Inventory and Summary of Storm Water Utilities in Wisconsin

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What Is a Storm Water Utility?

- A special assessment set up to generate funding specifically for storm water management.
- Businesses and residents within the utility district pay a storm water fee, and the revenue collected
  - supports maintenance of the existing storm drain systems,
  - supports development of drainage plans,
  - flood control measures,
  - water quality programs, and
  - funds major capital expenses (new sewers, BMPs)

Utility Fees vs Property Taxes

- Fees are alternative to raising property taxes
- Taxes are based on the value of the land, regardless of how much service is actually used
- Utility fees are generally based on how much of the service is used (area of impervious surface → quantity of storm water managed)
- Utility fees are placed in a segregated fund, for a specific purpose.
- Taxes go into general pot.

- WI Storm Water User Charge System Information
- Survey compiled by Jeff Mazanec – APWA
- 78 municipalities

Fox Wolf Watershed Alliance

WI Stormwater User Charge System Information
Representative Wisconsin Communities

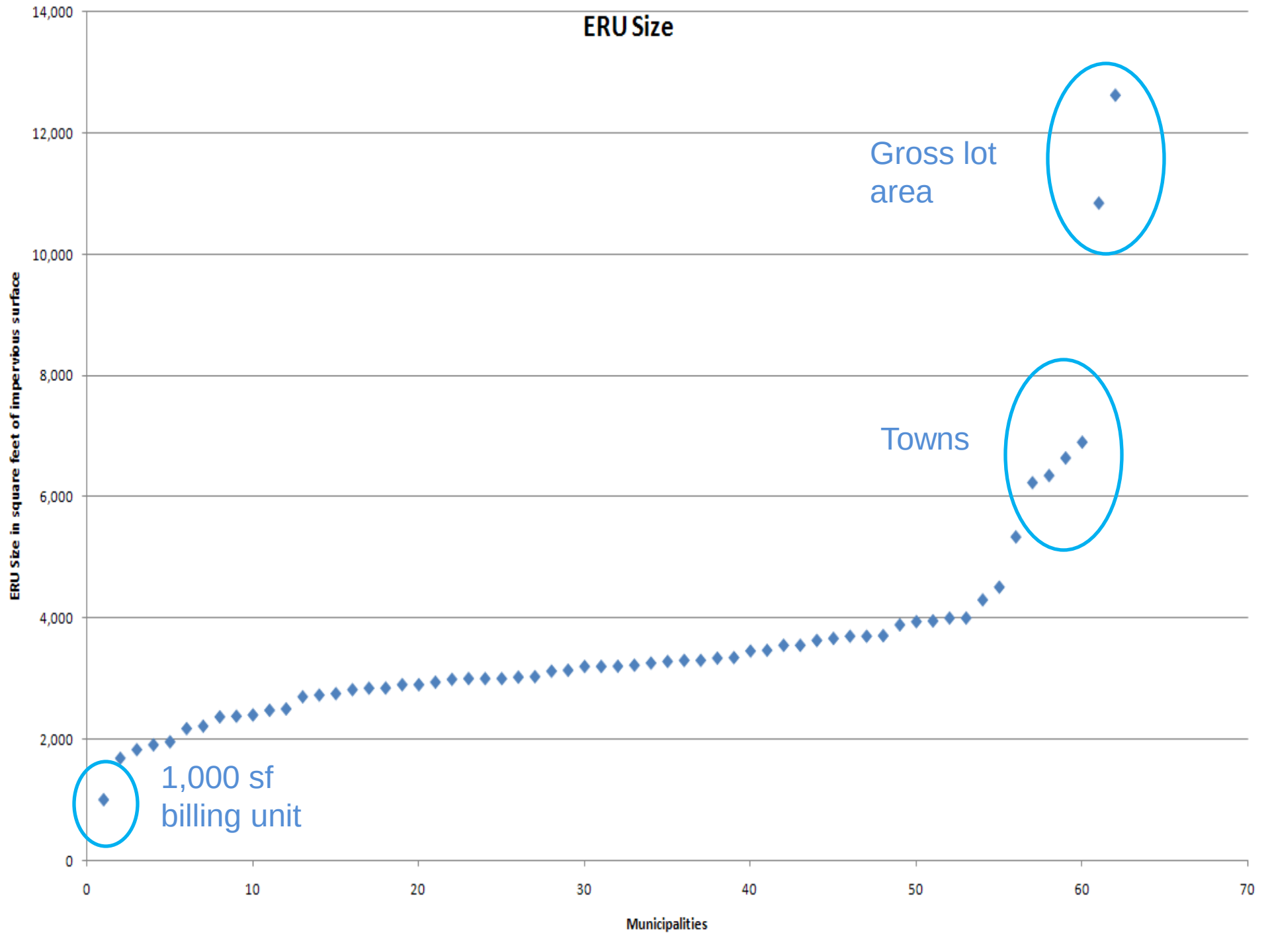
Wisconsin stormwater user charge information is subject to change! Contact individual communities to confirm accuracy - please forward corrections and updates!

