

FLOW AND STRENGTH PROJECTIONS

MONTH: January 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)	140,838,803	121,718,140	-19,120,663	\$ 112,107.69	\$ 96,887.64	\$ (15,220.05)
B.O.D. (#s)	274,607	293,313	18,706	\$ 71,947.03	\$ 76,848.01	\$ 4,900.98
S. SOLIDS (#s)	335,672	327,430	-8,242	\$ 89,288.75	\$ 87,096.25	\$ (2,192.50)
PHOSPHORUS (#s)	7,313	7,177	-136	\$ 45,998.77	\$ 45,146.29	\$ (852.48)
AMMONIA-N (#s)	39,837	44,839	5,002	\$ 59,715.66	\$ 67,213.32	\$ 7,497.65
CHLORIDES (#s)	637,210	739,705	102,495	\$ 3,186.05	\$ 3,698.52	\$ 512.47
			TOTAL:	\$ 382,243.96	\$ 376,890.03	\$ (5,353.93)

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	-19,120,663	\$ (15,220.05)
B.O.D. (#s)	3,292,724	18,706	\$ 4,900.98
S. SOLIDS (#s)	3,957,399	-8,242	\$ (2,192.50)
PHOSPHORUS (#s)	83,650	-136	\$ (852.48)
AMMONIA-N (#s)	464,411	5,002	\$ 7,497.65
CHLORIDES (#s)	7,768,031	102,495	\$ 512.47
		TOTAL:	\$ (5,353.93)

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

MONTH: JANUARY 2018

HYDRAULIC AND ORGANIC LOADINGS DATA

INFLUENT

TOTAL FLOW TO PLANT: 121,122,000 GALLONS
 AVERAGE B.O.D. : 294 mg/L
 AVERAGE SUSPENDED SOLIDS : 278 mg/L
 AVERAGE PHOSPHORUS : 6.69 mg/L
 AVERAGE AMMONIA-N : 44.02 mg/L
 AVERAGE CHLORIDES : 691.54 mg/L

MAXIMUM DAILY FLOW TO PLANT:
5,891,000

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

<u>COMMUNITY</u>	<u>FLOW</u>	<u>BOD</u>	<u>TSS</u>	<u>PHOSPHORUS</u>	<u>AMMONIA</u>	<u>CHLORIDES</u>
KAUKAUNA	37.87	28.42	31.24	29.96	31.10	31.85
LITTLE CHUTE	23.18	30.18	24.81	26.61	32.48	30.69
KIMBERLY	11.32	11.73	13.94	10.44	8.61	14.39
COMBINED LOCKS	5.97	6.60	7.91	6.60	5.26	1.82
DARBOY	21.65	23.07	22.10	26.40	22.55	21.26

AVERAGE DAILY INFLUENT LOADINGS

FLOW : 3,907,161 GALLONS
 B.O.D. : 9,565 POUNDS
 SUSPENDED SOLIDS : 9,057 POUNDS
 PHOSPHORUS : 218 POUNDS
 AMMONIA-N : 1,434 POUNDS
 CHLORIDES : 22,534 POUNDS

%

32.8
65.3
55.6
53.6
74.7

PLANT DESIGN CRITERIA

11,900,000 GALLONS/DAY
 14,651 POUNDS/DAY
 16,278 POUNDS/DAY
 407 POUNDS/DAY
 1,920 POUNDS/DAY

FINAL EFFLUENT

MONTHLY AVERAGE

FLOW: 1,993,613
 cB.O.D. : 7.06 mg/L
 SUSPENDED SOLIDS : 17.96 mg/L
 PHOSPHORUS : 0.56 mg/L
 AMMONIA-N : 0.49 mg/L
 CHLORIDES : 676.92 mg/L

