

FLOW AND STRENGTH PROJECTIONS

MONTH: March 2018

	<u>PROJECTED</u>	<u>ACTUAL</u>	<u>DIFFERENCE</u>	<u>PROJECTED INCOME FOR MONTH</u>	<u>ACTUAL INCOME FOR MONTH</u>	<u>SURPLUS OR DEFICIT</u>
FLOW (GALLONS)	199,495,213	135,371,810	-64,123,403	\$ 158,798.19	\$ 107,755.96	\$ (51,042.23)
B.O.D. (#s)	305,783	302,707	-3,076	\$ 80,115.15	\$ 79,309.23	\$ (805.91)
S. SOLIDS (#s)	385,554	285,298	-100,256	\$ 102,557.36	\$ 75,889.27	\$ (26,668.10)
PHOSPHORUS (#s)	7,522	6,172	-1,350	\$ 47,313.38	\$ 38,821.88	\$ (8,491.50)
AMMONIA-N (#s)	42,028	42,715	687	\$ 62,999.97	\$ 64,029.79	\$ 1,029.81
CHLORIDES (#s)	803,971	719,834	-84,137	\$ 4,019.86	\$ 3,599.17	\$ (420.69)
			TOTAL:	\$ 455,803.91	\$ 369,405.30	\$ (86,398.61)

(THRU MARCH 2018)

PROJECTED FOR 2018

	<u>END OF YEAR PROJECTED</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT \$\$</u>
FLOW (GALLONS)	1,947,278,400	-90,089,773	\$ (71,711.46)
B.O.D. (#s)	3,292,724	39,024	\$ 10,224.36
S. SOLIDS (#s)	3,957,399	-105,034	\$ (27,939.02)
PHOSPHORUS (#s)	83,650	-3,729	\$ (23,452.45)
AMMONIA-N (#s)	464,411	8,400	\$ 12,590.94
CHLORIDES (#s)	7,768,031	67,762	\$ 338.81
		TOTAL:	\$ (99,948.82)

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

MONTH: MARCH 2018

HYDRAULIC AND ORGANIC LOADINGS DATA

<u>INFLUENT*</u>		
TOTAL FLOW TO PLANT:	138,664,000 GALLONS	
AVERAGE B.O.D. :	258 mg/L	
AVERAGE SUSPENDED SOLIDS :	215 mg/L	
AVERAGE PHOSPHORUS :	5.24 mg/L	
AVERAGE AMMONIA-N :	34.89 mg/L	
AVERAGE CHLORIDES :	691.54 mg/L	MAXIMUM DAILY FLOW TO PLANT: 5,384,000

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

COMMUNITY	FLOW	BOD	TSS	PHOSPHORUS	AMMONIA	CHLORIDES
KAUKAUNA	37.77	28.94	31.67	31.22	29.51	34.62
LITTLE CHUTE	22.61	26.89	25.34	23.87	33.70	29.96
KIMBERLY	14.95	15.29	14.58	13.16	10.03	17.30
COMBINED LOCKS	5.41	5.90	6.82	6.59	5.56	2.45
DARBOY	19.26	22.98	21.59	25.16	21.20	15.66

<u>AVERAGE DAILY INFLUENT LOADINGS</u>	<u>%</u>	<u>PLANT DESIGN CRITERIA</u>
FLOW : 4,473,032 GALLONS	37.6	11,900,000 GALLONS/DAY
B.O.D. : 9,630 POUNDS	65.7	14,651 POUNDS/DAY
SUSPENDED SOLIDS : 8,019 POUNDS	49.3	16,278 POUNDS/DAY
PHOSPHORUS : 196 POUNDS	48.1	407 POUNDS/DAY
AMMONIA-N : 1,302 POUNDS	67.8	1,920 POUNDS/DAY
CHLORIDES : 25,798 POUNDS		

<u>FINAL EFFLUENT</u>		<u>MONTHLY AVG</u>	
<u>MONTHLY AVERAGE</u>	<u>%</u>	<u>PERMIT LIMIT</u>	
FLOW: 1,842,714			
cB.O.D. : 5.47 mg/L	21.9	25	mg/L
SUSPENDED SOLIDS : 10.75 mg/L	35.8	30	mg/L
PHOSPHORUS : 0.28 mg/L	27.5	1	mg/L
AMMONIA-N : 0.21 mg/L	2.1	10	mg/L
CHLORIDES : 671.54 mg/L			

