FLOW AND STRENGTH PROJECTIONS

MONTH: August 2016

	PROJECTED	ACTUAL	DIFFERENCE	PROJECTED INCOME FOR MONTH	ACTUAL INCOME FOR MONTH	SURPLUS OR DEFICIT
FLOW (GALLONS)	128,479,627	126,866,600	-1,613,027	$ 101,498.91	$ 100,224.61	$ (1,274.29)
B.O.D. (#s)	259,176	253,506	-5,670	$ 65,830.70	$ 64,390.52	$ (1,440.18)
S. SOLIDS (#s)	362,909	302,317	-60,592	$ 79,477.07	$ 66,207.42	$ (13,269.65)
PHOSPHORUS (#s)	7,039	7,131	92	$ 40,277.16	$ 40,803.58	$ 526.42
AMMONIA-N (#s)	29,737	44,196	14,459	$ 50,433.95	$ 74,956.42	$ 24,522.46
CHLORIDES (#s)	536,331	704,728	168,397	$ 2,681.66	$ 3,523.64	$ 841.99
			TOTAL:	$ 340,199.45	$ 350,106.20	$ 9,906.75

(THRU AUGUST 2016)

PROJECTED FOR 2016

	END OF YEAR PROJECTED	YEAR TO DATE SURPLUS/ DEFICIT	YEAR TO DATE SURPLUS/ DEFICIT $$
FLOW (GALLONS)	1,924,757,830	12,100,770	$ 9,559.61
B.O.D. (#s)	3,352,026	1,136	$ 288.53
S. SOLIDS (#s)	4,647,790	-747,284	$ (163,655.23)
PHOSPHORUS (#s)	90,738	-6,050	$ (34,619.13)
AMMONIA-N (#s)	402,396	67,725	$ 114,861.65
CHLORIDES (#s)	7,179,135	871,417	$ 4,357.09
		TOTAL:	$ (69,207.48)

HEART OF THE VALLEY
METROPOLITAN SEWERAGE DISTRICT

MONTH: AUGUST 2016

HYDRAULIC AND ORGANIC LOADINGS DATA

INFLUENT

TOTAL FLOW TO PLANT:	131,529,000 GALLONS
AVERAGE B.O.D. :	217 mg/L
AVERAGE SUSPENDED SOLIDS :	240 mg/L
AVERAGE PHOSPHORUS :	6.59 mg/L
AVERAGE AMMONIA-N :	40.64 mg/L
AVERAGE CHLORIDES :	693.85 mg/L

MAXIMUM DAILY FLOW TO PLANT:
5,507,000 Gallons

PERCENT (%) BY COMMUNITY OF TOTAL MONTHLY VOLUME TREATED AT WWTP

COMMUNITY	FLOW	BOD	TSS	PHOSPHORUS	AMMONIA	CHLORIDES
KAUKAUNA	34.19	24.18	24.67	27.68	30.02	26.29
LITTLE CHUTE	26.09	29.21	29.57	27.51	34.90	31.27
KIMBERLY	14.01	16.19	14.55	13.06	10.85	19.50
COMBINED LOCKS	5.57	5.91	6.29	6.68	5.58	1.53
DARBOY	20.14	24.51	24.93	25.07	18.66	21.41

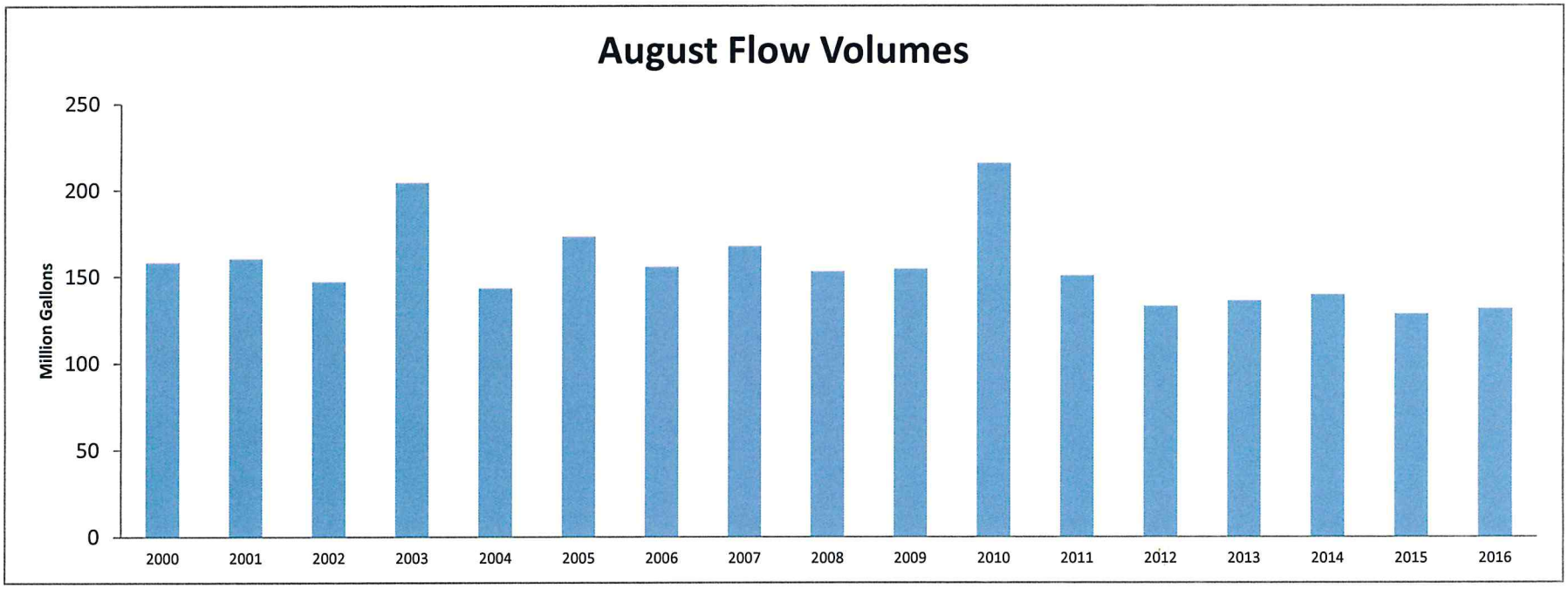
AVERAGE DAILY INFLUENT LOADINGS		%	PLANT DESIGN CRITERIA
FLOW :	4,242,871 GALLONS	35.7	11,900,000 GALLONS/DAY
B.O.D. :	7,920 POUNDS	54.1	14,651 POUNDS/DAY
SUSPENDED SOLIDS :	8,780 POUNDS	53.9	16,278 POUNDS/DAY
PHOSPHORUS :	241 POUNDS	59.2	407 POUNDS/DAY
AMMONIA-N :	1,486 POUNDS	77.4	1,920 POUNDS/DAY
CHLORIDES :	25,371 POUNDS		