December 14, 2010

	Name of Community or Stormwater District	Recent Population	Created/ Started in:	ERU Size (sf)	Annual $/ERU or 1 fam home	Credit Policy? Y/ N	Credit Policy? Max Amount	Comments/ Web site addresses
1	Allouez (Village)	15,443	2006	3,663				www.villageofallouez.com
2	Appleton (City)	70,293	1995	2,368	$ 125.00	Y	77%	www.appleton.org
3	Baraboo (City)	10,771	2005	2,379	$ 46.87			www.cityofbaraboo.com
4	Barron (City)	3,250	2005	10,850	$ 24.00	Y	75%	www.barronwi.us
5	Bellevue (Village)	14,386	2002	3,221	$ 48.00	Y	100%	www.bellevue-wi.com
6	Beloit (City)	35,803	2006	3,347	$ 36.00			beloit.govoffice3.com/
7	Brown Deer (Village)	11,895	2004	3,257	$ 91.80	N		www.browndeerwi.org
8	Butler (Village)	1,885	1999	3,032	$ 66.00			www.butlerwi.gov/
9	Chetek (City)	2,180	2005		$ 27.00	Y		www.chetek.net
10	Chippewa Falls (City)	13,374	2005		$ 36.00			www.ci.chippewa-falls.wi.us
11	Cudahy (City)	18,430	2001	2,700	$ 60.00	Y	$2/ ERU	www.ci.cudahy.wi.us
12	De Forest (Village)	7,400	2005	2,900	$ 60.00			www.vi.deforest.wi.us/
13	Delafield (City)	7,820	2004	1,000	$ 29.00			www.cityofdelafield.com/
14	De Pere (City)	20,560	2003		$ 47.00			www.de-pere.org/
15	Eau Claire (City)	62,576	1997	3,000	$ 68.00	Y	100%	www.ci.eau-claire.wi.us
16	Elm Grove (Village)	6,250	2004	6,235	$ 65.50			www.elmgrovewi.org
17	Fitchburg (City) - Urban	20,000	2002	3,700	$ 70.40	Y	50%	www.city.fitchburg.wi.us
18	Fitchburg (City) - Rural	4,000	2002	3,700	$ 24.20	Y	50%	www.city.fitchburg.wi.us
19	Fox Point (Village)	6,816	2009	2,988	$ 126.72			http://www.vil.fox-point.wi.us/
20	Fort Atkinson (City)		2009	3,096	$ 37.98			http://www.fortatkinsonwi.net/
21	Garner's Creek (watershed)		1998	3,623	$ 96.00	Y	85%	http://www.garnerscreekutility.org/
22	Glendale (City)	13,400	1996	3,200	$ 42.00	N	‡	www.glendale-wi.org
23	Grand Chute (Town)	20,200	1997	3,283	$ 48.00	Y	85%	www.grandchute.net
24	Grantsburg (Village)	1,397	2004		$ 18.00	Y	75%	www.grantsburgwi.com
25	Green Bay (City)	102,350	2004	3,000	$ 63.76	Y	67%	www.ci.green-bay.wi.us
26	Greendale (Village)	14,410	2004	3,941	$ 78.00	Y	50%	www.greendale.org
27	Greenfield (City)	35,476	2009	3,630	$ 49.80			http://www.ci.greenfield.wi.us/
28	Greenville (Town)	8,008	1999	4,510	$ 60.00	Y	85%	www.townofgreenville.com
29	Hales Corners (Village)	7,665	2008	3,952	$ 9.00			http://www.halescorners.org/
30	Harrison (Town of)	5,800	1998		$ 96.00			www.townofharrison.org
31	Hobart (Village of)	5,834	2007	4,000	$ 72.00	Y	50%	www.hobart-wi.org/
32	Holmen (Village of)	7,176	2007	3,550	$ 44.00	Y	50%	www.homenwi.com
33	Howard (Village)	15,774	2005	3,301	$ 44.00			www.villageofhoward.com
34	Janesville (City)	61,604	2003	3,200	$ 36.44	Y	65%	www.ci.janesville.wi.us
35	Kenosha (City)	96,845	2007	2,477	$ 60.00	Y		www.kenosha.org
36	Lake Delton (Village)	2,975	1993	1,685	$ 18.00	Y	100%	www.lakedelton.org
37	Lancaster (City)	4,033	2008	2,400	$ 24.00	Y		www.lancasterwisconsin.com
38	Lisbon (Town)	9,359	2007	6,642	$ 40.00	Y	50%	www.townoflisbonwi.com
39	Little Chute (Village)	10,830	1998	2,752	$ 96.00	N		www.littlechutewi.org
40	Madison (City)	220,332	2001	Ind'l Msmt	$ 55.00	Y	50%	www.cityofmadison.com
41	McFarland (Village)	6,416	2007	3,456	$ 46.85			www.mcfarland.wi.us
42	Menominee (City of)	15,318	2008	3,000	$ 32.00	Y	20%	www.menomonie-wi.gov/
43	Milton (City of)	5,667	2009		$ 55.13			http://www.ci.milton.wi.us/
44	Milwaukee (City)	597,000	2006	1,610	$ 82.20	Y	60%	www.mpw.net
45	Monona (City)	8,000	2004	NA *	$ 60.00	Y	65%	www.monona.wi.us
46	Monroe (City)	10,600	2006	2,728	$ 60.00			www.cityofmonroe.org
47	Neenah (City)	24,600	2003	3,138	$ 80.00			www.ci.neenah.wi.us
48	New Berlin (City)	38,719	2001	4,000	$ 60.00	N		www.newberlin.org
49	New Richmond (City)	7,726	2004	12,632	$ 28.68	Y	75%	www.ci.new-richmond.wi.us
50	N. Fond du Lac (Village)	4,557	2007	3,123	$ 56.00	Y		www.nfdl.org
51	Oak Creek (City)	28,456	2003	3,300				http://www.oakcreekwi.org/
52	Onalaska (City)	16,690	2009	3,888	$ 50.95	Y	40%	www.cityofonalaska.com
53	Onalaska (Town)	5,600	2005	3,709	$ 24.00			www.co.la-crosse.wi.us/townofonalaska
54	Oshkosh (City)	65,000	2003	2,817	$ 62.97	Y	40%	www.ci.oshkosh.wi.us
55	Pewaukee (City)	11,783	3010	5,339	$ 120.00			http://www.pleasantprairieonline.com/
56	Pleasant Prairie (Village)	18,000	2006		$ 15.00			www.pleasantprairieonline.com/
57	Poynette (Village)	2,563	2006	3,550	$ 50.00			www.poynette-wi.gov/
58	Racine (City)	81,855	2004	2,844	$ 72.30	Y	40%	www.cityofracine.org
59	Raymond (Town)	3,516	2008	$0.0036/ sf impervious area		N		www.raymondtownof.com
60	Reedsburg (City of)	8,594	2008	3,024	$ 46.00	Y	50%	www.reedsburgwi.gov
61	River Falls (City)	13,019	1998	NA *	$ 37.68	Y	100%	www.rfcity.org

