

City of Dover Ad Hoc Committee to Study Stormwater and Flood Resilience Funding

Summary of Findings & Recommendations

On August 12, 2020, the Mayor and City Council adopted a resolution ([R-2020.08.12-130](#)) establishing the Ad Hoc Committee to Study Stormwater and Flood Resilience Funding (Committee) to review data, investigate various funding options, and ultimately recommend whether to pursue one or more funding options. This summary reflects the key findings and recommendations supported by a majority of Committee members. Additional detail is provided within the Committee Recommendations Report.

The Committee understands...

Stormwater runoff and flooding present significant problems for the City now and in the future.

1. Stormwater runoff is rainfall or snowmelt that flows over land and does not soak into the ground. Impervious surfaces, such as rooftops, driveways, and parking lots create the most runoff. As it travels, stormwater runoff picks up oil, chemicals, bacteria, sediment, and other pollutants that are then carried into local water bodies. Stormwater runoff has already contributed to the impairment of Willand Pond and the Bellamy, Cocheco, Salmon Falls, and Piscataqua Rivers. Additionally, heavy rainfall can lead to excess stormwater runoff, which can overwhelm the capacity of storm drains, causing water to inundate roads and public and private property.
2. The City is vulnerable to urban, riverine, and coastal flooding from excessive rainfall (as the City experienced during the 2006 Mother's Day Flood and 2007 Patriot's Day Flood), rapid snow melt, sea-level rise, and storm surge. Coastal flood risks (i.e., sea-level rise and storm surge) can exacerbate stormwater management and flood resilience challenges. For example, precipitation events that trigger flooding in rivers and streams or that cause localized, urban flooding can combine with coastal events, often leading to more widespread and prolonged flooding. Also, increased frequency of extreme precipitation events increases the chances of a heavy rain event coinciding with a coastal flooding event. Higher sea levels can also raise groundwater levels up to three miles inland from the coast, potentially reducing infiltration from pervious surfaces and causing more stormwater runoff and increasing inland flood risk. According to the City's [2018 Multi-Hazard Mitigation Plan](#), there is approximately \$208,929,340 in estimated potential losses from flooding based on assessed value of residential, commercial, and utilities structures located in high flood hazard areas. More information on the City's flood vulnerability is available in the [2018 Climate Adaptation Master Plan Chapter](#).
3. The frequency and magnitude of extreme precipitation events is projected to increase, especially in springtime. The [NH Coastal Flood Risk Summary, Part II: Guidance \(2020\)](#) recommends planning for at least a 15% increase in extreme precipitation. More information on future projections for precipitation and other flood hazards is available in the [NH Coastal Flood Risk Summary, Part I: Science \(2019\)](#).

The City is responsible for the operation and maintenance of an extensive stormwater system.

4. The City maintains the public stormwater system to convey stormwater runoff away from private property and public right-of-ways to prevent flooding and control erosion, as well as to prevent polluted stormwater runoff from entering local water bodies.

5. The City is responsible for the operation and maintenance of an extensive stormwater system, including approximately 65 miles of drainage pipe, 101 miles of open drainage, 450 stormwater outfalls/discharge locations, 140 culverts, 100 drainage manholes, and 3,200 catch basins.
6. The City's stormwater system, portions of which date back as far as the late 1800s, is aging and is in need of rehabilitation and replacement.
7. Stormwater runoff capture and infiltration techniques (e.g., rain gardens, permeable pavers, and other types of green infrastructure) have been proven to prevent flooding, improve water quality, reduce demand on the City's water supplies, and improve drought conditions by allowing stormwater to recharge groundwater supplies.

The City must comply with increasing regulatory requirements.

8. The City is required to implement minimum control measures that minimize harmful pollutants entering local water bodies to maintain compliance with their [Municipal Separate Storm Sewer System \(MS4\) Permit](#) that is administered by the US Environmental Protection Agency (EPA).
9. The City is required to reduce their nitrogen loading into the Great Bay Estuary to comply with EPA's [Great Bay Total Nitrogen General Permit](#). These reduction targets cannot be met through public property stormwater quality enhancements alone, and therefore, nitrogen reductions from private property will be needed as well.
10. The City (along with Portsmouth and Rochester) entered into a [settlement agreement](#) with the Conservation Law Foundation that requires the City to set forth commitments to improve water quality in the Great Bay, which will necessitate increased investment in stormwater treatment.

