

FLOW AND STRENGTH PROJECTIONS

MONTH: March 2022

	<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)	270,272,000	242,511,000	-27,761,000	\$ 206,217.54	\$ 185,035.89	\$ (21,181.64)
B.O.D. (#s)	444,446	548,337	103,891	\$ 85,778.08	\$ 105,828.97	\$ 20,050.89
S. SOLIDS (#s)	406,107	470,373	64,266	\$ 103,151.18	\$ 119,474.77	\$ 16,323.59
PHOSPHORUS (#s)	7,702	8,956	1,254	\$ 51,541.78	\$ 59,932.68	\$ 8,390.90
AMMONIA-N (#s)	52,071	59,931	7,860	\$ 64,932.54	\$ 74,733.78	\$ 9,801.25
CHLORIDES (#s)	1,100,125	1,308,547	208,422	\$ 4,400.50	\$ 5,234.19	\$ 833.69
			TOTAL:	\$ 516,021.61	\$ 550,240.28	\$ 34,218.67

(THRU MARCH 2022)

PROJECTED FOR 2022

	<u>END OF YEAR PROJECTED</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT</u>	<u>YEAR TO DATE SURPLUS/ DEFICIT \$\$</u>
FLOW (GALLONS)	2,053,099,003	-107,805,000	\$ (82,255.22)
B.O.D. (#s)	3,755,281	84,896	\$ 16,384.85
S. SOLIDS (#s)	3,909,560	-23,408	\$ (5,945.60)
PHOSPHORUS (#s)	80,410	885	\$ 5,921.55
AMMONIA-N (#s)	505,265	12,241	\$ 15,264.35
CHLORIDES (#s)	8,748,079	31,058	\$ 124.23
		TOTAL:	\$ (50,505.83)

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

March 2022

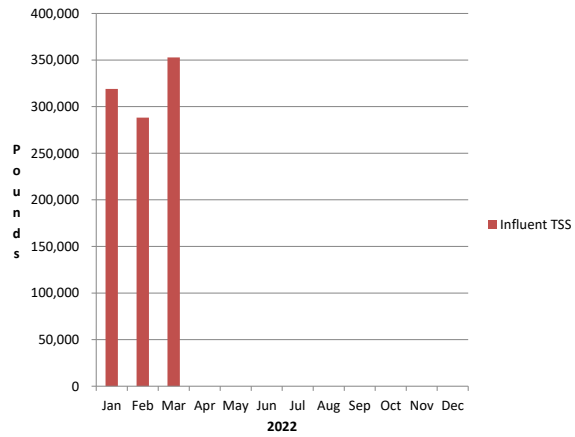
	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE		
MONTH	Million *	Avg MGD	Avg mg/L	Avg #/day	Total # /Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month
Jan	144.3	4.7	264	10,292	319,047	351	13,608	421,860	6.54	253	7,858	50.2	1947	60,352	722	28,567	857,010
Feb	129.3	4.6	267	10,291	288,149	375	14,417	403,684	6.64	256	7,158	46.7	1765	49,409	859	33,186	929,200
Mar	236.2	7.6	203	11,759	352,759	259	14,736	456,826	4.42	250	7,758	32.5	1795	55,652	716	41,706	1,292,877
Apr																	
May																	
Jun																	
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
Average	170	5.6	245	10,781	319,985	328	14,254	427,457	5.86	253	7,591	43.1	1,836	55,138	766	34,486	1,026,362
Yearly Total	509.8				959,955			1,282,370			22,774			165,413			3,079,087
*Includes Hauled Waste [Plant Design Capacity]		8.5		13,565			12,209			339			1,600				
(Hauled Waste Gallons)= 177,900 [Max Design Capacity]		11.9		16,278			14,651			407			1,920				
March % of Capacity		64%		72%			101%			61%			94%				

March Max Daily Flow	15.43
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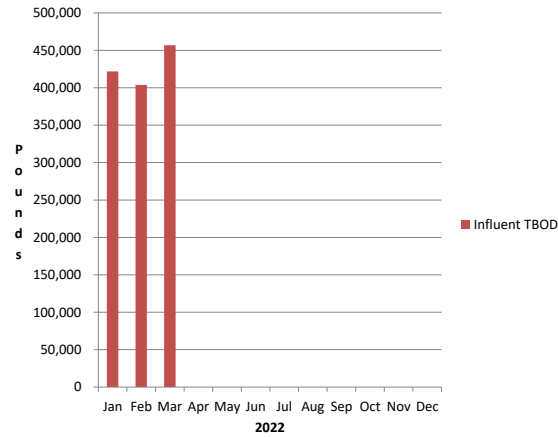
EFFLUENT QUALITY

{PERMIT LIMITS (WDNR) →			Monthly (Avg) Weekly (Avg) Daily Max (mg/L)		801#	Monthly Avg Weekly Avg WLA May-Oct		30 mg/L	Monthly Avg 6 mo Avg Daily Max mg/L		31.5#	Jan- MarC April-May June-Sep Oct- Dec		Monthly Avg Limit	
					1345#			45 mg/L			10.5#			10 mg/L	
					30						1.0			4.4 mg/L	
														18 mg/L	
	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	61.6	2.0	12.8	212	6,561	10.5	173	5,364	0.34	5.6	173	0.46	8.0	249	746
Feb	63.2	2.3	13.3	249	6,976	11.3	211	5,918	0.33	6.3	177	0.49	9.1	254	829
Mar	151.3	4.9	21.0	1,122	33,655	15.1	746	23,115	0.37	17.9	554	0.49	20.4	571	699
Apr															
May															
Jun															
Jul															
Aug															
Sep															
Oct															
Nov															
Dec															
Average	92.0	3.0	15.7	528	15,731	12.3	376.7	11,466	0.35	9.9	301.6	0.48	12.5	357.9	758
Yearly Total	276.1				47,192			34,397			905			1,073.6	
			March	Avg #'s						6 mo. Avg #'s	9.24	Nov-April			
			WEEK 1	1262											
			WEEK 2	242											
			WEEK 3	638											
			WEEK 4	1339											
Effluent Gallons to Fox Energy (March)															
Million Gallons % to Fox Energy															
84.90 36%															

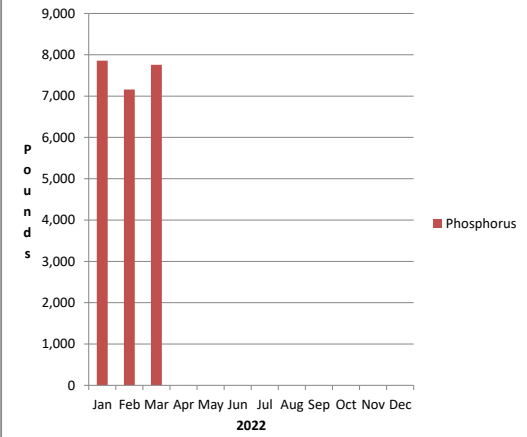
Influent TSS Total Pounds/Mo.



