

FLOW AND STRENGTH PROJECTIONS

MONTH: August 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)	154,725,000	198,892,000	44,167,000	\$ 118,055.18	\$ 151,754.60	\$ 33,699.42
B.O.D. (#s)	392,880	515,331	122,451	\$ 75,825.84	\$ 99,458.88	\$ 23,633.04
S. SOLIDS (#s)	362,210	468,588	106,378	\$ 92,001.34	\$ 119,021.35	\$ 27,020.01
PHOSPHORUS (#s)	7,542	9,197	1,655	\$ 50,471.06	\$ 61,546.32	\$ 11,075.26
AMMONIA-N (#s)	51,020	53,614	2,594	\$ 63,621.94	\$ 66,856.66	\$ 3,234.72
CHLORIDES (#s)	862,451	1,036,487	174,036	\$ 3,449.80	\$ 4,145.95	\$ 696.14
			TOTAL:	\$ 403,425.16	\$ 502,783.76	\$ 99,358.60

(THRU AUGUST 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	-66,785,000	\$ (50,956.96)
B.O.D. (#s)	3,755,281	515,349	\$ 99,462.34
S. SOLIDS (#s)	3,909,560	202,140	\$ 51,343.67
PHOSPHORUS (#s)	80,410	5,044	\$ 33,757.39
AMMONIA-N (#s)	505,265	28,062	\$ 34,993.14
CHLORIDES (#s)	8,748,079	657,579	\$ 2,630.32
		TOTAL:	\$ 171,229.90

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

August 2022

MONTH	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE		
	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	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	272.3	9.1	147	10,865	325,941	184	13,580	407,390	3.28	240	7,200	24.5	1775	55,039	511	33,214	1,029,625
May	222.5	7.2	178	10,477	324,787	272	16,081	498,519	4.82	277	8,587	32.2	1864	57,788	628	37,491	1,162,212
Jun	222.1	7.4	184	11,216	336,483	247	14,893	446,787	4.72	282	8,475	30.6	1853	55,589	655	39,747	1,192,416
Jul	188.0	6.1	203	10,237	317,346	267	13,520	419,128	4.82	242	7,489	34.4	1729	53,589	672	33,458	1,037,185
Aug	204.2	6.6	204	10,974	340,186	275	14,567	451,585	5.13	265	8,205	31.9	1692	52,461	651	34,287	1,062,895
Sep																	
Oct																	
Nov																	
Dec																	
Average	202.4	6.7	206	10,764	325,587	279	14,425	438,222	5.04	258	7,841	35.4	1,803	54,985	677	35,207	1,070,427
Yearly Total	1,618.9				2,604,698			3,505,778			62,729			439,878			8,563,419

*Includes Hauled Waste
[Plant Design Capacity] = 8.5
(Hauled Waste Gallons)= 287,210
[Max Design Capacity] = 11.9
August % of Capacity = 55%
August Max Daily Flow = 11.55

	13,565	12,209	339	1,600
	16,278	14,651	407	1,920
	67%	99%	65%	88%

EFFLUENT QUALITY

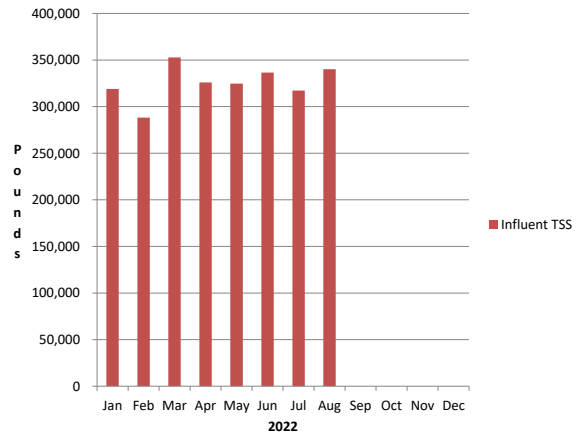
MONTH	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE
	Million Gallons	Avg MGD	Avg mg/L	Avg #/day	Total #/Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L
Jan	61.6	2.0	12.8	212	6,561	10.5	173	5,364	0.34	5.6	173	0.46	8.0	249	746
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	189.3	6.3	19.2	629	18,878	10.9	586	17,593	0.21	11.8	353	0.83	42.5	1,190	520
May	158.7	5.1	9.6	484	14,532	11.9	513	15,912	0.22	9.8	304	1.39	62.6	1,752	644
Jun	122.7	4.1	12.4	255	7,389	8.8	290	8,694	0.18	5.8	174	0.86	29.1	874	633
Jul	82.8	2.7	21.2	409	12,668	12.8	284	8,819	0.33	7.3	226	0.36	7.7	240	663
Aug	100.4	3.2	16.4	441	13,675	11.4	301	9,335	0.36	9.2	284	0.41	9.7	300	647
Sep															
Oct															
Nov															
Dec															
Average	116.2	3.8	15.7	475	14,292	11.6	388.1	11,844	0.29	9.2	280.7	0.66	23.6	678.7	673
Yearly Total	930.0				114,335			94,750			2,245			5,429.4	

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

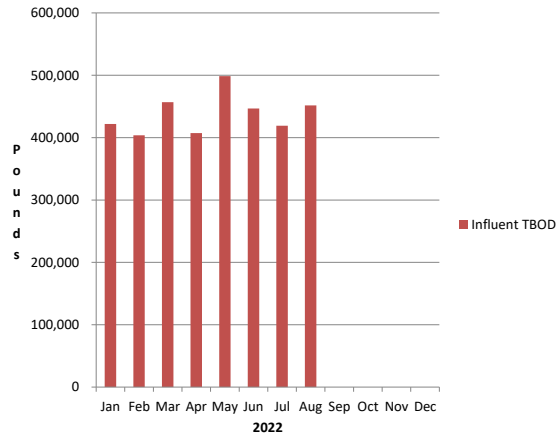
Effluent Gallons to Fox Energy
(August)
Million Gallons % to Fox Energy
103.82 51%

August	Avg #'s	6 mo. Avg #'s	8.03	May-Oct
WEEK 1	443			
WEEK 2	506			
WEEK 3	494			
WEEK 4	375			

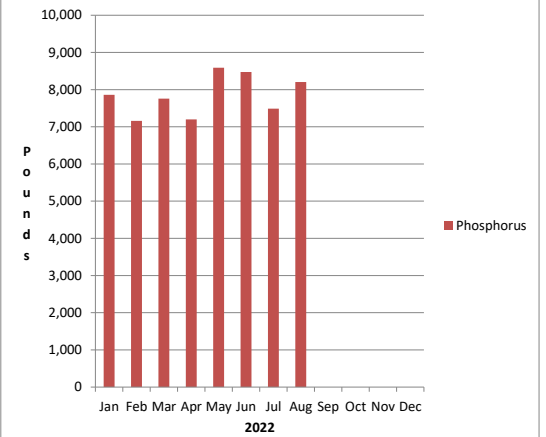
Influent TSS Total Pounds/Mo.



