



California Council for Environmental and Economic Balance

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July 24, 2015

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814
Delivered via email to commentletters@waterboards.ca.gov



Subject: Comment Letter – Proposal to Develop a Storm Water Program Workplan and Implementation Strategy

Dear Ms. Townsend and Members of the Board,

The California Council on Environmental and Economic Balance (CCEEB), together with CCEEB's Water Quality Task Force (WQTF), is pleased to provide comments on the State Water Board's *Storm Water Strategic Initiative Proposal to Develop a Storm Water Program Workplan and Implementation Strategy*.

CCEEB is a non-profit, non-partisan association of business, labor, and public leaders, which advances balanced policies for a strong economy and a healthy environment. In 2012, CCEEB convened a Water Quality Task Force (WQTF) that is comprised of businesses and municipal and regional governmental entities with considerable direct experience administering water quality programs. In 2013, CCEEB issued the report *A Clear Path to Cleaner Water*, which focused on developing and advancing proposals to support the State's ambitious goals for the waters and environment of California—that is, to improve water quality, increase recycled water use, augment stormwater capture, develop local water supplies, and reduce energy use and greenhouse gas emissions. This report found that furthering these goals will require planning for sustainability and a focus on collaborative, creative solutions, and will require agencies to focus resources efficiently so they can have the greatest impact.

The CCEEB/WQTF applaud the State Water Board and staff for issuing the Storm Water Strategic Initiative Proposal and for defining four important guiding principles to direct overall efforts to manage storm water. Our comments are organized into several sections below. First, we provide general comments on the guiding principles, and second, we would respectfully suggest that the State Water Board devote significant resources to addressing the overall storm water program in a comprehensive and holistic fashion. The CCEEB/WQTF also recommends that the State Water Board convene an expert panel or science advisory board to evaluate options for regulating storm flows and to assist in designing a model program of implementation for regulating storm flows in California. Finally, we have provided information on additional concepts that, if incorporated into the State's storm water regulatory framework, have

the potential to greatly improve the program, to lead to direct and measurable benefits, and to foster an environment where creative, collaborative solutions can be identified and readily implemented.

1. CCEEB and the WQTF strongly support the Guiding Principles identified by the State Water Board.

We agree that storm water is a valuable resource and should be treated as such. The current unprecedented drought conditions highlight the need to view all water—including storm water—as a resource. Identifying and addressing potential regulatory impediments to greater use of storm water will serve the State well into the future, even after critical drought conditions have eased.

We also applaud the State Water Board and staff for incorporating the need to implement efficient and effective regulatory programs as a key guiding principle. Improving the efficiency and effectiveness of the State's Storm Water Program and associated permits is critically important to ensuring progress on the desired environmental outcomes. Importantly, as additional requirements are added over time to manage and treat storm water, it is important to ensure they are efficient and focus on improvements that will have direct and measurable benefits while not placing unnecessary and significant costs on businesses.

State Water Board staff has identified storm water permits as needing to focus on preserving watershed processes to achieve water quality outcomes, rather than on specifying minimum requirements or actions to be implemented by permittees—we agree. The Storm Water Strategic Initiative documents note that a lack of focus can result in directing resources to actions with fewer water quality benefits, and that a more flexible regulatory approach may be needed to achieve accountability and effective water quality outcomes. As noted in Guiding Principle #4, collaboration and creativity, together with an array of regulatory and non-regulatory approaches, will be needed to solve water quality and pollutant problems associated with storm water.

2. Storm water is different from other types of discharges, and requires a tailored and comprehensive regulatory program. We encourage the State Water Board to devote the resources necessary to develop regulatory tools that are appropriate and achievable for storm water discharges.

Several common themes are present throughout the Storm Water Strategic Initiative list of issues (Table 1) and proposed project list (Appendix A):

- a strong desire to increase storm water capture and use
- a similar desire to focus on water quality and environmental outcomes

- challenges with funding implementation measures to improve storm water quality
- a need for greater connectivity and alignment between policy development and storm water permit writing
- concerns about data collection, availability, and quality
- technical issues associated with storm water permit implementation (including design storms, TMDL implementation, numeric effluent limitations, technology-based effluent limitations, low-impact development (LID) and post-construction standards, and a need for clear guidelines for compliance and enforcement)

As described in the Storm Water Strategic Initiative documents, these issues are common to storm water permits for municipal separate storm sewer systems (MS4s), industrial permits, construction permits, and individual permits. Although the proposed project list included in Appendix A to the Storm Water Strategic Initiative Proposal includes proposals to address these issues, many of these issues would be addressed in different projects, which are assigned different priorities, and which are unlikely to be conducted concurrently. Thus, there is a substantial risk that the step-wise implementation of the proposed projects will result in disjointed and piecemeal solutions.

The CCEEB/WQTF respectfully suggests, instead, that the State Water Board devote significant resources to addressing the overall storm water program in a comprehensive and holistic fashion. The CCEEB/WQTF also recommends that the State Water Board convene an expert panel or science advisory board to evaluate options for regulating storm flows and to assist in designing a model program of implementation for regulating storm flows in California.

The overall program strategy that would result from a well-integrated program would provide guidance and clarity on many, if not all, of these issues, and could be implemented in a systematic fashion that would be more likely to produce consistent, measurable, and equitable results across all classes of storm water permits.

The tools currently available for regulating storm water were originally developed for traditional point source discharges (e.g., treated wastewater and industrial process water discharges). Although it would be easy to apply the full range of available regulatory tools to storm water discharges, storm water differs in fundamental ways from traditional point sources. Particularly in arid climates like California, storm flows exhibit highly variable flow rates, flow volumes, and constituent concentrations. Storm flow water quality is a complex function of watershed size, slope, soils, vegetation types, rainfall (storm size and intensity), antecedent conditions, land use, and climate. Pollutants also enter storm flows from a variety of sources, including both natural sources (soils, airborne dust,

wildfire ash) and manmade sources (including atmospheric deposition of anthropogenic origin, automobile exhaust, road dust, building materials, site activities and practices, pesticides, etc.). Thus, treatment controls will vary in important respects from the treatment controls available for traditional point sources, and source control will be a more important consideration for storm flows than for traditional point sources. Perhaps most importantly, storm water regulatory approaches are challenged by the high volumes and flow rates and the intermittent nature of storm flows, such that meaningful design criteria are needed. The CCEEB/WQTF is particularly concerned that applying point source requirements to storm flows and non-point source pollution will preclude sustainable “green” solutions. (For greater detail, see the CCEEB comment letter previously provided to the State Water Board and included here as **Attachment A.**)

We note that the State Water Board has signaled its intent to promulgate Numeric Effluent Limits (NELs) in the future as water quality-based NELs and sector-specific technology-based NELs for the Industrial and Construction General Permits. Of note, the State Water Board acknowledged in the development of the new Industrial General Permit (IGP) that it does not have the information necessary to achieve these goals. Specifically, it noted that storm water sampling data collected over the past two decades have been inadequate to define storm water quality differences between various industries, to identify high-risk dischargers, or to assess compliance and the effectiveness of Best Management Practices (BMPs). Further, the Blue Ribbon Panel Report (2006) and other studies concluded that the existing industrial storm water database is too variable and may be too inaccurate to be used reliably for decision-making. In an attempt to resolve this problem, the new Permit increases the frequency of sampling (to create a larger database) and adds training requirements. We expect that data availability and data quality will be an even more challenging issue for MS4 permits.

