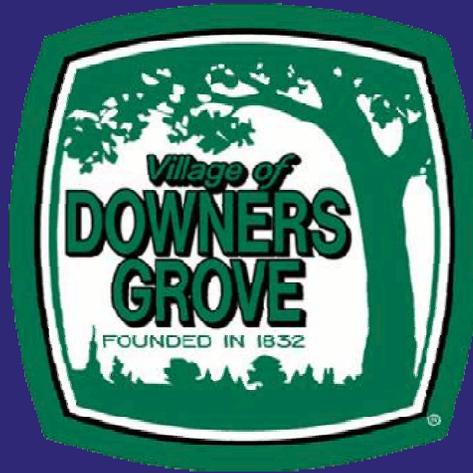


Village of Downers Grove

Stormwater Utility Study



Stormwater Fee Analysis
October 4, 2011



Agenda

I. Stormwater Fee Analysis

- Rate Base
- Fee Structure
- Credits
- Stormwater Fees

II. Fee Impact

III. Benchmarking



Timeline

- Workshop #1 – Background / Overview / Policy (August 2, 2011)
- Workshop #2 – Level of Service and Magnitude of Fee (September 13, 2011)
- **Workshop #3 – Stormwater Fee Analysis and Credits (October 4th, 2011)**
- Workshop #4 – Recommendations (3rd meeting in October)

Stormwater Fee Analysis

Fee Structure

- Goal of the stormwater fee:
 - To equitably assess the cost of providing stormwater service to property owners based on their impact to the stormwater system

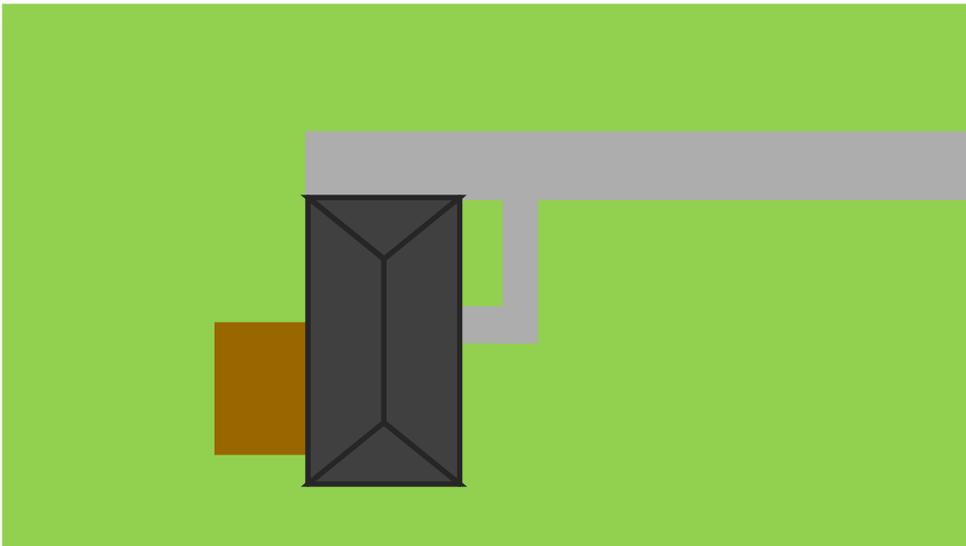
- To meet this goal two items must be addressed:
 - The unit of measure for the fee - Rate Base
 - How the fee is imposed

Rate Base

- Various rate bases are used to develop stormwater fees
- Approaches include:
 - ✓ Impervious area of property
 - ✓ Impervious area plus pervious area
 - ✓ Total area of property
 - ✓ Intensity of development
 - ✓ Other (Water Usage)
- Selection of rate base is often defined by availability of data

Rate Base – Impervious Area

- The industry best practice and most common approach is the use of impervious area.
- Impervious area relates directly to runoff and demand on system.
- Easily measured and verified.



- Upheld by courts.
- Impervious area is readily available for all parcels in Village.