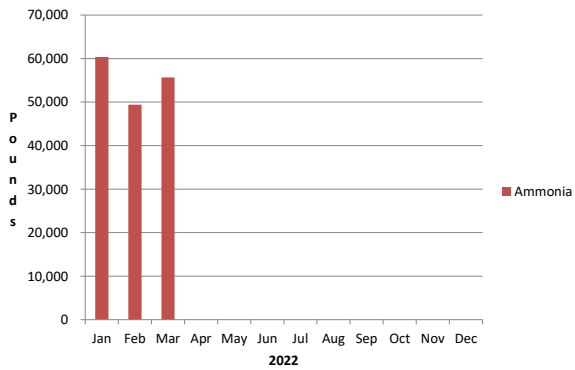
Influent BOD Total Pounds / Mo.



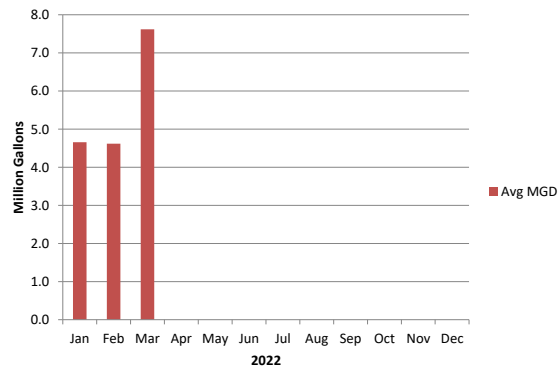
Influent Phosphorus Total Pounds/Mo.



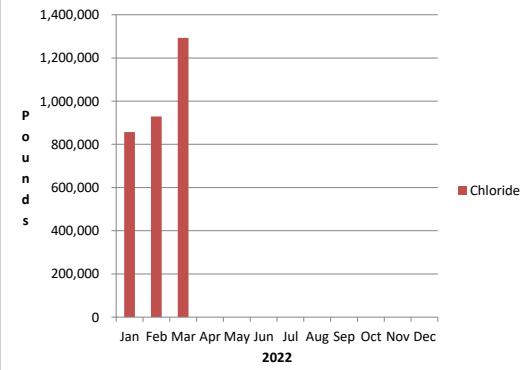
Influent Ammonia Total Pounds/Mo.



Avg Influent MGD/Mo.



Influent Chloride Total Pounds/Mo.



RAIN GAUGES

DAILY RAINFALL TOTALS (Includes Rain,Melted Snow)

MONTH: MARCH

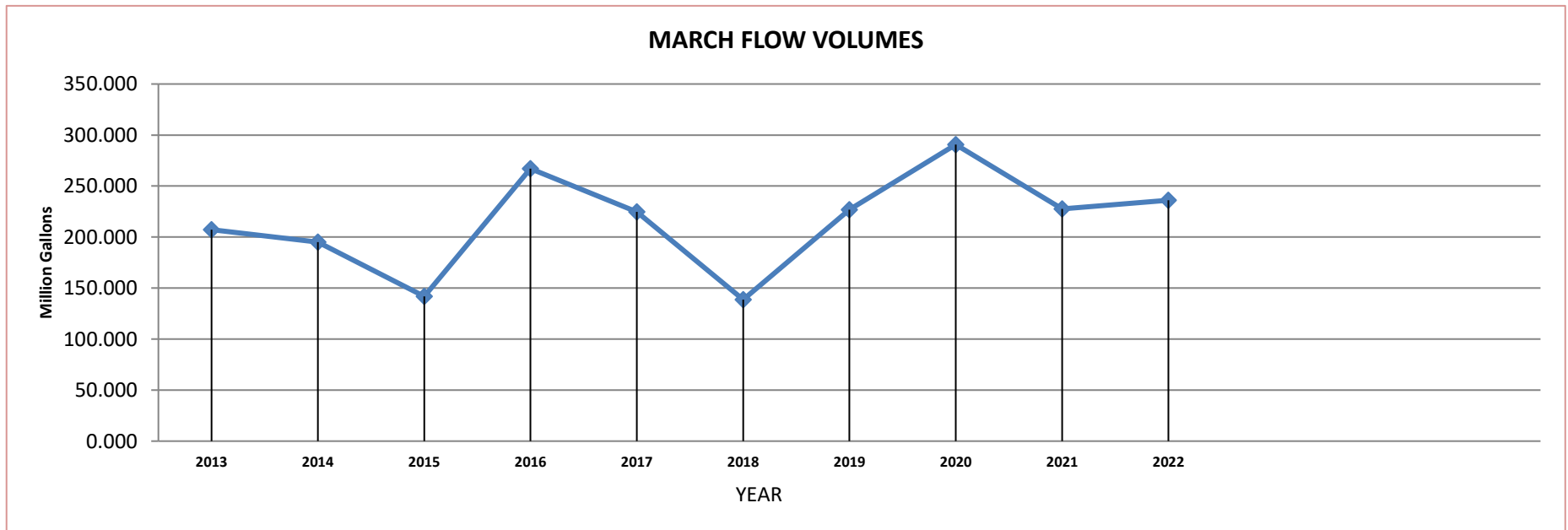
YEAR: 2022

NOAA Site Appleton

<u>DATE</u>	<u>PLANT INCHES</u>	<u>KAUKAUNA INCHES</u>	<u>LITTLE CHUTE INCHES</u>	<u>KIMBERLY INCHES</u>	<u>DARBOY INCHES</u>
1	0.00				
2	0.00				
3	0.00				
4	0.03				
5	1.35				
6	0.05				
7	0.10				
8	0.00				
9	0.00				
10	0.00				
11	0.00				
12	0.10				
13	0.00				
14	0.00				
15	0.00				
16	0.00				
17	0.00				
18	0.60				
19	0.00				
20	0.00				
21	0.00				
22	1.62				
23	0.07				
24	0.00				
25	0.02				
26	0.00				
27	0.00				
28	0.00				
29	0.61				
30	0.91				
31	0.00				
TOTAL:	5.46	0.00	0.00	0.00	0.00