Equivalent Runoff Units (ERUs) and Billing Units Used Nationally

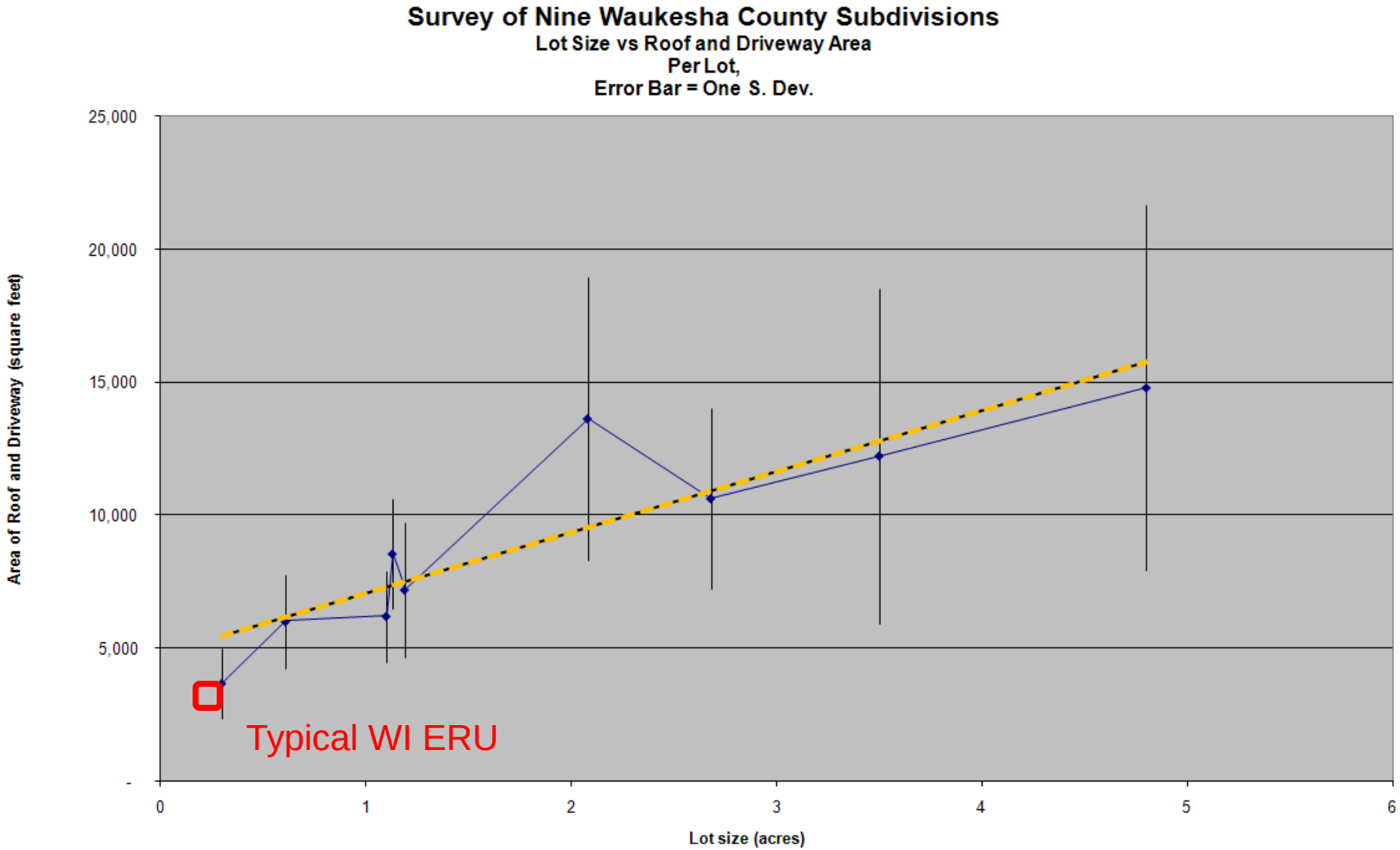
- Single family residence / lot
- Runoff equivalency factor
- Billing units
  - 500 sf impervious surface
  - 1 acre of gross lot area
- Equivalent hydraulic acreage = (imp. ac. * 0.95)+(pervious ac. * 0.15)
- Arizona – based on drinking water usage


