

A Greener Detroit Through Stormwater Management: Drainage Charge Program



January 2018

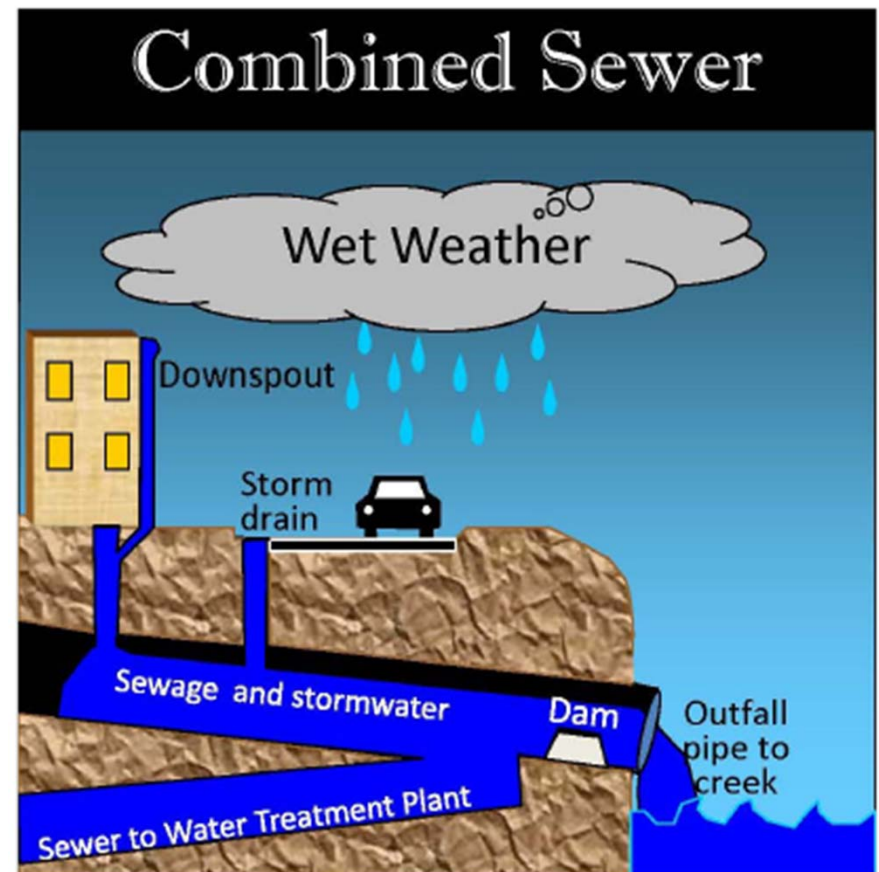
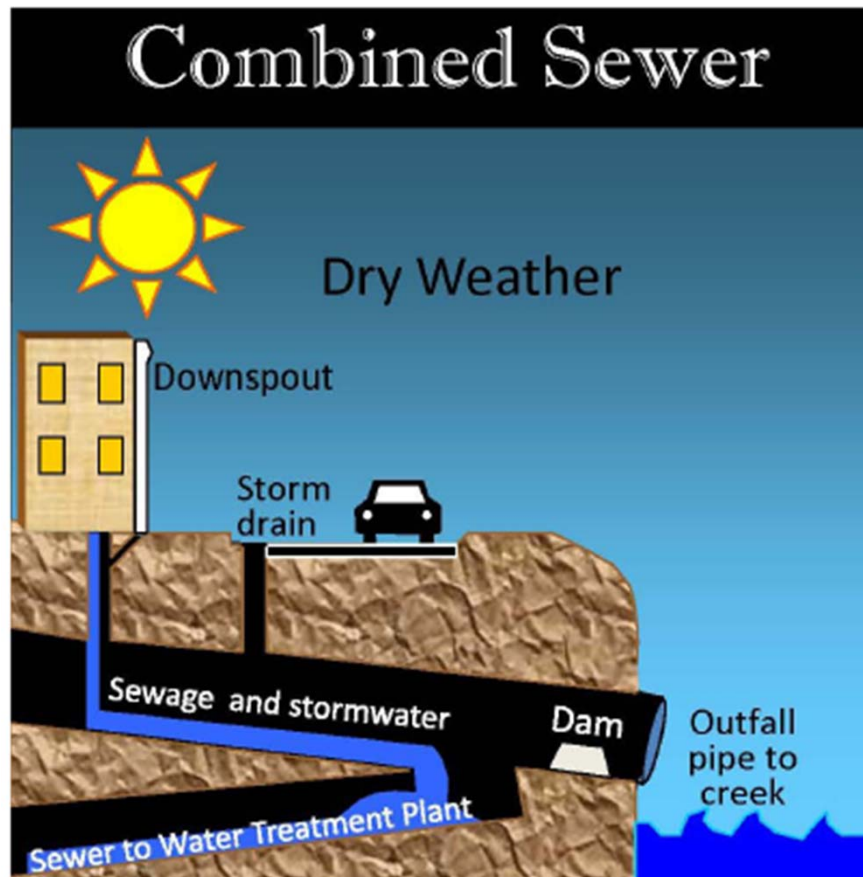


