

**REPORT OF THE AD HOC STORMWATER UTILITY STUDY
COMMITTEE
TO THE
NORWOOD BOARD OF SELECTMEN**

December 21, 2023

EXECUTIVE SUMMARY:

The Ad Hoc Stormwater Utility Committee was established by the General Manager in 2021. The Committee's charge is to evaluate the ways and means by which the Town can most effectively finance the work associated with its aging stormwater infrastructure. Current membership of the Committee is:

Francis Hopcroft, Chair*

Heather Audet, Vice Chair*

Alan Slater*

Bob Donnelly*

Michael Rosen, Ex Officio and Secretary

Mark Ryan, Director of Public Works and Engineering

Holly Jones, Assistant Town Planner

*Voting Member

The Committee met 20 times during the course of its work. Information and documents that were used by the Committee in its deliberations included the Meadowbrook Study from 2004, the updated 2021 Meadowbrook Study conducted by the engineering firm Stantec, as well as information associated with the recent history of flooding in Norwood and the resulting impact to Town services and residents caused by such flooding. In order to examine municipal best practices associated with financing stormwater operations and capital improvements, the Committee was supported by CDM Smith, a consultancy firm with expertise in the area of financing municipal stormwater management programs. The Committee also conducted 3 public meetings to review financing options and educate the public regarding the purpose of a stormwater system and the engineering solutions required to improve it.

In August of 2023, the Committee presented an update to the Board of Selectmen. At that meeting, the Committee included a series of recommendations to the Board. Our key recommendation for ensuring that Norwood's stormwater system is appropriately funded to meet the operational and capital needs for the system is to establish an enterprise fund similar to the Town's Water and Sewer Fund. This fund would be financed through a stormwater fee assessed to all properties in Norwood. Using the revenue generating model provided by CDM Smith, the assessed fee for a property would be based on the amount of impervious area a property possessed. Other options for funding were also considered but were ultimately rejected by the Committee for the reasons documented in our report.

In making these recommendations, the Committee noted that this approach to funding the stormwater system and its improvements will allow the Town to address the many deficiencies outlined in the Meadowbrook report as well as provide for stormwater infrastructure improvement in all areas of Norwood. The Committee also noted that to date, the Town has been effective in utilizing federal grant money (i.e., the American Rescue Plan Act) to fund its stormwater projects in South Norwood, the Meadowbrook watershed, and other sections of Norwood. Federal grant support from ARPA is ending, and the Town will eventually not be able to fund other improvements using this funding source.

BACKGROUND AND PURPOSE:

An Ad Hoc Stormwater Utility Study Committee was formed by the General Manager in late 2021 to evaluate ways that the Town could most effectively fund stormwater management activities. The original committee consisted of Heather Audet, Nicholas Grow, Craig Reise, Alan Slater, and Francis Hopcroft, with Michael Rosen, ex officio. Over time, some members of the Committee left, while Holly Jones, Mark Ryan, and Bob Donnelly were added as members of the committee.

The purpose of the Committee was, and has continued to be, specifically to address the issue of funding for future stormwater work; not to address specific project determinations, design issues, or construction issues.

The basis for the analyses done by the Committee was a study conducted in 2004 by a predecessor consulting firm “Stantec,” a consulting firm in Boston, which did a thorough review of the Meadowbrook watershed in the Town of Norwood at that time, in conjunction with the DPW and Town government officials, to determine the highest priority projects to alleviate flooding occurring on occasion in town from severe storms. A list of approximately 8 to 10 projects were identified and sorted into projects that could realistically be completed together. The projects were sorted again such that the earliest projects would be those at the downstream end of the system, where it ties into the Neponset River. Doing upstream projects prior to the downstream ones simply moves the flooding to different areas of the town and accomplishes little for overall effectiveness.

Although the focus of the Meadowbrook study was on the solutions needed to improve the conveyance of stormwater into the Meadow Brook, the committee noted that its recommendations seek to finance the improvement and maintenance of the stormwater management system throughout the entire Town of Norwood.