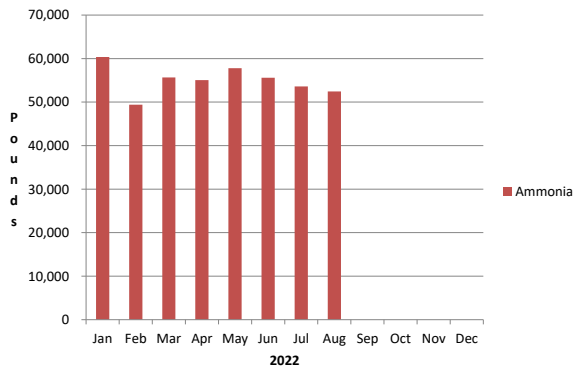
Influent BOD Total Pounds / Mo.



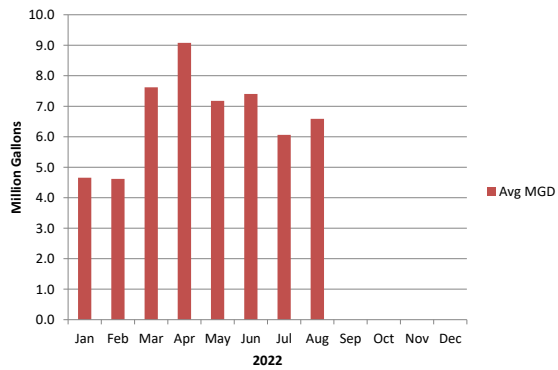
Influent Phosphorus Total Pounds/Mo.



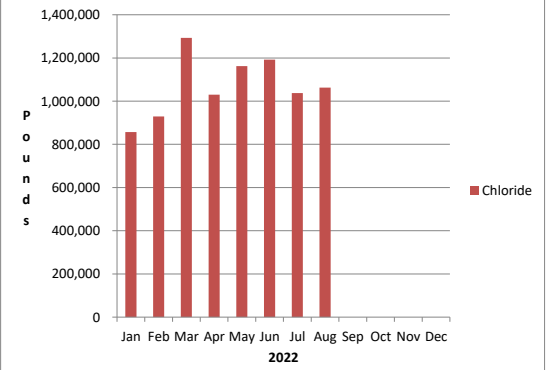
Influent Ammonia Total Pounds/Mo.



Avg Influent MGD/Mo.



Influent Chloride Total Pounds/Mo.



RAIN GAUGES

DAILY RAINFALL TOTALS

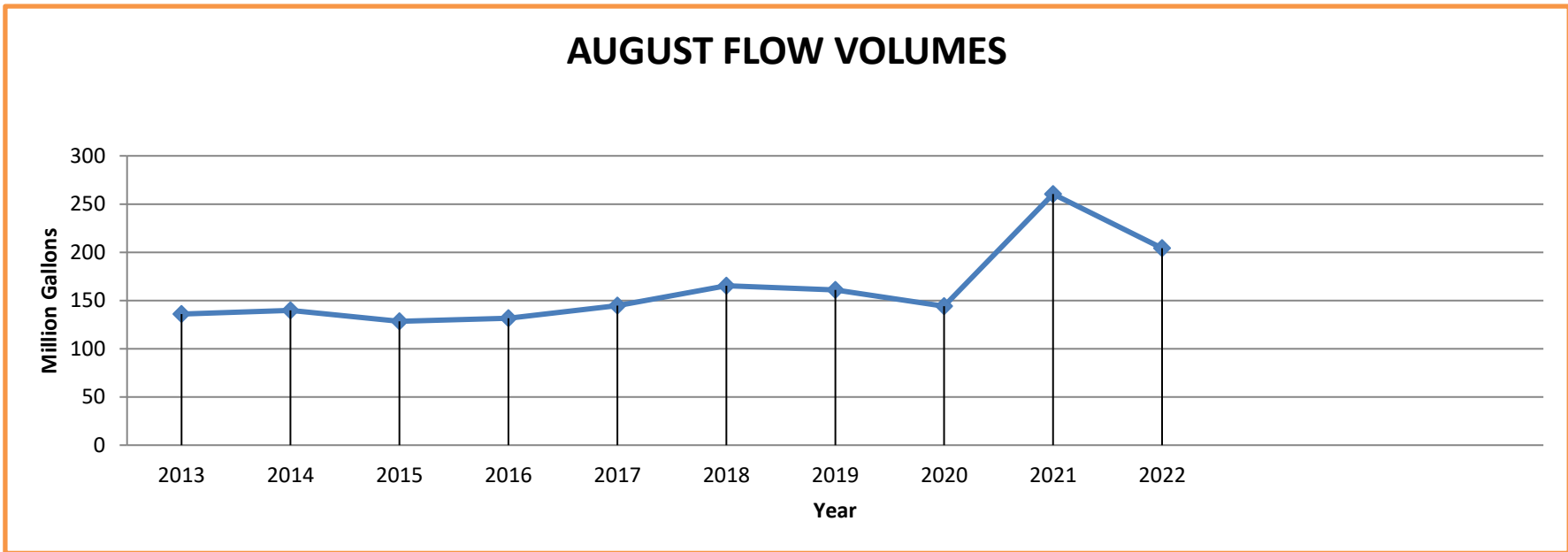
MONTH: AUGUST

YEAR: 2022

<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	0.00	0.00	0.00	
2	0.00	0.00	0.00	0.00	
3	0.42	0.08	0.33	0.06	
4	0.00	0.00	0.00	0.00	
5	0.00	0.01	0.00	0.01	
6	0.00	0.00	0.01	0.00	
7	1.83	0.39	1.65	0.41	
8	0.19	0.05	0.21	0.04	
9	0.00	0.00	0.00	0.00	
10	0.05	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.00	
12	0.00	0.14	0.05	0.00	
13	0.63	0.14	0.70	0.14	
14	0.00	0.00	0.01	0.00	
15	0.00	0.01	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	0.31	0.02	0.02	0.00	
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	0.12	0.03	0.15	0.05	
25	0.00	0.00	0.00	0.00	
26	0.00	0.00	0.00	0.00	
27	0.11	0.03	0.14	0.04	
28	0.61	0.15	0.40	0.08	
29	0.00	0.00	0.00	0.00	
30	0.00	0.00	0.00	0.00	
31	0.00	0.00	0.00	0.00	
TOTAL:	4.27	1.05	3.67	0.83	0.00

HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>August Flow Million Gallons</u>	<u>Precipitation Inches</u>
2013	135.948	2.02
2014	139.604	3.74
2015	128.427	3.22
2016	131.529	2.74
2017	144.717	2.75
2018	165.254	6.44
2019	160.932	3.76
2020	144.085	1.48
2021	260.418	5.27
2022	204.247	3.04

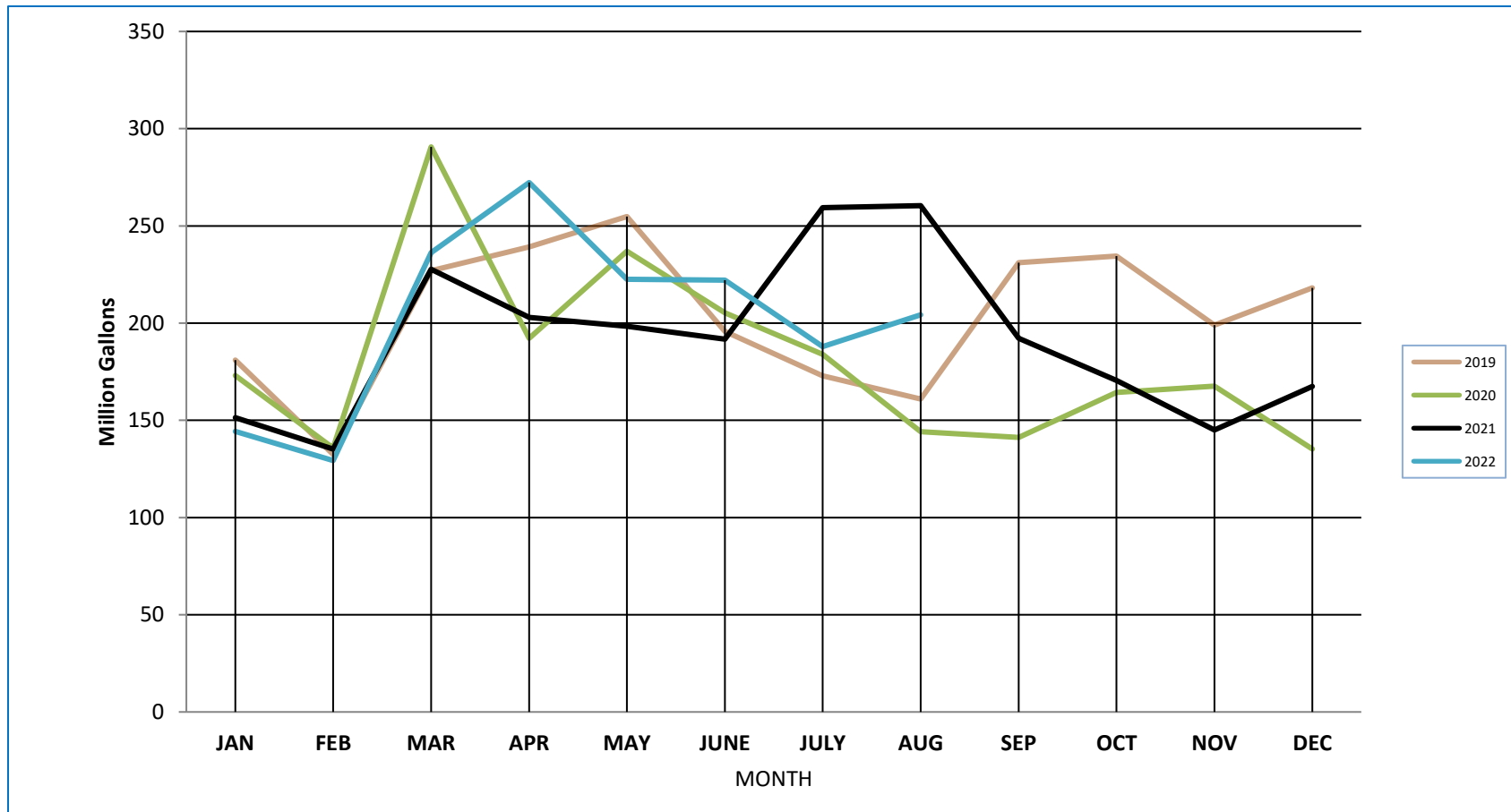


HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	<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	272.294	222.500	222.064	187.964	204.237				

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

MONTHLY FLOW VOLUMES



HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

% CONTRIBUTION BY COMMUNITY - FLOW GALLONS

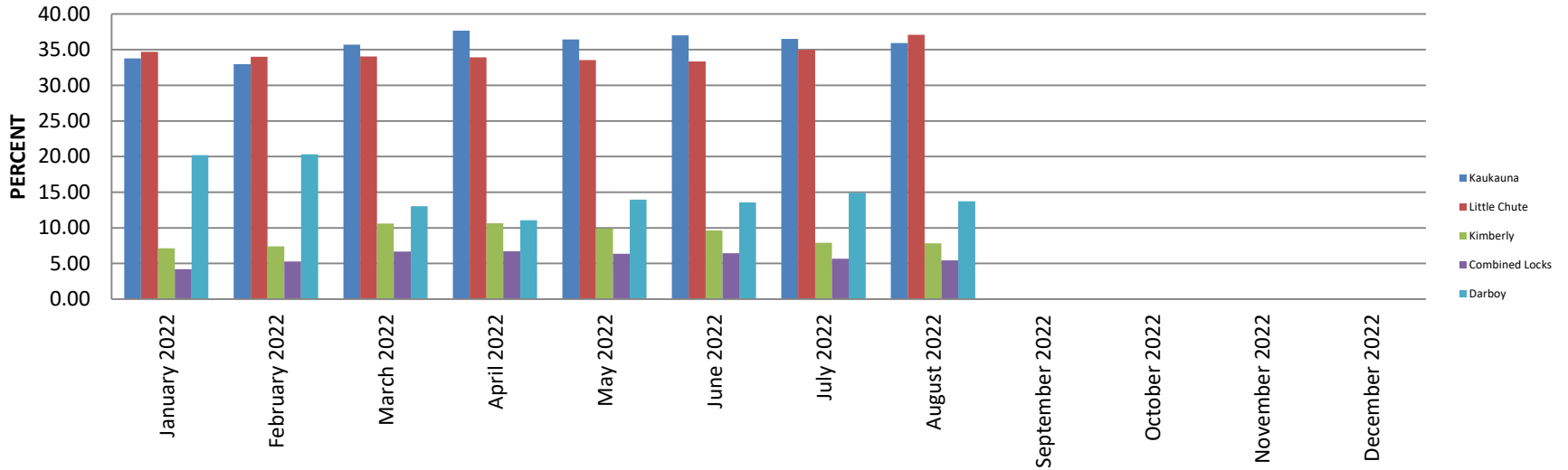
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches*</u>
January 2022	33.76	34.71	7.12	4.19	20.22	0.28
February 2022	32.97	34.01	7.39	5.30	20.32	0.50
March 2022	35.69	34.04	10.60	6.66	13.02	5.46
April 2022	37.67	33.91	10.65	6.71	11.06	2.87
May 2022	36.44	33.55	9.90	6.37	13.94	2.40
June 2022	36.99	33.34	9.65	6.43	13.58	
July 2022	36.50	34.98	7.89	5.69	14.94	2.55
August 2022	35.91	37.09	7.83	5.45	13.71	3.04
September 2022						
October 2022						
November 2022						
December 2022						