FINAL EFFLUENT

	MONTHLY AVERAGE	%	PERMIT LIMIT
cB.O.D. :	4.60 mg/L	18.4	25 mg/L
SUSPENDED SOLIDS :	23.37 mg/L	77.9	30 mg/L
PHOSPHORUS :	0.55 mg/L	55.2	1 mg/L
AMMONIA-N :	0.57 mg/L		
CHLORIDES :	762.31 mg/L		

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

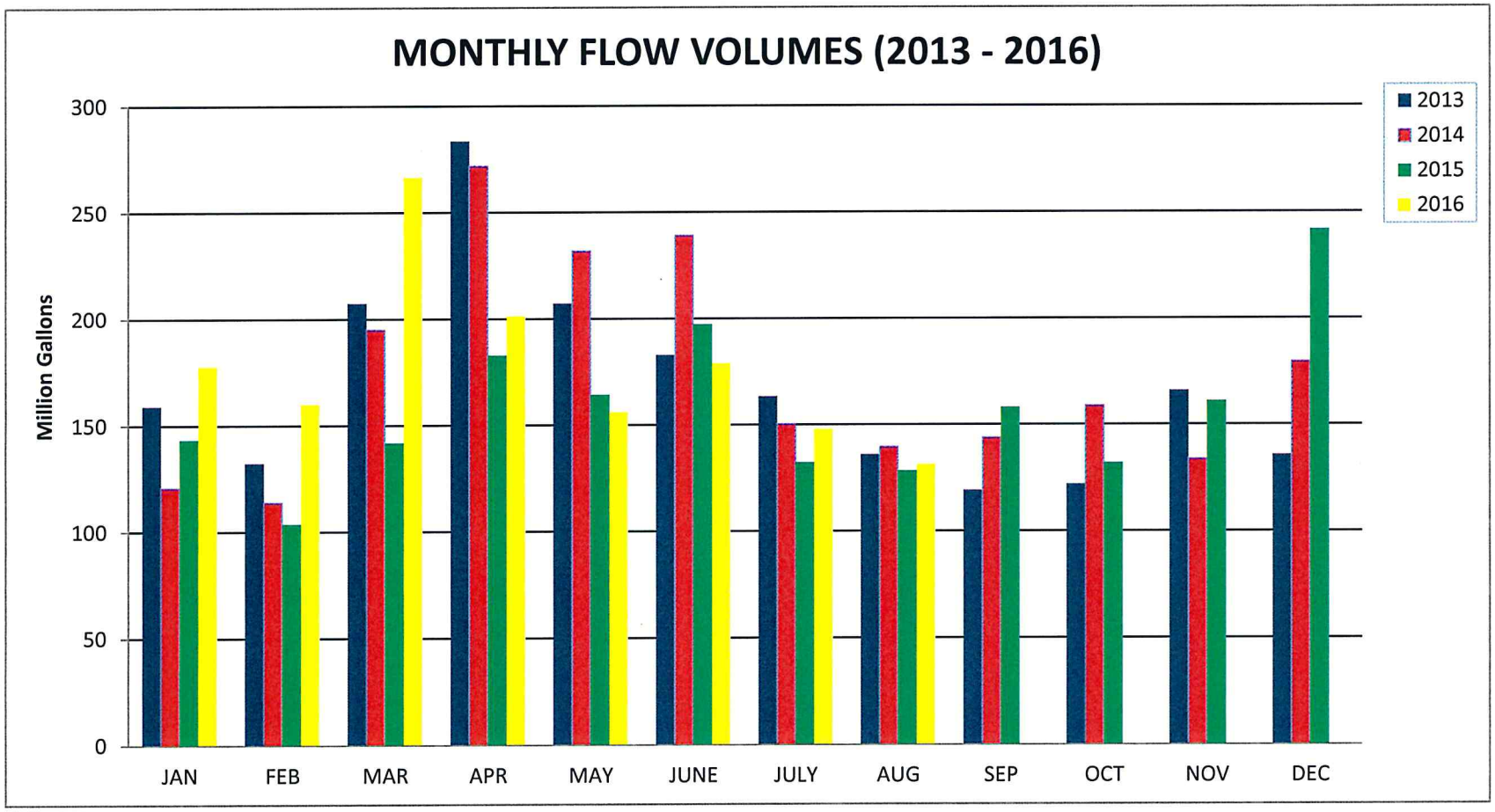
Year	August Flow Million Gallons	Precipitation Inches
2000	158.531	3.80
2001	160.537	3.85
2002	147.308	2.07
2003	204.456	2.56
2004	143.451	1.95
2005	173.194	3.49
2006	155.701	0.84
2007	167.607	3.88
2008	152.922	1.06
2009	154.483	3.85
2010	215.614	3.40
2011	150.532	1.94
2012	132.987	2.03
2013	135.948	2.02
2014	139.604	3.74
2015	128.427	3.22
2016	131.529	2.74



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
2013	159.014	132.251	207.339	283.615	207.246	182.739	163.201	135.948	119.210	122.015	165.861	135.674
2014	120.943	114.081	195.096	272.038	231.951	239.160	150.335	139.604	143.973	158.887	133.835	179.535
2015	143.460	103.918	141.868	182.911	164.246	197.337	132.478	128.427	158.179	132.217	161.094	241.853
2016	177.906	160.230	266.917	201.541	156.148	178.887	147.968	131.529				

*** FLOW VOLUMES REPORTED IN MILLION GALLONS ***



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

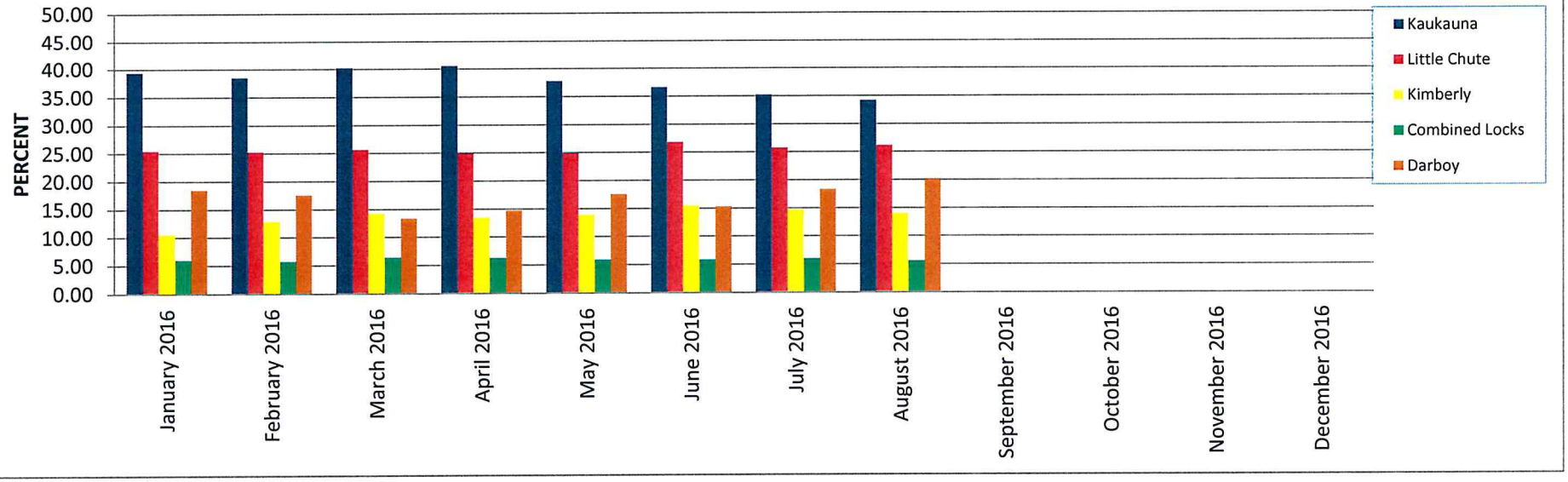
% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy	Rainfall - Inches
January 2016	39.42	25.45	10.65	6.00	18.48	1.53
February 2016	38.50	25.23	12.94	5.76	17.56	1.13
March 2016	40.24	25.63	14.31	6.46	13.37	2.82
April 2016	40.57	24.95	13.49	6.28	14.71	0.89
May 2016	37.78	24.88	13.91	5.89	17.54	2.52
June 2016	36.58	26.77	15.50	5.87	15.29	5.19
July 2016	35.19	25.71	14.73	6.02	18.35	2.36
August 2016	34.19	26.09	14.01	5.57	20.14	2.74
September 2016						
October 2016						
November 2016						
December 2016						

