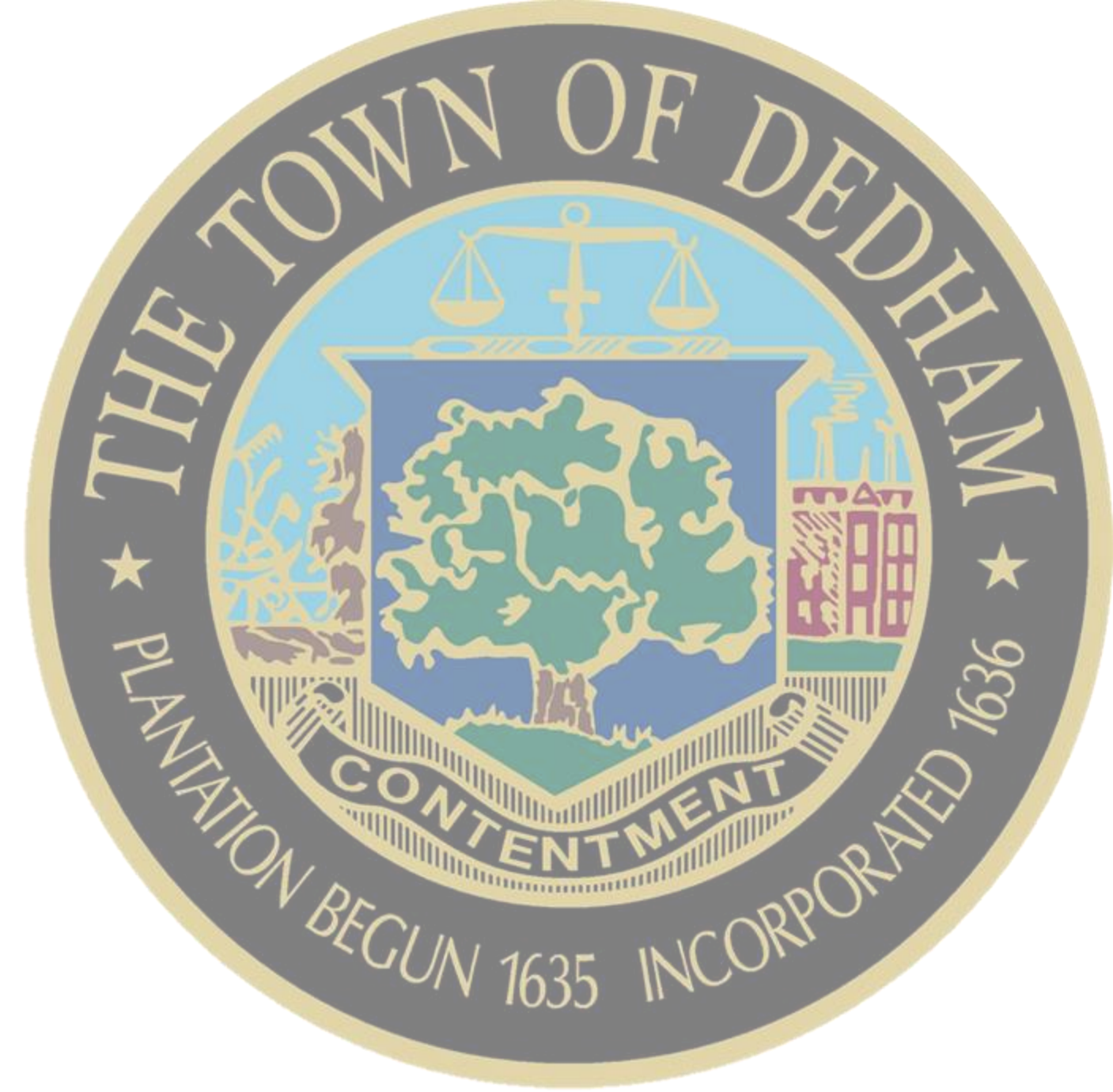


# Stormwater Utility Fee for Funded MS4 Requirements

**November 17, 2022**

Presentation to Select Board



# Overview & Goals

## PRESENTERS

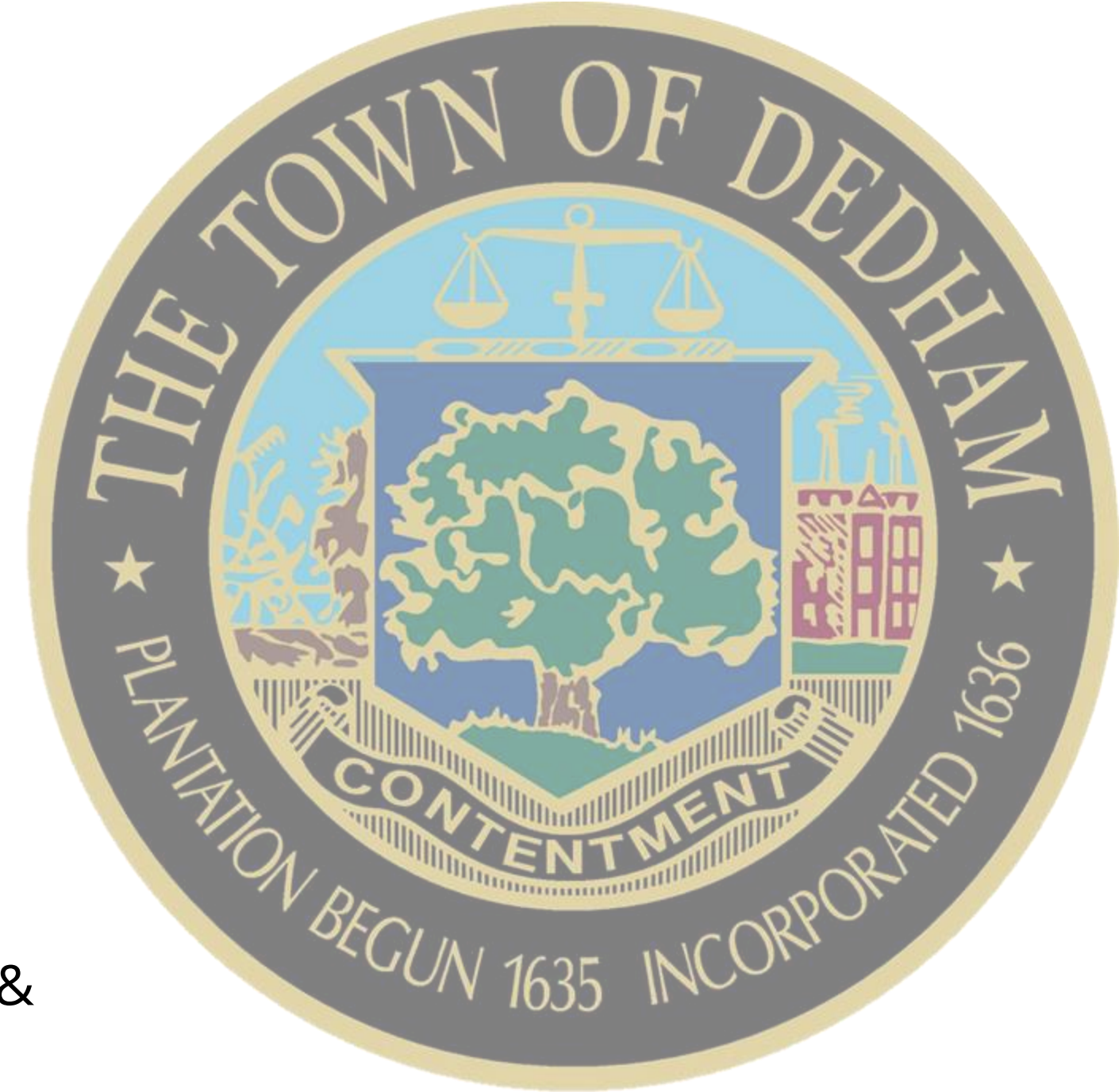
Leon Goodwin, Town Manager  
Jason Mammone, Director of Engineering  
John Arnett, Director of Finance  
Brady Winsten, Management Analyst  
Kevin Coughlin, Select Board Member

