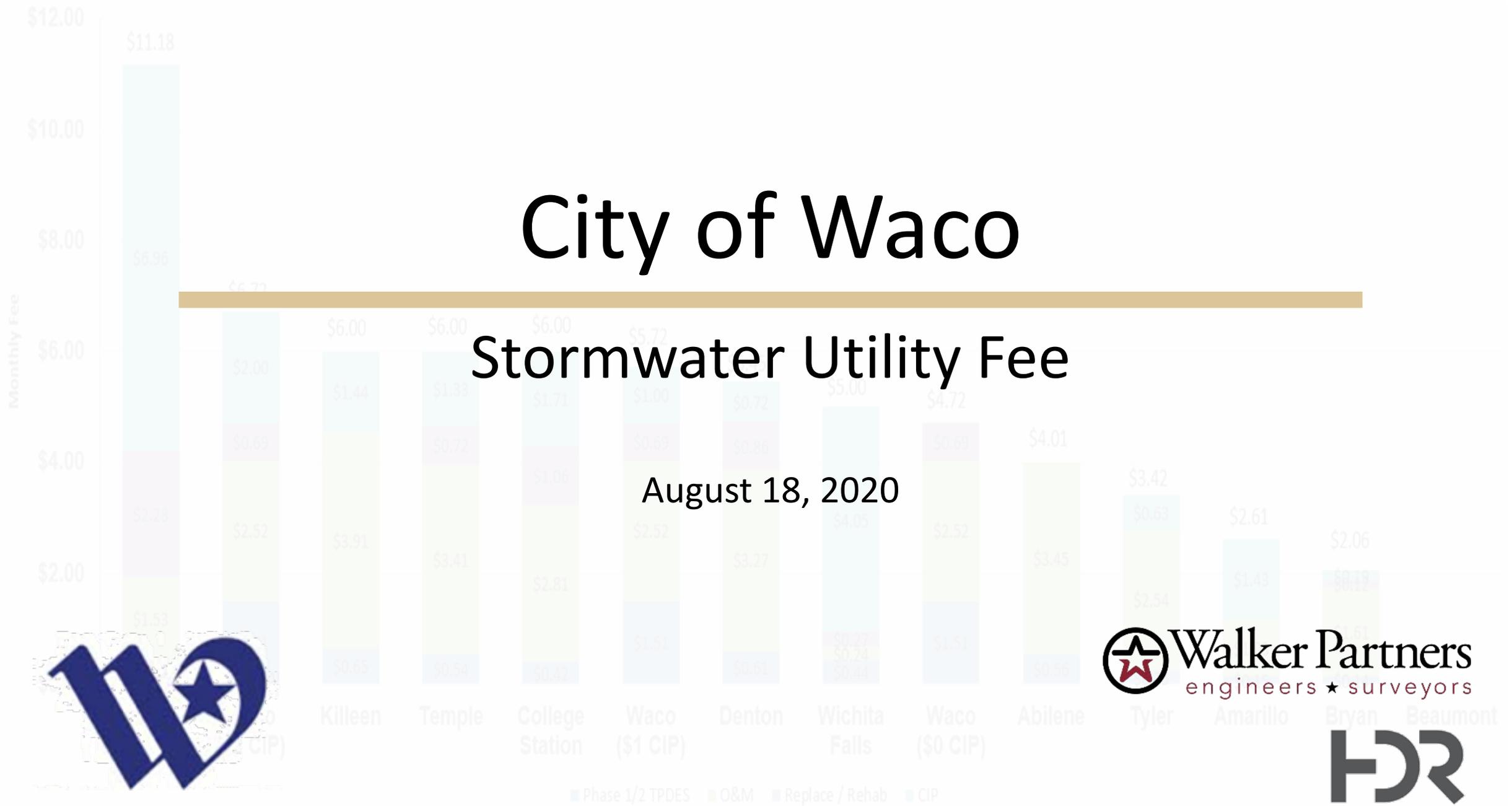


# City of Waco

## Stormwater Utility Fee

August 18, 2020



# Storm Water Funding...Why a Storm Water Utility?

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## Past

- Historically, storm water service was reactive and provided through General Fund as needed (no dedicated revenue source).
  - Phase 1 MS4 Permit
  - Necessary repairs
  - Operations & Maintenance (O&M) of entire system
- Water, wastewater, and solid waste are utilities that have a revenue source for O&M and capital improvements.

## Present

- Stormwater Master Plan studied flooding conditions of the major water courses.
  - Developed list of Capital Improvement Projects (CIP) for flood mitigation
- Per discussions with staff – routine and periodic maintenance is needed.
- Federal and State Mandates
  - Phase 1 MS4 Permit – TCEQ might require Waco to do more
- Maintenance and Capital demands are greater than the General Fund can satisfy.

