

Principles for Assessment and Negotiation of Financial Capability: A Compilation of Resources

November 2007

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Introduction

This document, *Principles for Assessment and Negotiation of Financial Capability: A Compilation of Resources*, compiles work completed following the publication of NACWA's 2005 white paper *Financial Capability and Affordability in Wet Weather Negotiations* (*White Paper*), which offered a critical review of the U.S. Environmental Protection Agency's (EPA) financial capability assessment guidance.¹ These new documents have expanded upon the points highlighted in NACWA's *White Paper*, and have outlined principles and approaches for more effective assessment of financial capabilities.

NACWA developed this compilation for its clean water agency members (referred to throughout as permittees or clean water agencies²) and their communities. Wet weather discharges including sanitary and combined sewer overflows continue to be top enforcement priorities for U.S. EPA and the government has set specific annual goals for establishing court-mandated programs for municipalities to address these issues. NACWA continues to advocate for more responsible national policy and enforcement practices that recognize and are responsive to permittees' environmental stewardship and fiduciary responsibilities. Other stakeholders, including the Environmental Finance Advisory Board (EFAB), are also recommending changes to EPA's current policies and guidance. EPA's existing financial capability guidance, which, as outlined in NACWA's 2005 *White Paper*, has many limitations, is still used as the primary resource for enforcement personnel. NACWA remains hopeful that federal policy and EPA's guidance on financial capability will ultimately be revised to incorporate the new concepts and approaches detailed in the Association's *White Paper*. In the interim, however, this compilation of resources will provide the NACWA membership critical information necessary to strike an effective balance between stewardship goals and financial responsibilities.

This compilation is intended to offer NACWA members guidance and information for use in balancing customer service and environmental stewardship goals with financial responsibilities. It also offers perspectives that may be used to establish a sound negotiation position with enforcement agencies that recognizes the required balancing of program costs and implementation schedules ("time and money"). This compilation begins with a discussion of how to use the various documents, and provides additional information for use in the assessment and negotiation of clean water program implementation.

¹ United States Environmental Protection Agency, *Combined Sewer Overflows: Guidance for Financial Capability Assessment and Schedule Development* (1997) – hereinafter generally referred to as "EPA's 1997 Guidance" or "the EPA Guidance"

² "Permittees" refers herein to agencies issued National Pollution Discharge Elimination System (NPDES) permits and are subject to enforcement of the federal Clean Water Act.

Assessing Financial Capabilities for Negotiation and Management of Clean Water Programs

NACWA has consistently advocated that local economic impacts are an important consideration in the development of environmental programs and enforcement priorities. That environmental requirements must be feasible and affordable for communities is recognized by a number of United States Environmental Protection Agency (EPA) publications, as well as the Clean Water Act (CWA) itself. However, as noted in NACWA's 2005 *White Paper*, "public agency experience with the Agency's implementation of its own guidance documents, along with its more vigorous use of enforcement, has revealed numerous limitations and shortfalls in the Agency's standard approaches to assessing financial capability and affordability at the local level." NACWA's *White Paper* calls for "...a more holistic, economically sustainable" framework to guide financial capability assessments, but to date there has been little movement at the federal level to make any major changes.

Given this recent experience, it is important that clean water agencies concerned with managing the financial implications of clean water programs have a full and complete understanding of the EPA guidance documents on financial capability. This would include recognizing what is and is not historically considered in enforcement actions, as well as recognizing the shortcomings of the Guidance (as summarized herein and in the NACWA *White Paper*). Clean water agencies may use this knowledge in the preparation of their Financial Capability Assessment (FCA) filings and in negotiation of any final programs or enforcement documents.

A. Permittees' Fiduciary Responsibilities

Permittees required to finance major capital improvement programs face a significant challenge. Permittees not only have responsibility for compliance with various environmental laws and regulations, but also are charged with effective stewardship of public funds. The realities of communities' competing priorities can result in difficult decisions on how best to invest public money. While there are clear regulatory requirements that dictate certain spending, other investments can and should be prioritized. Permittees developing FCA submittals and establishing their negotiation positions must balance the need to spend in order to meet regulatory mandates with other needed investments to ensure that reasonable limits of annual expenditure are established.

For permittees, a reluctance to commit to certain environmental investments that yield limited environmental benefit per dollar of expenditure is not a matter of recalcitrance – it is a matter of responsibility.

B. Financial Considerations for Negotiation Strategy

Communities preparing negotiation strategies should understand the need to evaluate and plan for future changes in the marketplace that could compromise their ability to implement a particular clean water program effectively. Flexibility in dealing with risks due to uncertain future conditions should be included in the negotiation strategy. For example, definitive schedules for significant volumes of work irrespective of construction market conditions or program management logistical constraints can be extremely problematic. Recent experience with world-wide construction material price escalation illustrates the unpredictability of market dynamics and their impacts on program costs.

For communities facing inflexible deadlines for completion of clean water program milestones, this cost escalation could impose enormous and largely unplanned rate or tax increases.

Even though enforcement actions impose specific implementation milestones, clean water agencies can protect themselves from future conditions that may present unaccounted for obstacles to implementing a particular program. This is accomplished by examining assumptions used in developing any long-term program

assessing risks, and providing for protection from these risks in the program. Several approaches have been successfully negotiated by clean water agencies and include:

- Placement of a cap on program cost over a defined implementation period, where program costs are defined holistically (to include requirements for Clean Water Act compliance, asset management, and other prospective capital expenditure requirements).
- Definition of annual spending limitations on holistically defined program costs such that rate increases may be mitigated.
- Monitoring of agreed-upon program implementation metrics such that variances from projections used as the context of negotiations (e.g., cost estimates, contractor mobilization periods) give rise to schedule relief or revision of program requirements.
- Regular review of factors used for assessing financial capabilities or other factors (e.g., those identified in Appendix A to the Annotated Guiding Principles herein). Eligibility for, or direct provision of, schedule or program scope relief could be obtained if selected factors reach negotiated threshold values.

Clean water agencies should consider whether specific milestones should apply only to the limited number of environmental investments that clearly yield the highest available environmental returns per dollar of expenditure. Fixed schedules for the remedial measures components (e.g., early action plans) of clean water programs also make sense from both an economic and environmental perspective; fixed schedules for entire long-term programs are difficult to develop and attain because of changing conditions and flexibility should be sought.