## WHY ARE WE HERE?

- Follow up from our initial 07/13/2022 presentation to the SB.
- To update the SB on the utility fee analysis performed by Weston & Sampson and the proposed fee structure for the utility fee

## OUR GOALS

- Join numerous other communities in Massachusetts to set up dedicated fund through Stormwater Utility Fee
- Develop a strategic plan to institute a new fee that includes dedicated public outreach and education
- Seeking Select Board support for this plan of setting up a dedicated fund to address MS4 requirements and future operations and maintenance of Town system





# Federal Requirement to Address Phosphorus Load

## THE TOWN OF DEDHAM IS REQUIRED TO COMPLY WITH MS4 PERMIT AND ADDRESS PHOSPHORUS IMPAIRMENT

### WHAT IS MS4?

- Municipal Separate Storm Sewer Systems (MS4) is a network of pipes designed collect or carry stormwater to local water bodies
- Dedham's MS4 system includes drain manholes, catch basins, underground pipes and various best management practices (BMP's). All MS4 discharges to public surface water bodies are regulated by the EPA (NPDES)

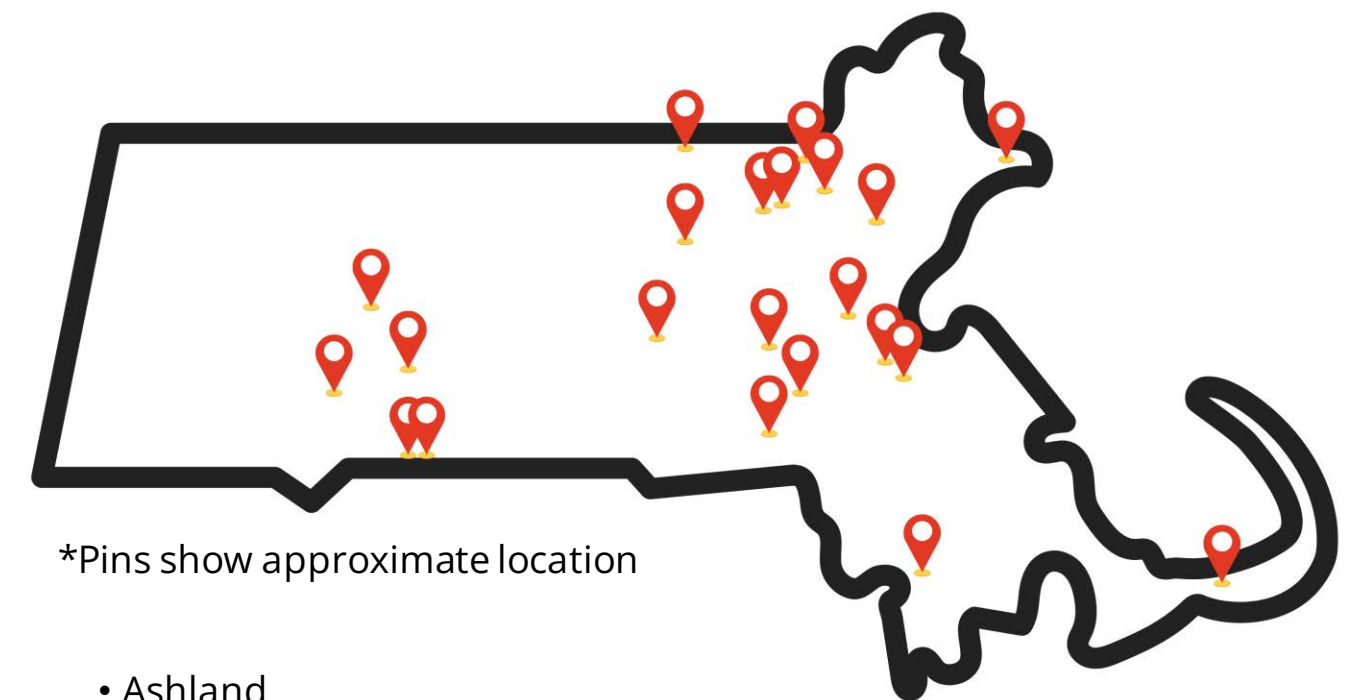
### WHY IS THIS HAPPENING?

- EPA reports continuous increase of phosphorus contamination in surface water across the United States
- Untreated stormwater major contributor
- All communities with an MS4 permit and impairment for phosphorus must implement a plan to address phosphorus contamination through maintenance, prevention, education, and structural improvements

### WHY JULY 1, 2023?

- Requirement in Year 6 of Town's phosphorus control plan
  - Currently in Year 5 (as of July 1, 2022)

### Other MA Communities with Stormwater Enterprise Funds for MS4 Permit Requirements



\*Pins show approximate location

- Ashland
- Ayer
- Bellingham
- Braintree
- Chelmsford
- Chicopee
- East Longmeadow
- Fall River
- Gloucester
- Longmeadow
- Millis
- Milton
- Newton
- Northampton
- Pepperell
- Reading
- Shrewsbury
- Tewksbury
- Westfield
- Westford
- Yarmouth

List from Mass.gov as of 2021

# Our Stormwater and this Stealth Pollutant

**CHARLES RIVER IS MAJOR NATURAL RESOURCE IN DEDHAM AND PLAYS A CRITICAL ROLE IN THE ENVIRONMENT**

## WHAT IS STORMWATER?

- Stormwater is untreated runoff from rain events or snow melt that flow over impervious surfaces (parking lots, driveways, roofs) and enters surface water resources
  - Can carry pollutants, like phosphorus, chemicals, trash, oils, etc. into surface water bodies, and can also enter through underground pipes (MS4) and groundwater

## WHY DOES EVERYONE HAVE TO PAY?

- All properties share responsibility for phosphorus contamination. Examples of contributing factors include paved surfaces (SHEET FLOW), use of phosphorus-containing fertilizers and other products, lack of onsite treatment (BMPs)
- Dedicated fund to be used to maintain entire MS4 system that serves all of Dedham

## WHY IS EXCESS PHOSPHORUS A BAD THING?

- Increased levels of phosphorus cause growth of algae blooms and large aquatic plants that reduce dissolved oxygen levels needed to sustain aquatic life and maintain water quality. Algal blooms pose a risk to human and animal health

