

Historical and Projected Billed Volume Data - Sewage Disposal System

CUSTOMER	Historical Flow					Prior Year Projection	Current Year Projection	Prospective Yr Projection
	2007	2008	2009	2010	2011	2011	2012	2013
	Mcf	Mcf	Mcf	Mcf	Mcf	Mcf	Mcf	Mcf
SUBURBAN WHOLESALE:								
Allen Park	44,945	38,220	39,252	34,382	42,611	39,000	35,000	38,000
Center Line	63,770	57,160	60,825	36,128	57,072	60,000	50,000	50,000
Clinton-Oakland (a)								
Dearborn East	503,527	507,432	529,147	480,415	489,421	525,000	515,000	500,000
Dearborn Northeast	38,126	40,485	17,069	41,246	32,332	40,000	40,000	35,000
Dearborn West	604,100	607,632	652,945	513,399	567,934	625,000	600,000	575,000
Evergreen-Farmington	2,150,422	2,042,275	2,154,256	1,725,742	1,876,971	2,275,000	2,100,000	1,975,000
Farmington	72,612	68,050	75,344	57,180	71,072	72,000	65,000	65,000
Grosse Pointe	36,369	35,674	38,005	38,561	28,775	36,000	36,000	32,500
Grosse Pointe Farms	79,187	85,881	59,990	69,638	74,990	85,000	80,000	75,000
Grosse Pointe Park	117,517	112,129	108,704	83,776	91,839	110,000	110,000	95,000
Hamtramck	76,157	72,201	69,318	119,670	64,800	70,000	75,000	80,000
Harper Woods	6,210	6,640	5,859	5,484	5,720	6,500	6,500	6,000
Highland Park	177,542	200,762	185,565	133,898	151,053	185,000	175,000	150,000
Oakland Macomb Int Dist (a)	3,645,504	3,610,835	3,830,402	3,285,208	3,467,283	3,750,000	3,600,000	3,500,000
Melvindale	83,803	80,958	88,628	70,494	85,121	84,000	84,000	84,000
N.E. Wayne County	1,507,023	1,422,601	1,698,509	1,296,673	1,620,339	1,525,000	1,500,000	1,500,000
Redford Township	1,557	1,524	1,429	1,406	1,604	1,500	1,500	1,500
Rouge Valley	3,506,757	3,382,764	3,671,128	3,041,654	3,365,086	3,500,000	3,500,000	3,300,000
S.E. Oakland County	2,990,713	2,883,453	3,188,621	2,404,934	2,972,975	3,025,000	3,000,000	2,850,000
Wayne County #3	198	8	199	143	286	300	300	200
Wayne County #6	3,456	3,647	581	3,336	3,230	4,000	4,000	3,250
SUBTOTAL SUBURBAN	15,709,495	15,260,331	16,475,777	13,443,365	15,070,513	16,018,300	15,577,300	14,915,450
DETROIT RETAIL	4,337,580	3,718,008	3,961,629	3,591,825	3,737,887	3,900,000	3,775,000	3,775,000
TOTAL VOLUME	20,047,074	18,978,339	20,437,405	17,035,189	18,808,400	19,918,300	19,352,300	18,690,450

(a) Clinton-Oakland and Macomb County are now combined and reflected in OMID

Table 25
Modification to Billed Volumes - GDRSS Data - Mcf
Look-Back Year 2010-11

Line No.		(1) Billed Volumes	(2) Corrected Volumes	(3) Difference
	OUTSIDE CITY			
	<u>Billing Meter Customers</u>			
1	Allen Park	42,611	42,616	5
2	Center Line	57,072	57,072	0
3	Dearborn East	489,421	489,313	(108)
4	Dearborn West	567,934	567,568	(366)
5	Evergreen-Farmington	1,876,971	1,872,225	(4,746)
6	Farmington	71,072	71,087	15
7	Grosse Pointe Park	91,839	91,841	2
8	Oakland Macomb Int Dist	3,467,283	3,550,292	83,009
9	Melvindale	85,121	85,121	0
10	N.E. Wayne County	1,620,339	1,611,703	(8,636)
11	Rouge Valley	3,365,086	3,363,061	(2,025)
12	S.E. Oakland County	<u>2,972,975</u>	<u>2,958,988</u>	<u>(13,987)</u>
13	SUBTOTALS:	14,707,724	14,760,887	53,163
	<u>System Meter Customers</u>			
14	Dearborn E. (Storm Only)	0	0	0
15	Dearborn N.E.	32,332	32,332	0
16	Grosse Pointe	28,775	28,775	0
17	Grosse Pointe Farms	74,990	74,990	0
18	Hamtramck	64,800	64,800	0
19	Harper Woods	5,720	5,720	0
20	Highland Park	151,053	151,053	0
21	Redford Township	1,604	1,604	0
22	Wayne County #3	286	286	0
23	Wayne County #6	<u>3,230</u>	<u>3,230</u>	<u>0</u>
24	SUBTOTALS:	362,789	362,789	0
25	<i>SUBTOTAL SUBURBAN</i>	15,070,513	15,123,676	53,163
26	CITY OF DETROIT	3,771,587	3,771,587	0
27	TOTAL ALLOCATION VOLUME	18,842,099	18,895,262	53,163

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Table 26
Calculation of Allocated I/I Volumes - GDRSS Data - Mcf
Look-Back Rate Year 2010-11 & Rate Year 2012-13

