

Eastern Service Area Hydraulic Loading

	<u>Influent Flows (MGD)</u>					<u>Rainfall (in)</u>
	2014	2015	2016	2017	2018	2018
January	27.30	24.62	22.42	20.28	19.80	3.16
February	37.77	23.02	26.46	18.62	25.84	5.71
March	30.54	31.17	23.72	21.27	29.08	4.41
April	31.15	25.11	21.49	22.70	25.57	4.18
May	33.81	24.72	23.69	22.55	25.01	5.07
June	25.01	23.84	20.33	19.41	23.75	3.47
July	21.86	22.23	19.07	18.93	19.96	3.47
August	19.46	18.46	18.27	18.66	22.02	5.23
September	18.83	18.46	19.07	17.74	26.25	5.95
October	18.86	20.38	19.39	17.83	23.34	3.61
November	20.62	20.59	19.61	17.62	33.20	8.91
December	21.91	22.22	22.03	17.46	35.34	6.17
Average	25.59	22.90	21.30	19.42	25.76	
5-Year Average					23.0	
Highest						
3-Month	33.15	27.00	24.20	22.17	30.63	
Average						
3-Month						
Max Ratio	1.295	1.179	1.136	1.142	1.189	
5-Year Average Max Ratio					1.188	

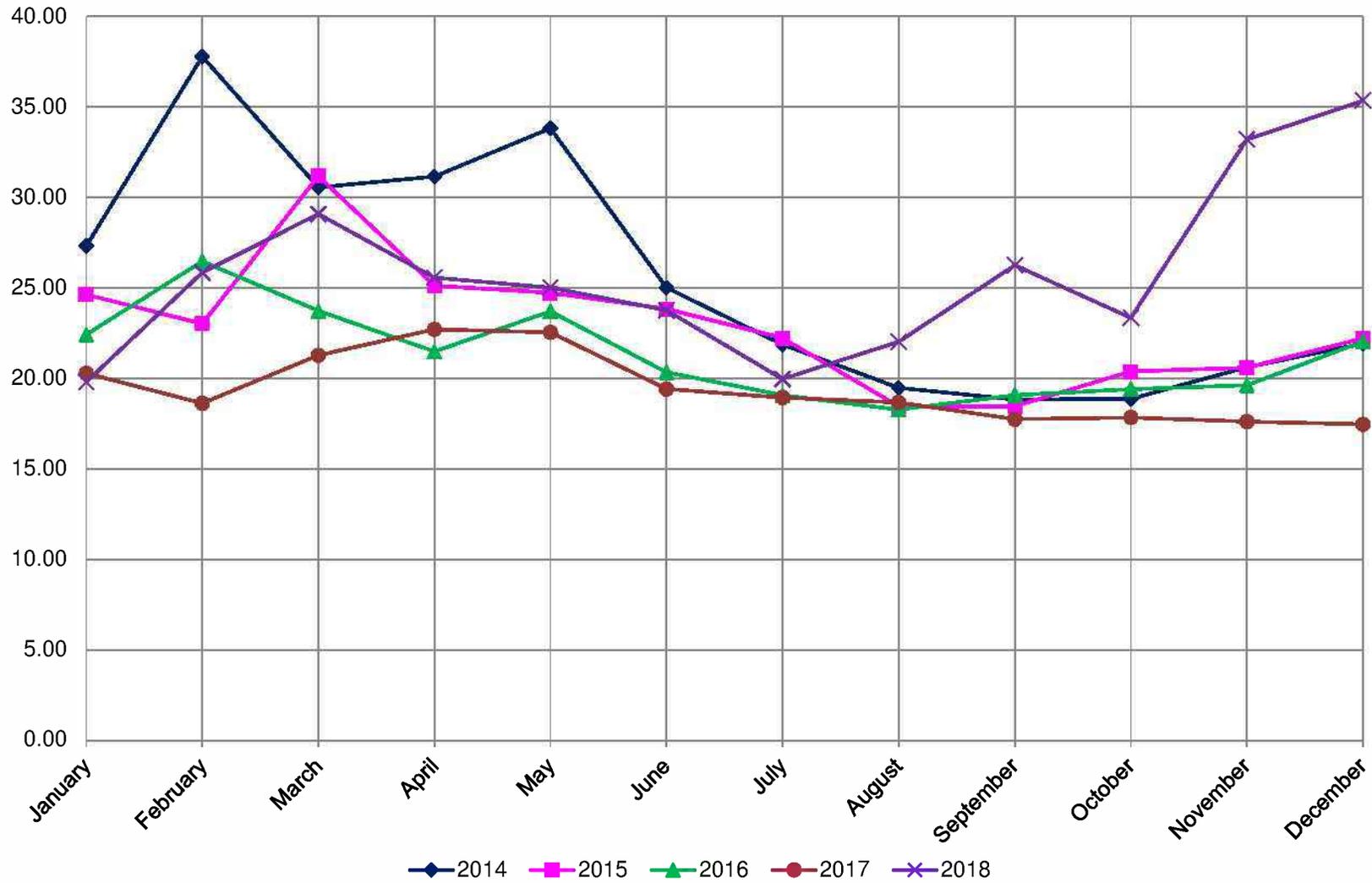
Base Flow 23.0

(Based on 2014 - 2018)

Notes:

- 1.) Data does not account for all water collected in the region, only that which is treated by SWWPCP. For total collection data please see pump station summaries included with this submission.
- 2.) Based on the PWD data for 2014-2018. Remaining data is from DELCORA eOPS database.
- 3.) Rainfall data is taken from CDPS weatherstation.

Eastern Service Area Hydraulic Loading



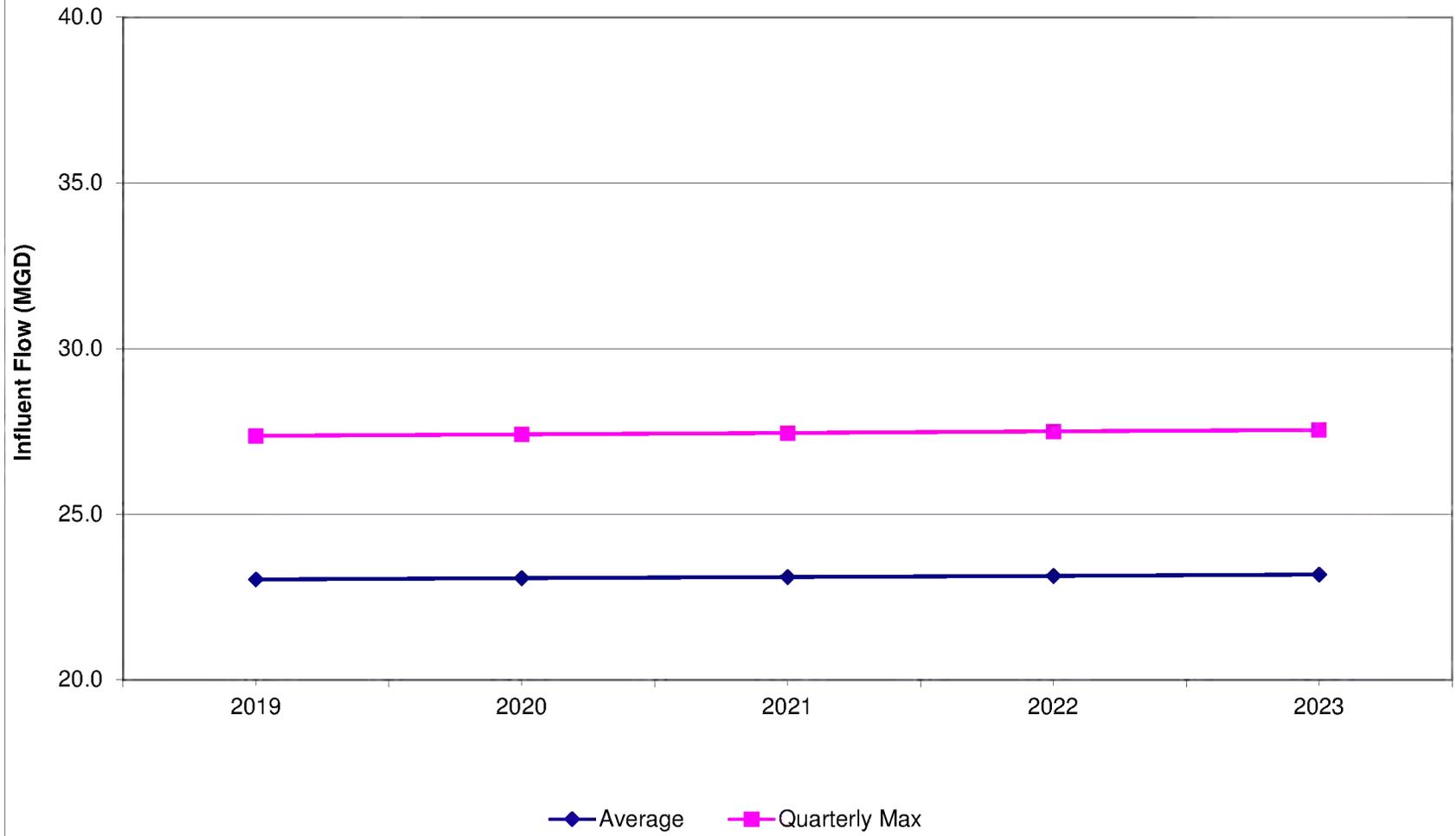
Eastern Service Area Projected Hydraulic Loading - Influent Flow