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

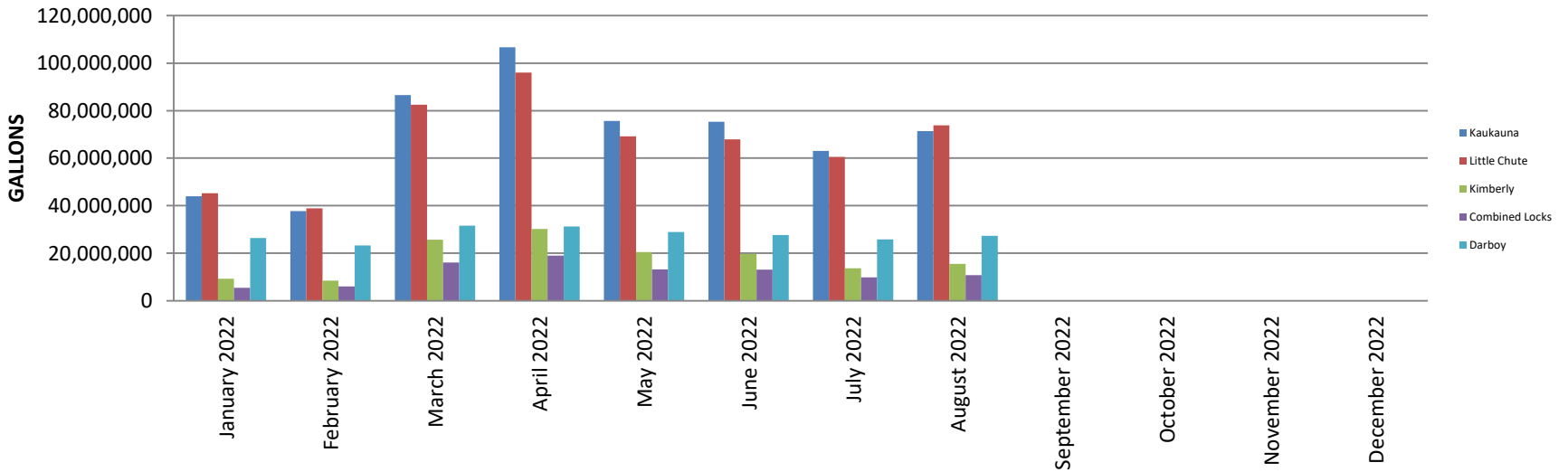
GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<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	106,667,000	96,022,000	30,170,000	19,012,000	31,306,000
May 2022	75,630,000	69,236,000	20,545,000	13,231,000	28,933,000
June 2022	75,367,000	67,925,000	19,659,000	13,102,000	27,670,000
July 2022	63,089,000	60,465,000	13,636,000	9,831,000	25,822,000
August 2022	71,426,000	73,777,000	15,578,000	10,834,000	27,277,000
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

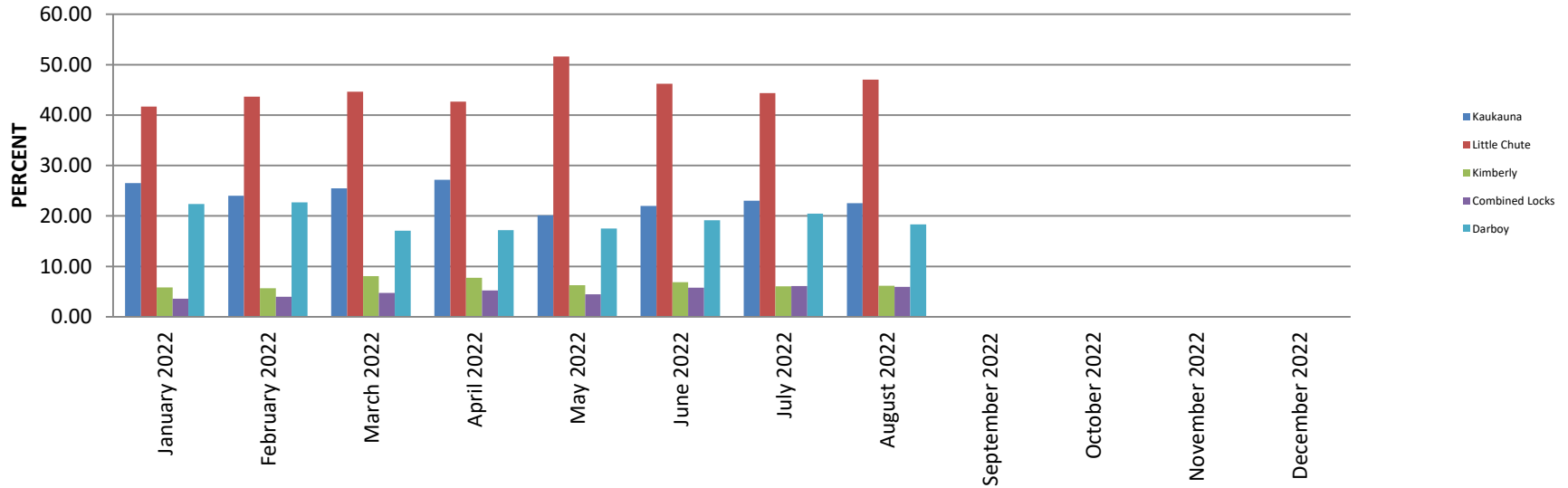
% CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<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	27.17	42.65	7.72	5.24	17.21
May 2022	20.15	51.59	6.29	4.45	17.53
June 2022	21.98	46.19	6.88	5.80	19.16
July 2022	23.00	44.37	6.07	6.08	20.48
August 2022	22.52	47.02	6.18	5.94	18.34
September 2022					
October 2022					
November 2022					
December 2022					