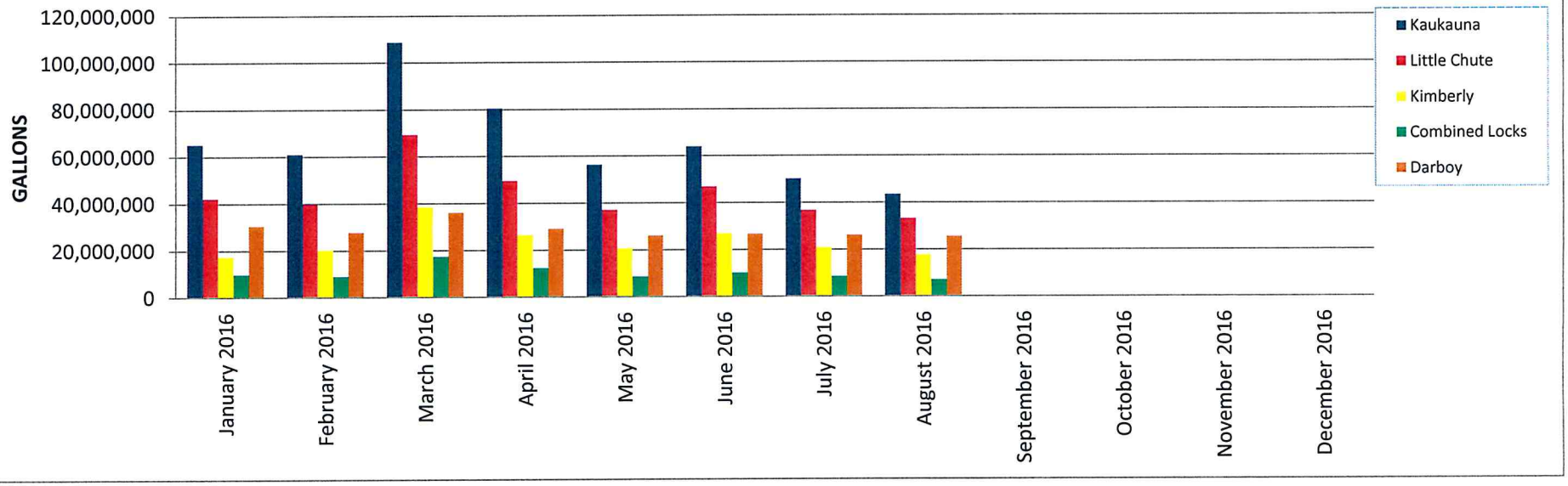
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	65,220,640	42,115,000	17,613,000	9,929,000	30,576,000
February 2016	60,936,840	39,936,000	20,481,000	9,116,000	27,791,000
March 2016	108,697,400	69,221,000	38,650,000	17,438,000	36,111,000
April 2016	80,370,220	49,428,000	26,732,000	12,434,000	29,144,000
May 2016	56,311,180	37,087,000	20,740,000	8,781,000	26,146,000
June 2016	63,887,260	46,745,000	27,065,000	10,245,000	26,706,000
July 2016	50,158,000	36,637,000	20,991,000	8,586,000	26,156,000
August 2016	43,369,600	33,105,000	17,774,000	7,068,000	25,550,000
September 2016					
October 2016					
November 2016					
December 2016					

FLOW PERCENT CONTRIBUTED BY COMMUNITY



FLOW GALLONS CONTRIBUTED BY COMMUNITY



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

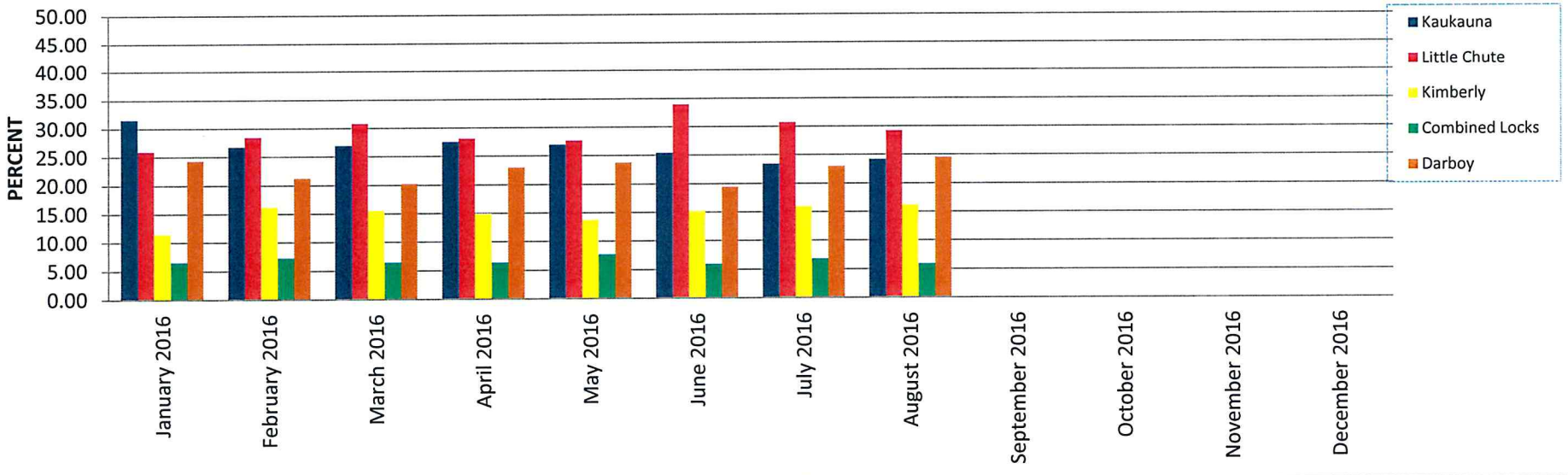
	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	31.61	25.94	11.56	6.56	24.32
February 2016	26.78	28.46	16.25	7.27	21.24
March 2016	26.94	30.84	15.58	6.45	20.20
April 2016	27.58	28.12	14.93	6.38	22.99
May 2016	27.00	27.66	13.83	7.73	23.78
June 2016	25.43	33.95	15.28	5.92	19.41
July 2016	23.42	30.74	16.02	6.82	23.00
August 2016	24.18	29.21	16.19	5.91	24.51
September 2016					
October 2016					
November 2016					
December 2016					

