

FLOW AND STRENGTH PROJECTIONS

MONTH: February 2024

	<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)	142,722,333	201,740,000	59,017,667	\$ 102,331.91	\$ 144,647.58	\$ 42,315.67
B.O.D. (#s)	449,855	460,321	10,466	\$ 79,174.48	\$ 81,016.50	\$ 1,842.02
S. SOLIDS (#s)	374,088	445,299	71,211	\$ 90,903.38	\$ 108,207.66	\$ 17,304.27
PHOSPHORUS (#s)	7,228	7,713	485	\$ 47,827.68	\$ 51,036.92	\$ 3,209.25
AMMONIA-N (#s)	48,498	51,373	2,875	\$ 53,444.80	\$ 56,613.05	\$ 3,168.25
CHLORIDES (#s)	877,103	1,133,651	256,548	\$ 1,754.21	\$ 2,267.30	\$ 513.10
			TOTAL:	\$ 375,436.45	\$ 443,789.00	\$ 68,352.55

(THRU FEBRUARY 2024)

PROJECTED FOR 2024

	<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	92,185,667	\$ 66,097.12
B.O.D. (#s)	5,484,285	22,035	\$ 3,878.16
S. SOLIDS (#s)	4,877,973	149,407	\$ 36,305.90
PHOSPHORUS (#s)	94,940	375	\$ 2,481.38
AMMONIA-N (#s)	666,440	-1,199	\$ (1,321.30)
CHLORIDES (#s)	11,252,829	538,478	\$ 1,076.96
		TOTAL:	\$ 108,518.22

Example 1

FLOW AND STRENGTH PROJECTIONS

MONTH: February 2024

	<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)	181,698,000	201,740,000	20,042,000	\$ 130,277.47	\$ 144,647.58	\$ 14,370.11
B.O.D. (#s)	492,208	460,321	-31,887	\$ 86,628.61	\$ 81,016.50	\$ (5,612.11)
S. SOLIDS (#s)	417,700	445,299	27,599	\$ 101,501.10	\$ 108,207.66	\$ 6,706.56
PHOSPHORUS (#s)	8,086	7,713	-373	\$ 53,505.06	\$ 51,036.92	\$ (2,468.14)
AMMONIA-N (#s)	48,719	51,373	2,654	\$ 53,688.34	\$ 56,613.05	\$ 2,924.71
CHLORIDES (#s)	991,377	1,133,651	142,274	\$ 1,982.75	\$ 2,267.30	\$ 284.55
2023 Actual Data			TOTAL:	\$ 427,583.33	\$ 443,789.00	\$ 16,205.67

(THRU FEBRUARY 2024)

PROJECTED FOR 2024

	<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	2,840,000	\$ 2,036.28
B.O.D. (#s)	5,484,285	-78,272	\$ (13,775.87)
S. SOLIDS (#s)	4,877,973	69,136	\$ 16,800.05
PHOSPHORUS (#s)	94,940	-1,206	\$ (7,980.10)
AMMONIA-N (#s)	666,440	-2,742	\$ (3,021.68)
CHLORIDES (#s)	11,252,829	250,251	\$ 500.50
		TOTAL:	\$ (5,440.83)

Example 2

FLOW AND STRENGTH PROJECTIONS

MONTH: February 2024

	<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)	142,722,333	201,740,000	59,017,667	\$ 102,331.91	\$ 144,647.58	\$ 42,315.67
B.O.D. (#s)	492,208	460,321	-31,887	\$ 86,628.61	\$ 81,016.50	\$ (5,612.11)
S. SOLIDS (#s)	417,700	445,299	27,599	\$ 101,501.10	\$ 108,207.66	\$ 6,706.56
PHOSPHORUS (#s)	8,086	7,713	-373	\$ 53,505.06	\$ 51,036.92	\$ (2,468.14)
AMMONIA-N (#s)	48,719	51,373	2,654	\$ 53,688.34	\$ 56,613.05	\$ 2,924.71
CHLORIDES (#s)	991,377	1,133,651	142,274	\$ 1,982.75	\$ 2,267.30	\$ 284.55
	3 yr avg flow 2023 Actual pounds		TOTAL:	\$ 399,637.77	\$ 443,789.00	\$ 44,151.23

(THRU FEBRUARY 2024)

PROJECTED FOR 2024

	<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	92,185,667	\$ 66,097.12
B.O.D. (#s)	5,484,285	-78,272	\$ (13,775.87)
S. SOLIDS (#s)	4,877,973	69,136	\$ 16,800.05
PHOSPHORUS (#s)	94,940	-1,206	\$ (7,980.10)
AMMONIA-N (#s)	666,440	-2,742	\$ (3,021.68)
CHLORIDES (#s)	11,252,829	250,251	\$ 500.50
		TOTAL:	\$ 58,620.02