%

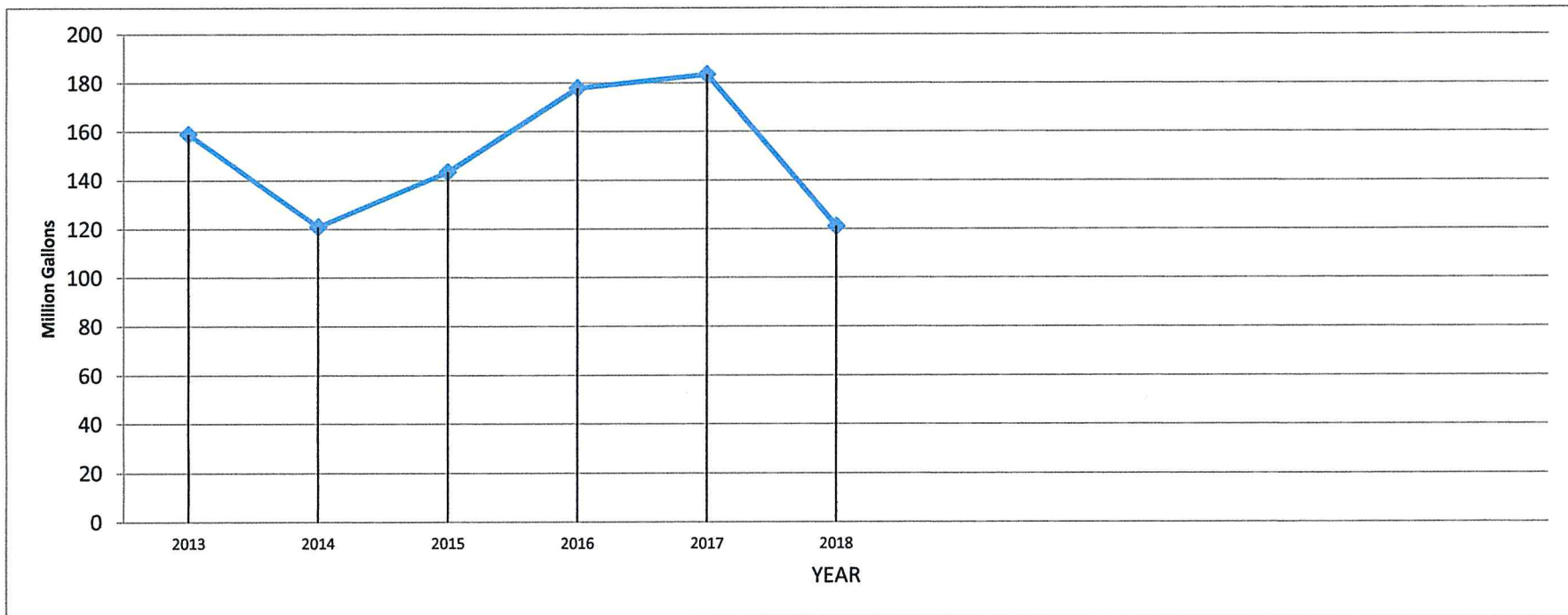
28.2
59.9
55.6
4.9

PERMIT LIMIT

25 mg/L
 30 mg/L
 1 mg/L
 10 mg/L

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>January Flow</u> <u>Million Gallons</u>	<u>Precipitation</u> <u>Inches</u>
2013	159.014	1.79
2014	120.943	1.65
2015	143.460	0.56
2016	177.906	1.53
2017	183.493	0.00
2018	121.122	0.60

