate a range of additional factors relevant to evaluating affordability. Further, a 2013 white paper issued by municipal water officials recommended that EPA assess financial capability to meet CWA obligations through an integrated planning framework that allows EPA to go beyond taking a “snapshot” of current financial indicators to also consider past or emerging trends that affect current conditions.

EPA repeatedly insisted that it is not necessary to revise the guidance, which the agency believes already provides flexibility for financially disadvantaged municipalities, including allowing a phased approach for implementing wastewater management controls. As noted above, EPA already has the flexibility and discretion to reopen consent decrees. Officials also point out that as a result of the integrated planning framework, in determining affordability, municipalities now can factor in the costs to manage stormwater flows, along with combined sewer overflows and wastewater treatment. The 1997 guidance did not include consideration of stormwater. To some extent, it appears that EPA and municipal officials fundamentally disagree on this point, with mayors and others contending that the 2% MHI metric is strictly enforced and is EPA’s primary

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determinant, and EPA responding that it is one of many financial factors that should be evaluated to assess overall burden on a community.

Nevertheless, EPA committed to further dialogue with cities and states and to clarifying guidelines on how it considers financial capability. Based on those discussions and in consultation with its Environmental Financial Advisory Board, in November 2014, the agency released a Financial Capability Assessment Framework. The document identifies additional information that may help some communities provide a more complete picture of their financial capability than under the 1997 guidance alone. The new framework includes two sets of examples meant to supplement—but not revise—the existing guidance. One set of examples concerns residential impacts, such as service area poverty rates and trends, or the percent of households that own versus rent. The second set of examples concerns the financial strength of the community, such as unemployment data; state or local legal limitations on property taxes, other revenue streams, or debt levels; or other financial obligations, such as drinking water infrastructure, that significantly affect a city’s ability to raise revenue.14

Communities’ investment needs for clean water infrastructure are large—estimated by states and EPA in 2012 to be $271 billion.15 Funding needs for drinking water projects also are substantial; projects needs were estimated in 2011 to total $385 billion nationwide through 2031.16 The 2014 Financial Capability Assessment Framework does allow for consideration of Safe Drinking Water Act (SDWA) obligations as relevant information about a community’s overall financial capability. For example, a city’s bond rating can be affected by both wastewater and drinking water obligations. The purpose of the assessment is to aid in establishing schedules for developing and implementing integrated plans and permit and consent decree implementation to meet CWA requirements. EPA’s policies do not similarly address or integrate planning for communities’ additional water infrastructure challenges of meeting SDWA requirements.

Using a wider range or more nuanced factors to assess financial capability would in all likelihood lead to additional determinations that affordability is a challenge for many U.S. communities. Still, what response regulators and policymakers should make to such information is unclear. Some stakeholders would likely be satisfied with additional time to achieve compliance with applicable requirements, while others undoubtedly would prefer more time and relaxation of the requirements themselves. Many stakeholders seek flexibility in meeting regulatory requirements, as well as increased federal spending on local water and wastewater infrastructure projects. Federal and state regulators have considerable, but not unlimited, discretion to provide extended compliance time, but much less flexibility to alter standards or provide additional funds.

**Congressional Interest**

EPA’s integrated planning process and community affordability are issues of interest to legislators, because they relate to policymakers’ overall concern with funding needs for water infrastructure projects. EPA’s goal is to report data for a 20-year timeframe, but due to insufficient data collected by states, this report generally includes estimated funding needs for 2012-2017.


infrastructure projects and the federal role in assisting communities. Both issues have been addressed in legislation and through congressional oversight. In the 114th Congress, H.R. 1093/S. 2358, the Clean Water Compliance and Ratepayer Affordability Act of 2015, would direct EPA to carry out a pilot program to work with communities desiring to implement an integrated stormwater/wastewater management program. The bill would allow extended CWA discharge permit terms for such communities, and it would allow for modification of consent decrees to reflect terms of an integrated plan.\(^{17}\)