PROBLEMS OBSERVED:

The flooding in town has been increasing in intensity and area for decades. The original problem of consistent flooding at the public safety building, which incapacitated the public safety responses for hours and days, and the flooding of the underpass on Nahatan Street were the key catalysts for considering further action. The photo below was taken in the late 1980s showing flooding at the public safety building. Those floods resulted in the creation of a stormwater detention basin behind the public safety building and an enhanced drain system from the shopping center across from the public safety building to the Hennessey Field-Murphy Field-Meadowbrook system.



Source: Norwood Police Dept., 2014

More recently, the Norwood Hospital was destroyed in 2020 when major flooding occurred in the area of East Hoyle Street and Broadway, while also flooding much of the downtown area, the underpasses at Nahatan Street and Guild Street, several neighborhoods in the Hawes Brook watershed, and in various other locations throughout the town. Many citizens had flooded basements and property losses, and many homeowners applied to the town for disaster relief. Multiple times a year, there is underpass flooding, additional flooding in the downtown area, and widespread flooding throughout the town. The following photograph was taken of the flooding on Cross Street near the entrance to Hennessey Field, for example, and the second photograph shows flooding on Pleasant Street resulting from that same storm event.

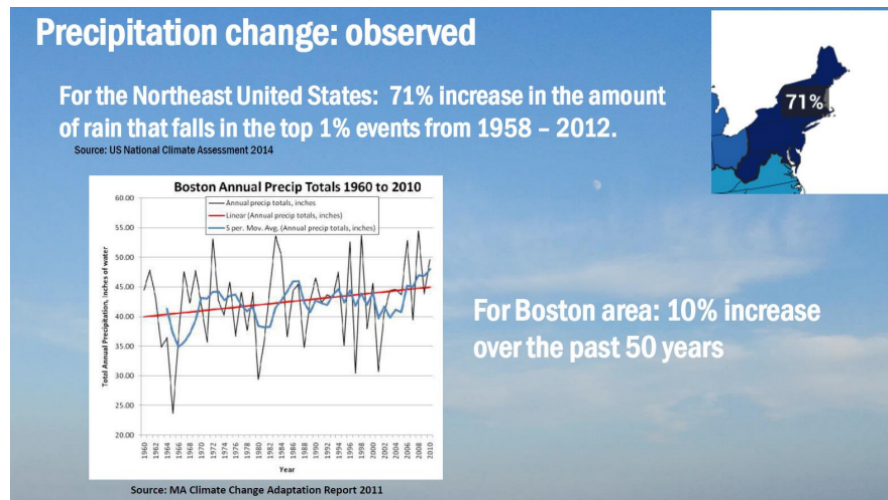


Source: General Manager's Office, 2023



Source: General Manager's office, 2023

These events are most likely going to continue to occur, and occur at much greater frequencies, and further to occur with greater and greater degrees of severity based on current climate change predictions as expressed, among other places, by the following chart.



Source: MA Climate Change Adaptation Report, 2011

RESPONSE ACTIONS:

In late 2021, the General Manager created an Ad Hoc Stormwater Utility Committee to study the options available for funding stormwater infrastructure projects in Norwood. The Committee was provided with the 2004 Meadowbrook Study as a basis for its determinations. In addition, a consultant then working with the DPW, CDM-Smith, was asked to carry out certain specific tasks to assist the Committee with developing an appropriate and equivalent basis for option analyses.

It is specifically noted that the charge to the Ad Hoc Committee was to evaluate options for funding stormwater infrastructure projects going forward. The Committee was not charged with determining what projects should go forward, setting any form of priority for building projects, or generating a list of needed work in the town. The issue for the Committee is not what needs to be done, but how to pay for whatever is determined to be needed. As a result, the list of projects, a list of additional projects, and the actual costs of any of those projects are not relevant to the work of the Committee. Whatever the cost of projects subsequently approved by Town Meeting for funding, it will be necessary to pay for them. The best way to structure future cost payments is the focus of the Committee.