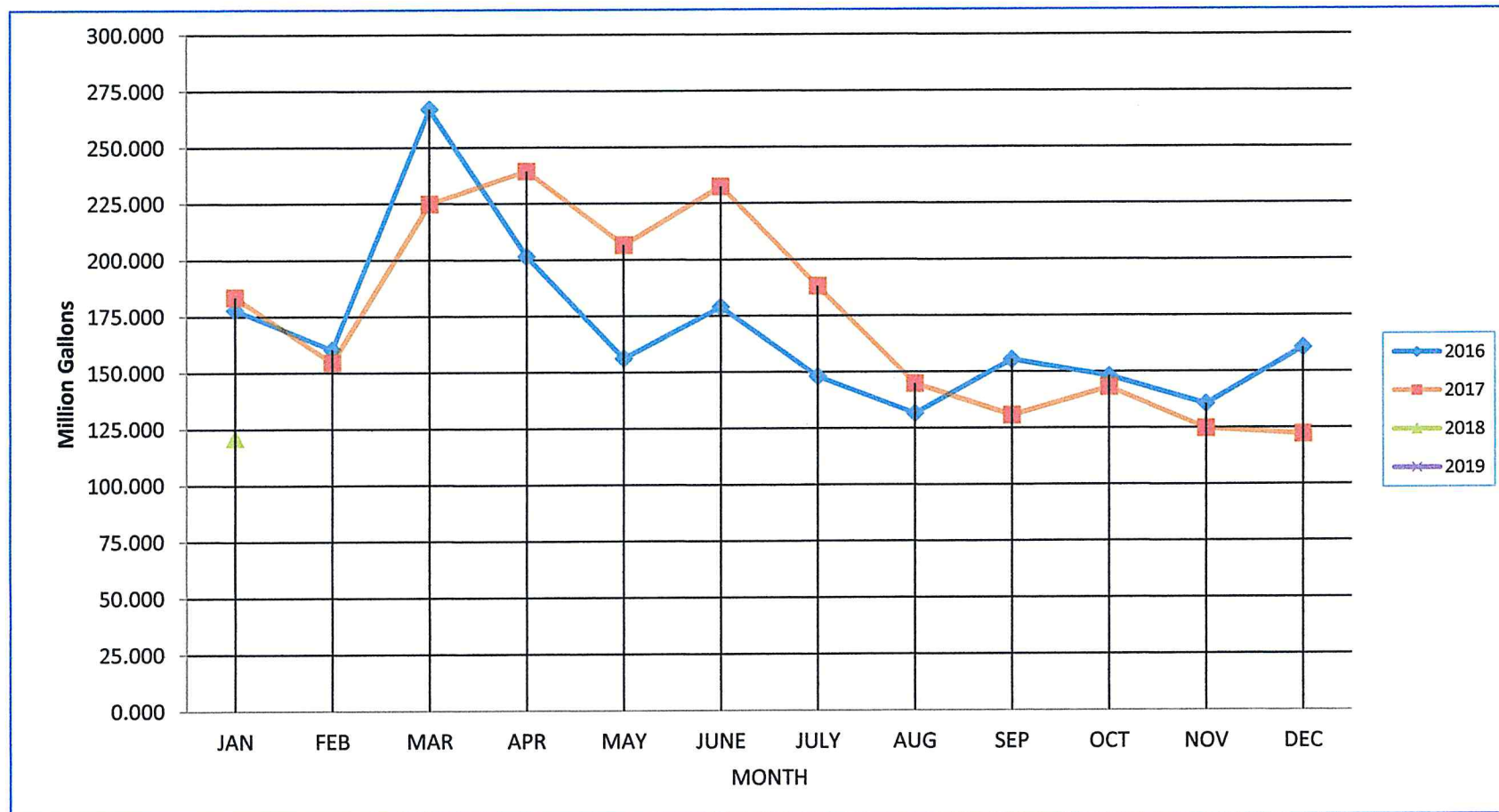


HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

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

MONTHLY FLOW VOLUMES



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

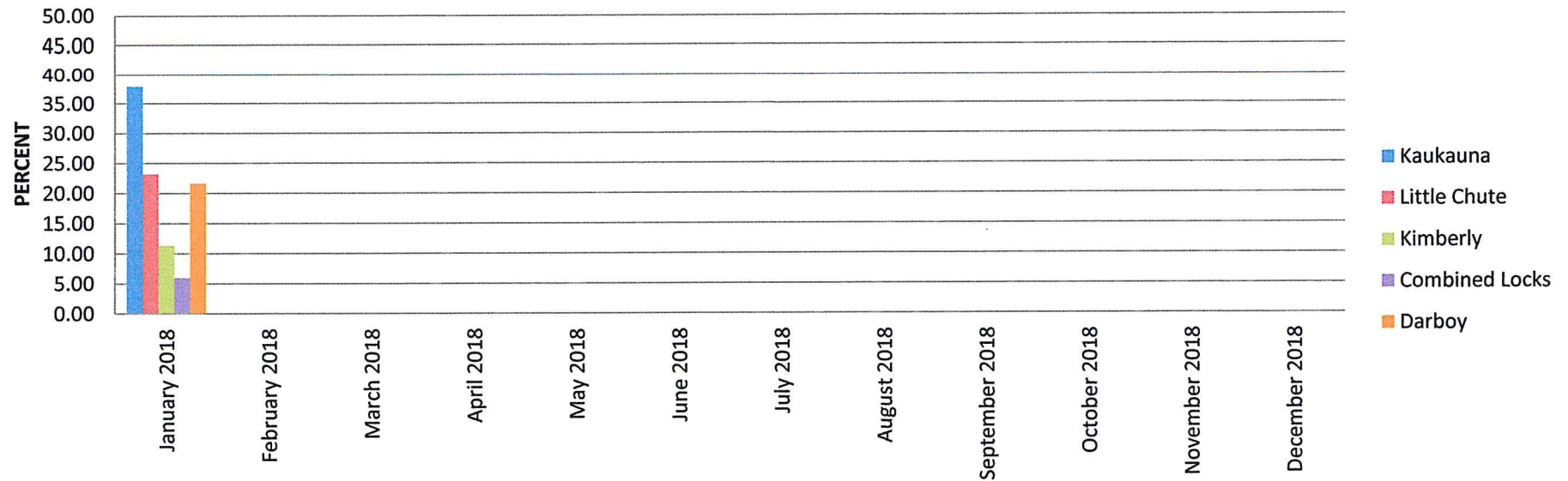
% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<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						
March 2018						
April 2018						
May 2018						
June 2018						
July 2018						
August 2018						
September 2018						
October 2018						
November 2018						
December 2018						

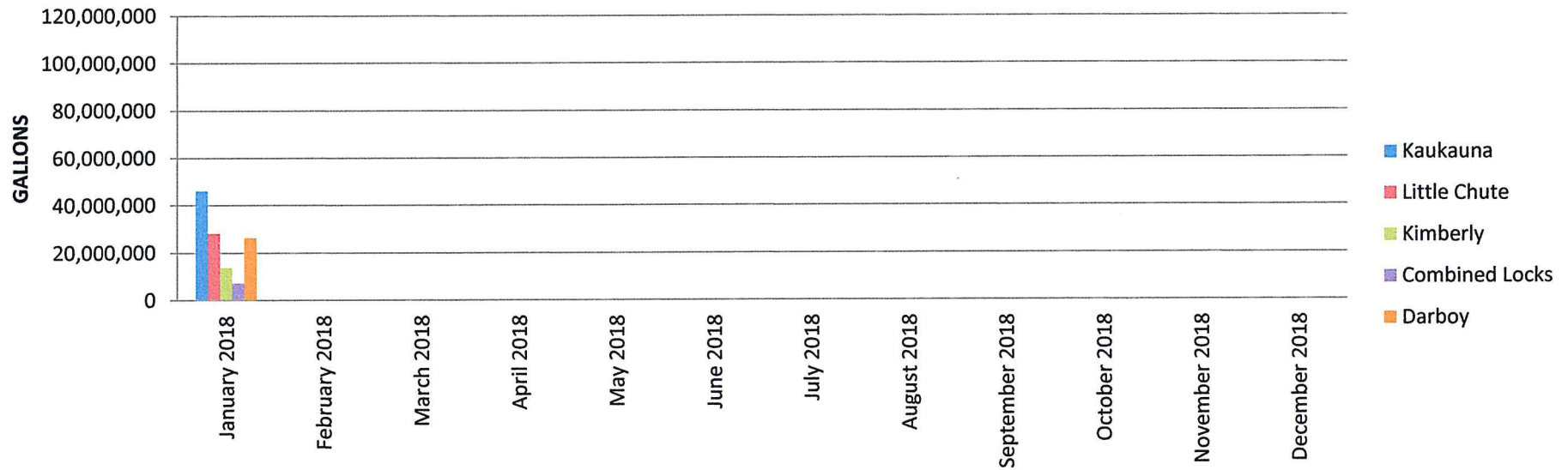
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS



GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

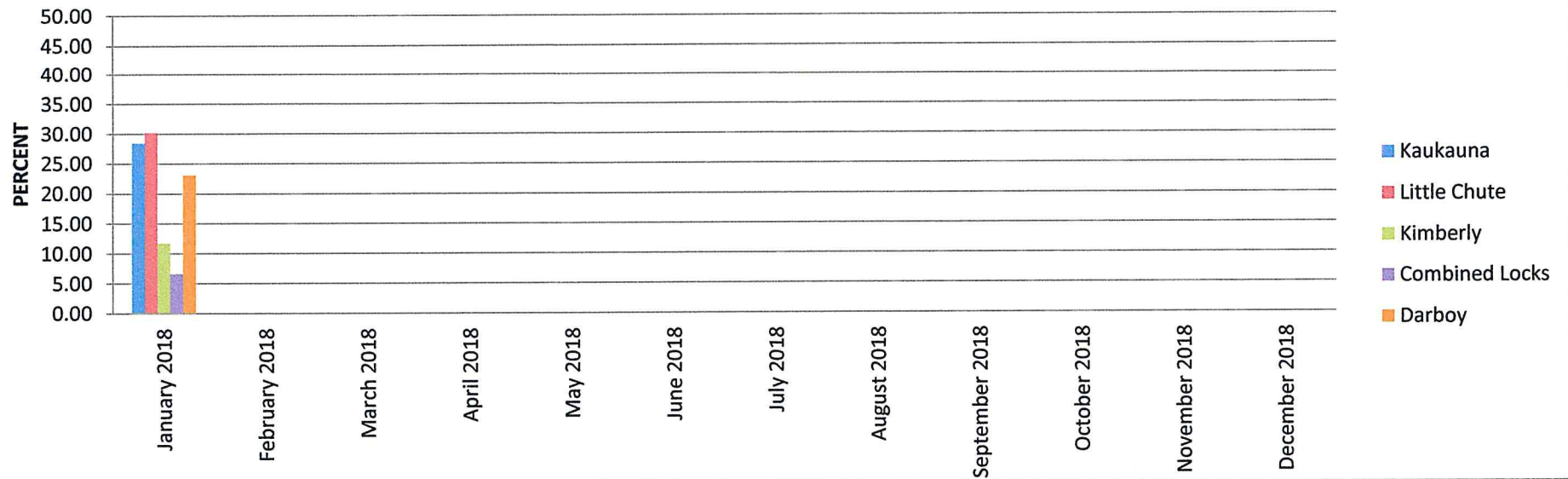
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

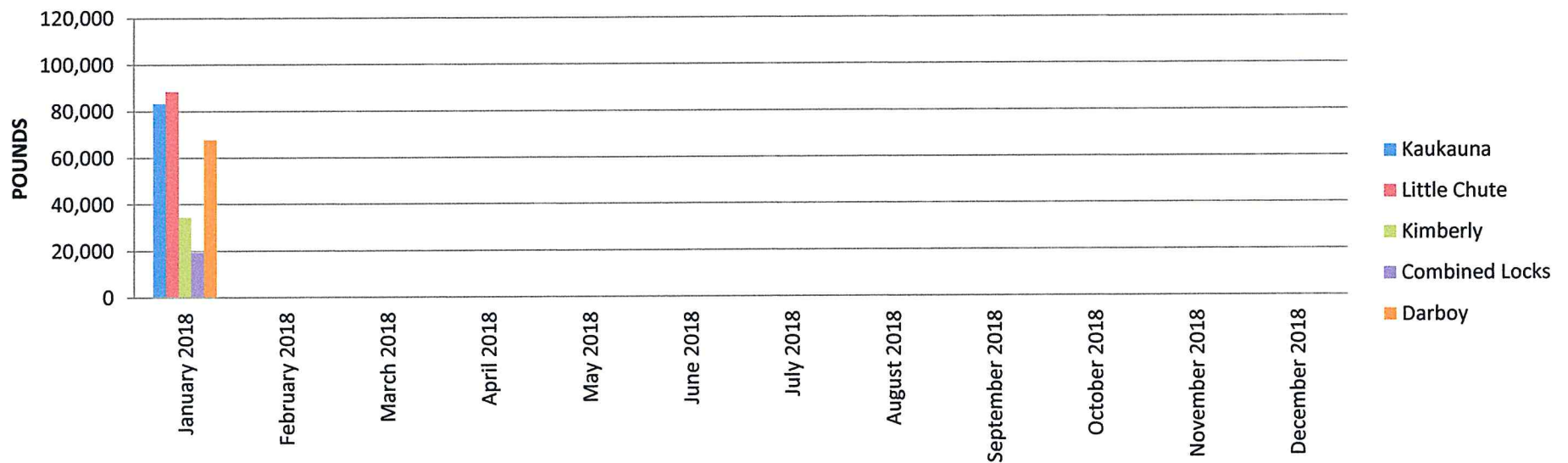
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