Despite the added sampling requirements in the new IGP, there is no evidence or justification that the increase in sampling will provide an adequate database that meets the State Water Board’s goals for the purpose of moving forward with NELs in future permits. In fact, our experience indicates that the data will likely continue to be “too variable and inaccurate” to be used reliably for the Board’s stated purposes, much less to substantiate the inclusion of NELs in future permits—a high degree of variability is a hallmark of storm water runoff, and the State’s regulatory program needs to develop approaches that recognize this variability.

In order to make progress, it is important to build a credible and reliable storm water database that is widely accepted and that accomplishes the following: accurately represents the quality of storm water runoff; helps define compliance; determines which facilities/jurisdictions need advanced BMPs or structural/treatment measures; characterizes the applicability and effectiveness of such controls; assists the regional water boards in quantifying TMDL sources;

and provides the State Water Board and the public with high quality data and information that can be used to substantiate the development of permits and NELs for the range of storm water permittees.

Finally, storm water is not a “utility” in the same sense as drinking water or wastewater, and the funding sources typically available for storm water point sources, such as utility rates and fees, are not available for storm water. The State Water Board’s record is replete with ample evidence that implementing storm water controls will be expensive and that, especially for municipal separate storm sewer system (MS4) permit implementation, there are few stable and sustainable funding mechanisms available.

The CCEEB/WQTF recommends that the State Water Board develop a work plan to evaluate the state’s approach to storm water regulation that would take into account the unique characteristics of storm flows. The work plan should, at a minimum, address the following issues:

- Are sufficient data available to support the various regulatory approaches? If not, what additional data should be collected, and over what time period?
- How can existing regulatory tools, such as mixing zones and dilution credits, be applied to storm water discharges?
- How should storm water-specific tools, including design storms, compliance storms, and high flow suspensions, be used in the storm water program?
- How can an emphasis on sustainability and sustainable infrastructure investments be incorporated into the storm water program?¹
- How can the State’s storm water regulatory approach ensure that outcomes are quantified, evaluated, and durable?
- How can the State incentivize collaborative, cooperative approaches?
- How can the program facilitate establishing implementation priorities?
- How can the State facilitate identification of a stable and durable source of funding, particularly for MS4 permit implementation?
- How can the value of storm water capture and water supply augmentation be quantified and recognized?
- What is the role of “maximum benefit” concepts in storm water regulation?

¹ We suggest that the State Water Board develop guidelines for implementing water quality requirements (e.g., TMDL requirements, effluent limitations) in concert with the principles of sustainability planning and to promote sustainable infrastructure investments. The State’s storm water program should be consistent with USEPA guidance, which “strongly encourages the use of green infrastructure and related innovative technologies, approaches, and practices to manage storm water as a resource, reduce sewer overflows, enhance environmental quality, and achieve other economic and community benefits.” The CCEEB/WQTF previously

3. The State Water Board should consider the use of the “Water Funds” concept to encourage collaboration and to focus on implementation measures and projects that are larger, and that provide far greater value, than the implementation measures that could be undertaken by individual entities.

Although the concept of watershed- or regional-scale implementation of storm water capture and treatment measures is part of the Integrated Regional Watershed Management (IRWM) programs, the State’s storm water permits do not consistently incentivize or provide compliance recognition for implementation of large-scale controls. It can also be very difficult for a local government to fund and implement measures that are physically located outside of its jurisdictional boundary. For this reason, the State should consider a storm water permit program that would allow for two potential tracks of implementation: (1) implementation of local best management practices (BMPs) to improve water quality on a small scale, and (2) allowing contributions to larger, watershed-scale projects that would provide multiple benefits (including water supply), where greater benefits could be attained from implementation of regional measures than from local measures alone.

Low impact develop (LID) requirements are one area where the benefit that could be achieved by a regional approach would be far greater than the benefit of local-scale implementation. In many watersheds, opportunities for infiltration and storm water capture to contribute to water supply are limited for a range of reasons—e.g., effective groundwater recharge via surface spreading is frequently limited to alluvial areas where water can infiltrate rapidly and reach drinking water aquifers; local soils may limit infiltration capacity; or underlying contamination may be exacerbated or spread by infiltration. Permittees located in these areas could potentially fund the implementation of large-scale, regional infiltration projects, rather than implementing LID measures at their individual facilities. However, the storm water regulatory program may need to be adjusted to recognize and encourage these types of implementation measures.

Water Funds are one potential method that could be used to implement large-scale infiltration projects and storm water capture. Water Funds are models of long-term conservation that function through investments focused on a specific “fund.” Resources generated by each fund are in turn distributed to projects within a watershed to preserve lands through conservation actions. Participants within a watershed would pay into a Water Fund to facilitate the capture and infiltration of storm water to be used as water supply in the future. Water Funds may be created as a partnership between local governments, private businesses, NGOs, regulatory authorities, and grassroots groups, or even be legislated as a fund at the State level; Water Funds have been used extensively by the Nature Conservancy in South and Central America, and the frameworks developed in these contexts should be evaluated to assess if they would be suitable for use as part of the State’s regulatory programs. Water Funds allow

for funding and financing of large-scale regional projects, such as installing enhanced storm water drainage for crop fields in rural areas, or for enabling urban areas to fund needed improvements of shared MS4 systems and watershed protection measures.

To facilitate the use of storm water to augment water supply, the State Water Board should evaluate options so that storm water can be “monetized,” and the value generated by storm water capture and supply augmentation can in turn be used to facilitate the implementation of additional storm water capture projects, LID implementation, and/or other needed storm water controls. CCEEB recommends that an outside economist or expert panel be hired to develop options for realizing the total value of storm water as a resource in a watershed system.

4. The State Water Board should incorporate Financial Capability Assessments (FCA) in the storm water program.

One major concern of local governments in implementing storm water programs centers on the implementation costs and funding obstacles, and a recognition that the State’s current approach to storm water lacks a component that explores how communities will balance the substantial investments needed to capture, treat, and use storm water, with other competing priorities. One tool that could be implemented to assist with these challenges is the Financial Capability Assessment (FCA) framework, which has existed in USEPA guidelines since 1997 and which was revised in November 2014 (see **Attachments B and C** for greater detail).²

The FCA provides a common basis for financial burden discussions between local government and regulatory agencies. The FCA provides a framework to assess the costs and ability to pay for all water-related services, including storm water, drinking water, wastewater, and flood control. The FCA is not a cost-benefit analysis, but rather an analysis that could be used to determine the affordability and phasing of storm water implementation measures, and to encourage a focus on the implementation of the most environmentally effective measures at the least cost. The FCA would evaluate State, Federal, and other financial resources; the potential for other agency and private sector funding; and costs to the ratepayers/taxpayers in the communities of a given watershed. Perhaps most importantly, the FCA framework would provide a means to evaluate the impacts of the storm water regulatory program on disadvantaged

² USEPA noted in the November 2014 memo (Attachment C) that “As programs are implemented to improve water quality and attain CWA objectives, many state and local government partners find themselves facing difficult economic challenges with limited resources and financial capability. We recognize these challenging conditions and are working with states and local governments to develop and implement new approaches that will achieve water quality goals at lower costs and in a manner that addresses the most pressing problems first.”

communities, and to give those communities a greater voice in establishing implementation priorities and realizing the benefits of integrated storm water planning.

5. CCEEB and the WQTF encourage the State Water Board to identify and resolve conflicts between regulatory programs, particularly where those conflicts inhibit the use of storm water to augment water supply.