DETROIT
Water & Sewerage
Department

Rain to Runoff: Managing Stormwater with a Combined Sewer System



Wet Weather Conditions Exceed Capacity of Sewer Systems



Video: Sewage Outflow Into the Detroit River



<https://www.youtube.com/watch?v=O8cagnYsfQc>



Drainage Charge Myths Vs. Facts

Drainage Charge Myths Vs. Facts No. 1



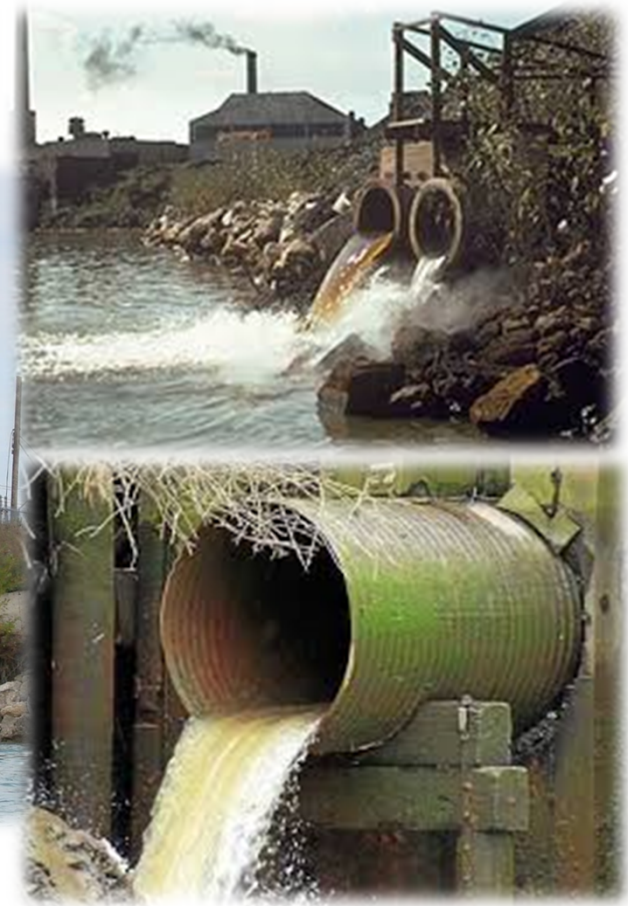
**The drainage charge
is new.**

DWSD has been charging customers since the 1975 City Charter authorized DWSD to charge customers for water, drainage and sewerage services. DWSD must comply with Michigan law regarding fees for services. The charge was embedded in sewerage charges until the mid 2000s.

Clean Water Act Requires Stormwater Management



Federal Clean Water Act of 1972 and Michigan NPDES permit requires that no untreated sewage/stormwater be discharged into the Detroit or Rouge Rivers.



Detroit's History of Stormwater Management



- 1972 Clean Water Act Passed by EPA.
- 1975 City Charter authorizes DWSD to charge drainage rates.
- 1977 Detroit sued for failure to comply with Clean Water Act – more than 20 billion gallons of combined sewage/stormwater dumped into Detroit River and Rouge River each year.
- 1977 Judge Feikens places wastewater treatment system in federal receivership.
- 1992-2013 Detroit spends \$1.5 Billion on system improvements to reduce illegal discharges.
- 2013 Detroit's federal discharge permit allowed delay until 2022 of expenditure to build an additional \$1 Billion in new combined sewage overflow facilities
- 2015 Michigan Warehouse sues DWSD saying it's being overcharged on drainage fees because not all users are paying the same fees.

Drainage Charge Myths Vs. Facts No. 2



Rain water is clean.

When rain and snowmelt runoff roofs, sidewalks, driveways, and streets, it mixes with dirt, oil and debris and flows into the combined sewer system. When this runoff is blended with sanitary waste, it must be treated before release into the Detroit and Rouge Rivers.