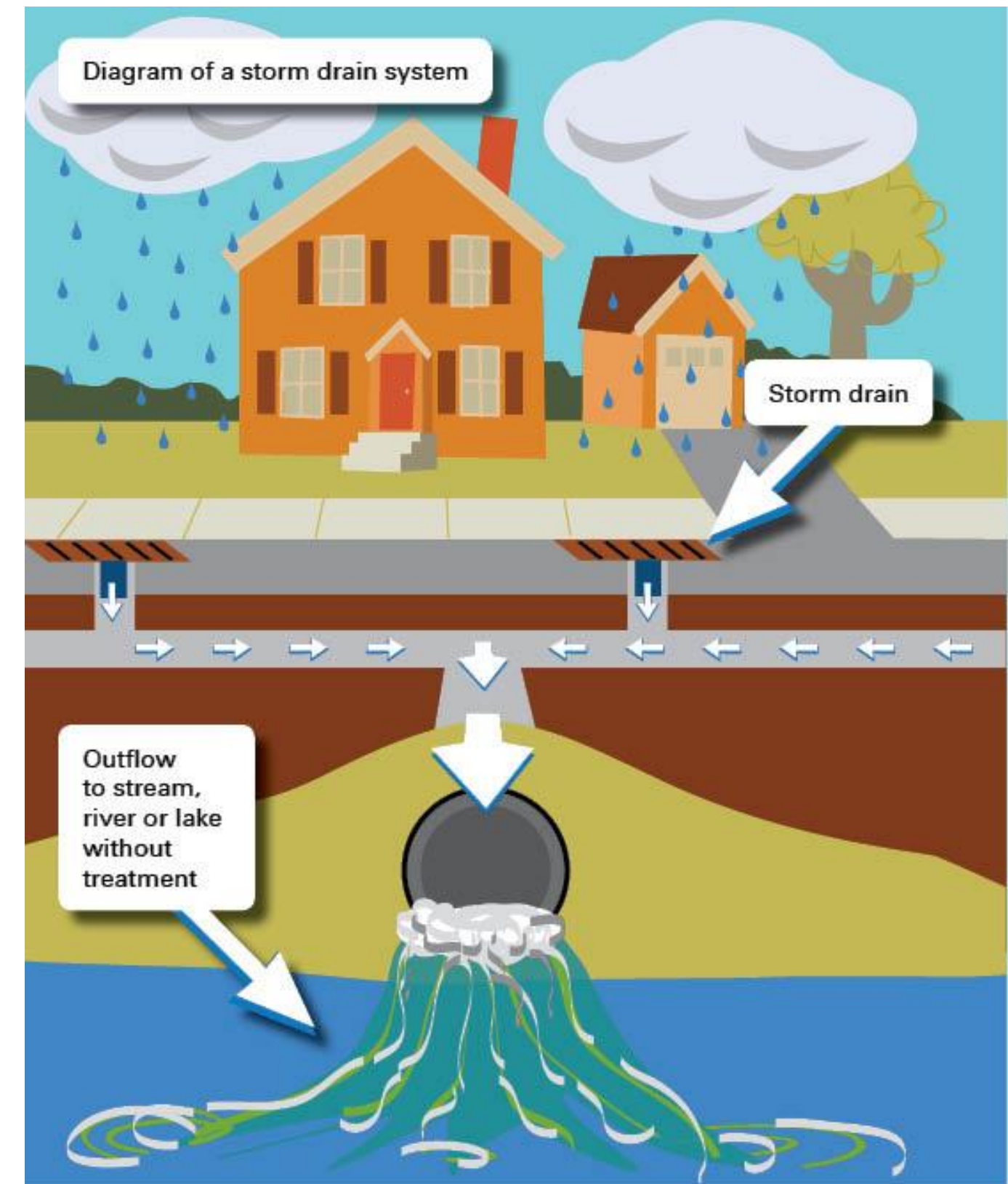


Diagram from Neponset River Watershed Association (a Dedham partner organization)

# Town to Set Up Utility Fee to Pay New Required Costs



**OUR EXISTING FUNDING AND OPERATIONS **WILL NOT** MITIGATE OR MEET NEW PERMIT REQUIREMENTS FROM EPA AND MASSDEP**

## **WHAT IS A UTILITY FEE?**

A fee issued to all residential and non-residential property owners within the Town of Dedham with greater than 500 square feet of total impervious surface to generate the funds necessary to meet our obligations under our MS4 permit issued by the EPA and MassDEP

## **WHAT WILL THE FEE PAY FOR?**

The fee will be used to meet our obligations under our EPA and MassDEP issued MS4 permit, including but not limited to:

- Public Education & Outreach
- Illicit Discharge Detection & Elimination (IDDE)
- Management of Construction Site Runoff
- Management of Post Construction Site Runoff
- Good Housekeeping & Municipal Operations
- Phosphorous Control Plan



# Funding Program Options

## Utility Fees through Enterprise

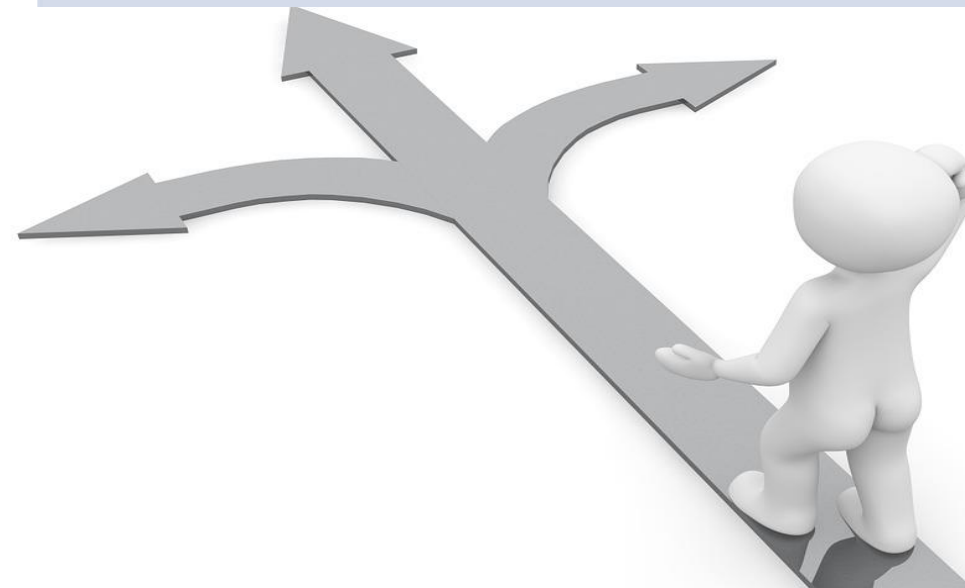
- Pros: Most transparent, most equitable, specified use of funds, cannot be comingled with general fund, potential cost reduction
- Cons: Difficult to initiate, administrative burden, potential for public misconception

## General Fund Expense

- Pros: not difficult to initiate, operational structure exists
- Cons: less transparent, less equitable

## Other Funding Options

- Debt issuance – Still requires payment through an enterprise or general fund
- MWRA – Does not currently have any assistance available for these projects
- MassDEP – Loan forgiveness program removes interest and not principal. Still requires repayment through enterprise or general fund