ERU Size
ERU Size in square feet of impervious surface
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
0
10
20
30
40
50
60
70
Municipalities
Gross lot area
Towns
1,000 sf billing unit

Variety in Size of ERUs

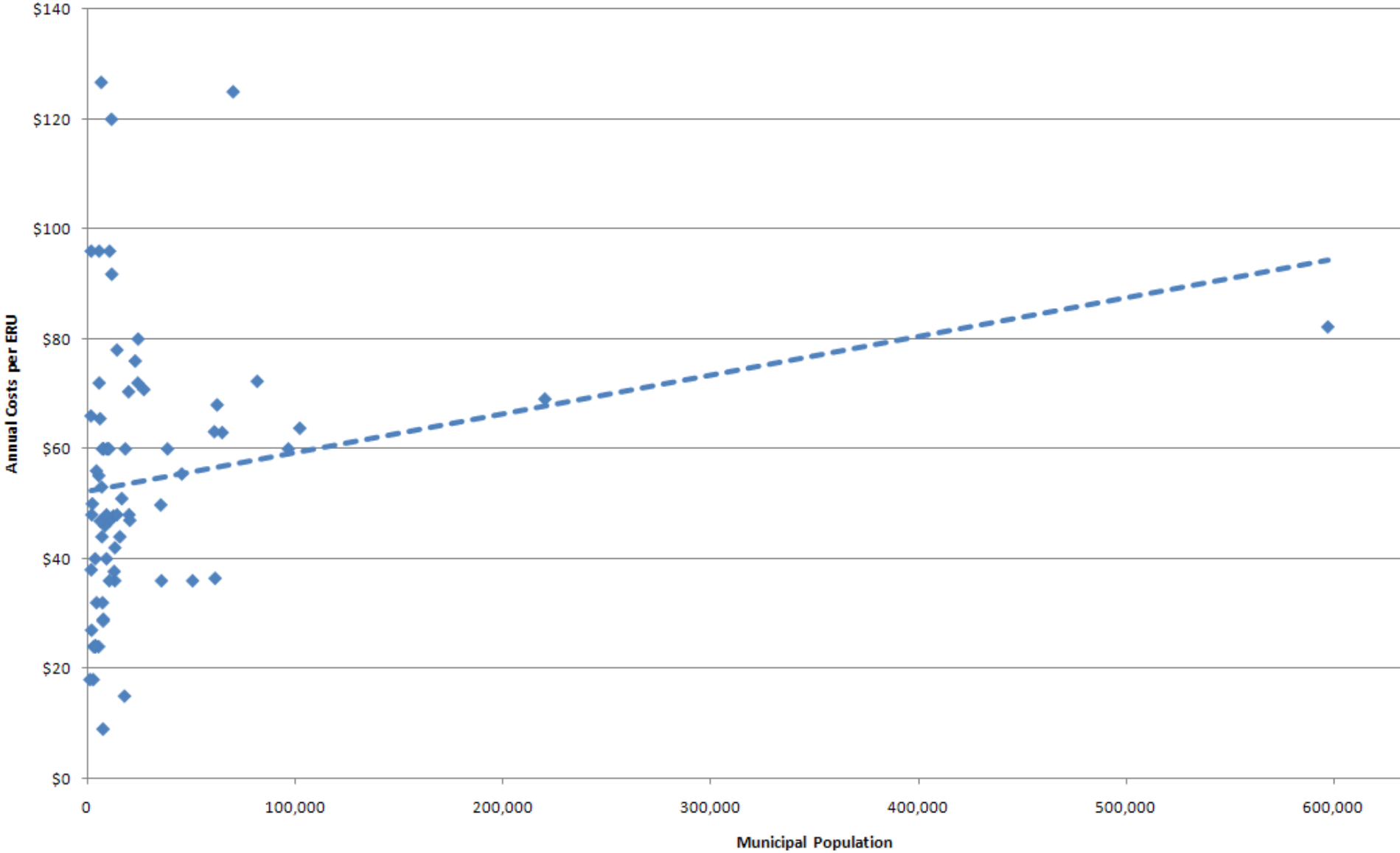
- Median = 3,202 sf
- Outliers at high end may be gross area, not impervious surface
- 2,800 sf = national average per 2006 study by Western Kentucky U.
- 3,690 sf = measured imperviousness for one 0.3-acre lot 1920s subdivision in Waukesha County

Is the Average Imperviousness Reasonable?