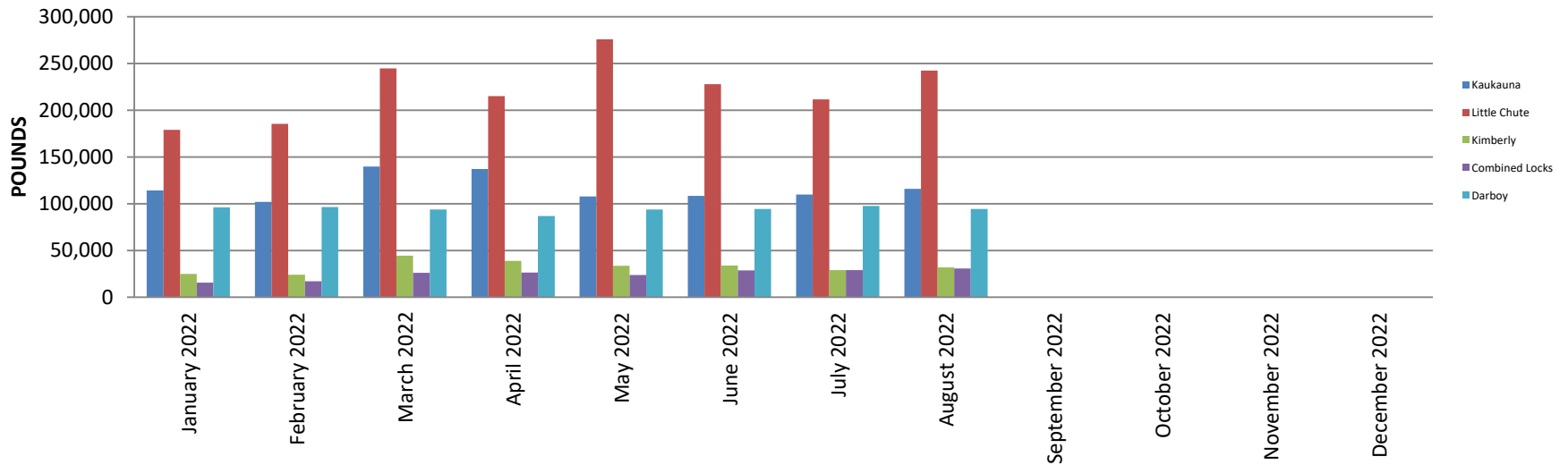
POUNDS CONTRIBUTION BY COMMUNITY - B.O.D. POUNDS

	<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	137,018	215,081	38,942	26,422	86,797
May 2022	107,680	275,717	33,642	23,772	93,674
June 2022	108,387	227,767	33,921	28,589	94,482
July 2022	109,768	211,702	28,942	29,009	97,729
August 2022	116,056	242,331	31,830	30,601	94,514
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

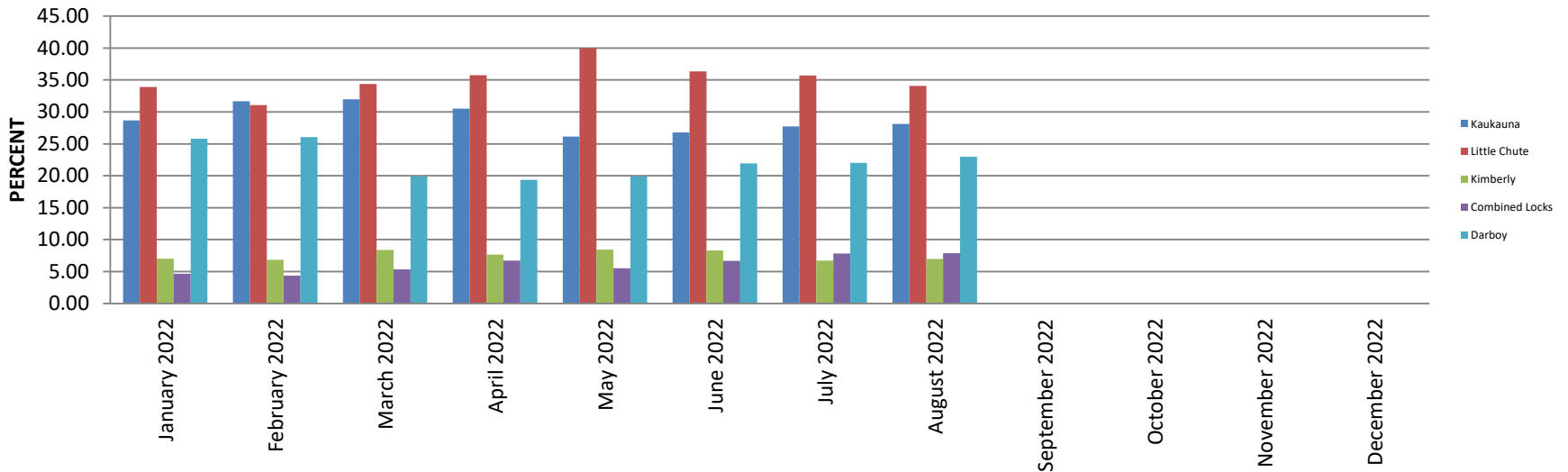
% CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<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	30.53	35.73	7.68	6.71	19.35
May 2022	26.13	40.00	8.43	5.50	19.94
June 2022	26.76	36.33	8.30	6.66	21.94
July 2022	27.74	35.69	6.72	7.82	22.03
August 2022	28.11	34.07	6.99	7.88	22.95
September 2022					
October 2022					
November 2022					
December 2022					

