

FLOW AND STRENGTH PROJECTIONS

MONTH: February 2023

	<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)	138,583,567	181,698,000	43,114,433	\$ 97,701.41	\$ 128,097.09	\$ 30,395.68
B.O.D. (#s)	438,119	492,208	54,089	\$ 77,108.94	\$ 86,628.61	\$ 9,519.66
S. SOLIDS (#s)	371,797	417,700	45,903	\$ 88,487.69	\$ 99,412.60	\$ 10,924.91
PHOSPHORUS (#s)	7,116	8,086	970	\$ 45,385.85	\$ 51,572.51	\$ 6,186.66
AMMONIA-N (#s)	50,935	48,719	-2,216	\$ 55,519.15	\$ 53,103.71	\$ (2,415.44)
CHLORIDES (#s)	845,492	991,377	145,885	\$ 2,536.48	\$ 2,974.13	\$ 437.66
			TOTAL:	\$ 366,739.52	\$ 421,788.65	\$ 55,049.13

(THRU FEBRUARY 2023)

PROJECTED FOR 2023

	<u>END OF YEAR PROJECTED</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT \$\$</u>
FLOW (GALLONS)	2,301,369,933	98,045,933	\$ 69,122.38
B.O.D. (#s)	5,484,285	122,979	\$ 21,644.30
S. SOLIDS (#s)	4,877,973	79,273	\$ 18,866.97
PHOSPHORUS (#s)	94,940	1,863	\$ 11,882.21
AMMONIA-N (#s)	666,440	-19	\$ (20.71)
CHLORIDES (#s)	11,252,829	349,077	\$ 1,047.23
		TOTAL:	\$ 122,542.40

RAW INFLUENT STRENGTH (Heart of the Valley Metropolitan Sewerage Facility)

February 2023

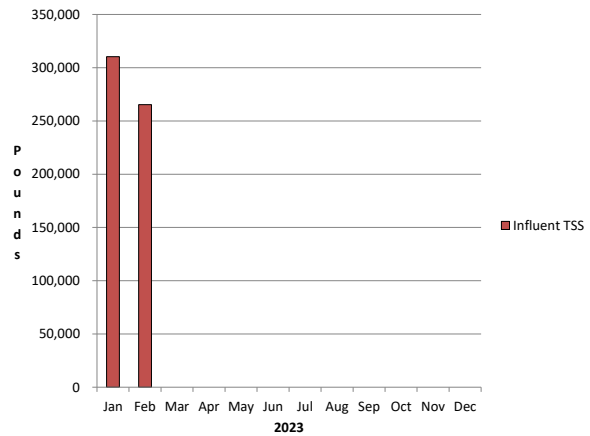
	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE		
MONTH	Million *	Avg MGD	Avg mg/L	Avg #/day	Total # /Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month
Jan	200.1	6.5	187	10,014	310,440	249	13,373	414,561	4.70	250	7,740	31.4	1653	51,242	625	32,183	997,678
Feb	152.9	5.5	214	9,476	265,340	273	12,145	340,058	5.08	228	6,374	35.4	1571	43,979	683	30,731	860,461
Mar																	
Apr																	
May																	
Jun																	
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
Average	176.5	6.0	200	9,745	287,890	261	12,759	377,310	4.89	239	7,057	33.4	1,612	47,610	654	31,457	929,070
Yearly Total	353.0				575,780			754,619			14,113			95,221			1,858,139
*Includes Hauled Waste [Plant Design Capacity] =		8.5			13,565			12,209			339			1,600			
(Hauled Waste Gallons)= 160,530 [Max Design Capacity] =		11.9			16,278			14,651			407			1,920			
February % of Capacity =		46%			58%			83%			56%			82%			

February Max Daily Flow = 8.09

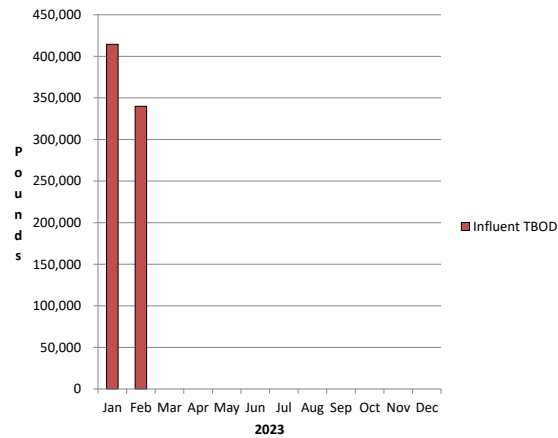
EFFLUENT QUALITY

												Monthly Avg Limit			
												Jan- Mar	10 mg/L		
												April-May	11 mg/L		
												June-Sept	4.4 mg/L		
												Oct- Dec	18 mg/L		
{PERMIT LIMITS (WDNR) →			Monthly (Avg)			801#	Monthly Avg			30 mg/L	Monthly Avg			31.5#	
			Weekly (Avg)			1345#	Weekly Avg			45 mg/L	6 mo Avg			10.5#	
			Daily Max (mg/L)			30	WLA May-Oct				Daily Max mg/L			1.0	
	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE
MONTH	Million Gallons	Avg MGD	Avg mg/L	Avg #/day	Total # /Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L
Jan	115.9	3.7	8.0	251	7,792	8.0	248	7,703	0.23	7.1	220	0.43	13.7	425	616
Feb	75.3	2.7	10.1	223	6,253	7.9	175	4,887	0.24	5.1	144	0.25	5.3	147	706
Mar															
Apr															
May															
Jun															
Jul															
Aug															
Sep															
Oct															
Nov															
Dec															
Average	95.6	3.2	9.0	237	7,023	7.9	211.5	6,295	0.23	6.1	181.8	0.34	9.5	286.2	661
Yearly Total	191.2				14,045			12,589			364			572.5	
			February	Avg #'s							6 mo. Avg #'s	8.28	Nov-April		
			WEEK 1	161											
			WEEK 2	201											
			WEEK 3	228											
			WEEK 4	303											
Effluent Gallons to Fox Energy (February)															
77.67	51%														

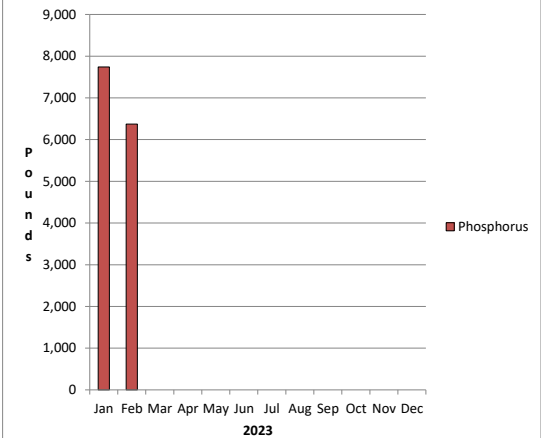
Influent TSS Total Pounds/Mo.