Video: Detroit is a Leader in Combined Sewer Overflow Control



<https://www.youtube.com/watch?v=cbClCs0ItCs>

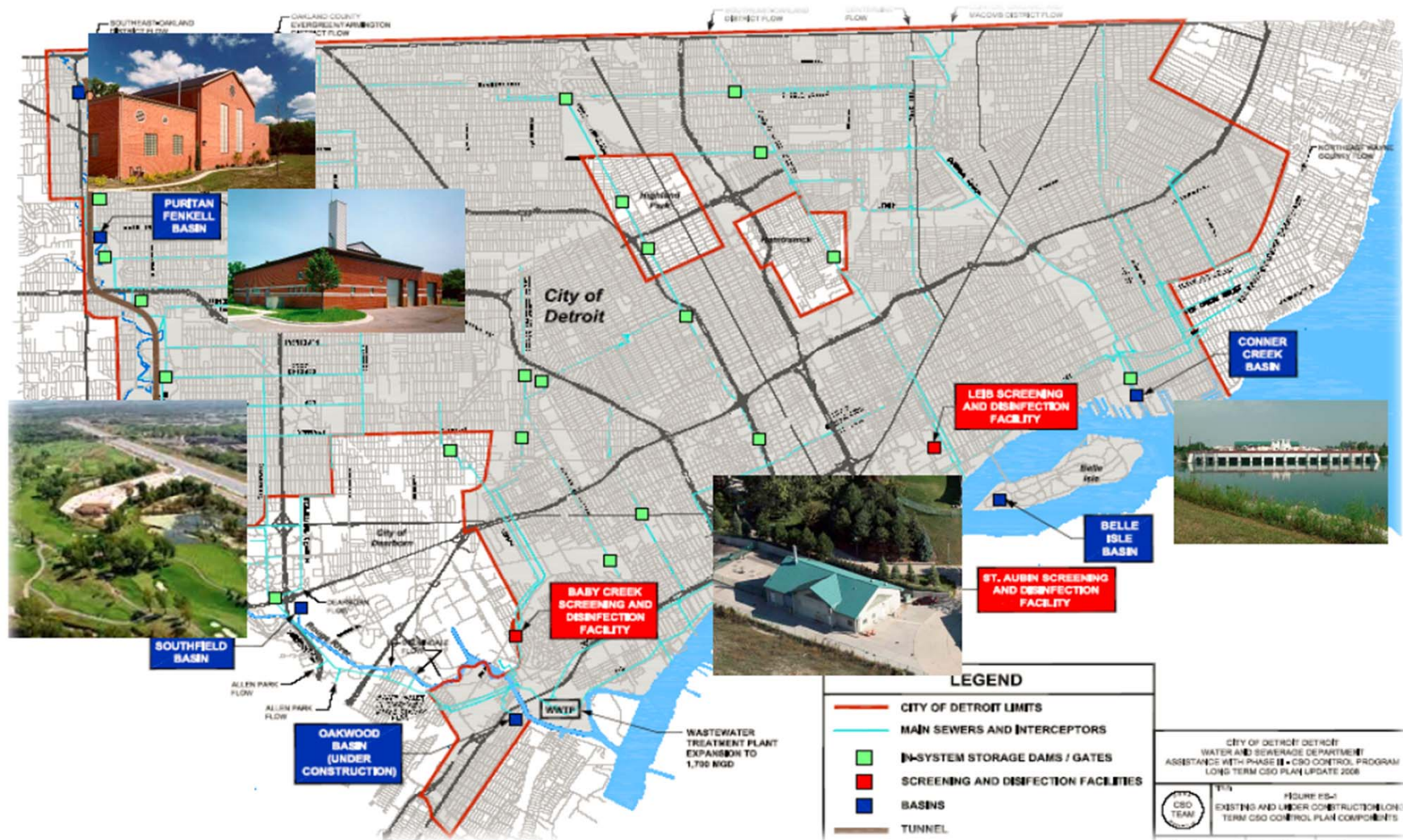
Drainage Charge Myths Vs. Facts No. 3



The charge is a money grab.

The drainage charge is not new. It recovers the cost to capture, convey, pump, treat and safely return combined sewage back to the Detroit and Rouge Rivers – including the \$1.5 billion invested in nine combined sewer overflow (CSO) facilities and other wet weather treatment system improvements. This equates to \$150 million in annual drainage related costs.

Detroit Invested \$1.5 Billion in Combined Sewer Overflow (CSO) Facilities



*Rates based on current forecasting models and are subject to change.

Nine CSO Facilities Treat Combined Sewage During Wet Weather



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Drainage Charge Myths Vs. Facts No. 4



The charge should not be monthly because it does not rain or snow every month.

DWSD bills for drainage based on annual wet weather treatment costs, determined by analyzing the volume of flow treated on dry days versus wet weather days. This equates to a simpler billing process.

Drainage Charge Myths Vs. Facts Nos. 5 & 6



The rate is unfair.

The rate is based on each parcel's impact on the sewer system. As of July 2018, all customers will be billed for drainage based on impervious acreage, a rate model used by many municipalities that provide wet weather treatment.

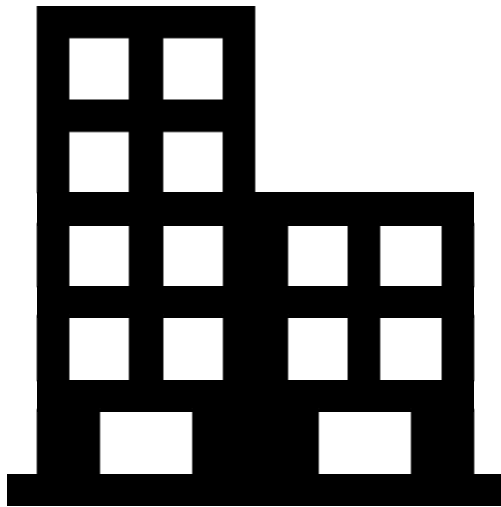
All Detroit property owners are not charged for drainage.

All customers including government entities are charged for drainage, except properties with less than .02 impervious acres or properties that discharge directly to rivers.

Why Were Changes Needed?