Line No.		(1)	(2)	(3)	(4)	(5)
		5-Year Average of GDRSS Data				
		Local I/I	Common Use Interceptors	Common Use Sewers	Customer Connections	Total Allocated
	OUTSIDE CITY					
	<u>Billing Meter Customers</u>					
1	Allen Park	4,437	0	0	0	4,437
2	Center Line	2,665	0	8,488	0	11,154
3	Clinton-Oakland	0	0	0	0	0
4	Dearborn East	32,747	0	1,698	0	34,445
5	Dearborn West	145,121	0	0	0	145,121
6	Evergreen-Farmington	211,867	0	86,222	15,227	313,316
7	Farmington	8,166	0	0	142	8,308
8	Grosse Pointe Park	18,263	0	179	0	18,441
9	Oakland Macomb Int Dist	394,554	0	0	163,499	558,054
10	Melvindale	10,385	0	250	0	10,635
11	N.E. Wayne County	183,605	0	6,880	13,705	204,189
12	Rouge Valley	254,090	0	0	0	254,090
13	S.E. Oakland County	<u>142,160</u>	<u>0</u>	<u>61,025</u>	<u>0</u>	<u>203,186</u>
14	<i>SUBTOTALS:</i>	1,408,061	0	164,742	192,573	1,765,375
	<u>System Meter Customers</u>					
15	Dearborn E. (Storm Only)	0	0	1,519	0	1,519
16	Dearborn N.E.	25,742	0	11,526	0	37,268
17	Grosse Pointe	11,377	0	518	2,019	13,914
18	Grosse Pointe Farms	23,597	0	1,045	4,143	28,785
19	Hamtramck	103,000	0	29,664	0	132,664
20	Harper Woods	3,573	0	5,808	0	9,380
21	Highland Park	78,534	0	83,809	0	162,344
22	Redford Township	633	0	3,753	0	4,386
23	Wayne County #3	445	0	1,358	0	1,803
24	Wayne County #6	<u>1,038</u>	<u>0</u>	<u>777</u>	<u>0</u>	<u>1,815</u>
25	<i>SUBTOTALS:</i>	247,938	0	139,778	6,162	393,878
26	<i>SUBTOTAL SUBURBAN</i>	1,655,999	0	304,519	198,735	2,159,253
27	CITY OF DETROIT	<u>4,297,379</u>	<u>0</u>	<u>1,224,618</u>	<u>0</u>	<u>5,521,997</u>
28	TOTAL ALLOCATION VOLUME	5,953,378	0	1,529,137	198,735	7,681,250
29	Common Use Interceptor I/I		1,557,164			1,557,164
30	Common Use Sewer I/I			118,030		118,030
31	Customer Connections				0	0
32	TOTAL SYSTEM VOLUME	<u>5,953,378</u>	<u>1,557,164</u>	<u>1,647,167</u>	<u>198,735</u>	<u>9,356,444</u>

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**Calculation of Allocated I/I Volumes - GDRSS Data - Mcf
Look-Back Rate Year 2010-11 & Rate Year 2012-13**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					4-Yr Average - FY 2006-07 thru FY 2009-10					FY 2010-11 GDRSS DWII Allocation				
	Common Use Sewers		Customer Connections		Local I/I	Common Use Interceptors	Common Use Sewers	Customer Connections	Total Allocated	Local I/I	Common Use Interceptors	Common Use Sewers	Customer Connections	Total Allocated
	inch-miles	%	inch-miles	%										
OUTSIDE CITY														
Billing Meter Customers														
Allen Park	0	0.00%	0	0.00%	4,437	0	0	0	4,437	4,437	0	0	0	4,437
Center Line	95	0.52%	0	0.00%	2,665	0	8,068	0	10,734	2,665	0	10,167	0	12,833
Dearborn East	19	0.10%	0	0.00%	36,352	0	1,614	0	37,966	18,326	0	2,033	0	20,359
Dearborn West	0	0.00%	0	0.00%	144,979	0	0	0	144,979	145,688	0	0	0	145,688
Evergreen-Farmington	965	5.23%	430	7.66%	219,351	0	81,957	15,503	316,811	181,930	0	103,280	14,126	299,336
Farmington	0	0.00%	4	0.07%	7,812	0	0	144	7,956	9,585	0	0	131	9,716
Grosse Pointe Park	2	0.01%	0	0.00%	18,572	0	170	0	18,741	17,027	0	214	0	17,241
Oakland Macomb Int Dist	0	0.00%	4,617	82.27%	433,034	0	0	166,456	599,490	240,635	0	0	151,671	392,306
Melvindale	3	0.02%	0	0.00%	9,965	0	238	0	10,203	12,062	0	300	0	12,362
N.E. Wayne County	77	0.42%	387	6.90%	193,955	0	6,540	13,952	214,447	142,206	0	8,241	12,713	163,160
Rouge Valley	0	0.00%	0	0.00%	259,532	0	0	0	259,532	232,323	0	0	0	232,323
S.E. Oakland County	683	3.70%	0	0.00%	150,388	0	58,007	0	208,395	109,248	0	73,098	0	182,346
SUBTOTALS:	1,844	10.00%	5,438	96.90%	1,481,043	0	156,594	196,056	1,833,692	1,116,133	0	197,334	178,641	1,492,107
System Meter Customers														
Dearborn E. (Storm Only)	17	0.09%	0	0.00%	0	0	1,444	0	1,444	0	0	1,819	0	1,819
Dearborn N.E.	129	0.70%	0	0.00%	22,615	0	10,956	0	33,571	38,254	0	13,806	0	52,060
Grosse Pointe	6	0.03%	57	1.02%	10,740	0	493	2,055	13,288	13,924	0	621	1,872	16,417
Grosse Pointe Farms	12	0.06%	117	2.08%	22,436	0	994	4,218	27,648	28,237	0	1,252	3,844	33,332
Hamtramck	332	1.80%	0	0.00%	96,405	0	28,197	0	124,601	129,380	0	35,532	0	164,912
Harper Woods	65	0.35%	0	0.00%	3,237	0	5,520	0	8,757	4,916	0	6,957	0	11,872
Highland Park	938	5.09%	0	0.00%	86,107	0	79,664	0	165,771	48,243	0	100,390	0	148,633
Redford Township	42	0.23%	0	0.00%	495	0	3,567	0	4,062	1,185	0	4,495	0	5,680
Wayne County #3	15	0.08%	0	0.00%	266	0	1,291	0	1,557	1,162	0	1,627	0	2,789
Wayne County #6	9	0.05%	0	0.00%	815	0	739	0	1,554	1,928	0	931	0	2,859
SUBTOTALS:	1,564	8.49%	174	3.10%	243,116	0	132,864	6,273	382,253	267,228	0	167,431	5,716	440,374
SUBTOTAL SUBURBAN	3,408	18.49%	5,612	100.00%	1,724,158	0	289,458	202,329	2,215,946	1,383,360	0	364,764	184,357	1,932,481
CITY OF DETROIT	13,706	74.35%	0	0.00%	4,038,921	0	1,164,050	0	5,202,971	5,331,209	0	1,466,891	0	6,798,100
Total Allocation Volume	17,114	92.83%	5,612	100.00%	5,763,080	0	1,453,508	202,329	7,418,917	6,714,569	0	1,831,655	184,357	8,730,581
Common Use Interceptor I/I	0		0		0	1,557,164	0	0	1,557,164	0	1,557,164	0	0	1,557,164
Common Use Sewer I/I	1,321	7.17%	0	0.00%	0	0	91,585	0	91,585	0	0	141,381	0	141,381
Customer Connections	0	0.00%	0	0.00%	0	0	0	0	0	0	0	0	0	0
TOTAL SYSTEM VOLUME	18,435	100.00%	5,612	100.00%	5,763,080	1,557,164	1,545,092	202,329	9,067,665	6,714,569	1,557,164	1,973,036	184,357	10,429,126