# What is a Storm Water Utility Fee?

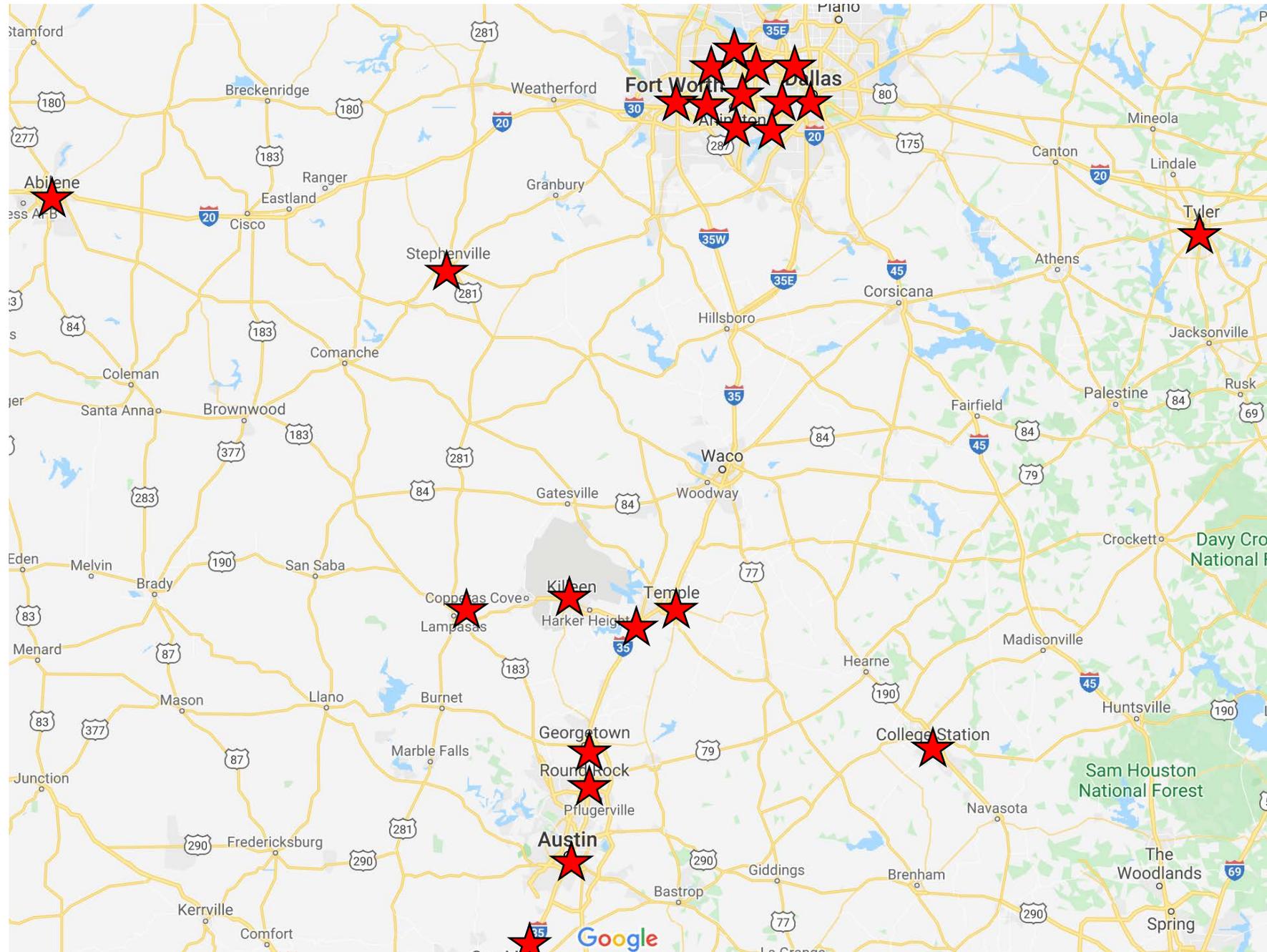
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- A monthly user fee that creates a revenue source for maintaining and improving the storm drain system and other stormwater program activities (City of Fort Worth).
- Equitable user fee - users pay proportional costs based on burden placed on system
  - Based on property stormwater run-off via amount of impervious cover (i.e. rooftops, driveways/walkways, parking)
  - Funding via property tax less equitable-value of property has little to do with how much stormwater a property creates (same rationale as water/wastewater/solid waste)
- Established by State Law (1989)
  - Higher education and state facilities are exempt
  - Undeveloped parcels are exempt
- Collected on City utility bill
- Provides stable revenue source
  - \$ managed in a dedicated account
  - Supports long-term program implementation

# Stormwater Utilities in Texas

47 D/FW cities

- Hewitt
- Stephenville
- Austin
- Round Rock
- Georgetown
- Kyle
- Corpus Christi
- San Angelo
- Abilene
- Wichita Falls
- Amarillo
- Tyler
- Lubbock
- Denton
- Copperas Cove
- Belton
- Killeen
- Temple
- College Station
- San Marcos
- San Antonio
- El Paso
- Houston



# Drainage System Inventory and Replacement Cost

Type	Quantity	Replacement Cost
<b>Channels</b>		
Improved, Concrete Lined	56.3 miles	\$ 33,264,000
Improved, Earthen Trapezoidal Channels	16.3 miles	
Unimproved, Natural Channels	94.0 miles	
<b>Storm Drains</b>		
Total Pipe Length	300.6 miles	\$621,296,493
Inlets	10,032 inlets	
Other Structures (manholes, headwalls, etc.)	1,542	\$111,570,700
<b>Curb and Gutter (Streets)</b>		
Downtown Streets	400 miles	
All other streets	2,000 miles	
<b>Detention Ponds</b>		
	32 ponds	
<b>TOTAL</b>		<b>\$766,131,193</b>

# Cost of Service Analysis

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## Four Categories of Service