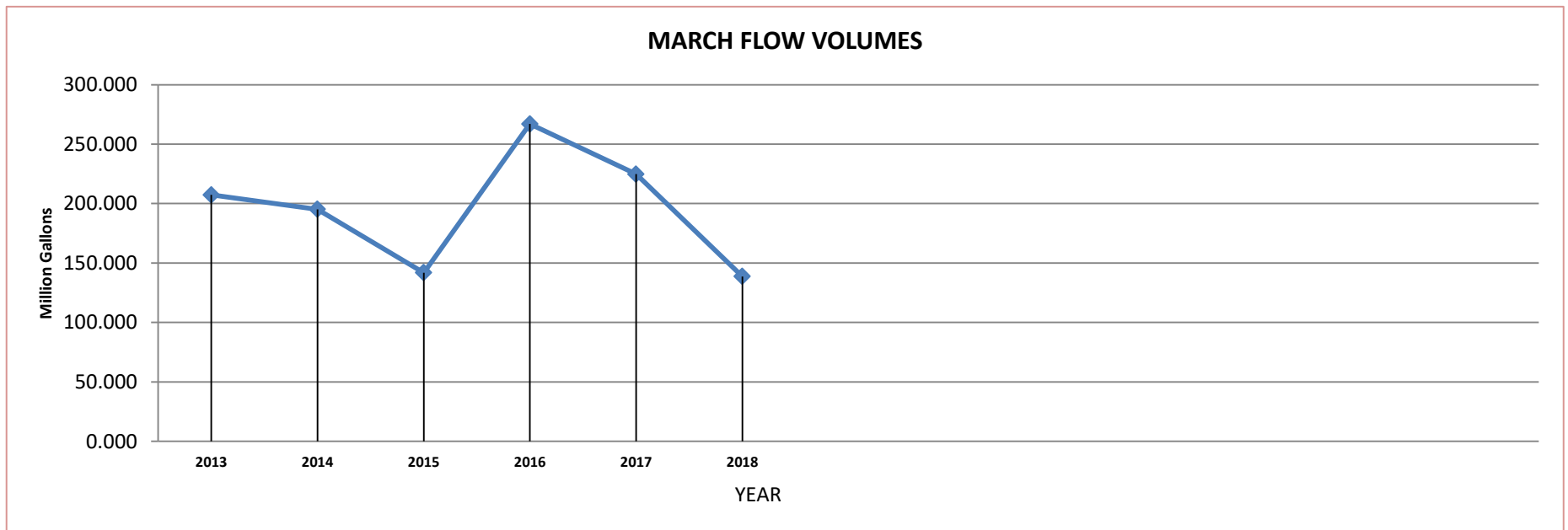
FINAL EFFLUENT PRODUCED: 138,664,000 GALLONS Effluent to Fox Energy
60%

FOX ENERGY CENTER PUMPED: 82,709,000 GALLONS

* INCLUDES HAULED WASTE

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>March Flow Million Gallons</u>	<u>Precipitation Inches</u>
2013	207.339	1.26
2014	195.096	1.49
2015	141.868	0.90
2016	266.917	2.82
2017	224.799	1.67
2018	138.664	0.63