Members of CCEEB's WQTF have identified a number of areas where conflicting regulatory requirements inhibit implementation of measures needed to facilitate greater capture and use of storm water. For example, many groundwater basins in Southern California are contaminated with pollutants that originate from industrial sources (e.g., volatile organic compounds (VOCs), perchlorate, metals), from natural sources (e.g., selenium), and from historical nonpoint sources (e.g., nitrate). These groundwater basins provide the best opportunity for storing captured storm water for later use, yet the cleanup of these basins is slowed by different regulatory requirements—e.g., different cleanup levels apply to treated water from these sites, depending on whether the end use will be potable supply, groundwater re-injection, or discharge to surface waters for habitat augmentation. Resolving these conflicts and proceeding efficiently with management and use of groundwater basins will be critical to capturing and using storm water as a resource.

The State Water Board should also consider how to resolve conflicts between water rights users. For example, if storm water is captured in the upstream portion of a watershed, how does this affect downstream water rights? At what point in the watershed does the right to use water transition from a landowner to a public agency, water district, or watermaster?

A second important issue relates to the liability that may be incurred by an entity that implements projects to capture and retain storm water. Will such an entity find itself liable for the cleanup costs that may be associated with the retained storm water? Is there a means to provide public or private entities with liability protection if they offer land or resources, or even if they provide funding, for new storm water capture and infiltration projects?

Finally, how can the State Water Board establish regulatory priorities that incentivize projects that will provide multiple benefits to the communities in which they are implemented?

Ms. Jeanine Townsend
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CCEEB and the WQTF appreciate the opportunity to comment on the State Water Board's Storm Water Strategic Initiative Proposal. We believe that the State Water Board has the opportunity to provide visionary leadership for recognizing storm water as a resource and to greatly improve the storm water regulatory program, to lead to direct and measurable benefits, and to foster an environment where creative, collaborative solutions can be identified and readily implemented.

CCEEB and the WQTF look forward to continuing to work with the State Water Board members and staff. If you have questions, please contact Jerry Secundy at (415) 512-7890, ext. 116 or Susan Paulsen at (626) 463-7075.

Sincerely,



Gerald D. Secundy
President



Susan C. Paulsen, Ph.D., P.E.
Consultant to CCEEB

cc: State Water Board Members
Jonathan Bishop
Greg Gearheart
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California Council for Environmental and Economic Balance

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January 21, 2015

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State Water Resources Control Board
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Sacramento, CA 95812-0100

Via email: commentletters@waterboards.ca.gov

RE: **Comments to A-2236(a)-(kk)**

Dear Chair Marcus and Members of the Board,

The California Council for Environmental and Economic Balance (CCEEB) is pleased to submit these written comments for your consideration in regards to petitions challenging the 2012 Los Angeles Municipal Storm Sewer System (MS4) Permit (Order No. R4-2012-0175). These comments focus upon the State Water Resources Control Board's (State Water Board's) proposed Order (Order WQ 2015-), which is dated November 21, 2014.

CCEEB supports many aspects of the State Water Board's proposed Order, particularly those that focus on the implementation of sustainable, green infrastructure approaches to managing stormwater. However, CCEEB is concerned that the proposed Order's requirement to achieve full and strict compliance with water quality standards at some future date will discourage the implementation of sustainable solutions, and will lead to the implementation of environmentally inferior "gray infrastructure" treatment solutions. We believe this is an important issue that should be addressed as part of the State Water Board's Stormwater Strategic Initiative process, which is currently underway.

Additionally, **CCEEB respectfully requests that the State Water Board amend the proposed Order to use numeric requirements as goals, not as strictly enforceable legal requirements.** Further detail is provided below.

Background. CCEEB is a coalition of business, labor, and public leaders that advances strategies for a sound economy and a healthy environment. In 2012, CCEEB convened a Water Quality Task Force (task force) comprised of businesses and municipal and regional governmental entities with considerable direct experience administering water quality programs. In 2013, CCEEB issued the report [A Clear Path to Cleaner Water](#), which focused on developing and advancing proposals to support the State’s ambitious goals for the waters and environment of California—that is, to improve water quality, increase recycled water use, augment stormwater capture, develop local water supplies, and reduce energy use and greenhouse gas emissions. As noted in the report, furthering these goals will require planning for sustainability and a focus on collaborative, creative solutions, and will require agencies to focus resources efficiently so they can have the greatest impact.

CCEEB agrees that the proposed Order should support sustainable, green infrastructure solutions. CCEEB recognizes and appreciates that the State Water Board’s draft Order supports an alternative compliance path that encourages the implementation of sustainable, green infrastructure approaches. For example, as stated in the draft Order at p. 49, “The alternative compliance path should encourage the use of green infrastructure and the adoption of low impact development principles ... should encourage multi-benefit regional projects that capture, infiltrate, and reuse storm water and support a local sustainable water supply...” As detailed in our testimony to the State Water Board on December 16, 2014 [Attachment 1], CCEEB believes that green infrastructure projects offer a wide range of benefits, including better water quality and water supply enhancement. Multi-benefit, green infrastructure projects are generally more acceptable to local communities and easier to fund. They may provide recreation opportunities and are generally designed to be aesthetically pleasing. Finally, green infrastructure projects are typically more sustainable than traditional treatment controls, in that they often use less energy and fewer chemicals, produce less waste, and require less maintenance.

The U.S. Environmental Protection Agency’s (EPA’s) policies and guidance also support sustainable approaches. For example, EPA guidance “strongly encourages the use of green infrastructure and related innovative technologies, approaches, and practices to manage stormwater as a resource, reduce sewer overflows, enhance environmental quality, and achieve other economic and community benefits.”¹ EPA’s Clean Water and Drinking Water Infrastructure Sustainability Policy states that “Sustainable water infrastructure is critical to providing the American public with clean and safe water... water infrastructure can only be sustainable if the communities it serves are sustainable, and if local decision makers and citizens understand the value of water infrastructure and the services provided. Federal investments, policies, and actions should support water infrastructure in more efficient and

¹ Stoner, Nancy, and Giles, Cynthia 2011. Memorandum: Achieving Water Quality through Integrated Municipal Stormwater and Wastewater Plans. USEPA: October 27, 2011, at p. 2.

sustainable locations to best support existing communities, enhance economic competitiveness, and promote affordable neighborhoods.”²

It may not be possible to achieve water quality standards under all conditions. The proposed Order appropriately recognizes that “the evidence in the Administrative Record is not sufficient to establish that the stormwater retention approach (a feature of the Enhanced Watershed Management Plans, or EWMPs) will in all cases result in achievement of final WQBELs and other TMDL-specific limitations” (proposed Order at p. 40). The proposed Order acknowledges that “we cannot say with certainty at this point that implementation will lead to compliance with receiving water limitations in all cases.”

Although the record clearly indicates that best management practices (BMPs) and other types of stormwater controls can and do lead to significant water quality improvement, it should come as no surprise that they may not be able to achieve water quality standards under all conditions and in all cases. The State Water Board’s “Blue Ribbon Panel” issued similar findings, stating that “[e]ven for conventional pollutants, there presently is no protocol that enables an engineer to design with certainty a BMP that will produce a desired outflow concentration for a constituent of concern.”³ The Blue Ribbon Panel also concluded, with respect to municipal stormwater, that “it is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges.”⁴ (Note that the Blue Ribbon Panel did find that it may be feasible to establish an Action Level, set as an “upset value” clearly above the normal variability, in order to identify problem areas or discharges requiring additional attention.)

