

**U.S. Environmental Protection Agency
Environmental Financial Advisory Board**

Consideration of the Stormwater Infrastructure Funding Task Force Report

Pre-Meeting Comments from EFAB Members

Developed in preparation for the February 11-12, 2020 meeting of the EFAB.

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Comments from Brent Anderson:

Executive Summary: I would add a brief paragraph describing what stormwater is. It will frame the rest of the Executive Summary, and for those that never read beyond the Executive Summary, context for the problem and recommendation

Page 10: Key Terms. I would clearly state that the issue is one of water quality, not to be confused with water quantity.

Page 14, Section 3.1.1: The word “utilities” is used throughout the document. This approach works in metropolitan areas, but much less so in unincorporated areas.

Regarding the Recommendation on technical assistance: I think the technical assistance should also include cooperative basin wide projects. The focus on federal and municipal funds likely results in a more ad hoc solution because projects have to follow the funding. Technical assistance that addresses problem in a coordinated basin context would likely reduce costs. It could result in additional (though more complex) funding opportunities.

Page 15, Section 3.1.2: This is a great recommendation, and to the extent we address Federal or any other state funding, we should always make it.

Page 16, regarding SRF as an integral tool: Conditioning access to SRF support on intra-basin solutions could be used to get different participants to work toward an economical common solution.

Comments from Janice Beecher:

- The report is ambitious, well-organized, and dense with information; case studies add value (although I did not review them carefully).
- It would benefit greatly from close editing by people with technical expertise in specific areas; for example, I took a swing at a paragraph on "private investment" (see below)
- The evaluation criteria (Sec. 6.2.2.1, page 67) were not entirely clear to me in terms of interpretation, and in some instances, I disagree with the "score."
- It is very important to avoid conjecture and assertions that may not be evidence-based; add a citation, a caveat, or delete.
- Be careful not to conflate sources of funding, means of financing, and organizational entity (government, utility).

Page 48: the private sector does not provide "financial assistance." Neither do finance companies. You do not "apply for private investment". Regarding the statement on private sources of capital being more expensive but more accessible than public sources: is this evidence based?

- **Private Investments:** Private investment can take the form of ~~loans and/or other financial assistance originating from sources other than commercial banks and/or finance companies. debt or equity instruments.~~ Sources of private ~~capital investment~~ can include ~~e, but are not limited to,~~ insurance companies, pension funds, ~~venture capital funds, individual venture capitalists or private equity (fund or individuals), corporation partners and general capital investors, and publicly traded companies.~~ Investor-owned utilities utilize both the ~~private equity and shareholder models.~~ Private investment ~~funds finance~~ billions of dollars' worth of ~~new~~ business start-ups in the United States each year. The potential uses of private investment for supporting environmentally related businesses and/or activities ~~are only limited~~ is based on perceptions of by the degree of profit associated with them profitability, which for investor-owned utilities is usually subject to state economic regulation due to their monopoly status. In fact, the creation of a privately owned utility may trigger state jurisdiction. The cost of public or private capital is based on anticipated returns relative to risk. ~~if it can be shown that an idea or activity will make money, then private investment can be found to support it.~~ Applying for private investment is typically much faster than for ~~government loan programs.~~ Private sources of capital are more expensive but, in some cases, may be less limited and more accessible than public sources. Private investors usually have no set eligibility criteria and may have no predetermined limits on the total amount of loan capital available. Private investment generally demands ~~ors tend to demand~~ a significantly higher rates of return than public sources on their money, though, ~~than other sources of capital.~~ Private investment can also be part of a public-private partnership or hybrid model. Note that a private investment can develop into a public-private partnership of an operational component is added to the mix.