C. Using this Compilation – Recommended Approaches to Financial Capability Assessment

In negotiating long-term programs, clean water agencies should look beyond the prescriptive language of the current EPA Guidance and use the more general provisions discussed in the Guidance that encourage consideration of unique local conditions in the economic assessment process. As highlighted in NACWA's 2005 *White Paper* and the recent Environmental Financial Advisory Board³ (EFAB) reviews, the prescriptive approach found in EPA's 1997 Guidance does not provide for full and accurate representation of the financial impacts of clean water investment programs. Permittees should recognize that their financial capability assessment filings afford them a unique opportunity to highlight the multitude of needs that make demands on limited community resources. These claims typically extend beyond the narrow focus of specific enforcement actions, and they often represent measures mandated, or at least recommended, by EPA and state enforcement agencies (e.g., asset management). These filings further provide an opportunity to demonstrate how certain cost and financing factors that are relegated to "additional considerations" in narrowly constructed filings, are in fact particularly significant and unique local conditions that should be the primary basis for evaluation. A more holistic analysis may afford permittees an opportunity to demonstrate their attempts to effectively balance economic and environmental concerns, consistent with their (uniquely held) fiduciary responsibilities.

NACWA's Annotated Guiding Principles (Document 1) and associated conceptual model (Document 2) offer assistance in developing such a holistic analysis. They recognize the primacy of local conditions and competing claims on community resources, mitigate impacts on low-income communities, and acknowledge the tradeoffs of time and money in defining program requirements. Though they do not prescribe specific methods for

³ A critical review of EFAB's comments on EPA's CSO Financial Capability Assessment Guidance, which echoes many of the points of NACWA's white paper but does not address several of the fundamental problems with EPA's guidance, is provided as the final component of this compilation.

compiling information required by EPA Guidance, several strategies are implicit. For example, in defining program costs, the breadth of requirements for water quality investments (e.g., CSO, SSO, stormwater management, asset management) must be considered, not just those costs identified in a Long-Term Control Plan (LTCP). In addition, local construction cost escalation data may be used rather than referring to Consumer Price Index values. Permittees may even offer adjustments to Median Household Income values to reflect impacts of exceptionally high shelter costs or local tax burdens.

If nothing else, the Annotated Guiding Principles and conceptual model may effectively provide an outline for submitting “additional considerations” for EPA review. In so doing, permittees may structure their commentary on financial capability concerns in a manner consistent with NACWA advocacy. Section IV also offers permittees an alternative methodological approach to financial capability assessment that is consistent with NACWA’s guiding principles.⁴ It offers one approach to retrieving local concerns and prioritization needs, which are central to a true assessment of financial capability, from the list of potential “additional considerations.”

Permittees should understand that concerns over the absence of a framework for dealing with “additional considerations” and the methodological limitations of EPA’s 1997 Guidance have engendered calls for its review and revision. In Document 3, NACWA has reviewed the EFAB comments on EPA’s Guidance and has attempted to frame the dynamics of ongoing developments related to financial capability assessments. EFAB has offered comments that echo many of those made by NACWA in its 2005 *White Paper* yet do not call for the fundamental changes advocated by NACWA. This climate of potential change may afford permittees an opportunity to make or reinforce points that gain currency with EPA, or which may be viewed favorably in litigation.

⁴This approach has several significant advantages in that it recognizes the complexity of assessment of financial capability (rather than requiring a prescriptive two-part test), may be tailored to reflect local conditions and concerns, and is a transparent process for evaluating the relative impacts of program alternatives.

Document 1

Annotated Guiding Principles for Financial Capability Assessment of Clean Water Programs

Purpose

The National Association of Clean Water Agencies (NACWA) has led the wastewater industry in advocating for the development and implementation of water quality policies that are grounded in practical insights and technical expertise. In 2005, NACWA published a white paper, *Financial Capability and Affordability in Wet Weather Negotiations* that provides a critical review of the U.S. Environmental Protection Agency's (EPA's) Financial Capability Assessment (FCA) guidance documents. It also delineates policy considerations to mitigate adverse economic impacts of Clean Water Act enforcement practices.

Referencing that *White Paper*, EPA's Assistant Administrator for Water, Benjamin Grumbles, called for a thorough review and revision of the FCA, specifically EPA's 1997 document "CSO Guidance for Financial Capability Assessment and Schedule Development".

To support EPA's review of the FCA, and to further the discussion on financial capability assessment, NACWA prepared a set of Guiding Principles to:

- Outline principles to guide revision of financial capability assessment practices, and
- Define economic considerations that wastewater agencies may appropriately highlight in negotiating Clean Water Act enforcement measures.

This document suggests clarifying definitions for a number of commonly used terms and provides context for the guiding principles for Financial Capability Assessments first offered by NACWA in July 2006.⁵ In Section IV, an alternative methodological framework for conducting Financial Capability Assessments is presented to foster further discussion.

Definitions

The discussion on the financial implications of long-term water quality-based control programs and the rising costs of water and wastewater services has been characterized by loose and often times interchangeable use of the terms "financial capability" and "affordability". Other terms, including "widespread economic hardship" and "low-income ratepayer impacts" have peppered the dialogue, causing further confusion. In order to ensure a degree of precision and clarity, the following definitions and context of the two most commonly used (and misused) terms are offered:

- **Financial capability** is the relationship between a community's⁶ economic condition and the investments needed to make water quality-related improvements. A community's ability to pay for these needed improvements is determined by its existing and potential future economic situation. Based on an assessment of a community's economic situation, the scope of any improvements and the timeframe for making the improvements is determined.
- **Affordability** relates to whether individual utility ratepayers or customers can pay their utility bills without undue hardship or unreasonable sacrifice in their lifestyle or in their essential spending patterns.⁷

⁵ The Guiding Principles were shared with many stakeholders, including the U.S. Environmental Protection Agency, in an earlier draft form.

⁶ The term "community" is intended to include the affected service area population, or portion thereof, of all wastewater entities, regardless of governance type (city, county, regional provider, special district, etc.).

⁷ This concept is drawn from a forthcoming Water Environment Federation Special Publication focused primarily on low-income assistance program planning and implementation considerations.