Because green infrastructure will improve water quality but is unlikely to produce effluent that achieves water quality standards under all conditions, many MS4 permittees will choose to implement treatment solutions (e.g., filtration, disinfection) that can be considered “gray infrastructure,” if they believe they are required to consistently produce effluent that meets water quality standards at the end-of-pipe. Although hardscaped treatment systems are more likely to produce water that consistently has effluent concentrations less than water quality standards, gray infrastructure treatment systems will have a larger environmental “footprint”—typically they are concrete structures that require more maintenance, use more energy and/or treatment chemicals, produce more waste, and are less aesthetically attractive—than green infrastructure. MS4 permittees are unlikely to invest in green infrastructure solutions if they believe that additional treatment will be required in the future to meet water quality standards

² USEPA, 2013. EPA’s Clean Water and Drinking Water Infrastructure Sustainability Policy. Available at <http://water.epa.gov/infrastructure/sustain/upload/Sustainability-Policy.pdf>.

³ Storm Water Panel Recommendations to the California State Water Resources Control Board, 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities. June 19.

⁴ Ibid.

and to demonstrate permit compliance. Examples of “gray infrastructure” are included in the PowerPoint presentation made by Dr. Susan Paulsen to the State Water Board on December 16, 2014. [Attachment 1]

Further, even investing in expensive, sophisticated treatment systems may not result in attainment of water quality objectives in receiving waters. Water quality objectives for indicator bacteria (e.g., *E. coli*, enterococcus) provide perhaps the clearest example of the difficulty that will be faced by MS4 permittees attempting to comply in a strict sense with water quality standards. During the development of the Los Angeles River Bacteria TMDL, the City of Los Angeles and other stakeholders, together with the Los Angeles Regional Board, developed a comprehensive study of indicator bacteria in the Los Angeles River (the CREST study).⁵ The CREST study involved the collection of samples during dry weather conditions on six different dates; concentrations of indicator bacteria were measured in the river itself and in inflows to the river (both tributaries and storm drains). Concentrations of human-specific bacteroidales, which are used to indicate human inputs of indicator bacteria, were also measured. The CREST study found that bacteria in inflows to the river totaled only 10-50% of the bacteria measured at the downstream end of the river reach; in other words, between 50% and 90% of the bacteria measured at the downstream end of the reach came from in-channel sources, potentially including wildlife, birds, and/or regrowth within the channel itself. Further analyses performed during the CREST study found that in one reach of the river, concentrations of indicator bacteria rose to levels higher than water quality objectives, while concentrations of human-specific bacteroidales remained nearly constant, indicating that the indicator bacteria in that reach were from non-human sources.

The Southern California Coastal Water Research Project (SCCWRP) has conducted sampling to characterize the water quality of dry and wet weather flows from natural, undeveloped open space land uses throughout Southern California.⁶ The “natural loadings studies” found that concentrations of indicator bacteria in runoff from open spaces frequently exceed water quality objectives, particularly during storm events. (The SCCWRP studies also found that concentrations of metals and other pollutants in runoff from natural, open space areas frequently exceed water quality criteria, particularly during storm events.)

Additional data and information indicates that even treated effluent discharged to a stream with low levels of indicator bacteria experience bacteria growth, such that treated effluent discharged to a stream shows concentrations of indicator bacteria that exceed water quality

⁵ CREST (Cleaner Rivers through Effective Stakeholder TMDLs), 2008. Los Angeles River Bacteria Source Identification Study: Final Report.

⁶ See, for example, LL Tiefenthaler, ED Stein, and GS Lyon. November 2008. [Fecal Indicator Bacteria \(FIB\) Levels During Dry Weather for Southern California Reference Streams](#). Presented at Society of Environmental Toxicology and Chemistry (SETAC) 29th Annual Meeting; and Stein, E.D., Tiefenthaler, L.L., and Schiff, K., 2008. Comparison of stormwater pollutant loading by land use type, available at http://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2008AnnualReport/AR08_015_027.pdf

objectives a short distance downstream of the point of discharge. For example, the County of Orange installed a treatment system that used filtration and ultraviolet disinfection to treat runoff from a 60-inch storm drain to REC 1 (recreational use) water quality standards.⁷ Although the treatment plant was successful in reducing bacteria concentrations in treated water, downstream samples collected within the receiving water indicated that “[t]he treated water experiences a rapid regrowth of the bacteria concentration after being released back into the stream.” These increases in concentrations of indicator bacteria, which occur rapidly within the receiving water, are beyond the control of any MS4 permittee.

Appropriate methods for calculating numeric effluent limits for storm water are not available.

As detailed within the CCEEB 2013 report, the methods currently used to calculate effluent limitations for NPDES permits are not technically appropriate for storm flows. Storm flows exhibit highly variable flow rates, flow volumes, and constituent concentrations, and pollutant concentrations can vary by an order of magnitude or more on timescales of an hour or less, and just as widely between storm events or between sites in relatively close proximity. Pollutants can enter storm flows from both natural and anthropogenic sources, and stormwater quality is a complex function of watershed size, slope, soils, vegetation types, rainfall (storm size and intensity), antecedent conditions, land use, and climate. Calculating appropriate numeric limits for storm flows will require the development of new methodologies, because existing procedures are typically based on low-flow receiving water conditions (which do not occur during storms) and statistical assumptions that do not hold for storm flows (e.g., that pollutant concentrations follow normal or log-normal distributions, as is typical for traditional point sources such as effluent from wastewater treatment plants). As detailed by the Blue Ribbon Panel, calculation of appropriate numeric effluent limits for stormwater will likely also require development of a “design storm” and/or “compliance storm” in recognition of the difficulty of treating the large volumes of runoff generated by large storm events. The State Water Board may also wish to consider the implementation of “deemed-compliant” approaches, whereby a municipality that installs certain BMPs would be deemed to be in compliance with its NPDES permit; such an approach has already been used in the Los Angeles Region’s Trash TMDLs and is proposed for use in the State Water Board’s proposed Trash Policy.⁸

These issues should be addressed within the Stormwater Strategic Initiative process. The State Water Board’s proposed Order does not address the widely recognized technical and scientific challenges associated with calculating appropriate numeric effluent limits for stormwater discharges. We understand that the State Water Board’s Stormwater Strategic

⁷ County of Orange Resources and Development Management Department, Watershed and Coastal Resources, 2005. *Final Report, Agreement 01-227-550-0, Aliso Beach Clean Beaches Initiative, J01P28 Interim Water Quality Improvement Package Plant Best Management Practices*. February 2005.

⁸ State Water Resources Control Board, 2014. Proposed Final Staff Report, Amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Available at http://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/trash_sr_1214.pdf. December 31, 2014.

Initiative is intended, at least in part, to address many of these challenges. For this reason and those stated in this letter, it appears to be premature to impose numeric limits as strictly enforceable legal requirements applicable to MS4 permittees at this time, as there appears to be no supporting technical or scientific basis for this.

CCEEB and its Water Quality Task Force, as well as the California Environmental Dialogue, have been participating with State Water Board in the Stormwater Strategic Initiative process. We continue to offer our support and pledge our participation to this process, and are committed to assisting the State Water Board in developing a comprehensive approach to stormwater control that focuses on green and sustainable infrastructure investments. But to achieve that goal, it is our view that the proposed Order must be amended so that the numeric measures are not interpreted as strictly enforceable legal requirements.

CCEEB respectfully requests that the State Water Board amend the proposed Order to use numeric requirements as goals, not as strictly enforceable legal requirements.

We look forward to continuing to work with the State Water Board and the regional water boards on issues related to the regulation of storm flows, and we thank you for the opportunity to provide these comments. Please contact me, Jerry Secundy, at 415-512-7890 x116 or jerrys@cceeb.org, if you require additional information.