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

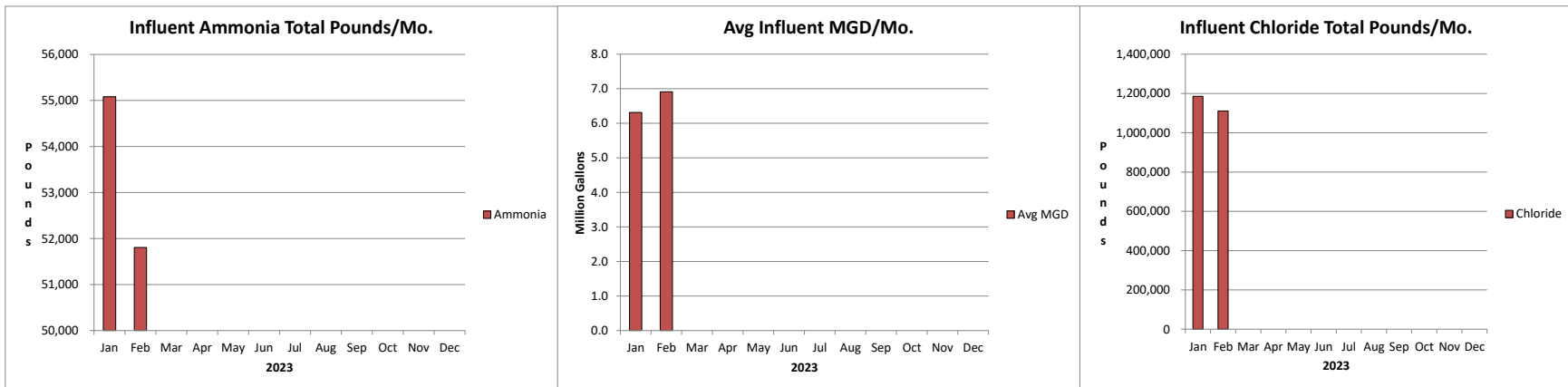
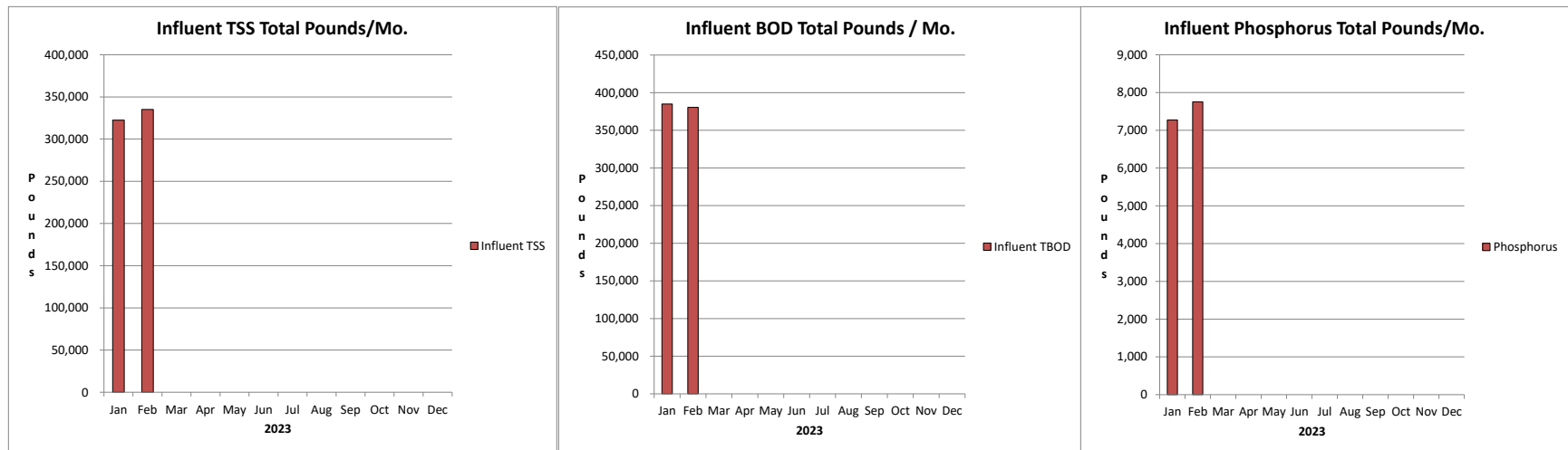
February 2024

	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	Avg #/day	Total # Month
Jan	195.7	6.3	200	10,529	322,474	239	12,606	384,941	4.62	243	7,271	35.0	1841	55,081	735	38,714	1,185,582
Feb	200.5	6.9	203	11,712	335,199	231	13,306	380,481	4.81	277	7,753	31.5	1815	51,806	671	38,668	1,110,798
Mar																	
Apr																	
May																	
Jun																	
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
Average	198.1	6.6	202	11,121	328,836	235	12,956	382,711	4.71	260	7,512	33.2	1,828	53,444	703	38,691	1,148,190
Yearly Total	396.1				657,673			765,422			15,024			106,887			2,296,380
*Includes Hauled Waste [Plant Design Capacity] =		8.5	13,565		12,209		339		1,600								
(Hauled Waste Gallons)= 132,830 [Max Design Capacity] =		11.9	16,278		14,651		407		1,920								
February % of Capacity :		58%	72%		91%		68%		95%								