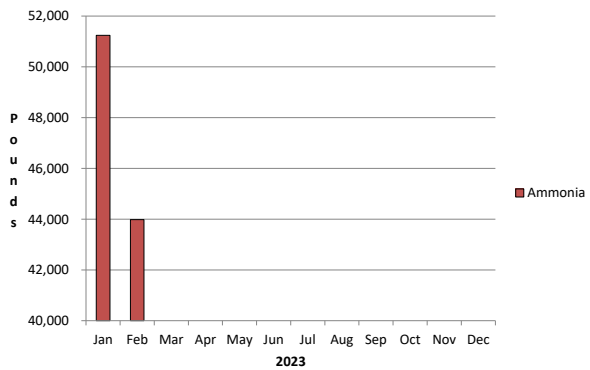
Influent BOD Total Pounds / Mo.



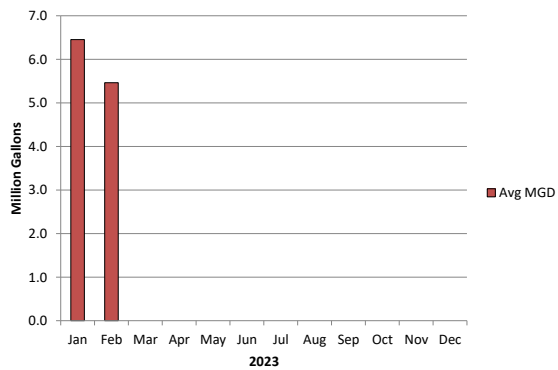
Influent Phosphorus Total Pounds/Mo.



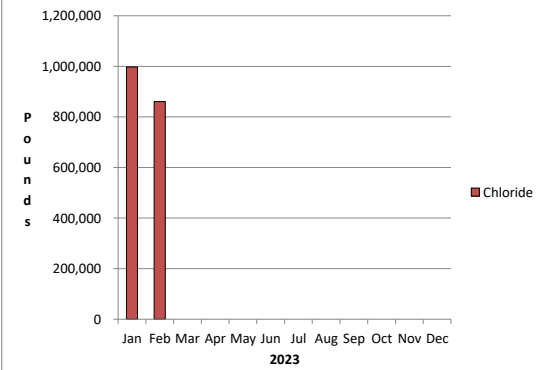
Influent Ammonia Total Pounds/Mo.



Avg Influent MGD/Mo.



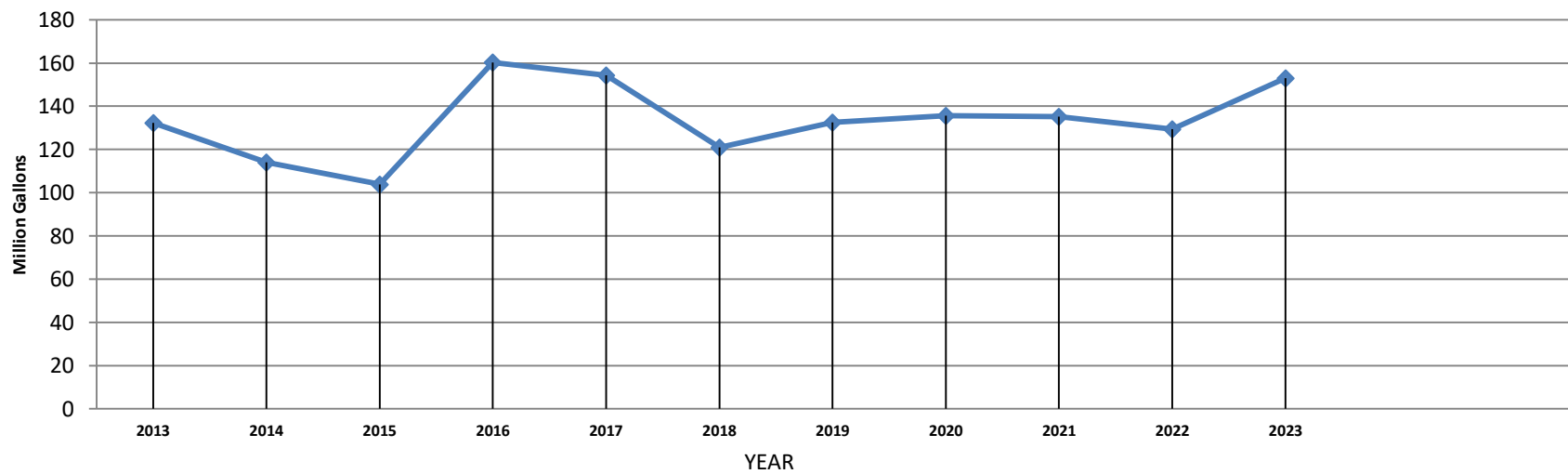
Influent Chloride Total Pounds/Mo.