Sincerely,



Gerald D. Secundy
CCEEB President



Susan C. Paulsen, Ph.D., P.E.
Consultant to the CCEEB Water Quality Task Force

cc: Members of the CCEEB Water Quality Task Force
Dawn Koepke, CCEEB Project Manager for Water, Waste and Chemistry
Sue Gornick, Executive Director of the California Environmental Dialogue

Testimony to SWRCB Los Angeles MS4 Permit Appeal

Presented by:
Susan C. Paulsen, Ph.D., P.E.
Exponent

On behalf of:
California Council for Environmental
and Economic Balance (CCEEB)



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Summary of Testimony

- CCEEB and others support sustainable, green infrastructure approaches to stormwater regulation
- CCEEB supports the SWRCB Stormwater Strategic Initiative Process
- CCEEB requests that the SWRCB use numeric measures as goals, but not as strictly enforceable legal requirements, now or in the future

CCEEB Supports Sustainable, Green Infrastructure Approaches to Stormwater Control

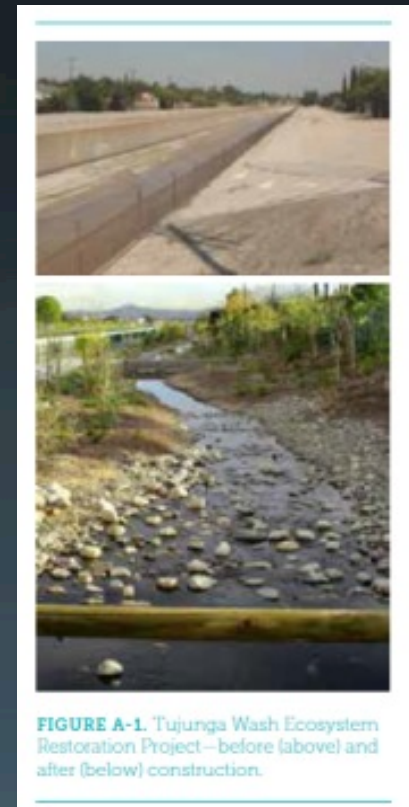
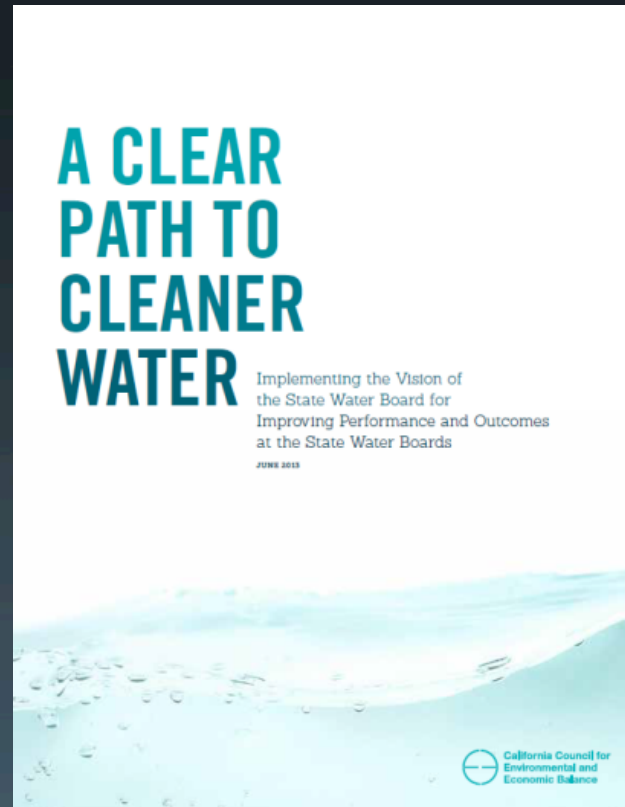


FIGURE A-1. Tujunga Wash Ecosystem Restoration Project—before (above) and after (below) construction.

Sustainable, Green Infrastructure Projects Offer a Range of Benefits

- Offer multiple benefits, including better water quality and water supply enhancement
- Promote multi-party partnerships and are often easier to fund than treatment controls
- Are generally more acceptable to the community
- Can provide recreation opportunities and visual amenities
- Generally use less energy and fewer chemicals, produce less waste, and require less maintenance



Draft Order Supports Sustainable, Green Infrastructure Approaches

“The alternative compliance path should encourage the use of green infrastructure and the adoption of low impact development principles ... should encourage multi-benefit regional projects that capture, infiltrate, and reuse storm water and support a local sustainable water supply ...”

(Draft Order at p. 49)

EPA Policy Supports Sustainable Infrastructure Approaches

EPA's Clean Water and Drinking Water Infrastructure Sustainability Policy

Statement of Policy

The Environmental Protection Agency (EPA), working with states and local governments, will develop guidance, provide technical assistance, and target federal SRF capitalization assistance to support increasing the sustainability of water infrastructure in the U.S. and the communities it serves

Sustainable water infrastructure is critical to providing the American public with clean and safe water. Further, water infrastructure can only be sustainable if the communities it serves are sustainable, and if local decision makers and citizens understand the value of water infrastructure and the services provided. Federal investments, policies, and actions should support water infrastructure in more efficient and sustainable locations to best support existing communities, enhance economic competitiveness, and promote affordable neighborhoods. Drinking water and wastewater systems

Planning for Sustainability



A Handbook for Water and Wastewater Utilities



February 2012
EPA-832-R-12-001

Exponent®

The Alternative to Green Infrastructure is Hardscape, Energy-intensive Treatment Controls



Source: Photo of Caltrans filter project,
210 Freeway in Pasadena (Paulsen, Dec 2014)



Source: Photo of Aliso Creek Bacteria Treatment Facility
(County of Orange, 2005)

Draft Order Recognizes Difficulty in Meeting Numeric Limitations Under All Circumstances

10. We find that the storm water retention approach is a promising approach to achieving receiving water limitations, but also find that the Administrative Record does not support a finding that the approach will necessarily lead to achievement of water quality standards in all cases. We revise the WMP/EWMP

(Draft Order at p. 73)

Stringent, Legally Enforceable Numeric Limits (Now or In the Future) Will Lead to Hardscape Treatment Solutions

Municipal Recommendations

It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target. Moreover, with this more rigorous

Technical Issues

Even for conventional pollutants, there presently is no protocol that enables an engineer to design with certainty a BMP that will produce a desired outflow concentration for a constituent of concern. A possible exception is removal of Total Suspended Solids in extended detention basins, and some types of media filters. The typical approach for evaluating BMP pollutant removal efficiency has been *percent removal*; but observed removal efficiencies vary greatly from facility to facility and it has been demonstrated that percent removal varies directly with the inflow concentration.

Storm Water Panel Recommendations to the
California State Water Resources Control Board

The Feasibility of Numeric Effluent Limits
Applicable to Discharges of Storm Water
Associated with Municipal, Industrial and
Construction Activities

June 19, 2006

CCEEB Respectfully Requests that the SWRCB Use Numeric Requirements as Goals

- CCEEB supports the SWRCB's Stormwater Strategic Initiative Process, which may address these issues, or may result in development of methods for calculating appropriate numeric measures
- Focus should be on green, sustainable, multi-benefit solutions, which do improve water quality
- Using numeric requirements as strictly enforceable limits (now or in future) will lead to undesirable results



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 13 2013

MEMORANDUM

SUBJECT: Assessing Financial Capability for Municipal Clean Water Act Requirements

FROM: Nancy Stoner
Acting Assistant Administrator
Office of Water (OW)

Cynthia Giles
Assistant Administrator
Office of Enforcement and Compliance Assurance (OECA)

TO: Regional Administrators
Regional Water Division Directors
Regional Enforcement Division Directors

We are working closely with local governments to clarify how the financial capability of a community will be considered when developing schedules for municipal projects necessary to meet Clean Water Act obligations. Our on-going conversations have been very encouraging and have helped identify several implementation issues, as well as more robust ways to present additional community-specific information within a financial capability analysis when considering a community's ability to achieve the shared goal of clean water. These issues are discussed in the attached financial capability framework document. We plan to develop an approach that addresses these issues in a way that achieves our shared goal of clean water. We expect to share a draft of the approach with you soon.