These definitions focus on prospective impacts and reflect an implicit public policy imperative that water quality investments must be considered in the context of other claims on limited available resources. Financial capability relates to broad community impacts and spending constraints; affordability to individual customer/ratepayer budgets. The definition of financial capability points to the reality that a community's capacity to finance water quality improvements depends on competing claims for other environmental investments (e.g., air quality improvements), as well as a full spectrum of public and social services.

Notably, these definitions frame but do not address at least three important questions that are fundamental to the debate on the financial implications of clean water policies:

- The definition of financial capability does not offer guidance on *how* prioritization of water quality investment across competing community objectives may be accomplished, particularly within a regulatory framework.
- The definition of financial capability defers the question of whether financial capability for further water quality investment is a function, in part, of past investment histories.⁸ Given competing community priorities, not only may a community's "existing and potential economic situation" warrant consideration, but so also may the extent to which it has already invested in water quality.⁹
- The definition of affordability focuses on individual ratepayer impacts but is silent as to where the responsibility for ensuring the affordability of service resides.

NACWA's Guiding Principles speak to the limitations of existing EPA Guidance for effectively addressing these public policy questions and offer perspectives on how community financial capability may be considered in defining the scope and timing of water quality investments. In the subsequent sections, each of NACWA's Guiding Principles is presented with accompanying discussions of such policy implications.

NACWA Guiding Principles

Individual NACWA Guiding Principles are offered in the following sections *in italics* followed by a discussion of their implications for conducting financial capability assessments and water quality investment policy.

I. Economic Capability

A. The first consideration in a financial capability assessment must be the community's economic situation.

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Alternative schools of thought exist about the relevance of past water quality investments for the determination of financial capability. One school of thought would suggest that past investments are only relevant to the extent that a community continues to pay debt service on these investments, thereby limiting capability for future investment. Alternatively, to the extent that one may view past, fully financed, water quality investments as limiting the prospective environmental return of future water quality investments, it may be argued that prior water quality investment is a relevant factor even in the absence of debt service obligations. More generally, it may be argued that significant prior water quality investment suggests the merit of environmental investments elsewhere (e.g., air quality).

⁹ For example, to the extent that Chicago's Tunnel And Reservoir Plan (TARP) program or San Francisco's Clean Water Program represent substantial and seminal past investments, traditional enforcement actions based on prospective assessment of financial capability generally deny recognition of previous investments and communities' competing claims on limited resources.

- *Prescriptive formulas for calculation of financial capability and thresholds for expenditure (e.g., median household income or MHI) are just one indicator of a community's ability to afford a particular program.*
- *Local conditions (e.g., scheduled water rate increases, rising energy costs, population and employment projections, low-income population percentage, construction market, shelter costs, etc.) are the primary factors in determining economic capability. Criteria must be developed to incorporate site-specific local conditions into the capability analysis.*
- *A framework or structured procedure should be established for evaluating local conditions to ensure a degree of national consistency. However, the framework must allow the specific local conditions to ultimately define the schedule and cost incurred for any particular program.*

Discussion:

EPA's current FCA Guidance provides reasonable litmus tests as to whether low median household incomes warrant schedule or program requirement relief. The current FCA Guidance also provides some reasonable measures as to whether poor community financial performance indicates real limitations on local debt financing capacity. Yet contrary to EPA enforcement practices in numerous cases, these barometers alone are insufficient¹⁰ to determine whether potential program costs represent high burdens (requiring schedule relief or reduced program requirements). Many communities may pass these litmus tests and yet not be in a position to finance water quality improvements without imposing untenable burdens or deferring other, more beneficial environmental investments. Financial capability, as suggested by the above definition, is a function of a broad array of interdependent factors that reflect not only resident and community income and wealth but also the economic prospects of diverse populations within a permittee's service area. Prescriptive formulas that focus only on median income values and broad measures of community financial performance cannot adequately represent or consider this diversity, and therefore cannot adequately assess financial capability.

In considering potential revisions to the current EPA FCA Guidance, recognition of the **primacy** of local conditions in determining financial capability would represent a significant advance. However difficult (as discussed below), this is **essential** for effectively assessing community financial capability. In the same way that an individual's ability to finance an investment is driven by numerous (non-income related) individual circumstances – including family wealth, dependent care requirements, essential service costs, and so on – the same is true for communities. Equally challenging is the fact that the relative importance of these factors differs from community to community and region to region. Potential adverse economic considerations are much more pronounced in “rust belt” communities than the booming southwest, and shelter costs are much more problematic in Hawaii and California than the Midwest. Accordingly, the consideration of local conditions must be tailored to reflect prevailing economic imperatives.

Financial capability assessment procedures that consider a community's economic **outlook** and the potential impact of program requirements over time, rather than the ‘snapshot’ approach of current EPA Guidance, are also important for assessing how individual communities can implement capital projects to solve water quality problems. For example, the static aspect of the current FCA Guidance has led to EPA conclusions that neither the City of Atlanta's nearly \$4 billion water-quality improvement program nor the Northeast Ohio Regional

¹⁰ Enforcement practices essentially have defined these litmus tests, in combination, as necessary conditions for a finding of high burden warranting schedule relief. Central to NACWA's guiding principles is the thesis that financial capability is not a threshold defined by selected financial benchmarks, but rather is a function of an array of (mostly local) factors. Therefore, the magnitude and pace of water quality investments must reflect these factors.

Sewer District's \$4 billion in expenditures over 30 years present high burdens to their communities. Common sense, if not defined assessment procedures, suggest the contrary. In fact, the Guidance suggests that for communities with strong financial performance indicator scores, there is virtually no program cost high enough to present a sufficient burden. While affluent communities certainly are likely to have greater capabilities than poorer communities to finance water quality improvements, this capacity is not infinite.

These and other examples support the contention that broadly applied prescriptive formulas without adequate consideration of local factors are untenable. There is no question, however, that tailoring financial capability assessments to site-specific local conditions could exacerbate inconsistencies in national enforcement practices, which are already heightened by variations in policy interpretation across EPA regions. As a consequence, a framework that is transparent, auditable and sufficiently flexible to accommodate a broad range of considerations is required.

In many respects, these evaluation requirements are typical of public resource investment decisions, where multiple priorities must be balanced across different, often competing, objectives. This suggests the potential value of formal prioritization methodologies that have been used successfully in, for example, portfolio management of financial resource decisions. Document 2 in this compilation includes a draft structure for prioritization of water-quality investment methods.