# Types of Parcels

RESIDENTIAL PROPERTIES	NON-RESIDENTIAL
<p style="text-align: center;"><b>7,340 Parcels</b> (91% of Total Parcels*)</p> <p style="text-align: center;"><b>19,906,508 SF of Impervious Area</b> (45% of Total Impervious Area)</p> <p>INCLUDING:</p> <ul style="list-style-type: none"> <li>• SINGLE FAMILY RESIDENTIAL</li> <li>• TWO FAMILY DWELLINGS</li> <li>• THREE FAMILY DWELLINGS</li> </ul>	<p style="text-align: center;"><b>768 Parcels</b> (9% of Total Parcels*)</p> <p style="text-align: center;"><b>24,252,534 SF of Impervious Area</b> (55% of Total Impervious Area)</p> <p>INCLUDING:</p> <ul style="list-style-type: none"> <li>• DWELLINGS WITH 4 OR MORE UNITS</li> <li>• COMMERCIAL</li> <li>• INDUSTRIAL</li> <li>• WAREHOUSE</li> <li>• MIXED-USE</li> <li>• NON-PROFITS (I.E. CHURCHES, SCHOOLS)</li> <li>• TOWN-OWNED PROPERTIES</li> <li>• STATE-OWNED PROPERTIES</li> </ul>

\* Parcels with less than 500 SF of total impervious area will not be billed and therefore not considered as part of our analysis.

# Utility Fee Structure and Breakdown

AS OF JULY 1, 2023 (FY24) THE TOWN IS ESTIMATED TO NEED **UP TO \$4.1 MILLION PER YEAR** TO MEET ALL OUR OBLIGATIONS UNDER THE MS4 PERMIT.

## HOW WAS THE FEE CALCULATED?

If all residential and non-residential parcels for were considered equal within their respective parcel type, the fee structure would resemble as shown in the table below.

Parcel Type	Impervious Area (SF)	Fee Multiplier	Adjusted Impervious Area (SF)	Cost per SF of Impervious Area	Percentage of Fee Required Based on Multiplier	Share of \$4.1 Million	Average Stormwater Fee Per Parcel
Residential	19,906,508	1.0	19,906,508	\$0.0761	37%	\$1,515,347	\$207
Non-Residential	24,252,534	1.4	33,953,547	\$0.1066	63%	\$2,584,653	\$3,366

**NOTE: The 1.4 Fee Multiplier is Consistent with Existing Sewer Billing Rates for Residential & Non-Residential**



# Utility Fee Structure and Breakdown (Con't)

AS OF JULY 1, 2023 (FY24) THE TOWN IS ESTIMATED TO NEED **UP TO \$4.1 MILLION PER YEAR** (ESTIMATED) TO MEET ALL OUR OBLIGATIONS UNDER THE MS4 PERMIT.

Diving deeper into each respective parcel type it was apparent that residential and non-residential parcels were not equal based upon the amount of impervious area per parcel.

- For residential parcels, the impervious areas ranged from 538 SF to 57,910 SF.
- For non-residential parcels, the impervious areas ranged from 509 SF to 1,170,869 SF

Due to the significant ranges in impervious areas, the most equitable approach is to generate a tiered fee structure.

Before a tiered fee structure could be generated for the two parcel types, it was important to determine the Equivalent Residential Unit (ERU) rate that would be carried throughout the fee structuring.

The ERU rate was determined by taking the average impervious area for all single-family dwellings as this group makes up 82% of all the total parcels analyzed.

Average IA for Single Family Dwellings = ERU (SF)	Total Adjusted Impervious Area (SF)	Residential ERU Rate = \$4.1 Million/(Adj. IA/ERU)	Non-Residential ERU Rate (Res ERU Rate x 1.4)
2,623	53,860,056	\$200	\$280

# Utility Fee Structure and Breakdown (Con't)

AS OF JULY 1, 2023 (FY24) THE TOWN IS ESTIMATED TO NEED **UP TO \$4.1 MILLION PER YEAR** (ESTIMATED) TO MEET ALL OUR OBLIGATIONS UNDER THE MS4 PERMIT.

## RESIDENTIAL PARCEL – TIERED FEE STRUCTURE

Tier #	Impervious Area (SF)	Number of Parcels	Percent of Parcels in Tier	Average Impervious Area	Average Impervious Area/ERU	Flat Rate Fee Per Year (Per Quarter)	Fees Collected
1	500 < IA ≤ 5,000	6,907	94%	2,372	0.904	\$181 (\$45.25)	\$1,250,167
2	5,000 < IA ≤ 10,000	359	5%	6,451	2.459	\$492 (\$123.00)	\$176,628
3	IA > 10,000	74	1%	16,350	6.233	\$1,245 (\$311.25)	\$92,130
<b>Total Revenue Collected =</b>							<b>\$1,518,925</b>

### NOTES:

- ERU = 2,623 SF
- Residential ERU Rate = \$200

# Utility Fee Structure and Breakdown (Con't)

AS OF JULY 1, 2023 (FY24) THE TOWN IS ESTIMATED TO NEED **UP TO \$4.1 MILLION PER YEAR** (ESTIMATED) TO MEET ALL OUR OBLIGATIONS UNDER THE MS4 PERMIT.

## NON-RESIDENTIAL PARCEL – TIERED FEE STRUCTURE

Tier #	Impervious Area (SF)	Number of Parcels	Percent of Parcels in Tier	Average Impervious Area	Average Impervious Area/ERU	Flat Rate Fee Per Year (Per Quarter)	Fees Collected
1	500 < IA ≤ 5,000	332	43%	2,723	1.038	\$291 (\$72.75)	\$96,612
2	5,000 < IA ≤ 10,000	133	17%	6980	2.661	\$746 (\$186.50)	\$99,218
3	10,000 < IA ≤ 15,000	56	7%	12,234	4.664	\$1,306 (\$326.50)	\$73,136
4	15,000 < IA ≤ 25,000	60	8%	19,002	7.244	\$2,029 (\$507.25)	\$121,740
5	25,000 < IA ≤ 50,000	72	9%	35,643	13.589	\$3,805 (\$951.25)	\$273,960
6	50,000 < IA ≤ 75,000	43	6%	63,128	24.067	\$6,739 (\$1684.75)	\$289,777
7	75,000 < IA ≤ 100,000	25	3%	84,502	32.216	\$9,021 (\$2,255.25)	\$225,525
8	100,000 < IA ≤ 250,000	29	4%	148,721	56.699	\$15,876 (\$3,969)	\$460,404
9	250,000 < IA ≤ 500,000	12	2%	342,201	130.462	\$36,530 (\$9,132.50)	\$438,360
10	500,000 < IA ≤ 750,000	3	0%	575,778	219.511	\$61,464 (\$15,366)	\$184,392
11	750,000 < IA ≤ 1,000,000	2	0%	942,088	359.164	\$100,566 (\$25,141.50)	\$201,132
12	IA < 1,000,000	1	0%	1,170,870	446.386	\$124,989 (\$31,247.25)	\$124,989
<b>Total Revenue Collected =</b>							<b>\$2,589,245</b>