	Average (MGD)	Quarterly Maximum (MGD)
Base Flow	23.0	*
2019	23.0	27.4
2020	23.1	27.4
2021	23.1	27.5
2022	23.1	27.5
2023	23.2	27.5

* Base flow is average of 2014 - 2018.

- NOTES:** 1.) Flow from Central Delaware Pump Station can be controlled between WRTP and SWWPCP so as to not exceed permitted flow at WRTP.
- 2.) Growth based on average number of EDUs added per year via planning modules for DCJA and MA for 2015-2017 at 262.5 GPD/EDU.
- 3.) Most of the growth at CDPS is expected to be pumped to WRTP for treatment.

Eastern Service Area Projected Hydraulic Loading - Influent Flow



Eastern Service Area Influent Total Suspended Solids

	<u>Influent TSS (mg/L)</u>				
	2014	2015	2016	2017	2018
January	183.07	185.94	181.16	192.34	232.00
February	134.07	168.86	158.48	200.71	187.43
March	157.42	151.47	189.68	204.00	160.77
April	171.20	175.13	186.93	188.40	206.27
May	145.16	193.68	178.97	184.13	180.97
June	180.83	177.80	189.20	194.40	178.67
July	181.29	175.55	193.42	189.03	180.77
August	191.68	187.74	190.84	183.23	182.06
September	200.27	202.67	205.33	208.27	168.67
October	210.32	192.13	208.00	206.19	168.77
November	201.33	192.13	209.60	210.67	133.33
December	190.71	180.00	203.10	220.90	127.52
Average	178.95	181.92	191.23	198.52	175.60
5-Year Average					185.24

Notes:

- 1.) Data does not account for all water collected in the region, only that which is treated by SWWPCP. For total collection data please see pump station summaries included with this submission.
- 2.) Based on the PWD data for 2014-2018. Remaining data is from DELCORA eOPS database.

Eastern Service Area Influent Total Suspended Solids Loading

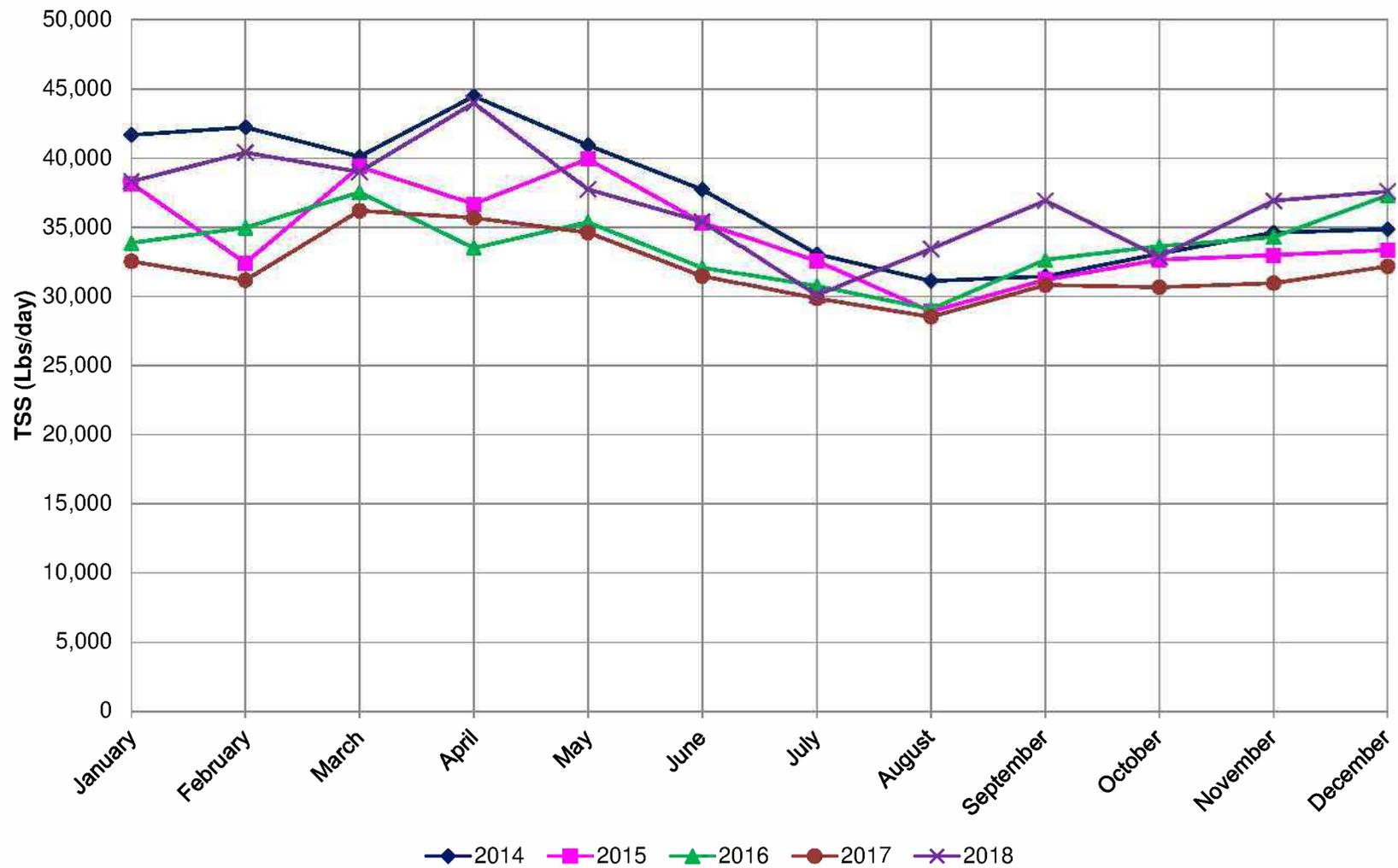
	<u>TSS Loading (lbs/day)</u>				
	2014	2015	2016	2017	2018
January	41,686	38,182	33,868	32,531	38,315
February	42,235	32,415	34,976	31,164	40,399
March	40,098	39,375	37,527	36,192	38,992
April	44,474	36,681	33,498	35,673	43,981
May	40,928	39,928	35,365	34,621	37,746
June	37,722	35,346	32,079	31,475	35,394
July	33,055	32,540	30,764	29,847	30,095
August	31,114	28,906	29,080	28,516	33,430
September	31,456	31,202	32,657	30,816	36,925
October	33,087	32,657	33,637	30,654	32,857
November	34,618	32,988	34,285	30,952	36,920
December	34,843	33,351	37,308	32,171	37,579
Average	37,110	34,464	33,754	32,051	36,886
5-Year Average					34,853
Max Ratio	1.198	1.159	1.112	1.129	1.192
5-Year Average Max Ratio					1.158

Notes:

1.) Data does not account for all water collected in the region, only that which is treated by SWWPCP. For total collection data please see pump station summaries included with this submission.

2.) Based on the PWD data for 2013-2017. Remaining data is from DELCORA eOPS database.