JUNE 2016 - LITTLE CHUTE TOTAL B.O.D. HIGH DUE TO REPAIR PROJECT AT AGROPUR CHEESE FACILITY

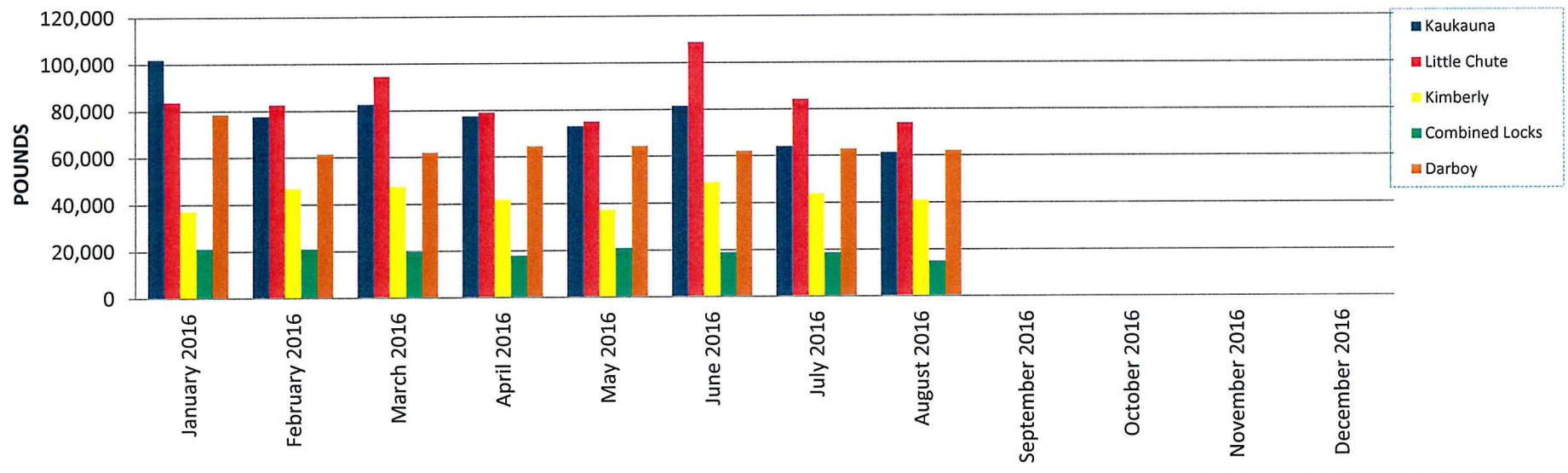
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	102,026	83,715	37,314	21,186	78,503
February 2016	77,616	82,483	47,098	21,080	61,548
March 2016	82,595	94,529	47,752	19,761	61,926
April 2016	77,474	78,994	41,949	17,914	64,593
May 2016	73,097	74,894	37,441	20,928	64,393
June 2016	81,440	108,725	48,942	18,970	62,148
July 2016	64,127	84,156	43,859	18,672	62,968
August 2016	61,307	74,044	41,046	14,975	62,135
September 2016					
October 2016					
November 2016					
December 2016					

B.O.D. PERCENT CONTRIBUTED BY COMMUNITY



B.O.D. POUNDS CONTRIBUTED BY COMMUNITY



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

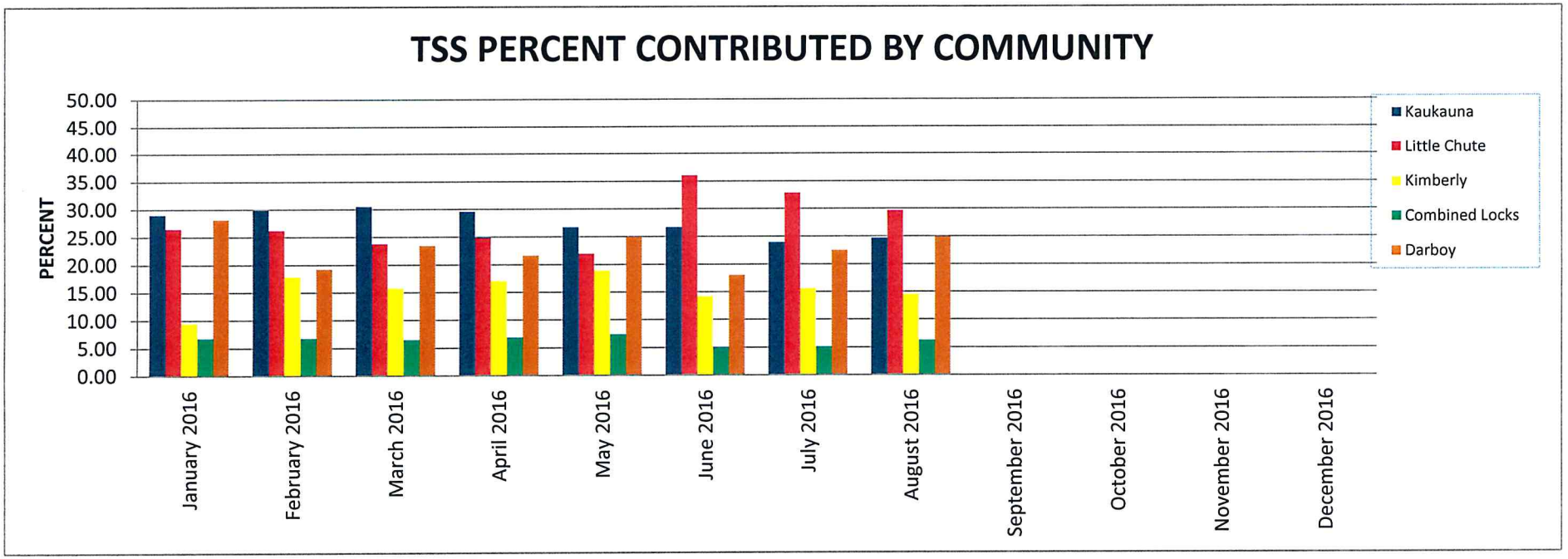
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