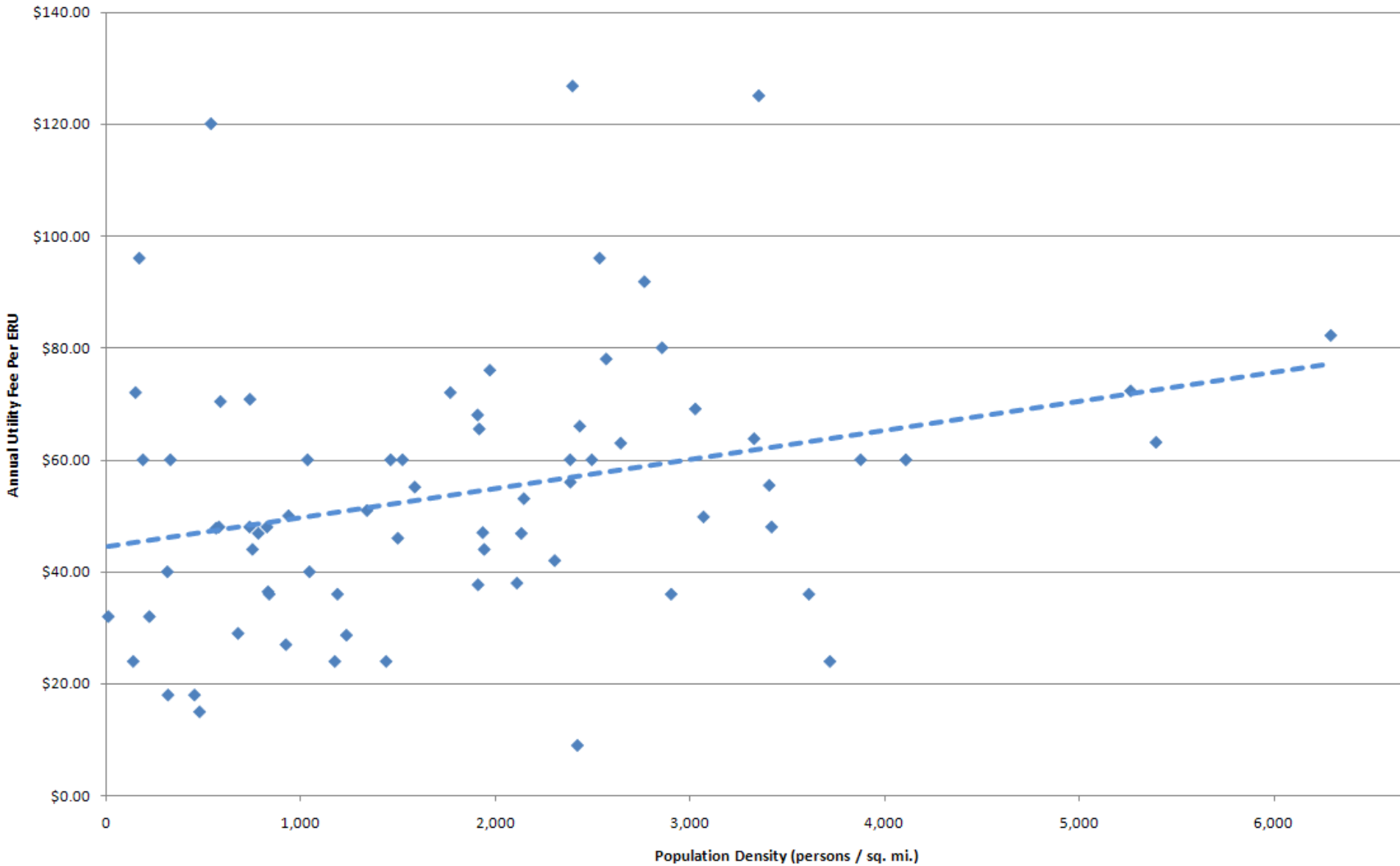


What is the best way to compare different municipalities' storm water utility fees?

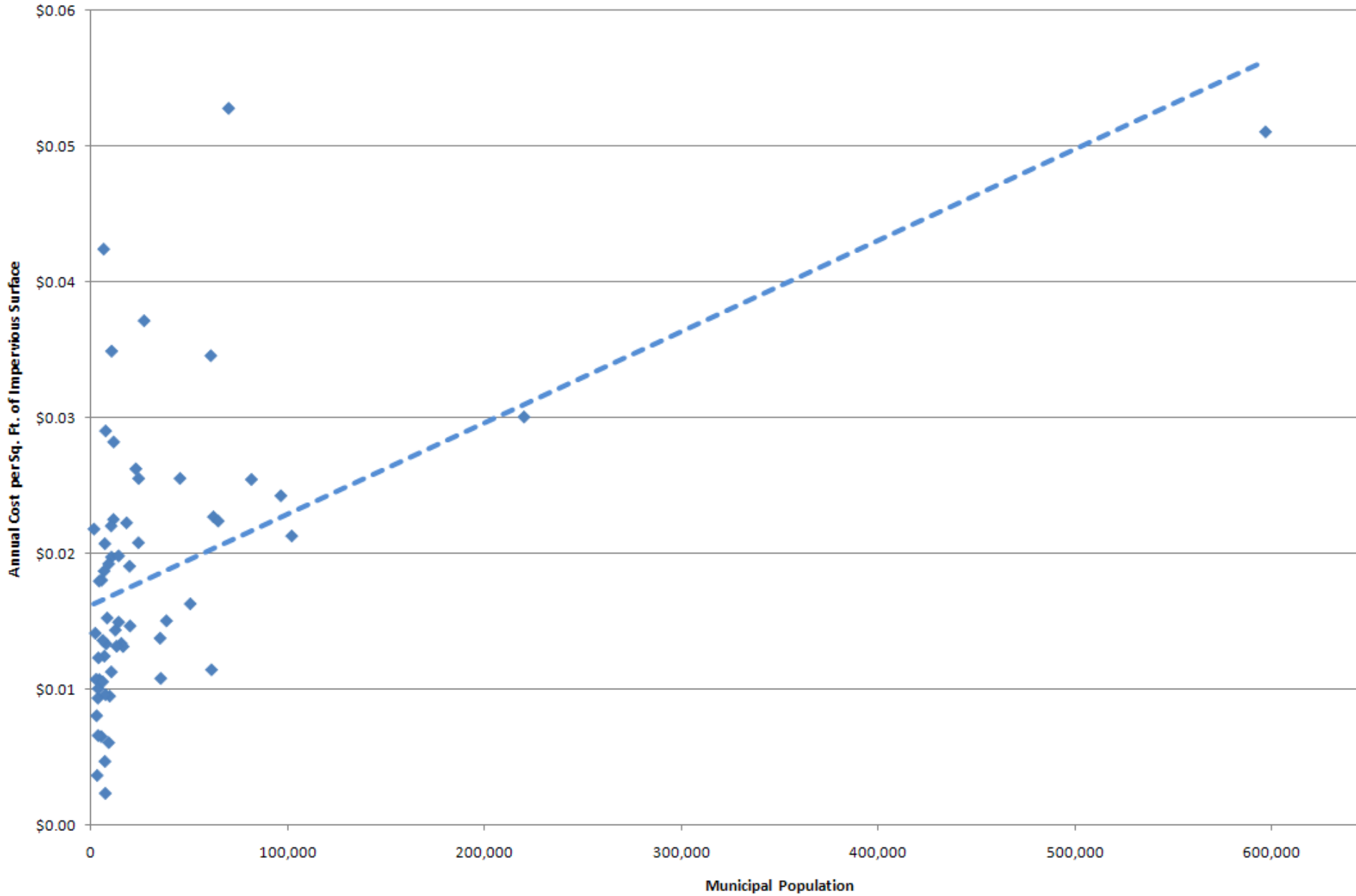
Annual Cost per ERU vs Population: r=0.21