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>February Flow</u> <u>Million Gallons</u>	<u>Precipitation</u> <u>Inches</u>
2013	132.251	1.22
2014	114.081	1.74
2015	103.918	0.52
2016	160.230	1.13
2017	154.391	0.00
2018	120.841	0.00
2019	132.459	2.81
2020	135.703	1.02
2021	135.210	1.29
2022	129.312	0.50
2023	152.933	2.81

FEBRUARY FLOW VOLUMES

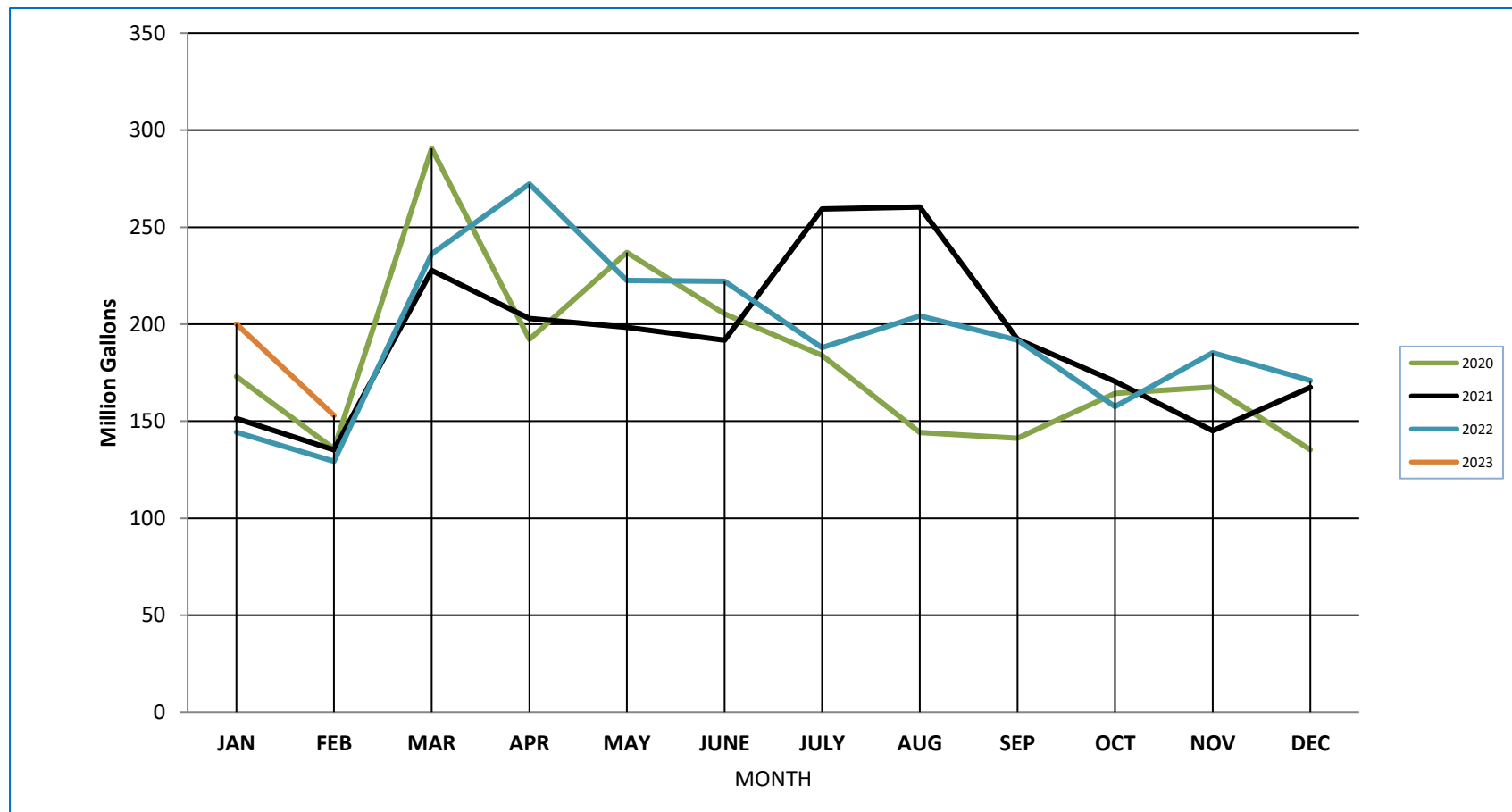


HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUNE</u>	<u>JULY</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
2020	172.999	135.703	290.643	192.150	236.946	205.368	184.011	144.085	141.266	164.399	167.558	135.257
2021	151.398	135.210	227.688	202.920	198.367	191.728	259.337	260.418	192.127	170.491	145.014	167.477
2022	144.333	129.312	236.184	272.294	222.500	222.064	187.964	204.237	191.682	157.552	185.294	171.044
2023	200.088	152.933										

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

MONTHLY FLOW VOLUMES



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

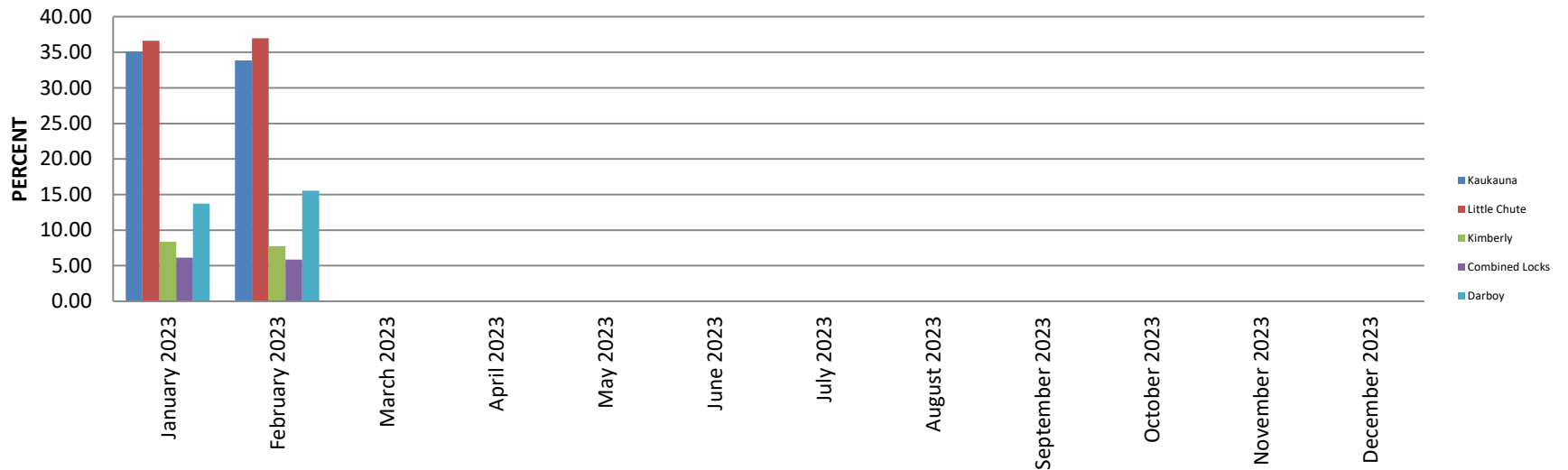
% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches</u>
January 2023	35.10	36.64	8.37	6.15	13.74	
February 2023	33.85	36.98	7.74	5.87	15.55	
March 2023						
April 2023						
May 2023						
June 2023						
July 2023						
August 2023						
September 2023						
October 2023						
November 2023						
December 2023						