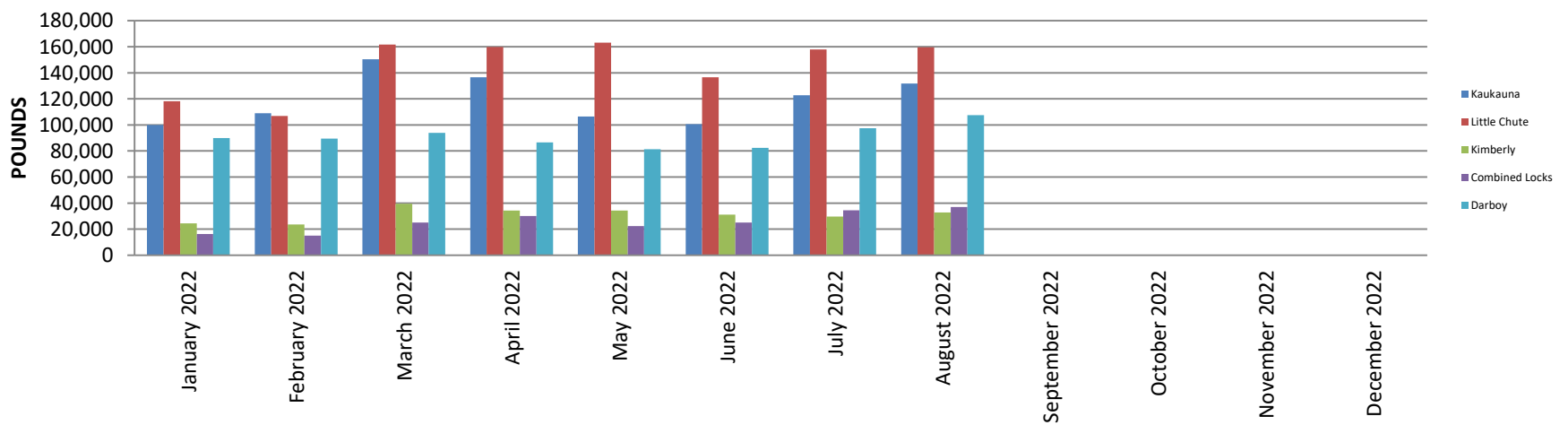
POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<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	136,587	159,842	34,368	30,012	86,546
May 2022	106,548	163,104	34,359	22,437	81,322
June 2022	100,566	136,525	31,202	25,010	82,447
July 2022	122,704	157,879	29,727	34,598	97,433
August 2022	131,706	159,640	32,776	36,932	107,534
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

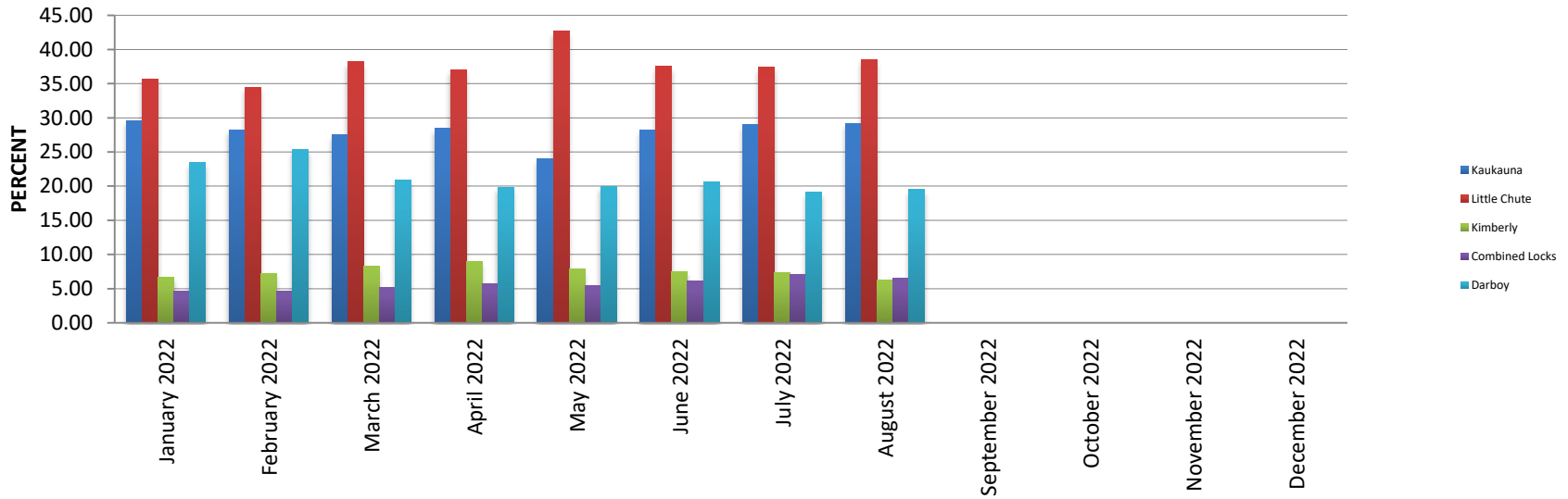
% CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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	28.42	37.06	8.93	5.74	19.85
May 2022	23.97	42.65	7.87	5.51	20.00
June 2022	28.25	37.51	7.52	6.06	20.66
July 2022	29.09	37.49	7.28	7.08	19.07
August 2022	29.18	38.51	6.23	6.59	19.49
September 2022					
October 2022					
November 2022					
December 2022					

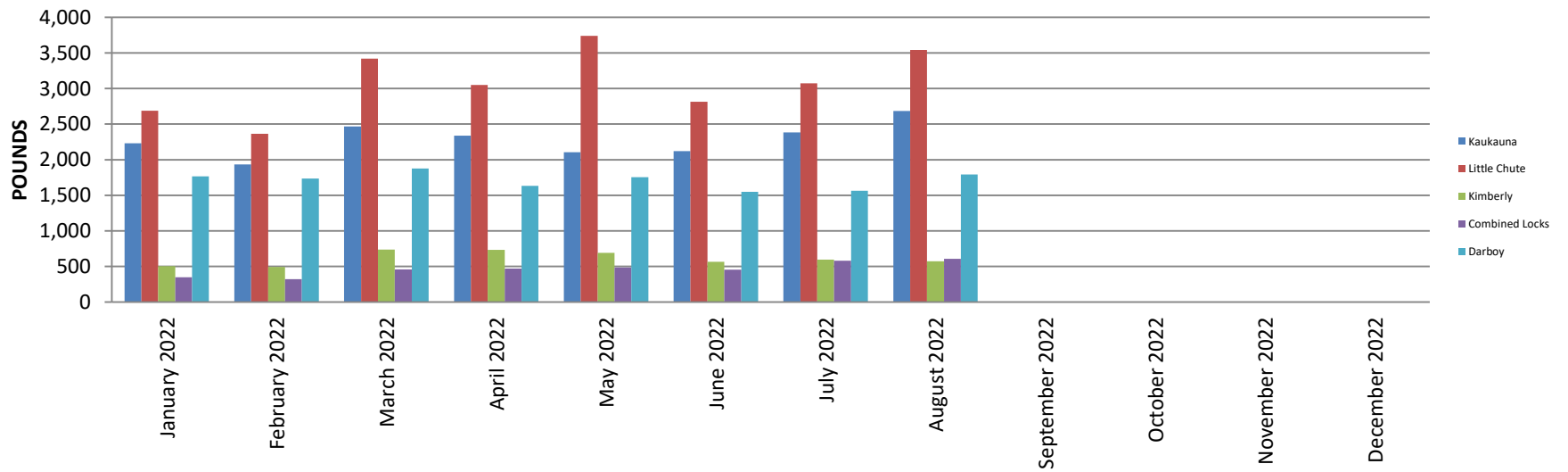
POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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	2,337	3,048	735	472	1,632
May 2022	2,103	3,741	690	484	1,754
June 2022	2,119	2,814	564	454	1,550
July 2022	2,384	3,073	597	580	1,564
August 2022	2,684	3,542	573	606	1,792
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

