Financing our waterways

EXECUTIVE SUMMARY AND FACT SHEET

To weather a storm preparation is key

The U.S. is in significant need of improvement to stormwater infrastructure. In urban landscapes without adequate infrastructure, stormwater runoff can pollute communities and their environments. Complicated stormwater governance structures leave few dedicated funding sources to support municipalities in meeting funding needs. Therefore, innovative funding mechanisms for stormwater projects are critical to protect the health of our cities and waterways.

- The 2022 Clean Watersheds Needs Survey Report found: $115.3 billion in stormwater management systems was needed, and $94.4 billion associated with NPS control was needed.
- The ASCE's 2025 Report Card for America's Infrastructure gave the United States stormwater infrastructure a D rating overall.

GALLATIN RIVER, MONTANA
DAVID TUCKER

Main impacts

Flooding
Common in municipalities without adequate stormwater infrastructure, especially green stormwater infrastructure. This is often due to a lack of permeable pavement and an overwhelmed, antiquated drainage structure. Frequent flooding can pose a direct threat to constituents' safety, as well as through pollution exposure. It can also cost cities significant sums in property damage.

Pollution
When urban stormwater runoff is not sufficiently captured and treated, it can enter bodies of water. This runoff is typically contaminated with several dangerous pollutants, including pesticides, motor oil, and bacteria. Stormwater runoff can also result in combined sewer overflows, which allow raw sewage, debris, and industrial waste to enter waterways. This pollution can significantly diminish drinking water quality, as well as threaten public health and surrounding ecosystems.

Limited resources
Frequent repairs to aging stormwater infrastructure can strain municipal budgets, and without the financial resources to implement large-scale improvements that can incorporate innovative technologies, sustainable growth and development can be hindered.

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Innovative financing options

Stormwater credit programs
Stormwater credit programs allow for increased flexibility from developers while also increasing the potential for stormwater management. Stormwater volume credit trading revolves around retention and detention requirements as an off-site compliance option. Credits are generated from the installation and maintenance of GSI projects and are not subject to post-construction stormwater management requirements. Systems benefit greatly from varied support from the private and public sectors.

Stormwater tax credit system
Municipalities can offer a stormwater tax credit or a fee reduction program to incentivize property owners to implement on-site solutions for managing stormwater runoff, like Green Stormwater Infrastructure (GSI). This can be done by including a list of eligible project types, an application, and a compliance process. These GSI projects become a strategy to comply with stormwater permit requirements while also planning ahead for the future of stormwater management needs.

Bonds
Debt financing through the sale of environmentally focused revenue bonds, such as green bonds and environmental impact bonds, can enable municipalities to finance large-scale stormwater infrastructure investments upfront while repaying costs over time. These bonds can directly fund stormwater infrastructure development and/or refinance existing debt by using established revenue streams for repayment. When combined with public-private partnership structures, bond financing can redistribute financial and performance risk among stakeholders, rather than placing full cost and liability on a single entity.

Trust funds
Trust funds have the opportunity to provide dedicated funding streams to water infrastructure projects through the offering of grants and/or loans that are distributed by governmental authorities. Trust funds can receive their funds through either pre-existing or newly created revenue sources that are enacted by the same authorities. Grants and loans offered by trust funds have the potential to require lower interest payments or matching funds for projects located in low-income geographic areas.

Policy recommendations

Create a pilot program dedicated to stormwater credit trading
Integrating mechanisms can increase the stability and lower the variability of credit prices to allow for less risk and more reassurance for both buyers and sellers in the system. Implementing an in-lieu fee can act like a ceiling (most willing to pay), while a last-resort purchase program from the governing body allows for a minimum (as a floor) for a potential range of prices to exist.

Support a tax incentive to help homeowners and businesses
Stormwater Tax Credits can provide long-term stability and sustainable funding sources for stormwater management and green infrastructure investments. A dedicated funding stream provides secure long-term funding for local infrastructure solutions based on needs. Property owners are responsive to meaningful incentives, and with combined technical and financial assistance, can expand a property owner's ability to participate. Localized green stormwater infrastructure can reduce runoff, strengthening stormwater infrastructure.

Implement environmental impact bonds
When financing projects with environmentally focused bonds, it's important to consider the level of risk, project scale, and project timelines. Environmental impact bonds must balance investor risk with innovation due to their pay-by-success framework, and their complexity necessitates large-scale projects. Green municipal bonds follow a more traditional repayment structure and typically have low interest rates. Both bond types require municipalities to examine repayment obligations relative to expected improvements over time.

Establish a dedicated water infrastructure trust fund
An important aspect of the success and stability of trust funds as a means to finance stormwater infrastructure projects is the stability of the revenue source. Newly created revenue sources (i.e., taxes, etc.) are directly attached to the trust fund and are less likely to be disestablished than pre-existing sources (i.e., appropriations, etc.), which can change during budgetary negotiations. Even with newly created revenue sources, it is important to limit opportunities for future reductions.

Closing statement

Financing stormwater infrastructure projects that incorporate innovative solutions is crucial for protecting our waterways and communities. Innovative financing mechanisms can bridge the funding gap frequently cited as a hurdle for project implementation. Using the varying innovative financing options described here, institutions that oversee stormwater infrastructure can decide which option is most beneficial based on the underlying circumstances of the situation.

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