February Max Daily Flow = 9.07

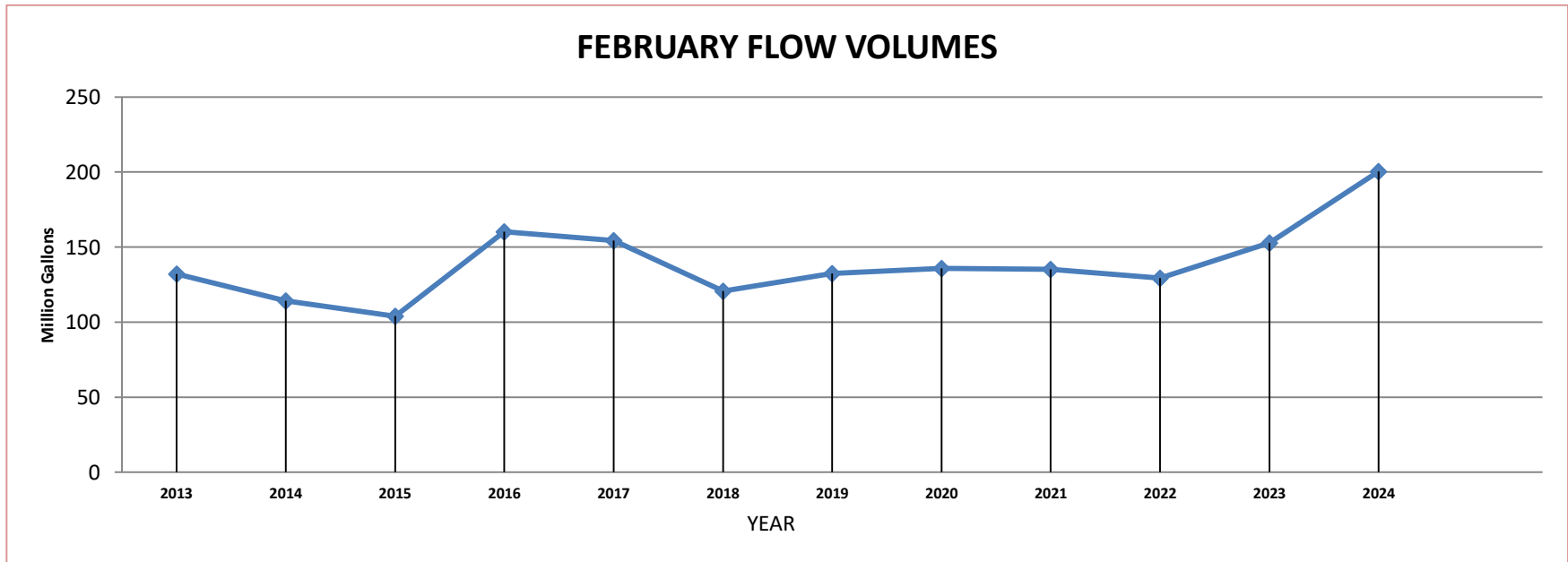
EFFLUENT QUALITY

{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	109.3	3.5	11.8	346	10,416	10.3	304	9,284	0.40	11.9	357	0.38	11.3	329	755
Feb	115.5	4.0	6.8	225	6,461	6.1	203	5,842	0.26	8.5	236	0.19	6.3	158	672
Mar															
Apr															
May															
Jun															
Jul															
Aug															
Sep															
Oct															
Nov															
Dec															
Average	112.4	3.8	9.3	286	8,439	8.2	253.3	7,563	0.33	10.2	296.2	0.29	8.8	243.6	714
Yearly Total	224.8				16,878			15,126			592			487.2	
			February	Avg #'s							6 mo. Avg #'s	11.80	Nov-April		
			WEEK 1	311											
			WEEK 2	228											
			WEEK 3	168											
			WEEK 4	188											
Effluent Gallons to Fox Energy (February)															
84.95		42%													



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>February Flow Million Gallons</u>
2013	132.251
2014	114.081
2015	103.918
2016	160.230
2017	154.391
2018	120.841
2019	132.459
2020	135.703
2021	135.210
2022	129.312
2023	152.933
2024	200.450

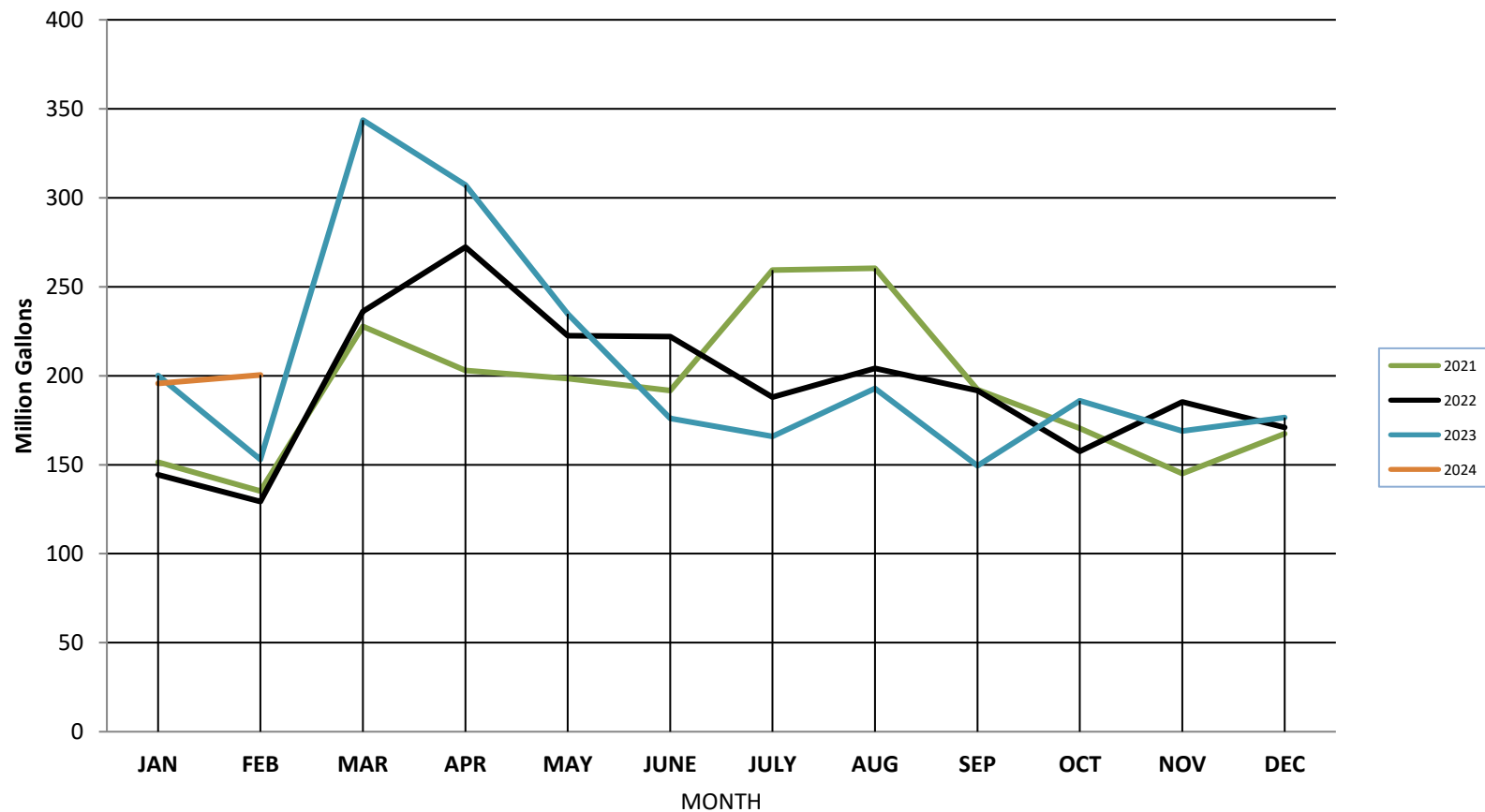


HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	<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>
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	343.638	307.249	234.764	176.104	165.991	192.923	149.417	186.008	168.941	176.546
2024	195.683	200.450										

