

FLOW AND STRENGTH PROJECTIONS

MONTH: May 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)	221,015,667	243,427,000	22,411,333	\$ 155,816.05	\$ 171,616.04	\$ 15,799.99
B.O.D. (#s)	496,036	480,855	-15,181	\$ 87,302.34	\$ 84,630.43	\$ (2,671.91)
S. SOLIDS (#s)	419,339	494,080	74,741	\$ 99,802.68	\$ 117,590.95	\$ 17,788.27
PHOSPHORUS (#s)	8,278	8,829	551	\$ 52,797.08	\$ 56,309.19	\$ 3,512.11
AMMONIA-N (#s)	56,922	62,466	5,544	\$ 62,044.98	\$ 68,087.83	\$ 6,042.85
CHLORIDES (#s)	1,022,649	1,208,333	185,684	\$ 3,067.95	\$ 3,625.00	\$ 557.05
			TOTAL:	\$ 460,831.07	\$ 501,859.44	\$ 41,028.36

(THRU MAY 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	286,176,233	\$ 201,754.24
B.O.D. (#s)	5,484,285	275,668	\$ 48,517.63
S. SOLIDS (#s)	4,877,973	254,323	\$ 60,528.79
PHOSPHORUS (#s)	94,940	4,190	\$ 26,721.65
AMMONIA-N (#s)	666,440	7,941	\$ 8,655.58
CHLORIDES (#s)	11,252,829	972,578	\$ 2,917.73
		TOTAL:	\$ 349,095.63

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

May 2023

	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	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	343.7	11.1	113	10,304	319,433	178	16,254	503,869	3.12	294	9,105	18.8	1759	54,543	489	44,804	1,388,909
Apr	307.2	10.2	156	12,415	372,459	188	15,087	452,619	3.63	288	8,649	23.6	1874	56,221	505	41,134	1,234,005
May	234.8	7.6	198	12,227	379,027	231	14,079	436,459	4.46	272	8,433	32.5	1989	61,655	676	41,355	1,282,002
Jun																	
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
Average	247.7	8.2	173	10,887	329,340	224	14,188	429,513	4.20	266	8,060	28.3	1,769	53,528	596	38,041	1,152,611
Yearly Total	1,238.7				1,646,699			2,147,567			40,300			267,640			5,763,056

*Includes Hauled Waste [Plant Design Capacity] =	8.5	13,565	12,209	339	1,600
(Hauled Waste Gallons)= 194,440 [Max Design Capacity] =	11.9	16,278	14,651	407	1,920
May % of Capacity =	64%	75%	96%	67%	104%

May Max Daily Flow = 12.46

EFFLUENT QUALITY

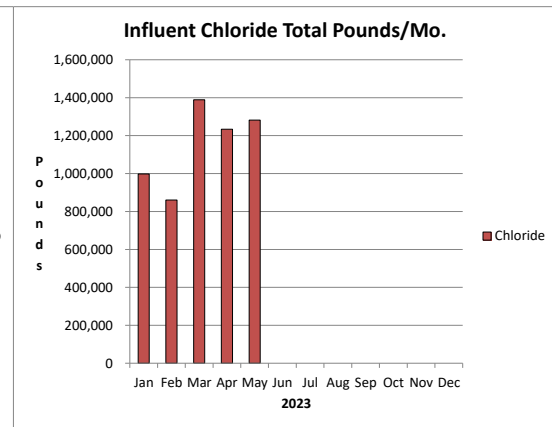
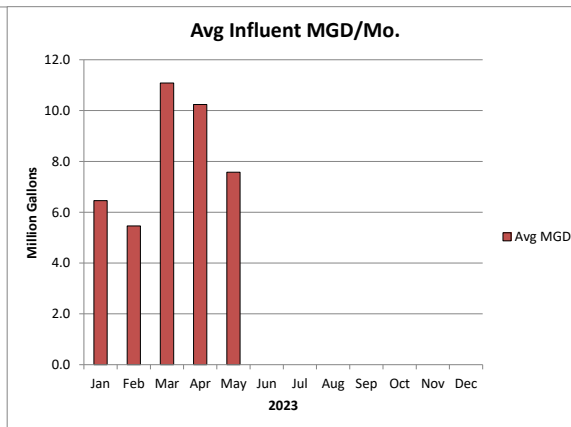
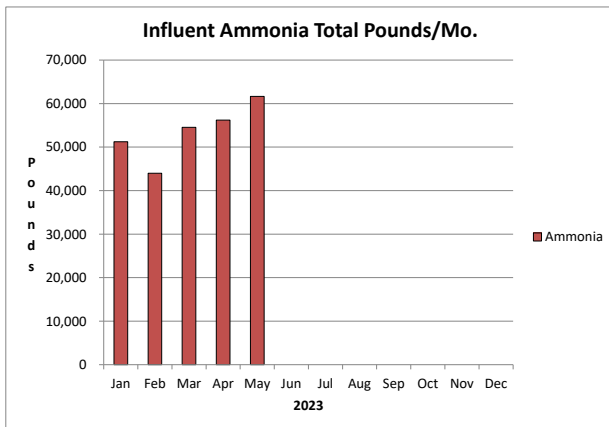
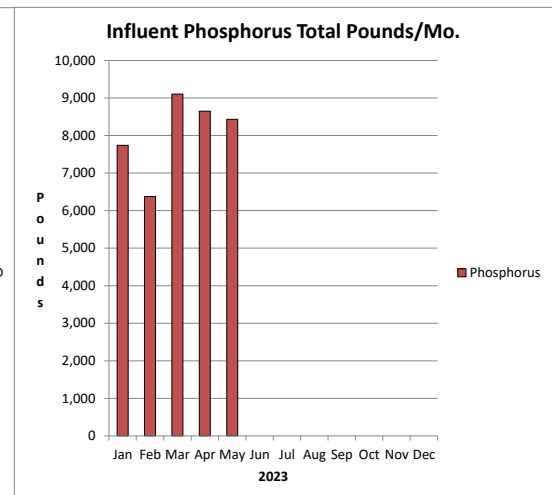
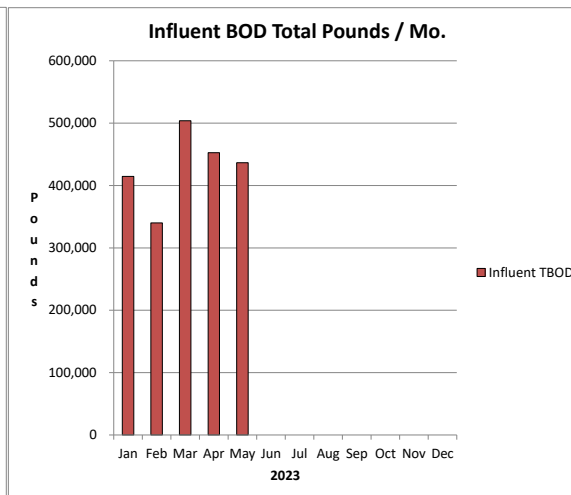
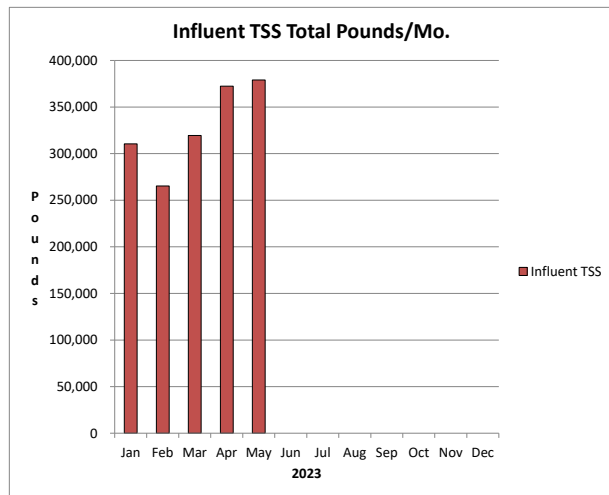
		FLOW		TSS		BOD		TOTAL PHOSPHORUS		AMMONIA		CHLORIDE					
MONTH		Million Gallons	Avg MGD	Avg mg/L	Avg #/day	Total # /Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	
Jan		115.9	3.7	8.0	251	7,792	8.0	248	7,703	0.23	7.1	220	0.43	13.7	425	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		254.1	8.2	19.6	1,345	41,700	11.9	817	25,315	0.36	24.5	760	0.29	21.1	653	505	
Apr		227.9	7.6	15.6	1,143	34,282	12.2	796	23,870	0.34	23.2	696	0.99	65.2	1,956	526	
May		177.8	5.7	11.8	544	16,874	8.4	396	12,269	0.27	12.4	385	0.72	35.6	1,105	658	
Jun																	
Jul																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
Average		170.2	5.6	13.0	701	21,380	9.7	486.2	14,809	0.29	14.5	440.8	0.54	28.2	857.4	602	
Yearly Total		851.0				106,902			74,044			2,204			4,286.8		

