

## FLOW AND STRENGTH PROJECTIONS

MONTH: June 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)	201,431,000	203,723,000	2,292,000	\$ 153,691.85	\$ 155,440.65	\$ 1,748.80
B.O.D. (#s)	408,585	493,146	84,561	\$ 78,856.91	\$ 95,177.18	\$ 16,320.27
S. SOLIDS (#s)	372,811	375,750	2,939	\$ 94,693.99	\$ 95,440.50	\$ 746.51
PHOSPHORUS (#s)	7,377	7,502	125	\$ 49,366.88	\$ 50,203.38	\$ 836.50
AMMONIA-N (#s)	49,156	50,849	1,693	\$ 61,297.53	\$ 63,408.70	\$ 2,111.17
CHLORIDES (#s)	920,940	997,148	76,208	\$ 3,683.76	\$ 3,988.59	\$ 304.83
			<b>TOTAL:</b>	\$ 441,590.93	\$ 463,659.01	\$ 22,068.08

(THRU JUNE 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	-76,872,000	\$ (58,653.34)
B.O.D. (#s)	3,755,281	345,550	\$ 66,691.13
S. SOLIDS (#s)	3,909,560	32,436	\$ 8,238.86
PHOSPHORUS (#s)	80,410	2,749	\$ 18,399.25
AMMONIA-N (#s)	505,265	19,663	\$ 24,519.59
CHLORIDES (#s)	8,748,079	430,740	\$ 1,722.96
		<b>TOTAL:</b>	\$ 60,918.45

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

**June 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																	
Aug																	
Sep																	
Oct																	
Nov																	
Dec																	
<b>Average</b>	204.4	6.8	207	10,817	324,528	281	14,553	439,178	5.07	260	7,839	36.1	1,833	55,638	682	35,652	1,077,223
<b>Yearly Total</b>	1,226.7				1,947,166			2,635,065			47,036			333,828			6,463,339

\*Includes Hauled Waste  
 [Plant Design Capacity] = 8.5  
 [Hauled Waste Gallons]= 233,470  
 [Max Design Capacity] = 11.9  
 June % of Capacity = 62%  
 June Max Daily Flow = 9.79

	13,565	12,209	339	1,600
	16,278	14,651	407	1,920
	69%	102%	69%	97%

**EFFLUENT QUALITY**

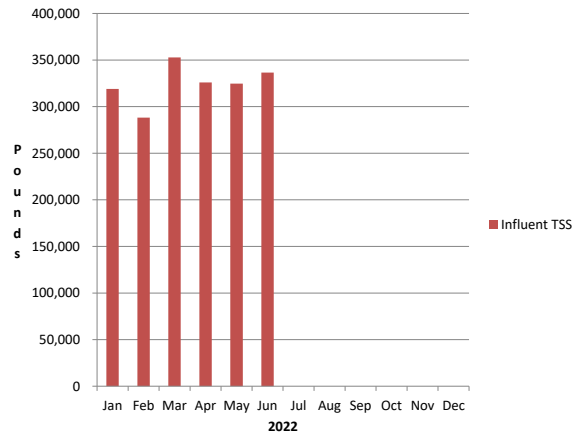
MONTH	FLOW		TSS			BOD			TOTAL PHOSPHORUS			AMMONIA			CHLORIDE
	Million Gallons	Avg MGD	Avg mg/L	Avg #/day	Total #/Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L	Avg #/day	Total # Month	Avg mg/L
Jan	61.6	2.0	12.8	212	6,561	10.5	173	5,364	0.34	5.6	173	0.46	8.0	249	746
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															
Aug															
Sep															
Oct															
Nov															
Dec															
<b>Average</b>	124.5	4.1	14.7	492	14,665	11.4	419.9	12,766	0.28	9.5	289.2	0.75	28.6	815.0	679
<b>Yearly Total</b>	746.7				87,992			76,596			1,735			4,890.1	

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

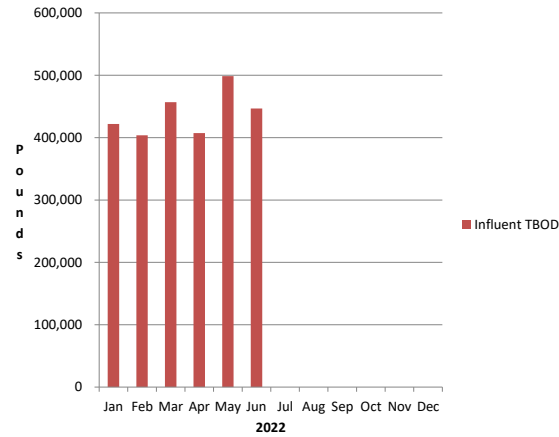
Effluent Gallons to Fox Energy  
 (June)  
 Million Gallons % to Fox Energy  
 99.37 45%

June	Avg #'s	6 mo. Avg #'s	7.83	May-Oct
WEEK 1	289			
WEEK 2	295			
WEEK 3	225			
WEEK 4	192			

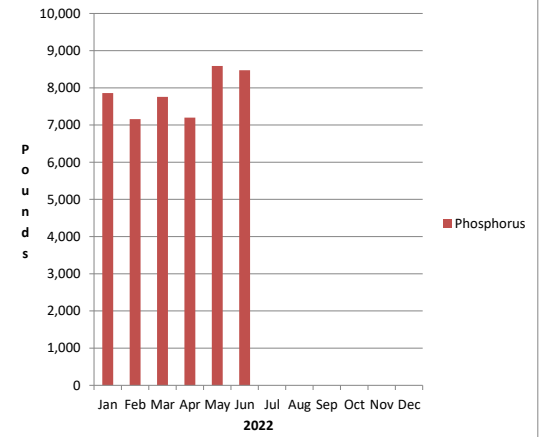
**Influent TSS Total Pounds/Mo.**



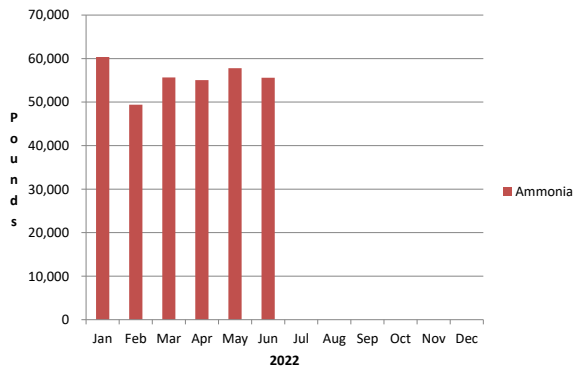
**Influent BOD Total Pounds / Mo.**



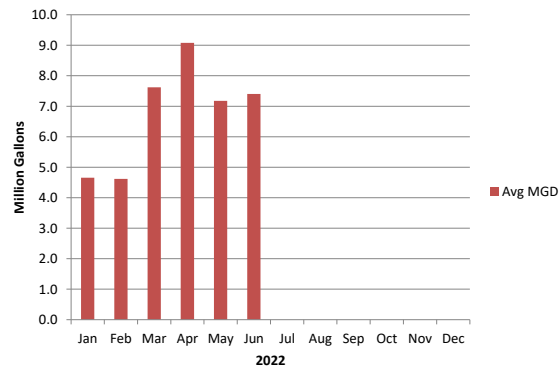
**Influent Phosphorus Total Pounds/Mo.**