Eastern Service Area Total Suspended Solids Loading

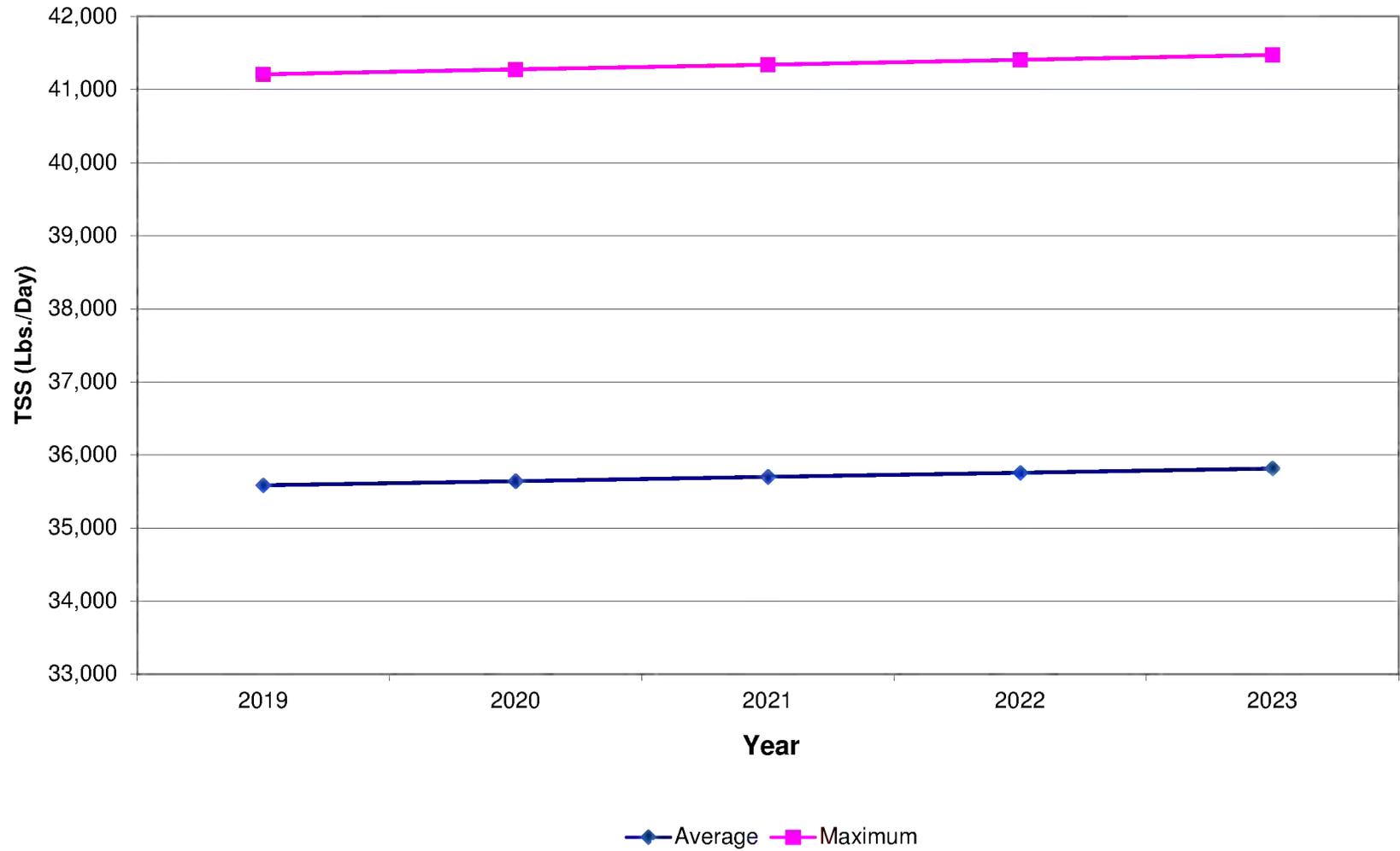


Eastern Service Area Projected TSS Loading

	Average (Lbs/Day)	Maximum (Lbs/Day)
Base Load	34,853 *	
2019	35,584	41,208
2020	35,641	41,275
2021	35,698	41,341
2022	35,755	41,407
2023	35,812	41,473

* Base Load is based on average of 2014-2018.

Eastern Service Area Projected Total Suspended Solids Loading



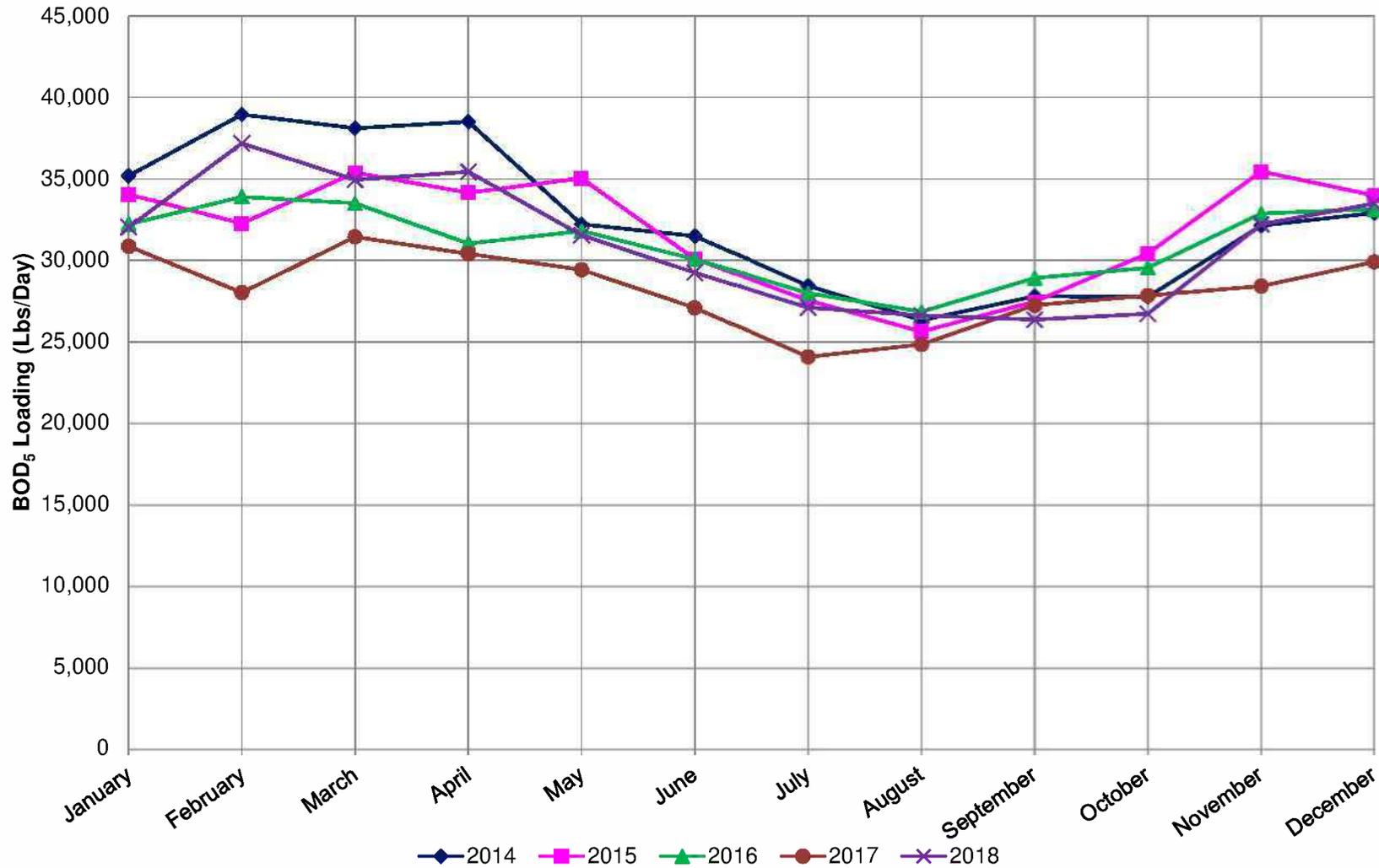
Eastern Service Area Influent BOD₅

	<u>Influent BOD₅ (mg/L)</u>				
	2014	2015	2016	2017	2018
January	154.50	165.81	172.32	182.48	194.03
February	123.64	168.07	153.59	180.50	172.50
March	149.65	136.13	169.32	177.23	144.10
April	148.23	163.07	173.13	160.53	166.20
May	114.29	169.97	160.94	156.48	151.23
June	150.97	151.33	177.40	167.33	147.67
July	155.94	148.65	176.00	152.52	162.77
August	162.19	166.48	176.19	159.58	144.97
September	177.00	178.37	181.83	184.17	120.43
October	176.52	178.97	182.68	187.35	137.26
November	186.87	206.50	200.97	193.40	116.37
December	180.16	183.39	180.45	205.42	113.61
Average	156.66	168.06	175.40	175.58	147.59
5-Year Average					164.66