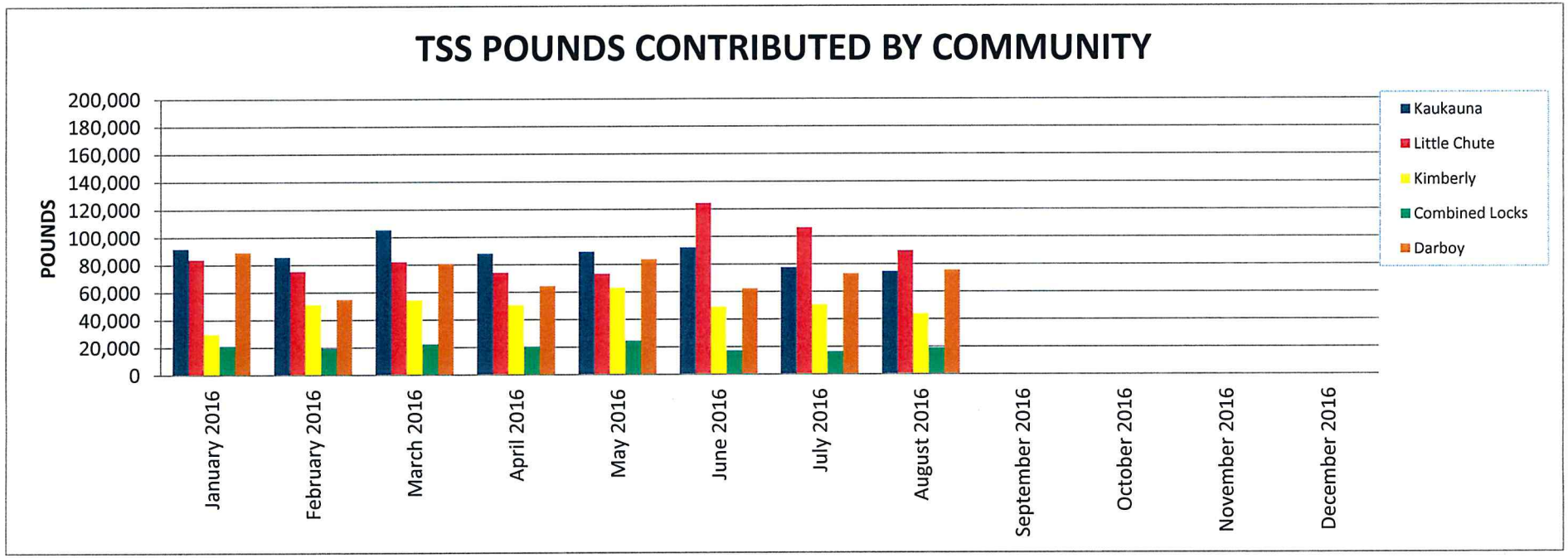
	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	29.01	26.50	9.55	6.78	28.16
February 2016	29.88	26.17	17.94	6.81	19.20
March 2016	30.50	23.75	15.83	6.52	23.40
April 2016	29.53	24.86	17.12	6.90	21.60
May 2016	26.73	21.90	18.92	7.41	25.05
June 2016	26.67	35.99	14.25	5.05	18.04
July 2016	23.93	32.79	15.66	5.14	22.48
August 2016	24.67	29.57	14.55	6.29	24.93
September 2016					
October 2016					
November 2016					
December 2016					

JUNE 2016 - LITTLE CHUTE TOTAL SOLIDS HIGH DUE TO REPAIR PROJECT AT AGROPUR CHEESE FACILITY

POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	91,773	83,828	30,192	21,454	89,055
February 2016	85,783	75,143	51,491	19,546	55,121
March 2016	105,329	82,029	54,650	22,509	80,806
April 2016	88,067	74,142	51,054	20,567	64,411
May 2016	89,272	73,149	63,194	24,735	83,671
June 2016	92,027	124,215	49,173	17,415	62,262
July 2016	77,542	106,254	50,757	16,653	72,829
August 2016	74,589	89,387	43,973	19,014	75,353
September 2016					
October 2016					
November 2016					
December 2016					


TSS PERCENT CONTRIBUTED BY COMMUNITY
PERCENT
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
January 2016
February 2016
March 2016
April 2016
May 2016
June 2016
July 2016
August 2016
September 2016
October 2016
November 2016
December 2016
Kaukauna
Little Chute
Kimberly
Combined Locks
Darboy


TSS POUNDS CONTRIBUTED BY COMMUNITY
POUNDS
200,000
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
January 2016
February 2016
March 2016
April 2016
May 2016
June 2016
July 2016
August 2016
September 2016
October 2016
November 2016
December 2016
Kaukauna
Little Chute
Kimberly
Combined Locks
Darboy

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

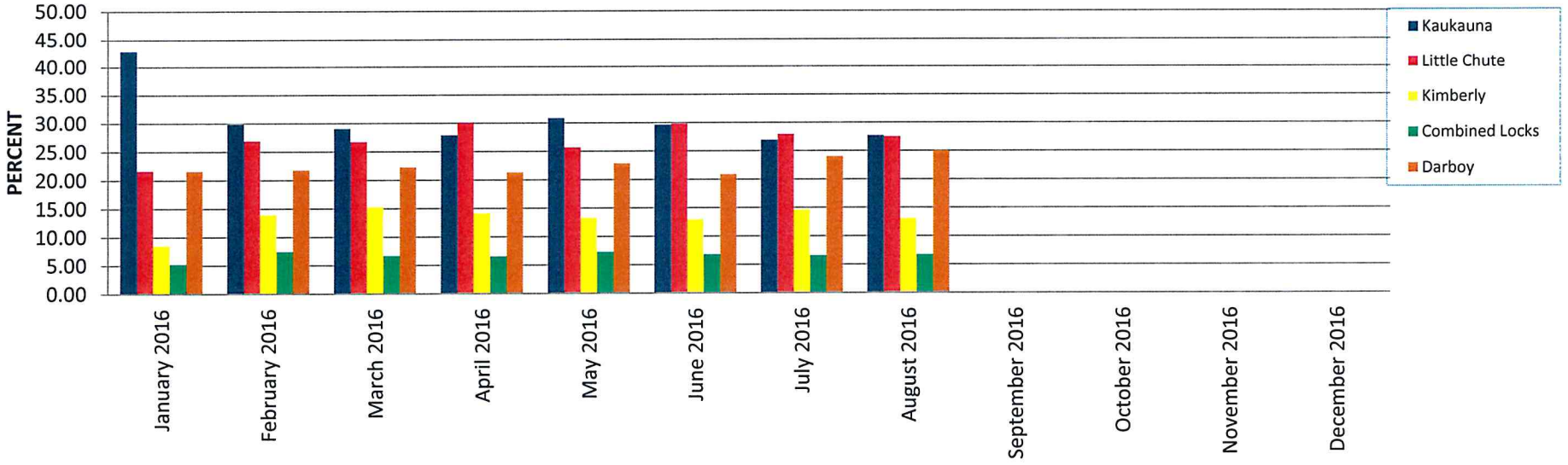
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	42.93	21.63	8.59	5.26	21.59
February 2016	29.87	26.92	13.99	7.44	21.77
March 2016	29.03	26.72	15.32	6.69	22.24
April 2016	27.89	30.08	14.18	6.54	21.31
May 2016	30.84	25.68	13.32	7.29	22.86
June 2016	29.59	29.78	13.01	6.77	20.85
July 2016	26.91	27.93	14.62	6.54	24.00
August 2016	27.68	27.51	13.06	6.68	25.07
September 2016					
October 2016					
November 2016					
December 2016					