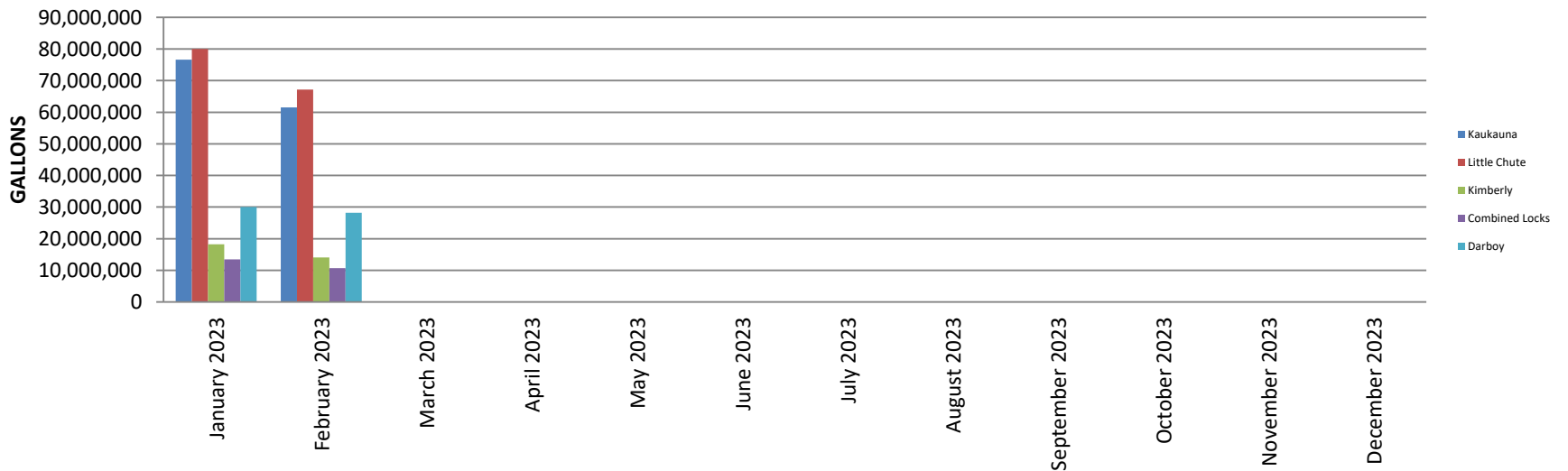
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	76,627,000	79,990,000	18,278,000	13,428,000	30,004,000
February 2023	61,513,000	67,194,000	14,068,000	10,673,000	28,250,000
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS



GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

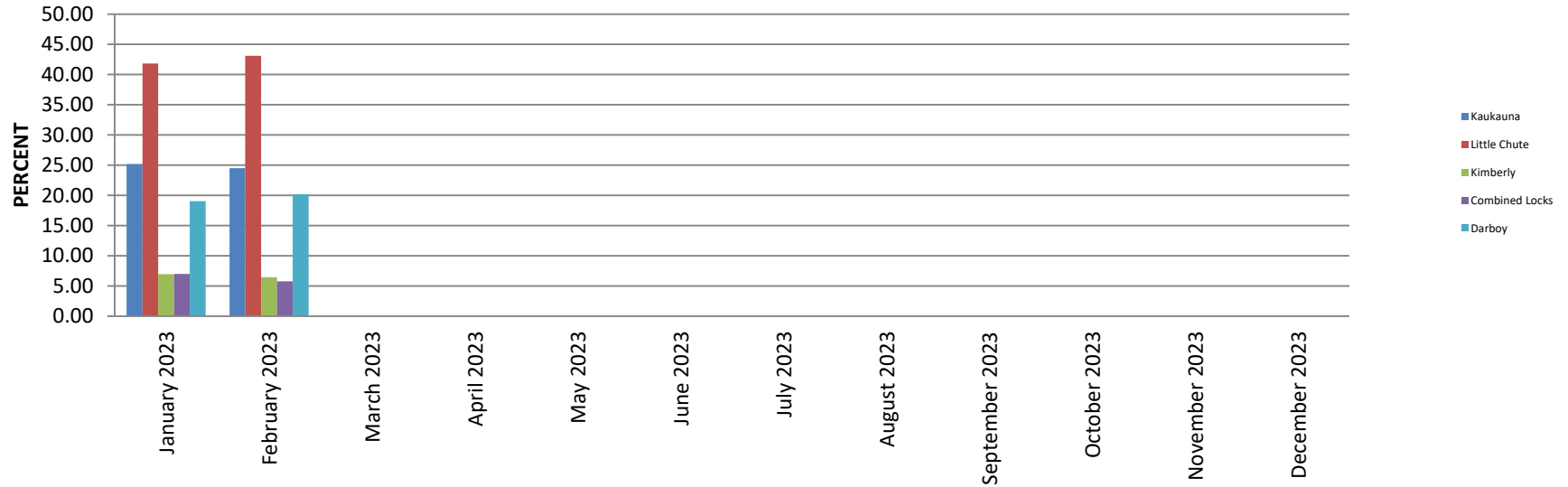
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	25.17	41.83	6.96	7.01	19.03
February 2023	24.49	43.10	6.43	5.78	20.20
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