**Eastern Service Area
Influent BOD₅ Loading**

	<u>Influent BOD₅ Loading (Lbs/Day)</u>				
	2014	2015	2016	2017	2018
January	35,181	34,049	32,216	30,864	32,044
February	38,950	32,264	33,896	28,026	37,181
March	38,118	35,389	33,500	31,442	34,947
April	38,508	34,154	31,025	30,396	35,438
May	32,224	35,040	31,802	29,423	31,543
June	31,492	30,085	30,079	27,092	29,253
July	28,432	27,553	27,993	24,082	27,098
August	26,328	25,633	26,848	24,836	26,618
September	27,802	27,461	28,919	27,250	26,366
October	27,768	30,420	29,542	27,854	26,721
November	32,130	35,455	32,873	28,415	32,222
December	32,915	33,978	33,148	29,916	33,481
Average	32,487	31,790	30,987	28,300	31,076
5-Year Average					30,928
Max Ratio	1.199	1.115	1.094	1.111	1.196
5-Year Average Max Ratio					1.143

Eastern Service Area BOD₅ Loading

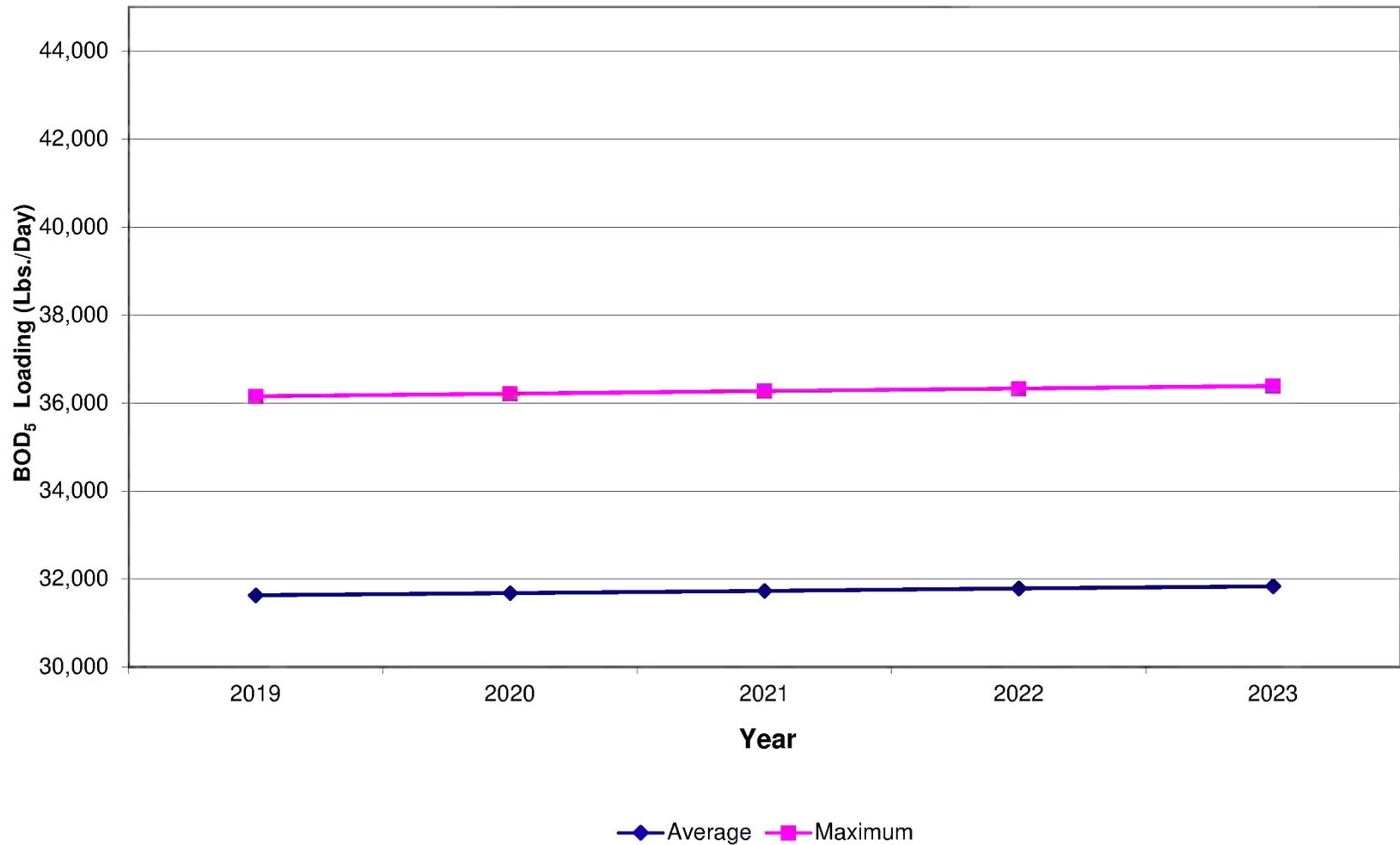


Eastern Service Area Projected BOD₅ Loading

	Average (Lbs/Day)	Maximum (Lbs/Day)
Base Load	30,928 *	
2019	31,630	36,156
2020	31,681	36,214
2021	31,731	36,273
2022	31,782	36,331
2023	31,833	36,389

* Base Load is based on average of 2013-2017.

Eastern Service Area Projected BOD₅ Loading



Station	Start Time	Stop Time	Date	Input
Namans	11:29 AM	11:42 AM	4/5/2018	7.2 MGD
Beech Street				1000 GPM
Central Main	11:24 AM	11:37 AM	4/4/2018	25 MGD
Central WRTP	11:24 AM	11:37 AM	4/4/2018	25 MGD
Darby	9:53 AM	10:07 AM	4/3/2018	50 MGD
Folcroft				3000 GPM
Effluent	9:10 AM	9:15 AM	4/5/2018	62.5 MGD
Influent	9:56 AM	10:15 AM	4/5/2018	62.5 MGD
EPS 1	10:29 AM	10:44 AM	4/5/2018	10 MGD
Muck	9:52 AM	10:04 AM	4/4/2018	15 MGD
Eddystone	12:39 PM	12:53 PM	4/4/2018	1000 GPM
Chester				25.0 MGD
CHI Pit	9:08 AM	9:20 AM	4/5/2018	650 GPM
Marcus Hook	1:27 PM	1:41 PM	4/4/2018	5.0 MGD
Chester Ridley	11:29 AM	11:42 AM	4/3/2018	8.50 MGD
Price Street				1042 GPM
Stadium				1500 GPM
SWDCMA	1:23 PM	1:35 PM	4/3/2018	7.5 MGD
Middletown	1:45 PM	1:56 PM	4/3/2018	7.5 MGD

William Doleski
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Station	Start Time	Stop Time	Date	Input
Namans	1:10 PM	1:23 PM	6/14/2018	7.2 MGD
Beech Street				1000 GPM
Central Main	11:44 AM	11:56 AM	6/13/2018	25 MGD
Central WRTP	11:44 AM	11:56 AM	6/13/2018	25 MGD
Darby	9:17 AM	9:29 AM	6/13/2018	50 MGD
Folcroft				3000 GPM
Effluent	8:45 AM	8:58 AM	6/14/2018	62.5 MGD
Influent	9:22 AM	9:35 AM	6/14/2018	62.5 MGD
EPS 1				10 MGD
Muck	10:07 AM	10:21 AM	6/13/2018	15 MGD
Eddystone	1:12 PM	1:26 PM	6/13/2018	1000 GPM
Chester				25.0 MGD
CHI Pit	10:27 AM	10:39 AM	6/14/2018	650 GPM
Marcus Hook	11:24 AM	11:36 AM	6/14/2018	5.0 MGD
Chester Ridley	9:08 AM	9:20 AM	6/15/2018	12.5 MGD
Price Street				1042 GPM
Stadium				1500 GPM
SWDCMA	11:55 AM	12:08 PM	6/19/2018	7.5 MGD
Middletown	11:55 AM	12:08 PM	6/19/2018	7.5 MGD
Rose Valley	10:06 AM	10:18 AM	6/15/2018	300 GPM