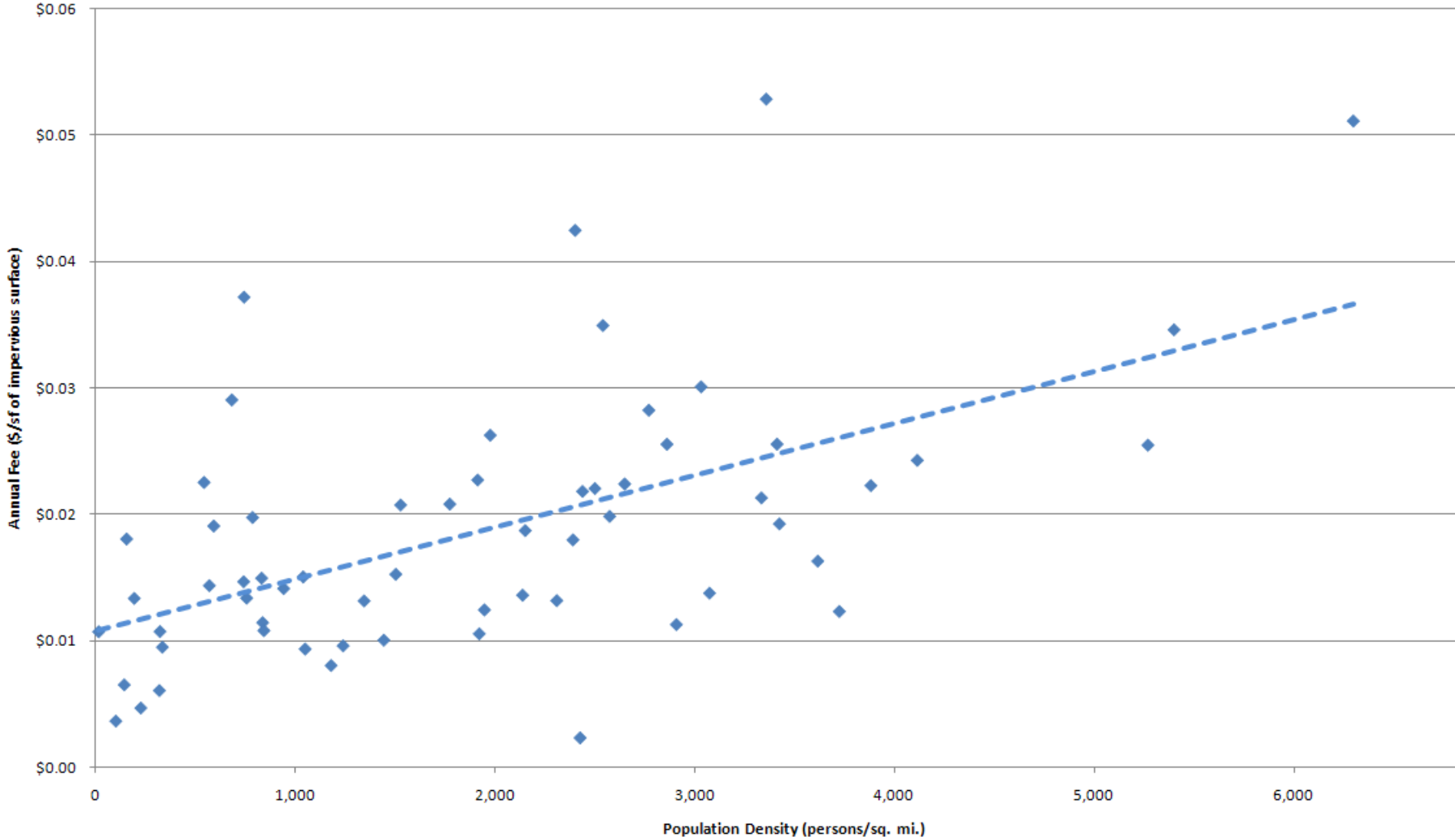
Annual Cost per ERU vs Pop. Density: r=0.29