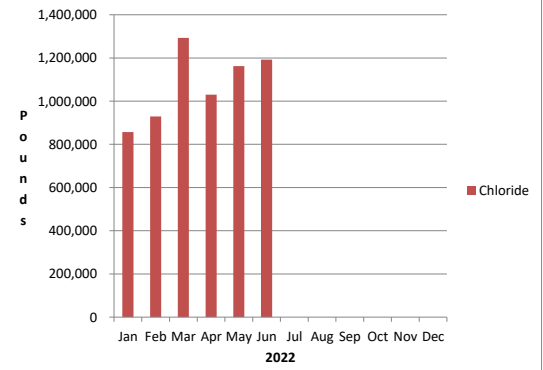
**Influent Ammonia Total Pounds/Mo.**



**Avg Influent MGD/Mo.**



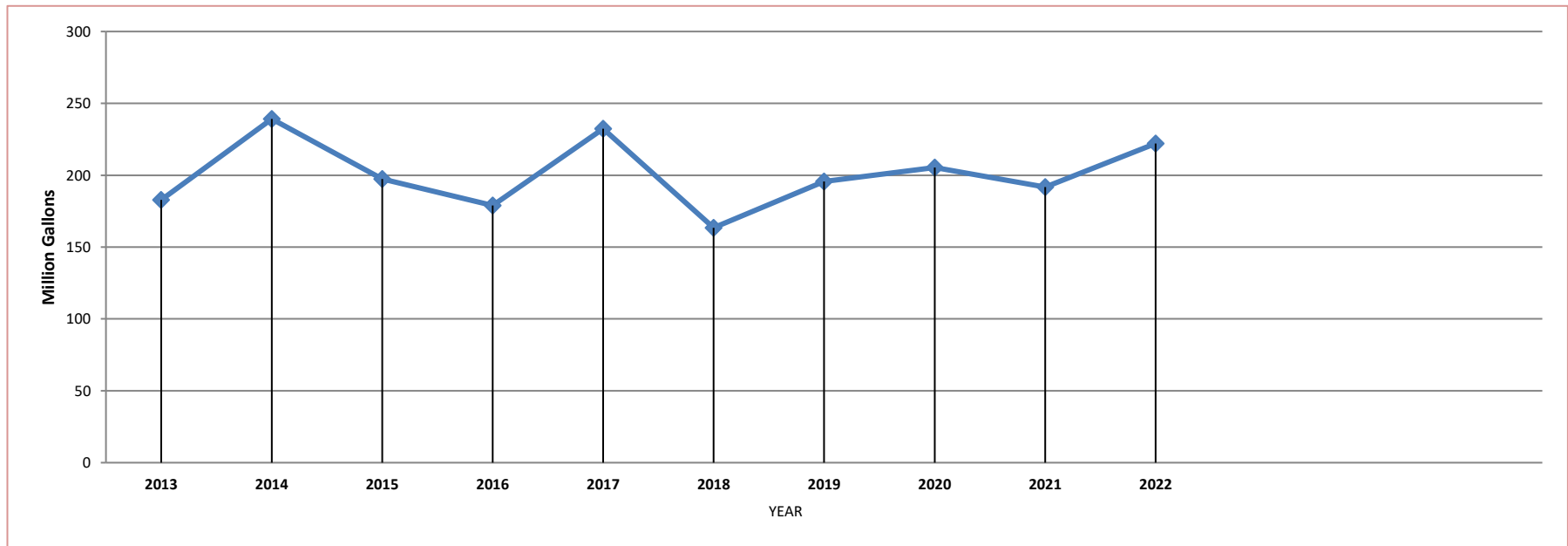
**Influent Chloride Total Pounds/Mo.**



# HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

<u>Year</u>	<u>June Flow Million Gallons</u>	<u>Precipitation Inches</u>
2013	182.739	2.27
2014	239.160	5.92
2015	197.337	4.59
2016	178.887	5.19
2017	232.395	6.37
2018	163.461	3.65
2019	195.654	3.99
2020	205.368	3.82
2021	191.728	4.94
2022	222.064	