- Phase 1 TPDES MS4 Permit
- Operations & Maintenance
- Rehabilitate / Replace
  - No new capacity
- Capital Improvement Projects
  - Flood protection and mitigation
  - Increases drainage system capacity

## Analysis Process

- Define Level of Service (LOS) goal
- Identify key activities
- Estimate labor hours per activity
- Include equipment and material costs

# Capital Improvement Projects (CIP) List

Rank	Project ID	Project Name	Score	Estimated Cost
1	FCR005	Chapel Road Detention	85	\$ 6,901,250
2	WAC001	Mary Avenue Diversion Engineering/Surveying	83	\$ 4,102,234
2	WAC001	Mary Avenue Diversion Construction Costs	83	\$ 46,719,900
3	PMR004	Hay Avenue to Columbia Street Channel & Culvert Improvements	78	\$ 2,521,830
4	NWC003	New Road to Homan Avenue Channel & Culvert Improvements	77	\$ 4,562,800
5	MAR001	S. M.L.K. Jr Boulevard Channel Improvements	76	\$ 2,164,485
6	PMR001	Oakwood Channel & Bridge Imp. Engineering/Surveying	69	\$ 3,761,250
6	PMR001	Oakwood Channel & Bridge Improvements Construction Costs	69	\$ 26,990,833
7	PMR003	Richter Street Channel & Culvert Improvements	64	\$ 854,380
8	DEL001	Sharondale Drainage Improvements	63	\$ 3,261,910
9	PMR002	IH-35 Betterments	62	\$ 3,605,535
10	WAC002	Floyd Casey Stream Restoration & Culvert Improvements	62	\$ 1,256,260
11	NWC001	N. 31st Street Buyouts	59	\$ 3,169,971
12	BRN002B	N. 15th Street Buyouts	58	\$ 1,346,703
13	WAC003	Grice Drive Buyouts	58	\$ 3,403,080
14	COT003	Beverly Drive Culvert Improvements	51	\$ 623,415
15	NWC002	N. 33rd Street Buyouts	49	\$ 644,994
16	BRN001B	N. 10th Street Buyouts	48	\$ 771,621
17	COT001	Loop 340 Berm & Frontage Road Improvements	47	\$ 6,209,860
18	HRS001	Cross Creek Road Low Water Crossing Removal	35	\$ 1,013,946
		<b>TOTAL ESTIMATED CIP COST (W/BRN001B &amp; BRN002B)</b>		<b>\$ 123,886,257</b>

Submitted abridged application to TWDB for Flood Infrastructure Fund (FIF) Grant

# Cost of Service Summary

Category of Service	Description	LOS 1	LOS 2	LOS 3
Phase 1 TPDES MS4 Permit		<ul style="list-style-type: none"> <li>• \$1.6M/year</li> </ul>	<ul style="list-style-type: none"> <li>• \$1.9M/year</li> </ul>	<ul style="list-style-type: none"> <li>• \$2.5M/year</li> </ul>
Operations & Maintenance	<ul style="list-style-type: none"> <li>• Channel maintenance</li> <li>• Drains &amp; inlet cleaning</li> <li>• Street sweeping</li> </ul>	<ul style="list-style-type: none"> <li>• Channels once/5 years</li> <li>• Inlets &amp; drains once/15 years</li> <li>• Street sweeping</li> <li>• \$2.7M/year</li> </ul>	<ul style="list-style-type: none"> <li>• channels once/3 years</li> <li>• Inlets &amp; drains once/10 years</li> <li>• Street sweeping</li> <li>• \$4.1M/year</li> </ul>	<ul style="list-style-type: none"> <li>• channels annually</li> <li>• Inlets &amp; drains once/5 years</li> <li>• Street sweeping</li> <li>• \$9.5M/year</li> </ul>
Rehabilitate/Replace	<ul style="list-style-type: none"> <li>• Existing infrastructure</li> <li>• No new capacity</li> </ul>	<ul style="list-style-type: none"> <li>• 1% of system annually</li> <li>• \$9.6M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 2% of system annually</li> <li>• \$19.2M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 5% of system annually</li> <li>• \$48M/year</li> </ul>
New Capital Improvement Projects	<ul style="list-style-type: none"> <li>• New capacity</li> <li>• Flood prone areas</li> <li>• 18 projects</li> <li>• \$123.9M</li> </ul>	<ul style="list-style-type: none"> <li>• 40-year program</li> <li>• \$8M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 30-year program</li> <li>• \$9M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 20-year program</li> <li>• \$11M/year</li> </ul>