		Monthly Avg Limit
Jan- Marc		10 mg/L
April-May		11 mg/L
June-Sept		4.4 mg/L
Oct- Dec		18 mg/L

Effluent Gallons to Fox Energy (May)	
56.93	24%

May	Avg #'s
WEEK 1	741
WEEK 2	739
WEEK 3	591
WEEK 4	267

6 mo. Avg #'s 12.68 May-Oct



RAIN GAUGES

DAILY RAINFALL TOTALS

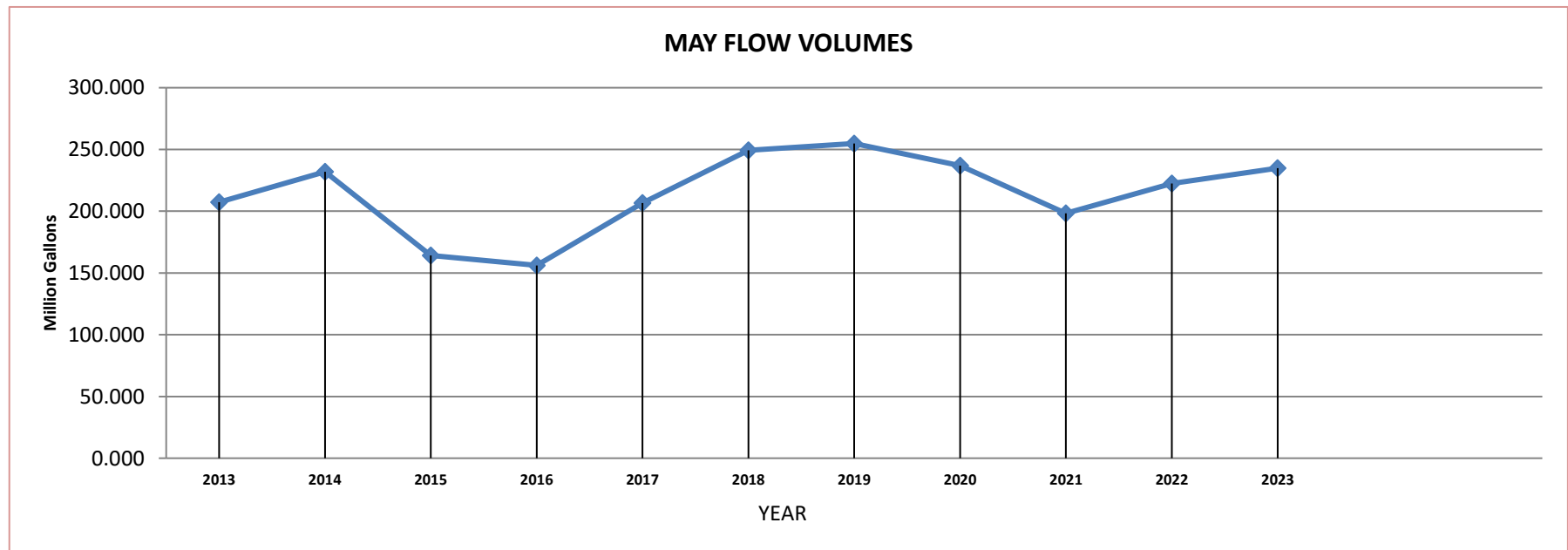
MONTH: MAY

YEAR: 2023

<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	0.29	0.45	0.49	0.82	
2	0.00	0.00	0.00	0.00	
3	NR	0.00	0.00	0.00	
4	NR	0.00	0.00	0.00	
5	0.02	0.11	0.10	0.07	
6	0.03	0.03	0.06	0.04	
7	0.03	0.02	0.03	0.01	
8	0.09	0.11	0.14	0.13	
9	0.00	0.00	0.01	0.00	
10	0.00	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	
14	0.00	0.00	0.00	0.00	
15	0.00	0.00	0.00	0.00	
16	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	
19	0.07	0.08	0.04	0.01	
20	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	
22	0.00	0.00	0.00	0.00	
23	0.00	0.00	0.00	0.00	
24	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	
27	0.00	0.00	0.00	0.00	
28	0.00	0.00	0.00	0.00	
29	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	
31	0.02	0.00	0.00	0.00	
TOTAL:	0.55	0.80	0.87	1.08	