The costs projected for the projects listed in the Meadowbrook Study, updated to 2023 estimates, were used as a basis for identifying and comparing various funding options. All future inflation factors and interest rate factors were identical for all options considered. Thus, regardless of the

actual costs encountered in the future, the option analyses provide equivalent relative parameters for determining the most effective way to pay for them.

ACTIONS TAKEN BY THE AD HOC STORMWATER UTILITY COMMITTEE:

The stormwater committee met starting in late 2021 and realized quickly that a significant amount of data was needed to properly formulate a response to the General Manager and the Board of Selectmen. A review of preliminary materials prepared by CDM Smith, based on the updated information from Stantec regarding the Meadowbrook Study from 2004, indicated that more refined data were needed to properly evaluate available options. It also became clear that only three options presented any real potential for effectively managing the future costs:

- Continued funding through the normal annual budgeting process
- Use of annual debt exclusion overrides
- Use of an enterprise fund financed through user fees

Continued funding through the annual budgeting process was ultimately rejected because the amount of funding needed for stormwater improvement would basically wipe out the bonding limits within the budget and foreclose the option to construct any other significant projects in town for decades. Moreover, the bond ratings would likely decline and the interest rates would go up because there would be no dedicated income stream available to pay back the bonds, and that would result in very high costs per household, realized as increases to the base tax rate.

Use of an annual debt exclusion override created the probability that as the projects started to move forward, the debt override votes would begin to cause the same negative impacts on the available interest rates and bonding availability under the general budgeting process as using the normal tax rate system, because the debt service would still go directly to the tax rate.

Use of an enterprise fund would move the debt service costs off the tax rate for the work done by the enterprise fund, and the debt would enjoy a lower interest rate because there would be a dedicated income stream to pay for it, through the user fees charged by the enterprise fund.

Fees differ significantly from a tax because taxes are based on the assumed or calculated value of a property, which has nothing at all to do with actual use of any particular service. A user fee is directly attached to the use of a specific service, in this case the stormwater system. Thus the fees would be lower than any tax rate increase to accomplish the same objectives, and the work would not directly impact the actual tax rate or tax amount, except through the removal of certain current costs from the DPW budget and funding those through the enterprise fund instead.

To be certain that the expectations of the Committee with respect to these options are correct, the Town Finance Department, specifically the Treasurer Alex Haggerty and Director of Finance and Town Accountant Meg LaMay, provided several cost analyses at the request of the Committee to look at how the cost to homeowners would compare under each option. It became clear that the general assumptions made by the Committee were correct and that the least cost to individual homeowners would come from the creation of an enterprise fund for this purpose.

PUBLIC INPUT:

The Committee then embarked on a public information and response campaign to encourage town residents to participate in the discussions and to understand the ramifications of the options.

The first meeting was well-advertised and run as a hybrid meeting at the Senior Center on Prospect Street. Several persons did attend that meeting and the Committee obtained some very useful feedback on the process.

The second public hearing was a more strongly advertised hybrid meeting held at the Senior Center on Prospect Street. Nobody showed up except the board members and a representative of Stantec, who was available online.

The third public meeting was planned as an in-person meeting at Hennessey Field to begin to explain what the projects upon which the cost analyses were run were based. Due to poor weather conditions that evening, the meeting was moved to the high school and all abutters were given a flyer on the day of the meeting informing them of the change of venue.

While reiterating the fact that the Committee was not created to foster any specific project, design or construction, a lot of input at that meeting focused on the design details of the proposed Hennessey Field and Murphy Field projects, even though those projects are only at the concept stage at this time. The outcome was not overly helpful to the work of this Committee, but did provide significant guidance to the DPW and Planning Department regarding the issues that will need to be addressed in future design meetings with local residents.

In addition, in April 2023, the committee met with the Board of Selectmen to provide an initial update on the work being done. The extent and magnitude of previous flooding events was reviewed at that time, and an outline of what the committee was working on was provided. No specific actions were asked of the Selectmen at that time, nor was any taken.