# Monthly Rate Determination

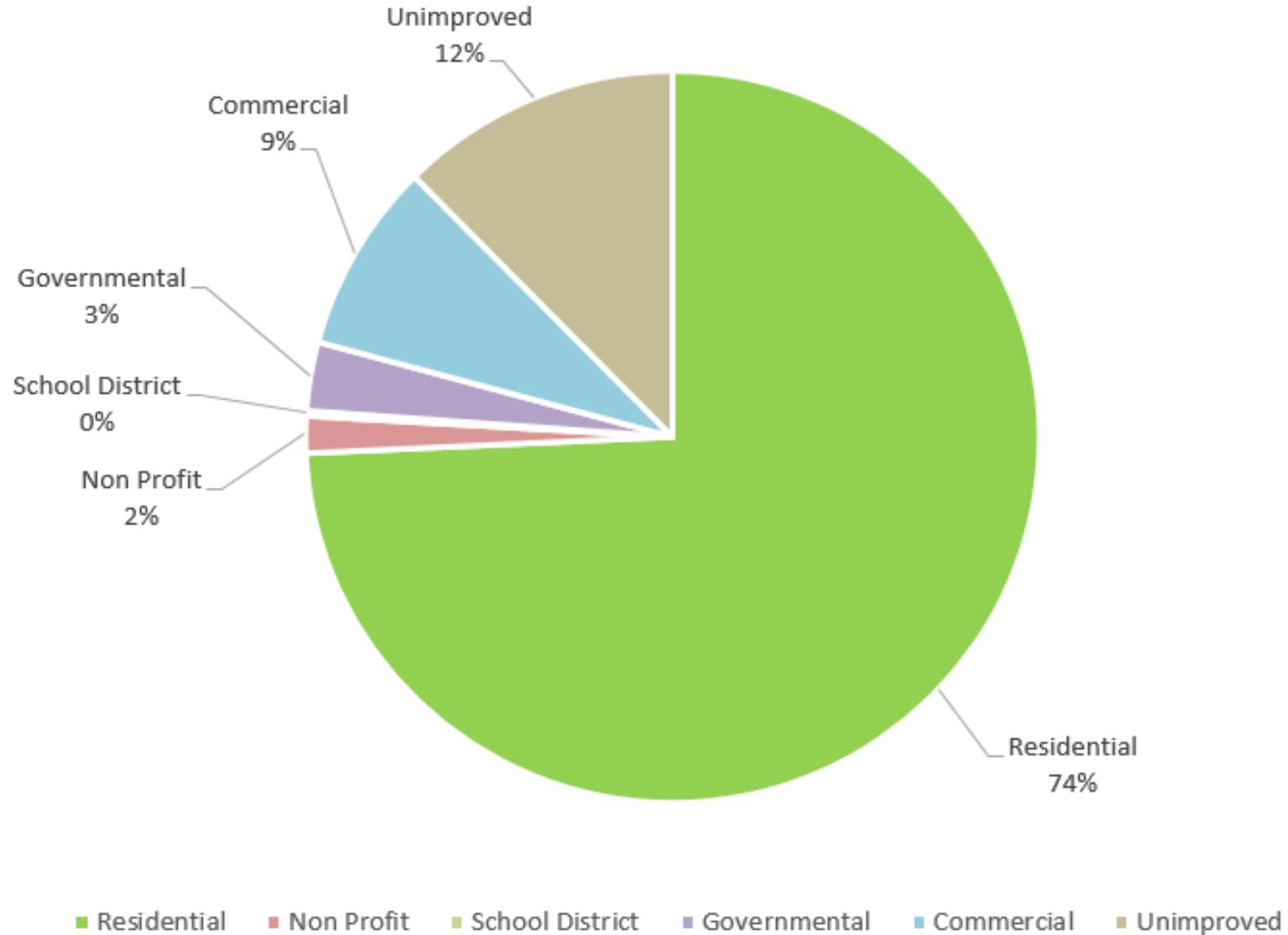
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$$\text{Monthly Bill} = \frac{\text{Annual Cost of Service}}{\text{Total \# Billing Units}} \times \frac{1 \text{ year}}{12 \text{ months}}$$