As we move forward, OW and OECA will continue to reach out to the Regions for your input and recommendations. If you have any questions, please contact one of us or have your staff contact Deborah Nagle, Director, Water Permits Division (nagle.deborah@epa.gov) or Mark Pollins, Director, Water Enforcement Division (pollins.mark@epa.gov).

cc: Randy Hill
Susan Shinkman
Lisa Lund
Deborah Nagle
Mark Pollins
Regional Permit and Enforcement Liaisons

Attachment

EPA's DIALOGUE WITH LOCAL GOVERNMENT FINANCIAL CAPABILITY FRAMEWORK

January 2013

Over the last several months, the U.S. Environmental Protection Agency (EPA) and local governments have engaged in a dialogue to clarify how the financial capability of a community will be considered when developing schedules for municipal projects necessary to meet Clean Water Act (CWA) obligations. This dialogue demonstrates EPA's strong support for ensuring that communities move forward in a sustainable manner and within their financial capability to meet CWA obligations. EPA is committed to ensuring that the policies reflected in this discussion are implemented consistently throughout EPA's Regional offices.

Local governments play a critical role in providing wastewater and stormwater infrastructure and services for their citizens, businesses and institutions. These municipal functions have been an important part of implementing the CWA to improve water quality and increased public health protection in streams, lakes, bays, and other waters nationwide. However, significant water pollution challenges remain. Elected officials remain strong supporters of the CWA goals and objectives by directing the public investment that is necessary to comply with the Act and to promote the quality of life for their citizens. Many local governments face complex water quality issues that are heightened by the need to address population growth, increases in impervious surfaces, source water supply needs, and aging infrastructure. In recent years, many local governments have increased their investment in their wastewater infrastructure by providing increased capital investments to rehabilitate existing systems, improve operation and maintenance and address additional regulatory requirements. As programs to improve water quality and attain CWA objectives are implemented, many state and local government partners find themselves facing difficult economic challenges. We recognize these challenging conditions and are working with states and local governments to develop and implement new approaches that will achieve water quality goals at lower costs and in a manner that addresses the most pressing problems first.

It is essential that long-term approaches to meeting CWA objectives are sustainable and within a community's financial capability. A community's financial capability and other relevant factors are important when developing appropriate compliance schedules that ensure human health and environmental protection. As EPA implements the recently released Integrated Municipal Stormwater and Wastewater Planning Approach Framework, EPA's "Combined Sewer Overflows: Guidance for Financial Capability Assessment and Schedule Development" (EPA 832-B-97-004) (Guidance for Financial Capability Assessment) will continue to be a valuable guide for evaluating the level of burden placed on a community by necessary clean water investments. Input from communities and others have pointed to a need to further clarify how financial capability is considered when developing schedules for municipal projects to meet their CWA obligations. In response, EPA is developing an approach to provide clarification of the financial capability analysis and that ensures consistent implementation among EPA Regions. The EPA's on-going conversations with communities and stakeholder groups have been very

encouraging and are providing a deeper understanding of the fiscal impacts that regulatory compliance has on consumers and households along the income distribution curve and on non-residential users. The flexibilities under the CWA, regulations, and EPA policies allow local government to continue to maintain existing wastewater and stormwater systems while making progress on clean water goals in a manner that is sustainable and within a community's financial capability. EPA and local government representatives will focus on the following topics associated with how a community's financial capability is assessed and considered when developing schedules to meet CWA objectives:

- How to expand the use of benchmark indicators of household, community and utility affordability, such as increasing arrearages, late payments, disconnection notices, service terminations, and uncollectable accounts;
- How to meet the obligations of the CWA by utilizing flexibilities in the statute and implementing regulations to prioritize necessary investments;
- How rate structures present both limitations and opportunities;
- How innovative financing tools, including public private partnerships, are related to affordability;
- How to facilitate consistent policy implementation at EPA Regional offices; and
- How other community specific factors, including obligations under the Safe Drinking Water Act, should be considered in developing appropriate compliance schedules

Prioritizing Investments

As articulated in the Integrated Planning Approach Framework, EPA encourages municipalities to balance CWA requirements in a manner that addresses the most pressing health and environmental protection issues first. For communities that have CWA responsibilities for stormwater and the collection and treatment of wastewater, it is entirely appropriate to consider the financial impacts of investments they need to make to manage both stormwater and wastewater discharges. EPA continues to explore ways in which the integrated planning approach can provide for meeting water quality standards and other CWA obligations by utilizing existing flexibilities in the CWA and its implementing regulations, policies and guidances.

Low Income Households

Uniform rate structures may place a disproportionately high financial burden on households with low incomes. EPA strongly encourages municipalities to consider establishing lower rates or subsidies for low income customers. This is consistent with one of the goals of integrated planning, which is to take advantage of synergies and savings that can be found through an integrated approach and thereby promote affordability.

Some communities have asked whether the CWA restricts a community's ability to set different rate structures to address such burdens or would limit their ability to receive grant funding from

the Agency¹. EPA plans to discuss both the limits and opportunities that different rate structures present for achieving clean water goals. Local officials have a great deal of latitude under these regulations and the EPA continues to encourage communities to consider and adopt rate structures that ensure that lower income households continue to be able to afford vital wastewater services. Several areas of discussion concerning rate structures involve state law, bond covenants, and implementation considerations.

In addition, EPA's Guidance for Financial Capability Assessment provides a flexible framework for considering the site-specific factors that impact a given community's rate base. The guidance encourages communities to consider and present any other documentation of their unique financial circumstances, so that it may be considered as part of the analysis. Where communities have adopted differential rates for low income customers, the income distribution that led to that approach may be valuable supplemental information that the community would choose to present as part of its financial analysis when determining the appropriate timeframe for reaching compliance. Examples of information that have been used in this context include poverty rates, income distribution by quintile, late payments, disconnection notices, service terminations, uncollectable accounts and average wastewater bill as a percentage of the median household income (MHI), although any information that the community believes is relevant may be presented.

The Role of Median Household Income in Developing Compliance Schedules

The EPA's Guidance for Financial Capability Assessment suggests using the percentage of MHI as one indicator for helping to determine the schedule for completing necessary work. The MHI indicator presents only one of many considerations that should be evaluated in determining the most appropriate schedule. EPA expects that the full range of financial indicators as well as municipal-specific information will be considered when developing schedules. A common misconception is that the EPA requires communities to spend to a level of 2% of MHI to meet CWA obligations. Rather, the percent MHI calculation is guidance, and is considered along with a suite of other financial indicators to assess the overall burden on a community. The guidance recommends that communities with higher burdens be given longer time periods to complete the needed work.

Community Specific Factors

The EPA's Guidance for Financial Capability Assessment provides a flexible framework for considering the site-specific factors that impact a given community's rate base. The guidance encourages communities to consider and present any other documentation of their unique financial circumstances, so that it may be considered as part of the analysis.