Page 50: add citation

5.2.3.1 Public-Private Partnerships

Public-private partnerships (P3s) are receiving increasing attention in the United States and internationally as an innovative way of financing a wide range of different environmental protection initiatives. The point of P3s is that partnering with private enterprise can expand access to resources and capital and offer better potential economies of scale. There are many types of P3s: design-/build, design-/build-/operate-/maintain, pay-for-performance (interchangeable with pay-for-success) contracting, community-based P3s, etc. They may include private financing or a combination of public and private financing. According to [cite], Community-based P3s have a

Page 69: Table 2

Table 1. *Financial Capacity Impact of Recurring/Intermittent Funding Sources—O&M Operations.*

Do these eval criteria really track here? low, hi, volatile?

<p>Household Affordability Impact</p>	<p><u>HighModerate:</u> property taxes are generally deemed as regressive</p>	<p><u>ModerateHigh:</u> property taxes are generally deemed as regressive</p>	<p><u>ModerateLow:</u> User fees are <u>still somewhat</u> regressive but <u>may be</u> usually much smaller in actual dollars compared to water and sewer charges</p>	<p><u>ModerateLow:</u> if tied to a “user pay” levy, would mostly likely be borne by those directly benefitting from the infrastructure</p>	<p><u>Moderate:</u> not as regressive as a pure tax but still correlated to property valuation without explicit income recognition</p>
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Household Affordability Impact: oversimplification - property taxes are not necessarily considered regressive, and are certainly less regressive than user fees.

Comments from Edwin Crooks:

In general, I think this is an excellent document - thorough, thoughtful and well-written. A couple points we might want to address include:

Section 3.1.3: I'm struggling a little with the first recommendation about building a national database. No doubt it would be good to have the info available, but it sounds like a very heavy lift and I question whether it would be very impactful to addressing the core challenges of stormwater financing. If the EFAB wants to keep this recommendation I think we need to beef up the argument for how it would make things better and give a good rationale for EPA to invest time and money in doing it.

Section 5.2: This section title should be changed to "Stormwater Funding and Financing". It might seem like semantics, but there is a big difference between funding and financing and we blur the lines here. The core problem of this entire charge is summarized in the first sentence of the "Revenue" discussion - the need for ongoing stable and meaningful funds. To the extent that funding flows can be increased and made more predictable, financing becomes cheaper and more readily available and lots of problems can be solved. But I think we need to highlight the differences in funding and financing in this section and discuss the linkage between the two.

Section 5.2.1.1.2: The subject of tax increment financing is mentioned later in section 5.2.3.5 but I think we ought to tee it up here as a subset of the universe of special taxing districts. This can be an important tool and I feel it is somewhat buried in its current location.

Section 5.2.2.1.1: The call out box about green bonds caught my eye for two reasons. First, it says these are tax exempt instruments. While they usually are tax exempt, there is no reason that a taxable bond couldn't be green as well. Then further down it says that these bonds are of interest to "younger investors", which I would dispute. Also, this appears to be a quote but there is no attribution to a source.

Section 5.2.3.1: In the first sentence we talk about P3 only as a financing mechanism, but we should describe it as a holistic approach to project delivery, including financing. In the second sentence we should add some mention of the potential for P3's to deliver more creative and efficient technical solutions to stormwater projects.

Also in this section there is no mention of another financing source used in P3 deals, which is private investor equity. I suggest we add a blurb somewhere here that says something like "Financing for P3s also typically includes private investor equity as another source of capital. Investor equity is very flexible, typically patient capital that instills a level of rigor in the private operator's management of the stormwater asset. This is relatively expensive financing, however, and typically requires that the public project sponsor cede some level of control to private investors."

Section 5.2.3.5: The second bullet on tax increment financing needs to be corrected to say: "...increase surrounding property values and the incremental tax on the increased property value is dedicated to funding the new infrastructure. In addition, owners of those properties may also agree to a new tax levy..."