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

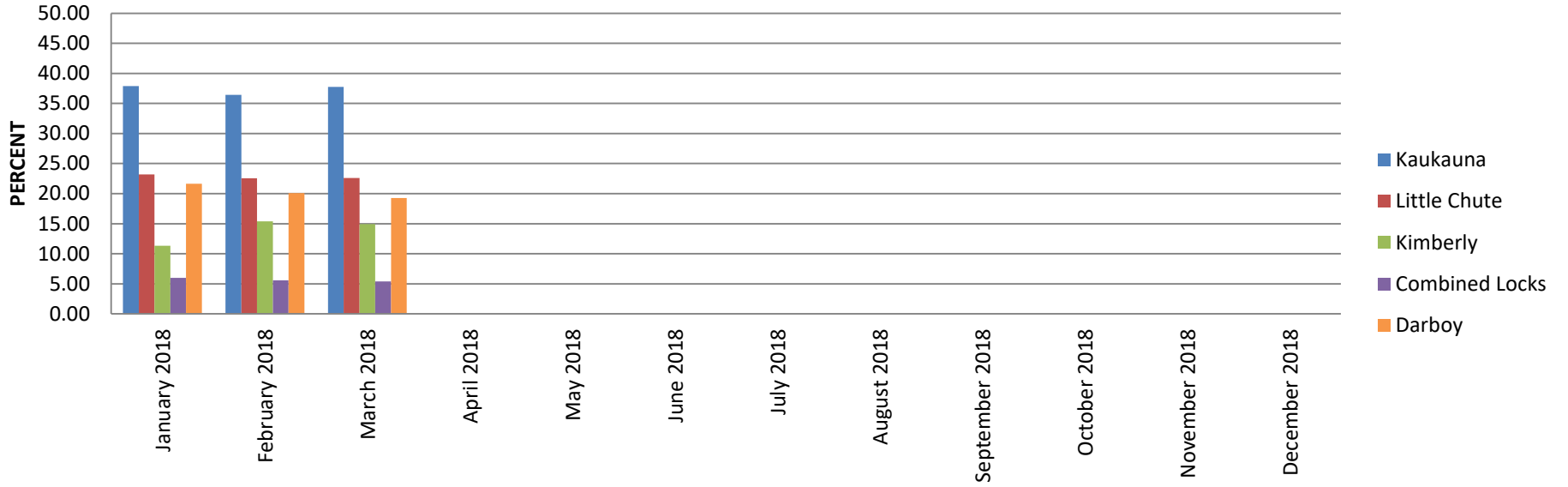
% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches</u>
January 2018	37.87	23.18	11.32	5.97	21.65	0.60
February 2018	36.41	22.54	15.39	5.58	20.08	0.00
March 2018	37.77	22.61	14.95	5.41	19.26	0.63
April 2018						
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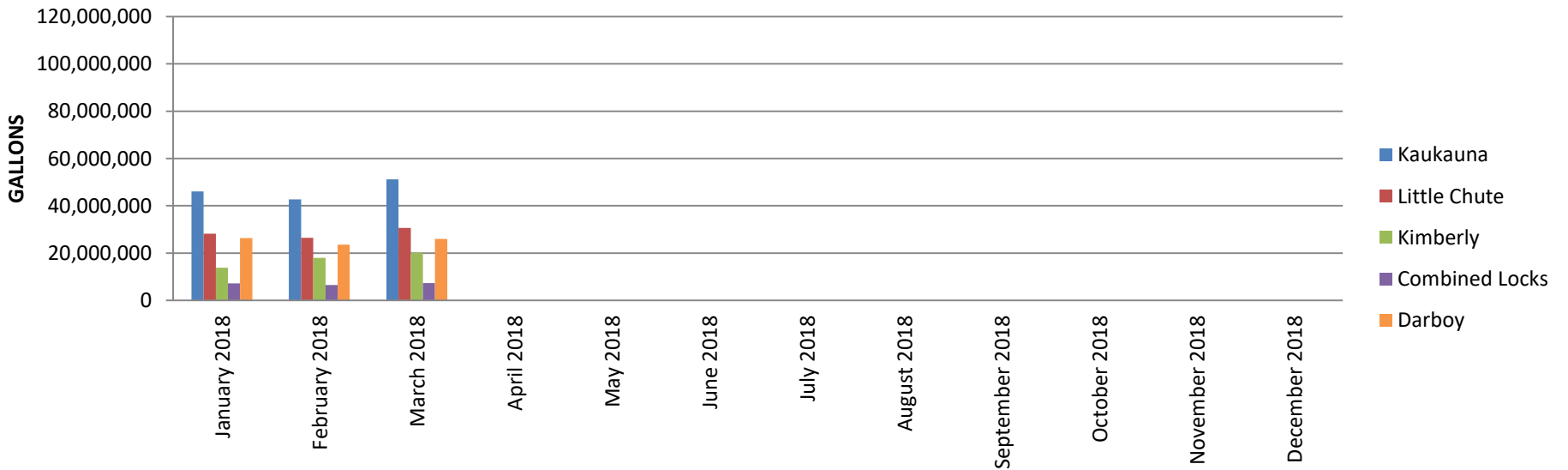
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	46,099,140	28,215,000	13,781,000	7,268,000	26,355,000
February 2018	42,761,360	26,468,000	18,068,000	6,547,000	23,585,000
March 2018	51,131,810	30,606,000	20,240,000	7,321,000	26,073,000
April 2018					
May 2018					
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December 2018					

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS



GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

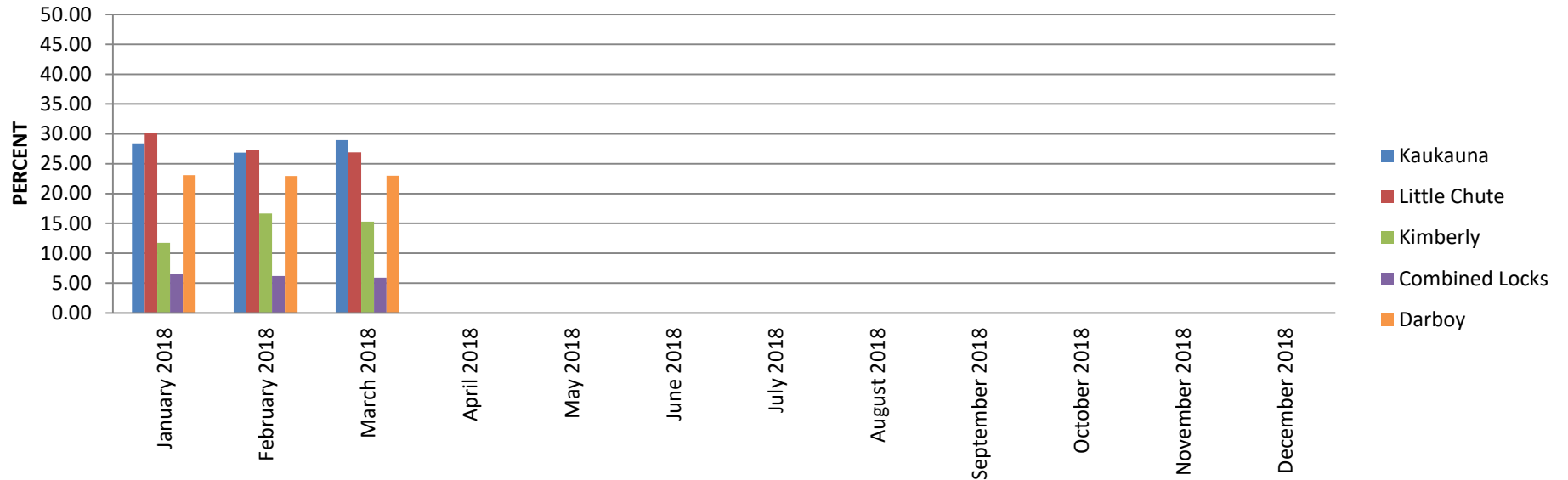
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	28.42	30.18	11.73	6.60	23.07
February 2018	26.85	27.36	16.67	6.19	22.93
March 2018	28.94	26.89	15.29	5.90	22.98
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
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December 2018					