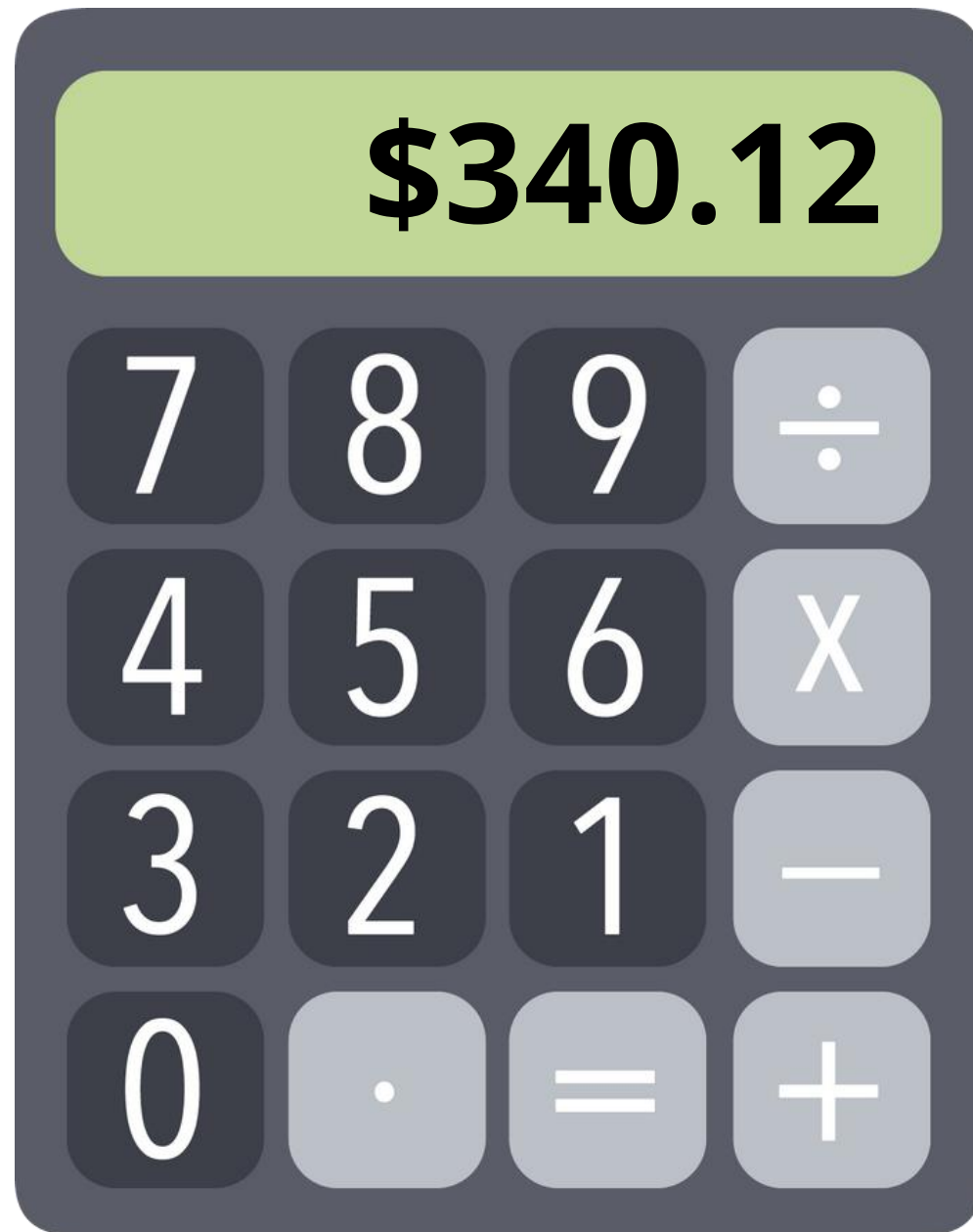
NOTES:

- ERU = 2,623 SF
- Non-Residential ERU Rate = (Residential ERU Rate) x 1.4 = \$280