B. Economic capability for clean water programs must be assessed in light of other investment demands and potential environmental benefit.

- *Water quality-related investments should be viewed holistically as components of a community's overall environmental investment (i.e., Combined Sewer Overflow (CSO), Sanitary Sewer Overflow (SSO), Stormwater, Total Maximum Daily Load (TMDL) programs).*
- *A utility has a fiduciary obligation to utilize its limited resources in such a way as to maximize the benefit to its community, so water quality-related projects must be prioritized based on cost effectiveness.*

Discussion:

Investment decisions, whether to manage personal wealth or community resources, call for consideration of available alternatives. Similar to individual investors, local governments fulfilling their fiduciary responsibilities seek to invest resources in ways that will maximize returns (in the form of community benefit) at acceptable levels of risk. EPA's current FCA Guidance uses discrete measures of community resources (e.g., median household incomes, community financial indicators), in isolation, to define capability to finance water quality investments. In certain communities, however, dedicating limited available resources for certain water quality investments will preclude investments that will provide more substantial benefit, resulting in sub-optimal resource allocations that, by definition, are not cost-effective.

Cost effectiveness must be considered in the context of a "portfolio" of available investment alternatives to achieve environmental benefit. Cost effectiveness, then, is about potential benefit relative to costs incurred, and a necessary condition is for benefits to exceed associated costs. But cost effectiveness is not established solely by benefit/cost ratios greater than one. For example, it is not cost effective to make an investment that yields benefits two times greater than associated costs if that will preclude another equivalent investment yielding benefits three times greater than costs. Rather than being an absolute measure, cost effectiveness is a relative measure, requiring consideration of other available alternatives.

In this respect, water quality investments can only be appropriately prioritized when they are considered from the holistic view of total watershed management.¹¹ In personal investing, investments are not optimized by considering the projected returns of individual stocks or bonds, but by balancing risks and returns in one's portfolio of investments. Similarly, the benefits of water quality investments cannot be properly considered in isolation based on, for example, compliance with individual provisions of the Clean Water Act. Rather, holistic water quality investment strategy requires balancing of investments to yield overall benefit within available resource constraints.

A holistic view also avoids investments being driven by the arbitrary sequencing of enforcement actions or compliance requirements. For example, investments in CSOs should not be prioritized over investments in SSOs or sediment remediation simply because a CSO-related enforcement action precedes other actions. Agencies facing prospective enforcement actions and/or compliance needs on multiple fronts may rightfully assert that limited resources ought to be applied first to those investments yielding the greatest or most immediate benefit per dollar of investment, with investments of lesser benefit deferred. This scheduling priority should not be a function of which enforcement action is taken first, but rather a function of water quality improvement returns. A holistic perspective requires not only an appropriate scope but also recognition of constraints on the *pace* with which water quality investments can be made.

A holistic perspective suggests that the magnitude and scope of water quality investments should generally be a significant, though not overly burdensome, claim on a community's resources. We all recognize that water quality is critically important for the health and vitality of our communities. In the same way that it is inappropriate to assert that massive water quality investment programs are not burdensome, it is equally inappropriate for communities to forestall significant environmental investments due to other, ever-present priorities. A utility's fiduciary responsibility is not to avoid water quality investments but rather to ensure that its significant allocation of resources to water quality investments are paced to yield the highest return within the real (and locally determined) constraints on its community's financial capabilities.

C. Environmental improvements should be structured so as to mitigate the potential adverse impact of their cost on distressed populations.

Discussion:

As stated above, EPA's current Guidance results in FCAs that provide a static review of the availability of community resources, rather than an evaluation of how the associated burden is distributed among sub-populations. The FCA Guidance is effectively silent on the potential adverse impacts of program implementation on distressed populations. In the same way that individuals who are responsible for disadvantaged relatives must divert resources to their care, thereby limiting their financial capability to make other investments, communities' financial capabilities cannot be separated from the public challenges presented by distressed populations.

Addressing the needs of distressed populations may, in fact, limit the total resource pool available to make water quality investments. Mitigation of the potential adverse impacts of water quality investments should

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Arguably, a truly holistic perspective may be even more expansive. Even if restricted to environmental investments subject to EPA enforcement, water quality investments should be prioritized across the spectrum of options that include investments in air quality, drinking water quality, wetland preservation, and so on.

extend beyond rate design and targeted programs to facilitate low-income assistance¹². It is appropriate to include environmental justice considerations in determination of site and schedule requirements for water quality programs.

II. Program Scope and Timetable

A. The scope of and implementation schedule for water quality-related improvements must be tailored to the affected community's unique financial condition.

- *Water quality-based improvement programs must be designed to maximize water quality benefit while maintaining a healthy economic balance for the community.*
- *The appropriate pace of environmental investments cannot be prescribed (e.g., 20 years) but rather must reflect the community's financial capabilities and investment alternatives.*
- *There is no legislative limitation on extended implementation schedules. Regulatory limitations, to the extent they exist, can be addressed and overcome.*

Considering financial capability in light of other investment demands and potential environmental benefits ensures that the greatest water quality improvement is obtained at the earliest possible time.

Discussion:

While the discussions above address many issues related to program scope, similar considerations govern questions of implementation schedule. In particular, not only is there no regulatory or legislative limitation on schedules, but arbitrary schedule prescriptions can lead to sub-optimization of investment resources. Implementation schedules should reflect investment priorities; projects conveying lower environmental benefit per dollar should not be prioritized above higher-benefit alternatives simply to meet arbitrarily prescribed schedules. In addition, schedule variances should be evaluated in the same context as project options: in terms of the benefit or costs associated with advancing or deferring program implementation. Fundamentally, benefits that accrue from scheduling projects earlier should exceed the opportunity costs of deferral. While there is certainly a “slippery slope” to consider (e.g., what harm will it do to defer a project another year, and then another?), requirements for accelerating program investments (particularly those that will impose significant financial burdens) should be justifiable on the basis that more relaxed scheduling requirements would result in relatively less net benefit.

¹² Rate design options include a variety of methods to provide distressed populations access to wastewater services at subsidized costs; programmatic measures are discussed in a forthcoming WEF special publication.