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

PLANT MONTHLY FLOW VOLUMES



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

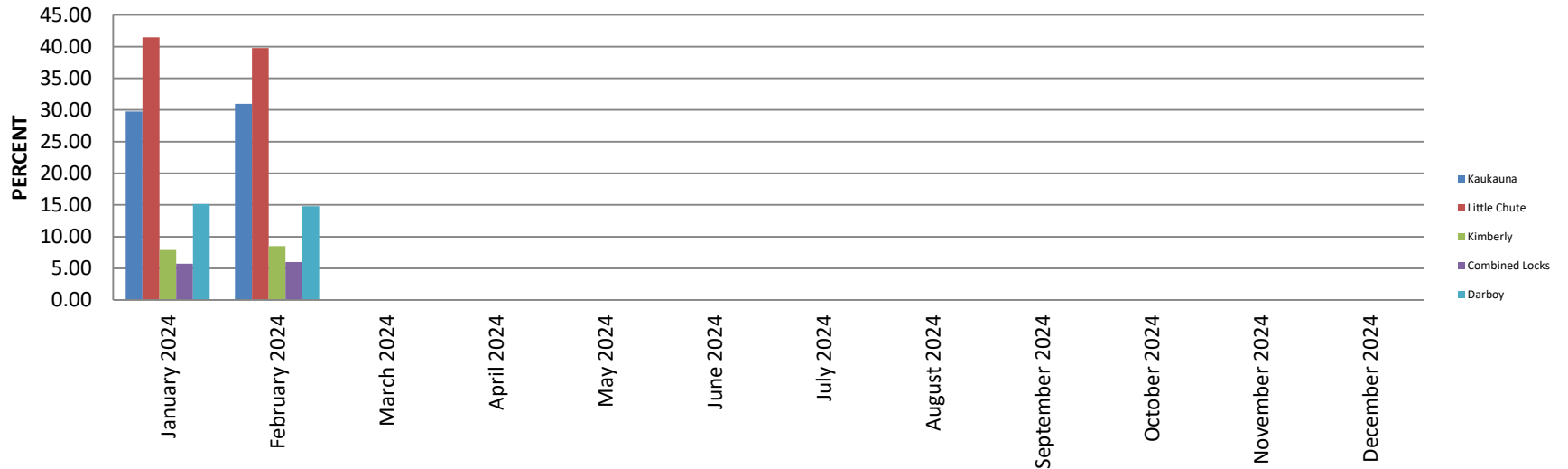
% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches</u>
January 2024	29.74	41.48	7.91	5.75	15.12	0.33
February 2024	30.97	39.76	8.51	5.97	14.79	0.00
March 2024						
April 2024						
May 2024						
June 2024						
July 2024						
August 2024						
September 2024						
October 2024						
November 2024						
December 2024						

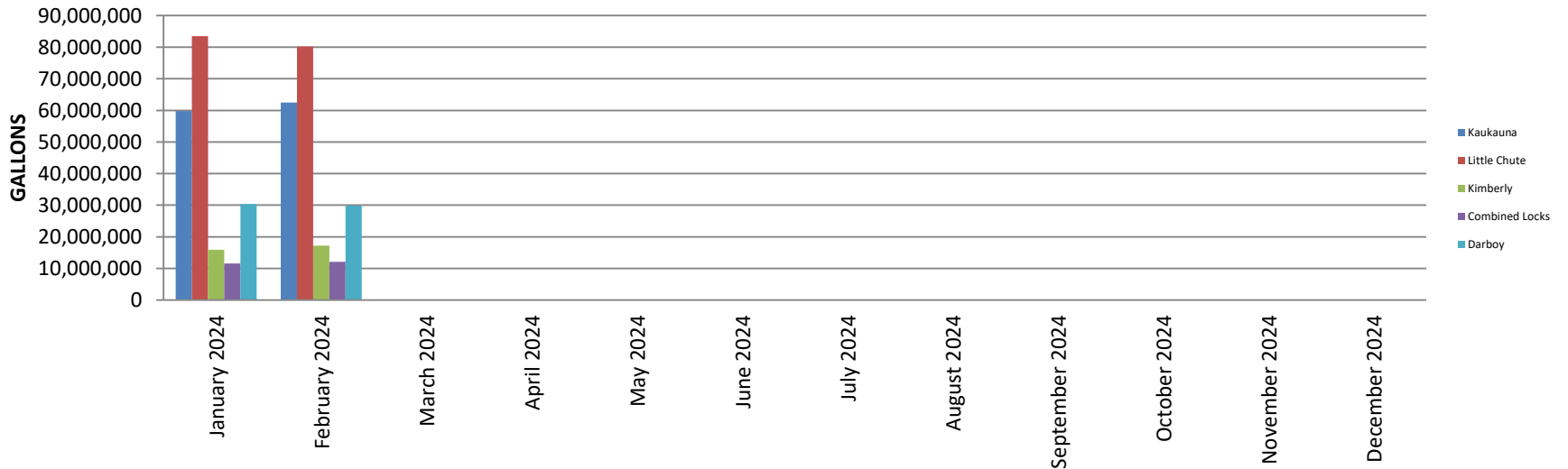
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	59,813,000	83,430,000	15,903,000	11,559,000	30,420,000
February 2024	62,480,000	80,209,000	17,170,000	12,044,000	29,837,000
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS



GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

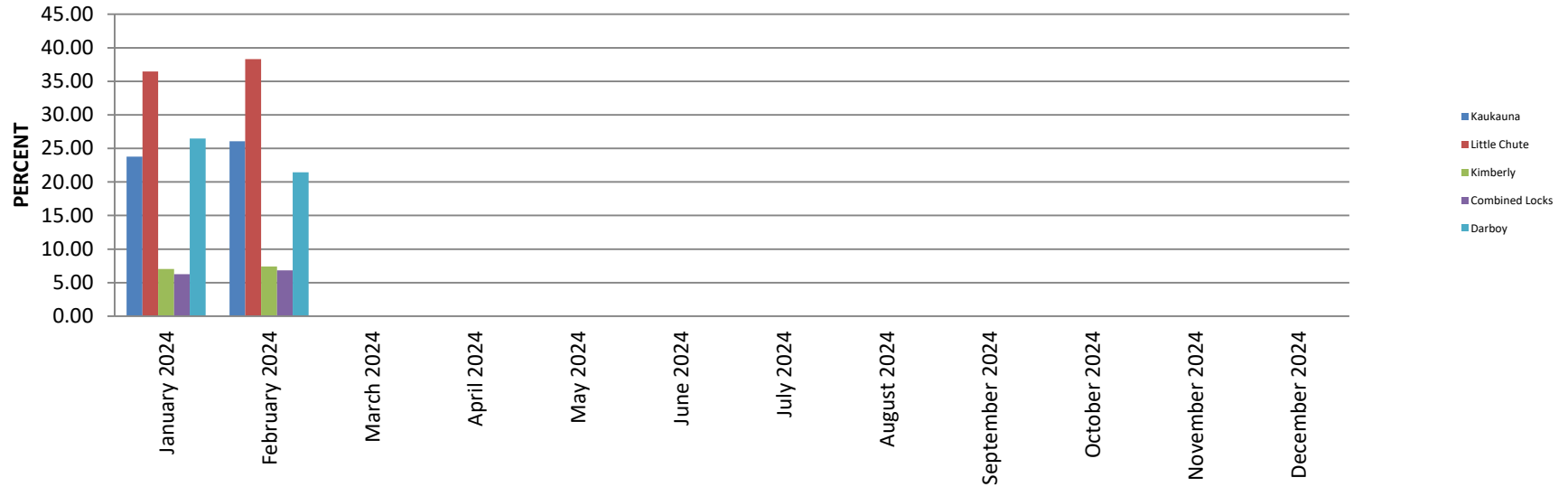
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	23.76	36.48	7.04	6.25	26.46
February 2024	26.06	38.29	7.39	6.83	21.43
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