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>March Flow</u> <u>Million Gallons</u>	<u>Precipitation</u> <u>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
2019	226.921	1.72
2020	290.643	4.17
2021	227.688	1.79
2022	236.184	5.46

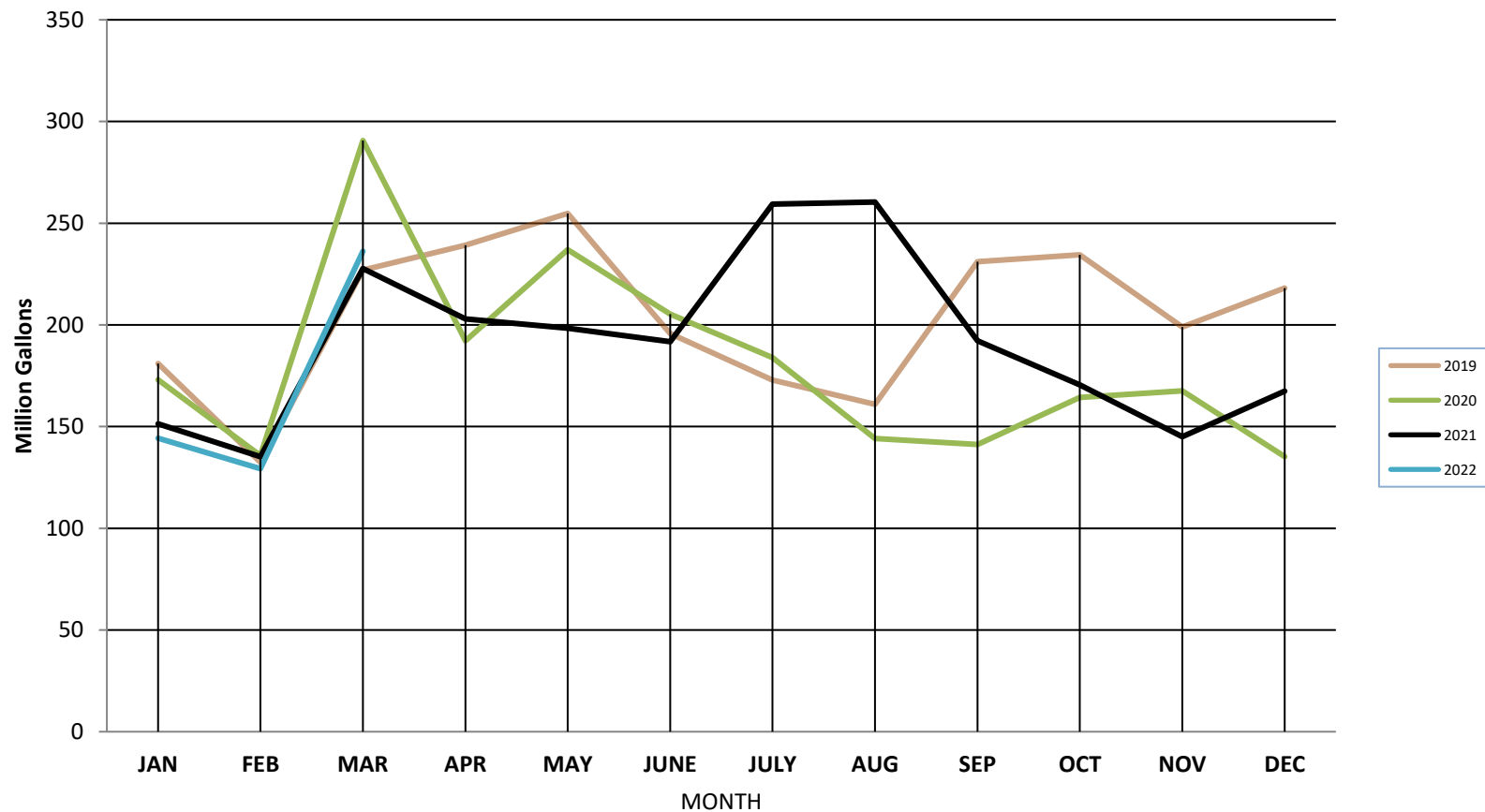


HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	<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>
2019	181.037	132.459	226.921	239.147	254.810	195.654	172.916	160.932	231.033	234.439	199.024	218.097
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									

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

MONTHLY FLOW VOLUMES



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

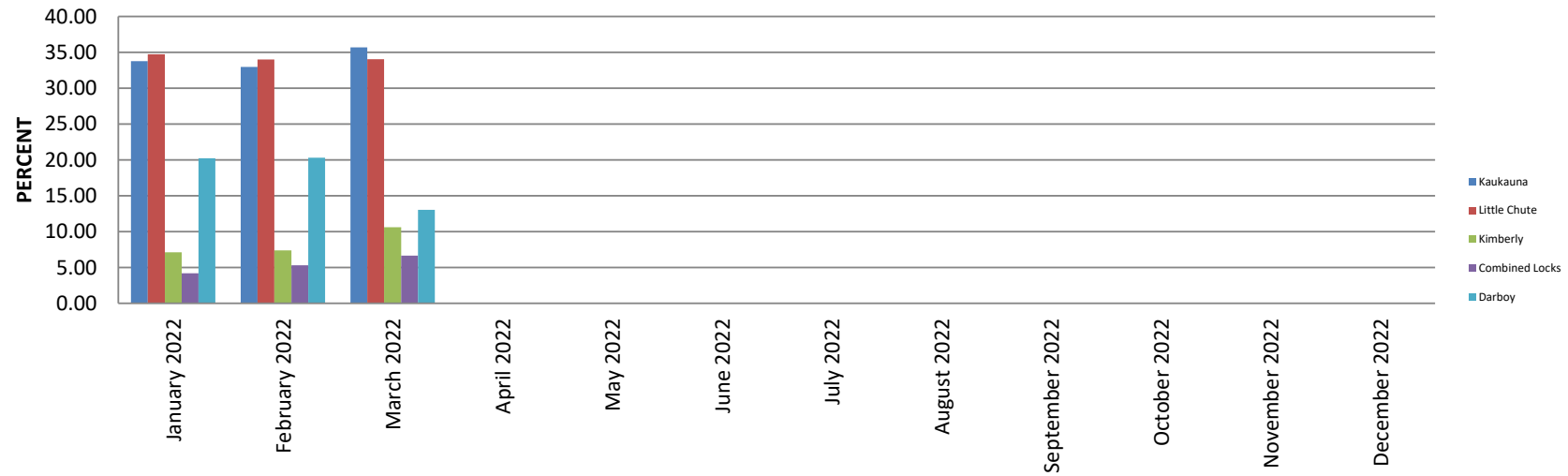
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches*</u>
January 2022	33.76	34.71	7.12	4.19	20.22	0.28
February 2022	32.97	34.01	7.39	5.30	20.32	0.50
March 2022	35.69	34.04	10.60	6.66	13.02	5.46
April 2022						
May 2022						
June 2022						
July 2022						
August 2022						
September 2022						
October 2022						
November 2022						
December 2022						