Table 27
Calculation of Wet Weather Allocation Volumes - GDRSS Data
Look-Back Rate Year 2010-11

Line No.	(1)	(2)	Wet Weather Flow					(8)	(9)	(10)	(11)	
			(3)	(4)	(5)	(6)	(7)					
	FY 2010-11											
	Metered Flow	less: Total Dry	= Calc'd Wet	FY 2007-08	FY 2008-09	FY 2009-10	Prior Method	Wtd Avg	Overflow Percent	Overflow Volume	Allo'd Storm Volume	
			1/5 _{th}	1/5 _{th}	1/5 _{th}	1/5 _{th}	1/5 _{th}			(7) x (8)	(7) - (9)	
										Mcf	Mcf	
OUTSIDE CITY												
Billing Meter Customers												
1	Allen Park	42,611	27,972	14,639	8,803	12,301	5,450	10,365	10,311	30.8%	3,176	7,136
2	Center Line	57,072	38,483	18,589	12,379	19,068	8,381	5,388	12,761	30.8%	3,930	8,831
3	Clinton-Oakland	0	0	0	0	0	0	0	0	30.8%	0	0
4	Dearborn East	489,421	251,309	238,112	172,449	194,736	158,540	161,349	185,037	30.8%	56,991	128,046
5	Dearborn West	567,934	411,471	156,463	168,359	204,835	94,864	118,045	148,513	30.8%	45,742	102,771
6	Evergreen-Farmington	1,876,971	1,559,229	317,742	229,810	332,381	130,350	171,232	236,303	30.8%	72,781	163,522
7	Farmington	71,072	53,976	17,096	12,401	19,124	6,641	10,873	13,227	30.8%	4,074	9,153
8	Grosse Pointe Park	91,839	70,088	21,751	34,531	34,155	14,079	9,659	22,835	30.8%	7,033	15,802
9	Oakland Macomb Int Dist	4,167,283	3,496,637	670,645	235,525	178,096	(135,650)	158,244	221,372	30.8%	68,183	153,189
10	Melvindale	85,121	63,552	21,569	13,328	22,438	7,277	13,291	15,581	30.8%	4,799	10,782
11	N.E. Wayne County	1,620,339	937,831	682,508	429,704	696,222	324,938	314,944	489,663	30.8%	150,816	338,847
12	Rouge Valley	3,365,086	2,573,041	792,045	634,192	968,684	290,011	264,856	589,958	30.8%	181,707	408,251
13	S.E. Oakland County	2,972,975	1,819,255	1,153,720	901,169	1,202,348	613,639	721,286	918,432	30.8%	282,877	635,555
14	SUBTOTALS:	15,407,724	11,302,846	4,104,877	2,852,649	3,884,388	1,518,520	1,959,533	2,863,993		882,110	1,981,883

PRELIMINARY

Table 27
Calculation of Wet Weather Allocation Volumes - GDRSS Data
Look-Back Rate Year 2010-11

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Stormwater Runoff and Overflow							
		Area Served	Runoff Coefficient	Avg Annual Rainfall	Conversion Factor	Runoff Volume	Overflow Percent	Overflow Volume	Allo'd Storm Volume
		(acres)		(inches)		(1)x(2)x(3)x(4) Mcf		(5) x (6) Mcf	(5) - (7) Mcf
System Meter Customers									
15	Dearborn E. (Storm Only)	852	0.279	32.00	3.63	27,612	30.8%	8,505	19,108
16	Dearborn N.E.	714	0.462	32.00	3.63	38,291	30.8%	11,794	26,497
17	Grosse Pointe	675	0.167	32.00	3.63	13,095	30.8%	4,033	9,062
18	Grosse Pointe Farms	1,369	0.172	32.00	3.63	27,346	30.8%	8,422	18,923
19	Hamtramck	1,360	0.441	32.00	3.63	69,665	30.8%	21,457	48,208
20	Harper Woods	173	0.064	32.00	3.63	1,285	30.8%	396	889
21	Highland Park	1,870	0.406	32.00	3.63	88,181	30.8%	27,160	61,021
22	Redford Township	49	0.332	32.00	3.63	1,899	30.8%	585	1,314
23	Wayne County #3	17	0.298	32.00	3.63	578	30.8%	178	400
24	Wayne County #6	<u>81</u>	0.354	32.00	3.63	<u>3,335</u>	30.8%	<u>1,027</u>	<u>2,308</u>
25	SUBTOTALS:	<u>7,159</u>				<u>271,287</u>		<u>83,556</u>	<u>187,731</u>
26	SUBTOTAL SUBURBAN					3,135,281		965,666	2,169,614
CITY OF DETROIT									
System Meters									
27	Baby Creek	10,831	0.379	32.00	3.63	476,818	30.8%	146,860	329,958
28	Central	21,844	0.489	32.00	3.63	1,240,802	30.8%	382,167	858,635
29	Conner Creek	15,411	0.395	32.00	3.63	707,085	30.8%	217,782	489,303
30	East Jefferson	2,452	0.400	32.00	3.63	113,943	30.8%	35,094	78,848
31	Fox Creek	7,596	0.366	32.00	3.63	322,941	30.8%	99,466	223,475
32	Hubbell	6,533	0.378	32.00	3.63	286,870	30.8%	88,356	198,514
33	Oakwood	1,462	0.443	32.00	3.63	75,252	30.8%	23,178	52,074
34	River Rouge	8,742	0.318	32.00	3.63	322,917	30.8%	99,459	223,459
35	Southfield	<u>7,308</u>	0.337	32.00	3.63	<u>286,093</u>	30.8%	<u>88,117</u>	<u>197,977</u>
36	SUBTOTALS:	<u>82,180</u>				<u>3,832,721</u>	30.8%	<u>1,180,478</u>	<u>2,652,243</u>
37	TOTAL ALLOCATION VOLUME	82,180				6,968,001		2,146,144	4,821,857