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

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	83,358	88,512	34,420	19,362	67,661
February 2018	75,247	76,661	46,699	17,352	64,259
March 2018	87,606	81,400	46,292	17,857	69,552
April 2018					
May 2018					
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December 2018					

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



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



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

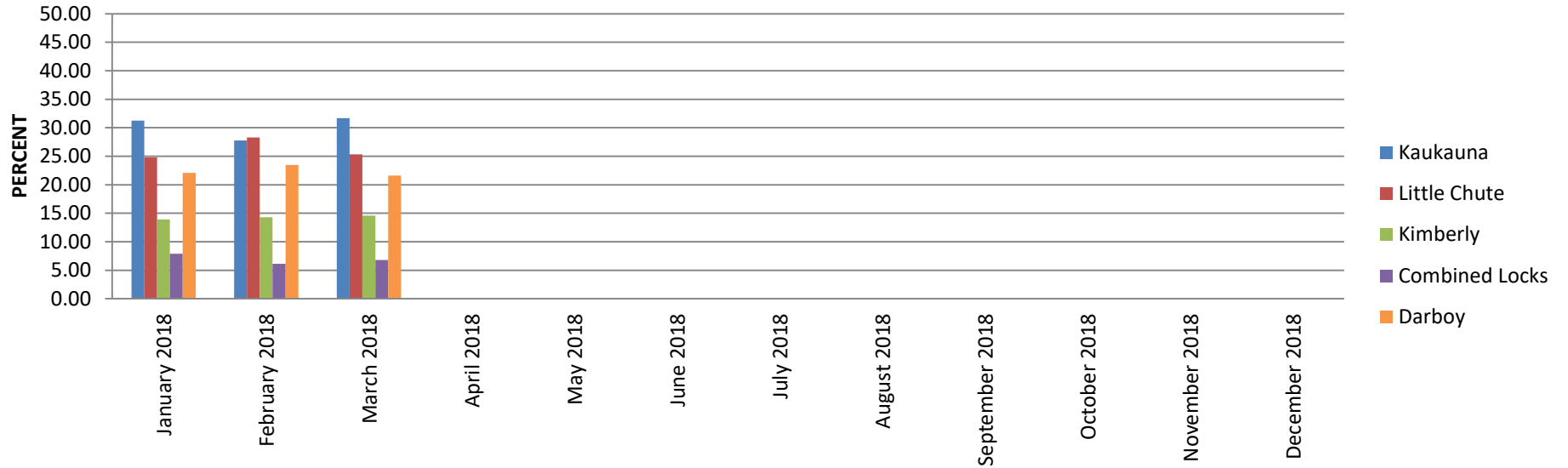
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	31.24	24.81	13.94	7.91	22.10
February 2018	27.78	28.30	14.32	6.15	23.45
March 2018	31.67	25.34	14.58	6.82	21.59
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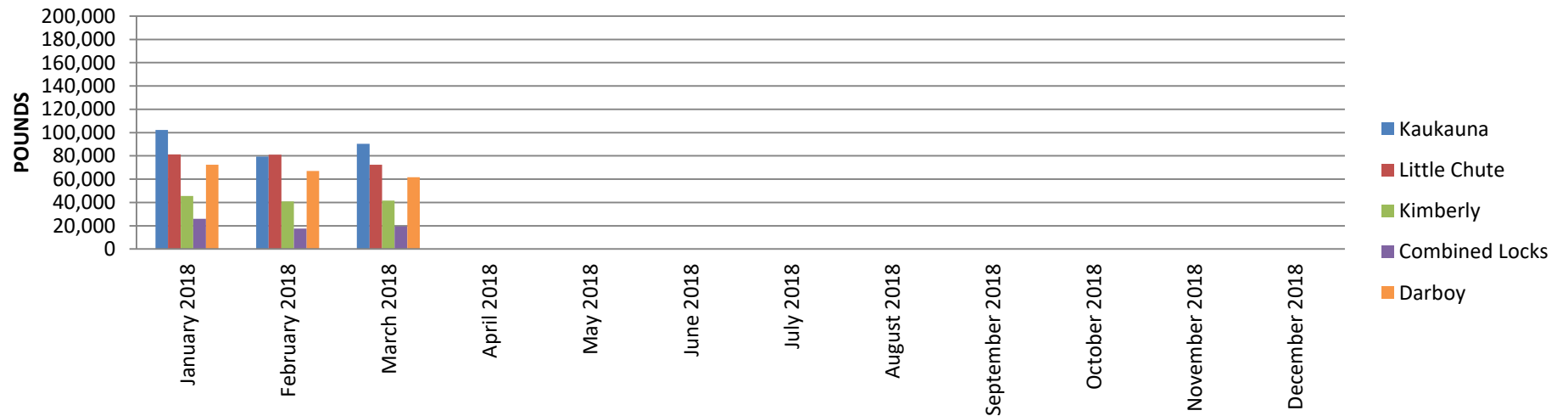
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	102,297	81,227	45,639	25,895	72,372
February 2018	79,448	80,940	40,972	17,598	67,074
March 2018	90,343	72,301	41,602	19,470	61,582
April 2018					
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December 2018					

% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

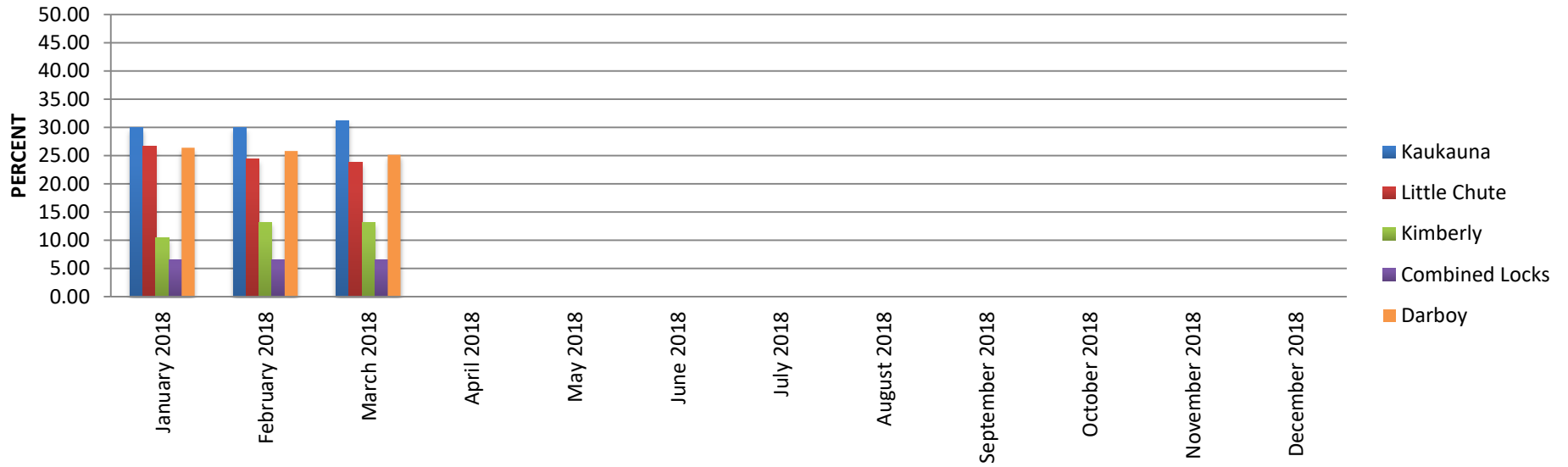
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	29.96	26.61	10.44	6.60	26.40
February 2018	29.98	24.42	13.22	6.58	25.80
March 2018	31.22	23.87	13.16	6.59	25.16
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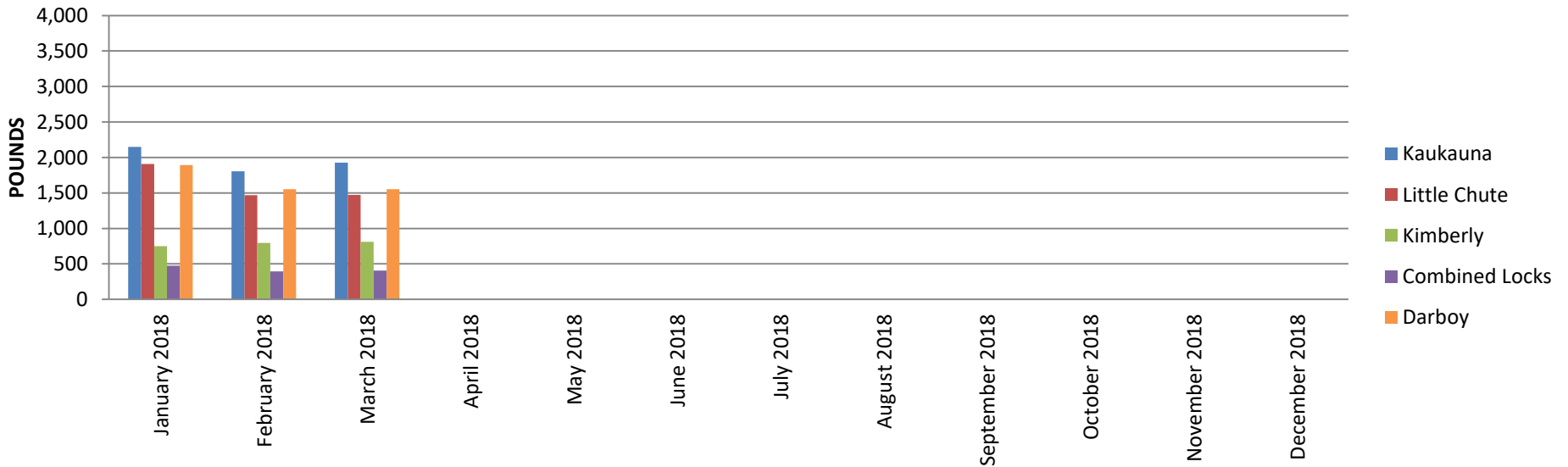
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	2,150	1,910	749	474	1,895
February 2018	1,805	1,470	796	396	1,553
March 2018	1,927	1,474	812	407	1,553
April 2018					
May 2018					
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November 2018					
December 2018					

% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

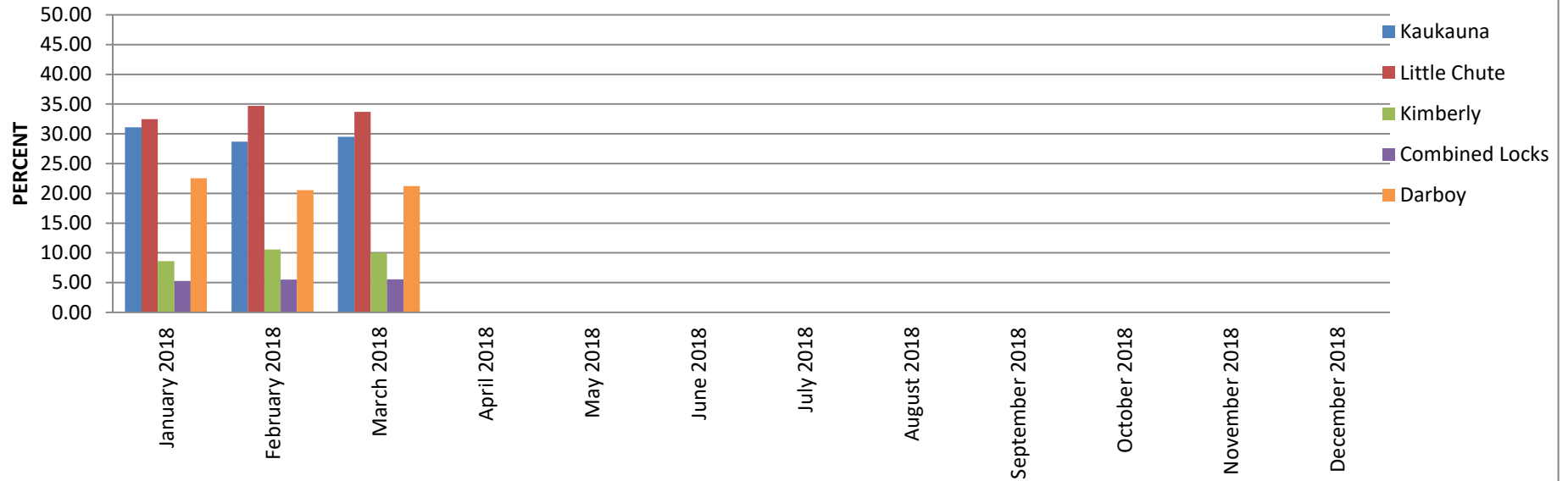
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	31.10	32.48	8.61	5.26	22.55
February 2018	28.69	34.71	10.57	5.49	20.54
March 2018	29.51	33.70	10.03	5.56	21.20
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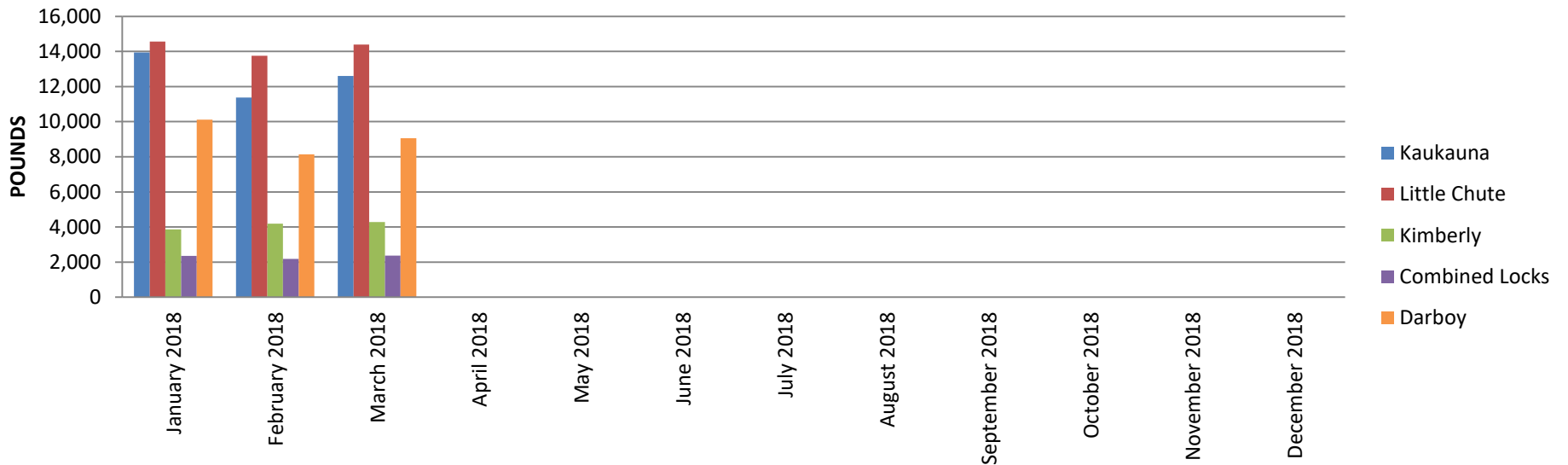
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	13,947	14,563	3,860	2,358	10,111
February 2018	11,375	13,761	4,191	2,176	8,142
March 2018	12,606	14,396	4,286	2,373	9,054
April 2018					
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July 2018					
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% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