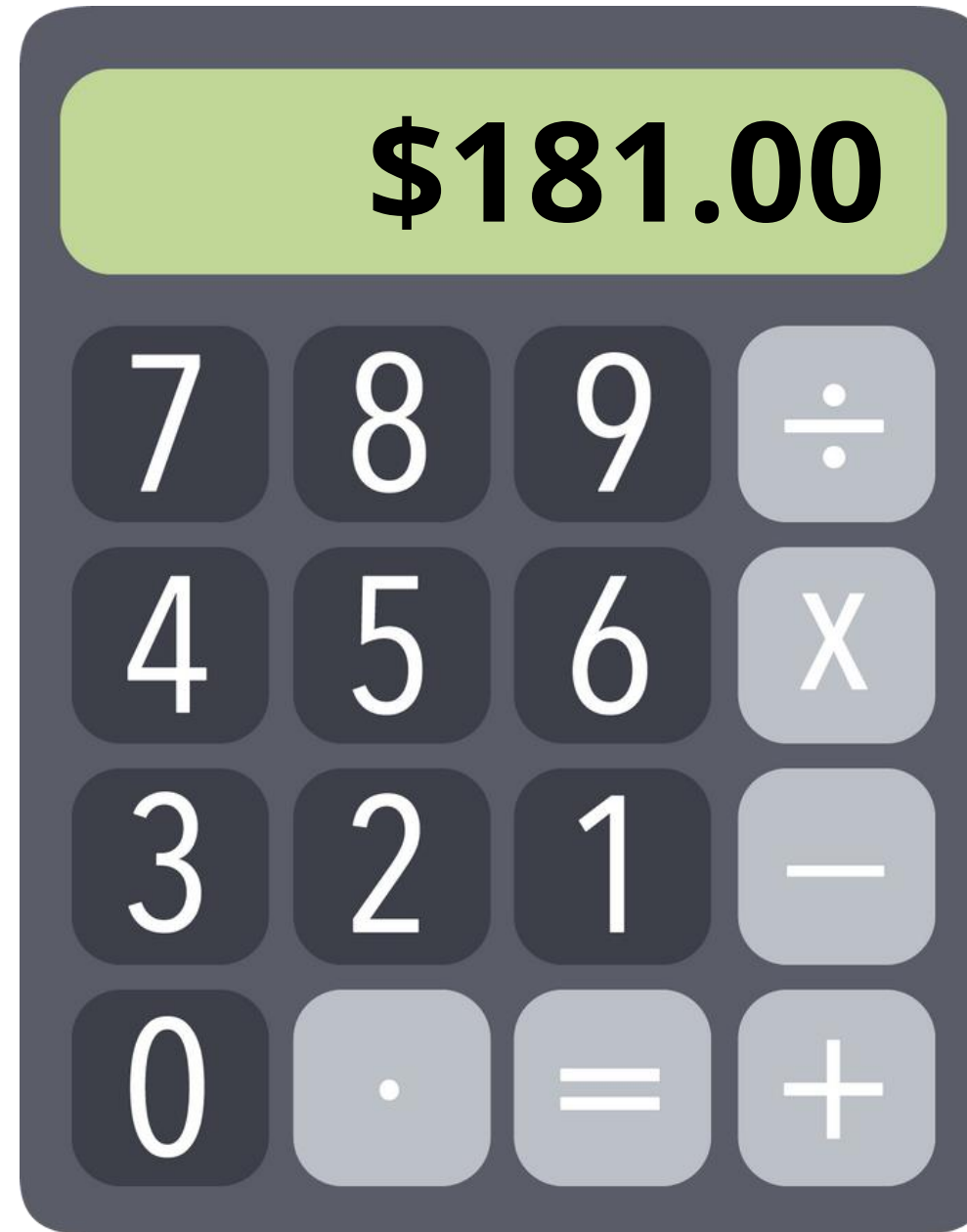


# Utility Fee Instead of Tax Is Less Expensive Option (Residential)

Option 1: Additional Annual Tax\*



Option 2: Additional Annual Utility Fee\*



vs

SAVINGS OF **\$159.12\*\***  
(PER YEAR) AS UTILITY FEE

**\$ 45.25 per quarter** for  
Tier 1 residential parcels

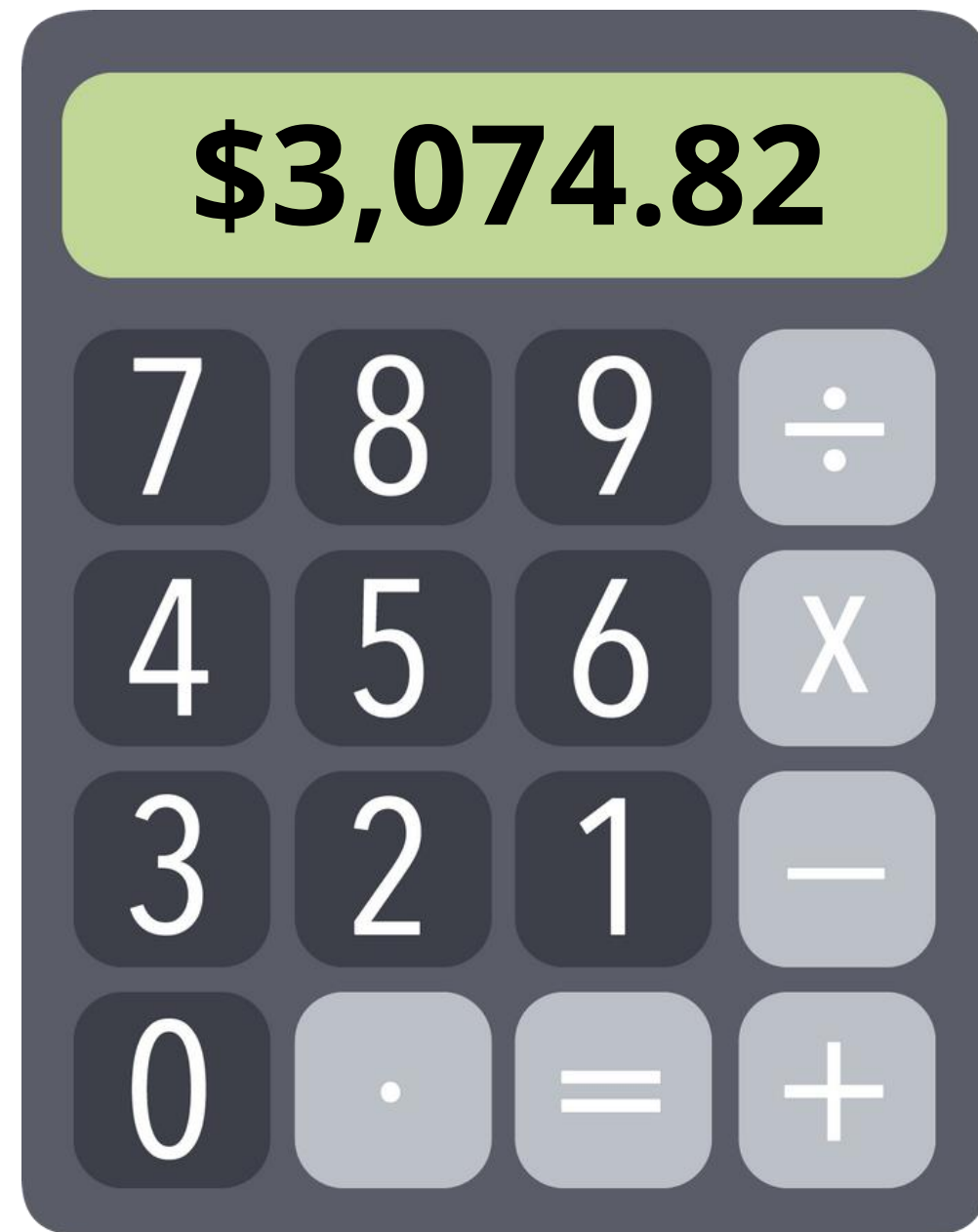
\*Calculations estimated for average residential taxpayer in Dedham.

\*\*Savings when billed as utility fee instead of part of tax levy (operating budget)

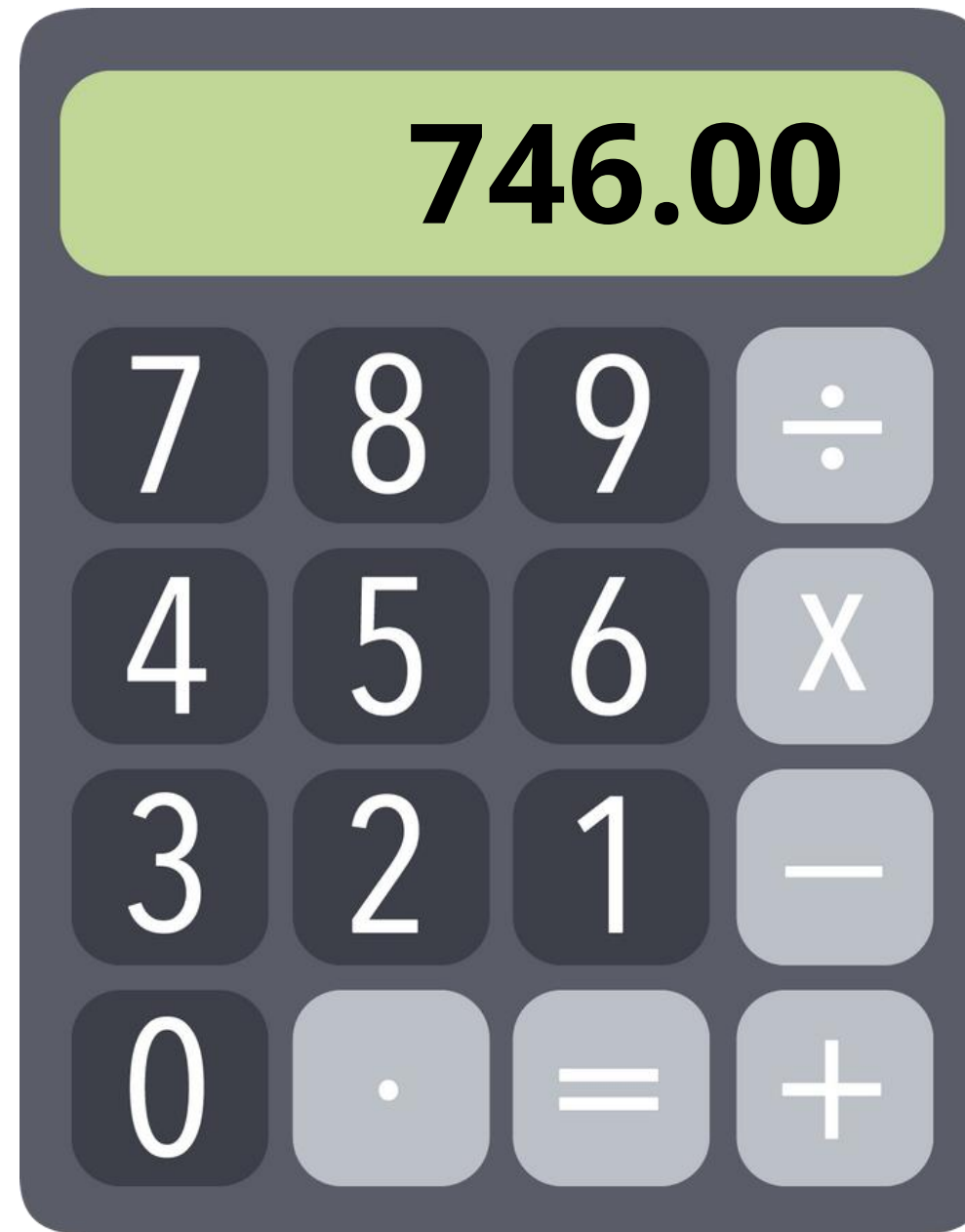
- This example is for a Tier 1 Residential Parcel. Values subject to change as valuations and tax rates are finalized