* Nov-March=Rain,Melted Snow, Etc (in.)

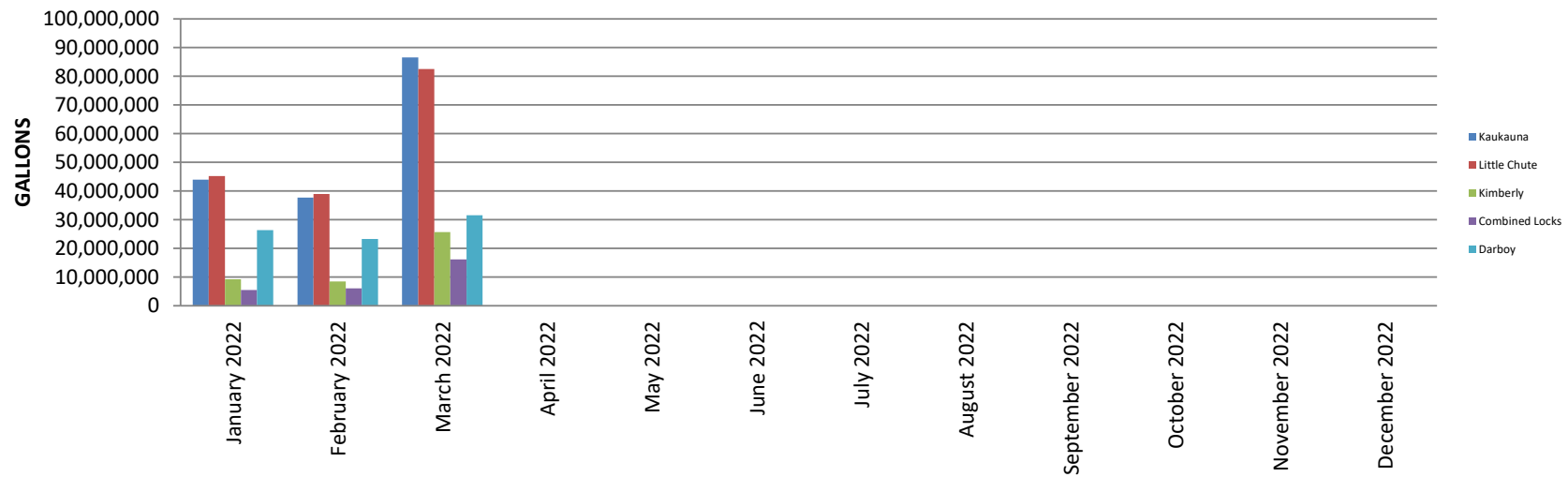
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	44,006,000	45,240,000	9,281,000	5,463,000	26,358,000
February 2022	37,739,000	38,925,000	8,463,000	6,063,000	23,260,000
March 2022	86,547,000	82,539,000	25,708,000	16,146,000	31,571,000
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS



GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

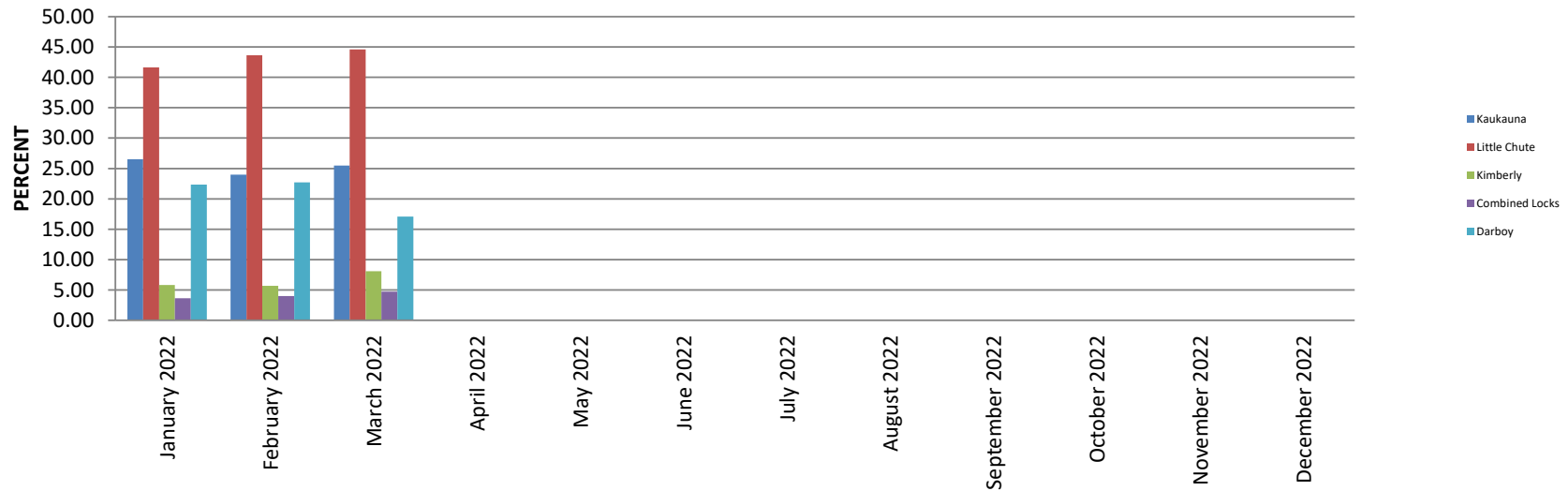
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	26.54	41.67	5.82	3.61	22.35
February 2022	23.98	43.65	5.68	3.99	22.71
March 2022	25.47	44.62	8.09	4.73	17.09
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