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>May Flow</u> <u>Million Gallons</u>	<u>Precipitation</u> <u>Inches</u>
2013	207.246	2.76
2014	231.951	3.03
2015	164.246	3.44
2016	156.148	2.52
2017	206.521	2.88
2018	249.379	3.71
2019	254.810	4.55
2020	236.946	4.82
2021	198.367	2.71
2022	222.500	2.40
2023	234.764	0.83

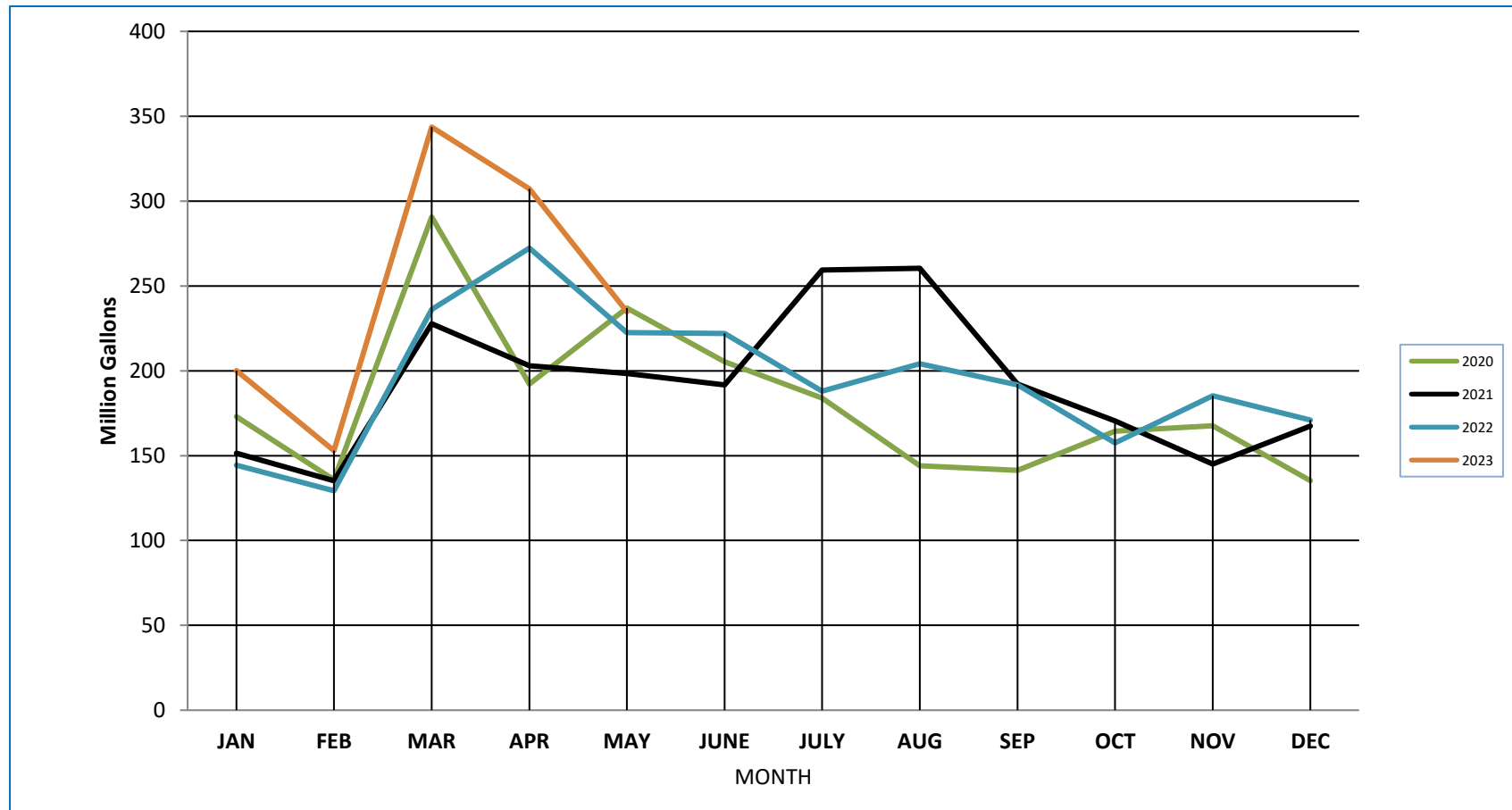


HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	<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	343.638	307.249	234.764							

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

MONTHLY FLOW VOLUMES



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

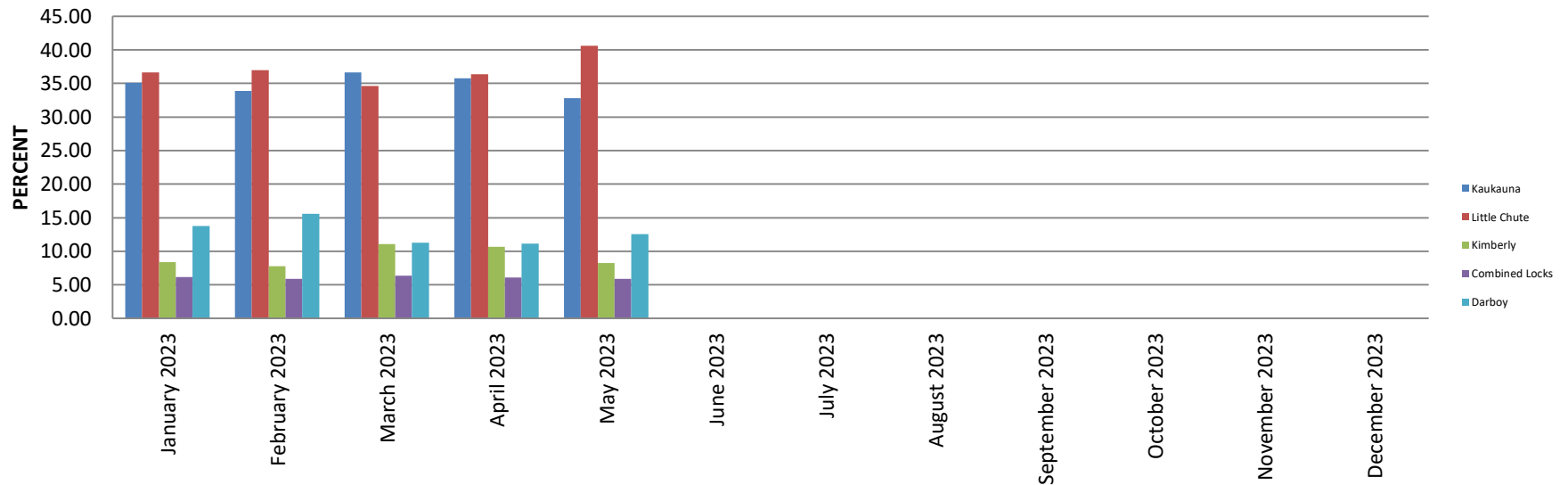
% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<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	36.64	34.65	11.08	6.36	11.27	
April 2023	35.78	36.36	10.68	6.07	11.11	2.08
May 2023	32.78	40.60	8.22	5.87	12.53	0.83
June 2023						
July 2023						
August 2023						
September 2023						
October 2023						
November 2023						
December 2023						