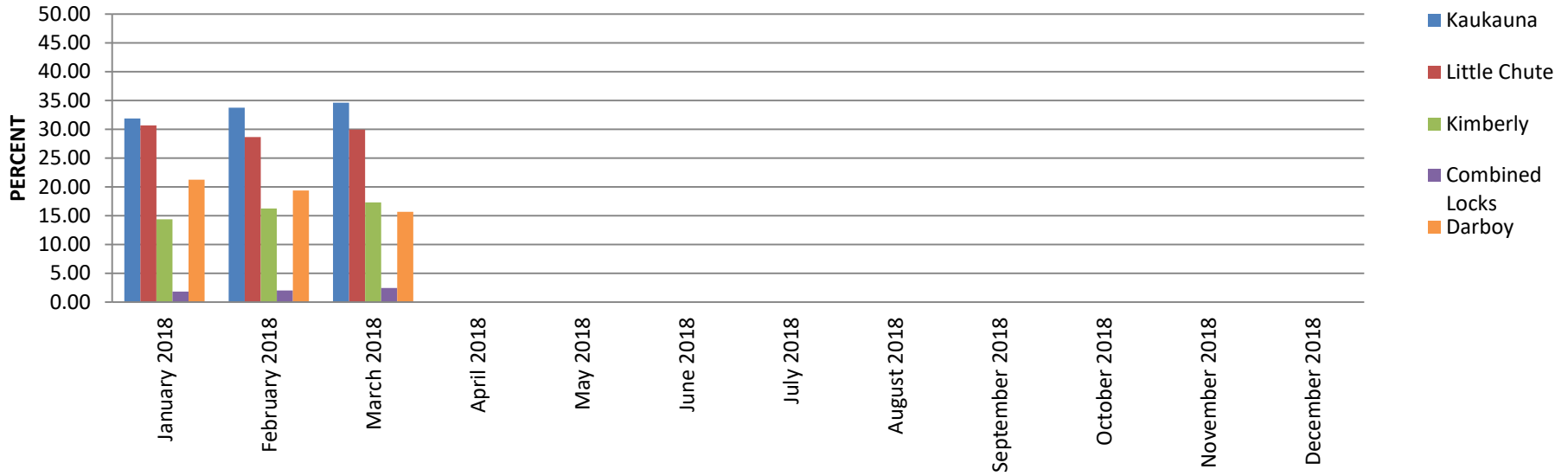
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	31.85	30.69	14.39	1.82	21.26
February 2018	33.73	28.65	16.24	2.03	19.36
March 2018	34.62	29.96	17.30	2.45	15.66
April 2018					
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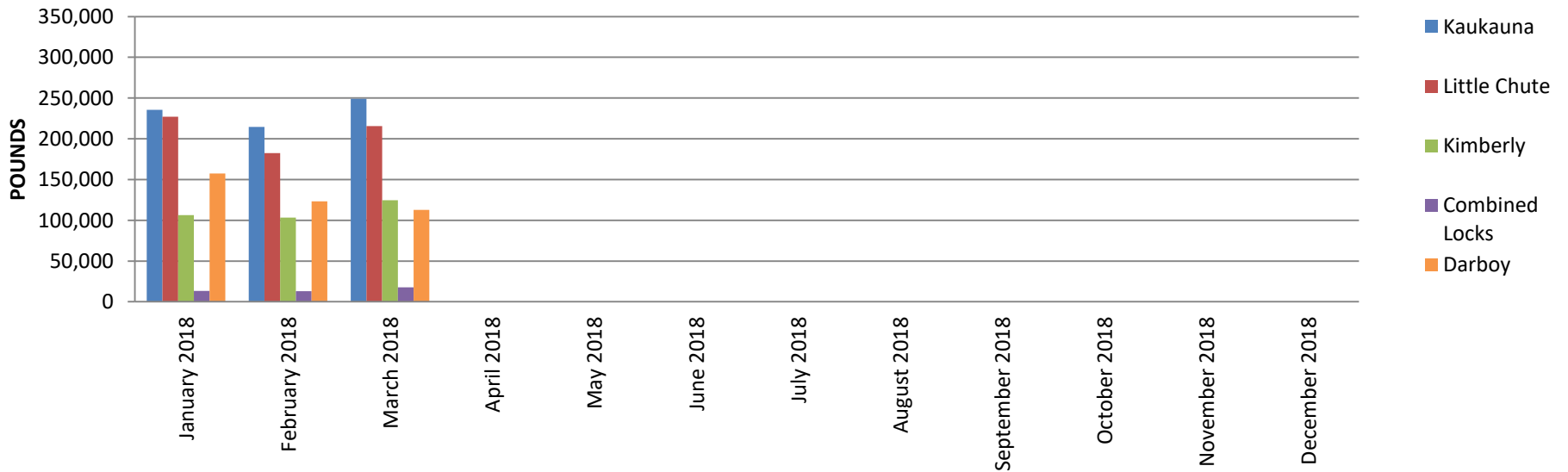
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2018	235,615	226,992	106,418	13,443	157,237
February 2018	214,675	182,327	103,385	12,914	123,204
March 2018	249,175	215,698	124,537	17,668	112,756
April 2018					
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% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