Section 6.0: It seems to me that this section is missing one very important observation about how the funding sources affect affordability. When municipalities are faced with insufficient funding they will often default to a "pay as you go" approach, meaning they will only build the improvements they can afford at that time. This means that larger projects have to be split up into multiple pieces that are procured and constructed separately over many years. This is inherently more expensive than building larger projects because it requires the municipality to conduct multiple procurements, each with its own transaction costs, oversight requirements, etc. Meanwhile the municipality is left with the added risk of coordinating and integrating what may become a patchwork quilt of improvement projects. In addition, the community and environmental benefits of completing the entire project are delayed.

If the municipality's funding sources were more robust and predictable, bond financing could become an option that would enable larger, more impactful projects to move forward. These projects and their benefits could be completed earlier and with less transaction cost and residual risk for the owner. And as funding sources become more and more robust and more creditworthy, the cost of borrowing should decline.

These points are applicable to several subsections of chapter 6.0 but should probably be addressed more explicitly somewhere in the chapter.

Comments from Dan Kaplan:

The second paragraph in 1.2 of the Executive Summary gives disproportionate emphasis on innovative funding strategies relative to what is presented in the report. The body of the report is clear that the preponderance of new funding sources will be local. This Executive Summary section should discuss how local communities need technical support for the creation of stormwater utilities and revenue systems, including assistance in accessing innovative approaches. This would provide a better tie-in to the first recommendation.

The draft report is inconsistent on the role of other federal funding programs. Section 2.4 delineates funding needs not included in the report, including agricultural pollution, but the final recommendations calls for a set aside for federal farm subsidies. I agree with this recommendation, but it should be supported within the report with a section on pollution caused by agricultural runoff.

The recommendation and supporting narrative (page 18) on the national data base to enumerate state barriers for the creation of stormwater utilities and fees should be moved to the education and technical assistance section and out of funding assistance. And can it be stronger? "States are encouraged to eliminate barriers to the creation of stormwater utilities and user fees to support them." And for funding assistance, "Federal assistance programs should prioritize funding to those communities with dedicated stormwater utilities."

Section 5.0, page 29 includes green infrastructure as a factor that has increased the average cost of stormwater programs. This bullet should be deleted, as green infrastructure is a response to challenges enumerated below that bullet and not a cause per se. I would include an additional bullet: "New investments for complying with CSO consent decrees and MS4 permits."

Lost in the discussion and tables on funding sources is any mention of wastewater fees, which are used by many utilities to support stormwater operations. Rather than clutter the table, a paragraph on cross-subsidization and equity could address this.

Page references for the case studies on page 80 would be helpful.

Comments from Suzanne Kim:

There is a tremendous and laudatory amount of work accomplished in a very short period of time. My comments are focused on the **Executive Summary** as this will be the primary vehicle to communicate the contents of the report.

- 1) The Executive Summary needs to be absolutely tight. I have attached my suggested edits to the Executive Summary (I didn't include comments #4 & #5).
- 2) Funding = free money, like grants. Financing is money you have to pay back...like loans and equity capital. You need to distinguish between the two. Funding DOES NOT = Financing. This section must distinguish between the two and communicate this distinction.
- 3) Also Funding/Financing is different from Revenue... Revenue is what utilities need to access debt capital. Revenue is leveraged to access financing. IT IS NOT FINANCING. There is confusion throughout the executive summary conflating the two concepts. Revenue is not funding nor financing
- 4) At the last EFAB meeting, there was considerable discussion on whether there is enough capital out there in the current programs to support the capital needs and or whether the problem is accessibility (how it is marketed and who can access it). In the Executive Summary, we need to establish whether we want to push for additional capital, better access, or both? Let's be clear.
- 5) In the executive summary the author asserted that there has been no comprehensive national survey done to determine the magnitude of the funding and financing shortfall--if so, that survey/analysis/study absolutely needs to be in the recommendations. How can one justify that the federal government appropriate additional \$s ("billions" is vague—is it tens of billions? Hundreds of billions?) if the quantity is unknown? If there truly has been no study, someone has to do one. Therefore, it should be in the recommendations.