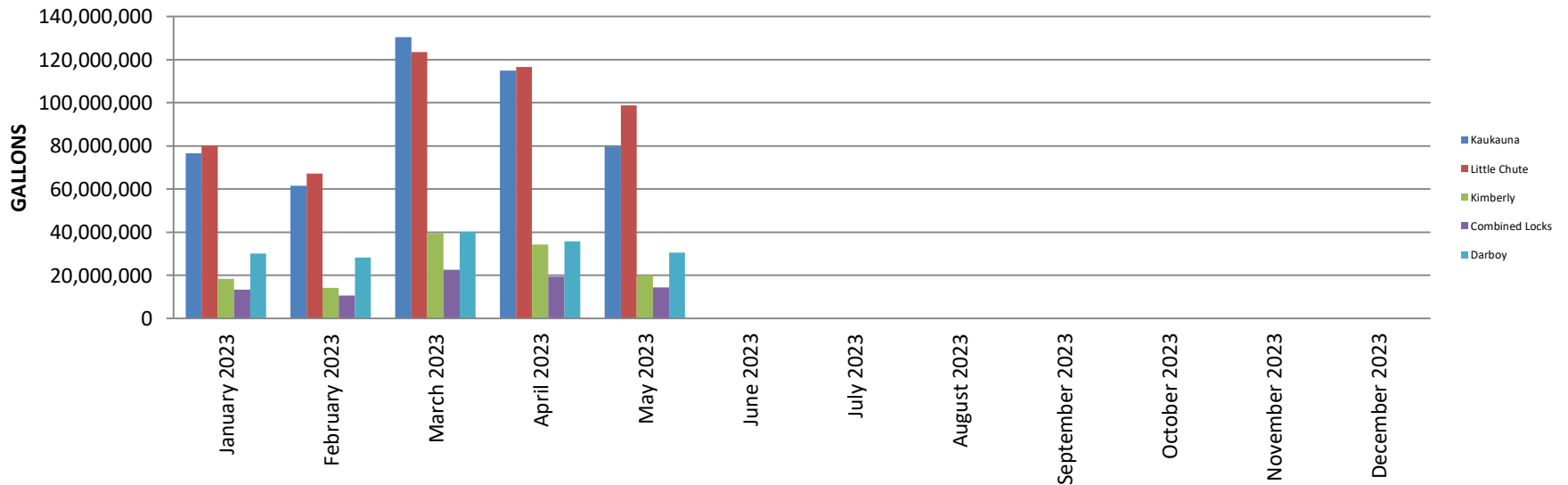
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<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	130,492,000	123,418,000	39,467,000	22,642,000	40,122,000
April 2023	114,819,000	116,670,000	34,258,000	19,467,000	35,661,000
May 2023	79,794,000	98,841,000	20,003,000	14,292,000	30,497,000
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

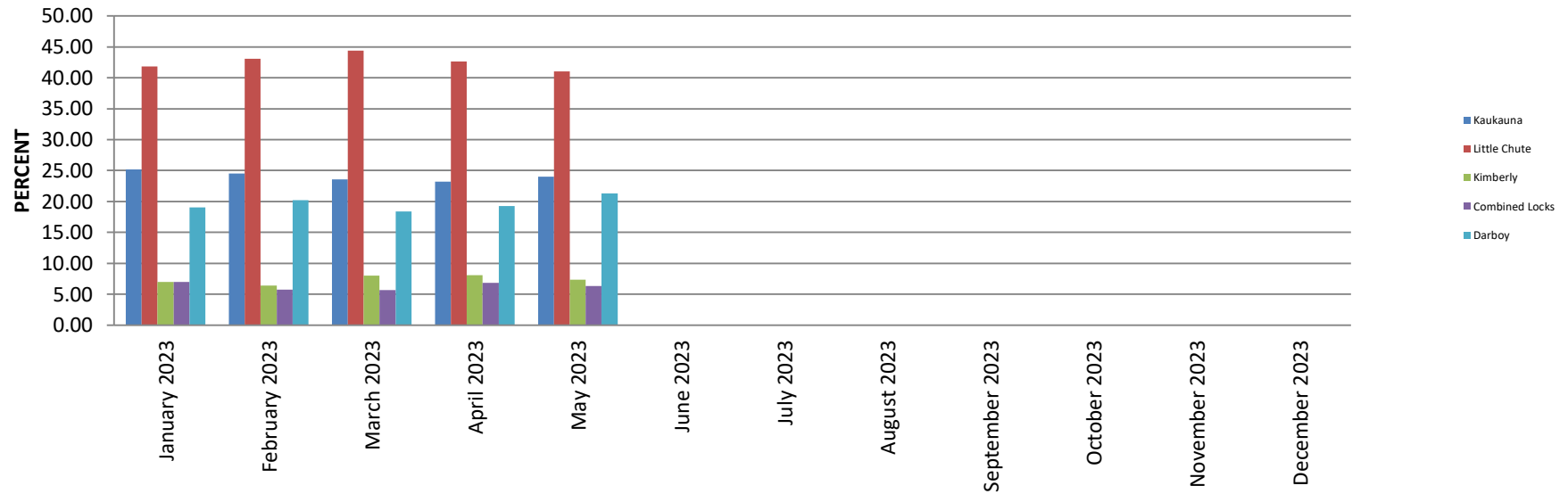
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<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	23.59	44.37	8.00	5.67	18.37
April 2023	23.20	42.61	8.11	6.81	19.26
May 2023	24.01	41.04	7.34	6.32	21.29
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