¹ Section 204(b)(1) of the CWA recognizes the use of lower charges for low-income residential users as satisfying the stipulation that recipients of services must pay their proportionate share. The EPA's regulations at 40 C.F.R. Section 35.2140(i) reflect this and authorize low income residential user rates.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 24 2014

MEMORANDUM

SUBJECT: Financial Capability Assessment Framework for Municipal Clean Water Act Requirements

FROM: Ken Kopocis *Keneth Kopocis*
Deputy Assistant Administrator
Office of Water (OW)

Cynthia Giles *Cynthia Giles*
Assistant Administrator
Office of Enforcement and Compliance Assurance (OECA)

TO: Regional Administrators
Regional Water Division Directors
Regional Enforcement Division Directors

In May of 2012, we distributed the Integrated Municipal Stormwater and Wastewater Planning Approach Framework (Integrated Planning Framework). Since that time, we have made solid progress in promoting integrated approaches to meet Clean Water Act (CWA) obligations. Thanks to the hard work of regional and headquarters staff, and the active engagement of cities, many of our enforcement settlements now embody integrated planning principles in the structure and schedule for injunctive relief or explicitly include integrated planning as part of the settlement. We have also seen an increasing number of municipalities and local authorities moving towards developing integrated plans to support the development of their NPDES permits. We have been working with EPA Regions and States to assist in that process.

As the implementation of the Integrated Planning Framework has progressed and evolved, we have been actively engaged with stakeholders on ways to build on our efforts. Those discussions found a natural focus on issues related to the financial capability of permittees working toward our shared goals of clean water. One consistent theme that emerged was the benefit of more clearly articulating the flexibility available under the existing guidance. EPA continues to be guided by the 1997 "Combined Sewer Overflows – Guidance for Financial Capability Assessment

and Schedule Development” (FCA Guidance) that provides an aid for assessing financial capability as part of negotiating schedules for implementing CWA requirements for municipalities and local authorities. The FCA Guidance also encourages permittees “to submit any additional documentation that would create a more accurate and complete picture of their financial capability” that may “affect the conclusion” of the analysis described in the guidance.

As part of EPA’s commitment to implementing CWA objectives in a sustainable manner, we have developed the attached “Financial Capability Assessment Framework” (FCA Framework). The FCA Framework has been greatly informed by the comments and experiences of a variety of stakeholders and financial experts. The FCA Framework identifies the key elements EPA uses in working with permittees to evaluate how their financial capability should influence schedules. In addition, the FCA Framework provides examples of additional information that may help some communities provide a “more accurate and complete picture” of their financial capability as is envisioned in the FCA guidance. We will be posting the FCA Framework to our website as an important next step in the pursuit of integrated planning approaches and in our ongoing work with municipalities and local authorities to achieve our shared goals of protecting our nation’s waters. While this memorandum releases the FCA Framework, we know that we will continue to learn and refine our understanding of the issues surrounding financial capability assessments as we use it moving forward. We will continue to look for ways to improve the Framework as we gain new insights and additional information.

We look forward to continue working with the Regions on these important issues and encourage you to contact Deborah Nagle, Director, Water Permits Division (nagle.deborah@epa.gov) and Mark Pollins, Director, Water Enforcement Division (pollins.mark@epa.gov) with any questions you might have.

Attachment

cc: Regional Permit and Enforcement Liaisons

FINANCIAL CAPABILITY ASSESSMENT FRAMEWORK

November 24, 2014

Purpose

The Environmental Protection Agency (EPA) is committed to working with state and local government partners to assist local municipalities and local authorities to meet Clean Water Act (CWA) obligations in a manner that recognizes the unique financial challenges that local jurisdictions face. This financial capability assessment framework is intended to provide additional examples and greater clarity on the flexibilities built into existing guidance that local governments or authorities can use in assessing their financial capability, and the relationship between that assessment and consideration of schedules for permit and consent decree implementation. This framework builds on the progress already made in the May 2012 “Integrated Municipal Stormwater and Wastewater Planning Approach Framework,” and the experience gained from talking with communities about their financial capability in actual, on the ground circumstances. Integrated Planning has been helping in identifying a permittee’s relative priorities for projects based on the relative importance of adverse impacts on human health and water quality and the municipality’s financial capability.

Background

Local governments and authorities want to provide clean water for their communities, and they play an essential role in providing wastewater and stormwater infrastructure and services for their citizens, businesses and institutions. These municipal functions have been an important part of implementing the CWA to protect public health and improve water quality in streams, lakes, bays, and other waters nationwide. However, significant water quality challenges remain. Public officials remain strong supporters of the CWA goals and objectives by directing the public investments that are necessary to comply with the Act and to provide clean water for their citizens. Many local governments face complex water quality issues that are heightened by the need to address population growth or decline, increases in impervious surfaces, source water supply needs, and aging infrastructure. In recent years, many local governments and authorities have increased investments in their wastewater and stormwater infrastructure through capital projects to rehabilitate existing systems, improve operation and maintenance, and address additional regulatory requirements. As programs are implemented to improve water quality and attain CWA objectives, many state and local government partners find themselves facing difficult economic challenges with limited resources and financial capability. We recognize these challenging conditions and are working with states and local governments to develop and implement new approaches that will achieve water quality goals at lower costs and in a manner that addresses the most pressing problems first.

Long-term approaches to meeting CWA objectives should be sustainable and within a local government or authority’s financial capability. The financial capability of these entities and other relevant factors are important to consider when developing appropriate schedules for infrastructure projects in permits or enforcement actions to help protect human health and the environment. EPA’s financial capability assessment guidance, “Combined Sewer Overflows:

Guidance for Financial Capability Assessment and Schedule Development” (FCA Guidance) (EPA 832-B-97-004) provides a reference point to aid all parties in negotiating reasonable and effective schedules for implementing CWA requirements, and the flexibility to take into account local considerations that may not be fully captured by the approach detailed in the guidance. As described in more detail in this Framework, the guidance provides for consideration of the impact on residential rate payers and the financial capability of the permittee using a suite of indicators, as well as allowing schedules to be responsive to circumstances unique to that community, while advancing the mutual goal to protect clean water. The FCA Guidance encourages permittees to provide any additional information that would be useful in understanding those unique or atypical circumstances and how they may affect CWA schedules, so that all relevant information presented by a community can be taken into account to ensure that a full understanding of financial capability guides the development of schedules.

Financial Capability Assessment

The following are key elements of EPA’s approach to the evaluation of the financial capability of municipalities to inform implementation schedules, both in permits and enforcement actions. The elements are fully compatible with the FCA Guidance, integrated planning approaches, and the flexibility embodied in both.

- 1. The 1997 FCA Guidance identifies a valuable assessment that provides a common basis for financial burden discussions between the permittee, EPA and state NPDES authorities. Permittees have the option of submitting additional information that would create a more accurate and complete picture of their financial conditions.** The financial capability assessment described in the 1997 FCA Guidance identifies information that provides a basis for a general comparison of financial conditions between communities across the country and provides a consistent assessment of basic financial indicators as part of the overall analysis. Additional information that the community provides on its unique financial circumstances will be considered so that schedules take local considerations into account. Where appropriate, this information can result in schedules that are different than the schedules suggested by the baseline analysis suggested in the 1997 FCA Guidance.
- 2. Financial capability is on a continuum.** Although the FCA Guidance approach categorizes financial burden as “high, medium, or low,” this does not mean that schedules will be rigidly set according to the break points between the categories. For example, two communities whose total residential share of costs are 1.1% and 1.9% of median household income (MHI) are both categorized in the FCA Guidance as having a “medium” burden for the Residential Indicator (RI). All other things being equal, the appropriate schedules for those communities are likely to be different. Similarly, all other things being equal, two communities whose residential share of costs are 1.9% and 2.1% of MHI would be more likely to have similar overall compliance timeframes, even though one community is ranked as having a “medium” burden and the other as having a “high” burden. Finally, additional information submitted by the community may affect the length of the schedule regardless of where the community is on the “high, medium, and low” continuum.