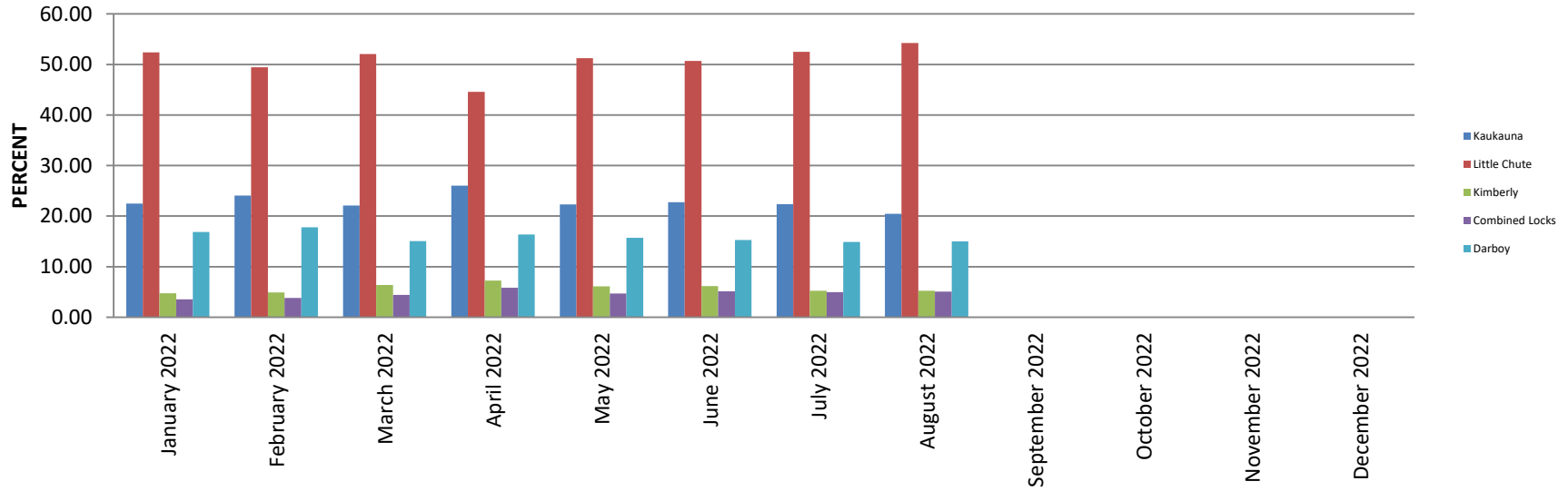
% CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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	26.00	44.56	7.26	5.85	16.34
May 2022	22.31	51.23	6.08	4.69	15.69
June 2022	22.75	50.67	6.17	5.14	15.27
July 2022	22.37	52.48	5.25	4.98	14.92
August 2022	20.46	54.26	5.22	5.08	14.98
September 2022					
October 2022					
November 2022					
December 2022					

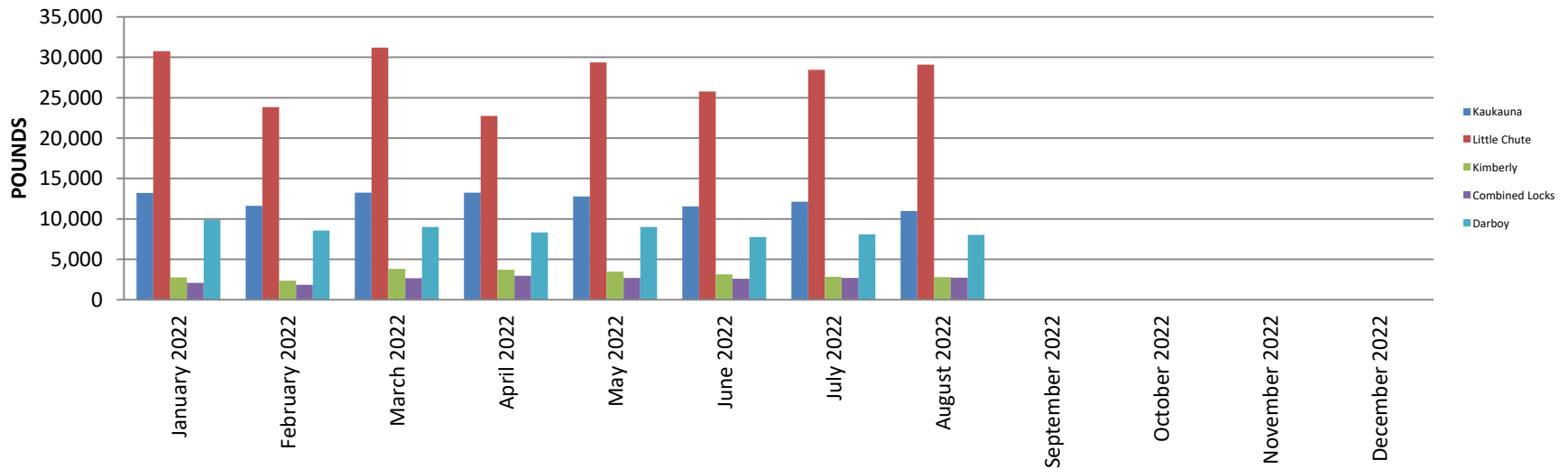
POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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	13,266	22,735	3,705	2,983	8,336
May 2022	12,788	29,365	3,483	2,689	8,996
June 2022	11,567	25,767	3,135	2,614	7,766
July 2022	12,132	28,465	2,846	2,699	8,094
August 2022	10,968	29,091	2,798	2,724	8,034
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