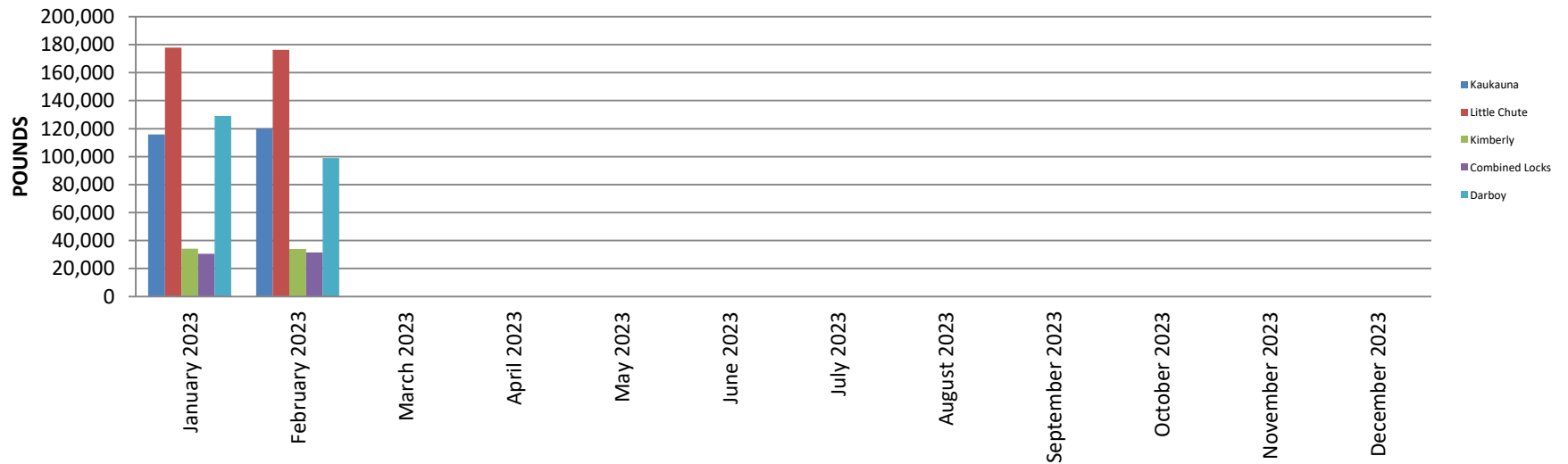
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	115,891	177,911	34,328	30,479	129,046
February 2023	119,969	176,269	33,996	31,432	98,956
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

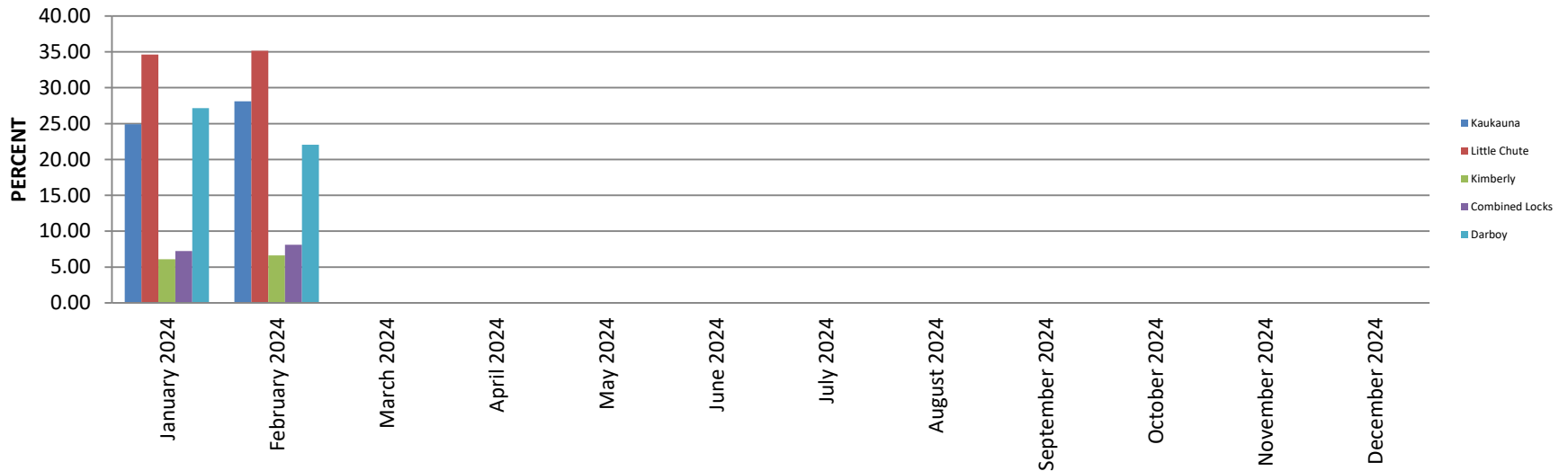
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	24.91	34.61	6.10	7.22	27.16
February 2024	28.10	35.17	6.61	8.09	22.04
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