Document 2

Potential Revisions to the EPA Financial Capability Assessment Methodology: A Conceptual Example

I. Purpose

Outlined below are potential revisions to EPA's procedures for Financial Capability Assessments (FCA) to address methodological limitations encountered in recent CWA enforcement actions and identified in the 2005 NACWA *White Paper*. This conceptual example outlines an alternative methodology to assessment of potential economic impacts of water-quality improvement programs that provide:

- A flexible, yet formulaic, methodology for calculation of program impacts relative to costs, thereby providing an analytical framework to support regulatory enforcement and negotiation.
- Recognition of the importance, even primacy, of local and regional factors in assessing economic impact.
- Through alternative weighting schemes, recognition of differences in the relative importance of various factors depending on economic conditions and potential infrastructure market impacts.
- Disciplined recognition of a number of factors previously relegated to passing reference as 'additional considerations' including a number of environmental / social justice and program delivery considerations about which the current FCA methodology is effectively silent.

II. Methodological Approach

The proposed methodological enhancement to the prescriptive FCA approach builds upon the recognition that effective assessment of financial capabilities requires consideration of a broad array of (often competing) factors whose relative importance may vary across regions and localities. This multi-attribute decision problem is characteristic of public resource allocation issues,¹³ and lends itself to application of formal prioritization techniques to evaluate relative impacts and costs of alternative water quality program and schedule configurations.

Conceptually, the proposed enhancements are simple, retain a structured performance-based assessment methodology critical for regulatory enforcement, and address many of the limitations of the current FCA methodology. In brief, the approach recognizes and/or affirms a limited number of fundamental program implementation impacts. These broad impacts are further defined by specific factors which may be measured. Weights are assigned to the defined program impacts to reflect the relative importance that stakeholders place on their importance. Well-defined performance scales for each factor helps ensure consistency and accuracy in the scoring and ranking of program alternatives.

An illustrative example is provided in Table A-1. This example employs four categories of impacts:

- **Household Financial Impacts** – Factors impacting individual households' ability to pay additional program-related costs.
- **Community Financial Impacts** – Recognition of economic trends and factors as well as existing claims on community financial resources.

¹³ As opposed to private sector resource allocation issues that tend to focus more on singular objectives of profit maximization. In many respects, the public resource allocation challenge is much more complicated due to the multitude of considerations (e.g., economic, social, environmental) and stakeholder perspectives that must be balanced.

- **Environmental / Social Justice Impacts** – Explicit recognition of impacts on low-income and disadvantaged communities.
- **Program Delivery Impacts** – Accommodation of market saturation, logistical coordination requirements, and contractor availability in scheduling.

For each of these categories of impact and specific factors, weights are assigned to reflect their relative importance to impacted stakeholders. Conceptually, these weights may be negotiated at the state and local level to enable permittees and regulators to tailor their evaluation of program impact to recognize the prevailing economic and environmental concerns in their regions and communities.¹⁴

For each factor assigned a non-zero importance weighting, scores are assigned for the program and community using the performance scales provided for each such factor.¹⁵ To the extent practicable, performance scales should enable the unambiguous scoring of program impacts, lending to auditable (yet flexible) evaluation of program impacts. The draft performance scales offered below provide some initial concepts for appropriate performance scales and illustrate formulations that facilitate objective scoring.

As can be seen, the specific factors incorporate most, but not all, of the local considerations and concerns identified in the NACWA 2005 *White Paper*. Their inclusion has been carefully structured to comply with formal prioritization system requirements, thereby ensuring the validity of a scoring and ranking process. Specifically, impact categories must be fundamental, independent and non-redundant to ensure mathematical validity of calculations.¹⁶

Several if not all of these factors (and their associated weights and performance scales) undoubtedly warrant discussion and negotiation between interested stakeholders. As presented, the framework attempts to employ specific, verifiable measures to offer a methodological context for many of those factors previously relegated to additional considerations. Performance scales are, to the extent practicable, tied to national and state indices to help ensure consistency across EPA regions. The framework may be tailored to have FCAs recognize the primacy of local factors, as noted in NACWA's Guiding Principles, yet remain a performance-based framework to facilitate regulatory enforcement.

¹⁴ Weights assigned in the example are illustrative. Weights assigned to Household Financial Impact (40) and Community Financial Impact (35) are relatively high compared to those assigned for Environmental Justice (10) and Program Delivery (15) principally because the latter two categories are an expansion of the current FCA methodology wherein Median Household Income (MHI) and Community Financial Health indicators alone are evaluated. To the extent that MHI and Community Financial Health Indicators should continue to be viewed as principal considerations, heavier weighting of these factors may accomplish this objective and preserve a measure of continuity with prior FCA methodologies. Similarly, within the Household Financial Impact and Community Financial Impact categories, weights assigned to the prior FCA measures are constrained (as an example) to be weighted at not less than 80 and 75 of the 100 points assigned within each category.

¹⁵ DRAFT conceptual performance scales are provided for each factor as comments in the applicable cell of the spreadsheet. These comments are revealed by 'passing over' the cell with one's mouse (or selecting View \Comments from the Toolbar) and are provided in the following section.

¹⁶ By fundamental, NACWA means that the impacts fully define what is important to consider in evaluating the program in discrete, measurable terms. Non-redundancy requires that impact categories not address effectively the same or overlapping aspects of program impact. Independence of categories insures that impacts relative to one category are not, in effect, dictated by the occurrence of impacts in another category. These requirements insure that the impacts assigned to program implementations are not double-counted and are additive.

Arithmetically, the weighting and scoring process provides for an accumulation of a 'Total Impact Score' simply by multiplying factor weights against scores, applying the impact category weights to the weighted factor score, and adding weighted impact scores across categories.¹⁷ Conceptually, total impact scores may be compared to indices of environmental benefit associated with alternative program configurations and schedules to prioritize options that offer the best tradeoffs of program impact vs. environmental benefit.