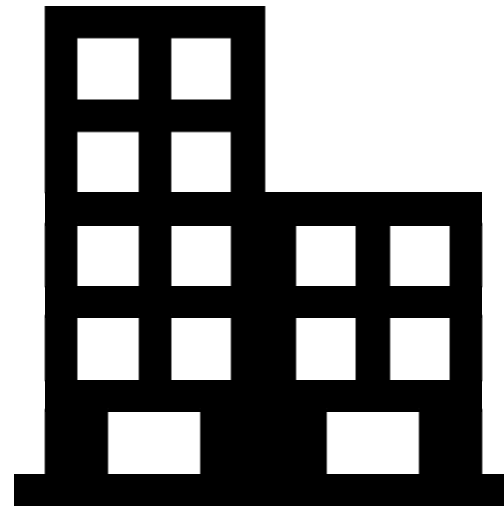


Non-Residential Customer A
Billed per **Impervious Acre x Class 4 Rate**



Billing **\$9,500** a month in Drainage

Non-Residential Customer B
Billed per **3" Meter Size Drainage Rate**



Billing **\$330** a month in Drainage

Review found major billing inconsistencies on drainage charges



Sampling of *Non-Residential* Properties

Billing <u>Impervious Acre</u> monthly for drainage	Approximately 10,000 properties
Billing <u>Flat monthly fee based on meter size</u> for drainage	Approximately 2,000 properties
<u>Not billing</u> for drainage	Approximately 8,000 properties
TOTAL	Approximately 20,000 properties

Drainage Charge Program

Program Goal: All customers will pay the same rate based on impervious area.

- Current Impervious Acre (IA) rate = \$661 per acre per month.
- Customers who were previously billed on imperviousness should see a decreased rate, expected to be 30% less by 2018 (\$852 → \$598/IA).
- Newly billed and meter billed customers will transition to the full rate through 2023. Transition credits start at \$125/IA rate. Rate increases \$125 per year until transition credits expire in 2023.



Impervious Surfaces



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Impervious Cover Examples



Check Your Impervious Area using your address via the [DWSD Parcel Viewer](#)

*Rates are based on current forecasting models and subject to change.

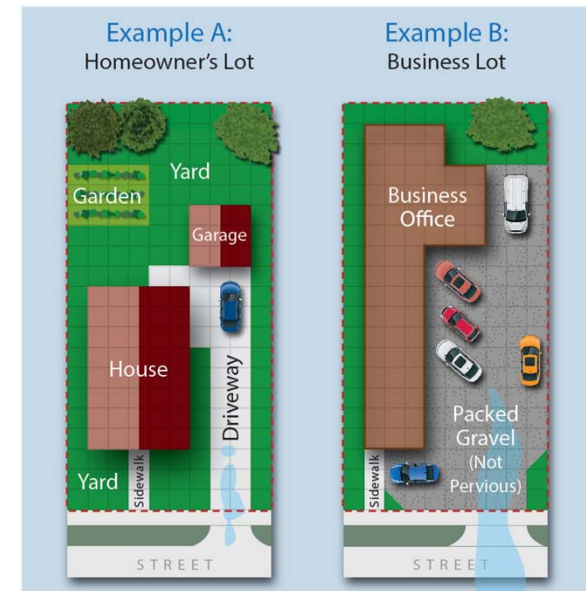
How Are Drainage Charges Calculated?



Rate = revenue requirements divided by billable impervious acreage

Charge = amount of impervious area multiplied by effective impervious area rate

Impervious area consists of hard surfaces that cause stormwater to run off



Parcels with less than 0.02 impervious acres (871 square feet) or parcels that discharge to surface waters are not subject to drainage charge.

Check Your Impervious Area using your address via the [DWSD Parcel Viewer](#)

Transition Credits



Automatic Five Year Rate Phase-in for Meter-Billed and Newly Billed Customers

Date	Impervious Acre Rate*	Industrial Rate*	Commercial & Exempt Rate*	Faith-Based Rate*
		Meter-Billed and Newly Billed Customers		
7/1/15	\$852	N/A	N/A	N/A
7/1/16	\$750	\$125	\$125	N/A
7/1/17	\$661	\$250	\$250	N/A
7/1/18	\$598	\$375	\$375	\$125
7/1/19	\$602	\$500	\$500	\$250
7/1/20	\$626	\$625	\$625	\$375
7/1/21	\$651	\$677	\$677	\$500
7/1/22	\$677	\$677	\$677	\$625
7/1/23	\$677	\$677	\$677	\$677

*Rates based on current forecasting models and are subject to change.