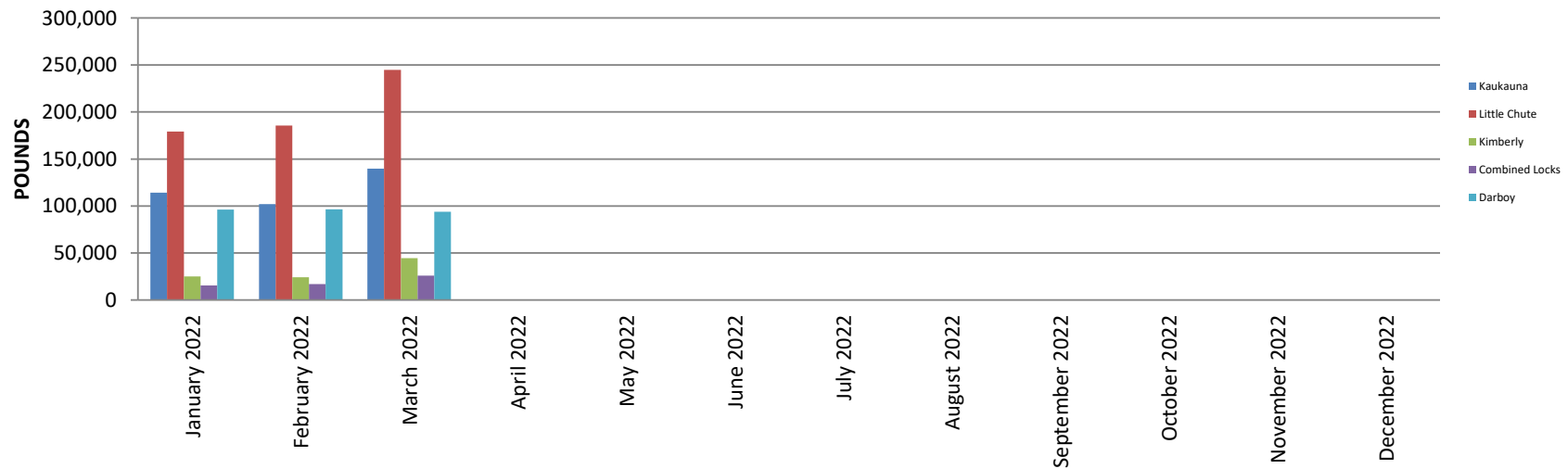
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	114,049	179,088	25,032	15,529	96,075
February 2022	101,875	185,458	24,145	16,935	96,501
March 2022	139,657	244,645	44,368	25,938	93,728
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

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



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



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

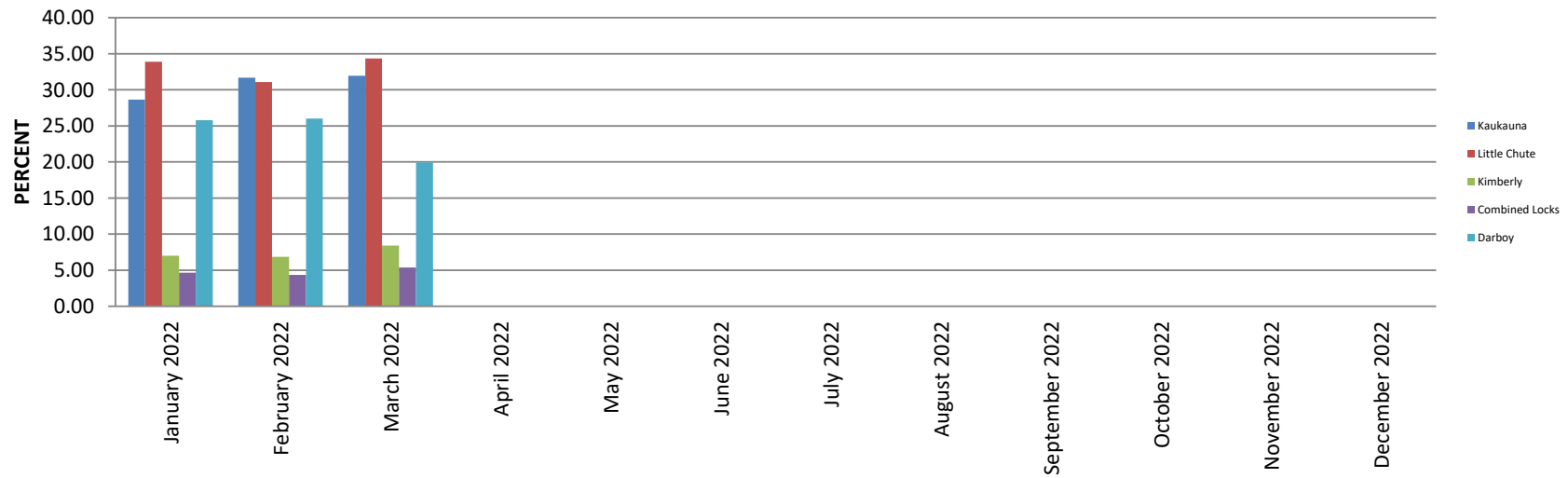
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	28.65	33.89	7.00	4.65	25.81
February 2022	31.68	31.07	6.85	4.36	26.04
March 2022	31.96	34.35	8.40	5.36	19.94
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