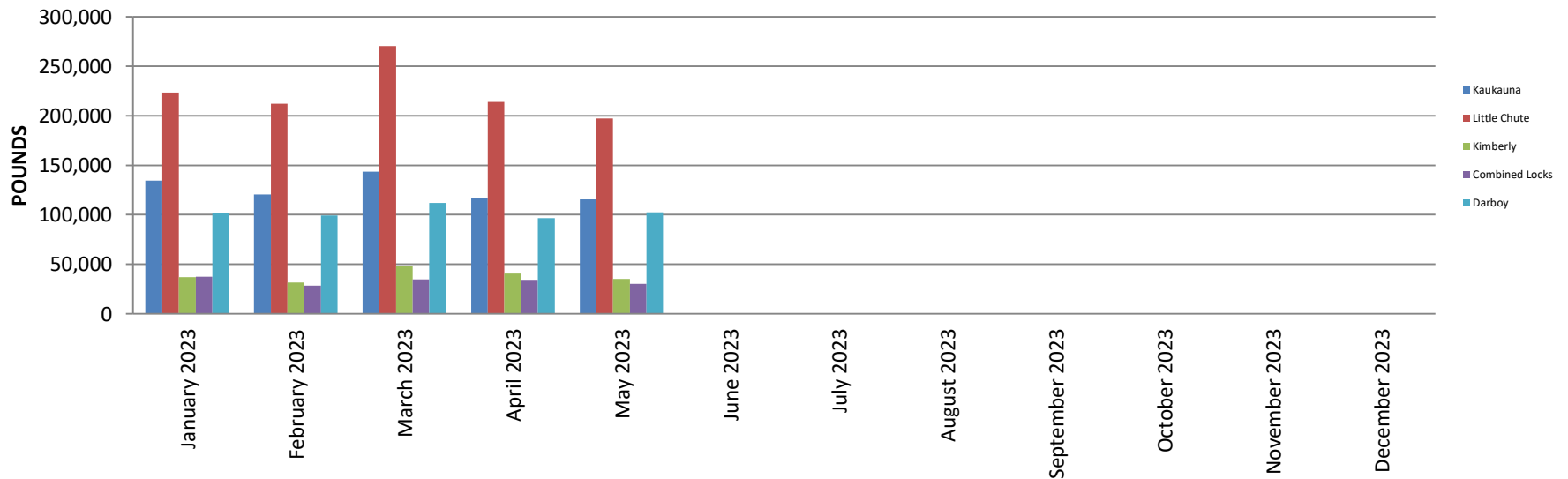
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<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	143,738	270,282	48,712	34,533	111,936
April 2023	116,459	213,951	40,726	34,205	96,716
May 2023	115,467	197,329	35,281	30,386	102,393
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

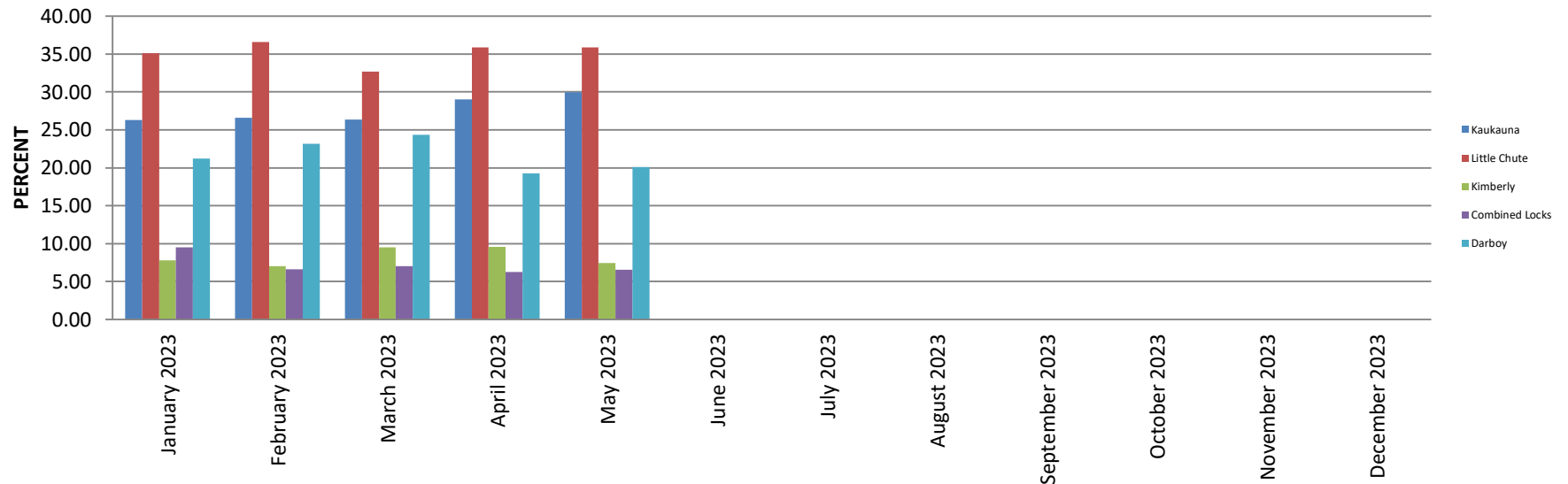
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<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	26.39	32.68	9.52	7.05	24.36
April 2023	29.02	35.90	9.55	6.27	19.26
May 2023	29.96	35.88	7.46	6.57	20.12
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