## JUNE FLOW VOLUMES

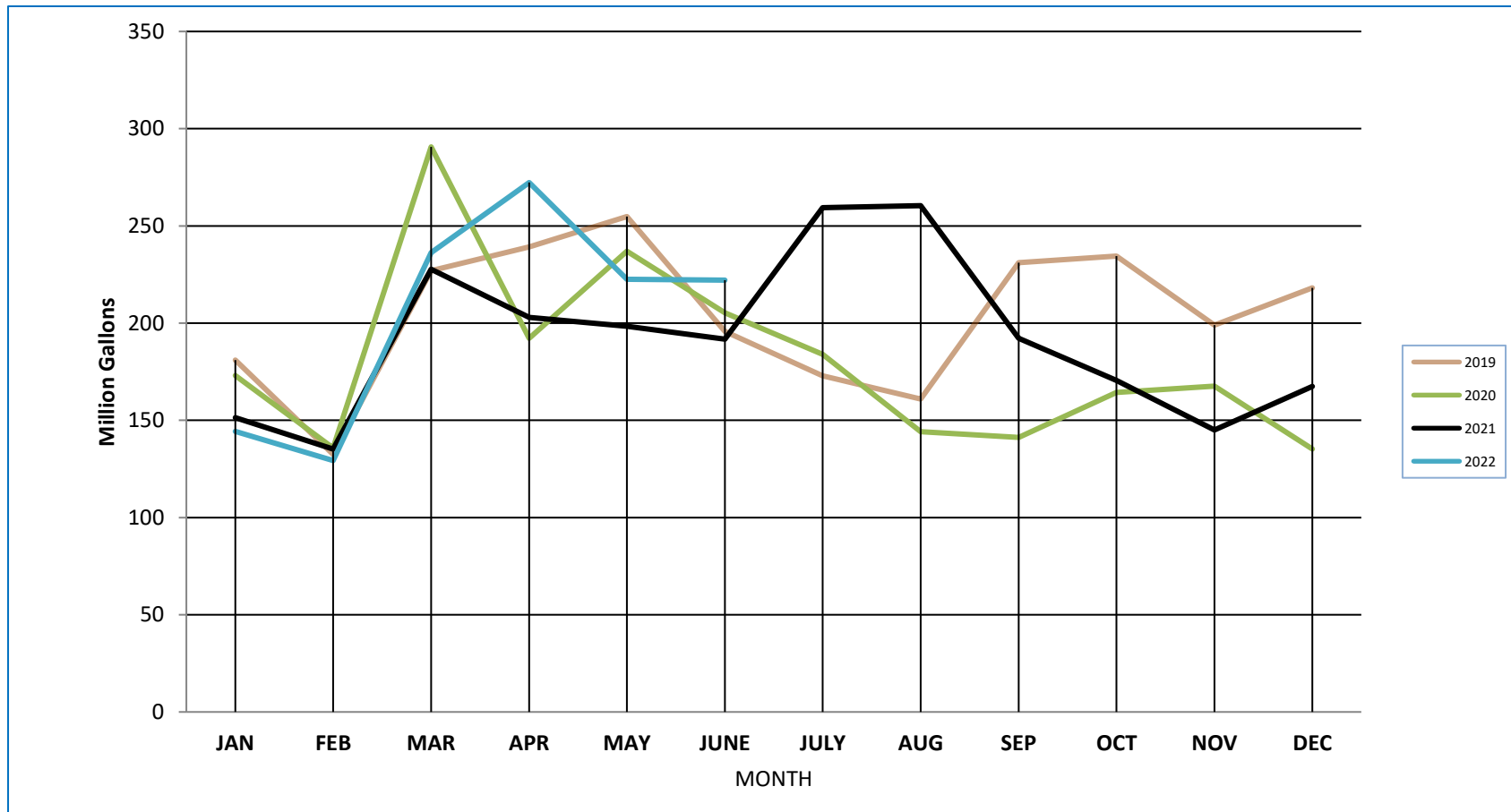


# HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

	<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>
<b>2019</b>	181.037	132.459	226.921	239.147	254.810	195.654	172.916	160.932	231.033	234.439	199.024	218.097
<b>2020</b>	172.999	135.703	290.643	192.150	236.946	205.368	184.011	144.085	141.266	164.399	167.558	135.257
<b>2021</b>	151.398	135.210	227.688	202.920	198.367	191.728	259.337	260.418	192.127	170.491	145.014	167.477
<b>2022</b>	144.333	129.312	236.184	272.294	222.500	222.064						

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

## MONTHLY FLOW VOLUMES



# HEART OF THE VALLEY METROPOLITAN SEWERAGE DISTRICT

## % CONTRIBUTION BY COMMUNITY - FLOW GALLONS

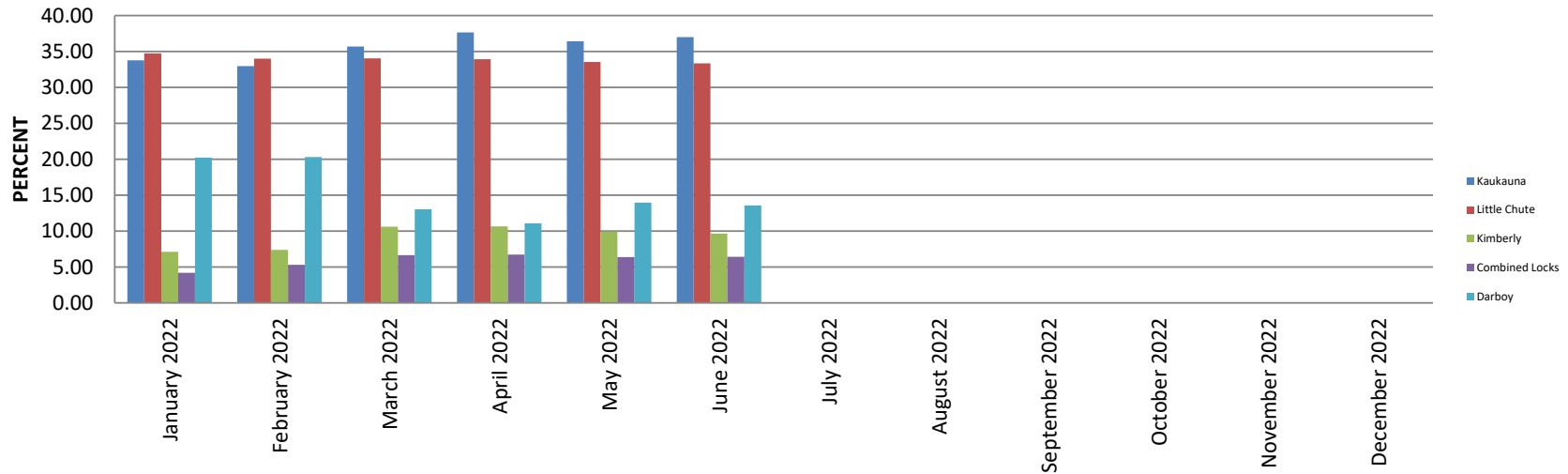
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>	<u>Rainfall - Inches*</u>
January 2022	33.76	34.71	7.12	4.19	20.22	0.28
February 2022	32.97	34.01	7.39	5.30	20.32	0.50
March 2022	35.69	34.04	10.60	6.66	13.02	5.46
April 2022	37.67	33.91	10.65	6.71	11.06	2.87
May 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						
August 2022						
September 2022						
October 2022						
November 2022						
December 2022						