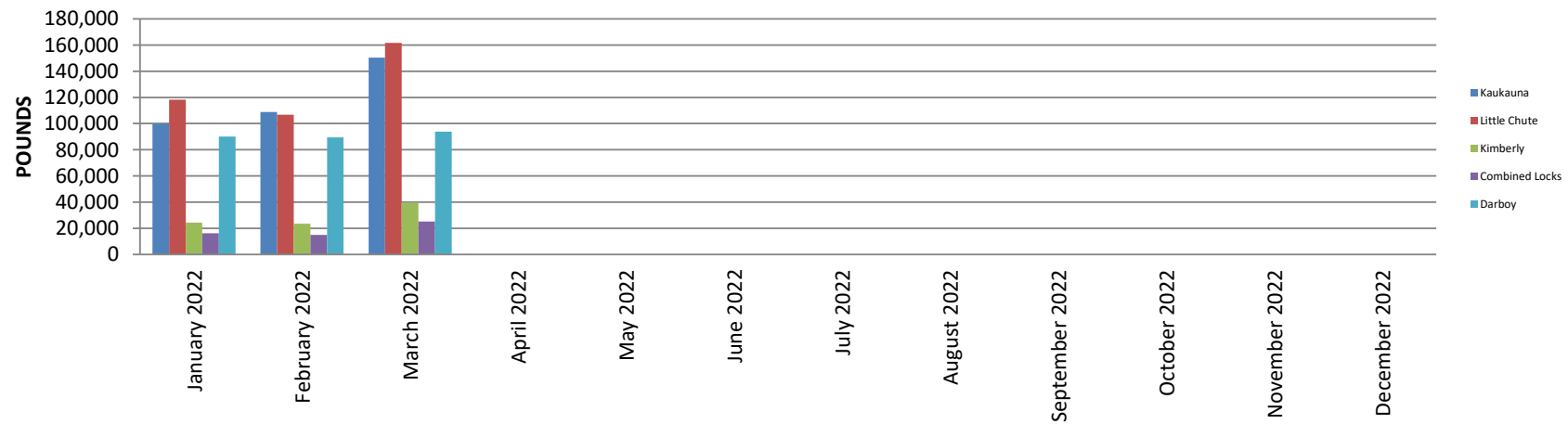
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	99,881	118,168	24,409	16,212	90,008
February 2022	108,904	106,811	23,566	15,004	89,520
March 2022	150,309	161,575	39,497	25,190	93,802
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

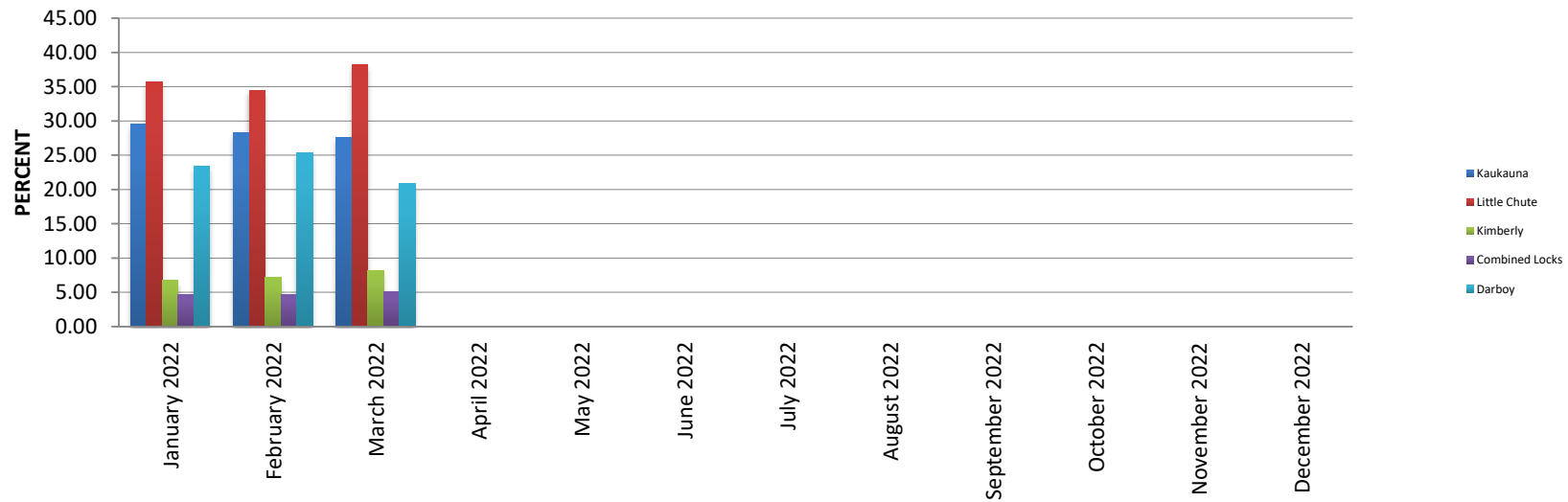
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	29.58	35.66	6.70	4.62	23.44
February 2022	28.25	34.51	7.19	4.68	25.37
March 2022	27.53	38.18	8.23	5.13	20.93
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

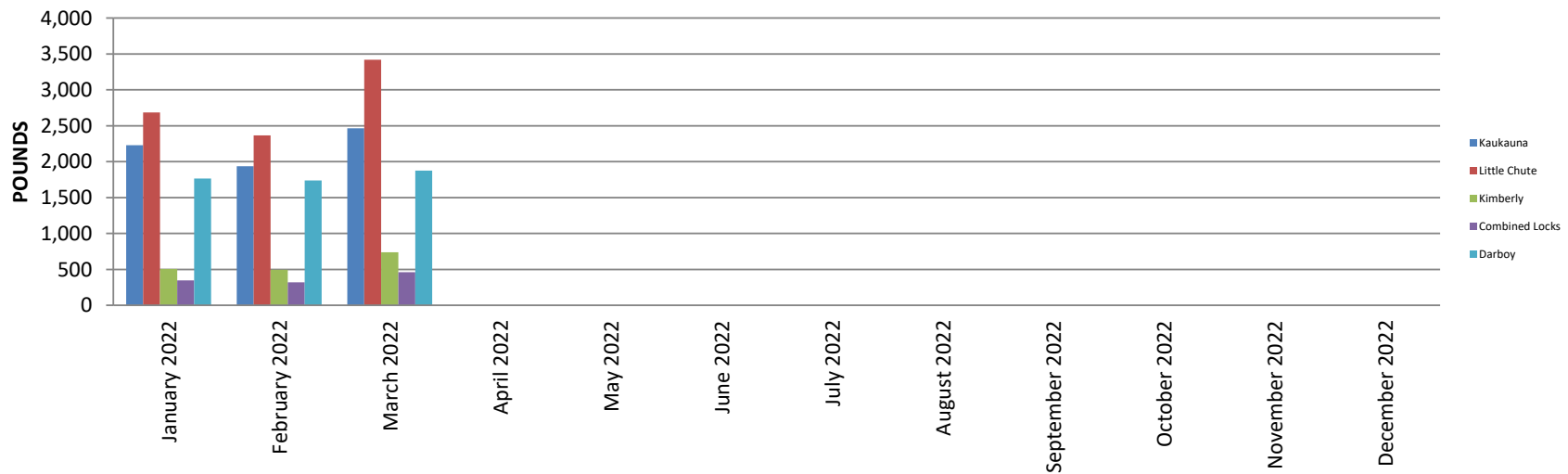
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	2,229	2,686	505	348	1,766
February 2022	1,935	2,364	493	320	1,737
March 2022	2,465	3,419	737	459	1,875
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