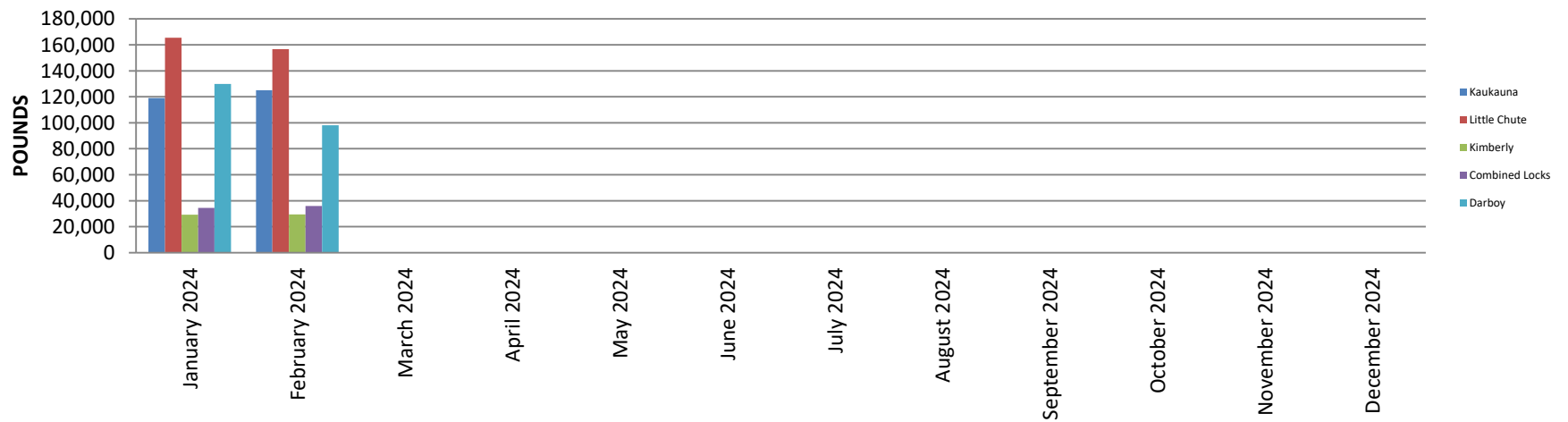
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	119,098	165,485	29,174	34,528	129,868
February 2024	125,113	156,619	29,429	36,012	98,126
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

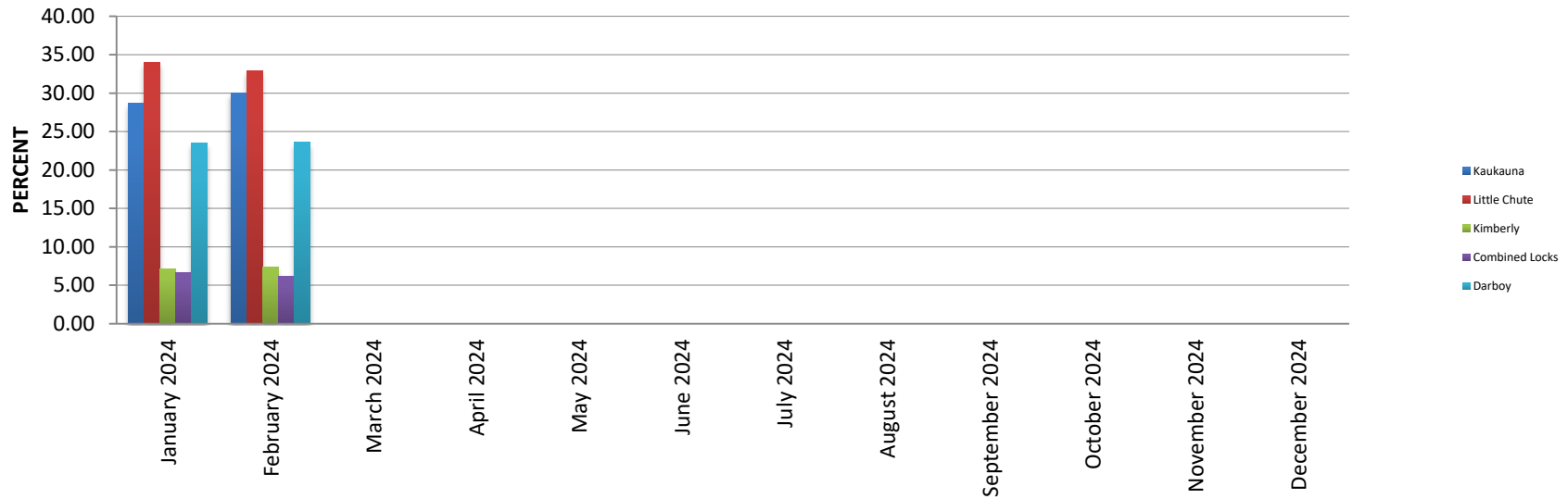
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	28.68	33.99	7.16	6.63	23.53
February 2024	29.98	32.88	7.36	6.19	23.58
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

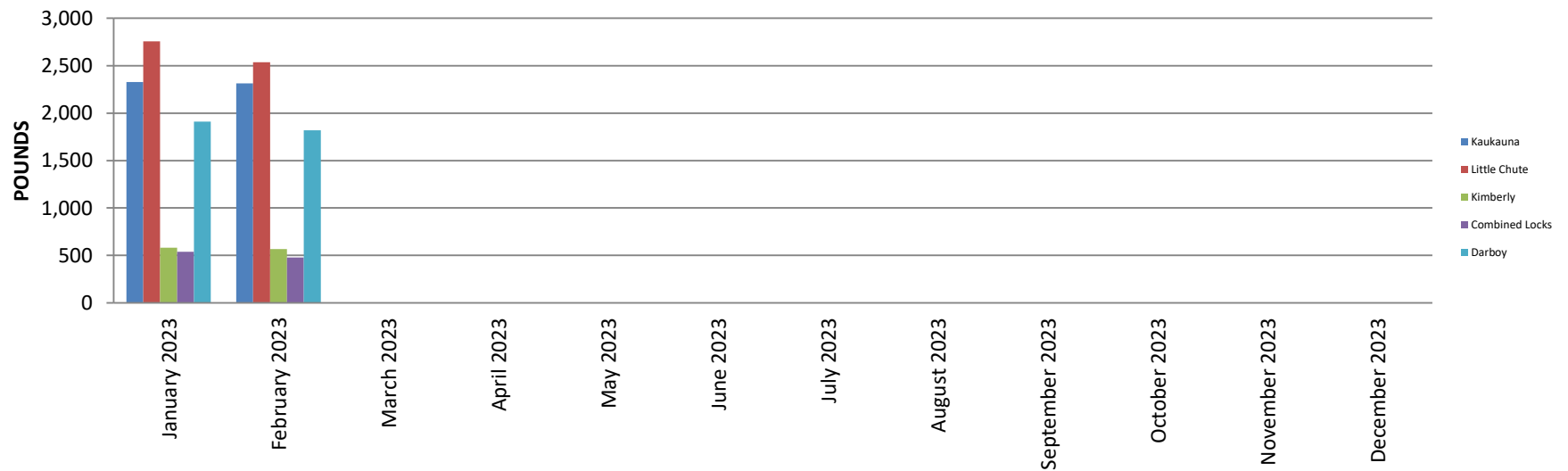
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2023	2,326	2,757	581	538	1,909
February 2023	2,312	2,537	568	478	1,819
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