PRELIMINARY

Table 28
Calculation of Allocated Sanitary Volumes - Mcf
Look-Back Year 2010-11

Line No.	(1) Metered Wastewater <i>Table 25</i>	(2) Local I/I <i>Table 26</i>	(3) Total Storm <i>Table 27</i>	(4) Allocated Sanitary <i>(1) - (2) - (3)</i>	
OUTSIDE CITY					
<u>Billing Meter Customers</u>					
1	Allen Park	42,616	4,437	10,311	27,867
2	Center Line	57,072	2,665	12,761	41,645
3	Dearborn East	489,313	32,747	185,037	271,529
4	Dearborn West	567,568	145,121	148,513	273,934
5	Evergreen-Farmington	1,872,225	211,867	236,303	1,424,055
6	Farmington	71,087	8,166	13,227	49,694
7	Grosse Pointe Park	91,841	18,263	22,835	50,743
8	Oakland Macomb Int Dist	3,550,292	394,554	221,372	2,934,365
9	Melvindale	85,121	10,385	15,581	59,156
10	N.E. Wayne County	1,611,703	183,605	489,663	938,435
11	Rouge Valley	3,363,061	254,090	589,958	2,519,013
12	S.E. Oakland County	<u>2,958,988</u>	<u>142,160</u>	<u>918,432</u>	<u>1,898,395</u>
13	<i>SUBTOTALS:</i>	<i>14,760,887</i>	<i>1,408,061</i>	<i>2,863,993</i>	<i>10,488,832</i>
			Metered Water Sales <i>Table 25</i>	Allocation Factor	Allocated Sanitary <i>(2) x (3)</i>
<u>System Meter Customers</u>					
14	Dearborn E. (Storm Only)				0
15	Dearborn N.E.		32,332	0.90	29,098
16	Grosse Pointe		28,775	0.90	25,897
17	Grosse Pointe Farms		74,990	0.90	67,491
18	Hamtramck		64,800	0.90	58,320
19	Harper Woods		5,720	0.90	5,148
20	Highland Park		151,053	0.90	135,948
21	Redford Township		1,604	0.90	1,444
22	Wayne County #3		286	0.90	258
23	Wayne County #6		<u>3,230</u>	<u>0.90</u>	<u>2,907</u>
24	<i>SUBTOTALS:</i>		<i>362,789</i>		<i>326,510</i>
25	SUBTOTAL SUBURBAN				10,815,343
26	CITY OF DETROIT		3,771,587	0.99	<u>3,734,208</u>
27	TOTAL ALLOCATION VOLUME				14,549,550

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Table 29
Calculation of Estimated Allocation Volumes - GDRSS Data - Mcf
Look-Back Year 2010-11

Line No.	(1) Allocated Sanitary <i>Table 28</i>	(2) Total Allocated I/I <i>Table 26</i>	(3) Allo'd Storm Volume <i>Table 27</i>	(4) Total Allocated Volume <i>(1)+(2)+(3)</i>	(5) Integrated System Flow Allocation Factor	
OUTSIDE CITY						
<u>Billing Meter Customers</u>						
1	Allen Park	27,867	4,437	7,136	39,440	0.15%
2	Center Line	41,645	11,154	8,831	61,630	0.23%
3	Dearborn East	271,529	34,445	128,046	434,019	1.60%
4	Dearborn West	273,934	145,121	102,771	521,826	1.93%
5	Evergreen-Farmington	1,424,055	313,316	163,522	1,900,893	7.03%
6	Farmington	49,694	8,308	9,153	67,155	0.25%
7	Grosse Pointe Park	50,743	18,441	15,802	84,986	0.31%
8	Oakland Macomb Int Dist	2,934,365	558,054	153,189	3,645,608	13.48%
9	Melvindale	59,156	10,635	10,782	80,572	0.30%
10	N.E. Wayne County	938,435	204,189	338,847	1,481,471	5.48%
11	Rouge Valley	2,519,013	254,090	408,251	3,181,354	11.76%
12	S.E. Oakland County	<u>1,898,395</u>	<u>203,186</u>	<u>635,555</u>	<u>2,737,136</u>	<u>10.12%</u>
13	<i>SUBTOTALS:</i>	<i>10,488,832</i>	<i>1,765,375</i>	<i>1,981,883</i>	<i>14,236,091</i>	<i>52.62%</i>
<u>System Meter Customers</u>						
14	Dearborn E. (Storm Only)	0	1,519	19,108	20,627	0.08%
15	Dearborn N.E.	29,098	37,268	26,497	92,864	0.34%
16	Grosse Pointe	25,897	13,914	9,062	48,873	0.18%
17	Grosse Pointe Farms	67,491	28,785	18,923	115,199	0.43%
18	Hamtramck	58,320	132,664	48,208	239,192	0.88%
19	Harper Woods	5,148	9,380	889	15,417	0.06%
20	Highland Park	135,948	162,344	61,021	359,313	1.33%
21	Redford Township	1,444	4,386	1,314	7,144	0.03%
22	Wayne County #3	258	1,803	400	2,461	0.01%
23	Wayne County #6	<u>2,907</u>	<u>1,815</u>	<u>2,308</u>	<u>7,030</u>	<u>0.03%</u>
24	<i>SUBTOTALS:</i>	<i>326,510</i>	<i>393,878</i>	<i>187,731</i>	<i>908,119</i>	<i>3.36%</i>
25	SUBTOTAL SUBURBAN	10,815,343	2,159,253	2,169,614	15,144,210	55.98%
26	CITY OF DETROIT	<u>3,734,208</u>	<u>5,521,997</u>	<u>2,652,243</u>	<u>11,908,447</u>	44.02%
27	TOTAL ALLOCATION VOLUME	14,549,550	7,681,250	4,821,857	27,052,657	100.00%