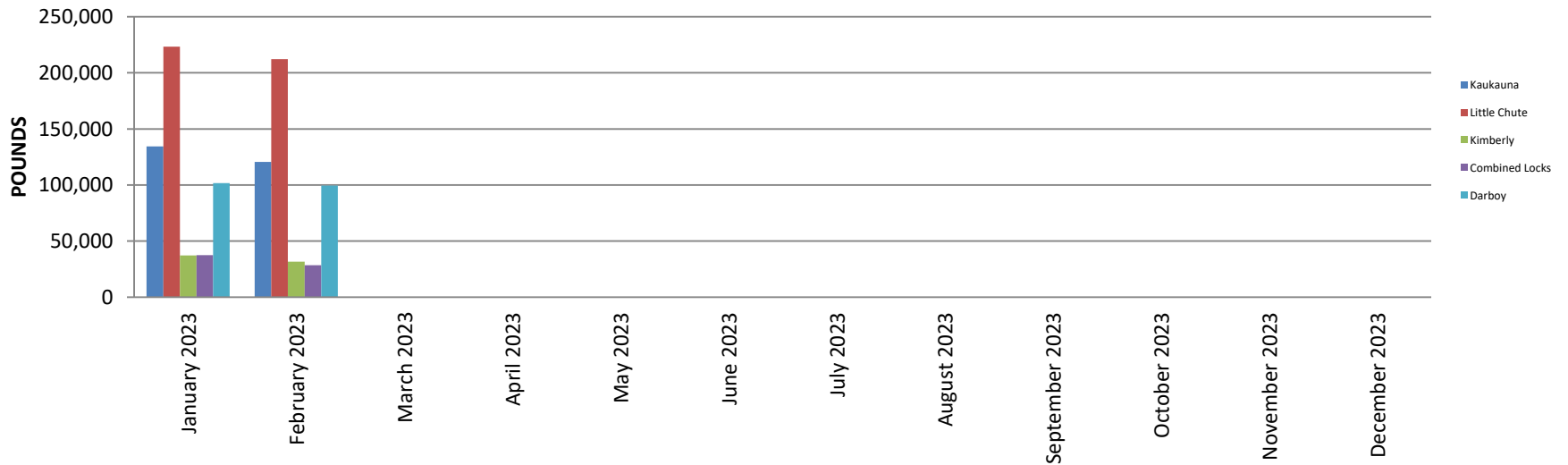
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	134,417	223,380	37,167	37,435	101,643
February 2023	120,535	212,140	31,664	28,427	99,442
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

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



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



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

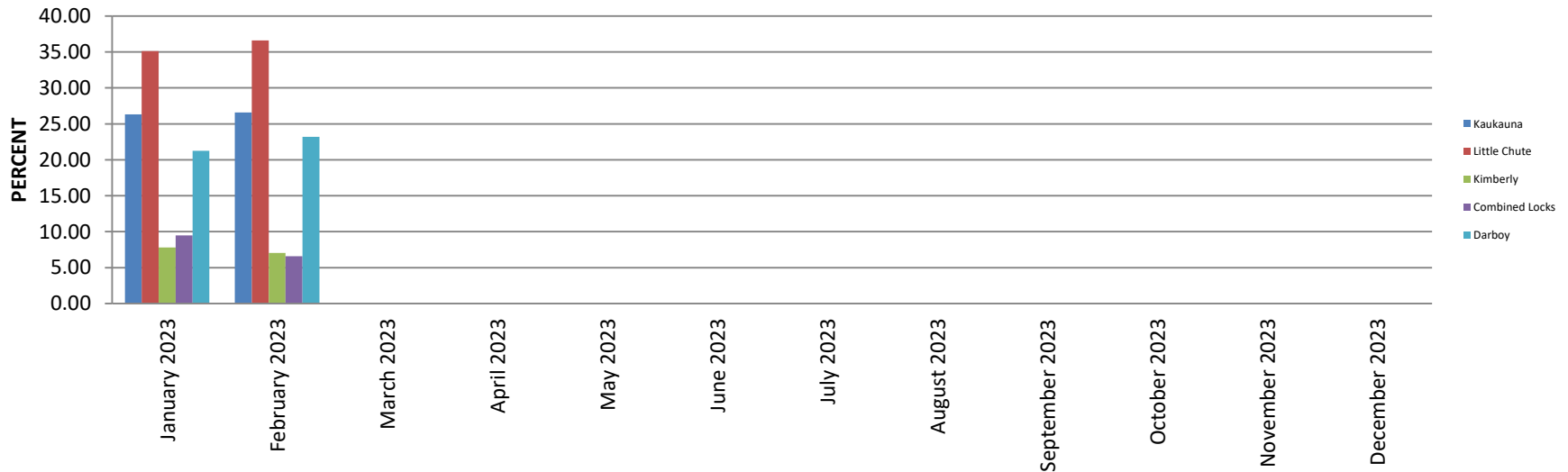
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	26.33	35.11	7.82	9.49	21.24
February 2023	26.58	36.61	7.03	6.59	23.20
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