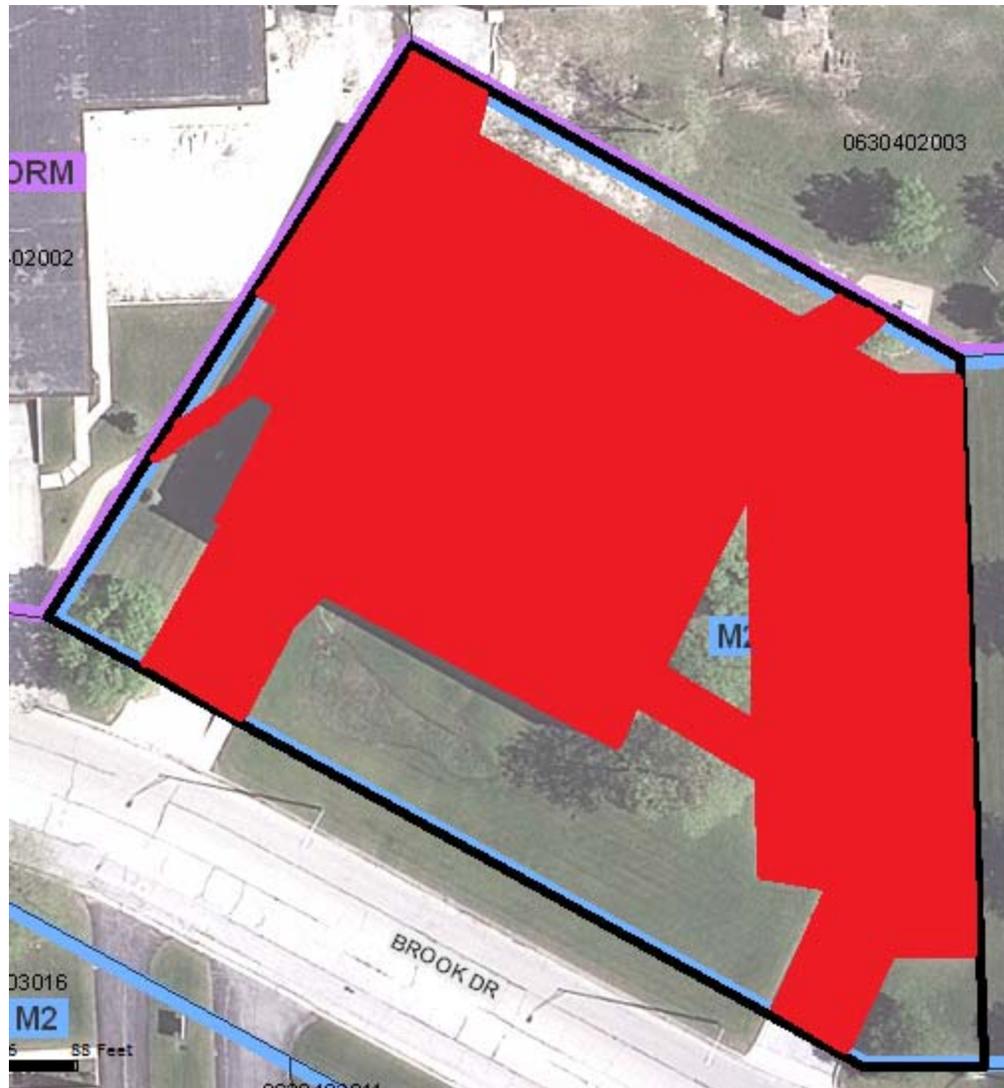
Example of Impervious



Example of Impervious

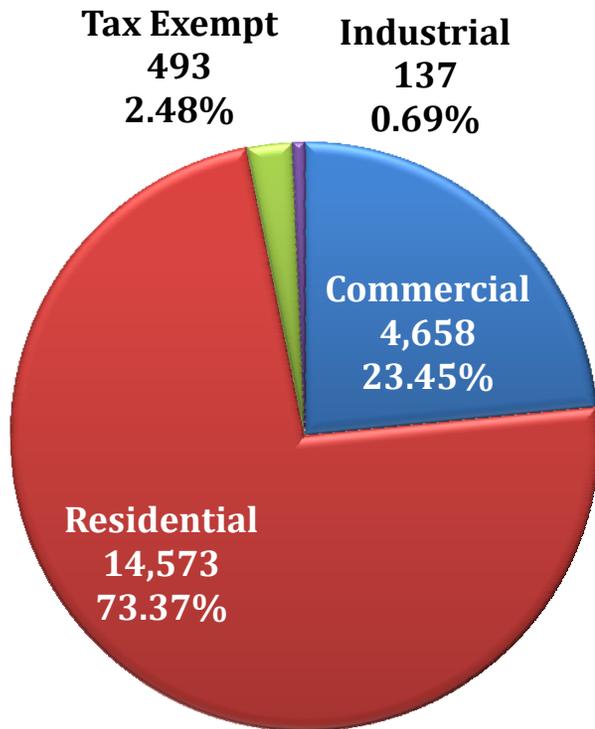


Example of Impervious

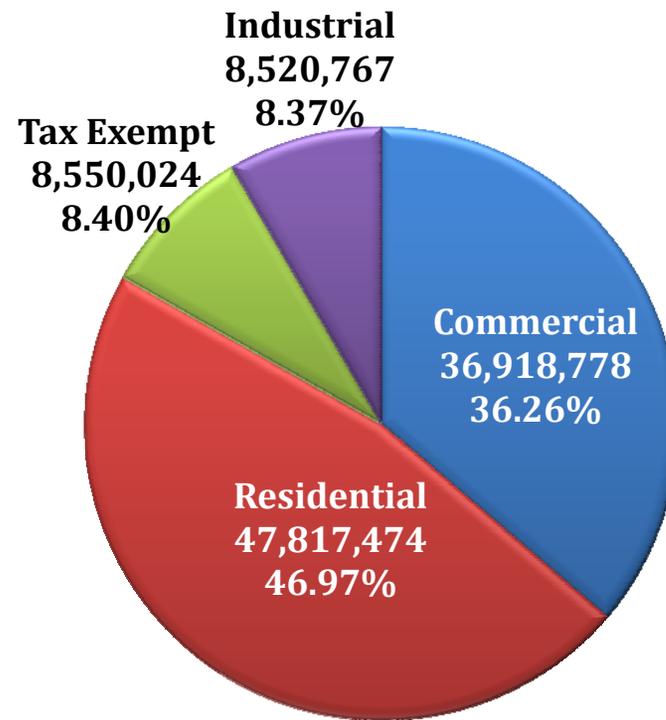


Impervious Area

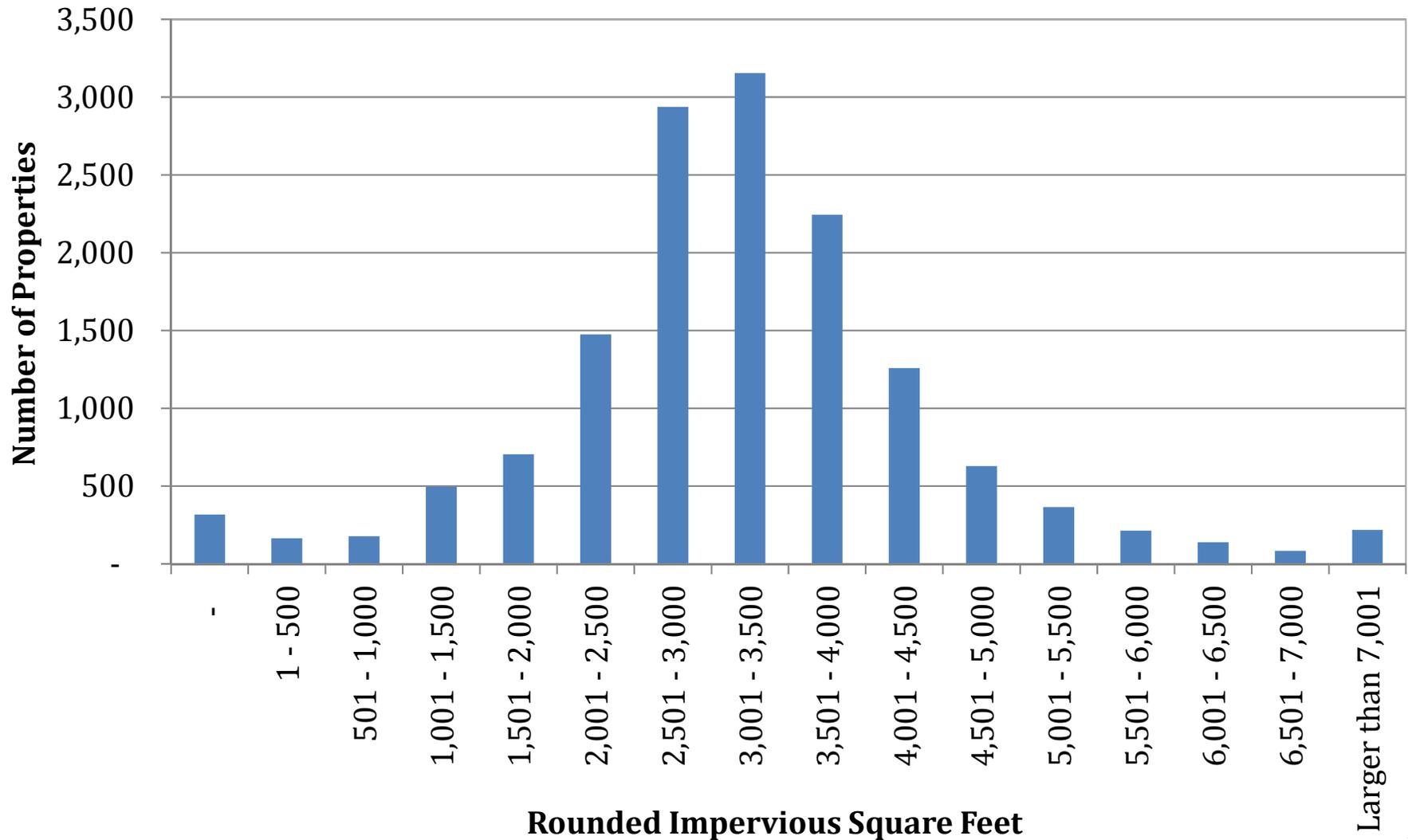