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



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



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

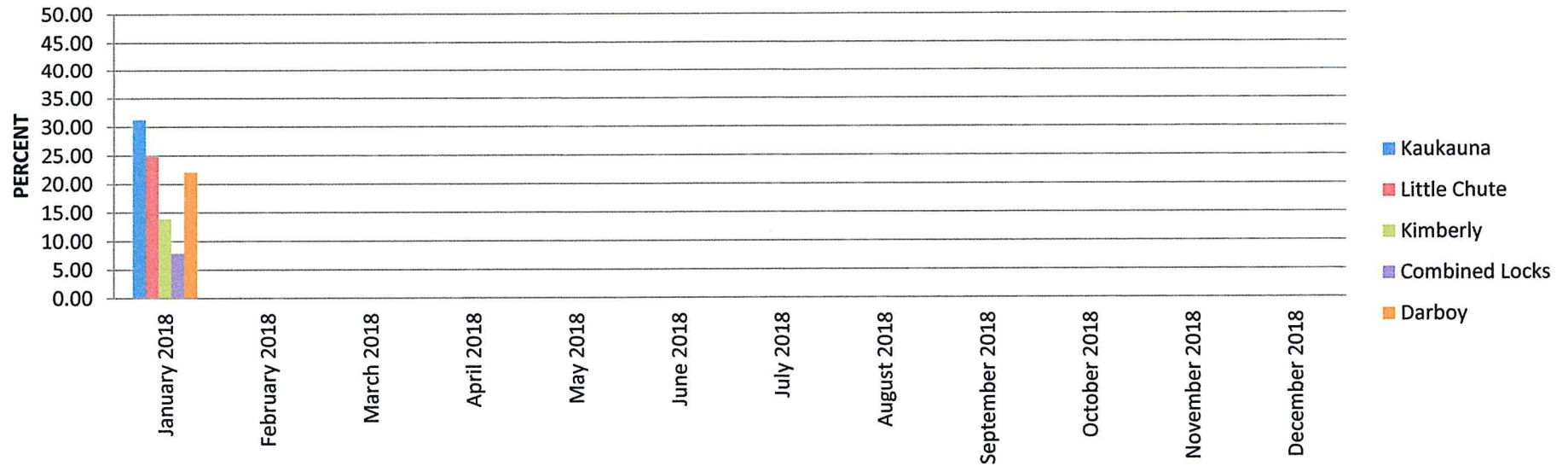
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

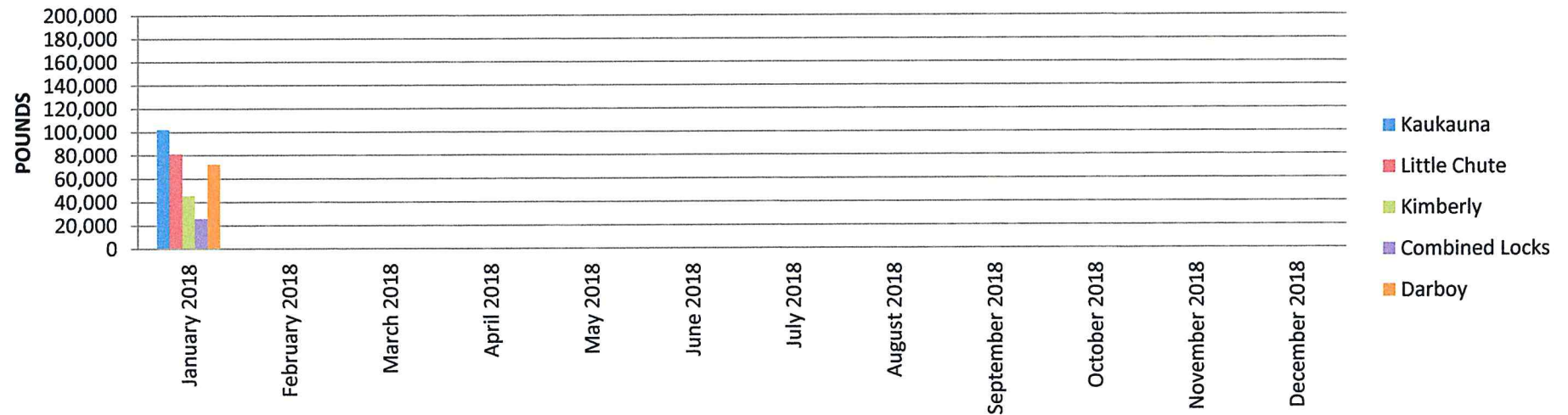
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