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Table 30
Allocation of Units of Service to Customers
Look-Back Year 2010-11

Line No.	(1) Allocation Volume Mcf	(2) BOD lbs (a)	(3) TSS lbs (b)	(4) PHOS lbs (c)	(5) FOG lbs (d)	(6) New Wet Weather Facilities	
OUTSIDE CITY							
Billing Meter Customers							
1	Allen Park	39,440	177,176	328,819	5,463	35,995	0.03%
2	Center Line	61,630	276,894	513,883	8,538	56,254	0.06%
3	Dearborn East	434,019	1,950,474	3,619,853	60,146	396,260	0.00%
4	Dearborn West	521,826	2,346,137	4,354,157	72,346	476,644	0.00%
5	Evergreen-Farmington	1,900,893	8,561,773	15,889,657	264,014	1,739,419	1.49%
6	Farmington	67,155	301,650	559,827	9,302	61,284	0.05%
7	Grosse Pointe Park	84,986	381,824	708,620	11,774	77,572	0.06%
8	Oakland Macomb Int Dist	3,645,608	16,006,269	29,705,775	493,575	3,251,851	2.65%
9	Melvindale	80,572	362,001	671,831	11,163	73,544	0.07%
10	N.E. Wayne County	1,481,471	6,694,847	12,424,858	206,445	1,360,133	1.17%
11	Rouge Valley	3,181,354	14,302,484	26,543,749	441,037	2,905,709	2.96%
12	S.E. Oakland County	2,737,136	12,360,418	22,939,501	381,151	2,511,156	2.26%
13	SUBTOTALS:	14,236,091	63,721,947	118,260,530	1,964,954	12,945,822	10.80%
System Meter Customers							
14	Dearborn E. (Storm Only)	20,627	92,672	171,989	2,858	18,827	1.63%
15	Dearborn N.E.	92,864	417,227	774,324	12,866	84,764	0.00%
16	Grosse Pointe	48,873	219,578	407,511	6,771	44,610	0.23%
17	Grosse Pointe Farms	115,199	517,573	960,556	15,960	105,151	0.50%
18	Hamtramck	239,192	1,074,658	1,994,440	33,139	218,329	1.59%
19	Harper Woods	15,417	69,268	128,553	2,136	14,073	0.01%
20	Highland Park	359,313	1,614,342	2,996,031	49,780	327,972	2.06%
21	Redford Township	7,144	32,096	59,566	990	6,521	0.06%
22	Wayne County #3	2,461	11,056	20,519	341	2,246	0.03%
23	Wayne County #6	7,030	31,583	58,614	974	6,416	0.08%
24	SUBTOTALS:	908,119	4,080,052	7,572,103	125,814	828,908	6.20%
25	SUBTOTAL SUBURBAN	15,144,210	67,801,999	125,832,633	2,090,768	13,774,730	17.00%
26	CITY OF DETROIT	11,908,447	53,503,015	99,295,381	1,649,839	10,869,732	83.00%
27	TOTAL ALLOCATION VOLUME	27,052,657	121,305,014	225,128,015	3,740,607	24,644,462	100.00%
28	Industrial Monitored Customers		<u>3,875,000</u>	<u>4,500,000</u>	<u>75,000</u>	<u>1,250,000</u>	
29	TOTAL ASSIGNED UNITS OF SERVICE	27,052,657	125,180,014	229,628,015	3,815,607	25,894,462	100.00%

(a) Based on 72 mg/l for ALL flow types

(b) Based on 134 mg/l for ALL flow types

(c) Based on 2.2 mg/l for ALL flow types

(d) Based on 14.6 mg/l for ALL flow types

Table 10
Calculation of Allocated I/I Volumes - GDRSS Data - Mcf
Look-Back Rate Year 2010-11 & Rate Year 2012-13

Line No.		(1)	(2)	(3)	(4)	(5)
		5-Year Average of GDRSS Data				
		Local I/I	Common Use Interceptors	Common Use Sewers	Customer Connections	Total Allocated
	OUTSIDE CITY					
	<u>Billing Meter Customers</u>					
1	Allen Park	4,437	0	0	0	4,437
2	Center Line	2,665	0	8,488	0	11,154
3	Clinton-Oakland	0	0	0	0	0
4	Dearborn East	32,747	0	1,698	0	34,445
5	Dearborn West	145,121	0	0	0	145,121
6	Evergreen-Farmington	211,867	0	86,222	15,227	313,316
7	Farmington	8,166	0	0	142	8,308
8	Grosse Pointe Park	18,263	0	179	0	18,441
9	Oakland Macomb Int Dist	394,554	0	0	163,499	558,054
10	Melvindale	10,385	0	250	0	10,635
11	N.E. Wayne County	183,605	0	6,880	13,705	204,189
12	Rouge Valley	254,090	0	0	0	254,090
13	S.E. Oakland County	<u>142,160</u>	<u>0</u>	<u>61,025</u>	<u>0</u>	<u>203,186</u>
14	<i>SUBTOTALS:</i>	1,408,061	0	164,742	192,573	1,765,375
	<u>System Meter Customers</u>					
15	Dearborn E. (Storm Only)	0	0	1,519	0	1,519
16	Dearborn N.E.	25,742	0	11,526	0	37,268
17	Grosse Pointe	11,377	0	518	2,019	13,914
18	Grosse Pointe Farms	23,597	0	1,045	4,143	28,785
19	Hamtramck	103,000	0	29,664	0	132,664
20	Harper Woods	3,573	0	5,808	0	9,380
21	Highland Park	78,534	0	83,809	0	162,344
22	Redford Township	633	0	3,753	0	4,386
23	Wayne County #3	445	0	1,358	0	1,803
24	Wayne County #6	<u>1,038</u>	<u>0</u>	<u>777</u>	<u>0</u>	<u>1,815</u>
25	<i>SUBTOTALS:</i>	247,938	0	139,778	6,162	393,878
26	<i>SUBTOTAL SUBURBAN</i>	1,655,999	0	304,519	198,735	2,159,253
27	CITY OF DETROIT	<u>4,297,379</u>	<u>0</u>	<u>1,224,618</u>	<u>0</u>	<u>5,521,997</u>
28	TOTAL ALLOCATION VOLUME	5,953,378	0	1,529,137	198,735	7,681,250
29	Common Use Interceptor I/I		1,557,164			1,557,164
30	Common Use Sewer I/I			118,030		118,030
31	Customer Connections				0	0
32	TOTAL SYSTEM VOLUME	<u>5,953,378</u>	<u>1,557,164</u>	<u>1,647,167</u>	<u>198,735</u>	<u>9,356,444</u>