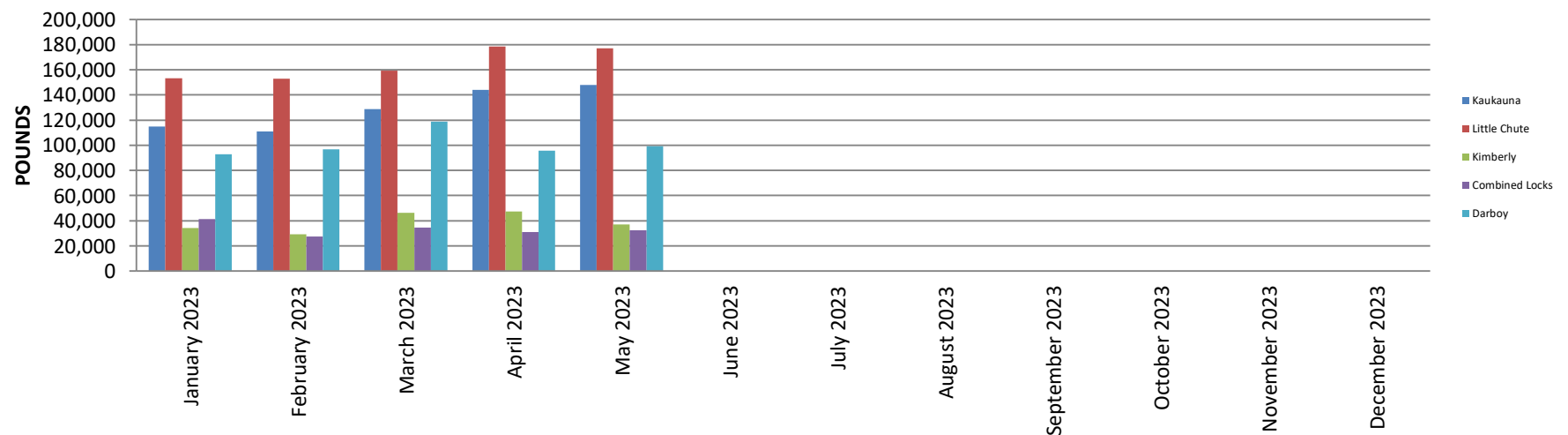
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<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	128,722	159,420	46,446	34,391	118,815
April 2023	144,144	178,365	47,436	31,164	95,673
May 2023	148,038	177,288	36,882	32,477	99,395
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

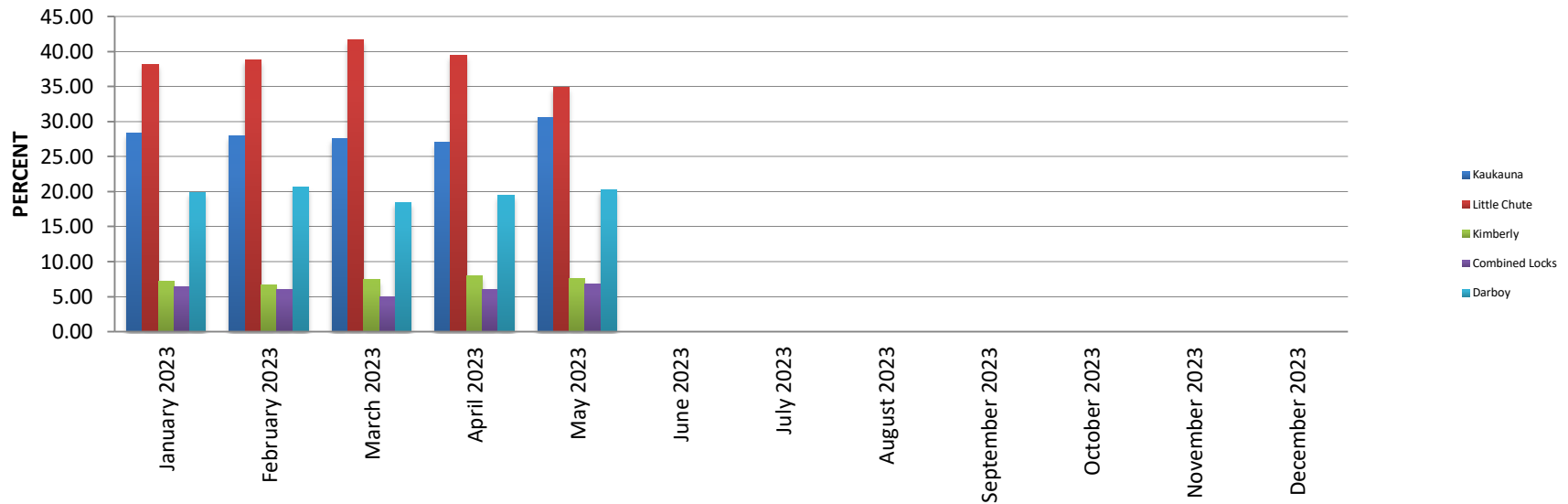
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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	27.55	41.70	7.39	4.91	18.46
April 2023	27.00	39.50	8.00	6.00	19.50
May 2023	30.62	34.83	7.61	6.74	20.19
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

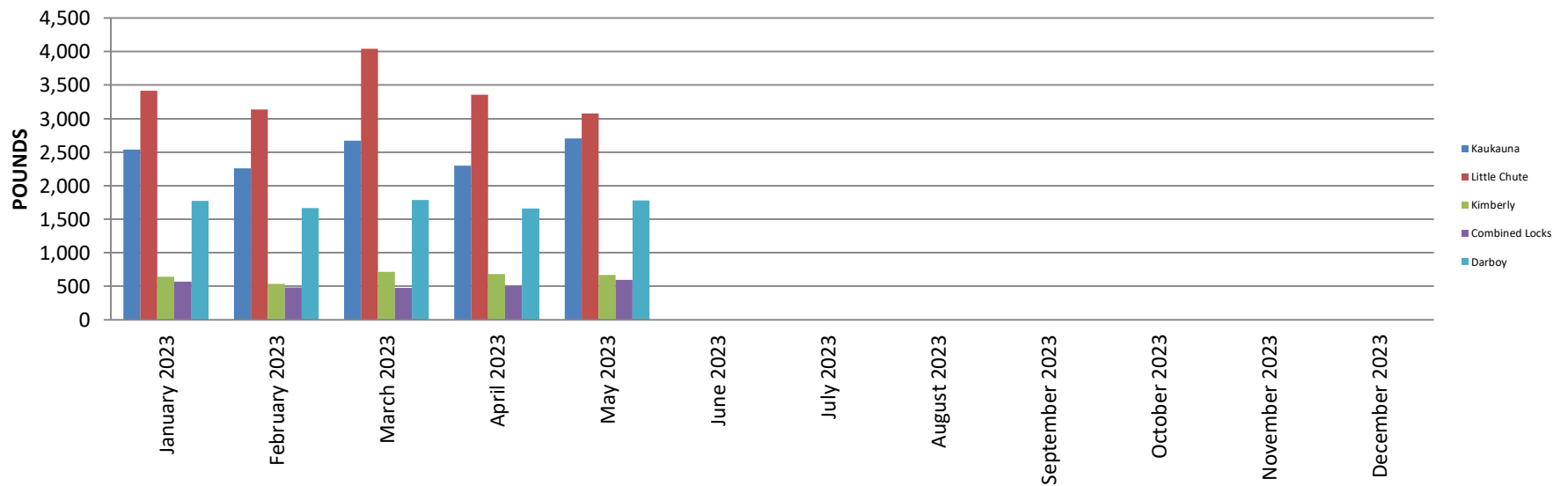
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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	2,669	4,040	716	476	1,789
April 2023	2,296	3,359	680	510	1,658
May 2023	2,703	3,075	672	595	1,783
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