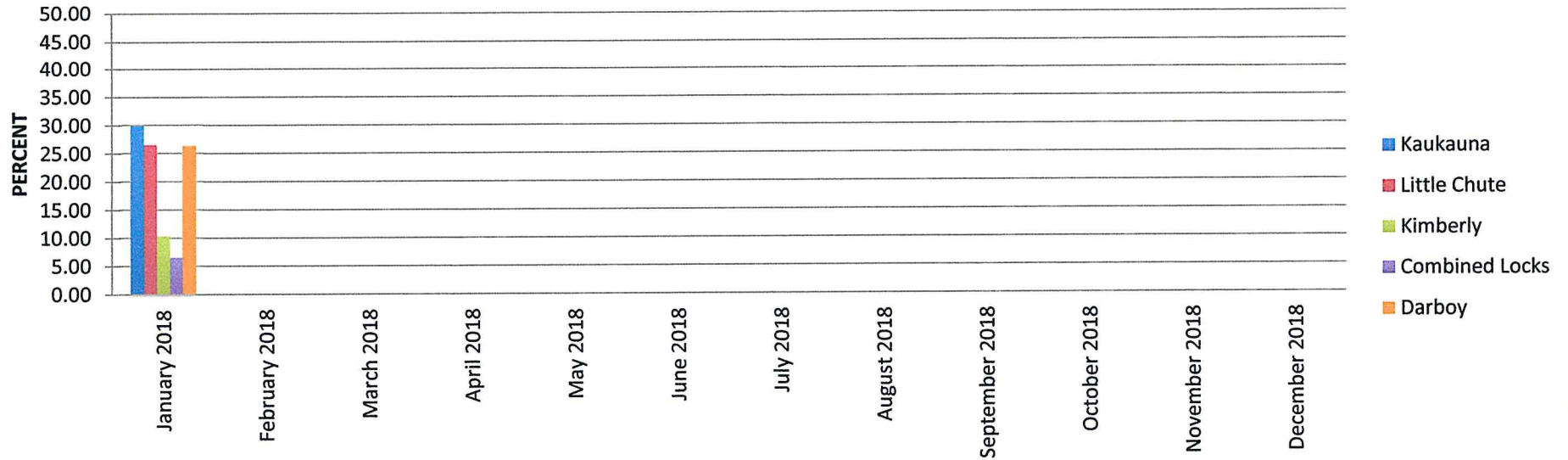
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

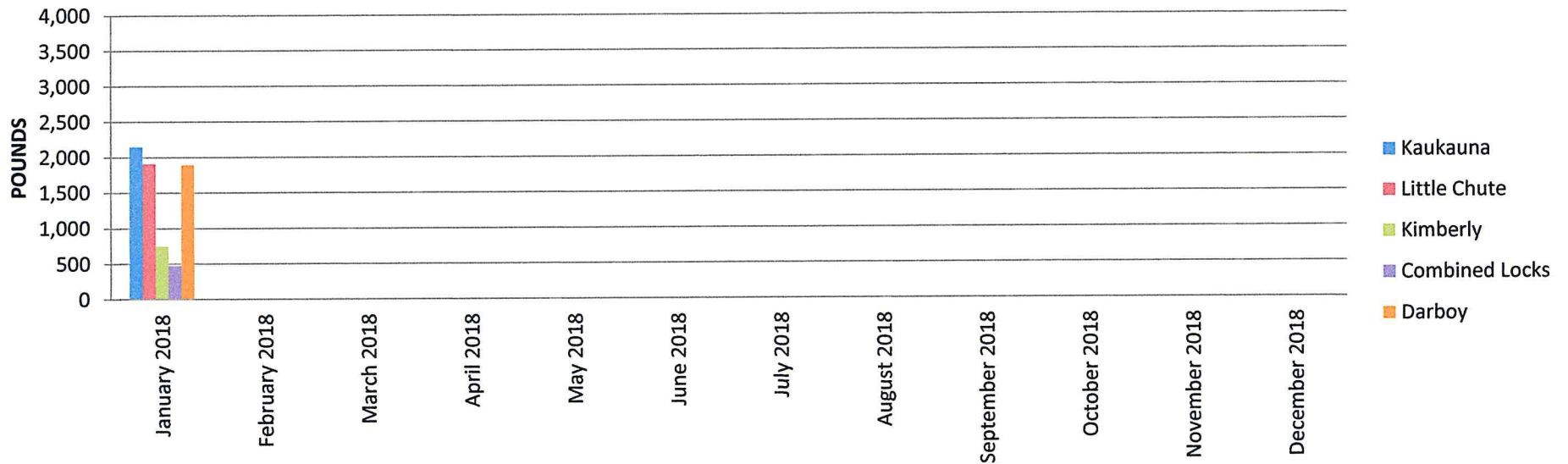
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