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Table 11
Calculation of Wet Weather Allocation Volumes - GDRSS Data
Look-Back Rate Year 2010-11 & Rate Year 2012-13

Line No.		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
		Wet Weather Flow							Overflow Percent	Overflow Volume	Allo'd Storm Volume		
		FY 2010-11											
		Metered Flow	less: Total Dry	= Calc'd Wet	FY 2007-08	FY 2008-09	FY 2009-10	Prior Method	Wtd Avg		(7) x (8)	(7) - (9)	
				1/5 _{th}	1/5 _{th}	1/5 _{th}	1/5 _{th}	1/5 _{th}			Mcf	Mcf	
OUTSIDE CITY													
Billing Meter Customers													
1	Allen Park	42,611	27,972	14,639	8,803	12,301	5,450	10,365	10,311	15.0%	1,547	8,765	
2	Center Line	57,072	38,483	18,589	12,379	19,068	8,381	5,388	12,761	15.0%	1,914	10,847	
3	Dearborn East	489,421	251,309	238,112	172,449	194,736	158,540	161,349	185,037	15.0%	27,756	157,281	
4	Dearborn West	567,934	411,471	156,463	168,359	204,835	94,864	118,045	148,513	15.0%	22,277	126,236	
5	Evergreen-Farmington	1,876,971	1,559,229	317,742	229,810	332,381	130,350	171,232	236,303	15.0%	35,445	200,858	
6	Farmington	71,072	53,976	17,096	12,401	19,124	6,641	10,873	13,227	15.0%	1,984	11,243	
7	Grosse Pointe Park	91,839	70,088	21,751	34,531	34,155	14,079	9,659	22,835	15.0%	3,425	19,410	
8	Oakland Macomb Int Dist	4,167,283	3,496,637	670,645	235,525	178,096	(135,650)	158,244	221,372	15.0%	33,206	188,166	
9	Melvindale	85,121	63,552	21,569	13,328	22,438	7,277	13,291	15,581	15.0%	2,337	13,244	
10	N.E. Wayne County	1,620,339	937,831	682,508	429,704	696,222	324,938	314,944	489,663	15.0%	73,449	416,214	
11	Rouge Valley	3,365,086	2,573,041	792,045	634,192	968,684	290,011	264,856	589,958	15.0%	88,494	501,464	
12	S.E. Oakland County	<u>2,972,975</u>	<u>1,819,255</u>	<u>1,153,720</u>	<u>901,169</u>	<u>1,202,348</u>	<u>613,639</u>	<u>721,286</u>	<u>918,432</u>	15.0%	<u>137,765</u>	<u>780,667</u>	
13	SUBTOTALS:	15,407,724	11,302,846	4,104,877	2,852,649	3,884,388	1,518,520	1,959,533	2,863,993		429,599	2,434,394	

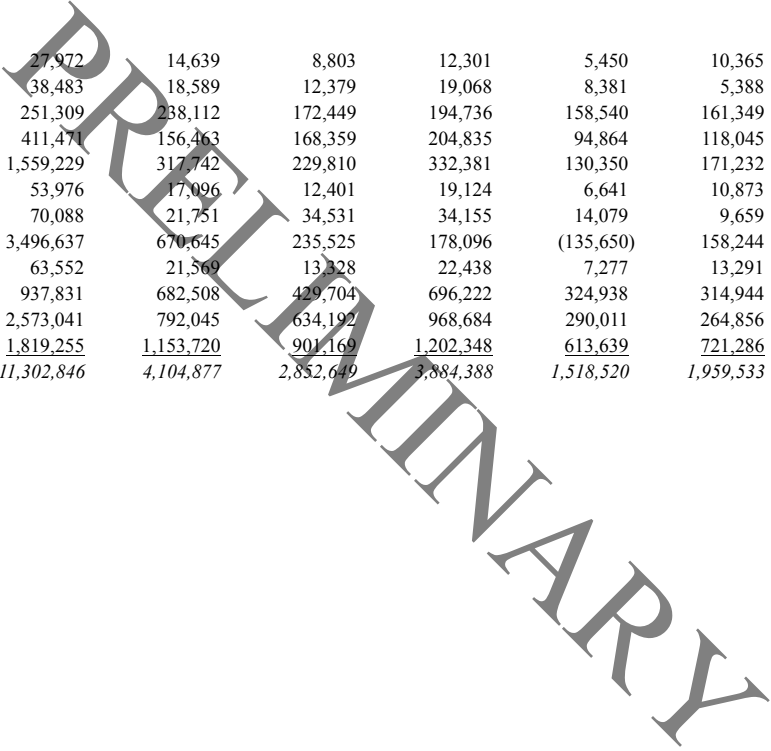


Table 11
Calculation of Wet Weather Allocation Volumes - GDRSS Data
Look-Back Rate Year 2010-11 & Rate Year 2012-13