1.0 Executive Summary: Stormwater Funding: A National Problem That Requires Action

~~In the United States, sEffective stormwater management is as as integral-critical to American quality of life as effective wastewater management and delivery of safe drinking water to achieving high water quality, thereby improving the basic quality of life for all Americans. To be as effective in the delivery of quality and effective drinking water and wastewater services, Hence, stormwater management will need comparable and equitable access to stable, reliable, and efficient funding and financing programs.~~

~~needs to be deemed as a true utility service on par with drinking water and wastewater utility services—and it needs equitable and reliable funding, just like drinking water and wastewater utilities.~~

~~In the United States, drinking water and wastewater management services in the US, are generally largely delivered through the utility structure model and, have generally matured to become as reliable and effective community services to the communities, and. Critically, these services have extensive with dedicated access, noting that access is not uniform, to sources of funding (such as grants) and financing (such as low-cost loans). Cumulatively To date, Clean Water State Revolving Fund programs have provided \$133 billion in financial assistance, mainly in the form of low-cost financing, to a wide range of eligible borrowers. The utility structure model, that is conducive to characterized by effective and efficient management-governance structures and dedicated-reliable revenue streams funding, which has generally worked well in-for the drinking water and wastewater sectors and, should be applied to adopted for the stormwater sector, which is the next frontier sector the nation should tackle in its efforts to improve for this nation's water quality goals.~~

~~A critical component of the utility model is predictable and sufficient revenue streams. But even a utility structure requires predictable and adequate revenues and sound governance. If these two elements are in place, effective operational capability will follow. Unfortunately, however, approximately only 1,600 of the 7,550 permitted stormwater entities in the United States have dedicated revenue sources. Typical stormwater revenue sources include, such as stormwater user fees (also known as stormwater utilities where fees are based, for example, largely on impervious area), taxes, or and established drainage districts that collect dedicated funding for stormwater management. In addition to stable revenue streams, the utility model requires effective governance structures guided by transparent and effective policies and procedures. And, with stable revenue streams and effective management, a utility is better equipped to access funding and financing programs.~~

~~A significant complication with stormwater services is that~~

~~But even a utility structure requires predictable and adequate revenues and sound governance. If these two elements are in place, effective operational capability will fol~~
~~low.~~

~~Stormwater knows no does not respect conventional jurisdictional boundaries and requires cooperation among crosses various local, municipal, county, state, county and municipal borders and federal entities. Therefore, meaningful cross jurisdictional partnerships underlie effective stormwater management. In addition, tThere are have been no comprehensive~~

assessments conducted at the national level to determine the magnitude of the funding and financing capital needed to construct, operate, and, and adequately maintain and operate stormwater infrastructure across the country nationally. Recently, there have been some Recent regional, limited surveys that have attempted to estimate the funding and financing shortfall in the stormwater services sector. These limited studies concluded that the annual shortfall is somewhere in the neighborhood of billions. [Kim: “billions” is not adequate—please cite something]

~~stormwater management and infrastructure funding needs in the billions of dollars annually beyond current funding levels. Without question, the challenges related to stormwater funding are daunting and there is a pressing need to continue to improve estimates of the sector’s needs. The dedicated stormwater funding sources that do exist are typically insufficient for currently known stormwater needs. Given the magnitude and cross-jurisdictional nature of the stormwater challenge, local funding efforts are not enough. Because of the cross jurisdictional nature of stormwater management and because the amount of and access to capital via current funding and financing programs are inadequate to construct, operate, and maintain effective stormwater management across the country, the Task Force recommends that the federal government invests in stormwater infrastructure, similar to how the federal government established There is a need for federal investment in stormwater infrastructure, similar to the level of investment that federal funding and financing programs have provided in the past to begin building that have built our interstate highway system, upgraded our wastewater infrastructure, or and delivered safe drinking water to our homes. The federal financing and funding framework that has worked so well to support the drinking water and wastewater sectors should be adapted to fund solutions to the stormwater challenge. This type of federal financing and funding will support communities with stormwater permits that serve more than 80 percent of the U.S. population. Therefore, stormwater funding is a national problem that requires action.~~