Residential Credits



Automatic 25% credit for disconnected imperviousness on residential properties

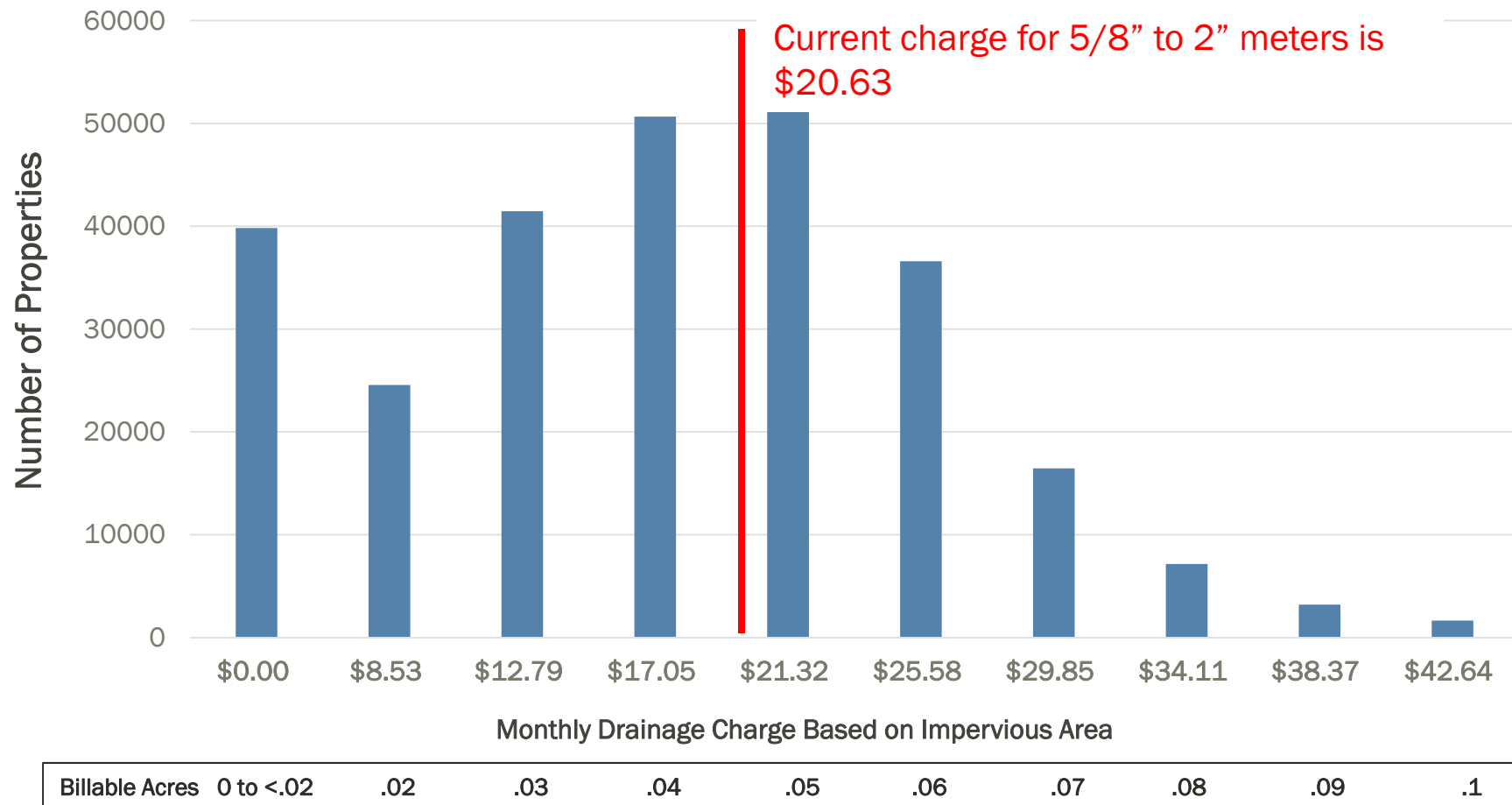
Date	Impervious Acre Rate*	Residential Rate Including Credit*
7/1/15	\$852	N/A
7/1/16	\$750	\$563
7/1/17	\$661	\$496
7/1/18	\$598	\$426
7/1/19	\$602	\$452
7/1/20	\$626	\$470
7/1/21	\$651	\$488
7/1/22	\$677	\$508
7/1/23	\$677	\$508

Meter-based billing maintained until July 2018. Targeted residential outreach starts first quarter 2018. Assistance programs available.

How will residential customers be impacted?



Estimated Residential Drainage Charge Bill Changes Effective in August 2018



50% of residential properties will see a decrease in their drainage charge.

*Rates based on current forecasting models and are subject to change.

Drainage Charge Myths Vs. Facts No. 6



Detroit pays 83 percent of all costs for sewage treatment.

Detroit pays 83% for combined sewer overflow facilities that treat Detroit flows. Suburban communities pay nearly 55% of all sewage treatment costs, while Detroit pays approximately 40%.

83/17 Agreement on CSO Cost Allocation



- 1990s DWSD provided Wastewater Collection, Treatment and Disposal Services to City of Detroit and 76 Suburban Communities in 3 counties. Combined Sewer System in Detroit, partially combined in suburbs.
- 1997 Agreement proposed a fair and equitable apportionment of the cost of the CSO Control Program
- 1999 Rate Settlement Agreement (Federal Court) assigned 83% of CSO Cost Responsibility to Detroit and 17% to Suburban Communities.
 - Capital costs allocated on “where” treated
 - According to GDRSS information, larger Share of Flow was assignable to Detroit. Detroit cost share allocations varied from 71% to 92%.
 - Three-Year Phase-In. Retroactive Recognition, Look-Back Adjustments.
 - Continued investigation of Detroit/Suburbs System Flows.