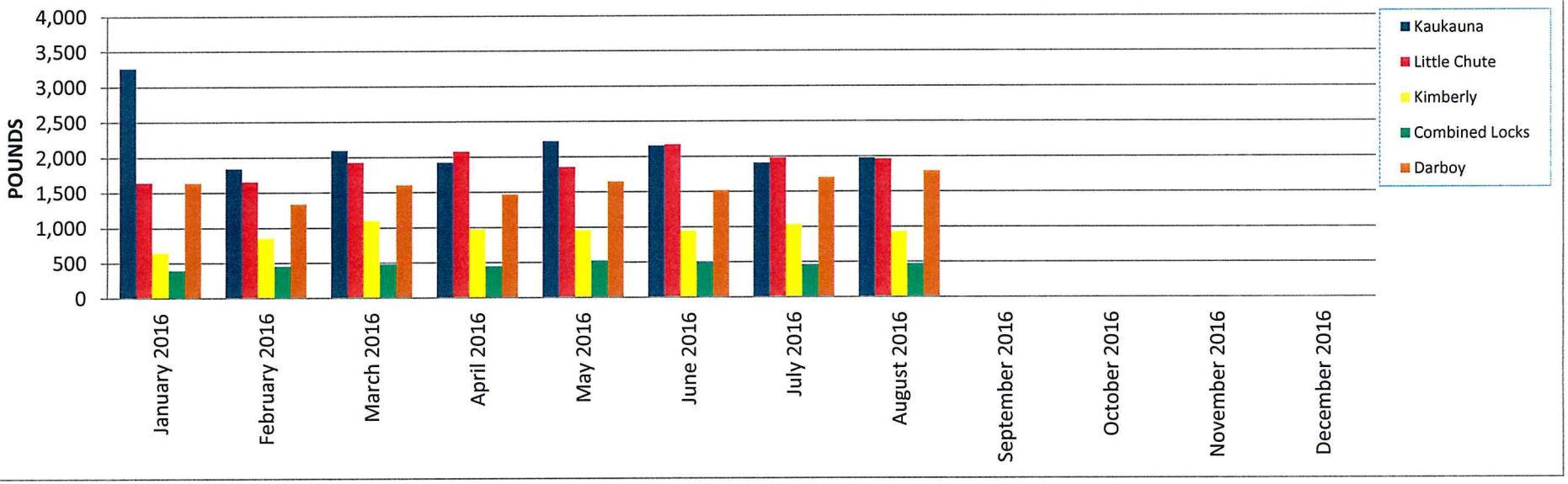
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	3,265	1,645	654	400	1,642
February 2016	1,838	1,656	861	458	1,340
March 2016	2,096	1,929	1,106	483	1,605
April 2016	1,925	2,075	979	451	1,471
May 2016	2,226	1,853	961	526	1,650
June 2016	2,157	2,170	948	494	1,520
July 2016	1,910	1,982	1,037	464	1,703
August 2016	1,977	1,962	931	476	1,788
September 2016					
October 2016					
November 2016					
December 2016					

PHOSPHORUS PERCENT CONTRIBUTED BY COMMUNITY



PHOSPHORUS POUNDS CONTRIBUTED BY COMMUNITY



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

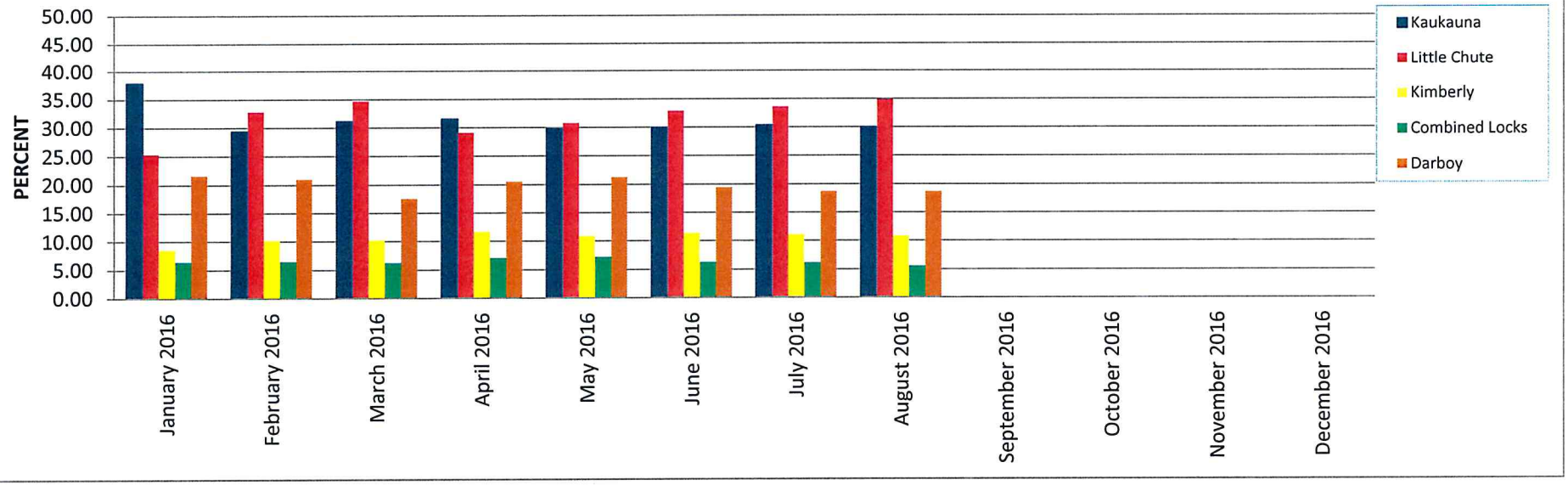
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	37.92	25.36	8.64	6.45	21.63
February 2016	29.38	32.85	10.30	6.49	20.98
March 2016	31.18	34.70	10.34	6.25	17.53
April 2016	31.55	29.10	11.75	7.10	20.50
May 2016	29.83	30.76	10.95	7.24	21.22
June 2016	29.99	32.90	11.42	6.27	19.43
July 2016	30.36	33.60	11.16	6.18	18.70
August 2016	30.02	34.90	10.85	5.58	18.66
September 2016					
October 2016					
November 2016					
December 2016					