1.1 Stormwater Infrastructure Funding & Financing Task Force Report and Charge

~~This report was developed in response to Section 4101 of the 2018 America’s Water Infrastructure Act (AWIA), which directed the Environmental Protection Agency (EPA) to establish a Stormwater Infrastructure Funding & Financing Task Force (“Task Force”) “to conduct a study on, and develop recommendations to improve the availability of public and private sources of funding for the construction, rehabilitation, and operation and maintenance of stormwater infrastructure” to meet the requirements of the Clean Water Act.~~

Specifically, the EPA charged the Task Force ~~was charged~~ with the following tasks:

- Identify existing federal, state and local public, and private sources of funding and financing for stormwater infrastructure (addressed in Section 5.0);
- Assess how the source of funding and financing, including the costs associated with infrastructure finance, affects affordability, ~~including costs associated with infrastructure finance~~ (addressed in Section 6.0); and
- Assess whether these sources of funding and financing are sufficient to support capital expenditures and long-term operational and maintenance costs required to meet the stormwater infrastructure needs of municipalities (addressed in Section 4.0).

The charge has culminated in the attached report.

1.2 Local Stormwater Funding & Financing Efforts

Finding funding sources has become a necessary activity for local governments and utilities that are charged with managing stormwater programs. Several professional organizations have developed publications and held workshops on how to develop and implement dedicated funding mechanisms. Their advocacy efforts have also elevated the discussion on the need for funding and the importance of affordability.

Perhaps more importantly, Recently, conversations among local governments and utilities charged with managing stormwater programs in recent years have shifted from “how to develop stormwater utilities” to the need for designing and utilizing innovative funding and financing strategies.

Undoubtedly, sourcing funding and financing capital is necessary function for local governments and utilities involved with stormwater management. Several professional organizations have developed publications and held workshops on how to develop and implement dedicated revenue streams. This has led to industry-wide discussions on the need for funding and financing and has elevated related topics such as the importance of affordability. In addition, these industry organizations have educated members on innovated funding and financing strategies that includes such as public-private partnerships, incentives for private property owners to implement stormwater controls, green bonds, and trading schemes. Innovative funding and mechanisms financing programs, coupled with reliable traditional mechanisms (e.g., stormwater utilities, fees-in-lieu-of, drainage/taxing districts) have provided some local programs with valuable additional alternatives to fund-finance their stormwater needs.

1.3 Federal Stormwater Funding and Financing Support

As previously stated, local funding efforts alone are not enough. Stormwater infrastructure requires funding and it has been neglected, or inadequately funded, for far too long. The Task Force advocates for There is a need for federal investment in stormwater infrastructure, similar to the level of investment that federal funding programs have provided in the past to, among others things, begin building build our interstate highway system, upgrade our wastewater infrastructure, and deliver safe drinking water to our homes.

The federal government can also help by also efficiently allocate ing funding and financing for stormwater programs from existing related programs to ensure that infrastructure is properly maintained and that future infrastructure planning, design, and capital expenditures are conducted using industry best practices.

Municipalities and local utilities need federal and state help in defining-identifying long-term reliable funding sources. Funding must be available in all states and be sufficient to support both capital expenditures and long-term operation and maintenance costs.

1.4 Recommendations

Task Force recommendations are presented as items that are practical to implement, actionable at the federal level, and understandable to the public. They present suggestions range from increasing accessibility to and education of existing funding and financing programs, to use enhancing existing funding and financing mechanisms programs, increase accessibility to those

~~funding mechanisms, and creating identify~~ additional funding ~~and financing opportunities~~ ~~sources, and enhance public education~~. The Specific Task Force's recommendations are ~~grouped into the following categories~~ as follows:

- ◆ **Stormwater funding education and technical assistance.** Educating the public and elected officials on the need for stormwater funding-management is critical to the successful implementation of and community support for funding and financing solutions. In addition, many communities need technical assistance ~~related to evaluating~~ and ~~securing~~ funding and financing ~~mechanisms~~ sources.