III. Issues Addressed in Proposed Methodology

The four categories of impact enumerated in Table A-1 conceptually address a number of issues relegated to additional consideration in the current FCA methodological framework. By category of impact, these issues include:

- **Household Financial Impacts** – the MHI factor employed in the current FCA (with scale preserved) is supplemented by factors to recognize the impacts of other claims on available resources. In particular, shelter costs provide acknowledgement that local ratepayers in communities like Boston and Honolulu face significantly higher claims against available MHI to pay mortgage (and associated property tax) costs. These claims impinge upon these residents' ability to pay ever-increasing wastewater service costs. Similarly, utility rate and tax factors are enumerated to enable consideration of other factors limiting ratepayers' ability to increase spending on wastewater service costs. The associated scales generally reference national averages to ensure that these factors substantively affect household impact scores only when individual households face relatively acute challenges as compared to households in other communities.
- **Community Financial Impacts** – in addition to the Financial Indicators from the current FCA methodology (with performance scales preserved and which are heavily weighted in the example), this category of impact incorporates several local factors. The historical water quality investments and non-water quality environmental investment factors attempt to address the imperative for communities to establish a well-balanced environmental investment portfolio. Arguably, a community's ability to (appropriately) invest in further water quality enhancements is dictated, to some extent, by the availability and return of other environmental investment options (and the community's existing and past water quality investments).¹⁸
- **Environmental Justice Impacts** – the designation of environmental justice as *fundamental* elevates the prospective consideration of these factors (while its low weighting, by example, retains focus on the first two impact categories). While it may be argued that addressing distributional inequities in a community is a local problem and is not indicative of a community's overall financial capability, this

¹⁷ Weights may be adjusted to reflect relative importance of factors within the context of regional / local economic and environmental imperatives. Weights should be assigned as 0 - 100 with the summation of all weights for a set of factors equal to 100. Scores must be from 0 - 10 and assigned using the scales delineated in the comments associated with each factor.

¹⁸ Alternative schools of thought with respect to the relevance of past water quality investments serve to illustrate the potential for this methodological approach to bring forward, in a structured framework, prevailing public policy issues. One school of thought would suggest that past investments are only relevant to the extent that a community continues to pay debt service on these investments, thereby limiting capability for future investment. Alternatively, to the extent that one may view past, fully financed water quality investments as limiting the prospective environmental return of future water quality investments, it may be argued that prior water quality investment is a relevant factor, even in the absence of debt service obligations. More generally, it may be argued that significant prior water quality investment suggests the merit of environmental investments elsewhere toward different but no less important environmental issues (e.g., air quality) that may yield higher environmental benefit returns when considered from a holistic perspective.

- impact category recognizes that there are constraints on wastewater service cost redistributions, especially for rental properties, and expands the narrow view that that environmental justice issues are more related to construction disruptions and other non-monetary impacts.
- **Program Delivery Impacts** – the designation of program delivery as *fundamental* to the ability to complete projects and realize water quality benefits also elevates consideration of these factors which have been largely dismissed in the context of consideration of additional considerations. This dismissal may reflect an argument that most of these factors can, and perhaps should, be translated to changes in program cost estimates. However, these factors are incorporated herein to highlight the importance of effective management of major program implementations and the fiduciary responsibilities of all key decision-makers to ensure cost-effective program delivery.

IV. Initial Concepts for Impact Factor Performance Scales

Undoubtedly, negotiation of appropriate program impact factors, weights and scoring systems will require considerable discussion and debate, which complicates the relatively rote prescriptions of the current FCA Guidance. This added complexity is appropriate, however, if the FCA methodology is to evolve from testing threshold conditions (e.g., MHI percentage) to promoting community investment in those projects and programs that yield the highest benefit per dollar of expenditure within their financial constraints. In the section below, initial concepts for Program Impact Factor Performance Scales are offered for consideration.

Household Indicators

| Median Household Income* | |
|---|--|
| Score | |
| 10 | MHI is in lowest 10% of national distribution |
| 5 | MHI is within 10% of national average |
| 1 | MHI is in highest 10% of national distribution |
| <i>Forced Weighting of factor among Household Indicators: Must be greater than or equal to 75</i> | |

| Shelter Costs | |
|---------------|--|
| Score | |
| 10 | In highest 10% of national distribution of shelter costs |
| 5 | Shelter costs within 10% of national average |
| 1 | In lowest 10% of national distribution of shelter costs |

| Water, Wastewater, Stormwater Rates | |
|-------------------------------------|---|
| Score | |
| 10 | In highest 10% combined residential water, wastewater and stormwater bills (for 10kgal usage) in US |
| 5 | Within 10% of combined residential water, wastewater and stormwater bills (for 10kgal usage) in US |
| 1 | Lowest 10% of combined residential water, wastewater and stormwater bills (for 10kgal usage) in US |

| State /Local Tax Structure | |
|-----------------------------------|---|
| Score | |
| 10 | In highest 10% combined residential state & local tax bills (per \$ assessed valuation) in US |
| 5 | Within 10% of combined residential state & local tax bills (per \$ assessed valuation) in US |
| 1 | Lowest 10% of combined residential state & local tax bills (per \$ assessed valuation) in US |

Community Financial Impacts

| Historical Water Quality Investments | |
|---|---|
| Score | |
| 10 | Avg. per annum Clean Water Act compliance investments greater than X% of local government capital budget. |
| 5 | Avg. per annum Clean Water Act compliance investments greater than Y% of local government capital budget. |
| 1 | Avg. per annum Clean Water Act compliance investments greater than Z% of local government capital budget. |

| Non- Water Quality Environmental Investments | |
|---|---|
| Score | |
| 10 | Projected per annum Non-CWA EPA mandated compliance investments greater than X% of local government capital budget. |
| 5 | Projected per annum Non-CWA EPA mandated compliance investments greater than Y% of local government capital budget. |
| 1 | Projected per annum Non-CWA EPA mandated compliance investments greater than Z% of local government capital budget. |

| Economic / Population Trends | |
|-------------------------------------|---|
| Score | |
| 10 | Greater than 3% avg. per annum decline in employment levels or population over last 5 years. |
| 8 | Greater than 1% and less than 3% avg. per annum decline in employment levels or population over last 5 years. |
| 5 | Between 1% decline and 1% increase in avg. per annum change in employment levels or population over last 5 years. |
| 3 | Greater than 1% and less than 3% avg. per annum increase in employment levels or population over last 5 years. |
| 1 | Greater than 3% avg. per annum increase in employment levels or population over last 5 years. |

| Financial Health Indicators * | |
|---|---|
| Employ existing FCA 'weak' to 'strong' scales, normalized to 0 - 10 scale by dividing sum by 1.5 and rounding | |
| | <i>Example Forced Weighting: Must be greater than or equal to 75.</i> |