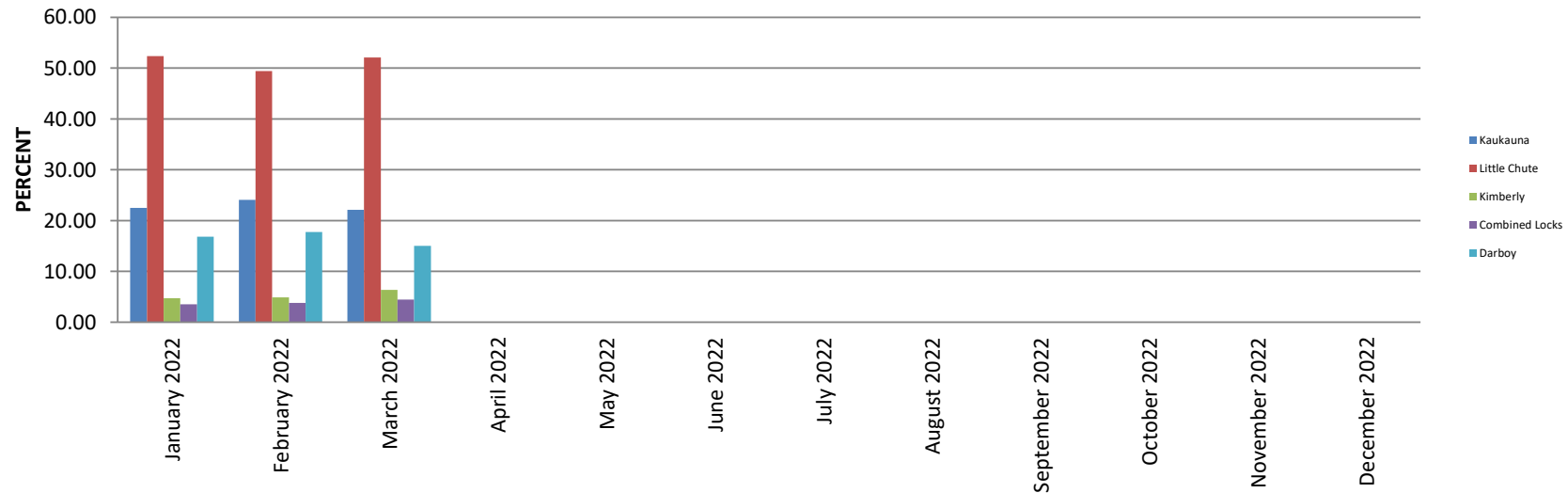
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	22.50	52.38	4.72	3.55	16.85
February 2022	24.08	49.43	4.90	3.82	17.77
March 2022	22.09	52.08	6.38	4.43	15.03
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

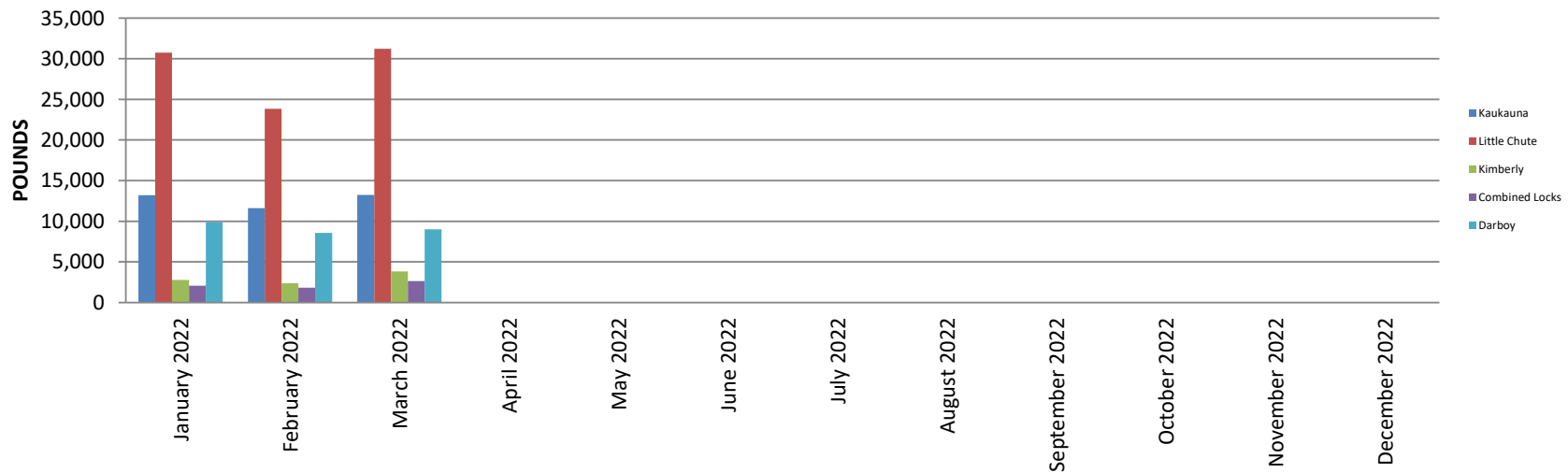
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	13,213	30,761	2,773	2,083	9,895
February 2022	11,612	23,841	2,363	1,842	8,570
March 2022	13,236	31,211	3,826	2,653	9,006
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