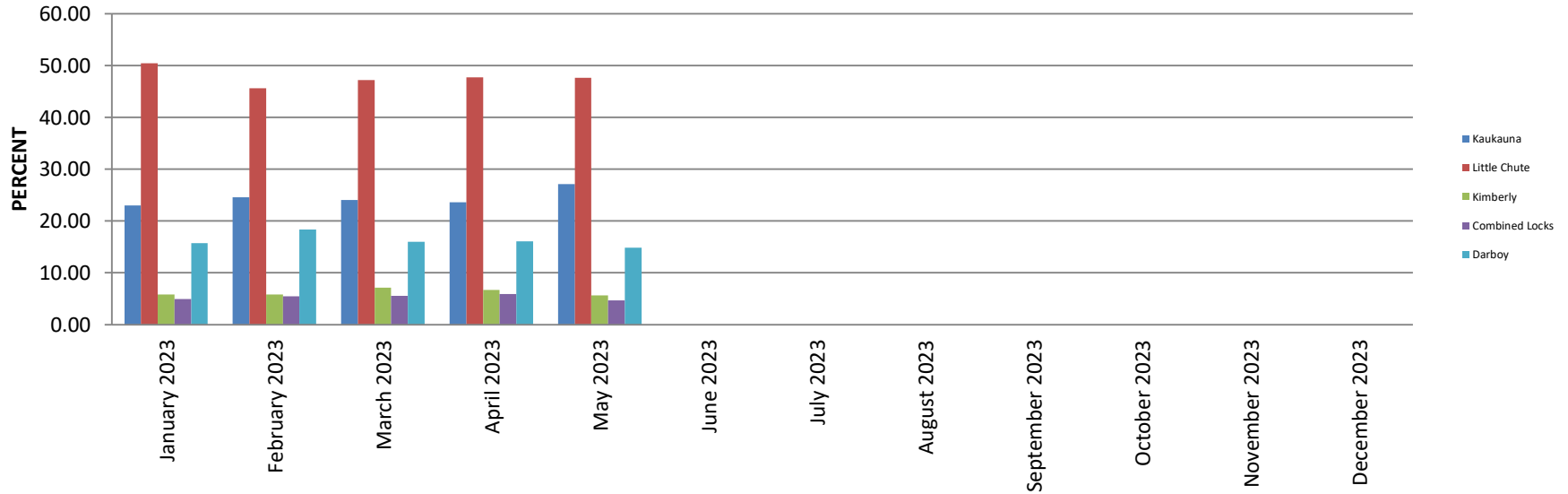
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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	24.08	47.21	7.17	5.58	15.96
April 2023	23.61	47.72	6.69	5.90	16.08
May 2023	27.10	47.66	5.66	4.72	14.86
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

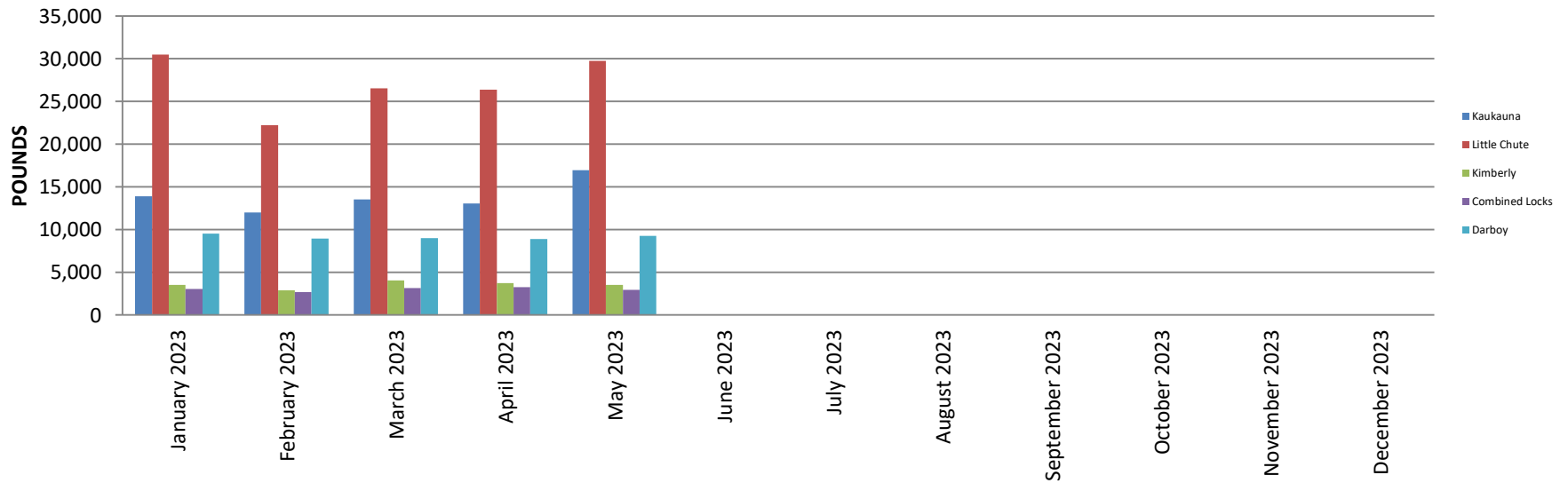
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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	13,528	26,528	4,028	3,136	8,970
April 2023	13,060	26,397	3,702	3,262	8,892
May 2023	16,929	29,771	3,535	2,949	9,281
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