- 3. EPA will consider all CWA costs presented in the analysis described in the FCA Guidance.** EPA originally published the FCA Guidance to assist in negotiating schedules for communities with combined sewer systems, as these typically represent the most expensive CWA compliance issues. The FCA Guidance has since been recognized as equally suitable for considering other municipal CWA obligations as well, such as those related to separate sanitary sewer systems. With the release of EPA’s 2012 Integrated Planning Framework, the Agency clarified that the financial capability analysis could include costs of: stormwater and wastewater; ongoing asset management or system rehabilitation programs; existing, CWA related capital improvement programs; collection systems and treatment facilities; and other CWA obligations required by state or other regulators. Where the costs of multiple CWA obligations are included in an FCA, each of those costs should be enumerated separately, so as to provide an understanding of how each contributes to the overall analysis.
- 4. When presented, Safe Drinking Water Act (SDWA) obligations will be considered, primarily as additional information about a permittee’s financial capability.** EPA believes that the SDWA obligations of a community can be an important consideration in establishing schedules for implementing integrated plans. EPA recognizes that both clean water and drinking water costs are often covered through charges on a single rate base. One component of a financial capability assessment includes an evaluation of the residential indicator that is based on only CWA costs as this best reflects the intended use of the metric and allows for comparisons with other communities. Drinking water costs may be reflected in other components of a financial capability assessment. For example, the financial capability indicator includes consideration of bond rating of the entity that issues debt to fund the permittee’s capital project, which can be impacted by both wastewater and drinking water obligations for a permittee that provides both services. If a community has incurred general obligation debt associated with the SDWA, these obligations would be considered in the indicator “overall net debt as a percent of full market property value.” In addition, as discussed below, additional information, including information regarding drinking water obligations, may be submitted for consideration in analyzing financial capability. To the extent that drinking water costs are not fully addressed by these other components, communities are encouraged to provide additional information about these costs.
- 5. Communities should demonstrate how the CWA work included as costs in the financial capability assessment will be implemented, including appropriate assurances that those expenditures will be made.**

The Financial Capability Assessment Guidance and Examples of Additional Information that are Relevant to a Consideration of Financial Capability

The specific approaches laid out in the FCA Guidance provide a good foundation for the assessment of financial capability. As stated in the guidance and outlined in this Framework, communities can build on that foundation to include additional relevant information. The FCA Guidance presents a two-phased approach to assessing overall financial capability. The first phase assesses the impact on residential customers, and the first step is to calculate the portion of

the annual costs that would be borne by residential households for both current and projected Clean Water Act related expenses. The residential share of the annual costs of CWA obligations is then compared to the MHI of the service area. MHI is calculated using current census data and may be adjusted based on the current Consumer Price Index. Finally, the CWA compliance costs per household are divided by the adjusted MHI to calculate the residential indicator (RI). The FCA Guidance then identifies various ranges of RI scores as “low, mid-range or high” levels of burden. In situations where there are unique circumstances that would affect the conclusion of the first phase of the assessment, additional information documenting unique financial conditions may be submitted.

The second phase of the financial capability analysis assesses the financial strength of the permittee. Six indicators are used to evaluate the debt, socioeconomic and financial conditions that affect a permittee’s financial capability to implement CWA controls necessary for compliance with the Act. These include bond ratings, overall net debt as a percent of full market property value, unemployment rate, median household income, property tax revenue collection rate, and property taxes as a percent of full market property value. In the Guidance, EPA has established benchmarks for each of the six indicators showing whether the indicator reflects a “weak”, “mid-range”, or “strong” financial capability. These benchmarks are used to generate an overall score of a permittee’s financial capability.

The residential indicator calculated in phase one and the permittee capability indicators analyzed in phase two are evaluated together in a Financial Capability Matrix to assess the level of financial burden. The level of burden is then used to inform discussions to establish an appropriate schedule for meeting CWA obligations in permits and enforcement actions. EPA uses these indicators, including the annualized costs as a percent of MHI, to help assess when costs are reaching levels that may represent a high burden on ratepayers and that longer compliance timeframes are likely to be appropriate to spread the cost over a longer period. EPA does not view or use the Financial Capability Matrix as a rigid metric that points to a given schedule length or threshold over which the costs are unaffordable.

Permittees have suggested and the FCA Guidance recognizes that the two step analysis may not provide a complete representation of financial capability. As noted above, other relevant financial or demographic information presented that illustrates the unique or atypical circumstances faced by a permittee will also be considered in evaluating financial capability. The presentation of additional information can be very valuable in analyzing financial capability, and the submission of this type of information has become fairly common practice. For example, in many consent decree negotiations, additional information has resulted in the establishment of schedules that differ from the ones suggested by the baseline analysis described in the FCA Guidance.

Some examples of information that may be relevant in negotiating schedules to be included in permits and consent decrees are given below. In order for such information to adequately illustrate that a permittee’s situation is atypical, EPA encourages permittees to compare any additional information on their circumstances to national averages or to that of other permittees.

The examples given below are not intended to be a complete list, nor a list of factors that will be relevant in every community. Rather it provides an illustration of information that may prove useful in some instances.

Examples of Information Related to Residential Impacts:

1. Income distribution by quintile, geography or other breakdown, illustrating how income distribution in the service area differs from comparable data on the national level or for similar cities.
2. Where cities have adopted differential rates for low income customers, the income distribution that led to that rate structure.
3. Information about service area poverty rates and trends.
4. Projected, current and historical sewer, and stormwater fees as a percentage of household income, quintile, geography or other breakdown.
5. Information on sewer and water usage for various classes of ratepayers or by type of dwelling unit.
6. Information on the percent of households who own versus rent.

Examples of Information Related to Financial Strength:

1. Historical population trends or population projections.
2. Service area unemployment data and trends, or other labor market indicators, including unemployment on an absolute basis.
3. Rate or revenue models, including dynamic financial planning models showing the projections of impacts over the program period. All revenue sources tied to CWA obligations may be included as appropriate.
4. Rate determination studies used to develop and support recent rate increases.
5. Data and trends on late payments, disconnection notices, service terminations, uncollectable accounts, or revenue collection rates.
6. Historical increases in rates or other dedicated revenue streams.
7. State or local legal restrictions or limitations on property taxes, other revenue streams or debt levels.
8. Other costs or financial obligations, such as those that relate to drinking water or other infrastructure, that significantly affect a permittee's ability to raise revenue.
9. Circumstances that may affect a permittee's bond rating. For instance, incurring debt beyond certain thresholds may negatively impact the permittee's bond rating, thus reducing the ability to raise capital.
10. Financial plans that show the implications of incurring additional debt for a permittee's ability to secure financing, including projections of metrics such as debt ratios, debt service coverage, debt per customer, days of cash on hand, days

of working capital and other metrics used by rating agencies. Such data should be benchmarked to metrics such as rating agency medians and relative to similar entities. This will be especially relevant where the permittee does not have a bond rating.

11. Extraordinary stressors such as those from natural disasters, municipal bankruptcies, unusual capital market conditions, or other situations which impact a permittee's ability to raise revenue or acquire needed financing. When such stressors occur, they may also provide support for making changes to existing schedules.