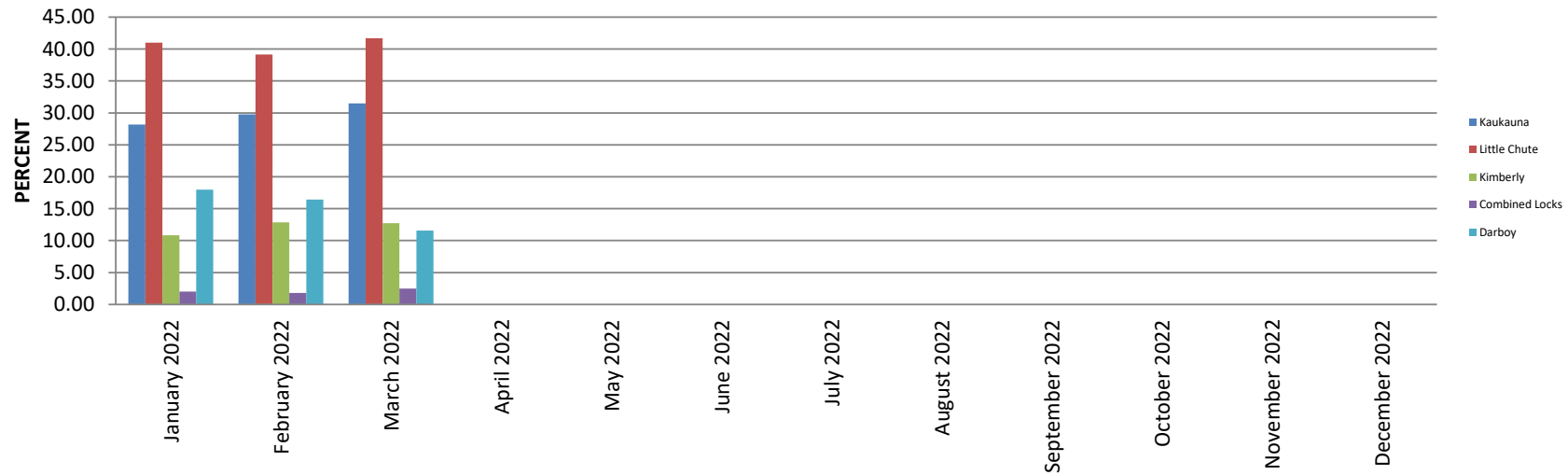
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	28.19	40.98	10.85	2.00	17.98
February 2022	29.77	39.14	12.86	1.82	16.42
March 2022	31.49	41.70	12.75	2.49	11.57
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

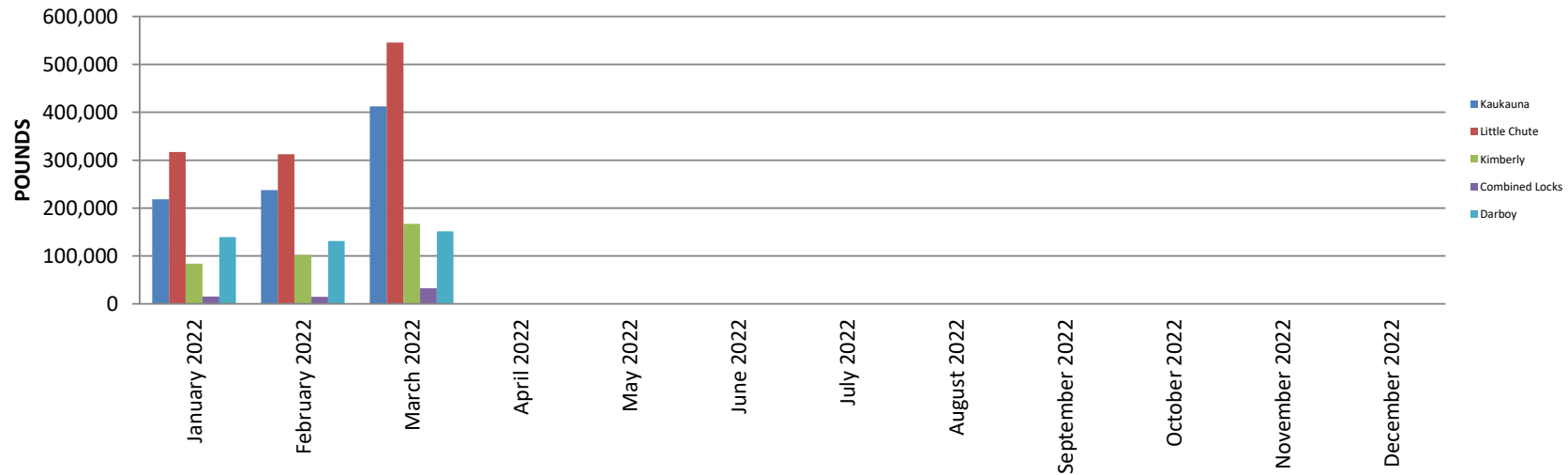
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	218,136	317,040	83,950	15,473	139,137
February 2022	237,466	312,154	102,539	14,529	130,931
March 2022	412,002	545,722	166,848	32,583	151,392
April 2022					
May 2022					
June 2022					
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

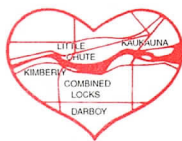


DISTRICT DIRECTOR:

Brian M. Helminger

SERVING:

Combined Locks
Kaukauna
Kimberly
Little Chute
Darboy S.D.

**COMMISSIONERS:**

David J. Casper, President
Bruce M. Siebers, Vice-Pres.
Patrick E. Hennessey, Secretary
Kevin P. Coffey
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 5651
Bismarck, ND 58506

Attn: Account # N2310E

Month: March

Year: 2022

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
3/1/2022	2,988,000	3/21/2022	2,865,000
3/2/2022	2,649,000	3/22/2022	2,718,000
3/3/2022	2,888,000	3/23/2022	2,755,000
3/4/2022	2,587,000	3/24/2022	2,962,000
3/5/2022	2,342,000	3/25/2022	2,526,000
3/6/2022	2,180,000	3/26/2022	2,610,000
3/7/2022	3,006,000	3/27/2022	2,814,000
3/8/2022	3,430,000	3/28/2022	2,842,000
3/9/2022	2,768,000	3/29/2022	2,994,000
3/10/2022	3,023,000	3/30/2022	2,873,000
3/11/2022	2,707,000	3/31/2022	2,651,000
3/12/2022	2,619,000		
3/13/2022	2,797,000		
3/14/2022	2,806,000	Total:	84,896,000
3/15/2022	2,943,000		
3/16/2022	2,937,000		
3/17/2022	2,790,000		
3/18/2022	2,345,000		
3/19/2022	2,600,000		
3/20/2022	1,881,000		

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

Attn: Account # N2310E

MONTHLY BILLING

Month: March

Year: 2022

GALLONS PURCHASED: 84,896,000

BILLING RATE: \$0.1635645 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$13,885.97

**Heart of the Valley
Metropolitan Sewerage District**

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

2022

Final Effluent Sent to Fox Energy Facility

Gallons: 233,766,000

Charge Per 1000 Gallons: \$0.1635645 Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$38,235.82