FY '17 GLWA Direct Cost Shares



Suburbs pay over 50% of direct GLWA costs while Detroit's 83% share of CSOs.

Budget Categories	GLWA	Detroit		Suburban Users#	
	Amount	Amount	Percentage	Amount	Percentage
Common-To-All	\$378.0	\$151.3	40.0%	\$226.7	60.0%
Suburban Only	\$10.3	\$0.0	0.0%	\$10.3	100.0%
OMID Specific	\$7.3	\$0.0	0.0%	\$7.3	100.0%
CSO Facilities	\$45.0	\$37.3	83%	\$7.7	17.0%
Industrial Specific*	\$19.4	\$0.0	0.0%	\$0.0	0.0%
Adjustments (Capital, Bad Debt*)	(\$1.4)	(\$1.4)	100.0%	\$0.0	0.0%
TOTAL*	\$458.6	\$187.2	40.8%	\$252.0	54.8%

- Amounts are in millions of dollars | * Accounts for remaining 4.2% of cost share.

OMID | Rouge Valley | Oakland GWK | Evergreen Farmington | NE Wayne Co. | Dearborn | Grosse Pointe Farms | Grosse Pointe Park | Melvindale | Farmington | Center Line | Allen Park | Highland Park | Hamtramck | Grosse Pointe | Harper Woods | Redford Township | Wayne County #3

Source: FY 2018 Wholesale Sewer Allocated Revenue Requirement Calculation, City of Detroit Customers

Drainage Costs: FY 2017 Revenue Requirements



Drainage rates cover annual costs including funding for credits.

Allocated Flow-Related Expenses	Amount	Drainage Program Expenses	Amount
Operations*	\$41 MM	DWSD Drainage Operations*	\$4 MM
Debt Service **	\$60 MM	GSI Credits + Program Implementation	\$14 MM
WRAP, Pension-related, Other*	\$7 MM	Transition Credits	\$4 MM
Bad Debt Expense	\$14 MM	Incremental Bad Debt Expense	\$7 MM
Total FY 2017 Drainage Charge Revenue Requirements			\$151 Million

Amounts in millions of dollars.

* Based on GLWA's allocation to Detroit of 40% percent of wet weather related treatment and transmission system costs, 83% of Combined Sewer Overflow (CSO) facility costs and 33% of selected DWSD O&M expenses.

** Based on Detroit's allocated share of debt (as assigned by GLWA) attributable to GLWA operated facilities including the CSOs facilities and Jefferson Avenue Wastewater Treatment Plant.

+ \$125.7 million in revenue requirements associated with Drainage operations include all GLWA expenses associated with drainage plus \$4 million of DWSD operations expense.

Drainage Charge Myths Vs. Facts No. 7



Only Detroit pays for drainage.

Some communities have separated sewer systems, while Detroit has a combined sewer system. Each community manages stormwater (drainage) differently, so the costs vary based on the type of facilities constructed to meet permit obligations.

Combined Sewer Overflow Facilities in Oakland County



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*Rates are based on current forecasting models and subject to change.

Stormwater Management Charges Vary by Community



STORM WATER: \$65.32 per ERU (Equivalent Residential Unit)



Wastewater Cost: \$37.75



Storm Water Utility Fee (per Equivalent Storm Water Unit):
Evergreen Farmington District \$45.75 per ESWU
South Oakland District \$59.50 per ESWU



Stormwater Runoff Charge: \$45.12 per ERU per bill

Stormwater Management Charges Vary by Community (2)



Single Family and Two-Family Residential	
Measured impervious area	Quarterly Charge
Up to 2,187 square feet (.05 acres)	\$22.07
> 2,187 to 4,175 square feet (to .1 acres)	\$38.62
> 4,175 to 7,110 square feet (.16 acres)	\$66.20
> 7,110 square feet	\$115.85
Commercial/Other Properties billed \$595.45 per acre per quarter	



Regulations, Codes and Ways to Reduce Your Bill

We've Cut 20 Billion Gallons of Annual Discharges By More Than 80%



But under the Clean Water Act and Michigan NPDES permit, more is needed

Today, Detroit's discharges range from:

- 2014. 6.8 Billion Gallons (Primarily from August 2014 rainstorm)
- 2016. 0.8 Billion Gallons (2016 had very little rainfall)

Cost Avoidance: By 2022, environmental permit under federal law requires DWSD to eliminate all discharges or begin work on \$1 Billion construction of new combined sewer overflow facilities.

If new “gray” infrastructure must be constructed, the drainage charge rate would likely double.

DWSD's Multi-Faceted Solution



- Provide **drainage charge credits** to incentivize green stormwater infrastructure
- Construct **Green Stormwater Infrastructure projects** to benefit neighborhoods and meet regulatory requirements
 - Will spend **\$50 million** on green infrastructure over 20 year period. Upper Rouge Tributary.
 - Remove **2.8 million gallons** of stormwater during a 2-year, 24-hour storm event.
- Update the **City's Municipal Code** to support and incentivize GSI during development. Develop **Post Construction Stormwater Management Ordinance**.