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

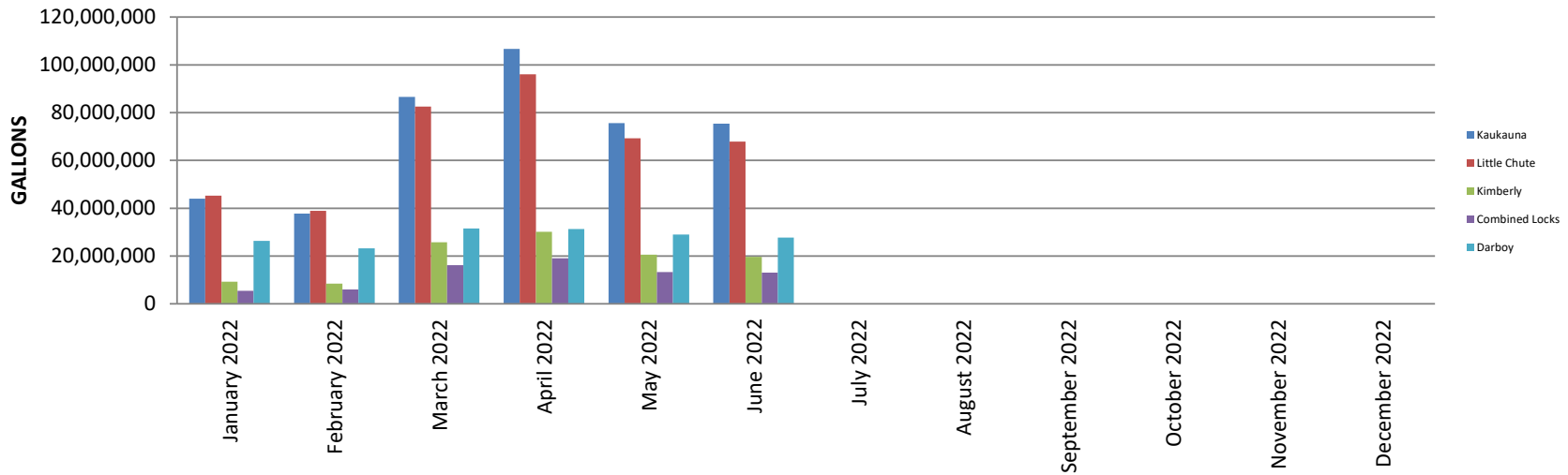
## GALLONS CONTRIBUTION BY COMMUNITY - FLOW GALLONS

	<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	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					
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

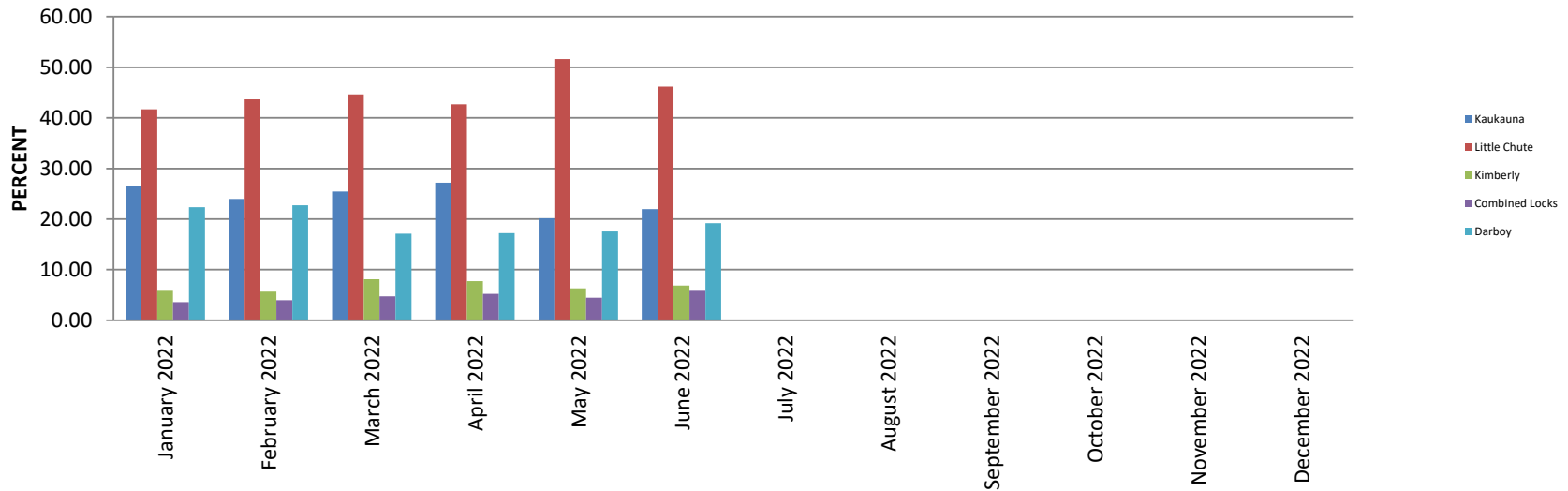
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	26.54	41.67	5.82	3.61	22.35
February 2022	23.98	43.65	5.68	3.99	22.71
March 2022	25.47	44.62	8.09	4.73	17.09
April 2022	27.17	42.65	7.72	5.24	17.21
May 2022	20.15	51.59	6.29	4.45	17.53
June 2022	21.98	46.19	6.88	5.80	19.16
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

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

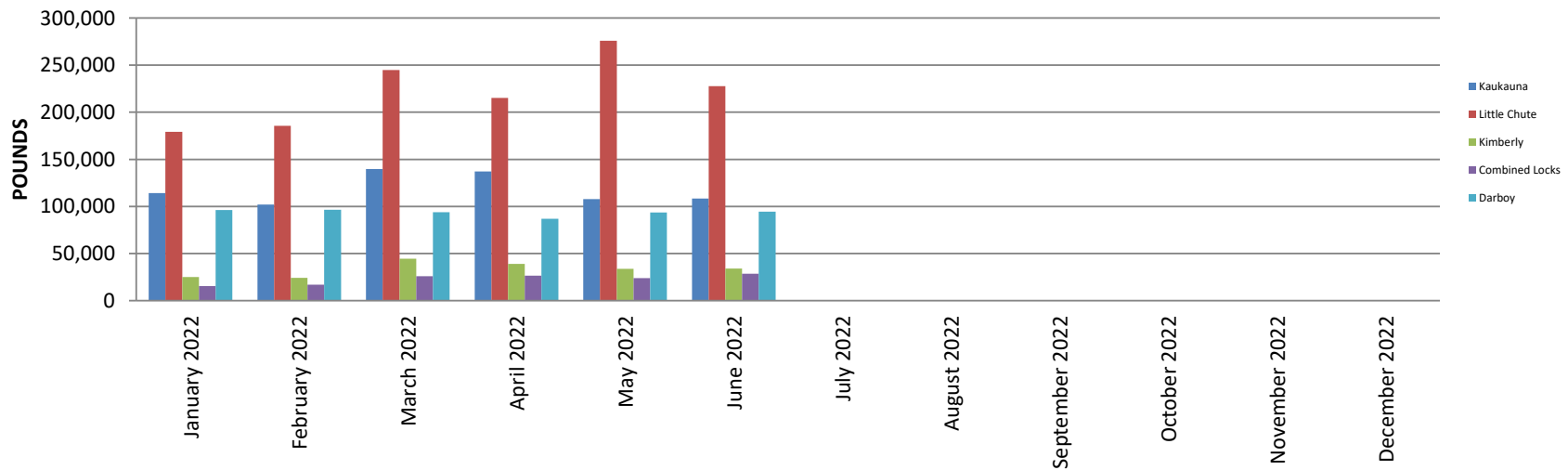
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	114,049	179,088	25,032	15,529	96,075
February 2022	101,875	185,458	24,145	16,935	96,501
March 2022	139,657	244,645	44,368	25,938	93,728
April 2022	137,018	215,081	38,942	26,422	86,797
May 2022	107,680	275,717	33,642	23,772	93,674
June 2022	108,387	227,767	33,921	28,589	94,482
July 2022					
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