Environmental Justice / Social Justice Impacts

| Low Income Ratepayer Percentage | |
|--|---|
| Score | |
| 10 | Greater than 20% below 100% of federal poverty line in last 5 years. |
| 5 | Between 10% and 20% of population below 100% of federal poverty line in last 5 years. |
| 1 | Less than 10% of population below 100% of federal poverty line in last 5 years. |

| Localized Construction Disruption | |
|--|--|
| Score | |
| 10 | Greater than __% of construction to occur within disadvantaged communities. |
| 5 | Between __% and __% of construction to occur within disadvantaged communities. |
| 0 | No construction to occur within disadvantaged communities. |

| Specific Community Impacts | |
|---|--|
| This was put as a placeholder for unique situations impacting particular sub-populations. Examples could include fisherman impacted by water quality variations, neighborhoods impacted by sludge hauling, etc. These sub-criteria may defy ready assignment of general performance scales but rather must be tailored at local levels. | |

| Rent/Tenant Impacts | |
|---|--|
| As a proxy for potential impacts to rents, employ measures of available low-rent housing like % occupancy of rental properties with rental rates at __% of MHI. Unavailability of alternatives would enable landlords to directly pass on cost increases whereas a renters' market may enable some cost absorption. | |

Program Delivery Impacts

| WQ Infrastructure Market Saturation | |
|--|---|
| Score | |
| 10 | Projected 10-yr water quality infrastructure investments within 100 mile region exceed \$X billion. |
| 5 | Projected 10-yr water quality infrastructure investments within 100 mile region exceed \$Y billion. |
| 1 | Projected 10-yr water quality infrastructure investments within 100 mile region exceed \$Z million. |

Program Management

Employ 1, 2, or 3 scale indicating whether sub-factors are "expected to" impact construction costs by less than X% (1), by X - Y% (2) or by greater than Y% --- normalized to 0 - 10 scale by dividing sum by 1.2 and rounding.

- Schedule Management
- Change order management
- Surety / Bonding
- Cost Escalation

| Table A-1 | | | | | | | | | |
|---|--|---|--|-----------------------------------|--|-------------------------------------|--|-------------------------|--|
| Financial Capability Assessment Program Evaluation Matrix -- Conceptual Example 6/12/2007 | | | | | | | | | |
| WGT Score | | WGT Score | | WGT Score | | WGT Score | | | |
| Household Financial Impact | | Community Financial Impact | | Environmental Justice Impact | | Program Delivery Impact | | | |
| Factors | | Factors | | Factors | | Factors | | | |
| Median Household Income | | Historical W.Q. Investment | | Low Income Ratepayer % | | WQ Infrastructure Market Saturation | | | |
| Shelter Costs | | Non Water Quality Environmental Investments | | Localized Construction Disruption | | Program Management | | | |
| Water, Wastewater & Stormwater Rates | | Economic / Population Trends | | Specific Community Impacts | | | | Schedule Management | |
| State / Local Tax Structure | | Financial Health Indicators | | Rental / Tenant Impacts | | | | Change/Order Management | |
| | | | | | | | | Surety Bonding | |
| | | | | | | | | Cost Escalation | |
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Document 3

Review of EFAB Comments on CSO Financial Capability Assessment Guidance

I. Executive Summary

In April 2007, NACWA reviewed comments by the EPA's Environmental Financial Advisory Board (EFAB) on the EPA's 1997 CSO Financial Capability Assessment (Guidance). The EFAB review was conducted at the request of EPA's Office of Wastewater Management in part due to the issues raised by NACWA's 2005 *White Paper*. In many respects, the EFAB review echoes concerns previously expressed by NACWA, and in so doing reiterates the need for revisions to the Agency's methodology. In particular, EFAB's comments are merited in that they recognize that improved assessments of financial capability require:

- Consideration of existing and prospective rates, rate structures, and the imperatives of long-term strategic capital improvement and financial planning
- Separate evaluation of potential impacts on disadvantaged communities not adequately represented by reference to Median Household Income measures
- Broad definition of cost components, including prospective requirements for asset maintenance, renewal and rehabilitation informed through asset management evaluations
- Refinement of the financial indicators used in the two-step analysis procedure, particularly those referencing property values and tax revenues

NACWA believes, however, that EFAB's comments are unduly limited and fail to address several fundamental problems with the EPA's current methodology. Some of these limitations relate to fundamental concerns articulated in NACWA's 2005 *White Paper*, and its subsequent Guiding Principles (Section III); other limitations involve issues related to affordability addressed in other contexts. The most significant limitations include:

- EFAB's acceptance of the current two-step analytical framework, which preserves a prescriptive approach rather than establishing a flexible framework for considering unique, site-specific factors and optimizing water quality investments
- EFAB's implicit acceptance of a paradigm that looks to "ability to pay" rather than to return on environmental investments as the basis for defining program cost and scheduling requirements
- EFAB's suggested consideration of incremental evaluation of financial capability in a framework similar to that advocated for individual drinking water regulations

EFAB was specifically requested to limit its review to the existing 1997 Guidance and unfortunately did not consider whether there are different, more holistic ways of conducting financial capability assessments.

NACWA hopes that the following detailed comments on EFAB's review will provide its members with insight into the additional considerations that can be included in financial capability negotiations. NACWA hopes to work collaboratively with the EPA to establish a more holistic assessment framework.

II. EFAB: Considerations in Assessing Residential Household Impact

A. Average Costs Per Household Versus Estimated Household Expenditures

EFAB highlights the fact that potential impacts of program costs for individual households will depend significantly on prevailing and prospective rate structures and the distribution of usage within the residential

population. In so doing, EFAB rightly asserts that consideration of actual rate levels¹⁹, and thereby the utility's financial plan, would represent an improvement to the Guidance's current focus solely on program costs. EFAB further points out that these impacts will change over time and consideration of projections of rate impacts would afford a better assessment of financial capability. Perhaps most importantly, EFAB assumes that permittees will have developed some form of strategic financial plan and rightly suggests that estimates derived from these plans are appropriately considered in negotiation processes.

EFAB also properly notes that rate structures and targeted investments may help to mitigate impacts on disadvantaged households. Yet, EFAB seemingly suggests that concerns of low-income affordability may be addressed entirely through low-income subsidizing rate structures. It falls back to suggesting use of an *average* household user as effectively the sole basis for consideration of costs imposed on residential users. This retrenchment dismisses the reality that rate structures alone, particularly those that require income qualification, have pronounced limitations and that social justice concerns related to program implementation are not confined to cost burdens.