Number of Parcels by Class



Impervious Area (sq. ft.) by Class



Single Family Residential Impervious



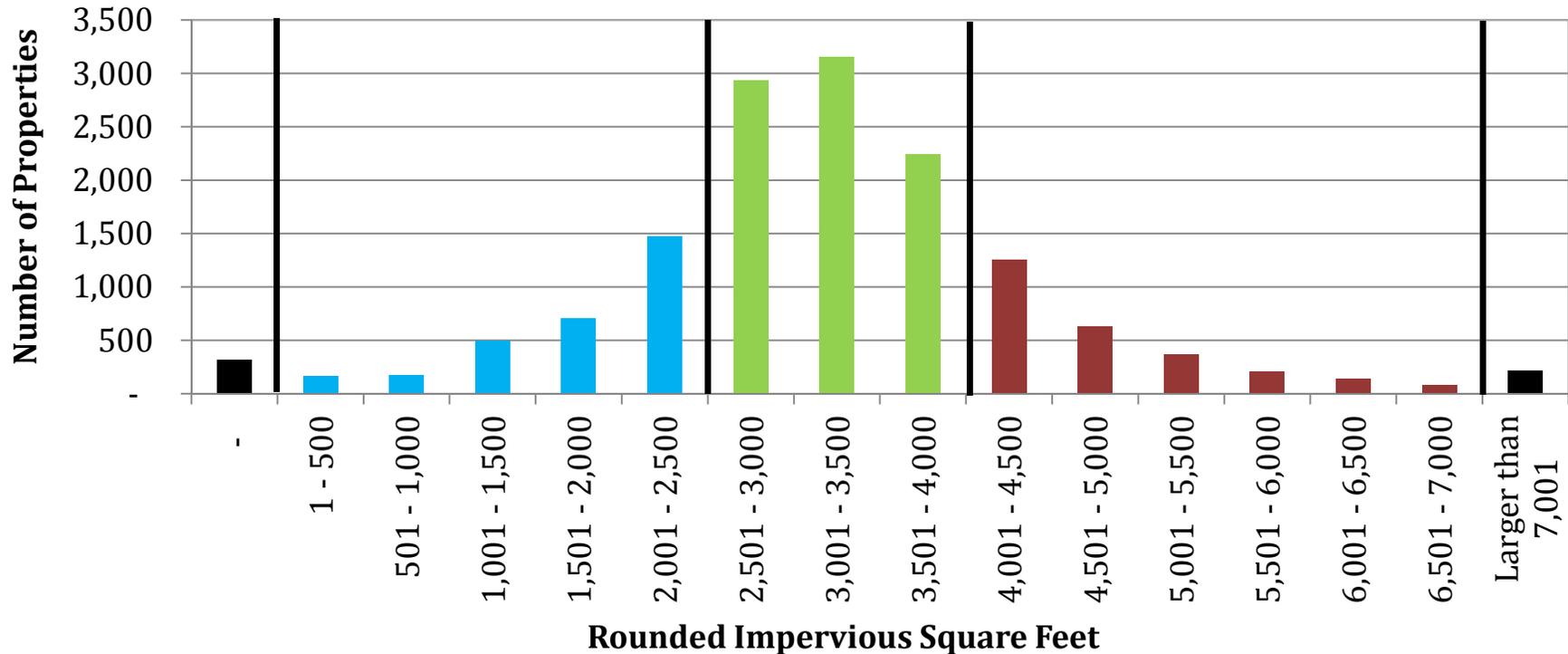
Stormwater Fee Structure

- Rate base defines unit of measure, rate structure defines how the fee is imposed.