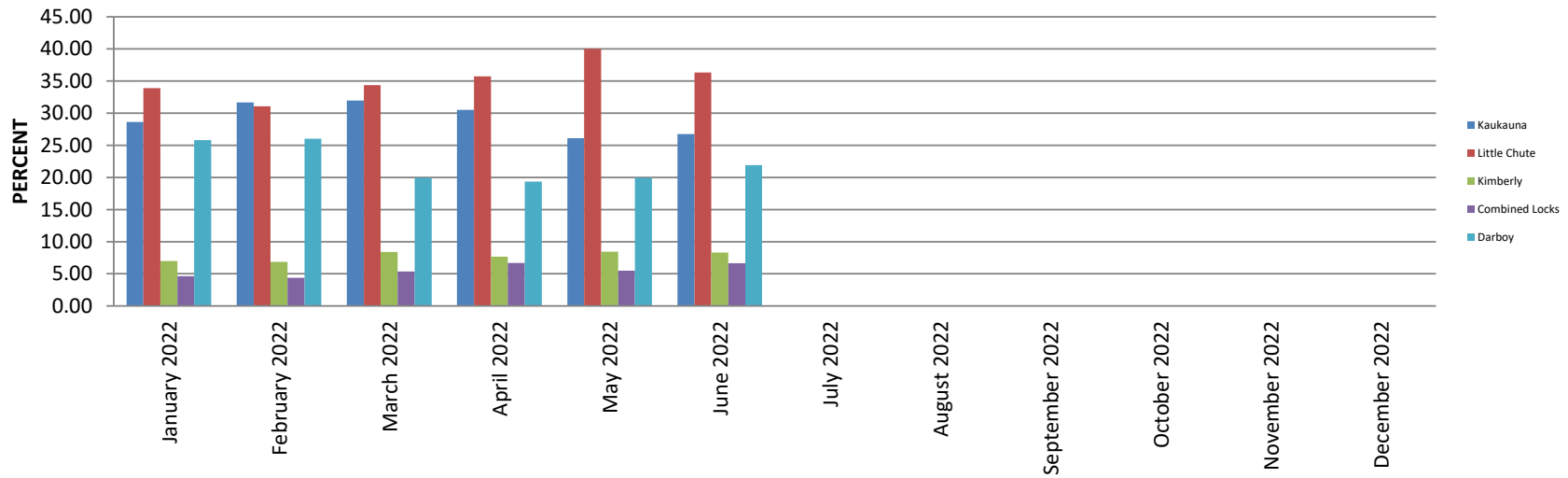
## % CONTRIBUTION BY COMMUNITY -TOTAL SUSPENDED SOLIDS POUNDS

	<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	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					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

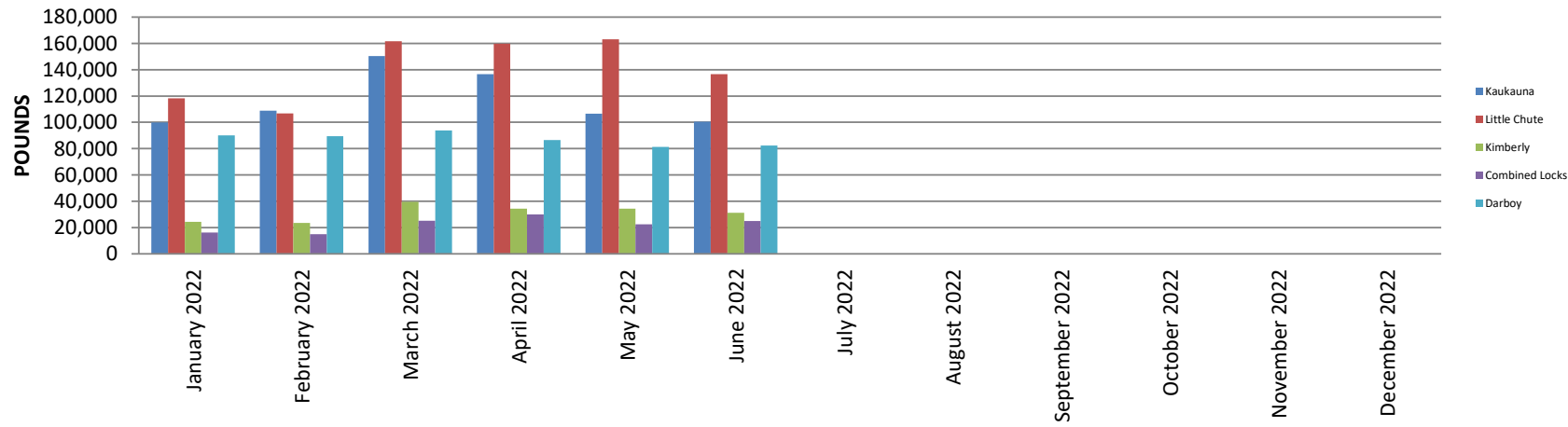
## POUNDS CONTRIBUTION BY COMMUNITY - TOTAL SUSPENDED SOLIDS POUNDS

	<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	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					
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