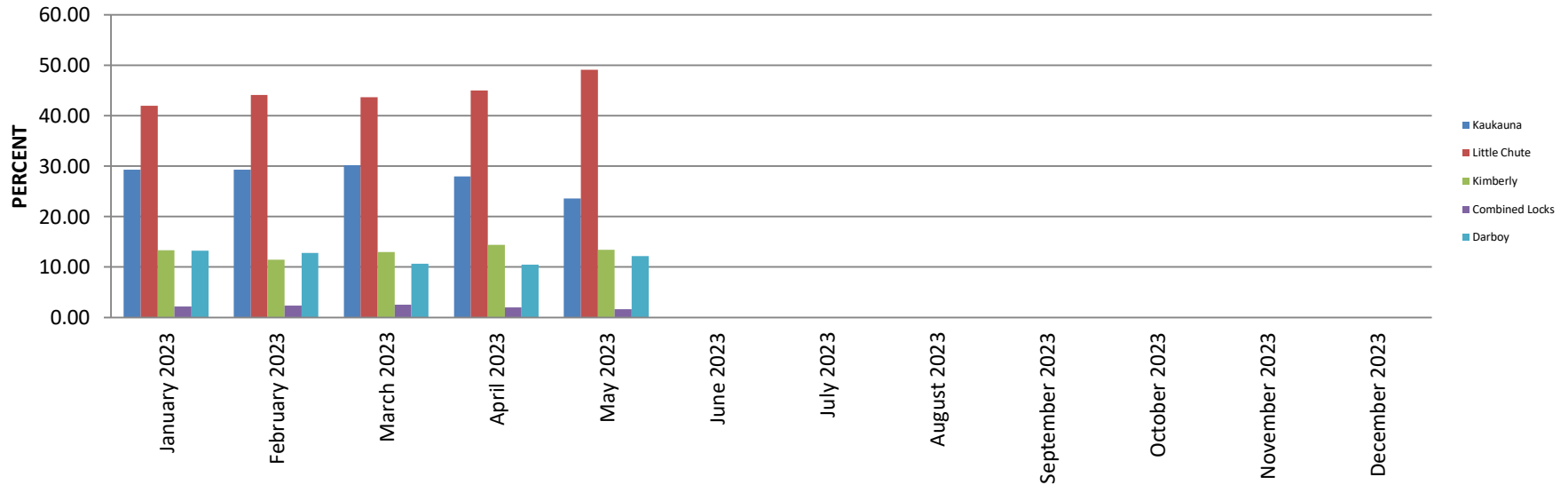
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<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	30.17	43.70	12.96	2.53	10.64
April 2023	27.99	45.05	14.44	2.04	10.48
May 2023	23.59	49.13	13.47	1.63	12.19
June 2023					
July 2023					
August 2023					
September 2023					
October 2023					
November 2023					
December 2023					

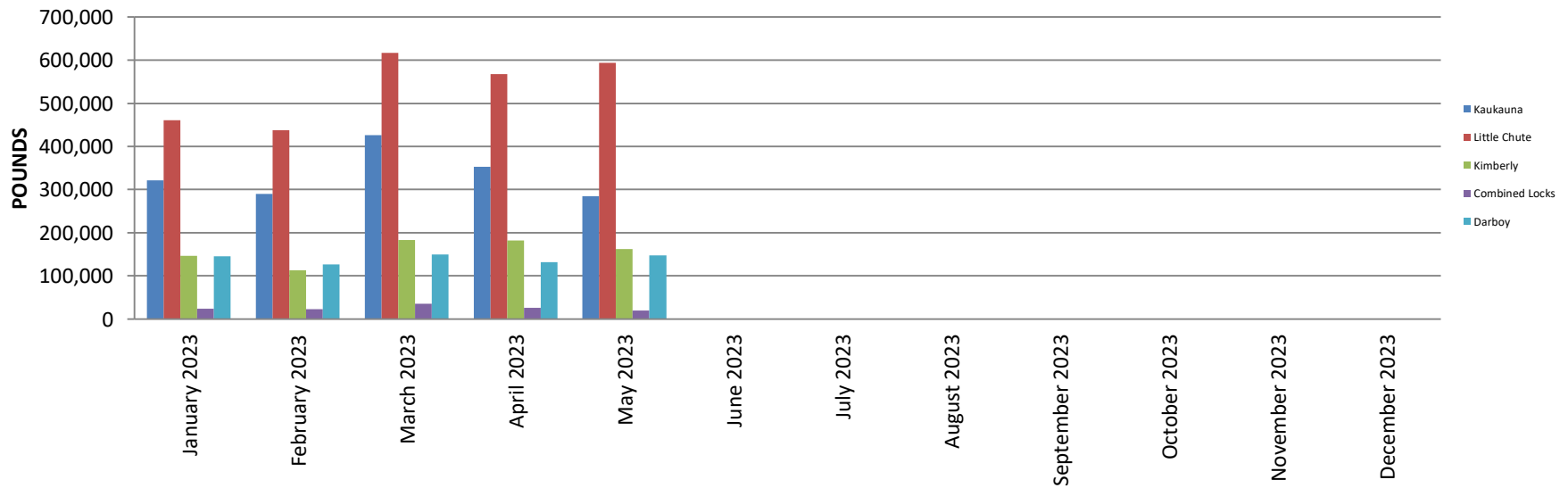
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<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	425,992	617,025	182,965	35,759	150,191
April 2023	352,879	567,857	182,004	25,710	132,083
May 2023	285,019	593,668	162,721	19,661	147,264
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

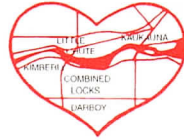


DISTRICT DIRECTOR:

Brian M. Helminger

SERVING:

Combined Locks
Kaukauna
Kimberly
Little Chute
Darboy S.D.

**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: May

Year: 2023

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
5/1/2023	2,524,000	5/21/2023	3,368,000
5/2/2023	2,781,000	5/22/2023	3,452,000
5/3/2023	2,766,000	5/23/2023	3,652,000
5/4/2023	3,390,000	5/24/2023	4,137,000
5/5/2023	2,007,000	5/25/2023	3,416,000
5/6/2023	1,719,000	5/26/2023	3,132,000
5/7/2023	60,000	5/27/2023	2,751,000
5/8/2023	0	5/28/2023	2,796,000
5/9/2023	0	5/29/2023	3,273,000
5/10/2023	0	5/30/2023	3,718,000
5/11/2023	0	5/31/2023	4,085,000
5/12/2023	0		
5/13/2023	0		
5/14/2023	0	Total:	56,931,000
5/15/2023	0		
5/16/2023	0		
5/17/2023	0		
5/18/2023	0		
5/19/2023	1,352,000		
5/20/2023	2,552,000		

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

Attn: Account # N2310E

MONTHLY BILLING

Month: May

Year: 2023

GALLONS PURCHASED: 56,931,000

BILLING RATE: \$0.1730911 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$9,854.25

**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: 387,777,500

Charge Per 1000 Gallons: \$0.1730911 Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$67,120.83