- Single family residential parcels
 - Impervious measured on property by property basis
 - Flat rate based on average impervious (Equivalent Runoff Unit – ERU)
 - Tiered ERU's (small, medium, large)

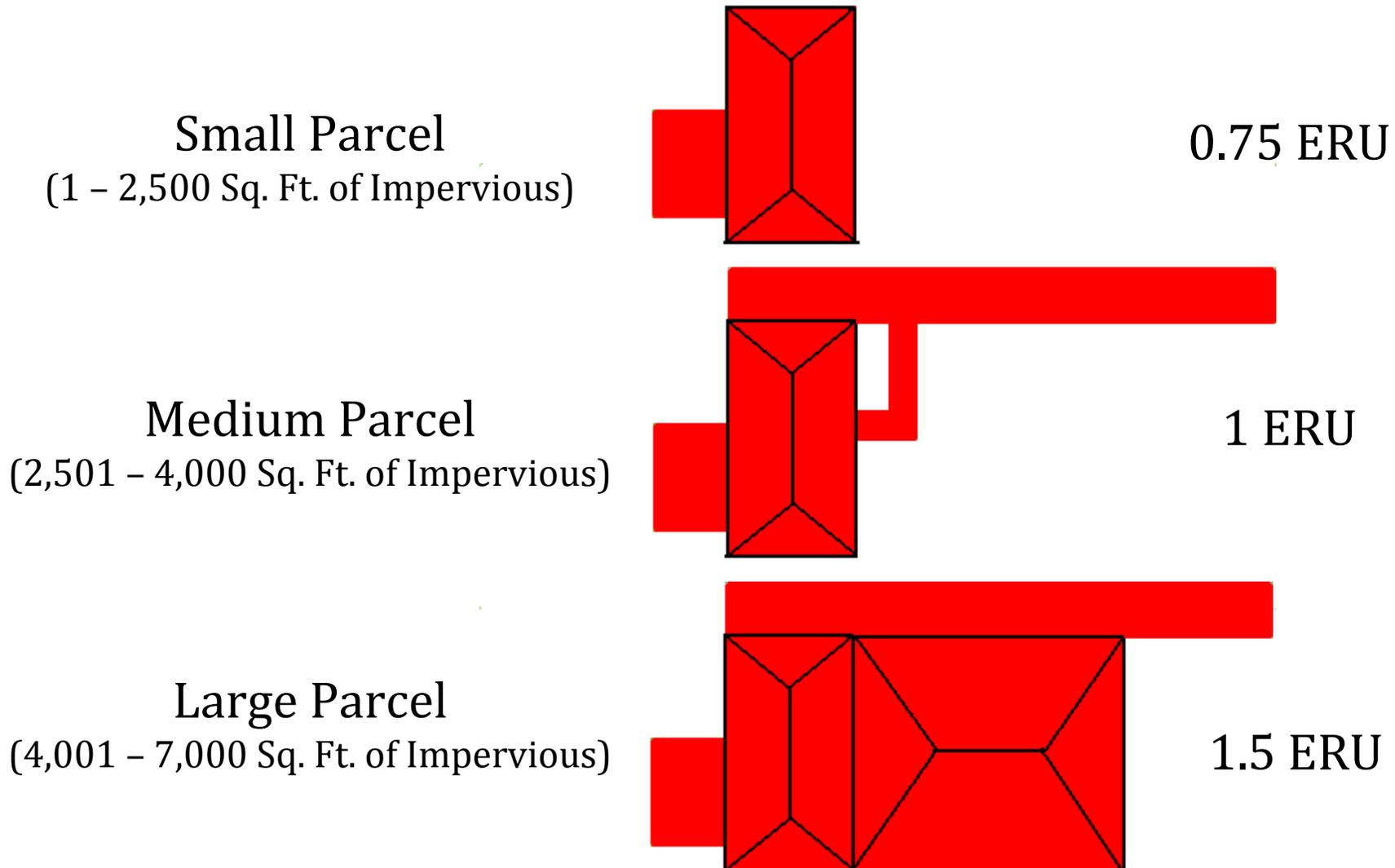
- Other parcels
 - Impervious measured on property by property basis

Single Family Residential Impervious



	Small Parcel	Medium Parcel	Large Parcel
Impervious	1 - 2,500 Sq. Ft.	2,501 - 4,000 Sq. Ft.	4,001 - 7,000 Sq. Ft.
ERU's	0.75	1.00	1.50
% of ERU's	13%	59%	28%

Fee Structure - Single Family Residential



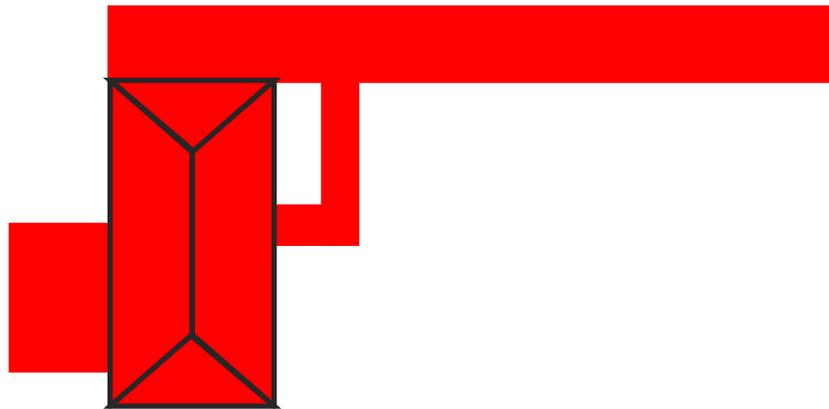
Single Family Residential Sample



Single Family Residential Medium Parcel
Total Impervious = 3,500 square feet (1 ERU)