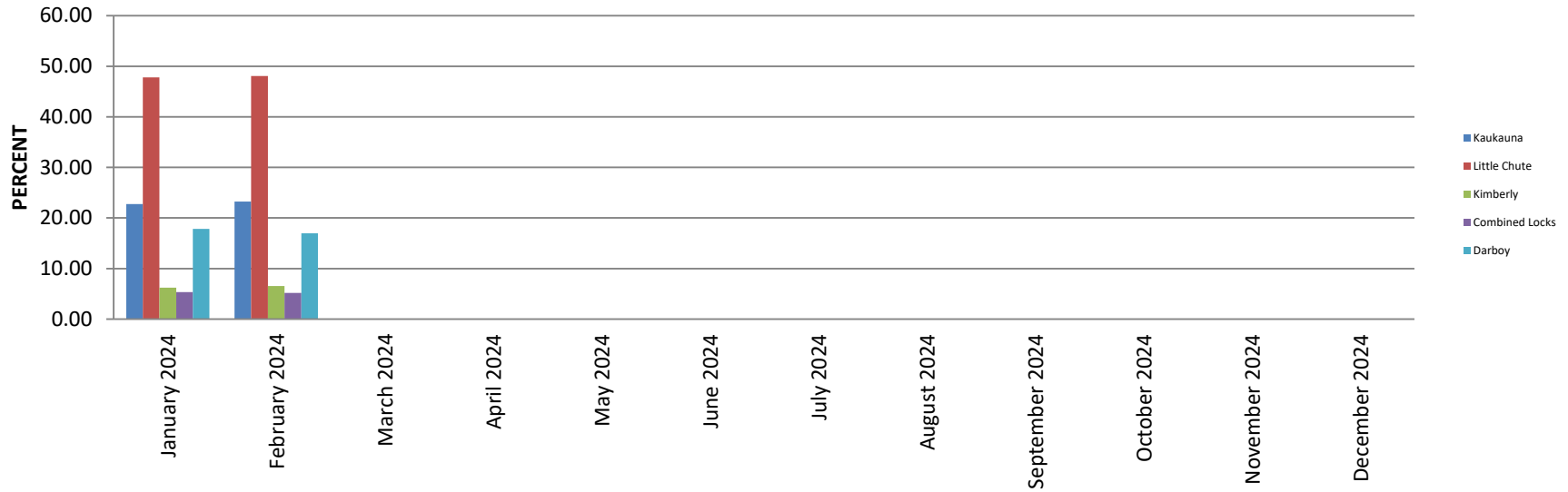
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	22.77	47.81	6.21	5.34	17.86
February 2024	23.23	48.08	6.54	5.16	16.99
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

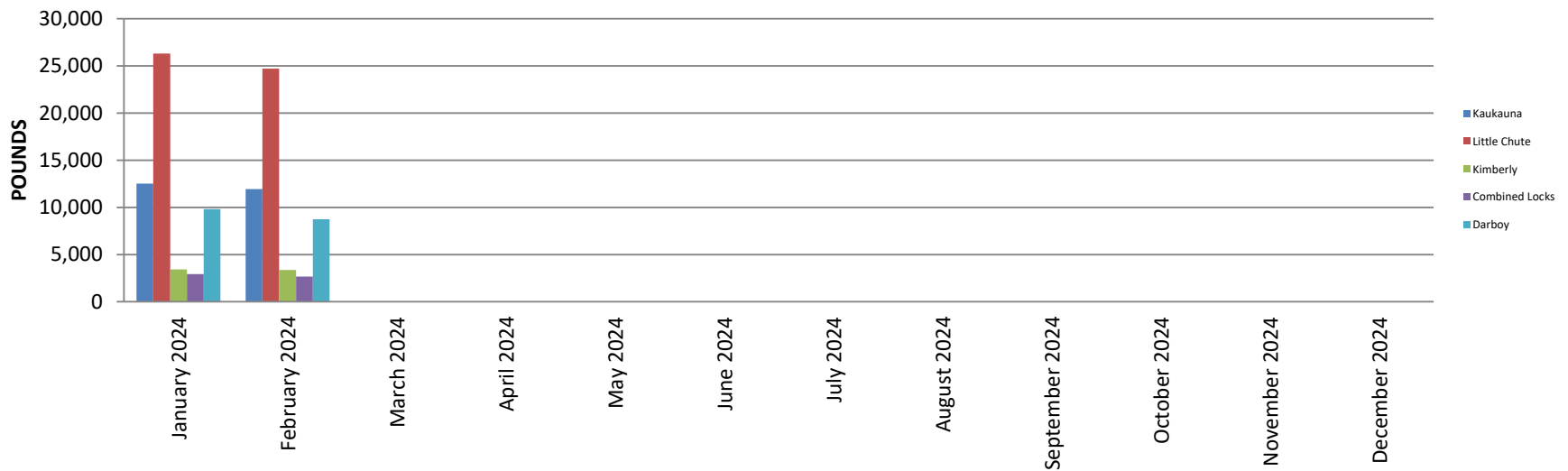
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	12,531	26,308	3,416	2,938	9,829
February 2024	11,934	24,700	3,359	2,651	8,729
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