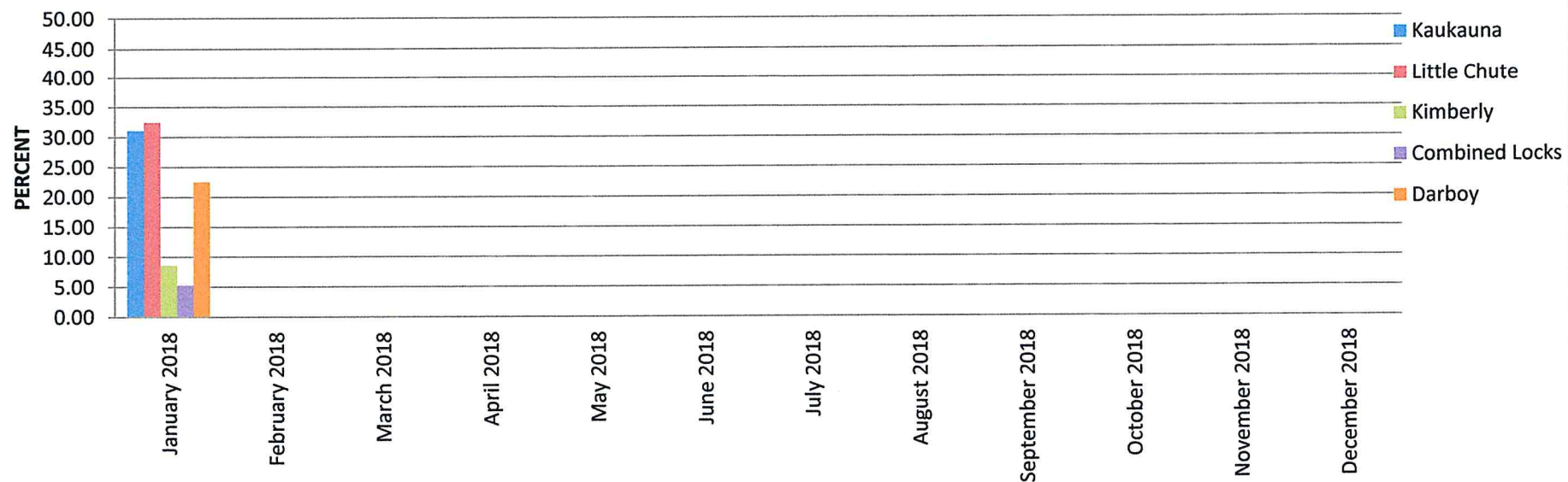
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

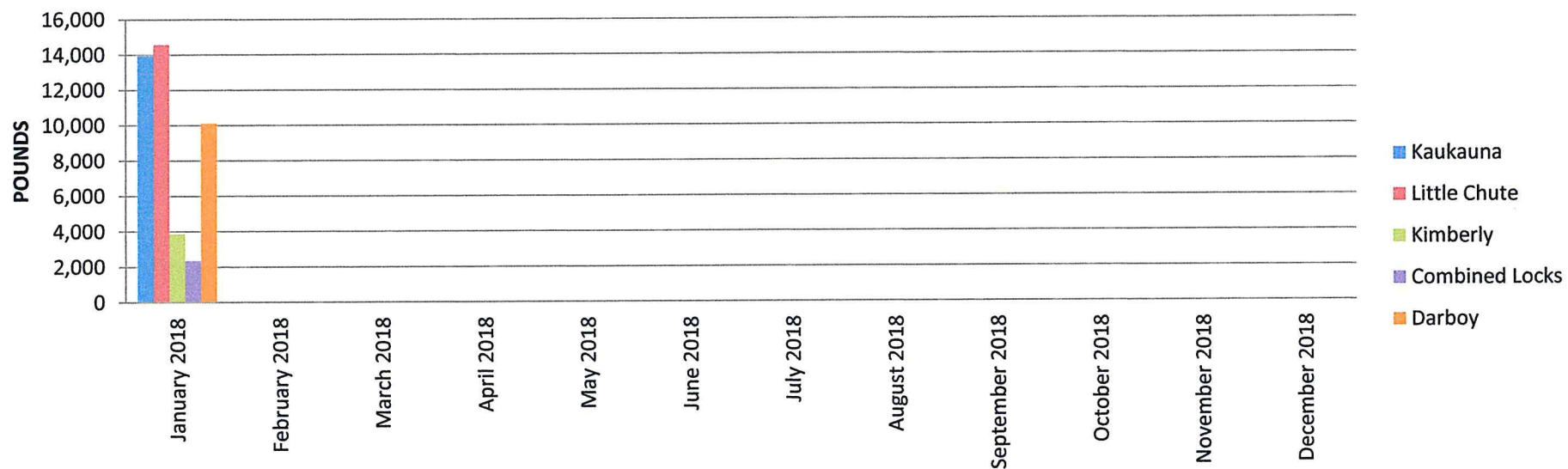
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

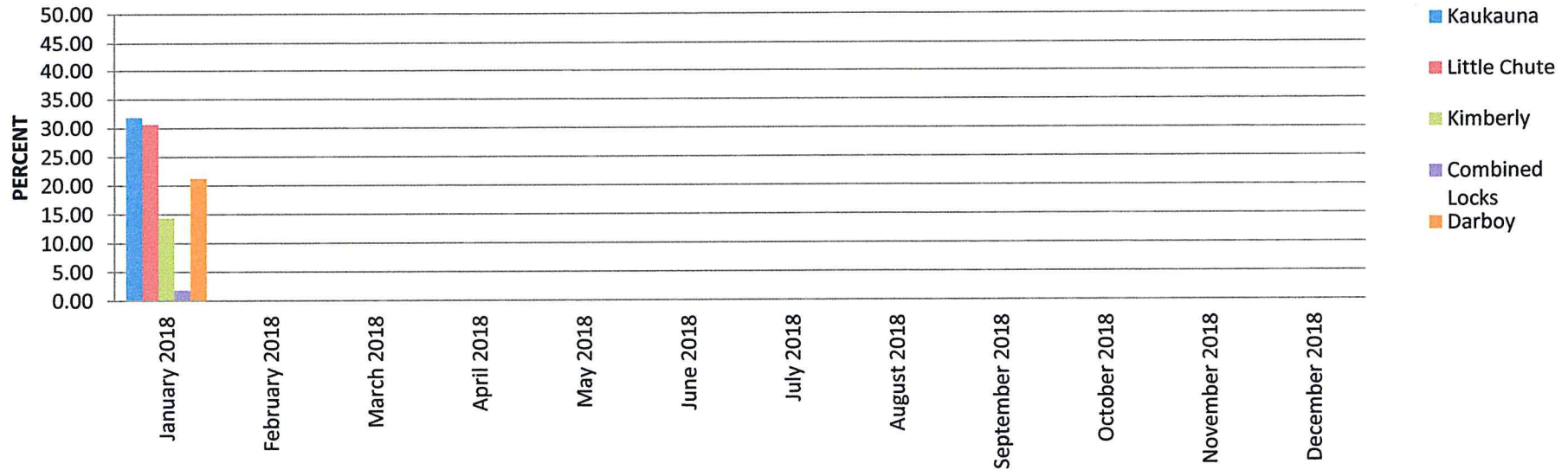
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