An alternative funding solution is necessary to address current and future stormwater runoff and flooding issues.

11. Stormwater management expenses include the Stormwater Program operating budget, capital projects, and other expenses such as Community Services Department professional staff time and Police and Fire Department response to flood events. All of these expenses are currently funded through general funds derived from local property taxes.
12. The General Fund annual allocation to the Stormwater Program operating budget (\$1,019,449 in FY21) is inequitable, unreliable, and inadequate to meet current and future needs. It is inequitable because a property's assessed value and resulting property tax contribution to the General Fund is not linked to the City's Stormwater Program Costs in a rational way. It is unreliable because the Stormwater Program has to compete for General Fund dollars and many other City services and projects with broad public support take precedence for funding. Finally, it is inadequate because several stormwater and flood resilience projects have been forced into deferment due to insufficient funding and costs will continue to increase in the future.
13. The City already has a growing list of deferred stormwater and flood resilience projects in excess of \$5 million due to insufficient funding. When insufficient funding forces deferred action on projects, those projects often grow in cost. Investment in stormwater and flood resilience infrastructure is necessary to avoid costs becoming insurmountable. Furthermore, deferred action leaves the City unprepared for current and future conditions.

14. Stormwater management and flood resilience face unavoidable increases in costs due to aging infrastructure, increasing development, regulatory requirements, undersized infrastructure, and increasing flood risk.
15. The City's annual Stormwater Program budget needs to increase to approximately \$3.5 million to fund existing and projected stormwater management and flood resilience costs. City staff and the Committee identified this funding need based on the average annual costs of stormwater management and flood resilience operating expenses and capital improvement projects from the past five years, while also recognizing costs are expected to increase in the future.
16. Increasing costs for stormwater management and flood resilience cannot be met solely through supplemental funding sources such as grants and development fees, and meeting costs through repeated bonding would substantially add to debt service fees and weaken City bond ratings. Therefore, the options for adequately funding the Stormwater Program include an increase in property taxes, reallocating General Funds away from other uses, or a stormwater and flood resilience utility that distributes service fees based on stormwater impact.

The Committee recommends the City...

17. Establish a Stormwater and Flood Resilience Utility to fund the majority of the City's stormwater and flood resilience costs. Similar to other utilities based on use or impacts (e.g., water, sewer, and electricity) fees should be based on stormwater impacts estimated by the impervious area of a property (i.e., an area of a property comprised of rooftops, driveways, patios, parking lots, or sidewalks). Furthermore, the Committee strongly recommends the utility be developed with substantial public input on the criteria described in the following sections of this summary. The importance of public input and education prior to implementation cannot be stressed enough.
18. Continue to pursue relevant grants and debt forgiveness loans to offset stormwater management and flood resilience expenses.
19. Continue to utilize plan review fees, permit fees, inspection fees, impact fees, and other supplemental sources of funding to offset stormwater management and flood resilience expenses.
20. Continue to collaborate with private-sector partners to deliver and maintain stormwater infrastructure projects when it is cost-effective and appropriate to do so.
21. Continue to collaborate with other communities in the Municipal Alliance for Adaptive Management (MAAM) with respect to reducing nitrogen pollution and complying with the Great Bay Total Nitrogen General Permit, and identify opportunities to engage and educate communities further upstream on their nitrogen impacts to the Great Bay Estuary.

The Committee recognizes a stormwater and flood resilience utility...

22. Will provide a dedicated, stable, and adequate mechanism to fund stormwater projects across the City to help reduce flooding, improve drought conditions, enhance recreation, and improve water quality.