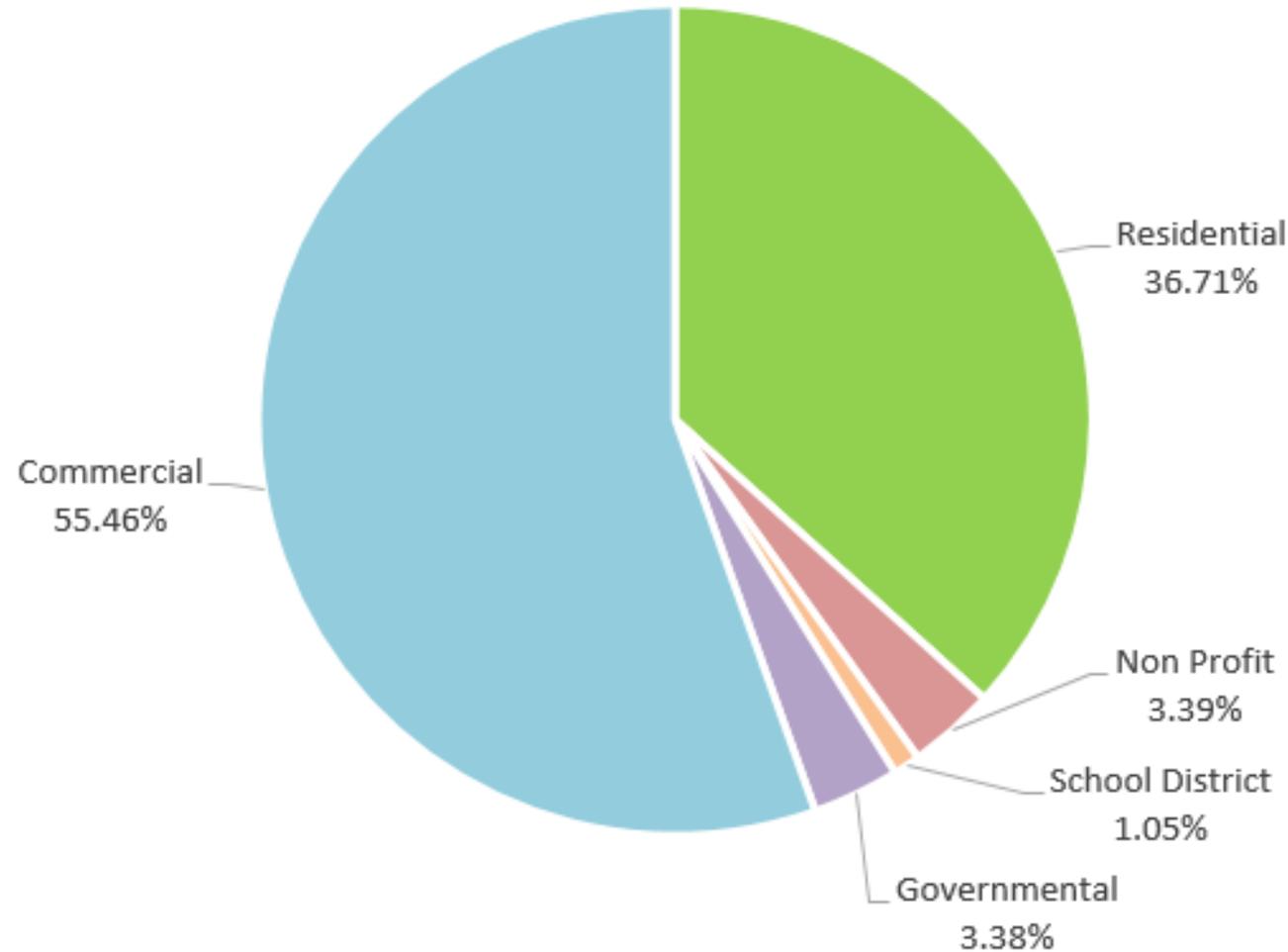
- Equitable user fee basis
  - Based on property stormwater run-off burden on drainage system
  - Impervious cover (i.e. rooftops, driveways/walkways, parking)
- Residential
  1. Measure impervious cover of average residential lot
- Commercial / Industrial / Governmental
  1. Measure impervious cover of each parcel
  2. Divide by average residential to get number of equivalent residential units (ERUs)

# Billing Unit Analysis – Total Number of Parcels

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# Billing Unit Analysis – Total Impervious Cover



■ Residential ■ Unimproved ■ Non Profit ■ School District ■ Governmental ■ Commercial

# Billing Unit Analysis – Residential Categories

## ➤ Residential (Small)

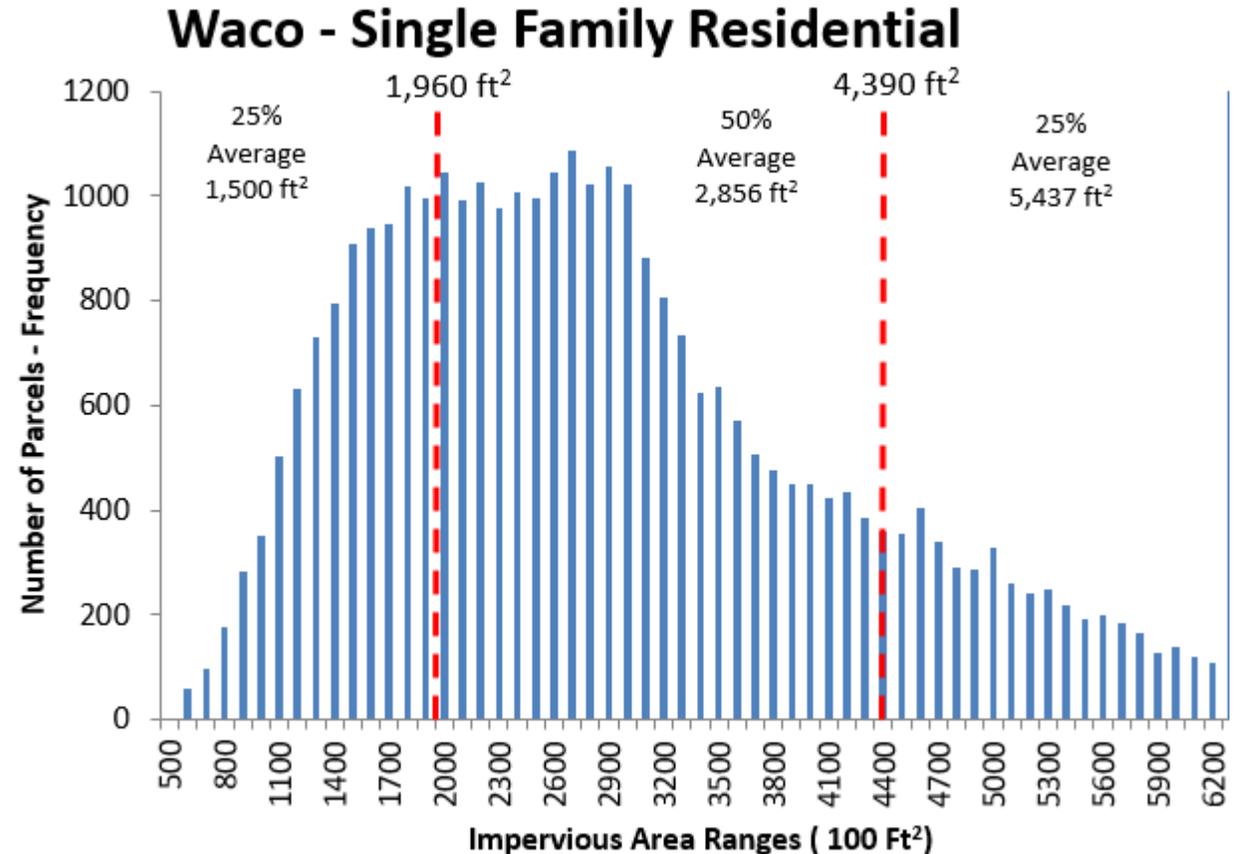
- 500 ft<sup>2</sup> to 1,960 ft<sup>2</sup>
- Average = 1,500 ft<sup>2</sup> (53% of 1 ERU)