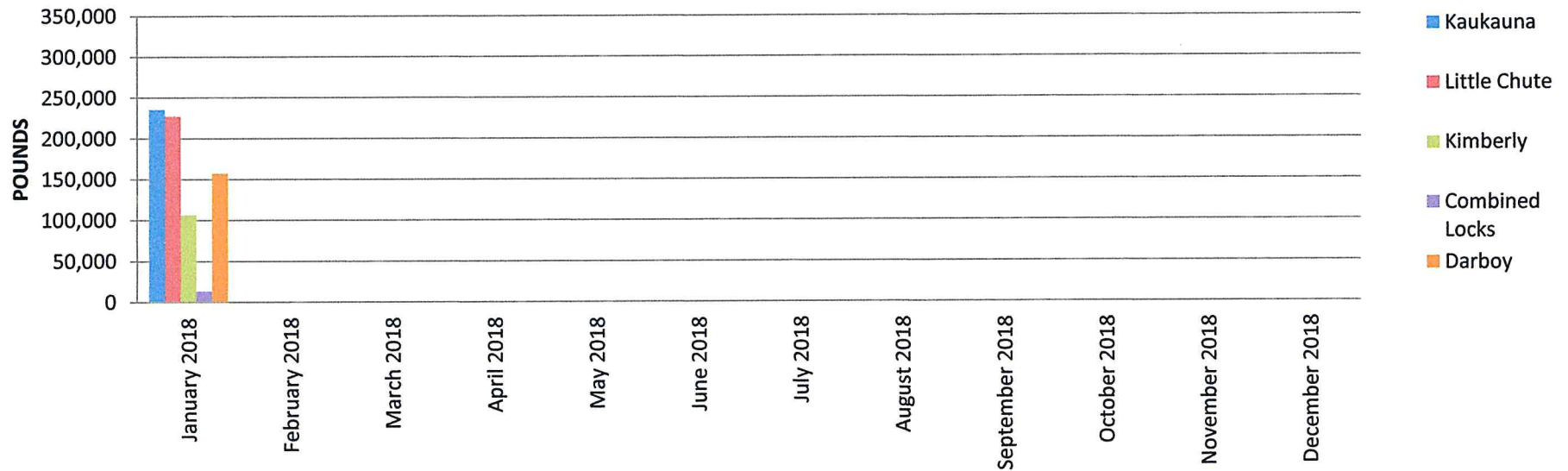
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<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					
March 2018					
April 2018					
May 2018					
June 2018					
July 2018					
August 2018					
September 2018					
October 2018					
November 2018					
December 2018					

% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

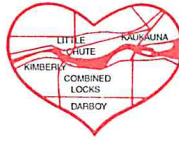


POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



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: January

Year: 2018

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
1/1/2018	1,434,000	1/21/2018	2,431,000
1/2/2018	2,354,000	1/22/2018	2,050,000
1/3/2018	2,380,000	1/23/2018	2,402,000
1/4/2018	2,221,000	1/24/2018	2,612,000
1/5/2018	1,834,000	1/25/2018	1,468,000
1/6/2018	1,855,000	1/26/2018	1,656,000
1/7/2018	1,924,000	1/27/2018	302,000
1/8/2018	64,000	1/28/2018	1,698,000
1/9/2018	2,592,000	1/29/2018	2,965,000
1/10/2018	1,440,000	1/30/2018	2,837,000
1/11/2018	1,440,000	1/31/2018	2,401,000
1/12/2018	1,650,000		
1/13/2018	1,872,000		
1/14/2018	1,872,000		
1/15/2018	1,872,000		
1/16/2018	1,584,000		
1/17/2018	1,536,000		
1/18/2018	1,584,000		
1/19/2018	2,088,000		
1/20/2018	2,902,000		
		Total:	59,320,000

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

Attn: Account # N2310E

MONTHLY BILLING

Month: January

Year: 2018

GALLONS PURCHASED: 59,320,000

BILLING RATE: \$0.1532146 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$9,088.69

**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: 59,320,000

Charge Per 1000 Gallons: \$0.1532146 Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$9,088.69