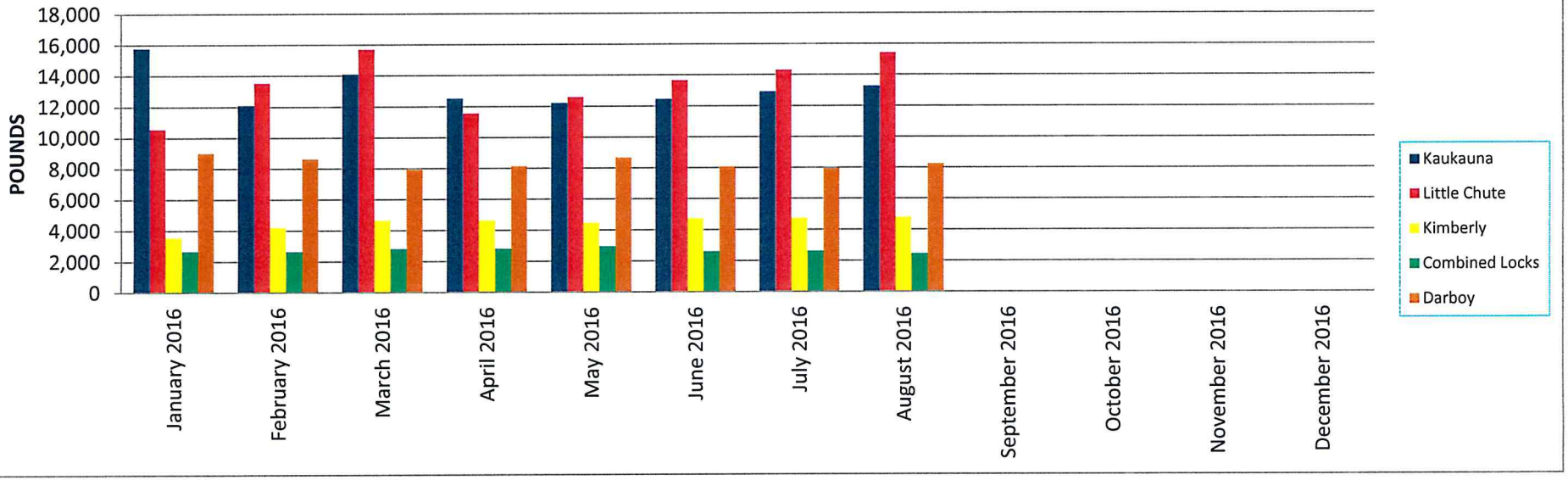
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	15,793	10,560	3,597	2,685	9,009
February 2016	12,105	13,533	4,241	2,674	8,643
March 2016	14,101	15,694	4,677	2,827	7,927
April 2016	12,525	11,552	4,666	2,819	8,138
May 2016	12,213	12,593	4,483	2,963	8,687
June 2016	12,451	13,660	4,741	2,605	8,067
July 2016	12,919	14,297	4,748	2,627	7,956
August 2016	13,268	15,425	4,793	2,464	8,246
September 2016					
October 2016					
November 2016					
December 2016					

AMMONIA PERCENT CONTRIBUTED BY COMMUNITY



AMMONIA POUNDS CONTRIBUTED BY COMMUNITY



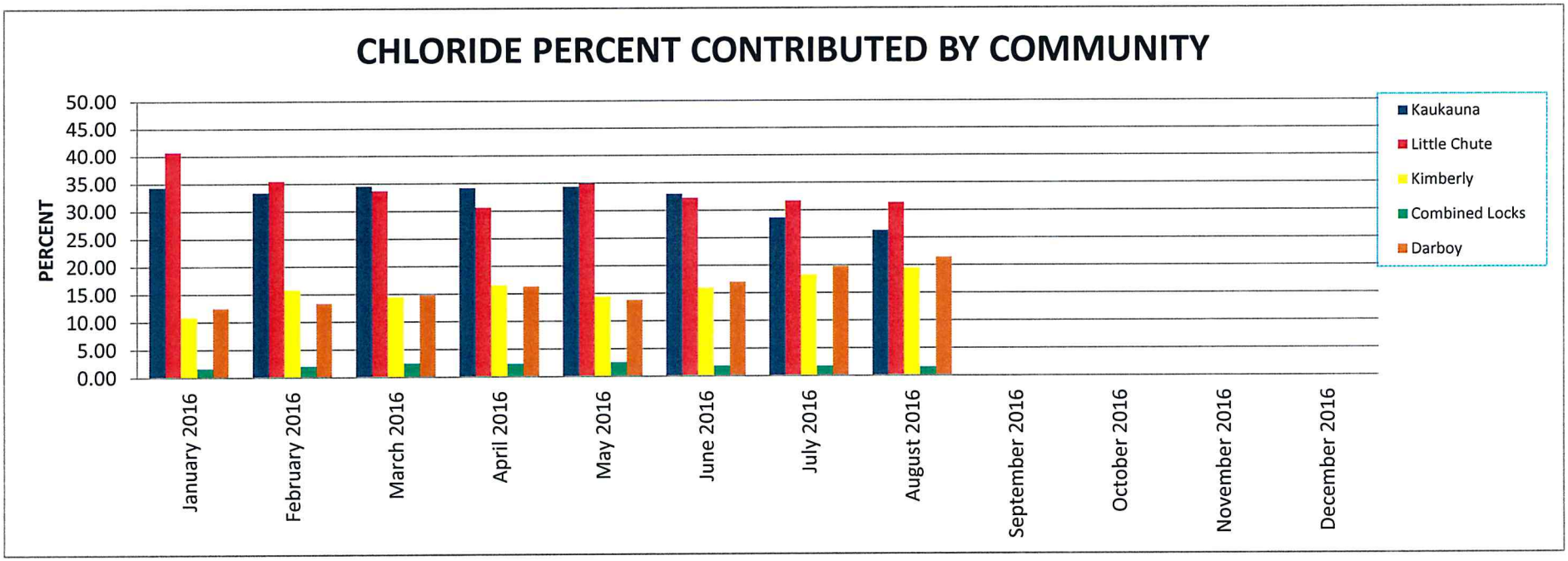
HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