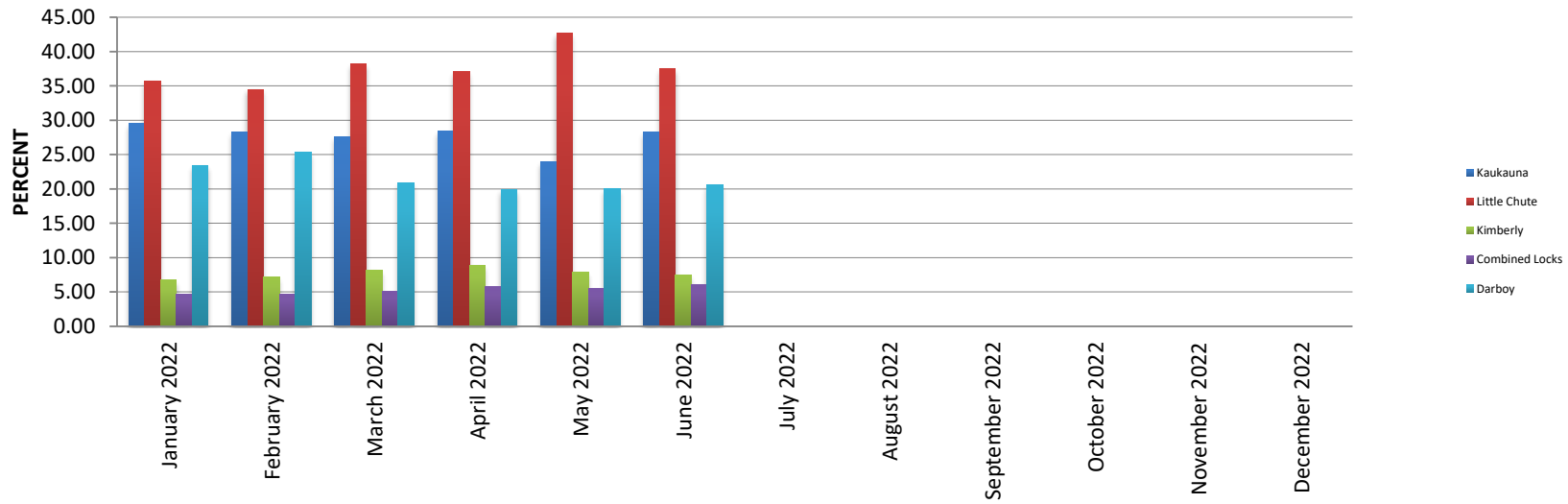
## % CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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	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					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

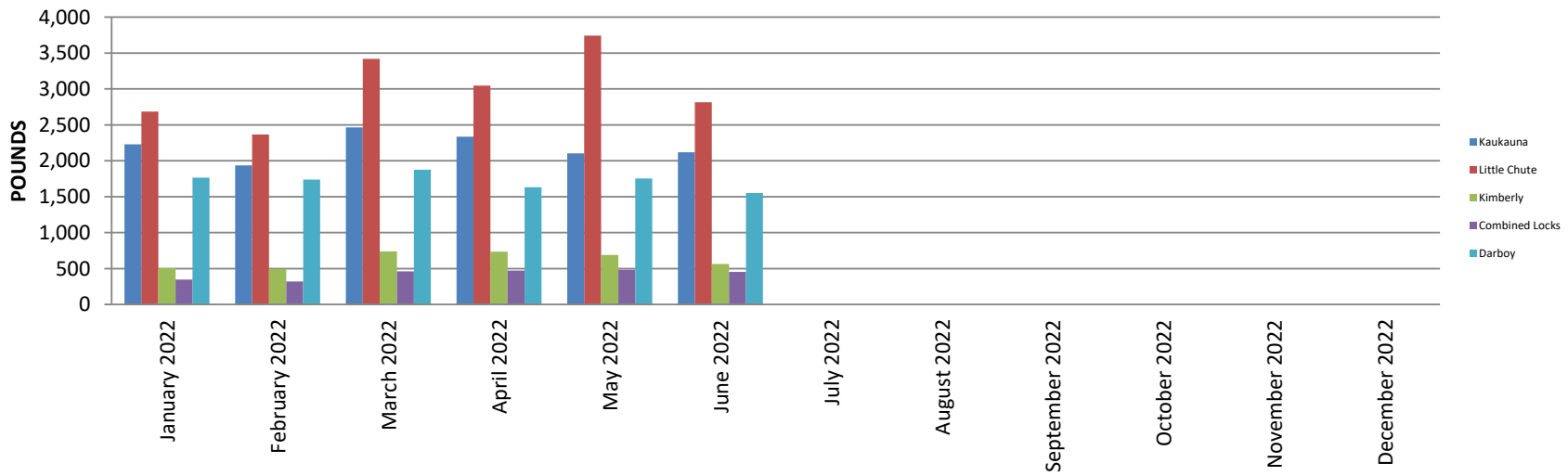
## POUNDS CONTRIBUTION BY COMMUNITY - PHOSPHORUS POUNDS

	<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	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					
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

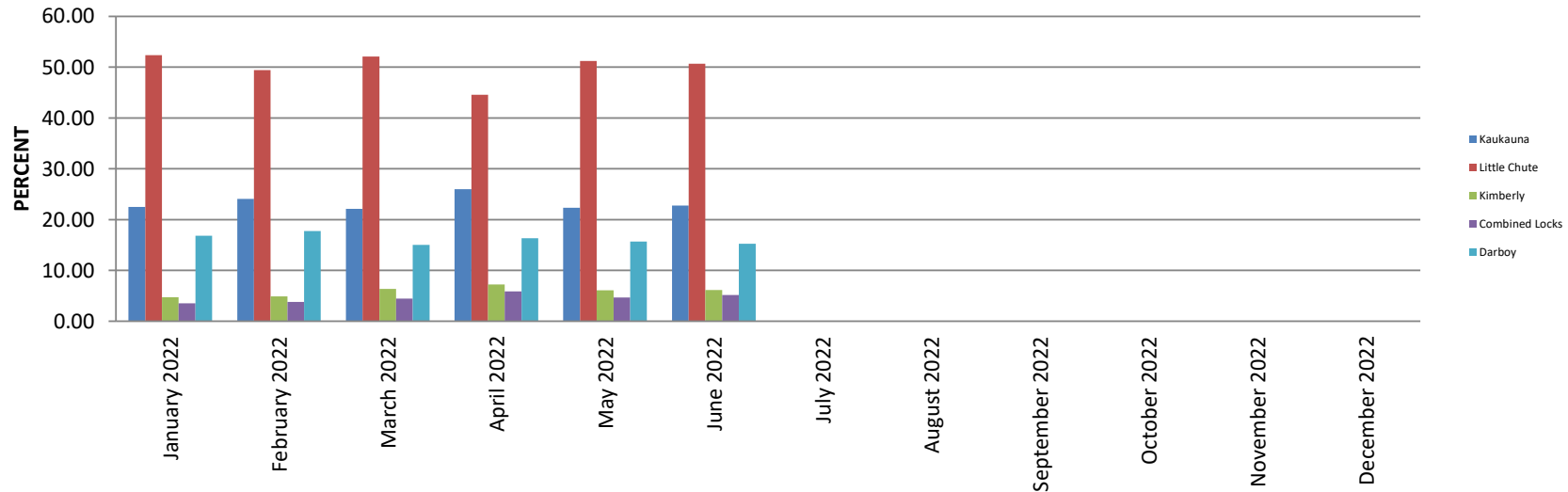
## % CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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	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					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