23. Will save money by allowing the City to more effectively plan for long-term infrastructure upgrades that will prevent expensive emergency infrastructure repairs and/or replacements in the future, as well as reduce debt service fees by lessening the need to fund projects through bonds or loans.
24. Will provide dedicated, reliable funding for the City's Stormwater Program, and therefore allow the City to more effectively plan for long-term infrastructure repairs, replacement, and upgrade, as well as reduce the number of deferred stormwater and flood resilience projects.
25. Will increase fairness and be a more equitable method of distributing cost with respect to the impact stormwater runoff and flooding has on City infrastructure, public safety, and local water quality. Under the current approach of funding the Stormwater Program through property tax revenue, 55% of the revenue comes from residential property owners, but these properties account for only 25% of the City's impervious area.
26. Will allow the City to generate funding necessary to meet state and federal grant cost share requirements.
27. Will cost less for the average single family homeowner compared to increasing the Stormwater Program budget through property taxes. Although stormwater management and flood resilience face unavoidable increases in costs, a utility would lessen the increased cost burden for homeowners.
28. Will cost more for some non-residential property owners (private and public) with significant amounts of impervious area compared to increasing the Stormwater Program budget through property taxes. This is due to utility fees being reflective of a property's impact on the stormwater system.
29. Will offer rate payers the opportunity to reduce their service charge, through credits, by making site improvements that reduce stormwater runoff and/or improve the water quality of stormwater runoff from their property, thereby reducing the overall impact on the City's stormwater system.
30. Will incentivize enhanced stormwater quality management projects on private property through a credit program allowing property owners to reduce their utility fee. Such projects offset potentially very expensive, less practical pollutant reductions on public property and/or very expensive limit of technology enhancements at the wastewater treatment plant.

The Committee recommends pursuing a stormwater and flood resilience utility according to the following criteria:

31. The Committee examined multiple approaches for determining the basis of the utility fee, including a fee based on impervious area only, a fee based on impervious area and gross area, and a fee based on intensity of development. The Committee believes the City should charge on the basis of impervious area only because an impervious only rate is most directly related to a property's stormwater impact.

32. The Committee examined multiple rate structures for Single Family Residential (SFR) properties including a flat fee for all properties, a tiered fee based on impervious area, and a proportional fee calculated based on each property's individual impervious area. The Committee believes the City should adopt a proportional fee for SFR properties because it is the most equitable option where rates vary according to the property's impact on the stormwater system.
33. The Committee examined multiple rate structures for non-single family residential (NSFR) properties (e.g., commercial properties, apartment buildings, tax-exempt properties, etc.) including a flat fee for all properties, a tiered fee based on impervious area, and a proportional fee for each property calculated based on each property's individual impervious area. The Committee believes the City should adopt a proportional fee for NSFR properties because it is the most equitable option where rates vary according to the property's impact on the stormwater system.
34. The Committee considered whether certain property types should be exempt, such as City- and State-owned roads, City-owned property, educational institutions, faith-based institutions, and other nonprofits. Since stormwater runoff generated by any property must be controlled and conveyed once it leaves the property, the Committee believes the utility fee should apply to all developed properties that have impervious surfaces.
35. The Committee recognizes the City would be legally obligated to develop a credit system to give all property owners the ability to reduce their stormwater and flood resilience utility fee ([Title X, Chapter 149-I:6-c](#)). The Committee believes an equitable credit system that encourages on-site stormwater quantity and/or pollutant reductions is key to the success of a stormwater and flood resilience utility. Therefore, the Committee recommends providing credits according to the following eligibility requirements:
- Stormwater Performance-Based Credit: The utility must, by State Statute, provide credits based on on-site management of water quality or peak runoff storage, or both. In other words, credits must be awarded to property owners that reduce pollutant loading from their property and/or reduce the amount of stormwater runoff their property generates through implementation of stormwater control systems and best management practices (BMPs). While the additional credits listed below would enhance social equity and can be readily defined and administered, performance-based credits are the only type of credits required by law and should be prioritized.
 - Low-Income & Affordable Housing Credit: Credits should be granted to SFR and multi-family residential (MFR) properties. In the case of SFR properties, the income level should be tied to existing property tax relief thresholds based on the Assessor's Office records. For MFR properties, the property owner should earn credit based on a percentage of units rented with documented conformance to United States Department of Housing and Urban Development (HUD) low-income rate limits.
 - Elderly Credit: Credit should be automatically applied to a property owner's utility fee based on the Assessor's Office records of residents who currently qualify for the City's Elderly Property Tax Credit.
 - Veterans Credit: Credit should be automatically applied to a property owner's utility fee based on the Assessor's Office records of residents who currently qualify for the City's Veterans' Property Tax Credit.