## ➤ Residential (Mid)

- 1,961 ft<sup>2</sup> to 4,390 ft<sup>2</sup>
- Average = 2,856 ft<sup>2</sup> (1 ERU)

## ➤ Residential (Large)

- 4,391 ft<sup>2</sup> to 17,000 ft<sup>2</sup>
- Average = 5,437 ft<sup>2</sup> (190% of 1 ERU)



Parcel Type	Parcel Count	Total Impervious	Billible Units
Residential (Small)	9,237	13,247,504	4,851
Residential (Mid)	18,360	54,095,031	18,360
Residential (Large)	6,147	38,048,655	11,702

# Examples Residential Categories

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Tier 1-Small

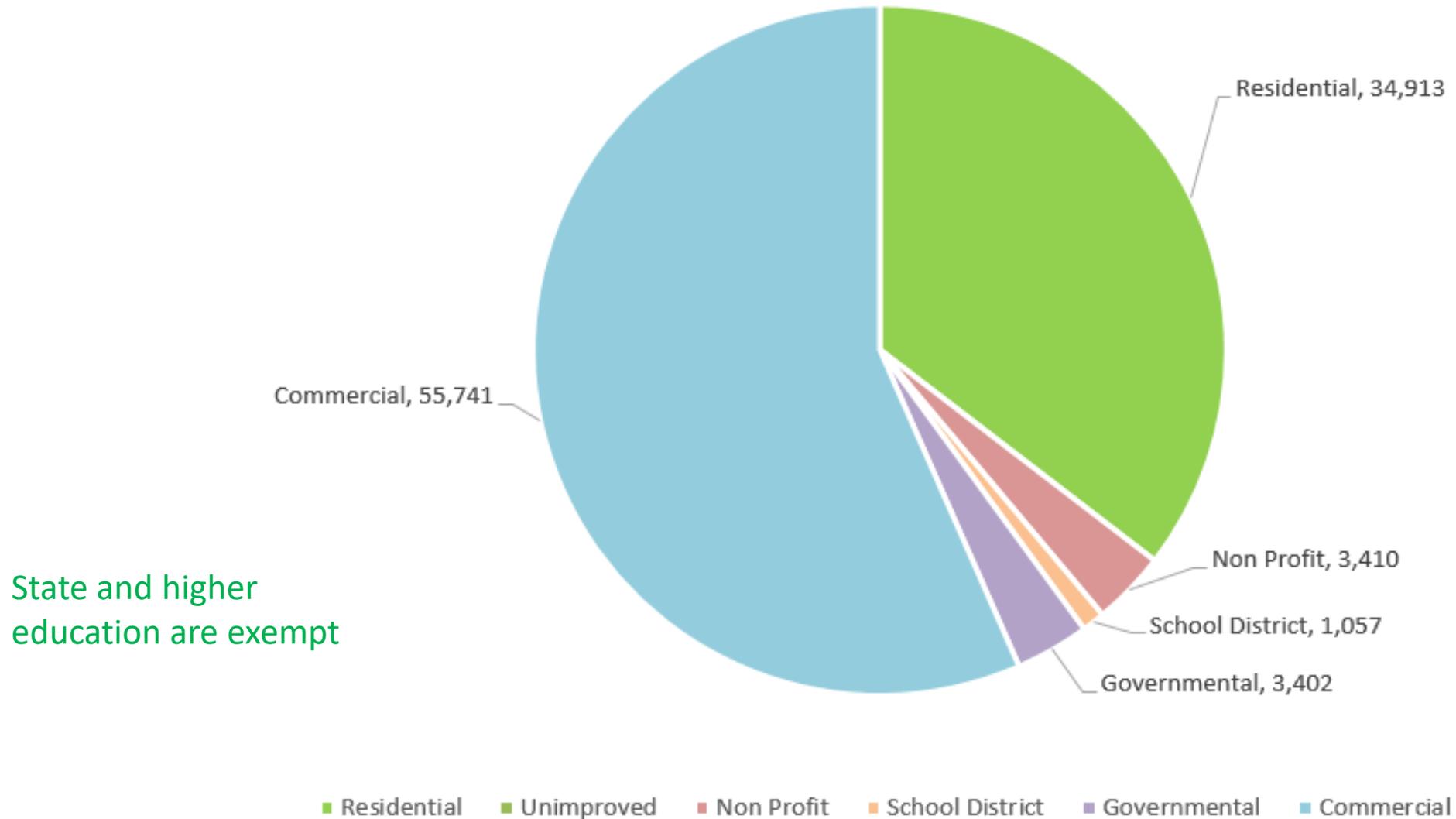


Tier 2-Medium



Tier 3- Large

# Billing Unit Analysis – Total Equivalent Residential Units



# Monthly Bill for Minimum Level of Service

Phase 1 MS4 Permit	\$1,640,490
Drainage Operations & Maintenance	\$2,738,766
Rehab and Replace Storm Drain	\$750,000
Capital Improvement Projects	\$0
<b>Total Program</b>	<b>\$5,129,256</b>
Parcels	47,073