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Stormwater Runoff and Overflow							
	Area Served	Runoff Coefficient	Avg Annual Rainfall	Conversion Factor	Runoff Volume	Overflow Percent	Overflow Volume	Allo'd Storm Volume
	(acres)		(inches)		(1)x(2)x(3)x(4) Mcf		(5) x (6) Mcf	(5) - (7) Mcf
System Meter Customers								
14	Dearborn E. (Storm Only)	852	0.279	32.00	3.63	27,612	15.0%	23,470
15	Dearborn N.E.	714	0.462	32.00	3.63	38,291	15.0%	32,547
16	Grosse Pointe	675	0.167	32.00	3.63	13,095	15.0%	11,131
17	Grosse Pointe Farms	1,369	0.172	32.00	3.63	27,346	15.0%	23,244
18	Hamtramck	1,360	0.441	32.00	3.63	69,665	15.0%	59,215
19	Harper Woods	173	0.064	32.00	3.63	1,285	15.0%	1,092
20	Highland Park	1,870	0.406	32.00	3.63	88,181	15.0%	74,953
21	Redford Township	49	0.332	32.00	3.63	1,899	15.0%	1,614
22	Wayne County #3	17	0.298	32.00	3.63	578	15.0%	491
23	Wayne County #6	81	0.354	32.00	3.63	3,335	15.0%	2,834
24	<i>SUBTOTALS:</i>	<u>7,159</u>				<u>271,287</u>		<u>230,594</u>
25	SUBTOTAL SUBURBAN					3,135,281		2,664,989
CITY OF DETROIT								
System Meters								
26	Baby Creek	10,831	0.379	32.00	3.63	476,818	15.0%	405,296
27	Central	21,844	0.489	32.00	3.63	1,240,802	15.0%	1,054,682
28	Conner Creek	15,411	0.395	32.00	3.63	707,085	15.0%	601,022
29	East Jefferson	2,452	0.400	32.00	3.63	113,943	15.0%	96,851
30	Fox Creek	7,596	0.366	32.00	3.63	322,941	15.0%	274,500
31	Hubbell	6,533	0.378	32.00	3.63	286,870	15.0%	243,839
32	Oakwood	1,462	0.443	32.00	3.63	75,252	15.0%	63,964
33	River Rouge	8,742	0.318	32.00	3.63	322,917	15.0%	274,480
34	Southfield	<u>7,308</u>	0.337	32.00	3.63	<u>286,093</u>	15.0%	<u>243,179</u>
35	<i>SUBTOTALS:</i>	<u>82,180</u>				<u>3,832,721</u>	<u>15.0%</u>	<u>3,257,813</u>
36	TOTAL ALLOCATION VOLUME	82,180				6,968,001		5,922,801

PRELIMINARY

Table 12
Calculation of Allocated Sanitary Volumes - Mcf
Prospective Rate Year 2012-13

Line No.	(1) Metered <u>Wastewater</u> <i>Table 1</i>	(2) Local <u>I/I</u> <i>Table 10</i>	(3) Total <u>Storm</u> <i>Table 11</i>	(4) Allocated <u>Sanitary</u> <i>(1) - (2) - (3)</i>	
OUTSIDE CITY					
<u>Billing Meter Customers</u>					
1	Allen Park	38,000	4,437	10,311	23,251
2	Center Line	50,000	2,665	12,761	34,573
3	Dearborn East	500,000	32,747	185,037	282,216
4	Dearborn West	575,000	145,121	148,513	281,366
5	Evergreen-Farmington	1,975,000	211,867	236,303	1,526,830
6	Farmington	65,000	8,166	13,227	43,607
7	Grosse Pointe Park	95,000	18,263	22,835	53,902
8	Oakland Macomb Int Dist	3,500,000	394,554	221,372	2,884,074
9	Melvindale	84,000	10,385	15,581	58,035
10	N.E. Wayne County	1,500,000	183,605	489,663	826,732
11	Rouge Valley	3,300,000	254,090	589,958	2,455,952
12	S.E. Oakland County	<u>2,850,000</u>	<u>142,160</u>	<u>918,432</u>	<u>1,789,407</u>
13	<i>SUBTOTALS:</i>	<i>14,532,000</i>	<i>1,408,061</i>	<i>2,863,993</i>	<i>10,259,946</i>
		Metered <u>Water Sales</u> <i>Table 1</i>	Allocation <u>Factor</u>	Allocated <u>Sanitary</u> <i>(2) x (3)</i>	
<u>System Meter Customers</u>					
14	Dearborn E. (Storm Only)				0
15	Dearborn N.E.		35,000	0.90	31,500
16	Grosse Pointe		32,500	0.90	29,250
17	Grosse Pointe Farms		75,000	0.90	67,500
18	Hamtramck		80,000	0.90	72,000
19	Harper Woods		6,000	0.90	5,400
20	Highland Park		150,000	0.90	135,000
21	Redford Township		1,500	0.90	1,350
22	Wayne County #3		200	0.90	180
23	Wayne County #6		<u>3,250</u>	<u>0.90</u>	<u>2,925</u>
24	<i>SUBTOTALS:</i>		<i>383,450</i>		<i>345,105</i>
25	SUBTOTAL SUBURBAN				10,605,051
26	CITY OF DETROIT		3,775,000	0.99	<u>3,737,500</u>
27	TOTAL ALLOCATION VOLUME				14,342,551

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Table 13
Calculation of Estimated Allocation Volumes - GDRSS Data - Mcf
Prospective Rate Year 2012-13