Validate and Adjust Your Data



- Verify service address, parcel, account and rate and credit

Account Information	
Account Name	CUSTOMER A
Account	000-0000.000
Service Address	1111 ACME ST CITY IMP
Customer Class	CITY DRAINAGE - UPDATED
Service Dates	06/09/17 - 07/12/17
Bill Date	07/12/17

July Bill Details	
Previous Balance	\$112.50
Payments Received - <i>Thank you!</i>	-\$112.50
Current Water Charges	
Water Subtotal	\$0.00
Current Sewer Charges	
Drainage Charge	\$112.50 @ 1 month \$112.50
Green Credit	(\$93.75) @ 1 month -\$93.75
Sewer Subtotal	\$18.75
Total Water & Sewer Charges	
	\$18.75

- Check Customer Class (per City Assessor)
- Confirm impervious acreage using the DWSD Parcel Viewer:
<http://arcg.is/29KWCPY>.
Apply for adjustment if incorrect.

Detroit Water and Sewerage Department
735 Randolph Street, Room 806
Detroit, MI 48226
313.267.8000 | drainage@detroitmi.gov

Drainage Charge Adjustment Application
(Please fill out one form per property)

Contact Information (Please print or type)
Property Owner: _____
Mailing Address: _____
Phone: _____ Street Address: _____ City: _____
Email: _____
Must match owner name in Assessor's parcel database. If different than owner, an Attorney or proof of tenant.

Service Location Information (Please print or type; use back if necessary)
Parcel ID and DWSD Account No.: _____
For Non-Residential Customers: Please provide copy of Articles of Incorporation or equivalent document and EIN or TIN Number.

Reason for Adjustment Request:
Feel free to provide a brief description of the adjustment(s) you are requesting in the following page for common appeal types and required back-up documentation.

Detroit Water and Sewerage Department
735 Randolph Street, Room 806
Detroit, MI 48226
313.267.8000 | drainage@detroitmi.gov

**DRAINAGE AND GREEN CREDIT PROGRAM
IMPERVIOUS COVER SURVEY FORM**

SECTION 1 - PROPERTY INFORMATION
Name of the Firm: _____
Address: _____ Zip code: _____
Parcel ID: _____ Account Number: _____
Lot Size: _____ Feet x _____ Feet
(If other than rectangular, sketch all dimensions and angles on back of sheet)

SECTION 2 - BUILDING INFORMATION
Size of Roof: _____ Feet x _____ Feet
Total: _____ Feet x _____ Feet
Size of Roof: _____ Feet x _____ Feet
Total: _____ Feet x _____ Feet
Size of Roof: _____ Feet x _____ Feet
Total: _____ Feet x _____ Feet

SECTION 3 - PAVED/UNPAVED SURFACE INFORMATION
Paved: _____
Unpaved: _____
Total: _____ Feet x _____ Feet

Eliminate Your Drainage Charge



Direct discharge to surface waters

If you have a private storm sewer that discharges to the Detroit River or Rouge River:

- ✓ Complete Adjustment Application:
<http://bit.ly/2h94t2j>
- ✓ Complete Impervious Cover Survey Form:
<http://bit.ly/2zC3DXa>
- ✓ Include site photos and other pertinent information

The image shows two forms from the Detroit Water & Sewerage Department. The top form is the 'Drainage Charge Adjustment Application' (Please fill out one form per property). It includes contact information for the department and fields for property owner, mailing address, street address, city, zip, phone, and email. The bottom form is the 'DRAINAGE AND GREEN CREDIT PROGRAM IMPERVIOUS COVER SURVEY FORM'. It is divided into three sections: SECTION 1 - PROPERTY INFORMATION, SECTION 2 - BUILDING INFORMATION, and SECTION 3 - PAVED / UNPAVED SURFACE INFORMATION. SECTION 1 includes fields for name of firm, address, zip code, phone, and principal product or business. SECTION 2 includes fields for building size (feet x feet) and total area. SECTION 3 includes checkboxes for paved/unpaved surfaces and fields for total area.

Green Stormwater Infrastructure (GSI) Credits – Components



- **Annual Volume of Flow**

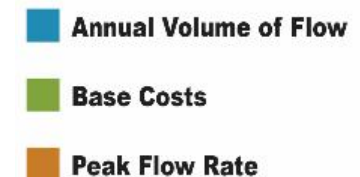
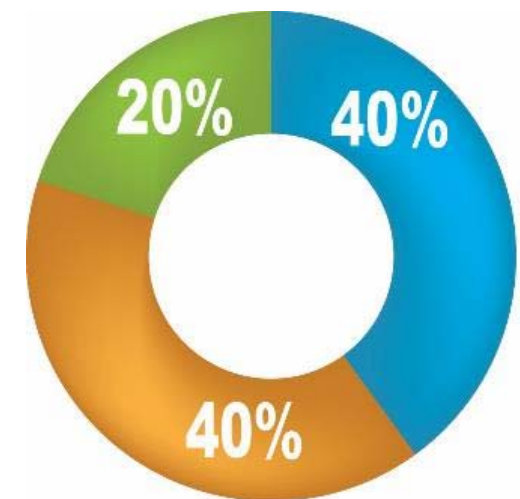
Reduced volume results in less flow going into the wet weather treatment facilities and subsequently reduces cost to store and treat stormwater.