A related bill in the 114th Congress, H.R. 1705, the Clean Water Affordability Act of 2015, would codify an integrated approach through CWA permits. This bill also would require EPA to update the 1997 CSO affordability guidance document, which has been heavily criticized by some local governments. Bills in the Senate with similar provisions are S. 2768 and S. 2848.\(^{18}\) As described previously, communities generally support the financial capability framework issued by EPA in 2014, but some also support legislation that would further expand the criteria for determining affordability. In report language accompanying FY2016 appropriations legislation for EPA, the Senate Appropriations Committee directed EPA to contract with the National Academy of Public Administration to conduct an independent study to create a definition and framework for community affordability and report to Congress within one year.\(^{19}\)

Some in Congress have sought financial support to test EPA's integrated planning policy. In 2014, Republican and Democratic leaders of the House Transportation and Infrastructure Committee’s Water Resources Subcommittee wrote to House appropriators to request funds for a limited number of pilot projects. The letter requested $5 million in FY2015 appropriations for three to five projects per EPA region (30 to 50 projects in all) to assist communities in developing and implementing integrated plans. If successfully implemented, the letter said, EPA's framework “could help communities more affordably manage their clean water obligations while ensuring continuous progress toward water quality goals.”\(^{20}\) Some utility and municipal groups also have been seeking funding for pilot projects, and, as noted above, in October 2014, EPA awarded grants to five communities to assist them in developing integrated plans. In the report accompanying FY2016 appropriations legislation for EPA, the House Appropriations Committee said that it supports EPA's efforts to expand technical assistance for communities seeking to develop and implement an integrated planning approach, but the committee did not recommend specific funding for such assistance.\(^{21}\)

In July 2014, the Water Resources Subcommittee held a hearing to review EPA's 2012 integrated planning policy. The subcommittee heard from witnesses who contended that EPA has not provided enough regulatory flexibility in implementing the policy. Some witnesses urged Congress to pass legislation that would require EPA to speed its approval of integrated plans, and

\(^{17}\) Related bills have been introduced previously, including H.R. 2707, H.R. 3862, and S. 2995 in the 113th Congress, and H.R. 1189 and S. 2094 in the 112th Congress.

\(^{18}\) H.R. 3862 in the 113th Congress and S. 2094 in the 112th Congress also would have directed EPA to revise the 1997 affordability guidance.


\(^{20}\) Letter from Representative Bob Gibbs and Representative Tim Bishop to Representative Ken Calvert, Chairman, and Representative Jim Moran, Ranking Member, Subcommittee on Interior, Environment and Related Agencies, House Committee on Appropriations, April 1, 2014.

some urged EPA to develop “model permits” to serve as templates for integrated plans.\textsuperscript{22} The Senate Environment and Public Works Committee held a hearing on April 7, 2016, that addressed issues of water infrastructure affordability.

The House Water Resources Subcommittee also held two hearings in the 112\textsuperscript{th} Congress on EPA’s efforts to provide flexibility to communities in addressing wastewater and stormwater project needs. The first hearing, in December 2011, examined EPA’s integrated planning policy, then still in draft form, and the second hearing invited witnesses to discuss the policy document, which EPA had issued in June. Particularly at the second hearing, in July 2012, witnesses addressed concerns with EPA’s approach to determining a community’s ability to afford water infrastructure projects.

**Conclusion**

Local government stakeholders generally support EPA’s efforts to encourage ways for communities to prioritize their investments in CWA infrastructure and to consider a wide range of factors that affect affordability of such investments. As described in this report, cities and states have continuing concerns with aspects of both the integrated planning policy and the financial capability assessment framework. Nevertheless, these recent policies may partially help local governments address the economic challenges of meeting their CWA water infrastructure obligations. As discussed in this report, EPA’s 2014 Financial Capability Assessment Framework is focused on plans and implementation to meet CWA requirements. While it might be beneficial to municipalities if EPA’s policies encompassed priorities, plans, and schedules for all of a community’s water infrastructure obligations—including for drinking water projects—currently that is not the case.

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\textsuperscript{22} U.S. Congress, House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, Integrated Planning and Permitting Framework: An Opportunity for EPA to Provide Communities with Flexibility to Make Smart Investments in Water Quality, 114\textsuperscript{th} Cong., 2\textsuperscript{nd} sess., July 24, 2014.