***Recommendation:** Educate elected representatives, professional administrative leaders and the general public on the need for sustainable local stormwater funding and organizational capacity through, for example, the creation of stormwater utilities or the expansion of existing utilities into the stormwater sector.*

***Recommendation:** Provide technical assistance and funding to help communities create sustainable funding sources. This could include assistance with funding need assessments, organization analysis, grant applications, and/or establishing a stormwater utility fee.*

- ◆ **Simplification and/or modification of existing federal grant and loan programs and affordability support.** Federal grants, loans (e.g., from State Revolving Funds) and support to enhance affordability are needed to maintain sustainable local funding sources.

***Recommendation:** Provide for a common application for different federal grants across all federal agencies.*

***Recommendation:** The State Revolving Fund (SRF) is an integral tool among the many infrastructure financing options available to communities. Whether stormwater receives consideration of its own through a new SRF program, or receives less restrictive eligibility considerations and larger appropriations within the existing Clean Water SRFs (CWSRF) or eligible Drinking Water SRF (DWSRF) projects, it is the view of the Task Force that stormwater would benefit from an additive – not zero-sum – recurring financial commitment from EPA. This could be achieved by the implementation of one or more of the following, each of which is outlined below:*

- Create a new SRF program exclusive to stormwater programs and projects.
- Expand the existing Water Infrastructure Finance and Innovation Act (WIFIA) program or fund the Army Corps of Engineers' Water Infrastructure Program also established in 2014.
- Create a specific stormwater set-aside in the existing CWSRF framework and increase awareness/ guidance on the CWSRF for stormwater projects, including the Green Project Reserve program.

***Recommendation:** Use federal funding or technical assistance to help utility customers who are financially struggling to pay their water, sewer, and stormwater utility bills (similar to Low Income Home Energy Assistance Program (LIHEAP)).*

- ◆ **Dedicated federal stormwater funding assistance.** Given the magnitude of the stormwater

needs described in this report, there is a need for federal investment similar to the investments in the National Interstate Highway system and historical wastewater treatment plant upgrades.

Recommendation: *Build comprehensive national database that enumerates state barriers to implementation of new dedicated stormwater revenue sources such as user fees or other revenue sources, and/or any state restrictions on existing fees and charges.*

Recommendation: *Increase annual funding allocation for and modify the 319(h) grant program to allow and encourage local capacity building, utility fee study and implementation, asset management, and remove restrictions on use of grant funds for MS4 permit compliance.*

Recommendation: *Develop a new construction grant program specifically for stormwater projects, similar to the federal Municipal Construction Grants Program that funded the construction of wastewater treatment plants.*

Recommendation: *Given the link between agricultural pollution and mandated stormwater pollutant reduction targets for impaired streams, a Farm Bill Federal subsidy dedicated to stormwater programs would also be valuable. Require 10 percent of US federal farm subsidies (all programs) be re-directed toward stormwater/nonpoint impacts in same watershed where recipient farm is located.*

Comments from Richard Weiss:

In general, I thought that the report was very thorough and informative. The charge questions to the workgroup were adequately addressed. It was clear and logical with recommendations supported by the body of the draft report. Following are some comments on various sections of the report for the workgroup's consideration.

Page 4 – Section 1.4 recommendation for a new construction grants program for stormwater projects similar to the federal Municipal Construction Grants Program for wastewater projects could be viewed as an inefficient way to get funding to communities. However, page 19 mentions the use of the SRFs as well as other modifications which would make the proposal more efficient than the original Municipal Construction Grants Program. Suggest modifying the recommendation to make it clear that this recommendation is not a repeat of the prior program.

The Section 1.4 recommendation to carve out 10% of US federal farm subsidies to be redirected toward stormwater/non-point impacts in the same watershed was unclear to me. See my comments on page 20.