**Debt Capacity**  
\$0

	<b><u>Residential</u></b>		
	<b><u>Small</u></b>	<b><u>Medium</u></b>	<b><u>Large</u></b>
% of Residential ERUs	27.4%	54.4%	18.2%
	0.53	1.00	1.90

	<b><u>ERUs</u></b>	<b><u>Cost/ERU/Month</u></b>	<b><u>\$/Month</u></b>	<b><u>\$/Month</u></b>	<b><u>\$/Month</u></b>
No Exemptions	98,523	\$4.34	\$2.28	\$4.34	\$8.26
Only ISDs Exempted	97,466	\$4.39	\$2.30	\$4.39	\$8.35
ISDs & Non-Profits Exempt	94,056	\$4.54	\$2.39	\$4.54	\$8.65
ISDs, Non-Profit & Gov Exempt	90,654	\$4.72	\$2.48	\$4.72	\$8.98

# Cost of Service Summary

Category of Service	Description	LOS 1	LOS 2	LOS 3
Phase 1 TPDES MS4 Permit		<ul style="list-style-type: none"> <li>• \$1.6M/year</li> </ul>	<ul style="list-style-type: none"> <li>• \$1.9M/year</li> </ul>	<ul style="list-style-type: none"> <li>• \$2.5M/year</li> </ul>
Operations & Maintenance	<ul style="list-style-type: none"> <li>• Channel maintenance</li> <li>• Drains &amp; inlet cleaning</li> <li>• Street sweeping</li> </ul>	<ul style="list-style-type: none"> <li>• Channels once/5 years</li> <li>• Inlets &amp; drains once/15 years</li> <li>• Street sweeping</li> <li>• \$2.7M/year</li> </ul>	<ul style="list-style-type: none"> <li>• channels once/3 years</li> <li>• Inlets &amp; drains once/10 years</li> <li>• Street sweeping</li> <li>• \$4.1M/year</li> </ul>	<ul style="list-style-type: none"> <li>• channels annually</li> <li>• Inlets &amp; drains once/5 years</li> <li>• Street sweeping</li> <li>• \$9.5M/year</li> </ul>
Rehabilitate/Replace	<ul style="list-style-type: none"> <li>• Existing infrastructure</li> <li>• No new capacity</li> </ul>	<ul style="list-style-type: none"> <li>• 1% of system annually</li> <li>• \$9.6M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 2% of system annually</li> <li>• \$19.2M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 5% of system annually</li> <li>• \$48M/year</li> </ul>
New Capital Improvement Projects	<ul style="list-style-type: none"> <li>• New capacity</li> <li>• Flood prone areas</li> <li>• 18 projects</li> <li>• \$123.9M</li> </ul>	<ul style="list-style-type: none"> <li>• 40-year program</li> <li>• \$8M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 30-year program</li> <li>• \$9M/year</li> </ul>	<ul style="list-style-type: none"> <li>• 20-year program</li> <li>• \$11M/year</li> </ul>

# Monthly Bill for Minimum Level of Service + \$1 per ERU

Phase 1 MS4 Permit	\$1,640,490
Drainage Operations & Maintenance	\$2,738,766
Rehab and Replace Storm Drain	\$750,000
Capital Improvement Projects	<u>\$1,087,849</u>
Total Program	\$6,217,105
Parcels	47,073

## Debt Capacity

\$15,460,954

	<u>Residential</u>		
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
% of Residential ERUs	27.4%	54.4%	18.2%
	0.53	1.00	1.90

	<u>ERUs</u>	<u>Cost/ERU/Month</u>	<u>\$/Month</u>	<u>\$/Month</u>	<u>\$/Month</u>
No Exemptions	98,523	\$5.26	\$2.76	\$5.26	\$10.01
Only ISDs Exempted	97,466	\$5.32	\$2.79	\$5.32	\$10.12
ISDs & Non-Profits Exempt	94,056	\$5.51	\$2.89	\$5.51	\$10.49
ISDs, Non-Profit & Gov Exempt	90,654	\$5.72	\$3.00	\$5.72	\$10.88

# Monthly Bill for Minimum Level of Service + \$2 per ERU

Phase 1 MS4 Permit	\$1,640,490
Drainage Operations & Maintenance	\$2,738,766
Rehab and Replace Storm Drain	\$750,000
Capital Improvement Projects	\$2,175,698
<b>Total Program</b>	<b>\$7,304,954</b>
Parcels	47,073

## Debt Capacity

\$30,921,908

	<u>Residential</u>		
	<u>Small</u>	<u>Medium</u>	<u>Large</u>
% of Residential ERUs	27.4%	54.4%	18.2%
	0.53	1.00	1.90