A second update was provided to the Board of Selectmen on August 22, 2023. At that time a recommendation was made that the Selectmen proceed with a warrant article for the November

2023 Town Meeting to allow creation of an enterprise fund for stormwater management and to seek approval of the detailed structural matters needed to fund the enterprise fund at the Spring 2024 Town Meeting in time for implementation in FY 25, beginning July 1, 2024. At that meeting, the Committee agreed to provide the Board with this detailed report of its activities and recommendations prior to the Selectmen's meeting in late September. The Committee also agreed to support the Board in developing the funding proposal and presenting it to Town Meeting. Additionally, the Committee planned a series of continued public information and education activities in advance of the spring 2024 town meetings.

RECOMMENDATIONS OF THE AD HOC STORMWATER UTILITY COMMITTEE:

A second update was provided to the Board of Selectmen on August 22, 2023. At this meeting the Committee made the following recommendations:

1. Prior to the Spring 2024 Town Meeting, the Board of Selectmen should establish a fee structure that is based on the amount of impervious surface a property possesses to fund an enterprise fund. The fee should be in place for billing and funding the Enterprise Fund in January 2026.
2. The Board of Selectmen should place an article on the Spring 2024 Special Town Meeting warrant to create a bylaw authorizing the creation of a separate Stormwater Enterprise Fund (similar to the Water Enterprise Fund).
3. At the FY25 Annual Town Meeting, the Board should transfer the operations and maintenance portion of the DPW budget for stormwater to the Stormwater Enterprise Fund in the FY25 Budget Book.
4. In future years (FY26 and beyond), the Committee recommends using the enterprise fund to finance stormwater capital projects in addition to the annual budget for stormwater operations and maintenance.

Approval of capital spending for stormwater projects will continue to follow the current process for capital planning (i.e., projects are subject to Capital Outlay Committee recommendations and subsequent Town Meeting approval).

Other program costs such as public education and regulatory requirements (e.g., stormwater management program, permit requirements, identifying and eliminating illicit discharges, annual reporting requirements as mandated by EPA and DEP) through the enterprise fund. These activities will enhance Norwood's ability to comply with the Municipal Separate Storm Sewer System 4 permit (MS4). Norwood is subject to penalties from those agencies for non-compliance with its MS4 permit.

The committee also agreed to support the Board in developing the fund and presenting it to Town Meeting, along with continued public information and education activities in advance of the town meetings.

ADVANTAGES OF A STORMWATER FEE STRUCTURE

A stormwater fee is seen as more advantageous than a debt exclusion for the following reasons:

1. The burden of the costs for the stormwater utility is on properties that have large areas of impervious surface which result in large stormwater runoff volumes into Norwood's stormwater system.
2. A debt exclusion override is based on a property's assessed value which is unrelated to impervious surfaces or directly to management of the stormwater flows generated from the property.
3. The property tax burden on the average residential home would be greater under any other option than it would be under a fee structure.
4. The fee would be more advantageous than funding capital improvements through the annual general fund budget as the stormwater projects would consume nearly the entire debt service budget line resulting in the Town deferring needed capital projects in other departments.

CALCULATING A FEE STRUCTURE

To calculate a fee structure, the committee recommends using a model developed by our consultant, CDM Smith based on an **"Equivalent Residential Unit (ERU)."** The Equivalent Residential Unit is a standardized unit of measure implemented by many Stormwater Utilities that is used to equate non-residential or multi-family residential properties to a specific number of single-family residences.

Utilizing this approach, Norwood is able to develop a flat rate that is based on the amount of impervious area (square footage) of an average residential unit in Norwood. CDM Smith collected data on residential, commercial, and industrial parcels to determine the square footage amount of impervious surfaces in order to determine an equitable fee structure. This model is based on the concept of "the more you pave, the more you pay."

The Committee worked with town management to estimate utility costs based on the best current estimates of future expenditures for capital, operations and maintenance, and program compliance costs using the Meadowbrook work as a guide.