Page 5 – First paragraph second line insert “management” after “capital program”.

Page 17 – For III, an additional Disadvantage of the specific stormwater set-aside in the existing CWSRF framework is the potential for reduced funds available for non-stormwater projects if the CWSRF grant funds are not increased to accommodate this.

For IV, what is meant by “equal weighting”? Funding for the three infrastructure needs may not be equal. Perhaps revise to say “Create a “One Water” SRF that includes drinking water, clean water and stormwater.”

Page 19 – To the extent that there is a Stormwater Construction Grants Program, it would be efficient for the federal government to provide capitalization grants to the SRFs. To affordability, there could be meaningful principal forgiveness on each loan originated by the SRFs (particularly for disadvantaged communities). This approach would eliminate the need for a local match as was the case on the wastewater Municipal Construction Grants Program.

Page 20 – For the requirement that 10% of U.S. federal farm subsidies be redirected toward stormwater/nonpoint impacts in the same watershed - how was this percentage determined? What would be the impact on farmers of this carve out in various commodities market environments? How would this impact project development to the extent that farm subsidies vary from year to year? Who would determine the projects, oversee the expenditure of these funds, and the completion of these stormwater/non-point projects?

Page 36 – In the chart for the Coordination with other Municipal Departments and State Agencies, one could also include the concept of merging stormwater functions into an existing water and/or wastewater utility to get greater coordination as well as operating and capital spending efficiencies. Stormwater could still be a separate enterprise of the utility. The concept is addressed later in Section 6.1.2.

Page 41 – “WKU’ referenced in the second full paragraph. Suggest defining it in the first full paragraph after “Western Kentucky University”. In the second paragraph, there is reference to \$2.2 billion in utility fees with 20% coming from Chattanooga. If these are annual fees, that would imply \$400 million for the City. Text here should be checked.

Comments from David Zimmer:

Overall, great paper. I have some minor additions I hope will add value. My general thought is that the paper might consider shedding a bit more light on the need to educate and help local officials with quantifying how much effective storm water management policies and their corresponding projects will save their constituents - in macro-economic terms to offset the rate costs from the SW utility's projects (e.g. savings from mitigating the occurrence and costs of flooded basement and car repairs, business interruption costs, commuter down time from flooded streets or blocked roadways).

If the narrative includes language in dollars and cents – especially if the projects become net positive for the community, it becomes an easier sell to get behind. I noticed some comments in this regard, but they seemed to be minor mentions.

Page 3: Recommendations

Should consider including the cost of inaction (i.e. relative cost of choosing to do nothing):

***Recommendation:** Educate elected representatives, professional administrative leaders and the general public on the benefits of and need for sustainable local stormwater funding and organizational capacity through, for example, the creation of stormwater utilities or the expansion of existing utilities into the stormwater sector.*

Regarding the recommendation about a new SRF program (“Create a new SRF program exclusive to stormwater programs and projects”): I know there were 2 SRFs involved in the writing of this fine paper. I would take issue with the part of this recommendation for the possibility of a 3rd separate SRF Program. There is enough infrastructure in the CWSRF to handle this already... additional segregated funds maybe, but not a new SRF program with its own division w/in EPA.

Page 14, Section 3.1.1 Stormwater funding education and technical assistance

In addition to Water Quality benefit, need to include related concept that SW Mgmt also promotes economic improvement from the mitigation of the destructive forces of floods, standing water, etc. Also, nice segue into next parag.