	<u>ERUs</u>	<u>Cost/ERU/Month</u>	<u>\$/Month</u>	<u>\$/Month</u>	<u>\$/Month</u>
No Exemptions	98,523	\$6.18	\$3.25	\$6.18	\$11.76
Only ISDs Exempted	97,466	\$6.25	\$3.28	\$6.25	\$11.89
ISDs & Non-Profits Exempt	94,056	\$6.47	\$3.40	\$6.47	\$12.32
ISDs, Non-Profit & Gov Exempt	90,654	\$6.72	\$3.53	\$6.72	\$12.78

# Typical Monthly Fees for Industrial and Commercial Users

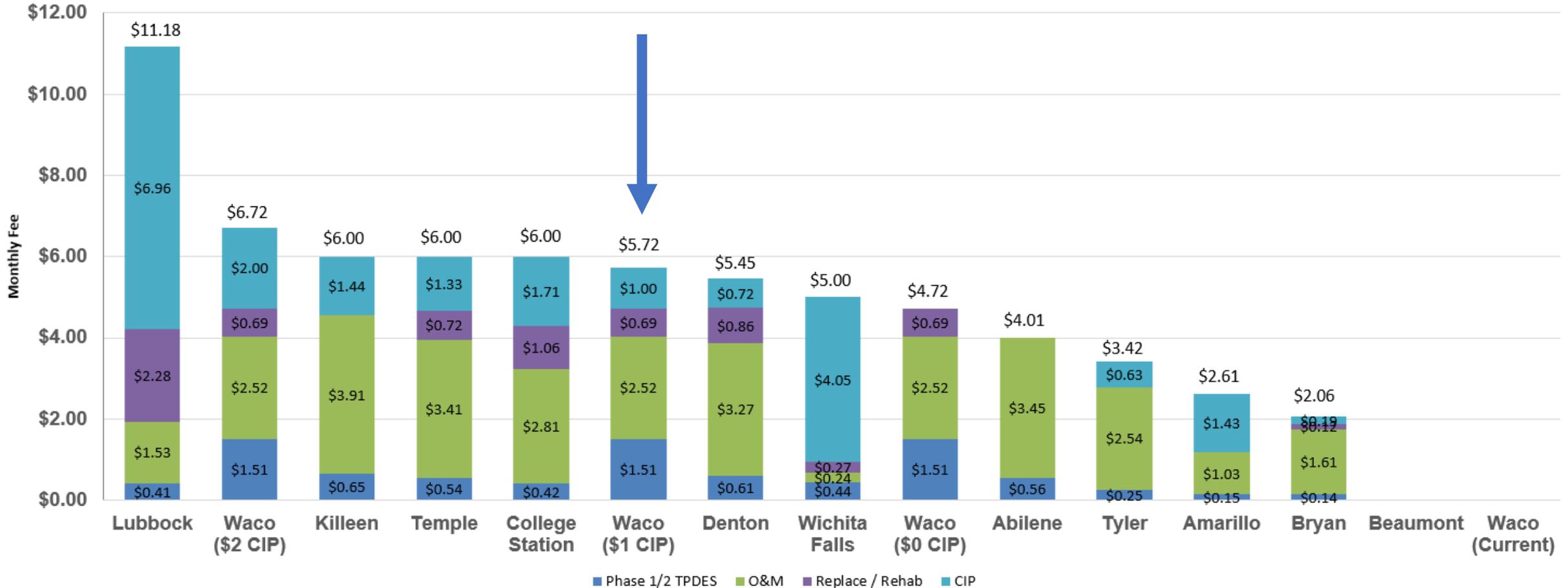
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	<u>Impervious</u>	<u>ERUs</u>	<u>\$0 CIP Monthly</u>	<u>\$1 CIP Monthly</u>	<u>\$2 CIP Monthly</u>
Big Box Retail	748,222	262.0	\$1,235	\$1,497	\$1,759
Convenience Store	60,143	21.1	\$99	\$120	\$141
Bank with Drive-In	37,407	13.1	\$62	\$75	\$88
Fast Food	36,133	12.7	\$60	\$72	\$85
Manufacturer	1,249,199	437.4	\$2,062	\$2,500	\$2,937

These rates do not include any credits in exchange for installing and maintaining features that reduce the contribution to the storm drain system (e.g. detention facilities and green infrastructure elements such as water quality ponds, bio-retention facilities, wetlands, bioswales, pervious pavements, rainwater harvesting, etc.)

# Monthly Bill – Comparison to Sister Cities

Average Residential Monthly Fee



# Summary & Recommendation

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- Exempt ISDs, Non-Profits, Government
- \$5.72 per ERU rate recommended
  - Equitable apportionment of cost based on burden created on stormwater system
  - Consistent with philosophy behind water, wastewater, and solid waste rates
  - Within market rate of comparable cities
  - Establishes the first comprehensive stormwater program in Waco's history
  - Provides dedicated funding source for Federal and State mandates
  - Creates annual CIP of \$15M to address pressing need for capital improvements without reducing Streets, Parks and Facilities CIP
  - Transfers operating expense (estimated at \$3.0-\$3.5M) from General Fund
- COVID-19 Timing
  - **Staff recommendation: create Utility now, set \$5.72 fee effective 10/1/21**
    - Additional time to refine fee structure and evaluate tax rate implications