

STRATEGIC ADVISORY

RECOVERING STORMWATER COST OF SERVICE

Program-Cost-Fee-Customer Nexus Delivers Financial and Operational Resilience

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Recovering Stormwater Cost of Service

As climate change concerns mount and natural disasters continue to threaten water infrastructure, proactively planning for resilience has become a critical necessity for utilities. To achieve financial and operational resilience stormwater utilities should ensure that there is a clear nexus between programs, cost of service, user fees and customer benefits.

Questions Nexus Should Address

Program or Level of Service

What infrastructure, regulatory, operational, and community needs are we trying to address?

Cost of Service

What does it cost to deliver the desired level of service?

Fee

How do we equitably recover the full cost of service?

Customer Benefit

What benefits do our customers gain and perceive?

Varying Views on Stormwater Charges

In a previous Black & Veatch Stormwater Utility Survey, findings revealed a significant range in the magnitude of typical monthly residential stormwater charges among participating utilities. In many cases, this is largely due to user fees not reflecting the full cost of service. This trend is typically more pronounced in the stormwater sector than in the water/sewer sector.

From a benchmarking perspective, when all participating utilities do not set their fees to recover the full cost of service, it impacts the ability to truly compare the stormwater charges across utilities, even when system characteristics and programs are comparable.

Annual Stormwater Utility Revenue Per capita Trend

Source: Black & Veatch 2021 Stormwater Survey Report

Maximum*

2020	\$200
2018	\$200
2016	\$155
2014	\$145

Average

2020	\$63
2018	\$54
2016	\$49
2014	\$49

Minimum

2020	\$3.20
2018	\$5.70
2016	\$4.00
2014	\$4.00

**Indian Creek Village, with the lowest population among the respondents (86 residents), has a much higher revenue per capita than the maximum indicated.*

So, why recover the cost of service through user fees only?

Reason #1: Equity of Cost Recovery

Stormwater user fees are typically based on the level of imperviousness (commonly referred to as impervious area), which serves as a reasonable surrogate measure to estimate the demand a property places on the stormwater system. However, taxes are based on aspects such as a property's value or the level of sales, which have no direct correlation to the stormwater contributed to the system. In addition, in the case of tax-based cost recovery, many properties that have tax exemptions would not pay anything towards stormwater costs. Hence, recovering the full cost of service through user fees provides for a more equitable recovery of costs among customers.

Reason #2: Customer Perception

When the fee is designed to reflect the full cost of service, customers can better understand the true costs a utility incurs in providing service. User fees being set to only recover a portion of the stormwater costs can potentially lead to a misperception of the true scale of a utility's operating costs and impact the level of understanding of the critical funding a utility needs to manage infrastructure and service delivery.

Reason #3: Onsite Stormwater Management

If the user fees are set to reasonably correlate with the cost of service, utilities will have the ability to offer appropriate stormwater fee credits for private stormwater management practices that reduce the stormwater contribution to the system. However, recovering a portion of the stormwater costs through tax revenues would impact a utility's ability to provide stormwater credits on taxes, as taxes do not correlate with a property's stormwater contribution.

Recovering Cost of Service Through User Fees vs. Combination of User Fees and Taxes

To explain the difference between utilities that set user fees to recover the full cost of service and those that recover the cost of service through a mix of "user fees" and "non-user fees," we present the following examples.

Utilities Setting User Fees to Recover the Full Cost of Service

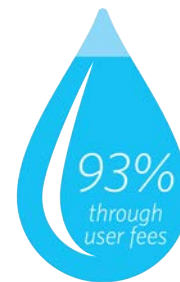
Northwestern Large Market Metro Utility: This large, metropolitan utility, which has both combined sewer system and separate storm sewer systems, has defined a cost allocation approach that consistently and fairly allocates all operational and capital costs between the sanitary sewer and drainage business lines. Beginning in 2008 through a phased approach, this utility began allocating a portion of the combined sewer system costs to the stormwater utility, recognizing that a portion of the combined sewer system and combined sewer overflow (CSO) structures support the drainage system. This utility has not only done the due diligence of defining the full cost of service but also recovers 97 percent of the stormwater costs of service through stormwater user fees, and the remaining through grants and other sources. Such an approach enhances the equity of cost recovery as:



- i. Costs are aligned with the service demands (wastewater versus drainage), and
- ii. The stormwater fees are aligned to recover 97 percent of the drainage costs.