***Recommendation:** Educate elected officials, professional administrative leaders and the public on the need for sustainable local stormwater funding and organizational capacity through, for example, the creation of stormwater utilities or the expansion of existing utilities into the stormwater sector. Sustainable funding for stormwater infrastructure builds long-term financial capacity, improves operational performance—and over time produces results for citizens and residents. For over two hundred years, this has been the experience with drinking water and wastewater utilities in this country. The educational goals for these three audiences will demonstrate that stormwater management investment directly benefits the health, safety and economic opportunity for citizens and residents through the overall improvement of water quality and resiliency of the community.*

Page 16:

- I. **Create a new SRF program exclusive to stormwater programs and projects.**
 - Advantages
 - *Replicates programs that have been proven successful for decades.*
 - *Would eliminate ‘competition’ with wastewater projects inherent within the current CWSRF program.*
 - Disadvantages
 - *Would require the creation and passage of new enabling legislation to establish a new SRF program.*
 - *Would create a new layer of bureaucracy with cross over and potential duplicity with the Clean Water SRF Program, both of which are legislated through the same, CWA.*

Page 17:

- II. **Create a specific stormwater set-aside in the existing CWSRF framework and increase awareness/ guidance on the CWSRF for stormwater projects, including the Green Project Reserve program.**
 - Advantages
 - *Would not require new federal legislation.*
 - *Preserves each states’ ability to administer the program to maximize efficiencies and effectiveness specific to each states’ needs.*
 - Disadvantages
 - *Might not improve best management practices or capability of communities if the set-aside is viewed by them as an implicit high likelihood/guarantee to get funded.*

This statement (under disadvantages) seems to contradict the argument above of the outstanding need for storm water projects. If the need is great and the funding is available, the logic would dictate that there will be demand.

Page 22: “Without low-cost concessionary debt, there is no compelling desire for outside, private capital to invest.” What about the developing market for “Impact bonds”?

Page 23: Affordability is, however, an issue for lower-income segments of the population across the nation, typically the sector in each community most impacted by the lack of proper storm water management policies:

Page 47:

CWSRF: One of the most commonly used loan programs in the wastewater sector is the CWSRF loan. Under Title VI of the 1987 Clean Water Act, states receive federal monies to capitalize CWSRF loan programs. Through CWSRF programs, loans are made to communities to provide low-cost financing for a wide range of different projects to protect water quality. Examples of activities funded with these loans include nonpoint-source pollution control, watershed protection and restoration, estuary management, wetlands restoration, brownfields remediation, and improvements to municipal wastewater treatment infrastructure. Loans are made at low interest rates (0 percent to market rate) for terms of up to 20 years. In addition, states use CWSRF money to repurchase debt to get these loans to 30 years. States may set the criteria for determining which municipalities can access the loans each year. All 50 U.S. states and Puerto Rico operate CWSRF programs. States have the option to offer a portion of their annual CWSRF grants as subsidization in the form of principal forgiveness or to buy down the interest rates on their borrowers' debt. CWSRF grants may also be used to guarantee loans as a way to increase the leverage and capacity of their lending programs. Combining guarantees and interest buydowns in a low rate environment, such as exists today, can be a very effective method for States to offer additional financing to local communities at levels well below market rates. Some CWSRF and Drinking Water State Revolving Fund (DWSRF) loan programs make short-term loans for planning, design and initial construction in localities that may later receive long-term CWSRF and DWSRF loans. In addition, state revolving fund loans may be used to pre-finance other federal or state drinking water loans or grants

Page 49, Section 5.2.2.1.4

Reference Footnote: <https://www.goldmansachs.com/media-relations/press-releases/current/dc-water-environmental-impact-bond-fact-sheet.pdf> for the insert suggested below:

In addition to more traditional funding sources discussed previously, there are new and evolving approaches to funding stormwater management that could be leveraged in many cases. These include public/private partnerships, private site stormwater development, impact bonds such as the DC Water Environmental Impact Bond and volunteer programs. The ability to utilize such approaches, and the impact to the stormwater program vary but are important options to evaluate in developing a comprehensive funding strategy.

Page 76:

For the sentence, "In addition, the use of MHI as an affordability metric has been widely criticized," I also recommend footnoting a paper by one of the leading voices on the problems with MHI, Texas A&M Associate Professor, Manny Teodoro: http://mannyteodoro.com/wp-content/uploads/2017/08/MTeodoro_Affordability-Method-Working-Paper-Aug2017.pdf