William Doleski

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Station	Start Time	Stop Time	Date	Input
Namans	1:33 PM	1:45 PM	9/19/2018	7.2 MGD
Broomall	10:48 AM	11:01 AM	9/19/2018	3000 GPM
Beech Street				1000 GPM
Central Main	9:39 AM	9:54 AM	9/19/2018	25 MGD
Central WRTP	9:39 AM	9:54 AM	9/19/2018	25 MGD
Darby	9:36 AM	9:48 AM	9/18/2018	50 MGD
Folcroft				3000 GPM
Effluent	8:46 AM	8:59 AM	9/20/2018	62.5 MGD
Influent	9:24 AM	9:37 AM	9/20/2018	62.5 MGD
EPS 1				10 MGD
Muck	10:40 AM	10:52 AM	9/18/2018	15 MGD
Eddystone	12:01 PM	12:14 PM	9/18/2018	1000 GPM
Chester				25.0 MGD
CHI Pit	10:10 AM	10:22 AM	9/20/2018	650 GPM
Marcus Hook	12:30 PM	12:42 PM	9/19/2018	5.0 MGD
Chester Ridley	9:00 AM	9:12 AM	9/21/2018	12.5 MGD
Price Street				1042 GPM
Stadium				1500 GPM
SWDCMA	9:42 AM	9:54 AM	9/21/2018	7.5 MGD
Middletown	9:42 AM	9:54 AM	9/21/2018	7.5 MGD
Rose Valley	10:39 AM	10:51 AM	9/21/2018	300 GPM

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Station	Start Time	Stop Time	Date	Input
Namans	10:02 AM	10:14 AM	12/6/2018	7.2 MGD
Broomall				
Beech Street	10:46 AM	10:54 AM	12/6/2018	1000 GPM
Central Main	1:34 PM	1:47 PM	12/6/2018	25 MGD
Central WRTP	1:34 PM	1:47 PM	12/6/2018	25 MGD
Darby	9:08 AM	9:21 AM	12/5/2018	50 MGD
Folcroft				3000 GPM
Effluent	1:11 PM	1:23 PM	12/10/2018	62.5 MGD
Influent	1:40 PM	1:53 PM	12/10/2018	62.5 MGD
EPS 1				10 MGD
Muck	9:57 AM	10:12 AM	12/5/2018	15 MGD
Eddystone	10:57 AM	11:10 AM	12/5/2018	1000 GPM
Chester	12:37 PM	12:50 PM	12/5/2018	25.0 MGD
CHI Pit	11:13 AM	11:26 AM	12/6/2018	650 GPM
Marcus Hook	8:56 AM	9:12 AM	12/6/2018	5.0 MGD
Chester Ridley	11:22 AM	11:35 AM	12/10/2018	12.5 MGD
Price Street	1:39 PM	1:52 PM	12/5/2018	1042 GPM
Stadium				1500 GPM
SWDCMA	11:45 AM	11:58 AM	12/10/2018	7.5 MGD
Middletown	11:45 AM	11:58 AM	12/10/2018	7.5 MGD
Rose Valley	9:54 AM	10:06 AM	12/7/2018	300 GPM

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PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

Orig: B. Willert
RECEIVED
 MAY 2 2018
 BY *2018-0625*
fw'd: John Pileggi
Per BAB

CHARGES FOR LONG TERM CONTROL PLAN and MONTHLY WASTEWATER SERVICES

Account Number:	620 11020 15380 T01
Revenue Source Code:	02-284596-8521
Fiscal Year Invoice Num.	S-18-0160
Date of Mailing:	4/30/2018
Payment Due Date:	5/31/2018
Current Amount Due:	\$1,037,504.10

Mr. Robert J. Willert, Exec. Director
 Delaware County Regional Authority
 P. O. Box 999, 100 East Fifth St.
 Chester, PA 19016-0999

Mail to: Phila. Water Department
 Attention: Alicia Robertson
 Finance Division 5th Floor
 ARAMARK Tower, 1101 Market St
 Philadelphia, PA 19107-2994

CHARGES FOR LONG TERM CONTROL PLAN AND WASTEWATER SERVICES TO DELCORA

**Amount Due For
March 2018**

For the Delaware County Regional Water Quality Control Authority's share of the long term control plan.

Billing Period:

	Current Assets	Assets prior to 7/1/11	Assets in Service after 7/1/11
Investment	\$3,501,304	(\$636,000)	\$2,865,304

Return on investment 7.5%		\$214,897.78
Depreciation 2%		\$57,306.08
SMIP/GARP Amortization		\$61,720.68
Sub Total		\$333,924.54
Management Fee 12%		\$40,070.94
Total Share of Long Term Control Plan for FY 2017		\$373,995.48
Monthly Share of Long Term Control Plan (Amount Due equal to 1/12 of FY 2017)		\$31,166.29
Quarterly Billing for Wastewater Charges: January 2018 - March 2018	1st Qtr. - 2018	\$2,371,161.69
	Less: January 2018	(697,216.94)
	February 2018	(667,606.94)
TOTAL QUARTERLY BILLING FOR DELCORA		\$1,037,504.10

PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora

For wastewater services rendered the Delaware County Regional Water Quality Control Authority for the metered connection located at the Southwest

	Average B. O. D.	Average S. S.	Quarterly Flow (MG)
Water Pollution Control Plant: Delcora	164.12	188.66	2,238.991

Annual Lump Sum Charge:

\$558,000	*	25.00%	
			\$139,500.00

Capacity Charge:

155 CFS	*	\$6,258.00 /cfs	*	25.00%
				\$242,497.50

Volume Charge:

	MG	*	Conv. Factor	*	\$/MCF
Delcora	2,238.991		133.69		\$1.3979
					\$418,434.40

Biochemical Oxygen Demand:

	Flow	* Conv. Factor	* Avg	= Loading	*	\$/KLBS
		1000				
Delcora	2,238.99	8.34	164.12	3,064.64		\$177.8872
						\$545,160.78

Suspended Solids Charge:

	Flow	* Conv. Fact	* Avg	= Loading	*	\$/KLBS
		1000				
Delcora	2,238.99	8.34	188.66	3,522.88		\$219.0013
						\$771,515.97

Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora

Subtotal:	Quarterly Billing for Wastewater Charges Prior to Management Fee	\$2,117,108.65
Plus:	Management Fee of 12.00%	\$254,053.04
Total:	TOTAL QUARTERLY BILLING FOR DELCORA	\$2,371,161.69

Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA

For Quarter: 1 - 2018 (January 1st to March 31st)

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

Date		B.O.D. (mg/l)	S.S. (mg/l)	Flow (MG)
01/01/2018	ACTUAL	180.00	212.00	17.503
01/02/2018	ACTUAL	221.00	236.00	17.339
01/03/2018	ACTUAL	180.00	212.00	17.010
01/04/2018	ACTUAL	254.00	300.00	17.074
01/05/2018	ACTUAL	215.00	232.00	17.232
01/06/2018	ACTUAL	208.00	320.00	16.977
01/07/2018	ACTUAL	278.00	408.00	18.499
01/08/2018	ACTUAL	215.00	228.00	18.395
01/09/2018	ACTUAL	143.00	232.00	17.711
01/10/2018	ACTUAL	164.00	220.00	17.623
01/11/2018	ACTUAL	209.00	232.00	18.760
01/12/2018	ACTUAL	119.00	284.00	44.923
01/13/2018	ACTUAL	213.00	180.00	30.157
01/14/2018	ACTUAL	215.00	232.00	21.161
01/15/2018	ACTUAL	188.00	236.00	20.096
01/16/2018	ACTUAL	163.00	228.00	18.630
01/17/2018	ACTUAL	176.00	212.00	19.681
01/18/2018	ACTUAL	206.00	216.00	18.488
01/19/2018	ACTUAL	164.00	180.00	18.135
01/20/2018	ACTUAL	193.00	232.00	18.646
01/21/2018	ACTUAL	184.00	200.00	18.843
01/22/2018	ACTUAL	200.00	224.00	17.887
01/23/2018	ACTUAL	176.00	200.00	22.067
01/24/2018	ACTUAL	212.00	188.00	18.901
01/25/2018	ACTUAL	251.00	232.00	18.100
01/26/2018	ACTUAL	157.00	176.00	17.796
01/27/2018	ACTUAL	195.00	236.00	18.191
01/28/2018	ACTUAL	185.00	228.00	21.301
01/29/2018	ACTUAL	187.00	208.00	18.848