Fee Structure – Non-Residential

Average Single Family Impervious Area



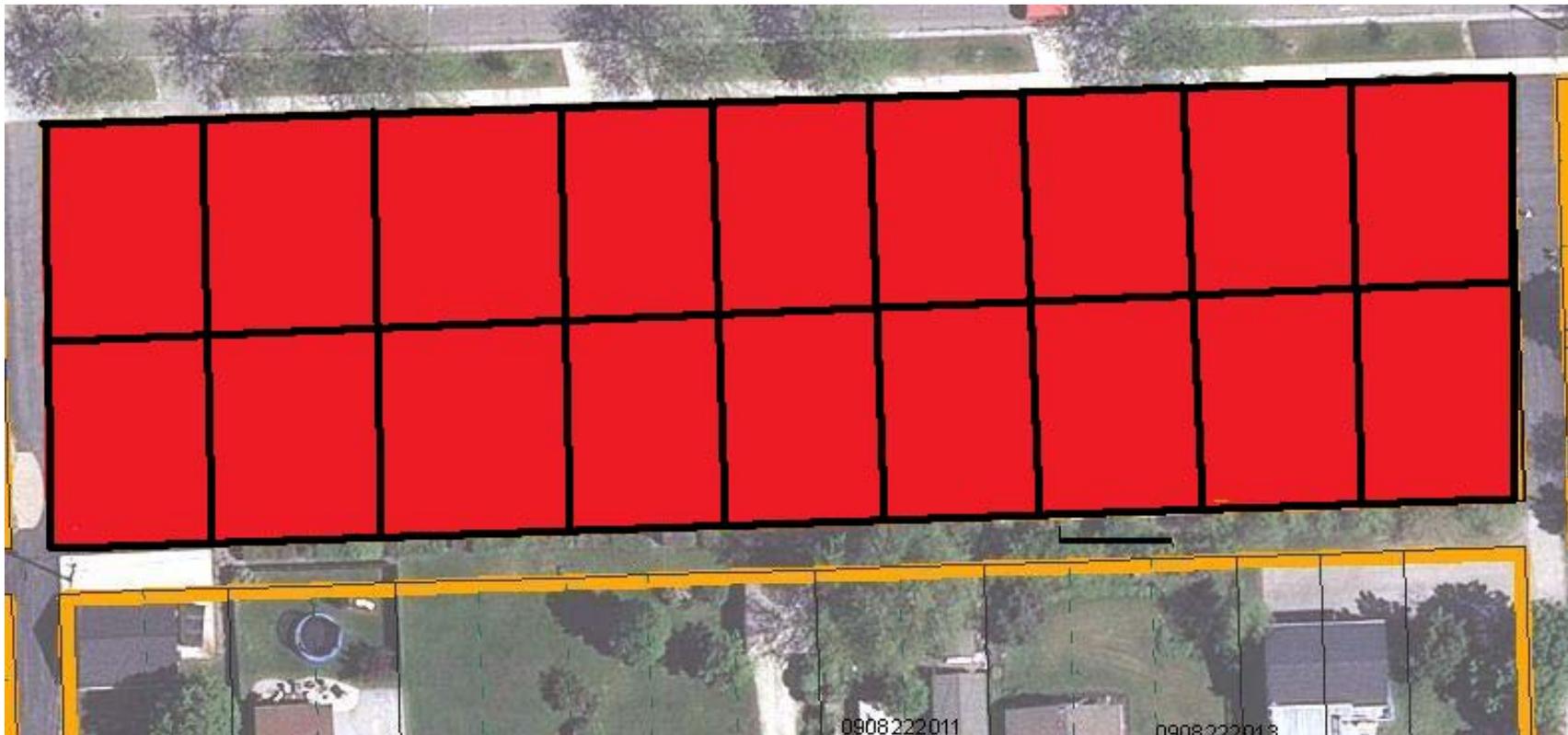
= 1 Equivalent Runoff Unit (ERU)