- Disability Credit: Credit should be automatically applied to a property owner's utility fee based on the Assessor's Office records of residents who currently qualify for the City's Disability Property Tax Credit.
- Blind Credit: Credit should be automatically applied to a property owner's utility fee based on the Assessor's Office records of residents who currently qualify for the City's Blind Property Tax Credit.
- Deaf Credit: Credit should be automatically applied to a property owner's utility fee based on the Assessor's Office records of residents who currently qualify for the City's Deaf Property Tax Credit.

36. The Committee recognizes public outreach, education, and involvement during the continued exploration of and transition to an equitable stormwater and flood resilience utility is paramount. The importance of outreach must not be underestimated, and therefore, the Committee recommends the City develop and implement a 9-12 month outreach plan, including multiple public hearings. The outreach plan should be broad in scope, encompassing multiple forms of media outreach and multiple ways to engage the public, businesses, nonprofits, and other stakeholders. Based on previous experiences in New Hampshire, implementation of a utility is highly unlikely without proper outreach and education. In 2008 and 2009, Dover, Manchester, Nashua, and Portsmouth recognized stormwater management activities were underfunded, so they conducted stormwater utility feasibility studies, and although utilities were deemed appropriate from a technical perspective, implementation was rejected amid public opposition. In each case, the municipality performed little to no public outreach. The experiences of these municipalities were well document, allowing the New Hampshire Department of Environmental Services to compile the following lessons learned:

- Involve the Public: The public must be involved from the very beginning. They should have the opportunity to learn about how a utility works, be able to ask questions, and voice concerns in order to make an educated decision on whether or not they think a utility is a good option for their municipality. Without public support, it is very unlikely that there will be the political support to pursue and approve a utility.
- Ensure Political Understanding and Support: It is essential that municipal decision makers fully understand the purpose and function of a utility in order to be able to speak about it to their constituents and answer any questions that arise. Open communication between the public and political leaders about a utility is necessary in order for both parties to feel confident supporting it.
- Provide Real Numbers and Full Disclosure: In order for the public to better understand how they would be personally impacted by a utility fee, actual examples of rates based on various rate structures should be developed and available for public review.
- Identify and Communicate the Need: It is important to identify and communicate local stormwater and flood resilience needs that could be funded with revenue from a utility fee. Highlighting examples of potential fixes to ongoing stormwater and flooding concerns focuses on the solutions.
- Consider Timing: During the exploration of a utility, use the process to identify the best time to move forward with getting approval. Be flexible and respond to external factors.

- Don't Assume Anything: No matter how aware your community is about stormwater and flooding and how much support appears to exist, do more communication and outreach than you think you need to.

The Committee recommends the City conduct further exploration on the following stormwater and flood resilience utility development considerations:

37. Credit system: The Committee recognizes all property owners must be eligible to receive Stormwater Performance-Based Credits for verifiable on-site management of water quality and/or water quantity, but further analysis of specific on-site stormwater controls (e.g. pervious driveways/parking lots, drywells, detention ponds, infiltration chambers, etc.) and associated design standards will be required to determine the fee reduction a property owner can receive for implementing each unique stormwater control measure. Determining the appropriate fee reduction for Low Income & Affordable Housing, Elderly, Veterans, Disability, Blind, and Deaf Credits also requires further exploration. Additional analyses will be required to identify the impact these credits will have on revenue once they are applied.
38. City staffing: The Committee recognizes the adoption of a stormwater and flood resilience utility would require additional staff capacity to administer billing, process credit applications and approvals, and perform relevant customer service duties. Further exploration will be required to determine utility staffing needs and the associated effect on Stormwater Program funding needs.