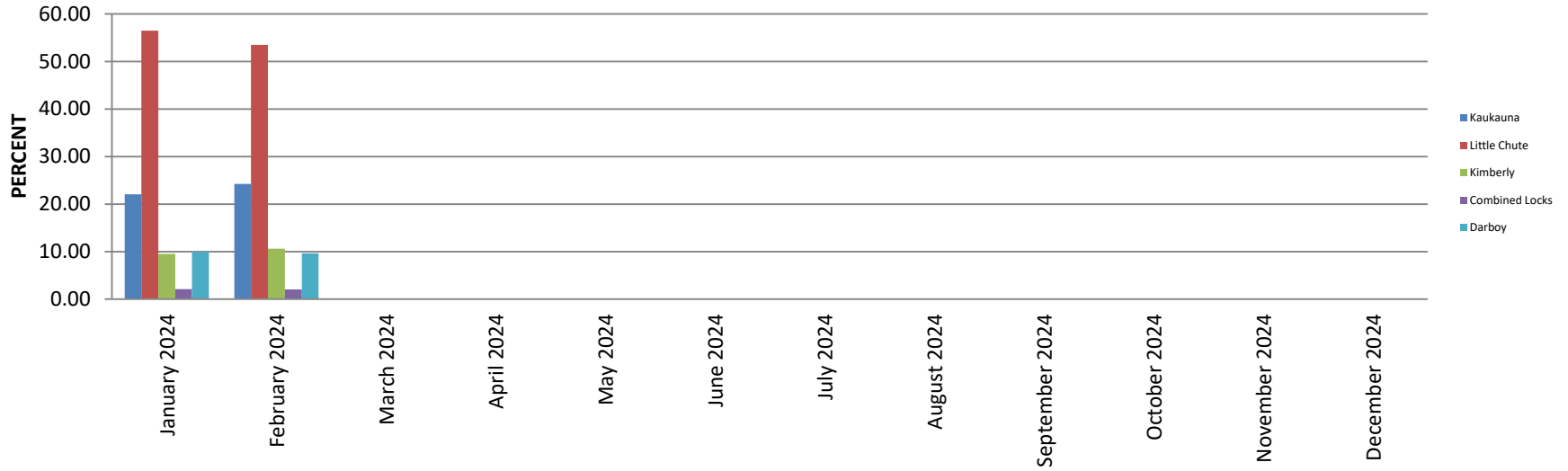
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	22.06	56.47	9.49	2.08	9.91
February 2024	24.24	53.51	10.63	2.02	9.61
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

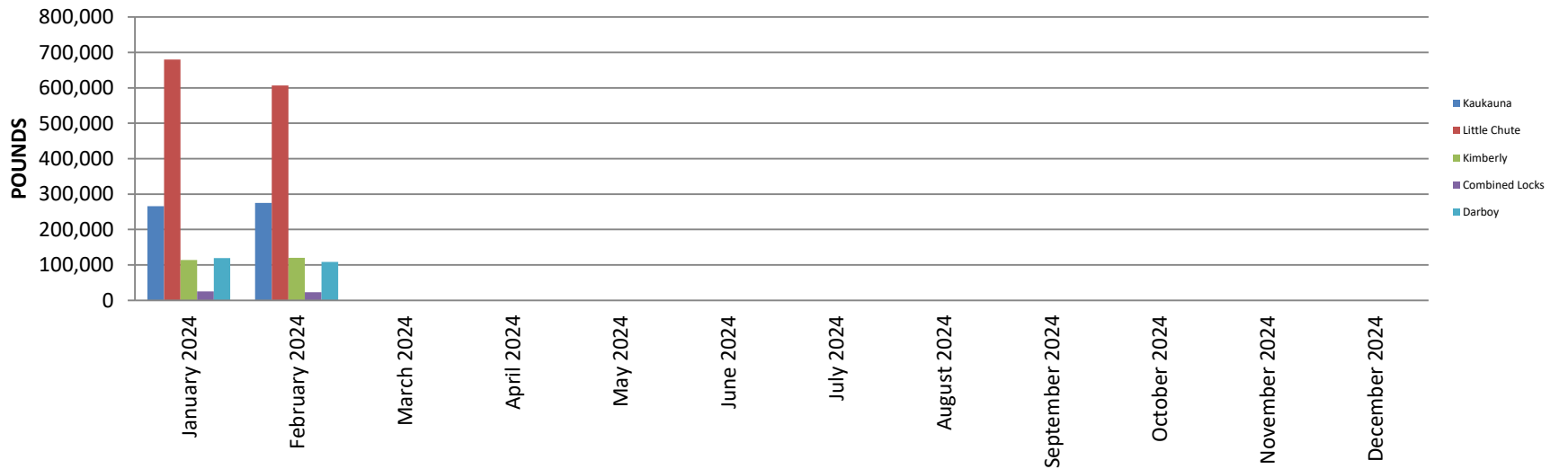
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2024	265,727	680,128	114,277	25,047	119,326
February 2024	274,796	606,570	120,456	22,874	108,956
March 2024					
April 2024					
May 2024					
June 2024					
July 2024					
August 2024					
September 2024					
October 2024					
November 2024					
December 2024					

% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

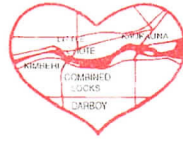


POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



DISTRICT DIRECTOR:

Brian M. Helminger

**COMMISSIONERS:**

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

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:** February**Year:** 2024**Gallons of Final Effluent Purchased (Billing)**

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
2/1/2024	3,110,000	2/21/2024	2,742,000
2/2/2024	2,988,000	2/22/2024	3,231,000
2/3/2024	2,882,000	2/23/2024	3,455,000
2/4/2024	2,901,000	2/24/2024	2,372,000
2/5/2024	2,847,000	2/25/2024	2,188,000
2/6/2024	2,438,000	2/26/2024	3,003,000
2/7/2024	2,622,000	2/27/2024	3,148,000
2/8/2024	3,037,000	2/28/2024	2,834,000
2/9/2024	3,445,000		
2/10/2024	3,354,000		
2/11/2024	2,941,000		
2/12/2024	3,111,000		
2/13/2024	3,110,000		
2/14/2024	2,460,000		
2/15/2024	3,066,000		
2/16/2024	2,871,000		
2/17/2024	2,767,000		
2/18/2024	2,756,000		
2/19/2024	2,854,000		
2/20/2024	3,276,000		
		Total:	81,809,000

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

Attn: Account # N2310E

MONTHLY BILLING

Month: February

Year: 2024

GALLONS PURCHASED: 81,809,000

BILLING RATE: \$0.1832483 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$14,991.36

**Heart of the Valley
Metropolitan Sewerage District**

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

2024

Final Effluent Sent to Fox Energy Facility

Gallons: 168,205,000

Charge Per 1000 Gallons: **\$0.1832483** Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$30,823.28