= 3,300 square feet

Non-Residential fee based on multiples of ERU's

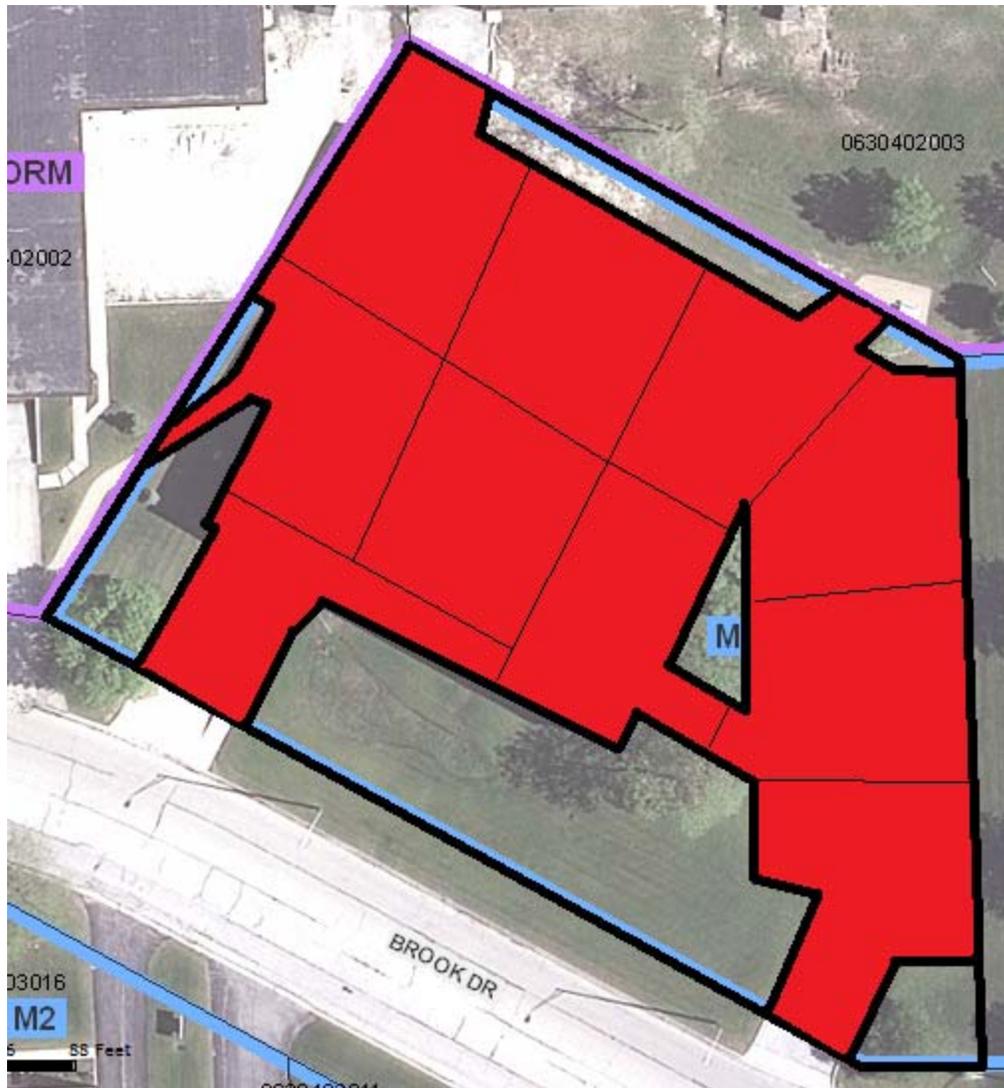
$$\text{Impervious Area} = \frac{29,000 \text{ sq. ft.}}{3,300 \text{ sq. ft.}} = 9 \text{ ERU's}$$

Non-Residential Sample



Non-Residential Parcel
Total Impervious = 59,000 square feet (18 ERU's)

Non-Residential Sample



Non-Residential Parcel
Total Impervious =
32,500 square feet
(10 ERU's)

Credits

- Stormwater fee credit is a reduction in the fee charged to a property in return for on-site stormwater management.
- Credit is recognition that on-site stormwater management may reduce the Village's stormwater expenditures.
- Credits encourage property owners to proactively manage their stormwater impact.

Credit Program

Control Activities	Examples	Range of Credits
Volume Control	Detention Basin, Rainwater Harvesting, Green Roof	5% - 30%
Water Quality Control	Rain Garden, Permeable Pavement, BMPs	5% - 30%
Direct Discharge	Discharge Outside Village	20% - 50%

- Typical program limits maximum credit to 50%
- Credit application required -Typical application fee (\$100 - \$200)

Control Activity Examples



Stormwater Fee Calculation

Level of Service (Expenditures)

+

Reductions in Revenue (Credits)

=

Total Revenue Requirement

÷

Rate Base (Billable Units)

=

Stormwater Fee

Total Revenue Requirement

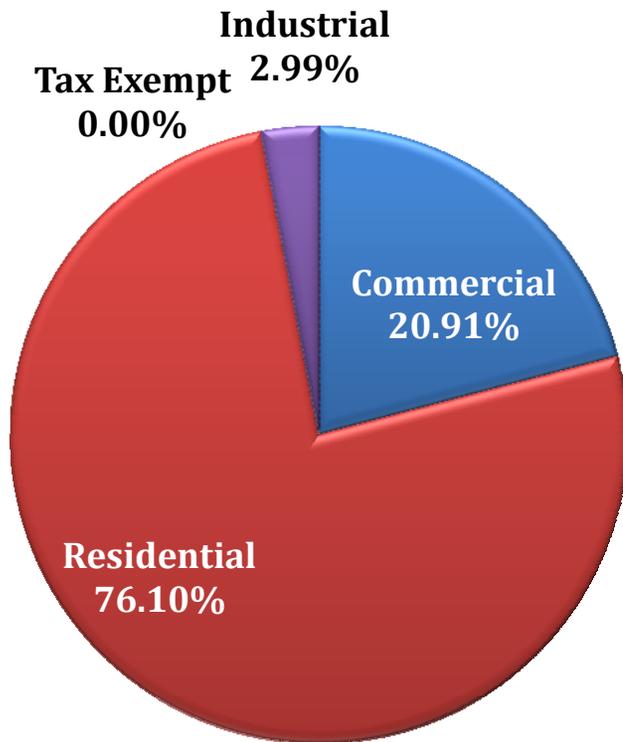
	Current Revenues	Current Level of Service	Recommended Level of Service
Expenditures	\$2,523,800	\$3,358,700	\$5,758,900
Revenue Reductions	\$150,000	\$200,000	\$250,000
Total Revenue Requirement	\$2,673,800	\$3,558,700	\$6,008,900