- **Peak Flow Rate**

Control of peak flows reduces the frequency at which Combined Sewer Overflow (CSO) facilities operate and defers the need for additional retention and treatment basins.

- **Base Costs**

DWSD must provide a combined sewer system, CSO and treatment capabilities for residual or potential discharges into the sewer system.



Reduce Your Drainage Charge



Modify and Manage Impervious Surface



Up to 100%
Reduction!

Starter Guides: <http://www.detroitmi.gov/Government/Departments-and-Agencies/Water-and-Sewerage-Department/Learn-About-Drainage-Credits#starterguides>

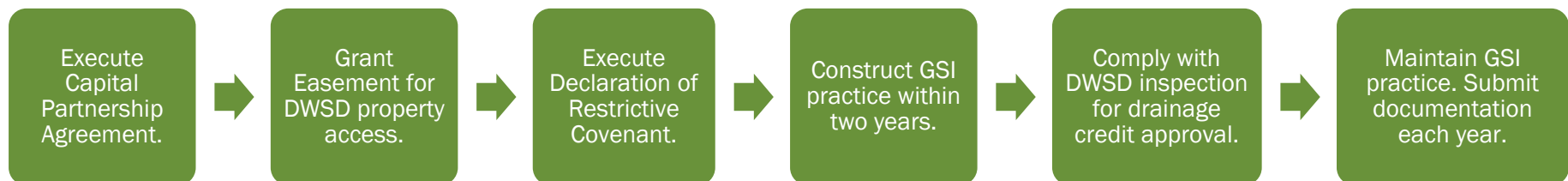
0.02 impervious acres or less (871 square feet) are not subject to the drainage charge.

GSI Capital Partnership Program



Allocates \$5 million per year to fund installation of approved GSI projects for non-residential property owners. Up to 50% of design, installation and capital costs will be reimbursed, up to a maximum \$50,000.*

- Prioritized projects that increase GSI in our service area
- Eligibility requirements
- Requirements for selected applicants



Applications accepted starting January 2018.
Funding announced quarterly, starting first quarter 2018.

* Subject to DWSD discretion.

Community Outreach Credits



Nonprofit organizations that support DWSD in outreach and public education efforts and raise awareness and engagement with DWSD programs among their members and neighborhood residents can earn up to 80% in credits on their water and sewerage account.

- Outreach activities include Information Sharing, Awareness Survey, Testimonials and Hosted Events.
- Credits range from \$25 up to \$350 per activity, plus increases for the number of attendees at events. More activities completed receive more credits. Additional credit options available in future.
- Program launches January 2018.



Credits are not transferable or refundable and have no cash value.

Community Service Credits



Nonprofit organizations that organize volunteers to provide DWSD related services in their neighborhood or a DWSD-designated area can earn one-time credits on their water and sewerage account. Services can include:

- **Fire Hydrant Painting:** Fire hydrants are a visible water asset in Detroit neighborhoods and business districts that have far too long gone without repainting. Credit per painted hydrant can be earned.
- **Disconnected Downspouts:** DWSD and GLWA's permit requires downspouts be disconnected from the combined sewer system – yet many residential homes and commercial properties are not. Credit per inspected/disconnected downspout can be earned.



DWSD will provide training, certified supplies, mobile app tracking and credit approval. Program launches January 2018.

Credits are not transferable or refundable and have no cash value.

Community Service and Outreach Credit Pilots



- **Gesu Catholic Church and School** fire hydrant painting project.
 - Organized several groups to paint 110 hydrants in the University District.
 - Led two informational training seminars.
 - Hosted a water teach-in to educate nearby residents.
 - To receive a credit of nearly \$2,000 off its water and sewerage account.
 - Gesu plans to start a new project in spring 2018.

- **Detroit Association of Black Organizations (DABO)** included DWSD in its DTE Energy Customer Assistance Day on December 13.
 - DWSD's Customer Assurance Specialist Team (CAST) assisted 150 residents with billing issues and enrolled them into payment plans.
 - To receive \$1,250 credit toward its water and sewerage account.
 - Host a water assistance day on January 31 which will include participation by DWSD CAST, and the City Treasurer's Office for property tax assistance.

- **Historic Little Rock Baptist Church)** during the January 12 Food Pantry event staff educated Detroiters about DWSD customer assistance programs. Credit amount being finalized.



Credits are not transferable or refundable and have no cash value.

Video: Green Stormwater Infrastructure in Detroit



<https://www.youtube.com/watch?v=TT2q70I3dMO>



**DETROIT
Water & Sewerage
Department**

Website:

www.detroitmi.gov/drainage

Email (recommended):

drainage@detroitmi.gov

Phone Number:

313-267-8000, follow prompts



facebook.com/DWSDDetroit



@DetroitWaterDep



@detroitwatersewerage