Please note that there are about 2,100 Stormwater utilities nationally with 75% using a fee to fund the utility (per CDM Smith estimates). Almost all MA utilities using a fee appear to use an

impervious area basis for calculating the fee (per CDM Smith estimates). Stormwater improvements in other areas of Norwood would also be funded from the enterprise fund.

The following table depicts the expected impacts of such a fee system on various selected property types in Norwood. These values are shown for 5 years because beyond that, estimating costs is not helpful at this point as capital needs and priorities will change over time.

<u>ESTIMATED ANNUAL COSTS FOR STORMWATER WITH</u> <u>ENTERPRISE FUND FEE</u> <u>ALL SUGGESTED COSTS INCLUDED</u>			
CATEGORY	ERUs	FY 2025 COST EST.	FY 2029 COST EST.
Single family home with up to 3,400 sf impervious area	1	\$54	\$147
Multi-family residence property with about 34,000 sf of impervious area (Fee to be divided among unit owners)	10	\$540	\$1,470
Multi-family apartment complex with about 340,000 square feet of impervious area (Fee to be divided among unit owners)	100	\$5,400	\$14,700
Medium sized commercial property with about 40,000 square feet of impervious area	11.76	\$635	\$1,739
A commercial property dominated by a parking lot with about 191,000 square feet of impervious area	56.18	\$3,029	\$8,258
A large commercial property with about 760,000 square feet of impervious area	223.53	\$12,045	\$32,859

The values shown in this table are based on analyses of the following data using five years of projections into the future.

Fiscal Year	2025	2026	2027	2028	2029
O&M Expenses					
Existing Drain Maintenance Budget	\$76,016	\$78,297	\$80,645	\$83,065	\$85,557
Catch Basin Cleaning	\$190,825	\$196,550	\$202,446	\$208,520	\$214,775
Street Sweeping	\$89,300	\$91,979	\$94,738	\$97,580	\$100,508
Maintenance of Town-owned Stormwater Treatment Structures	\$0	\$0	\$0	\$0	\$0
SWPPP	\$0	\$0	\$0	\$0	\$0
Stormwater/Drain Management Staff	\$553,836	\$570,451	\$587,564	\$605,191	\$623,347
Total O&M Expenses	\$909,977	\$937,276	\$965,394	\$994,356	\$1,024,187
CIP					
Debt Payments	\$0	\$746,200	\$871,600	\$1,113,500	\$1,703,200
<u>Cash Funded Capital</u>	<u>\$53,543</u>	<u>\$53,543</u>	<u>\$53,543</u>	<u>\$53,543</u>	<u>\$53,543</u>
Total CIP	\$53,543	\$799,743	\$925,143	\$1,167,043	\$1,756,743
Miscellaneous Program Costs					
Public Education	\$12,151	\$12,516	\$12,891	\$13,278	\$13,676
Public Participation	\$2,841	\$2,926	\$3,014	\$3,105	\$3,198
NOI	\$1,770	\$1,823	\$1,878	\$1,934	\$1,992
SWMP	\$3,628	\$3,737	\$3,849	\$3,964	\$4,083
IDDE	\$55,729	\$57,401	\$59,123	\$60,897	\$62,724
Construction Site Control	\$2,819	\$2,904	\$2,991	\$3,081	\$3,173
Post Construction Site Control	\$7,387	\$7,608	\$7,837	\$8,072	\$8,314
Annual Report	\$8,392	\$8,644	\$8,903	\$9,170	\$9,445
Total Miscellaneous Program Costs	\$94,718	\$97,559	\$100,486	\$103,500	\$106,605
Rainy Day Fund	\$14,340	\$10,232	\$77,223	\$53,733	\$53,733
Total Revenue Requirement	\$1,072,576	\$1,844,809	\$2,068,246	\$2,318,632	\$2,941,268

Fiscal Year	2025	2026	2027	2028	2029
Total Billing Units (ERU equivalents)	20,000	20,000	20,000	20,000	20,000
Annual cost per ERU	\$54	\$92	\$103	\$116	\$147
Monthly Cost per ERU	\$4.47	\$7.69	\$8.62	\$9.66	\$12.26

By comparison, Dedham and Milton have a user fee based on impervious area similar to that proposed for Norwood. Braintree uses a slightly modified version of that system in which the number of dwelling units per parcel is used for residential areas and an imputed fee is charged for industrial, commercial, and other properties. Those published fees are compared to Norwood's proposed fees in the following tables. The estimated Norwood fee is shown adjacent to the other town fees. Please note that not all categories are directly comparable as each community's revenue requirements differ based on their specific operational and capital requirements for stormwater management.