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report**

DELCORA

For Quarter: 1 2018 (January 1st to March 31st)

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
01/30/2018	ACTUAL	207.00	232.00	19.347
01/31/2018	ACTUAL	157.00	236.00	18.543
02/01/2018	ACTUAL	208.00	248.00	18.210
02/02/2018	ACTUAL	197.00	236.00	19.874
02/03/2018	ACTUAL	194.00	212.00	19.014
02/04/2018	ACTUAL	198.00	328.00	26.818
02/05/2018	ACTUAL	221.00	288.00	25.144
02/06/2018	ACTUAL	230.00	212.00	20.096
02/07/2018	ACTUAL	178.00	160.00	31.562
02/08/2018	ACTUAL	167.00	192.00	25.354
02/09/2018	ACTUAL	212.00	236.00	21.252
02/10/2018	ACTUAL	192.00	224.00	23.230
02/11/2018	ACTUAL	115.00	212.00	61.491
02/12/2018	ACTUAL	134.00	84.00	31.391
02/13/2018	ACTUAL	180.00	148.00	24.501
02/14/2018	ACTUAL	194.00	168.00	23.084
02/15/2018	ACTUAL	180.00	228.00	24.280
02/16/2018	ACTUAL	139.00	228.00	31.321
02/17/2018	ACTUAL	167.00	140.00	25.011
02/18/2018	ACTUAL	129.00	124.00	28.500
02/19/2018	ACTUAL	176.00	100.00	24.730
02/20/2018	ACTUAL	169.00	236.00	22.891
02/21/2018	ACTUAL	181.00	192.00	22.188
02/22/2018	ACTUAL	188.00	204.00	21.772
02/23/2018	ACTUAL	152.00	132.00	23.683
02/24/2018	ACTUAL	167.00	176.00	22.981
02/25/2018	ACTUAL	118.00	152.00	33.655
02/26/2018	ACTUAL	130.00	92.00	25.745
02/27/2018	ACTUAL	123.00	144.00	23.292

Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA

For Quarter: 1 2018 (January 1st to March 31st)

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
02/28/2018	ACTUAL	191.00	152.00	22.579
03/01/2018	ACTUAL	191.00	152.00	23.624
03/02/2018	ACTUAL	185.00	176.00	56.628
03/03/2018	ACTUAL	132.00	140.00	42.204
03/04/2018	ACTUAL	84.00	120.00	31.748
03/05/2018	ACTUAL	114.00	164.00	27.627
03/06/2018	ACTUAL	146.00	140.00	25.659
03/07/2018	ACTUAL	167.00	172.00	40.080
03/08/2018	ACTUAL	92.00	172.00	40.247
03/09/2018	ACTUAL	126.00	164.00	33.464
03/10/2018	ACTUAL	90.00	140.00	31.078
03/11/2018	ACTUAL	124.00	164.00	29.820
03/12/2018	ACTUAL	155.00	112.00	28.148
03/13/2018	ACTUAL	133.00	112.00	28.636
03/14/2018	ACTUAL	160.00	132.00	26.797
03/15/2018	ACTUAL	121.00	108.00	25.685
03/16/2018	ACTUAL	129.00	164.00	24.939
03/17/2018	ACTUAL	138.00	128.00	24.697
03/18/2018	ACTUAL	138.00	164.00	24.873
03/19/2018	ACTUAL	190.00	168.00	23.518
03/20/2018	ACTUAL	181.00	144.00	24.413
03/21/2018	ACTUAL	134.00	160.00	26.842
03/22/2018	ACTUAL	181.00	204.00	32.209
03/23/2018	ACTUAL	147.00	188.00	29.661
03/24/2018	ACTUAL	141.00	168.00	27.488
03/25/2018	ACTUAL	126.00	160.00	26.059
03/26/2018	ACTUAL	164.00	176.00	24.567
03/27/2018	ACTUAL	126.00	184.00	24.040
03/28/2018	ACTUAL	126.00	192.00	23.916

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report**

DELCORA

For Quarter: 1 2018 (January 1st to March 31st)

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

Date		B.O.D. (mg/l)	S.S. (mg/l)	Flow (MG)
03/29/2018	ACTUAL	184.00	204.00	24.615
03/30/2018	ACTUAL	166.00	212.00	24.498
03/31/2018	ACTUAL	176.00	200.00	23.698
Averages:		164.12	188.66	Total: 2238.991

Loadings:

B.O.D. (Thousands of Pounds):	3,064.69	Total Flow (MG):	2,238.991
S.S. (Thousands of Pounds):	3,522.87	Credit Flow (MG):	0.000

Previous Cycle History

Billing Flow (MG): **2,238.991**

Last Quarter Avg. B.O.D. (mg/l): **195.66**

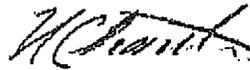
Last Quarter Avg. S.S. (mg/l): **213.01**

Last Quarter Billing Flow (MG): **1,623.418**

Data marked with asterisk (*) is unreported due to either an analytical quality criterion not being met or loss of sample. When fewer than 12 samples are reported for measurement of BOD and/or SS, the arithmetic mean of the sample results for the previous four quarters data is used as a substitute for the 'missing' data in computing the average BOD and/or SS values.

During the above billing quarter the following number of days of actual flow readings were recorded: **JAN - 31 days; FEB - 28 days; MAR - 31 days;**

For any day when actual flow data is unavailable, an estimated day's flow is utilized for billing purposes. That estimate is calculated by using the arithmetic mean of the previous 90 days' actual readings.



Nicole Charlton
Manager, IWU

PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

CHARGES FOR LONG TERM CONTROL PLAN and MONTHLY WASTEWATER SERVICES

Account Number: 620 11020 15380 T01	
Revenue Source Code: 02-284596-8521	
Fiscal Year Invoice Num.	S-19-0011
Date of Mailing:	7/30/2018
Payment Due Date:	8/30/2018
Current Amount Due:	\$836,157.81

Mr. Robert J. Willert, Exec. Director
Delaware County Regional Authority
P. O. Box 999, 100 East Fifth St.
Chester, PA 19016-0999

<i>Mail to: Phila. Water Department</i>
Attention: Alicia Robertson
Finance Division 5th Floor
ARAMARK Tower, 1101 Market St
Philadelphia, PA 19107-2994

CHARGES FOR LONG TERM CONTROL PLAN AND WASTEWATER SERVICES TO DELCORA

Amount Due For
June 2018

For the Delaware County Regional Water Quality Control Authority's share of the long term control plan.

Billing Period:

	Current Assets	Assets prior to 7/1/11	Assets in Service after 7/1/11
Investment	\$3,501,304	(\$636,000)	\$2,865,304

Return on Investment 7.5%	\$214,897.78
Depreciation 2%	\$57,308.08

SMIP/GARP Amortization	\$61,720.68
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Sub Total	\$333,924.54
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Management Fee 12%	\$40,070.94
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Total Share of Long Term Control Plan for FY 2017	\$373,995.48
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Monthly Share of Long Term Control Plan (Amount Due equal to 1/12 of FY 2017)	\$31,166.29
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Quarterly Billing for Wastewater Charges: April 2018 - June 2018		2nd Qtr. - 2018	\$2,358,155.98
	Less: April 2018		(790,387.23)
	May 2018		(790,387.23)

Instantaneous Flow Exceedance Charge for 1/12/18	\$29,610.00
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TOTAL QUARTERLY BILLING FOR DELCORA	\$836,157.81
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Philadelphia Water Department | 1101 Market Street | Philadelphia, PA 19107-2994

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PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

**Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora**

For wastewater services rendered the Delaware County Regional Water Quality Control Authority for the metered connection located at the Southwest

	Average B. O. D.	Average S. S.	Quarterly Flow (MG)
Water Pollution Control Plant:			
Delcora	154.94	189.87	2,254.900

Annual Lump Sum Charge:

\$558,000	25.00%	<u>\$139,500.00</u>
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Capacity Charge:

156 CFS	\$6,258.00 /cfs	25.00%	<u>\$242,497.50</u>
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Volume Charge:

	MG	Conv. Factor	\$/MCF
Delcora	2,254.900	133.89	\$1.3979
			<u>\$421,407.55</u>

Biochemical Oxygen Demand:

	Flow	Conv. Factor 1000	Avg	= Loading	\$/KLBS
Delcora	2,254.90	8.34	154.94	2,913.78	\$177.8872
					<u>\$518,324.32</u>

Suspended Solids Charge:

	Flow	Conv. Fact 1000	Avg	= Loading	\$/KLBS
Delcora	2,254.90	8.34	189.87	3,570.67	\$219.0013
					<u>\$781,981.32</u>

**Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora**

Subtotal:	Quarterly Billing for Wastewater Charges Prior to Management Fee	\$2,103,710.70
Plus:	Management Fee of 12.00%	\$252,445.28
Total:	TOTAL QUARTERLY BILLING FOR DELCORA	<u>\$2,356,155.98</u>

Philadelphia Water Department | 1101 Market Street | Philadelphia, PA 19107-2994

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**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: **2 - 2018 (April 1st to June 30th)**

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

Date		B.O.D. (mg/l)	S.S. (mg/l)	Flow (MG)
04/01/2018	ACTUAL	194.00	144.00	23.600
04/02/2018	ACTUAL	181.00	192.00	25.800
04/03/2018	ACTUAL	161.00	232.00	24.500
04/04/2018	ACTUAL	136.00	132.00	24.100
04/05/2018	ACTUAL	138.00	136.00	23.600
04/06/2018	ACTUAL	181.00	184.00	22.500
04/07/2018	ACTUAL	169.00	176.00	23.200
04/08/2018	ACTUAL	197.00	184.00	23.800
04/09/2018	ACTUAL	164.00	192.00	22.100
04/10/2018	ACTUAL	164.00	212.00	22.700
04/11/2018	ACTUAL	174.00	200.00	21.900
04/12/2018	ACTUAL	141.00	208.00	21.900
04/13/2018	ACTUAL	181.00	200.00	22.000
04/14/2018	ACTUAL	137.00	220.00	21.200
04/15/2018	ACTUAL	170.00	144.00	25.800
04/16/2018	ACTUAL	149.00	220.00	62.700
04/17/2018	ACTUAL	232.00	744.00	29.800
04/18/2018	ACTUAL	183.00	116.00	28.000
04/19/2018	ACTUAL	165.00	96.00	26.700
04/20/2018	ACTUAL	152.00	172.00	25.200
04/21/2018	ACTUAL	165.00	180.00	25.000
04/22/2018	ACTUAL	166.00	196.00	25.200
04/23/2018	ACTUAL	155.00	196.00	24.000
04/24/2018	ACTUAL	172.00	184.00	24.500
04/25/2018	ACTUAL	166.00	236.00	26.200
04/26/2018	ACTUAL	187.00	196.00	24.200
04/27/2018	ACTUAL	170.00	220.00	24.800
04/28/2018	ACTUAL	114.00	204.00	25.300
04/29/2018	ACTUAL	143.00	208.00	25.200

- Continued -

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 2 2018 (April 1st to June 30th)

Meter Chamber Code DELCORA

The following data is taken from: DELCORA

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
04/30/2018	ACTUAL	179.00	264.00	21.500
05/01/2018	ACTUAL	182.00	192.00	22.100
05/02/2018	ACTUAL	133.00	192.00	21.500
05/03/2018	ACTUAL	126.00	232.00	21.500
05/04/2018	ACTUAL	156.00	204.00	21.000
05/05/2018	ACTUAL	169.00	200.00	27.700
05/06/2018	ACTUAL	146.00	208.00	25.800
05/07/2018	ACTUAL	167.00	160.00	21.500
05/08/2018	ACTUAL	150.00	204.00	22.100
05/09/2018	ACTUAL	167.00	124.00	21.500
05/10/2018	ACTUAL	121.00	152.00	21.500
05/11/2018	ACTUAL	148.00	192.00	21.000
05/12/2018	ACTUAL	122.00	232.00	27.700
05/13/2018	ACTUAL	125.00	220.00	25.800
05/14/2018	ACTUAL	133.00	72.00	23.900
05/15/2018	ACTUAL	145.00	188.00	24.600
05/16/2018	ACTUAL	132.00	188.00	28.600
05/17/2018	ACTUAL	121.00	160.00	35.100
05/18/2018	ACTUAL	117.00	144.00	25.900
05/19/2018	ACTUAL	144.00	134.00	40.400
05/20/2018	ACTUAL	160.00	152.00	29.700
05/21/2018	ACTUAL	284.00	128.00	26.100
05/22/2018	ACTUAL	168.00	188.00	27.500
05/23/2018	ACTUAL	149.00	144.00	25.100
05/24/2018	ACTUAL	136.00	208.00	24.400
05/25/2018	ACTUAL	150.00	208.00	23.600
05/26/2018	ACTUAL	155.00	188.00	22.900
05/27/2018	ACTUAL	188.00	172.00	24.300
05/28/2018	ACTUAL	140.00	180.00	23.800

- Continued -

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 2 2018 (April 1st to June 30th)

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
05/29/2018	ACTUAL	140.00	216.00	23.000
05/30/2018	ACTUAL	182.00	192.00	22.600
05/31/2018	ACTUAL	132.00	236.00	23.100
06/01/2018	ACTUAL	184.00	228.00	22.600
06/02/2018	ACTUAL	154.00	228.00	24.000
06/03/2018	ACTUAL	175.00	160.00	31.600
06/04/2018	ACTUAL	128.00	176.00	27.100
06/05/2018	ACTUAL	119.00	220.00	24.900
06/06/2018	ACTUAL	148.00	184.00	23.600
06/07/2018	ACTUAL	133.00	164.00	23.000
06/08/2018	ACTUAL	176.00	168.00	22.700
06/09/2018	ACTUAL	179.00	156.00	22.500
06/10/2018	ACTUAL	160.00	160.00	32.500
06/11/2018	ACTUAL	152.00	236.00	40.400
06/12/2018	ACTUAL	102.00	108.00	25.800
06/13/2018	ACTUAL	154.00	156.00	24.800
06/14/2018	ACTUAL	105.00	180.00	23.900
06/15/2018	ACTUAL	105.00	200.00	22.900
06/16/2018	ACTUAL	151.00	160.00	22.400
06/17/2018	ACTUAL	149.00	192.00	22.500
06/18/2018	ACTUAL	141.00	132.00	22.300
06/19/2018	ACTUAL	126.00	180.00	21.700
06/20/2018	ACTUAL	166.00	176.00	22.400
06/21/2018	ACTUAL	160.00	200.00	21.500
06/22/2018	ACTUAL	148.00	144.00	20.500
06/23/2018	ACTUAL	153.00	172.00	21.500
06/24/2018	ACTUAL	136.00	200.00	21.400
06/25/2018	ACTUAL	143.00	164.00	20.800
06/26/2018	ACTUAL	184.00	192.00	20.500

- Continued -

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: **2 2018 (April 1st to June 30th)**

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
06/27/2018	ACTUAL	149.00	216.00	20.500
06/28/2018	ACTUAL	133.00	180.00	22.500
06/29/2018	ACTUAL	166.00	188.00	19.900
06/30/2018	ACTUAL	151.00	140.00	19.900
Averages:		154.94	189.87	Total: 2254.900
Loadings:				
	B.O.D. (Thousands of Pounds):	2,913.76	Total Flow (MG):	2,254.900
	S.S. (Thousands of Pounds):	3,570.67	Credit Flow (MG):	0.000
Previous Cycle History			Billing Flow (MG):	2,254.900

Last Quarter Avg. B.O.D. (mg/l): **164.12**
 Last Quarter Avg. S.S. (mg/l): **188.66**
 Last Quarter Billing Flow (MG): **2,238.991**

Data marked with asterisk (*) is unreported due to either an analytical quality criterion not being met or loss of sample. When fewer than 12 samples are reported for measurement of BOD and/or SS, the arithmetic mean of the sample results for the previous four quarters data is used as a substitute for the 'missing' data in computing the average BOD and/or SS values.

During the above billing quarter the following number of days of actual flow readings were recorded: **APR - 30 days; MAY - 31 days; JUN - 30 days;**

For any day when actual flow data is unavailable, an estimated day's flow is utilized for billing purposes. That estimate is calculated by using the arithmetic mean of the previous 90 days' actual readings.