$/yr/sf imp. surf. vs Population: r=0.52



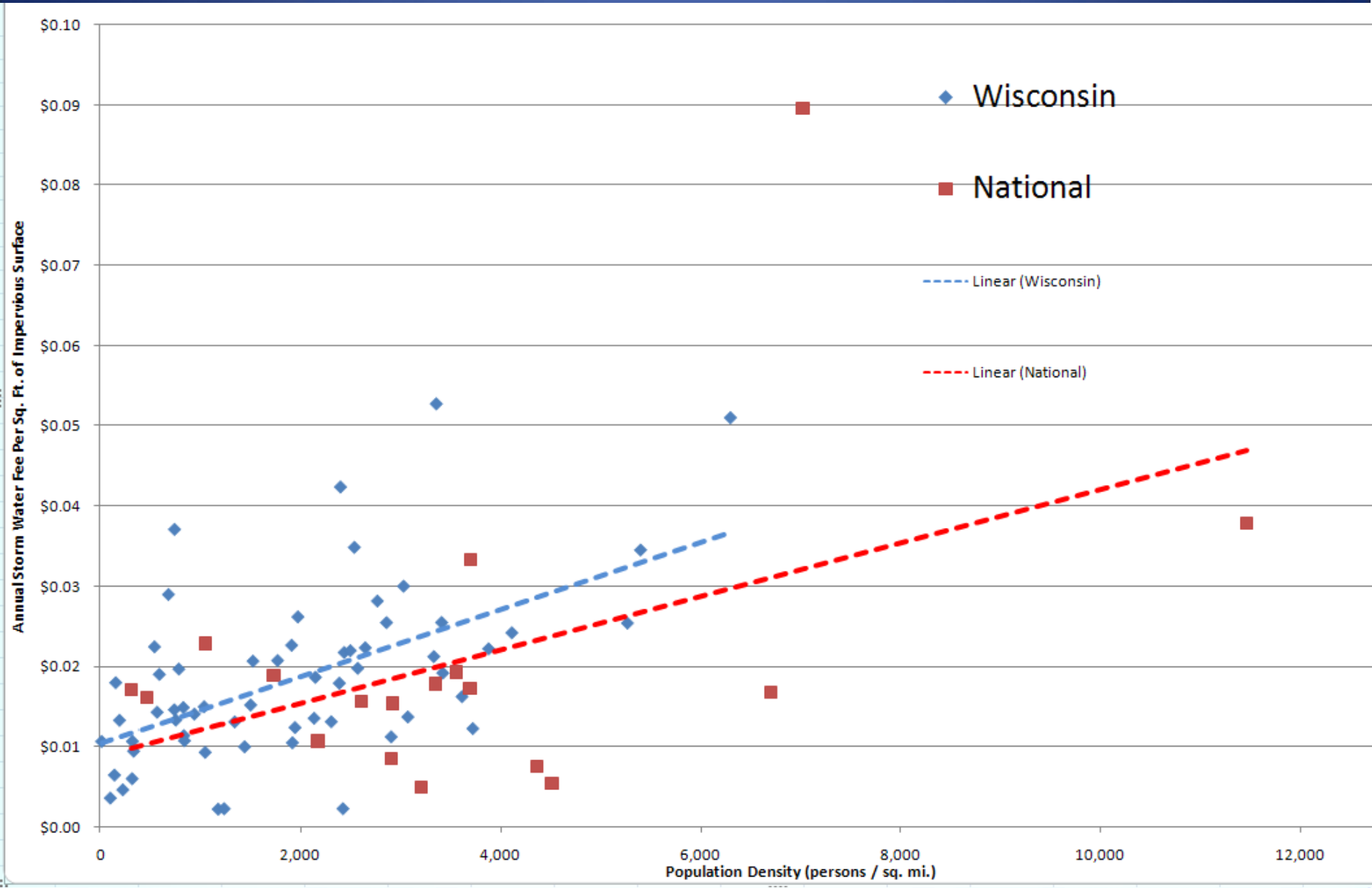
$/yr/sf imp. surf. vs Pop. Density: r=0.56