B. Expanding the Definition of Costs

EFAB echoes NACWA's expressed concerns about the narrow definition of costs used in the current FCA Guidance. It notes that the definition 'does not seem to take into consideration some of the fundamental principles of proactive asset management, an approach strongly promoted by EPA.' However, EFAB's suggested approach to broadening the definition of costs is problematic. EFAB suggests including:

additional components if the permittee can demonstrate that these costs will indeed be passed on to the customer (for example, the permittee has an approved capital improvement plan and expenditure history that demonstrates the use of capital reserve funds and significant capital rehabilitation and replacement expenditures).

In many cases, however, permittees have not fully assessed their prospective renewal and replacement requirements or service area stormwater management needs and incorporated these estimates into approved capital plans. Indeed, one of the fundamental points of EPA's policy prescriptions is that these requirements have not historically been recognized and addressed in communities' capital plans, contributing to the current national infrastructure funding gap. The current absence of specific plans to address water resource management requirements holistically should not be interpreted to mean that these types of costs will not be incurred in the future – particularly insofar as EPA has established regulations and enforcement measures that will require these expenditures. While the absence of specific capital plans may necessitate rough estimation of associated costs, it is certain that the zero cost value that is effectively assigned by excluding these costs is a gross underestimate of communities' prospective liabilities.

C. Consideration of the Impact of Capital Investment Planning and Financing Options on Costs

EFAB suggests that "a permittee should be required to present estimated household expenditures as projected in an approved CIP or financial plan" and points out that "the availability of extended term financing (30-40 years) compared to shorter financing (20 years) could have an impact on rates". Both these points align with NACWA's points related to consideration of program cost impacts over time and the importance of strategic financial planning.

¹⁹

It should be acknowledged, however, that from a regulatory perspective, assessments based on rate levels rather than cost measures may be even more difficult to accomplish equitably across permittees whose current and projected rates are not only a function of compliance costs but also a variety of other cost and utility management factors.

D. Incremental vs. Cumulative Financial Impacts

Though some EFAB members disagreed, the EFAB review suggests that EPA consider application of the National Drinking Water Advisory Council's recommendations related to Small System Variances (for compliance with drinking water contaminant limits). These recommendations call for evaluation of the incremental impact of individual regulations rather than consideration of their cumulative impact. EFAB also notes that both incremental and cumulative measures could be employed, yet suggests that cumulative measures would be properly relegated to 'secondary financial information used for negotiation'.

These suggestions would exacerbate rather than mitigate current problems with the financial capability assessment procedures. Incremental evaluations would move the assessment process away from, rather than towards, holistic consideration of water quality investment costs to be borne by communities' ratepayers. Certainly, given the objectives of financial capability assessments, it should be measures of incremental impacts that are relegated to secondary financial information while cumulative impacts (using broadly defined costs) retain primacy.

E. Reliance on Single Indicator to Assess Residential Household Impact

EFAB echoes NACWA's points on the adequacy of a single indicator of residential household impact. EFAB further suggests "EPA consider a composite residential indicator similar to the composite financial indicator". In so doing, EFAB advocates movement toward the approach outlined in *Review of EFAB Comments on CSO Financial Capability Assessment Guidance*. EFAB's example, however, seems to indicate that a relatively limited composite may suffice, though there would seem every opportunity to broaden the scope of review to other fundamentally important factors (e.g. shelter costs).

F. Commercial Customer Impact

EFAB also highlights the potential importance of program cost impacts on communities' commercial sectors, however it suggests that the diversity of the sector would make development of a commercial indicator impractical. While there is no question that the commercial sector is very diverse, the noted importance of the health of this sector argues against commercial impact measures being relegated to secondary financial information. Rather, it argues for a modification to the financial indicators, as suggested in *Review of EFAB Comments on CSO Financial Capability Assessment Guidance*.

III. EFAB: Considerations in Assessing System Financial Capability

EFAB makes a number of suggestions to improve the individual measures used to derive the financial indicator employed in the second step of the FCA methodology. These are further elaborated in the last section of the EFAB comments²⁰, the most significant of which is EFAB's call for abandonment of debt metrics based on property values (given that most permittees are sewer rate revenue supported). These suggestions represent appropriate refinements only within the context of a methodology that has significant limitations. EFAB's comments do not, however, address a fundamentally questionable attribute of the financial indicators score calculation, namely the implicit equal weighting of each factor.

IV. EFAB: Clarifying Policies and Approaches Related to Financial Capability and Affordability

The Board points out the potential for confusion among state and local officials given other EPA policies and guidance related to financial impacts. They further note that "it may be reasonable to set regulatory relief triggers at a higher bar than grant eligibility metrics". In both respects, the Board highlights important policy

²⁰

Specific suggested edits to the FCA Guidance are provided in the EFAB comment section 5: "Suggested Revisions to the Debt Indicators in the Financial Capability Assessment Guidance". These revisions largely reflect improvements to the measures and procedures potentially employed in the FCA methodology and, as such, are not reviewed individually herein.

issues related to decision-making and water quality resource investments. However, in a context-setting sentence, the Board explicitly reiterates a fundamental principle in EPA's approach to conduct of financial capability assessments that is inherently objectionable. Specifically, the Board notes that EPA "financial assessment policies share a common theme in their attempts to help assess '**ability to pay**' for environmental objectives/services [*emphasis added*]"

What EFAB fails to note is that establishment of threshold criteria invites sub-optimal resource allocations and inappropriate regulation. The fundamental question should not be how much can possibly be paid, but rather how much **should** be paid to best utilize available resources. Permittees cannot pay for sub-optimal water quality investments irrespective of whether or not their financial indicators or household incomes would suggest that they could afford to do so.

It is this aspect of the Guidance, and EFAB's tacit acceptance thereof, which is most problematic for prospective consideration of financial capability in wet weather enforcement. Indeed, the most troublesome aspects of the EFAB comments are the errors of omission insofar as the Board effectively declined to speak to fundamental problems. Defining financial capability in terms of 'ability to pay' incorrectly frames the problem. Given all the other claims on communities' resources and the broad spectrum of environmental challenges they face, EPA and permittees should define a financial capability framework that seeks to maximize benefits per dollar of resource investment.