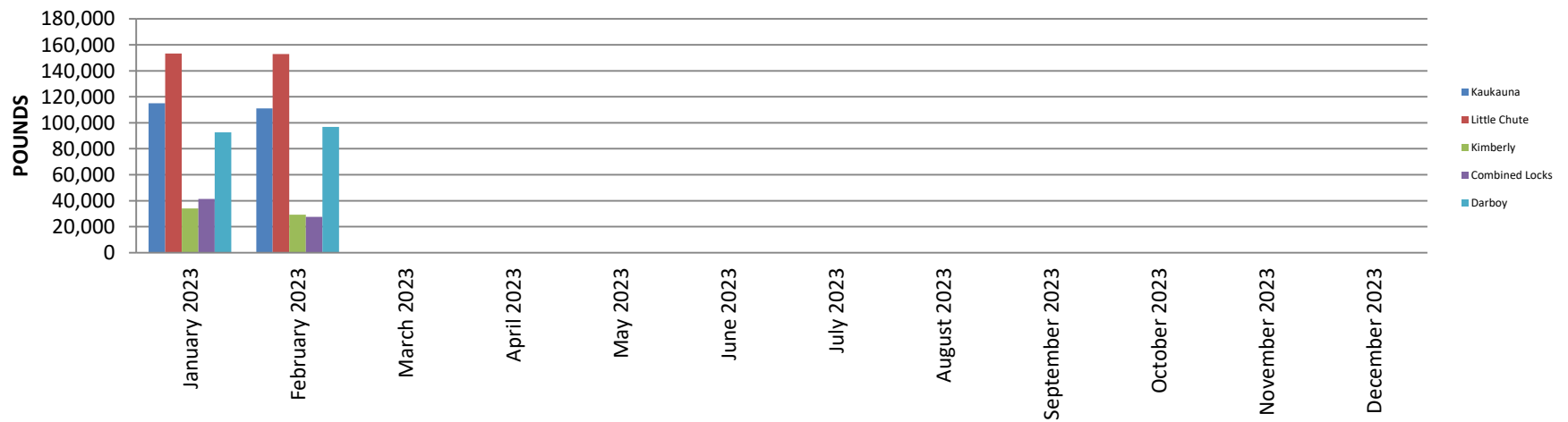
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	114,976	153,300	34,163	41,452	92,726
February 2023	111,023	152,901	29,366	27,510	96,901
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

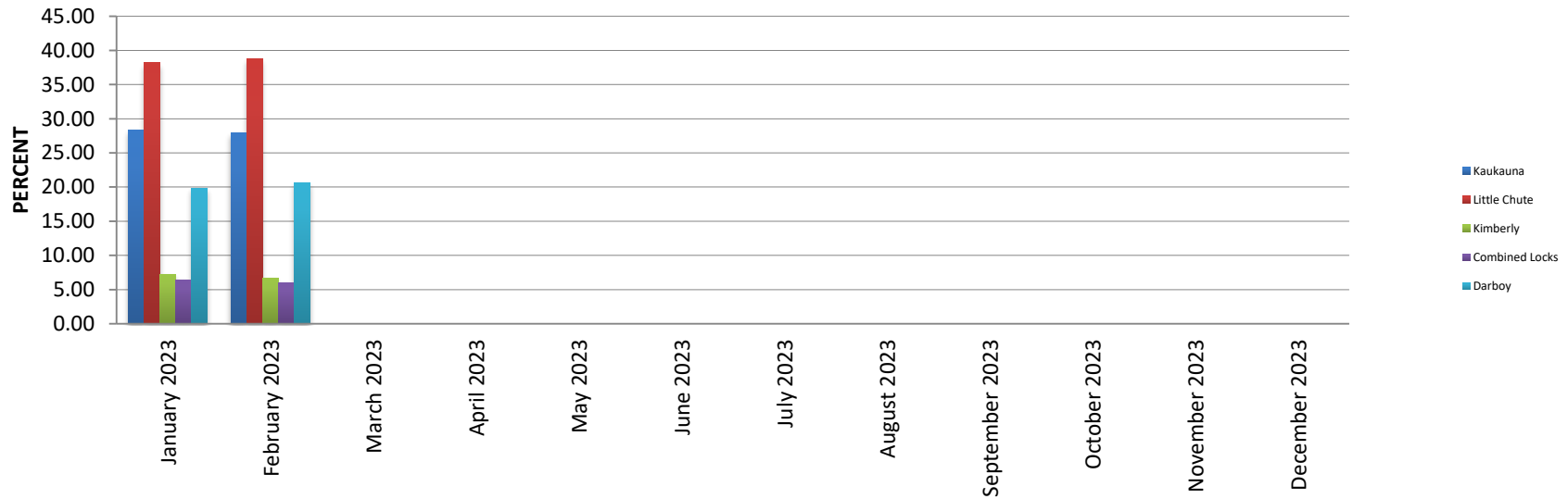
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	28.38	38.18	7.20	6.39	19.84
February 2023	27.92	38.79	6.66	5.97	20.66
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

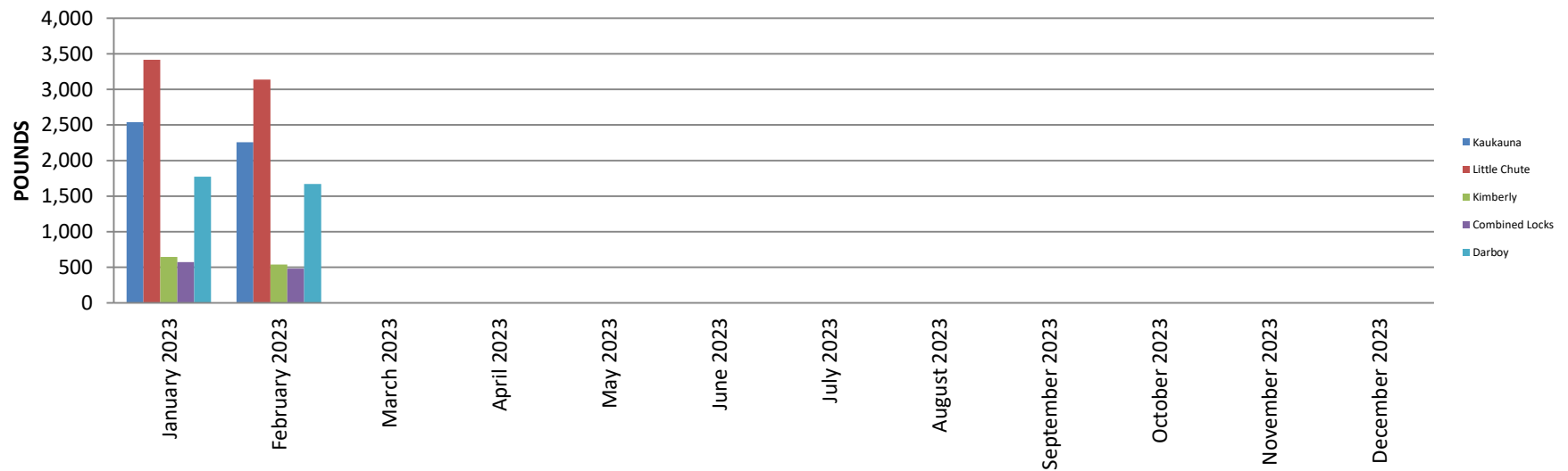
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	2,538	3,415	644	572	1,775
February 2023	2,257	3,137	539	483	1,670
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