Monthly Stormwater Fees – FY 13

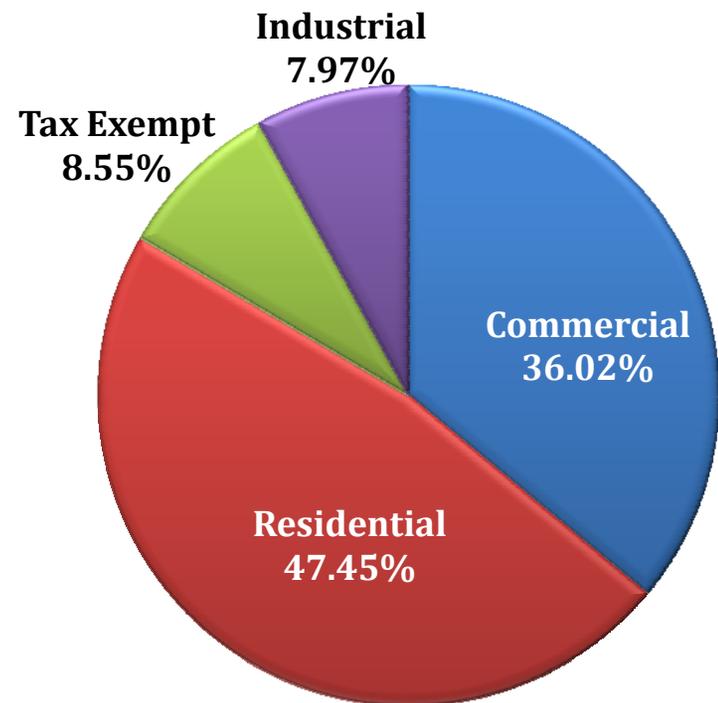
	Current Revenues	Current Level of Service	Recommended Level of Service
Total Revenue Requirement	\$2,673,800	\$3,558,700	\$6,008,900
Single Family Residential			
Small Parcel (1 – 2,500 sq. ft.)	\$4.80	\$6.40	\$10.80
Medium Parcel (2,501 – 4,000 sq. ft.)	\$6.40	\$8.50	\$14.40
Large Parcel (4,001 – 7,000 sq. ft.)	\$9.60	\$12.80	\$21.60
Non-Residential per ERU (3,300 Impervious sq. ft.)	\$6.40	\$8.50	\$14.40

Stormwater Fees vs. Property Taxes

Tax Revenue
Allocation



Stormwater Fee Revenue
Allocation



Fee Impacts

Monthly Property Owner Impact

	# of ERU's	Current Revenues	Current Level of Service	Recommended Level of Service
Small SFR Parcel	0.75	\$4.80	\$6.40	\$10.80
Medium SFR Parcel	1	\$6.40	\$8.50	\$14.40
Large SFR Parcel	1.5	\$9.60	\$12.80	\$21.60
Average Church	18	\$115.20	\$153.00	\$259.20
Hospital*	235	\$752.00	\$998.75	\$1,692.00
University*	278	\$889.60	\$1,181.50	\$2,001.60

*Assumes receipt of maximum credit of 50%

Average Residential Property

	Current Revenues	Current Level of Service	Recommended Level of Service
Monthly Stormwater Fee	\$6.40	\$8.50	\$14.40
Monthly Property Tax*	\$9.26	\$12.32	\$20.81
<i>Difference</i>	(\$2.86)	(\$3.82)	(\$6.41)

*\$300,000 assessed value

Commercial Example: 2000 Butterfield Road

	Current Revenues	Current Level of Service	Recommended Level of Service
Monthly Stormwater Fee	\$889.60	\$1,181.50	\$2,001.60
Monthly Property Tax*	\$238.77	\$317.79	\$536.58
<i>Difference</i>	\$650.83	\$863.71	\$1,465.02

*\$7,735,620 assessed value

Non-Residential fee based on multiples of ERU's

$$\text{Impervious Area} = \frac{457,389 \text{ sq. ft.}}{3,300 \text{ sq. ft.}} = 139 \text{ ERU's}$$

Commercial Example: 1245-9 Ogden Avenue

	Current Revenues	Current Level of Service	Recommended Level of Service
Monthly Stormwater Fee	\$44.80	\$59.50	\$100.80
Monthly Property Tax*	\$15.13	\$20.13	\$33.99
<i>Difference</i>	\$29.67	\$39.37	\$66.81

*\$490,080 assessed value

Non-Residential fee based on multiples of ERU's

$$\text{Impervious Area} = \frac{22,386 \text{ sq. ft.}}{3,300 \text{ sq. ft.}} = 7 \text{ ERU's}$$

Commercial Example: 1212 75th Street

	Current Revenues	Current Level of Service	Recommended Level of Service
Monthly Stormwater Fee	\$768.00	\$1,020.00	\$1,728.00
Monthly Property Tax*	\$206.23	\$274.48	\$463.46
<i>Difference</i>	\$561.77	\$745.52	\$1,264.54

*\$6,681,420 assessed value

Non-Residential fee based on multiples of ERU's

$$\text{Impervious Area} = \frac{393,211 \text{ sq. ft.}}{3,300 \text{ sq. ft.}} = 120 \text{ ERU's}$$

Benchmarking

Benchmarking – Fee Structure

Locality	Established	Rate Base	SFR Fee Structure	Non-SFR Fee Structure
Aurora	1998	Impervious Area	Flat Fee per Parcel	Flat Fee per Parcel
Bloomington	2004	Impervious Area	Tiered ERU	Tiered ERU
Champaign	2011	Impervious Area	Average ERU	Multiple of ERU
East Moline	2009	Impervious Area	Tiered ERU	Tiered ERU
Freeport	2004	Flat Fee by Prop. Type	Flat Fee by Prop. Type	Flat Fee by Prop. Type
Highland Park	2006	Impervious Area	Average ERU	Multiple of ERU
Moline	2000	Impervious Area	Tiered ERU	Multiple of ERU
Morton	2005	Impervious Area	Average ERU	Multiple of ERU
Normal	2006	Impervious Area	Average ERU	Multiple of ERU
O'Fallon	2008	Impervious Area	Average ERU	Multiple of ERU
Rantoul	2001	Impervious Area	Average ERU	Flat Fee per Parcel
Richton	2008	Impervious Area	Flat Fee by Prop. Type	Flat Fee by Prop. Type
Rock Island	2002	Gross Area	Tiered ERU	Multiple of ERU
Rolling Meadows	2001	Impervious Area	Flat Fee per Parcel	Flat Fee per Parcel
Tinley Park	1996	Water Use	Flat Fee per Parcel and Usage Charges	Flat Fee per Parcel and Usage Charges