A Sampling of Utility Fees in Other States

Location	Population	Pop. Density (persons/ sq. mi.)	Basic unit size (sf)	Basis	ERU / single family lot / Billing unit	Annual Fees	Data sources	Notes
National average of 600 SWUs			2,800	Imp. Surf.	Single family lot	$ 15.40	Survey taken by Western Kentucky University	Mark Hoskins, P.E., CFM, Manhard Consulting Ltd. From IAFSM Fall 2006 Newsletter
Moline, IL	43,050	2,751	10,000	Gross lot area	EHA	$ 23.20	City website	Equivalent hydraulic acreage = (imp. Ac. * 0.95)+(pervious ac. * 0.15)
DuPage County, IL	930,528	2,784	500	Imp. Surf.	Billing unit	$ 4.50	County website	SFR - 6 billing units - $27/yr
Normal, IL	52,799	3,688	3,200	Imp. Surf.	ERU / SFR	$ 55.20	City website	
Rolling Meadows, IL	24,607	4,510	3,600	Imp. Surf.	ERU / SFR	$ 19.80	City website	
Bloomington, IL	74,184	3,297	12,000	Gross lot area	Single family lot	$ 87.00	City website	"Large"
Bloomington, IL	74,184	3,297	7,000	Gross lot area	Single family lot	$ 34.80	City website	"Small"
Bloomington, IL	74,184	3,297	1,000	Imp. Surf.	IAU	$ 17.80	City website	Minimum of 4 IAUs / parcel, $67/yr.
Grand Rapids, MN	7,764	1,057			SFR	$ 64.00	City website	
Grand Rapids, MN	7,764	1,057	43,560	Gross lot area	Billing unit	$ 360.00	City website	
Austin, MN	23,300	2,168			SFR	$ 30.00	City website	
Austin, MN	23,300	2,168	43,560	Gross lot area	Billing unit	$ 135.00	City website	Institutional
Austin, MN	23,300	2,168			Apartment	$ 7.56	City website	
Austin, MN	23,300	2,168	43,560	Gross lot area	Billing unit	$ 180.00	City website	Commercial
Cloquet, MN	11,200	318			REF	$ 48.00	City website	
New Brighton, MN	22,200	3,344			SFR	$ 50.00	City website	
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ 15.00	City website	Park, Cemetery, Golf Course
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ 158.00	City website	School
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ 215.00	City website	townhouse and mobile home park
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ 295.00	City website	Church
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ 350.00	City website	Aptmnt, Condo, Sr. Housing, Nursing Home
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ 658.00	City website	Commercial, Industiral, and Warehouse
New Brighton, MN	22,200	3,344	43,560	Gross lot area	Billing unit	$ -	City website	Unimproved, Vacant land
Minneapolis, MN	385,378	7,020	1,530	Imp. Surf.	ESU	$ 137.00	City website	1 ESU = 1 medium-sized SFR
Orono, MN	7,538	469			REF	$ 45.32	City website	REF - Reunoff equivalency factor = imp. Surf. Of SFR
Gwinnett County, GA	700,000	1,360	100	Imp. Surf.	Billing unit	$ 73.80	County website	Annual fee is for 3,000 sf imp surf
Newark, DE	28,547	3,200	21,780	Gross lot area	SFR	$ 31.00	City website	
Newark, DE	28,547	3,200	1,000	Imp. Surf.	Billing unit	$ 5.00	City website	Multifamily Residential, University, Business, Manufacturing, Industrial, Office
Santa Cruz, CA	56,124	4,356			SFR	$ 21.24	City website	
Santa Cruz, CA	56,124	4,356	43,560	Gross lot area	Billing unit	$ 261.09	City website	Commercial
Santa Cruz, CA	56,124	4,356	43,560	Gross lot area	Billing unit	$ 5.28	City website	Vacant lot
Fort Wayne, IN	253,691	2,606			SFR	$ 43.80	City website	Added to all residential customers' sewer / water bills
Fort Wayne, IN	253,691	2,606	2,500	Imp. Surf.	REU	$ 43.80	City website	Added to all non-residential customers' sewer / water bills
Sarasota County, FL	366,250	570	3,153	Imp. Surf.	SFR	$ 87.00	Philadelphia Inquirer	
Littleton, CO	40,400	2,902			SFR	$ 24.00	Philadelphia Inquirer	
Littleton, CO	40,400	2,902	43,560	Gross lot area	Billing unit	$ 50.00	Philadelphia Inquirer	Commercial
Wilmington, DE	73,069	6,698				$ 47.00	Philadelphia Inquirer	
Philadelphia, PA	1,460,000	11,457			SFR	$ 106.00	Philadelphia Inquirer	
Hampton, VA	145,600	2,919				$ 43.20	Philadelphia Inquirer	
Wooster, OH	25,700	1,726	3,050	Imp. Surf.	SFR	$ 57.60	Philadelphia Inquirer	
Dallas, TX	1,299,542	3,697	10,000	Gross lot area	SFR	$ 93.24	City website	Middle of several size ranges
Columbus, OH	769,360	3,556			SFR	$ 54.08	City website	Residential
Columbus, OH	769,360	3,556	2,000	Imp. Surf.	ERU	$ 54.08	City website	Non-residential

WI ~20% Above National Average



WI ~25% Above National Average

Possible City of Waukesha Storm Water Utility

- City is considering creating storm water utility
- Population 64,524
  - Estimate based on population: $56/ERU/yr
- Density 3,005 persons/mi^2
- Average lot 12,084 sq. ft. gross, 15,676 parcels
- ERU = 2,941 sq. ft.
  - $0.02/yr/sf impervious surface
  - ($0.02/yr/sf)*2,941 sf/ERU = $59/yr/ERU, estimate based on pop. density and impervious area / lot

Conclusions

- Storm water fee rates go up as population goes up.
- Population density and $/yr/sf imp. surf. are best predictor of annual fees.
- Wisconsin storm water fees are 20% higher than national fees, based on density and $/yr/sf imp. surf.
- Wisconsin storm water fees are 25% higher than national fees, based on total population and annual ERU rates.
- Impervious surface per ERU seems reasonable, based on small urban lots (1/4 acre).