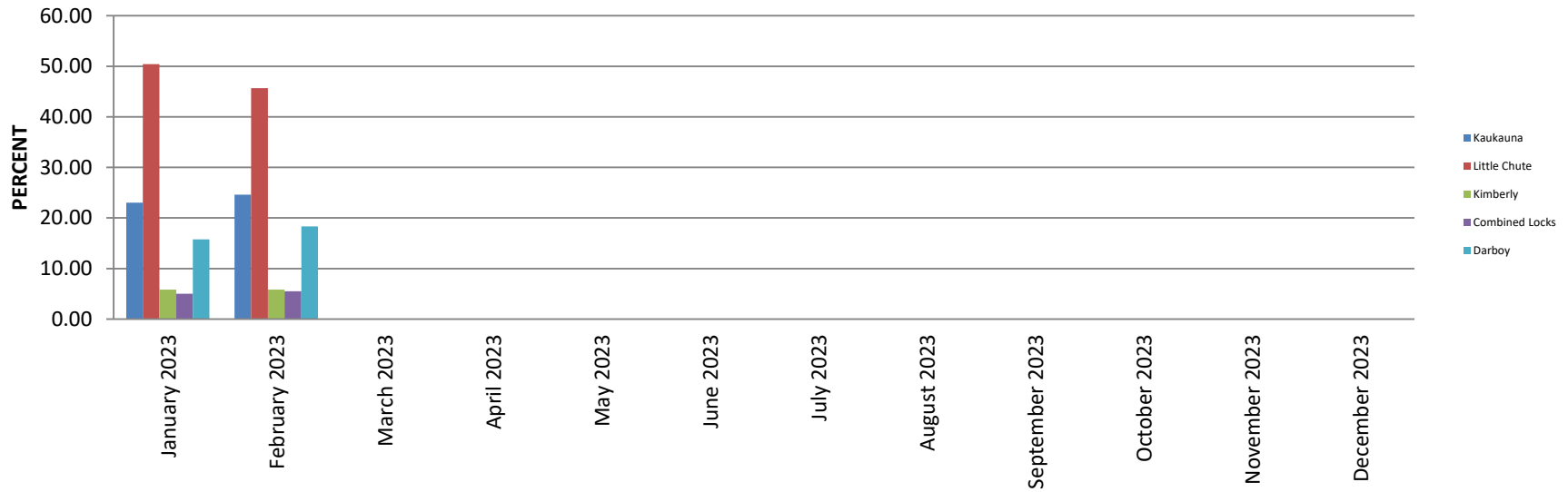
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	23.02	50.41	5.82	5.00	15.74
February 2023	24.61	45.65	5.86	5.52	18.35
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

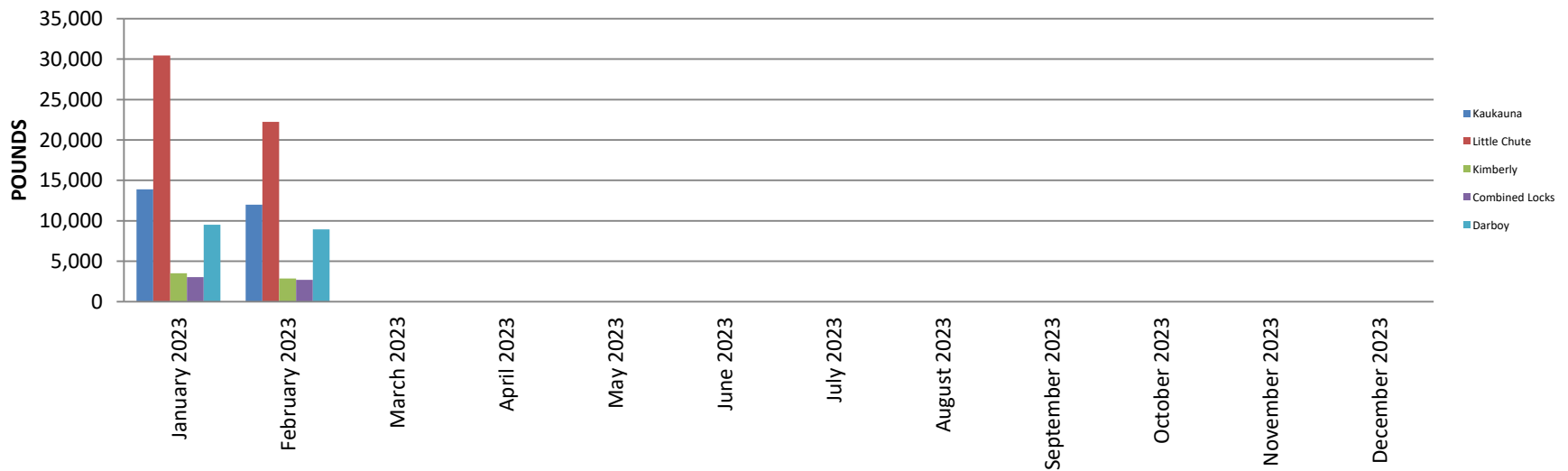
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	13,909	30,459	3,515	3,024	9,511
February 2023	11,990	22,239	2,857	2,691	8,942
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