# Utility Fee Instead of Tax Is Less Expensive Option (Non-Residential)

Option 1: Additional Annual Tax\*



Option 2: Additional Annual Utility Fee\*



vs

**SAVINGS OF \$2,328.82\*\***  
**(PER YEAR) AS UTILITY FEE**

**\$ 186.50 per quarter for  
Tier 2 non-residential  
parcels**

\*Calculations estimated for average commercial taxpayer in Dedham.

\*\*Savings when billed as utility fee instead of part of tax levy (operating budget)

- This example is for a Tier 2 Commercial Parcel. Values subject to change as valuations and tax rates are finalized.

# Examples of Impervious Areas and Stormwater Utility Fees for Various Parcel Types

**Note:** The following maps have been generated by Weston & Sampson using Town of Dedham GIS data and aerial imagery






Tier 1 Residential Parcel

Impervious Area = 2,710 SF

Stormwater Utility Fee = \$181/Yr (\$45.25/Qrt)



**Impervious Surfaces**

-  Building Footprints; Facilities
-  Driveways Paved
-  Sidewalks



PARCEL ADDRESS	IMPERVIOUS AREA (SQFT)
40 LINCOLN ST	2,710

**FIGURE 5**  
TOWN OF DEDHAM, MA  
STORMWATER ENTERPRISE FUND DEVELOPMENT  
SAMPLE IA DELINEATIONS  
RESIDENTIAL PARCEL (2710 SQFT)  
OCTOBER 2022 SCALE: NOTED



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**Tier 3 Residential Parcel**

Impervious Area = 40,448 SF  
 Stormwater Utility Fee = \$1,245/Yr (\$311.25/Qrt)

PARCEL ADDRESS	IMPERVIOUS AREA (SQFT)
38 COOLIDGE LN	40,448

**Impervious Surfaces**

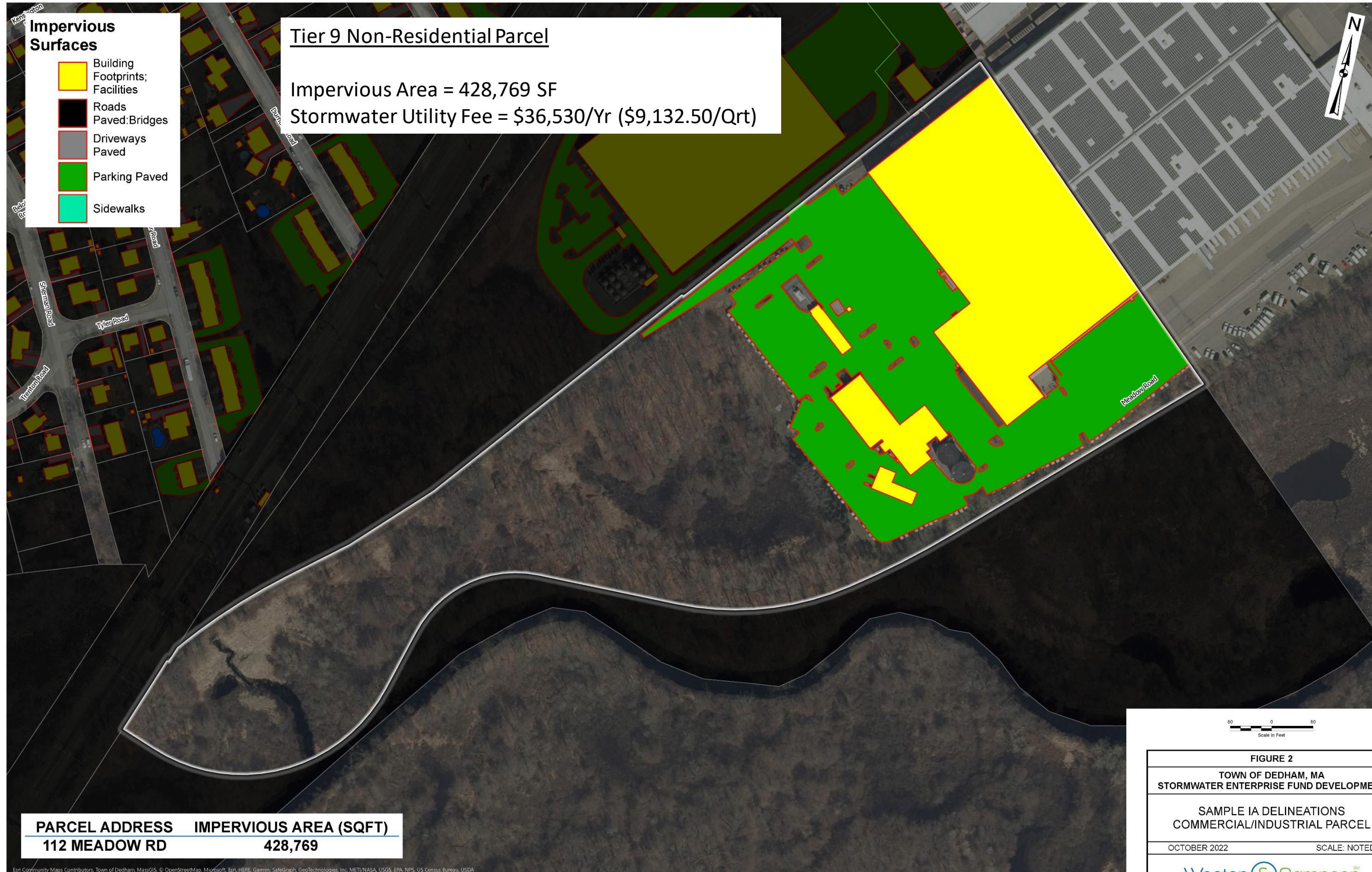
- Building Footprints; Facilities
- Roads Paved; Bridges
- Driveways Paved
- Parking Paved
- Sidewalks