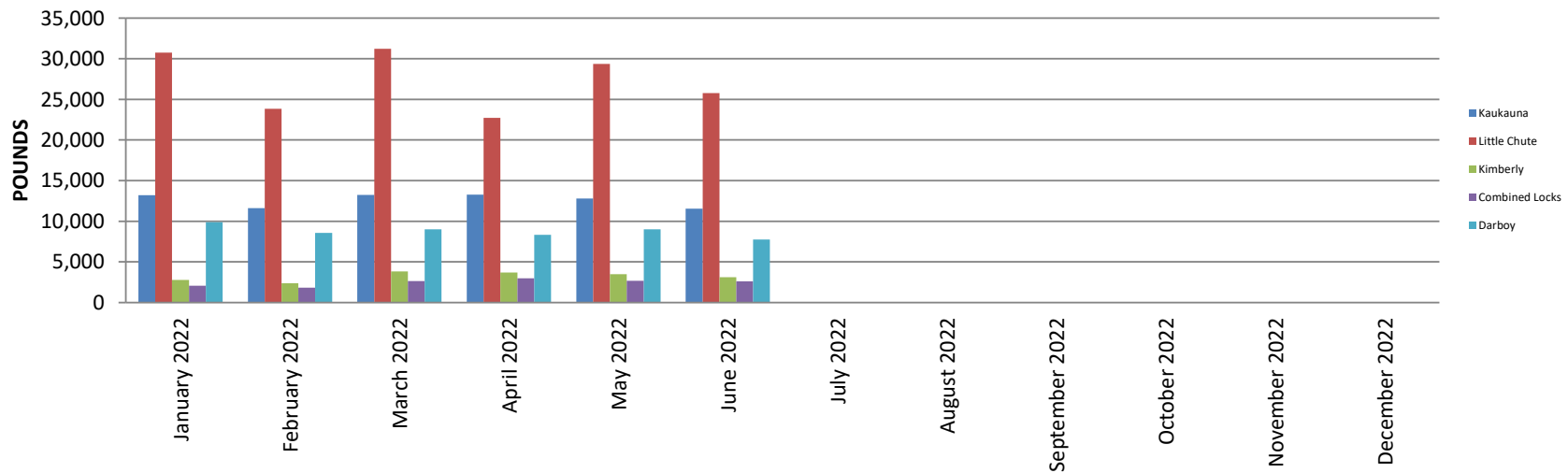
## POUNDS CONTRIBUTION BY COMMUNITY - AMMONIA POUNDS

	<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	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					
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**

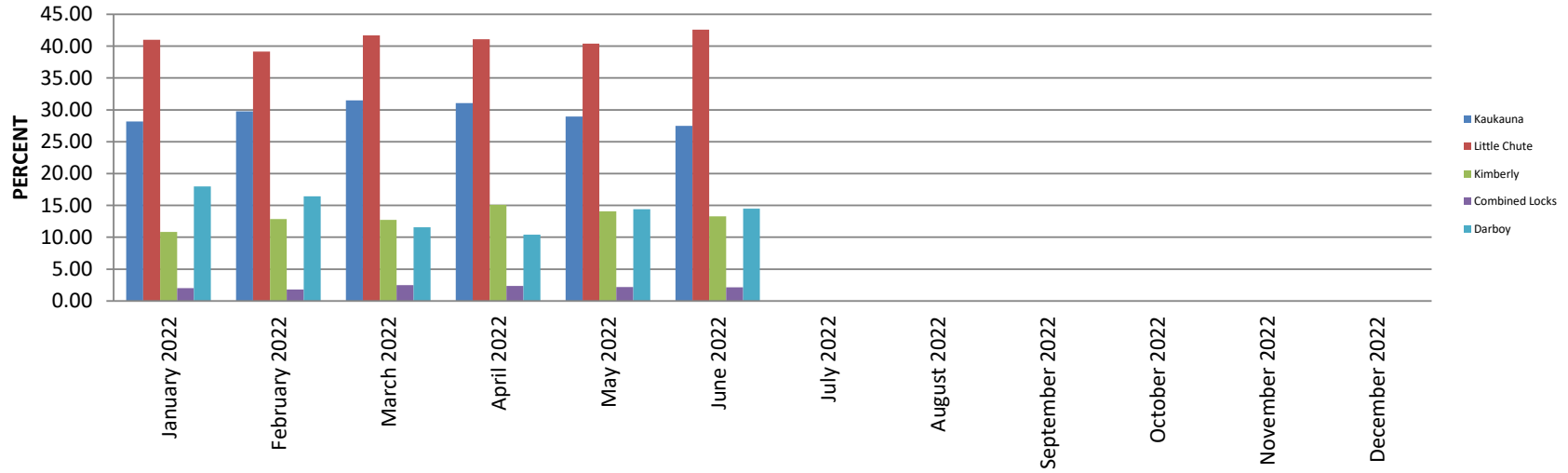
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	28.19	40.98	10.85	2.00	17.98
February 2022	29.77	39.14	12.86	1.82	16.42
March 2022	31.49	41.70	12.75	2.49	11.57
April 2022	31.04	41.08	15.10	2.38	10.40
May 2022	28.94	40.39	14.07	2.20	14.41
June 2022	27.50	42.58	13.31	2.13	14.48
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					

**POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS**

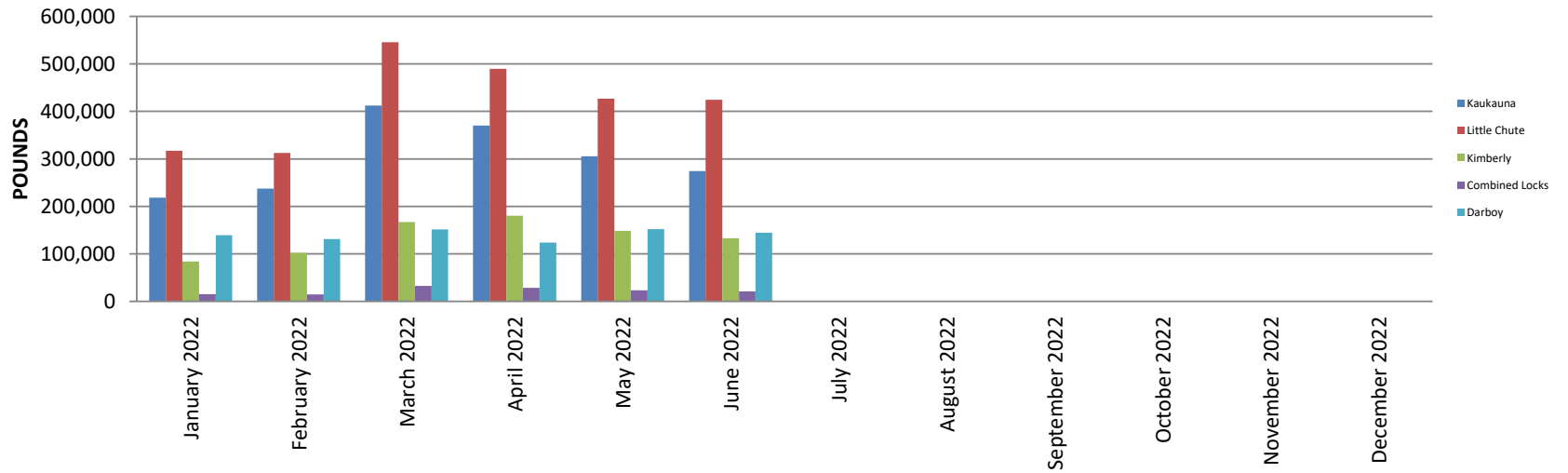
	<u>Kaukauna</u>	<u>Little Chute</u>	<u>Kimberly</u>	<u>Combined Locks</u>	<u>Darboy</u>
January 2022	218,136	317,040	83,950	15,473	139,137
February 2022	237,466	312,154	102,539	14,529	130,931
March 2022	412,002	545,722	166,848	32,583	151,392
April 2022	370,037	489,639	180,041	28,374	123,942
May 2022	305,646	426,556	148,548	23,200	152,178
June 2022	274,172	424,560	132,759	21,222	144,435
July 2022					
August 2022					
September 2022					
October 2022					
November 2022					
December 2022					



### % CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS

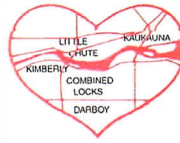


### POUNDS CONTRIBUTION BY COMMUNITY - CHLORIDE POUNDS



**DISTRICT DIRECTOR:**

Brian M. Heimlinger

**COMMISSIONERS:**

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

**SERVING:**

Combined Locks  
 Kaukauna  
 Kimberly  
 Little Chute  
 Darbo 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:** June

**Year:** 2022

## Gallons of Final Effluent Purchased (Billing)

<u>Date</u>	<u>Gallons</u>	<u>Date</u>	<u>Gallons</u>
6/1/2022	3,672,000	6/21/2022	3,974,000
6/2/2022	3,405,000	6/22/2022	3,783,000
6/3/2022	2,635,000	6/23/2022	3,669,000
6/4/2022	3,006,000	6/24/2022	3,873,000
6/5/2022	2,872,000	6/25/2022	3,171,000
6/6/2022	2,853,000	6/26/2022	2,863,000
6/7/2022	3,234,000	6/27/2022	2,973,000
6/8/2022	3,381,000	6/28/2022	4,087,000
6/9/2022	3,591,000	6/29/2022	3,672,000
6/10/2022	3,456,000	6/30/2022	3,507,000
6/11/2022	3,226,000		
6/12/2022	3,024,000		
6/13/2022	3,069,000		
6/14/2022	3,238,000		
6/15/2022	3,167,000		
6/16/2022	3,154,000		
6/17/2022	3,416,000		
6/18/2022	3,013,000		
6/19/2022	2,647,000		
6/20/2022	3,740,000		
		<b>Total:</b>	<b>99,371,000</b>

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

**Attn:** Account # N2310E

## **MONTHLY BILLING**

**Month:** June

**Year:** 2022

**GALLONS PURCHASED:** 99,371,000

**BILLING RATE:** \$0.1635645 PER 1000 GALLONS

**TOTAL AMOUNT DUE: \$16,253.57**

**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: 479,959,000**

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

**Sale of Final Effluent (Revenue Collected): \$78,504.25**

YR	Yearly Average Strength PPM		Locks	
	BOD	NH3-N	TP	
2011	286.5	30.6	7.5	
2012	295.3	28.5	7.6	
2013	249.8	28.5	6.6	
2014	252.1	32	6.1	
2015	273.9	34.5	6.4	
2016	238.1	34.8	6	
2017	272.4	32.6	6.3	
2018	252.9	32.5	5.8	
2019	243.1	26.8	4.9	
2020	296.4	32.1	6.1	
2021	270.7	34.4	5.8	
2022	256.1	29.3	5	

Custmr_ID	Site_ID	StrtDte	BOD	NH3-N	TP
PLT	MS-#4	1/2/2011	228	22.666	6.846
PLT	MS-#4	1/4/2011	191	21.864	5.406
PLT	MS-#4	1/6/2011	232	24.997	6.399
PLT	MS-#4	1/9/2011	259	31.682	9.027
PLT	MS-#4	1/11/2011	241	28.782	7.265
PLT	MS-#4	1/13/2011	176	28.329	7.772
PLT	MS-#4	1/16/2011	223	27.691	7.222
PLT	MS-#4	1/18/2011	228	29.168	7.038
PLT	MS-#4	1/20/2011	220	31.373	6.786
PLT	MS-#4	1/25/2011	528	24.992	20.636
PLT	MS-#4	1/27/2011	293	33.239	9.467
PLT	MS-#4	1/30/2011	379	31.027	10.365
PLT	MS-#4	2/1/2011	497	35.011	10.272
PLT	MS-#4	2/3/2011	320	32.239	9.364
PLT	MS-#4	2/6/2011	382	32.691	10.758
PLT	MS-#4	2/8/2011	336	28.54	7.527
PLT	MS-#4	2/10/2011	290	28.239	6.963
PLT	MS-#4	2/13/2011	357	29.986	8.659