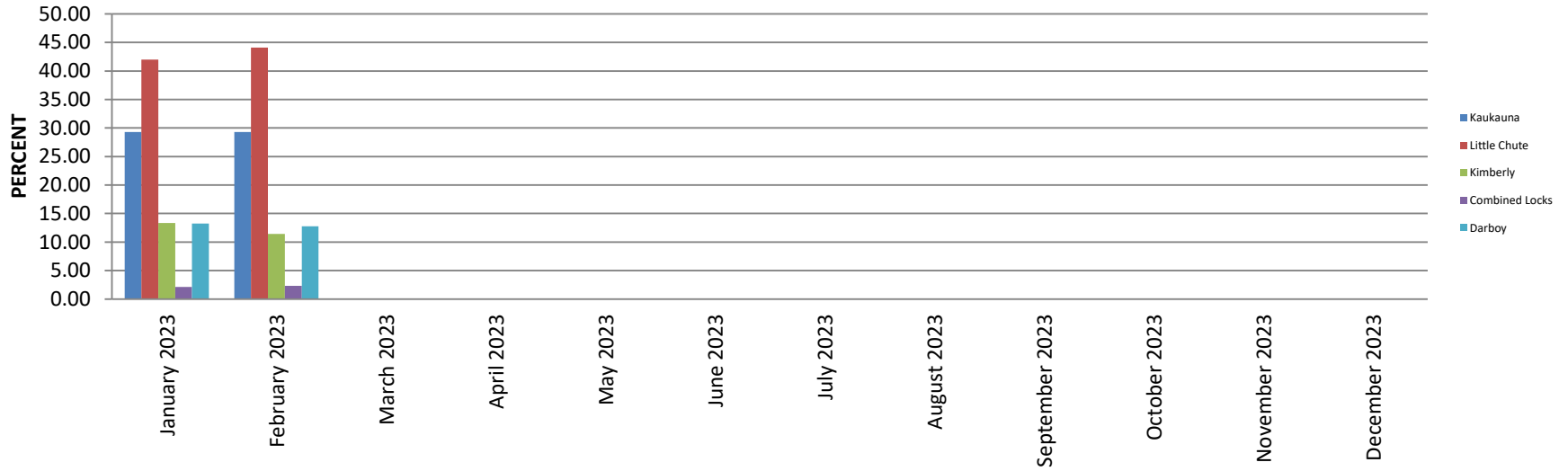
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	29.28	41.98	13.33	2.15	13.27
February 2023	29.30	44.12	11.44	2.35	12.79
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

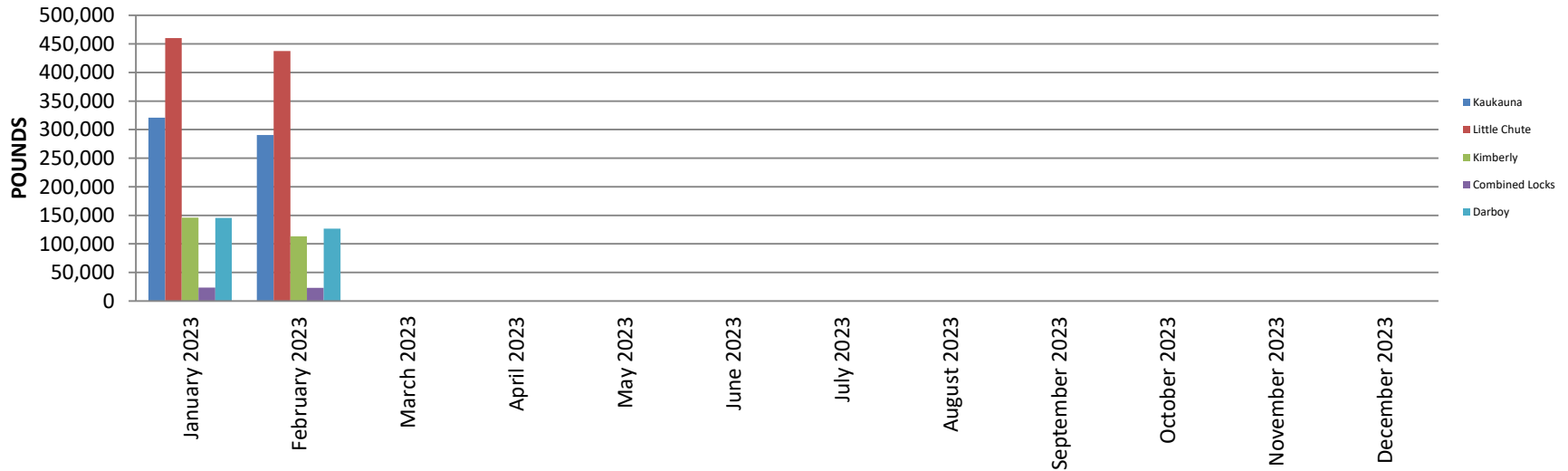
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	321,036	460,286	146,148	23,524	145,533
February 2023	290,450	437,395	113,420	23,313	126,799
March 2023					
April 2023					
May 2023					
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

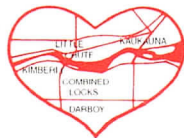


DISTRICT DIRECTOR:

Brian M. Helminger

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

COMMISSIONERS:

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

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

Attn: Account # N2310E

Month: February

Year: 2023

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
2/1/2022	2,799,000	2/21/2022	2,768,000
2/2/2022	2,961,000	2/22/2022	2,451,000
2/3/2022	2,821,000	2/23/2022	2,609,500
2/4/2022	2,777,000	2/24/2022	3,039,000
2/5/2022	2,329,000	2/25/2022	3,107,000
2/6/2022	2,832,000	2/26/2022	2,971,000
2/7/2022	2,792,000	2/27/2022	2,551,000
2/8/2022	2,943,000	2/28/2022	2,798,000
2/9/2022	3,102,000		
2/10/2022	2,438,000		
2/11/2022	2,769,000		
2/12/2022	2,769,000		
2/13/2022	2,820,000		
2/14/2022	2,392,000		
2/15/2022	2,364,000		
2/16/2022	2,768,000		
2/17/2022	3,045,000		
2/18/2022	3,100,000		
2/19/2022	2,782,000		
2/20/2022	2,768,000		
		Total:	77,665,500

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

Attn: Account # N2310E

MONTHLY BILLING

Month: February

Year: 2023

GALLONS PURCHASED: 77,665,500

BILLING RATE: \$0.1730911 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$13,443.21

**Heart of the Valley
Metropolitan Sewerage District**

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

2023

Final Effluent Sent to Fox Energy Facility

Gallons: 161,861,500

Charge Per 1000 Gallons: **\$0.1730911** Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$28,016.79