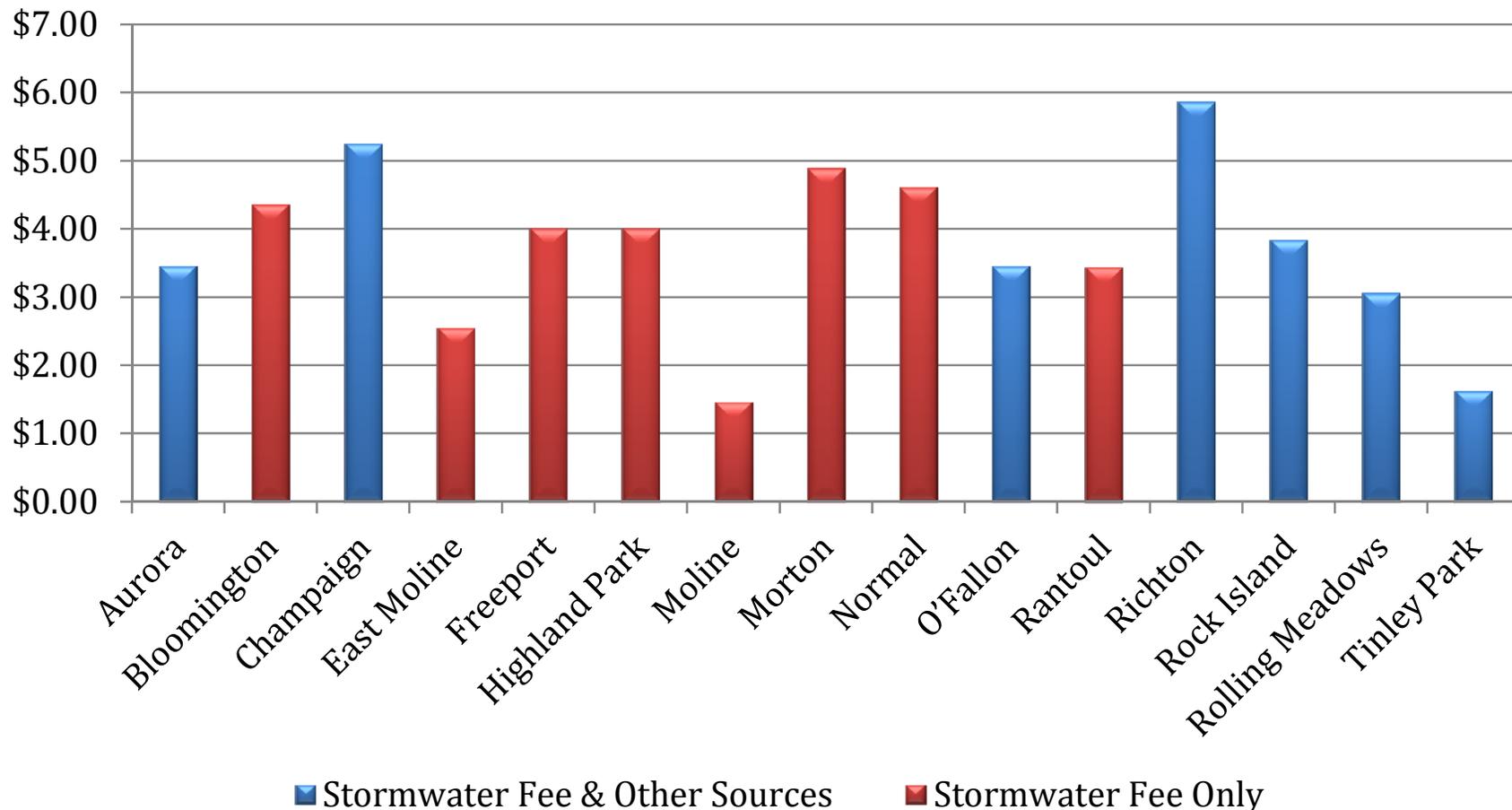
Benchmarking – Exemptions / Credits

Locality	Exemptions from Fee	Credits	Credit Programs Offered ⁽¹⁾
Aurora	None	NO	-
Bloomington	None	YES	RQ, DD
Champaign	None	YES	RQ, WQ, DD
East Moline	None	NO	-
Freeport	None	NO	-
Highland Park	None	YES	DDC
Moline	None	YES	RQ, DD
Morton	None	YES	RQ, DD
Normal	None	YES	RQ, WQ, DD
O'Fallon	None	YES	RQ, WQ
Rantoul	None	NO	-
Richton	None	NO	-
Rock Island	None	YES	RQ, WQ, DD
Rolling Meadows	None	NO	-
Tinley Park	None	NO	-

(1) RQ – Runoff Quantity, WQ – Water Quality, DD – Direct Discharge

Benchmarking - Exemptions / Credits

Monthly Stormwater Fee
(SFR - 12,000 sq. ft. total area/ 3,400 sq. ft. impervious)



Questions / Discussion

Monthly Stormwater Fee Example: School Districts

	Number of ERU's	Current Revenues	Current Level of Service	Recommended Level of Service
School District No. 58	363.20	\$2,324.48	\$3,087.20	\$5,230.08
School District No. 99	343.00	\$2,195.20	\$2,915.50	\$4,939.20