PUBLISHED ANNUAL ENTERPRISE FUND FEES FOR DEDHAM, MA		
DEDHAM - RESIDENTIAL	ANNUAL FEE	ESTIMATED NORWOOD FEE
500 – 5,000 sf of Impervious Area	\$188	\$54 - \$79
5,000 – 10,000 sf of Impervious Area	\$508	\$79 - \$159
>10,000 sf of Impervious Area	\$1,286	\$159 - Variable
Dedham Non-Residential		
500 – 5,000 sf of Impervious Area	\$303	\$54 - \$79
5,000 – 10,000 sf of Impervious Area	\$785	\$79 - \$159
10,000 – 15,000 sf of Impervious Area	\$1,347	\$159 - \$238
15,000 – 25,000 sf of Impervious Area	\$2,087	\$238 - \$397
25,000 – 50,000 sf of Impervious Area	\$3,952	\$397 - \$794
50,000 – 75,000 sf of Impervious Area	\$6,853	\$794 - \$1,191
75,000 – 100,000 sf of Impervious Area	\$9,395	\$1,191 - \$1588

100,000 – 250,000 sf of Impervious Area		\$16,170	\$1,588 - \$3,971
250,000 – 500,000 sf of Impervious Area		\$36,688	\$3,971 - \$7,941
500,000 – 750,000 sf of Impervious Area		\$62,238	\$7,941 - \$11,912
750,000 – 1,000,000 sf of Impervious Area		\$104,150	\$11,912 - \$15,881
>1,000,000 sf of Impervious Area		\$118,687	\$15,881 - Variable

**PUBLISHED ANNUAL ENTERPRISE FUND FEES
FOR MILTON, MA**

SINGLE FAMILY RESIDENTIAL		ANNUAL FEE	ESTIMATED NORWOOD FEE
0 – 2,075 sf of Impervious Area		\$41	\$54
2,076 – 2,675 sf of Impervious Area		\$57	\$54
2,676 – 4,225 sf of Impervious Area		\$78	\$54 - \$67
4,226 – 8,365 sf of Impervious Area		\$139	\$67 - \$133
8,366 – 15,895 sf of Impervious Area		\$260	\$133 - \$252
> 15,895 sf of Impervious Area		\$533	\$252 - Variable
Other Properties			
Condos, Multi-Family		\$238 / 100 sf	\$54 / 3,400 sf
Commercial, Industrial, Office, Retail		\$238 / 100 sf	\$54 / 3,400 sf
Tax Exempt, Municipal, Institutions		\$238 / 100 sf	\$54 / 3,400 sf

**PUBLISHED ANNUAL ENTERPRISE FUND FEES
FOR BRAINTREE, MA**

	ANNUAL FEE	ESTIMATED NORWOOD FEE
Single Family Residential	\$60	\$54
Multifamily Residential (1-3)	\$60	\$54 / 3,400 sf
Multifamily Residential (4+)	\$60/Unit	\$54 / 3,400 sf
Commercial	\$106 - \$7,000	\$54 / 3,400 sf
Industrial	\$68 - \$7,000	\$54 / 3,400 sf
Tax Exempt	\$60 - \$7,000	\$54 / 3,400 sf

NEXT STEPS:

As indicated at the August 22, 2023 Board meeting, the next steps for the committee are the following.

- Continue public information sessions into early 2024
- Produce this Committee Recommendations Narrative Report
- Assist in producing materials and information needed for the Spring 2024 Town Meeting and Board of Selectmen consideration of a stormwater fee structure.