Scale in Feet

**FIGURE 1**  
 TOWN OF DEDHAM, MA  
 STORMWATER ENTERPRISE FUND DEVELOPMENT  
 SAMPLE IA DELINEATIONS  
 RESIDENTIAL PARCEL  
 OCTOBER 2022 SCALE: NOTED

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- Impervious Surfaces**
- Building Footprints; Facilities
  - Roads Paved; Bridges
  - Driveways Paved
  - Parking Paved
  - Sidewalks

Tier 9 Non-Residential Parcel

Impervious Area = 428,769 SF

Stormwater Utility Fee = \$36,530/Yr (\$9,132.50/Qrt)



PARCEL ADDRESS	IMPERVIOUS AREA (SQFT)
112 MEADOW RD	428,769



**FIGURE 2**

TOWN OF DEDHAM, MA  
STORMWATER ENTERPRISE FUND DEVELOPMENT

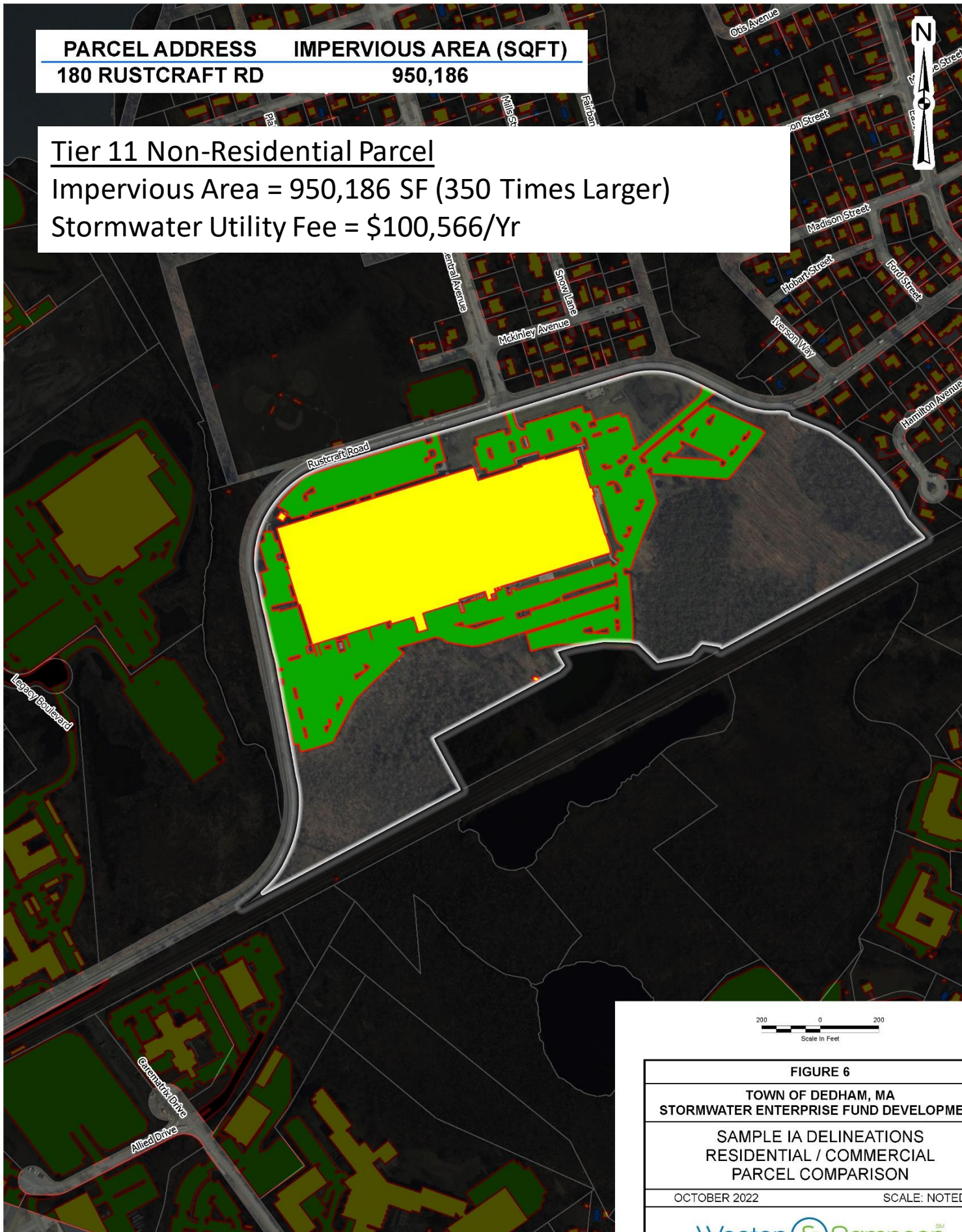
SAMPLE IA DELINEATIONS  
COMMERCIAL/INDUSTRIAL PARCEL

OCTOBER 2022      SCALE: NOTED



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**FIGURE 6**  
 TOWN OF DEDHAM, MA  
 STORMWATER ENTERPRISE FUND DEVELOPMENT  
 SAMPLE IA DELINEATIONS  
 RESIDENTIAL / COMMERCIAL  
 PARCEL COMPARISON  
 OCTOBER 2022 SCALE: NOTED

Weston & Sampson

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## **PUBLIC EDUCATION & OUTREACH**

### **ON-GOING (TO BEGIN NOVEMBER 2022)**

- Flyers with tax and utility bills
- Public Information Meetings
- Specific page on Town website
- Collaboration with Boards/Committees and Community Groups
- Attendance at Town/Community events
- Social media campaign

## **SET UP FEE STRUCTURE & BILLING SYSTEM**

### **ON-GOING AUGUST 2022**

- In September, Weston & Sampson assisted the Town to analyze the Town's impervious areas per parcel type and develop a fee structure. They are also creating an online GIS web application that will show all the impervious surfaces (including areas) for all parcels.
  - This data is currently being used by the Finance Dept. to prepare for sending out the initial bills in July 2023.
  - Develop a Policy to address abatements and potential future credits.

# **NEXT STEPS**

## **TOWN MEETING VOTE SPRING ANNUAL TOWN MEETING MAY 2023**

- Appropriate the necessary funds into Sewer Enterprise Fund for MS4 work
- Vote will occur each Spring Annual Town Meeting
- Presentation(s) to Finance & Warrant Committee early 2023 as part of Warrant Hearings
- Produce additional information materials for inclusion in Warrant Book

## **WHAT HAPPENS AS OF JULY 1, 2023? NEW FEE EFFECTIVE IN FY24**

- New Utility Fee will become effective July 1, 2023
- Property owners will begin to see a new Stormwater Utility Fee appear on sewer utility bill each quarter
- Increase in work/services to comply with MS4 permit (subject to change each year)

# Questions & Suggestions