While this approach strengthens the nexus between system needs, cost, and fees, it also results in their charges appearing to be the highest among survey participants.

Large Eastern Metro Market Utility: This utility, located in the northeastern region of the U.S., has a mix of combined sewer and separate storm sewer systems, and has adopted a similar due diligence process of clearly delineating direct stormwater management costs and allocating a portion of the combined sewer operating and capital costs to the stormwater utility, to derive the stormwater utility's annual full cost of service. To meet its Long-Term Control Plan (LTCP) consent order agreement requirements, offers robust stormwater credits and incentives programs, the costs of which are proportionally funded through both wastewater rates and stormwater rates.



Northwestern Metro Utility: The city only has a separate storm sewer system, and also appears to have established a nexus between its stormwater full cost of service and the



stormwater user fees, with 93 percent of its cost of service being recovered by stormwater user fees, and 6 percent from miscellaneous stormwater fees. When utilities delineate full stormwater cost of service and then set user fees to appropriately recover those costs, their fees tend to be higher, but also reflect a more equitable approach to cost recovery.

Cost of Service Recovered Through a Combination of User Fees and Taxes

The Black & Veatch Management Consulting, LLC survey also indicates that many utilities do not set rates to adequately recover the full cost of service.

A large Midwest Metro utility has a mix of combined sewer and separate storm sewer systems, and currently has a consent order for CSOs. The city's stormwater user fee only recovers a portion of the cost of service.

Based on a 1998 voter referendum on user fees, the stormwater user fee is designed to recover only the stormwater operating costs.

Similarly, a metro region in California, recovers approximately 50 percent of its stormwater revenues from user fees and the remaining stormwater revenues are generated primarily from general taxes (e.g., sales tax, property tax) and parking citation revenue. Further, it has not increased its stormwater user fees since 1996. Consequently, in the case of these two utilities, the stormwater user fees for a typical residential property are significantly lower when compared with other stormwater utilities that strive to recover their stormwater cost of service primarily through a dedicated stormwater user fee. Establishing user fees to recover only a portion of the stormwater costs can have equity of cost recovery implications, as the magnitude of costs recovered from a user from taxes may not be fully aligned with the level of demand the user places on the system.



In summary, with respect to establishing an effective nexus between program, cost, fees, and customer engagement, stormwater utilities are continuing to evolve very slowly and have yet to reach even the level of maturity that we see in the municipal water and wastewater sectors. While municipalities that have established a user fee funding mechanism are ahead of the curve relative to those that have not, to plan for and build resilience, it is time that municipal leaders and communities transitioned to more collaborative, needs-driven, and holistic approaches to policy making, delineating cost of service and stormwater funding.

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Prabha has over 22 years comprehensive utility consulting experience and specializes in Water and sewer financial planning and rate studies; stormwater utility consulting; non-revenue water management initiatives; business transformation and performance management services; and stakeholder engagement.

Ms. Kumar is an active member of the Water Environment Federation (WEF) and is a member of the Strategic Management Practices Committee (SMPC) of the American Water Works Association (AWWA). In addition, she has served as the Lead Author for Wastewater and Stormwater User Fee Guidance Manuals. She most recently contributed updates to the 2nd edition of the WEF manual, “Wastewater Financing and Charges, Manual of Practice 27,” and updates to the 2nd edition of the WEF manual “User Fee Funded Stormwater Programs.”