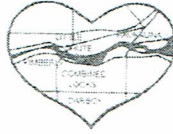


POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



DISTRICT DIRECTOR:

Brian M. Helminger

**COMMISSIONERS:**

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

SERVING:

Combined Locks
 Kaukauna
 Kimberly
 Little Chute
 Darboy S.D.

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 5651
 Bismarck, ND 58506

Attn: Account # N2310E

Month: March

Year: 2018

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
3/1/2018	2,713,000	3/21/2018	2,718,000
3/2/2018	2,711,000	3/22/2018	2,719,000
3/3/2018	2,491,000	3/23/2018	2,530,000
3/4/2018	2,422,000	3/24/2018	2,438,000
3/5/2018	2,437,000	3/25/2018	2,432,000
3/6/2018	2,493,000	3/26/2018	2,601,000
3/7/2018	2,707,000	3/27/2018	2,978,000
3/8/2018	2,715,000	3/28/2018	3,009,000
3/9/2018	2,717,000	3/29/2018	2,698,000
3/10/2018	2,609,000	3/30/2018	2,711,000
3/11/2018	2,718,000	3/31/2018	2,717,000
3/12/2018	2,699,000		
3/13/2018	2,701,000		
3/14/2018	2,710,000		
3/15/2018	2,711,000		
3/16/2018	2,722,000		
3/17/2018	2,717,000		
3/18/2018	2,717,000		
3/19/2018	2,725,000		
3/20/2018	2,723,000		
		Total:	82,709,000

Facility: Wisconsin Public Service Corporation - Fox Energy Center
P.O. Box 5651
Bismarck, ND 58506

Attn: Account # N2310E

MONTHLY BILLING

Month: March

Year: 2018

GALLONS PURCHASED: 82,709,000

BILLING RATE: \$0.1532146 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$12,672.23

**Heart of the Valley
Metropolitan Sewerage District**

**Fox Energy Revenue
From the Sale of Final Effluent**

2018

Final Effluent Sent to Fox Energy Facility

Gallons: 211,274,000

Charge Per 1000 Gallons: \$0.1532146 Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$32,370.26