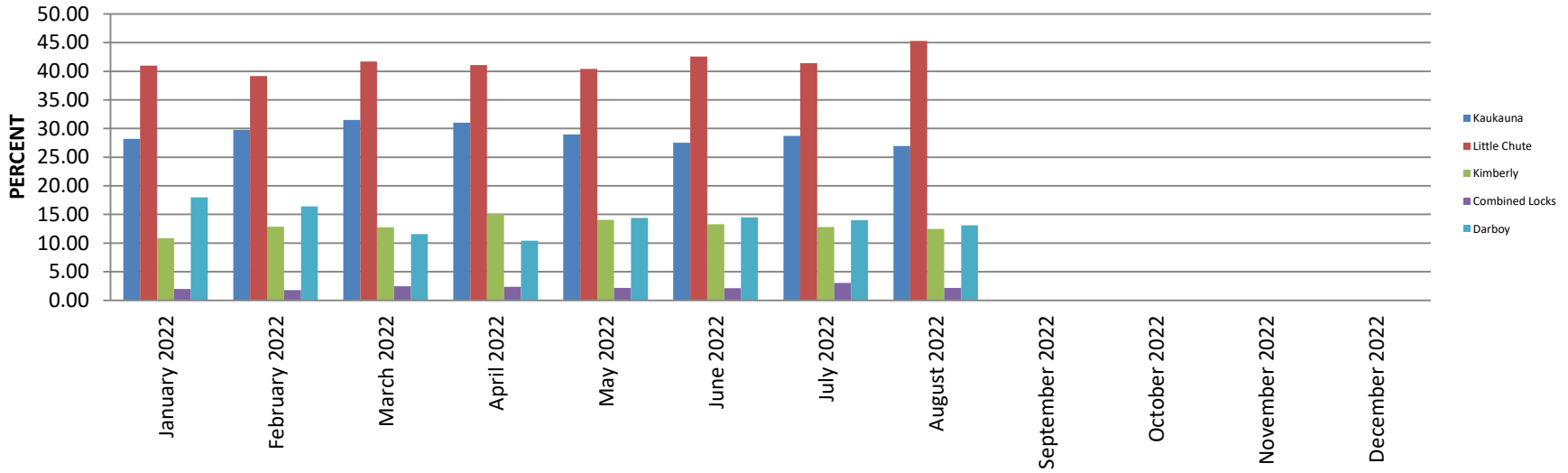
% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<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	31.04	41.08	15.10	2.38	10.40
May 2022	28.94	40.39	14.07	2.20	14.41
June 2022	27.50	42.58	13.31	2.13	14.48
July 2022	28.70	41.42	12.80	3.06	14.01
August 2022	26.93	45.31	12.50	2.17	13.09
September 2022					
October 2022					
November 2022					
December 2022					

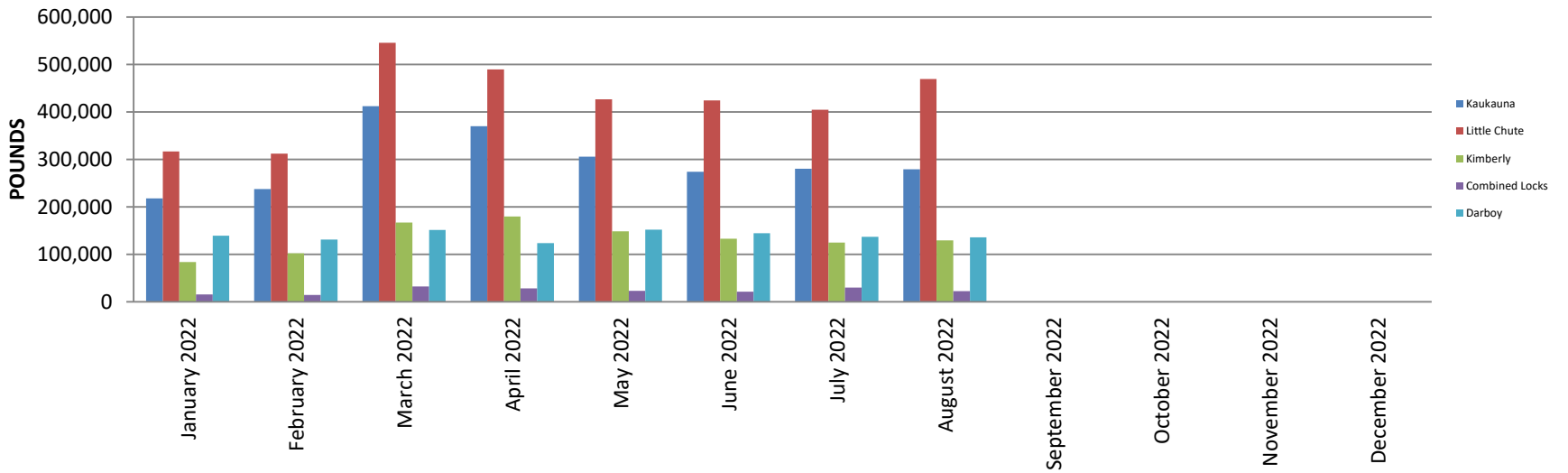
POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

	<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	370,037	489,639	180,041	28,374	123,942
May 2022	305,646	426,556	148,548	23,200	152,178
June 2022	274,172	424,560	132,759	21,222	144,435
July 2022	280,232	404,422	124,998	29,902	136,767
August 2022	279,094	469,650	129,530	22,542	135,671
September 2022					
October 2022					
November 2022					
December 2022					

% CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

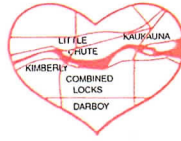


DISTRICT DIRECTOR:

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
 Bismarek, ND 58506

Attn: Account # N2310E

Month: August

Year: 2022

Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
8/1/2022	3,609,000	8/21/2022	3,149,000
8/2/2022	3,704,000	8/22/2022	3,454,000
8/3/2022	3,245,000	8/23/2022	3,586,000
8/4/2022	3,522,000	8/24/2022	3,485,000
8/5/2022	3,915,000	8/25/2022	3,110,000
8/6/2022	3,364,000	8/26/2022	3,383,000
8/7/2022	3,411,000	8/27/2022	3,185,000
8/8/2022	2,806,000	8/28/2022	3,293,000
8/9/2022	3,268,000	8/29/2022	3,237,000
8/10/2022	2,061,000	8/30/2022	3,407,000
8/11/2022	3,098,000	8/31/2022	3,635,000
8/12/2022	3,973,000		
8/13/2022	3,539,000		
8/14/2022	2,892,000	Total:	103,821,000
8/15/2022	3,405,000		
8/16/2022	3,456,000		
8/17/2022	3,455,000		
8/18/2022	3,442,000		
8/19/2022	3,406,000		
8/20/2022	3,326,000		

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

Attn: Account # N2310E

MONTHLY BILLING

Month: August

Year: 2022

GALLONS PURCHASED: 103,821,000

BILLING RATE: \$0.1635645 PER 1000 GALLONS

TOTAL AMOUNT DUE: \$16,981.43

**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: 688,935,000

Charge Per 1000 Gallons: **\$0.1635645** Per 1000 Gallons

Sale of Final Effluent (Revenue Collected): \$112,685.31