Line No.	(1) Allocated Sanitary <i>Table 12</i>	(2) Total Allocated I/I <i>Table 10</i>	(3) Allo'd Storm Volume <i>Table 11</i>	(4) Total Allocated Volume <i>(1)+(2)+(3)</i>	(5) Integrated System Flow Allocation Factor	
OUTSIDE CITY						
<u>Billing Meter Customers</u>						
1	Allen Park	23,251	4,437	8,765	36,453	0.13%
2	Center Line	34,573	11,154	10,847	56,574	0.20%
3	Dearborn East	282,216	34,445	157,281	473,942	1.70%
4	Dearborn West	281,366	145,121	126,236	552,723	1.98%
5	Evergreen-Farmington	1,526,830	313,316	200,858	2,041,004	7.30%
6	Farmington	43,607	8,308	11,243	63,158	0.23%
7	Grosse Pointe Park	53,902	18,441	19,410	91,753	0.33%
8	Oakland Macomb Int Dist	2,884,074	558,054	188,166	3,630,294	12.99%
9	Melvindale	58,035	10,635	13,244	81,913	0.29%
10	N.E. Wayne County	826,732	204,189	416,214	1,447,135	5.18%
11	Rouge Valley	2,455,952	254,090	501,464	3,211,506	11.49%
12	S.E. Oakland County	<u>1,789,407</u>	<u>203,186</u>	<u>780,667</u>	<u>2,773,261</u>	<u>9.92%</u>
13	SUBTOTALS:	<u>10,259,946</u>	<u>1,765,375</u>	<u>2,434,394</u>	<u>14,459,716</u>	<u>51.74%</u>
<u>System Meter Customers</u>						
14	Dearborn E. (Storm Only)	0	1,519	23,470	24,989	0.09%
15	Dearborn N.E.	31,500	37,268	32,547	101,316	0.36%
16	Grosse Pointe	29,250	13,914	11,131	54,295	0.19%
17	Grosse Pointe Farms	67,500	28,785	23,244	119,529	0.43%
18	Hamtramck	72,000	132,664	59,215	263,879	0.94%
19	Harper Woods	5,400	9,380	1,092	15,873	0.06%
20	Highland Park	135,000	162,344	74,953	372,297	1.33%
21	Redford Township	1,350	4,386	1,614	7,350	0.03%
22	Wayne County #3	180	1,803	491	2,474	0.01%
23	Wayne County #6	<u>2,925</u>	<u>1,815</u>	<u>2,834</u>	<u>7,575</u>	<u>0.03%</u>
24	SUBTOTALS:	<u>345,105</u>	<u>393,878</u>	<u>230,594</u>	<u>969,577</u>	<u>3.47%</u>
25	SUBTOTAL SUBURBAN	10,605,051	2,159,253	2,664,989	15,429,292	55.21%
26	CITY OF DETROIT	<u>3,737,500</u>	<u>5,521,997</u>	<u>3,257,813</u>	<u>12,517,309</u>	44.79%
27	TOTAL ALLOCATION VOLUME	14,342,551	7,681,250	5,922,801	27,946,602	100.00%

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Table 14
Units of Service Summary by Customer
Prospective Rate Year 2012-13

Line No.	Allocation	(1)	(2)	(3)	(4)	(5)	(6)
		<u>Volume</u> Mcf	<u>BOD</u> lbs <i>(a)</i>	<u>TSS</u> lbs <i>(b)</i>	<u>PHOS</u> lbs <i>(c)</i>	<u>FOG</u> lbs <i>(d)</i>	<u>New Wet Weather Facilities</u>
OUTSIDE CITY							
<u>Billing Meter Customers</u>							
1	Allen Park	36,453	218,419	340,613	5,633	36,366	0.03%
2	Center Line	56,574	332,758	518,919	8,582	55,404	0.06%
3	Dearborn East	473,942	2,757,112	4,299,575	71,110	459,055	0.00%
4	Dearborn West	552,723	3,018,868	4,707,769	77,861	502,637	0.00%
5	Evergreen-Farmington	2,041,004	13,155,151	20,514,781	339,289	2,190,314	1.49%
6	Farmington	63,158	392,099	611,458	10,113	65,284	0.05%
7	Grosse Pointe Park	91,753	530,747	827,672	13,689	88,369	0.06%
8	Oakland Macomb Int Dist	3,630,294	24,091,521	37,569,488	621,353	4,011,205	2.65%
9	Melvindale	81,913	514,621	802,525	13,273	85,684	0.07%
10	N.E. Wayne County	1,447,135	8,274,592	12,903,800	213,413	1,377,708	1.17%
11	Rouge Valley	3,211,506	20,919,687	32,623,176	539,547	3,483,099	2.96%
12	S.E. Oakland County	2,773,261	16,701,182	26,044,635	430,746	2,780,724	2.26%
13	SUBTOTALS:	14,459,716	90,906,756	141,764,412	2,344,608	15,135,848	10.80%
<u>System Meter Customers</u>							
14	Dearborn E. (Storm Only)	24,989	84,138	131,209	2,170	14,009	1.63%
15	Dearborn N.E.	101,316	470,755	734,118	12,141	78,380	0.00%
16	Grosse Pointe	54,295	303,177	472,788	7,819	50,478	0.23%
17	Grosse Pointe Farms	119,529	680,223	1,060,773	17,544	113,256	0.50%
18	Hamtramck	263,879	1,184,763	1,847,577	30,557	197,261	1.59%
19	Harper Woods	15,873	75,664	117,995	1,951	12,598	0.01%
20	Highland Park	372,297	1,809,058	2,821,133	46,658	301,206	2.06%
21	Redford Township	7,350	30,303	47,256	782	5,045	0.06%
22	Wayne County #3	2,474	9,072	14,148	234	1,511	0.03%
23	Wayne County #6	7,575	37,540	58,542	968	6,250	0.08%
24	SUBTOTALS:	969,577	4,684,694	7,305,539	120,825	779,995	6.20%
25	SUBTOTAL SUBURBAN	15,429,292	95,591,450	149,069,950	2,465,433	15,915,843	17.00%
26	CITY OF DETROIT	12,517,309	57,525,750	89,708,450	1,483,667	9,577,957	83.00%
27	TOTAL ALLOCATION VOLUME	27,946,602	153,117,200	238,778,400	3,949,100	25,493,800	100.00%
28	Industrial Monitored Customers		<u>4,398,000</u>	<u>6,157,000</u>	<u>71,000</u>	<u>1,163,000</u>	
29	TOTAL ASSIGNED UNITS OF SER	27,946,602	157,515,200	244,935,400	4,020,100	26,656,800	100.00%

(a) Based on 120 mg/l Sanitary, 54 mg/l DWII, and 54 mg/l wet weather

(b) Based on 187 mg/l Sanitary, 84 mg/l DWII, and 84 mg/l wet weather

(c) Based on 3.1 mg/l Sanitary, 1.4 mg/l DWII, and 1.4 mg/l wet weather

(d) Based on 20.0 mg/l Sanitary, 9.0 mg/l DWII, and 9.0 mg/l wet weather

TFG