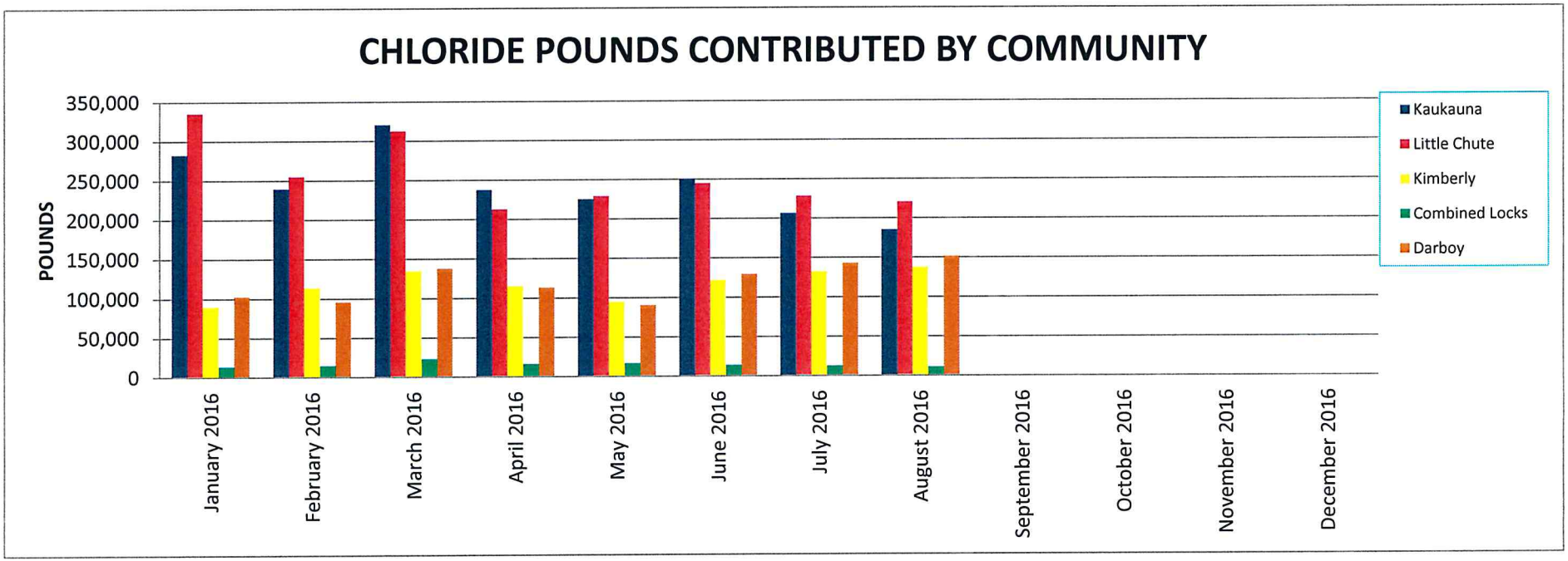
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	34.32	40.69	10.91	1.64	12.44
February 2016	33.35	35.43	15.88	2.04	13.31
March 2016	34.50	33.63	14.54	2.50	14.83
April 2016	34.17	30.56	16.60	2.37	16.29
May 2016	34.34	34.88	14.49	2.55	13.74
June 2016	32.96	32.20	16.00	1.86	16.97
July 2016	28.58	31.61	18.32	1.74	19.75
August 2016	26.29	31.27	19.50	1.53	21.41
September 2016					
October 2016					
November 2016					
December 2016					

POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

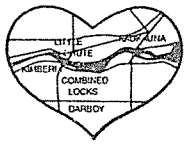
	Kaukauna	Little Chute	Kimberly	Combined Locks	Darboy
January 2016	283,016	335,506	89,944	13,504	102,591
February 2016	239,748	254,722	114,133	14,653	95,661
March 2016	320,719	312,610	135,135	23,269	137,841
April 2016	237,464	212,422	115,374	16,506	113,225
May 2016	225,105	228,643	94,960	16,701	90,088
June 2016	250,500	244,729	121,611	14,142	128,943
July 2016	206,378	228,240	132,266	12,578	142,608
August 2016	185,275	220,352	137,424	10,809	150,868
September 2016					
October 2016					
November 2016					
December 2016					


CHLORIDE PERCENT CONTRIBUTED BY COMMUNITY
PERCENT
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
January 2016
February 2016
March 2016
April 2016
May 2016
June 2016
July 2016
August 2016
September 2016
October 2016
November 2016
December 2016
Kaukauna
Little Chute
Kimberly
Combined Locks
Darboy


CHLORIDE POUNDS CONTRIBUTED BY COMMUNITY
POUNDS
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
January 2016
February 2016
March 2016
April 2016
May 2016
June 2016
July 2016
August 2016
September 2016
October 2016
November 2016
December 2016
Kaukauna
Little Chute
Kimberly
Combined Locks
Darboy

DISTRICT DIRECTOR:
Glen H. Geurts

SERVING:
Combined Locks
Kaukauna
Kimberly
Little Chute
Darboy S.D.



COMMISSIONERS:
David J. Casper, President
Bruce M. Siebers, Vice-Pres.
Kevin P. Coffey, Secretary
Patrick E. Hennessey
John W. Sundelius

Heart of the Valley

METROPOLITAN SEWERAGE DISTRICT

801 THILMANY ROAD
KAUKAUNA, WISCONSIN 54130
(920) 766-5731 FAX (920) 766-5733
www.hvmsd.org

Facility: Wisconsin Public Service Corporation - Fox Energy Center
P.O. Box 19800
Green Bay, WI 54307-9004

Attn: Account # N2310E

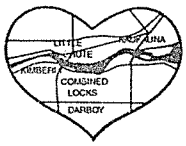
Month: August **Year:** 2016

Gallons of Final Effluent Purchased (Billing)

Date	Gallons	Date	Gallons
8/1/2016	3,284,000	8/21/2016	2,965,000
8/2/2016	3,622,000	8/22/2016	3,068,000
8/3/2016	3,802,000	8/23/2016	3,090,000
8/4/2016	3,546,000	8/24/2016	3,109,000
8/5/2016	3,114,000	8/25/2016	3,249,000
8/6/2016	3,252,000	8/26/2016	3,558,000
8/7/2016	3,245,000	8/27/2016	3,537,000
8/8/2016	3,187,000	8/28/2016	3,412,000
8/9/2016	3,217,000	8/29/2016	2,946,000
8/10/2016	4,004,000	8/30/2016	2,793,000
8/11/2016	3,220,000	8/31/2016	3,442,000
8/12/2016	3,410,000		
8/13/2016	3,018,000		
8/14/2016	2,964,000	**Total:**	102,788,000
8/15/2016	3,497,000		
8/16/2016	3,475,000		
8/17/2016	3,672,000		
8/18/2016	3,638,000		
8/19/2016	3,294,000		
8/20/2016	3,158,000		

DISTRICT DIRECTOR:
Glen H. Geurts

SERVING:
Combined Locks
Kaukauna
Kimberly
Little Chute
Darboy S.D.



COMMISSIONERS:
David J. Casper, President
Bruce M. Siebers, Vice-Pres.
Kevin P. Coffey, Secretary
Patrick E. Hennessey
John W. Sundelius

Heart of the Valley

METROPOLITAN SEWERAGE DISTRICT

801 THILMANY ROAD
KAUKAUNA, WISCONSIN 54130
(920) 766-5731 FAX (920) 766-5733
www.hvmsd.org

Facility: Wisconsin Public Service Corporation - Fox Energy Center
P.O. Box 19800
Green Bay, WI 54307-9004

Attn: Account # N2310E

MONTHLY BILLING

Month: August **Year:** 2016

GALLONS PURCHASED: 102,788,000

BILLING RATE: $0.1552173 PER 1000 GALLONS

TOTAL AMOUNT DUE: $15,954.48

Heart of the Valley
Metropolitan Sewerage District

Fox Energy Revenue
From the Sale of Final Effluent

2016

Final Effluent Sent to Fox Energy Facility

Gallons: 600,075,000

Charge Per 1000 Gallons: $0.1552173 Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): $93,142.02