Nicole Charlton
 Manager, IWU

PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

CHARGES FOR LONG TERM CONTROL PLAN and MONTHLY WASTEWATER SERVICES

Account Number: 620 11020 15380 T01	
Revenue Source Code: 02-284596-8521	
Fiscal Year Invoice Num.	S-19-0067
Date of Mailing:	10/31/2018
Payment Due Date:	12/1/2018
Current Amount Due:	\$561,497.19

Mr. Robert J. Willert, Exec. Director
 Delaware County Regional Authority
 P. O. Box 999, 100 East Fifth St.
 Chester, PA 19016-0999

<i>Mail to: Phila. Water Department</i>
Attention: Alicia Robertson
Finance Division 5th Floor
ARAMARK Tower, 1101 Market St
Philadelphia, PA 19107-2994

CHARGES FOR LONG TERM CONTROL PLAN AND WASTEWATER SERVICES TO DELCORA

Amount Due For
September 2018

For the Delaware County Regional Water Quality Control Authority's share of the long term control plan.

Billing Period:

	Current Assets	Assets prior to 7/1/11	Assets In Service after 7/1/11	
Investment	\$3,501,304	(\$636,000)	\$2,865,304	
Return on investment 7.5%				\$214,897.78
Depreciation 2%				\$57,306.08
SMIP/GARP Amortization				<u>\$61,720.68</u>
Sub Total				\$333,924.54
Management Fee 12%				<u>\$40,070.94</u>
Total Share of Long Term Control Plan for FY 2017				<u>\$373,995.48</u>
Monthly Share of Long Term Control Plan (Amount Due equal to 1/12 of FY 2017)				\$31,166.29
Quarterly Billing for Wastewater Charges: July 2018 - September 2018				3rd Qtr. - 2018 \$2,101,101.55
				Less: July 2018 (785,385.33)
				August 2018 (785,385.33)

TOTAL QUARTERLY BILLING FOR DELCORA \$561,497.19

Philadelphia Water Department | 1101 Market Street | Philadelphia, PA 19107-2994

An Equal Opportunity Employer

PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora

For wastewater services rendered the Delaware County Regional Water Quality Control Authority for the metered connection located at the Southwest

	Average B. O. D.	Average S. S.	Quarterly Flow (MG)	
Water Pollution Control Plant: Delcora	138.47	176.80	2,088.800	

Annual Lump Sum Charge:				
\$558,000	*	25.00%		<u>\$139,500.00</u>

Capacity Charge:

155 CFS	*	\$6,258.00 /cfs	*	25.00%
				<u>\$242,497.50</u>

Volume Charge:

	MG	*	Conv. Factor	* \$/MCF
Delcora	2,088.800	*	133.69	\$1.3979
				<u>\$390,365.91</u>

Biochemical Oxygen Demand:

	Flow	* Conv. Factor	* Avg	= Loading	* \$/KLBS
		1000			
Delcora	2,088.80	8.34	138.47	2,412.23	\$177.8872
					<u>\$429,104.73</u>

Suspended Solids Charge:

	Flow	* Conv. Fact	* Avg	= Loading	* \$/KLBS
		1000			
Delcora	2,088.80	8.34	176.80	3,079.96	\$219.0013
					<u>\$674,515.39</u>

Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora

Subtotal:	Quarterly Billing for Wastewater Charges Prior to Management Fee	\$1,875,983.53
Plus:	Management Fee of 12.00%	<u>\$225,118.02</u>
Total:	TOTAL QUARTERLY BILLING FOR DELCORA	\$2,101,101.55

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 3-2018 (July 1st to September 30th)

Meter Chamber Code DELCORA

The following data is taken from: DELCORA

Date		B.O.D. (mg/l)	S.S. (mg/l)	Flow (MG)
07/01/2018	ACTUAL	168.00	224.00	20.600
07/02/2018	ACTUAL	182.00	180.00	20.000
07/03/2018	ACTUAL	152.00	164.00	22.000
07/04/2018	ACTUAL	184.00	200.00	20.400
07/05/2018	ACTUAL	202.00	232.00	20.000
07/06/2018	ACTUAL	122.00	192.00	20.900
07/07/2018	ACTUAL	167.00	156.00	18.900
07/08/2018	ACTUAL	166.00	196.00	19.500
07/09/2018	ACTUAL	182.00	132.00	20.300
07/10/2018	ACTUAL	155.00	160.00	18.800
07/11/2018	ACTUAL	149.00	120.00	19.100
07/12/2018	ACTUAL	149.00	180.00	19.100
07/13/2018	ACTUAL	157.00	156.00	18.800
07/14/2018	ACTUAL	201.00	212.00	18.700
07/15/2018	ACTUAL	200.00	168.00	21.200
07/16/2018	ACTUAL	173.00	188.00	19.100
07/17/2018	ACTUAL	145.00	236.00	19.600
07/18/2018	ACTUAL	150.00	136.00	18.100
07/19/2018	ACTUAL	154.00	204.00	18.700
07/20/2018	ACTUAL	161.00	200.00	17.900
07/21/2018	ACTUAL	179.00	168.00	23.000
07/22/2018	ACTUAL	179.00	200.00	22.300
07/23/2018	ACTUAL	142.00	164.00	20.100
07/24/2018	ACTUAL	143.00	188.00	22.700
07/25/2018	ACTUAL	208.00	124.00	23.100
07/26/2018	ACTUAL	122.00	184.00	20.600
07/27/2018	ACTUAL	176.00	180.00	20.300
07/28/2018	ACTUAL	144.00	192.00	18.400
07/29/2018	ACTUAL	142.00	164.00	19.400

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 3 2018 (July 1st to September 30th)

Meter Chamber Code DELCORA

The following data is taken from: DELCORA

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
07/30/2018	ACTUAL	137.00	188.00	18.700
07/31/2018	ACTUAL	153.00	216.00	18.500
08/01/2018	ACTUAL	193.00	192.00	20.000
08/02/2018	ACTUAL	161.00	204.00	20.900
08/03/2018	ACTUAL	180.00	232.00	21.100
08/04/2018	ACTUAL	132.00	216.00	20.500
08/05/2018	ACTUAL	179.00	208.00	19.700
08/06/2018	ACTUAL	182.00	152.00	19.000
08/07/2018	ACTUAL	187.00	192.00	18.800
08/08/2018	ACTUAL	168.00	172.00	18.700
08/09/2018	ACTUAL	159.00	160.00	18.600
08/10/2018	ACTUAL	151.00	172.00	17.900
08/11/2018	ACTUAL	130.00	216.00	24.600
08/12/2018	ACTUAL	131.00	236.00	23.200
08/13/2018	ACTUAL	117.00	196.00	48.600
08/14/2018	ACTUAL	82.00	132.00	26.300
08/15/2018	ACTUAL	103.00	160.00	22.400
08/16/2018	ACTUAL	165.00	192.00	21.600
08/17/2018	ACTUAL	143.00	180.00	21.000
08/18/2018	ACTUAL	103.00	176.00	21.800
08/19/2018	ACTUAL	162.00	140.00	30.000
08/20/2018	ACTUAL	120.00	192.00	23.400
08/21/2018	ACTUAL	136.00	164.00	22.300
08/22/2018	ACTUAL	136.00	184.00	22.100
08/23/2018	ACTUAL	133.00	192.00	20.900
08/24/2018	ACTUAL	195.00	224.00	20.300
08/25/2018	ACTUAL	110.00	84.00	19.800
08/26/2018	ACTUAL	131.00	212.00	20.100
08/27/2018	ACTUAL	169.00	188.00	20.100

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 3 2018 (July 1st to September 30th)

Meter Chamber Code DELCORA

The following data is taken from: DELCORA

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
08/28/2018	ACTUAL	157.00	144.00	19.400
08/29/2018	ACTUAL	91.00	176.00	19.400
08/30/2018	ACTUAL	157.00	180.00	19.400
08/31/2018	ACTUAL	131.00	176.00	20.600
09/01/2018	ACTUAL	158.00	172.00	19.300
09/02/2018	ACTUAL	129.00	164.00	19.100
09/03/2018	ACTUAL	131.00	140.00	20.070
09/04/2018	ACTUAL	190.00	168.00	19.140
09/05/2018	ACTUAL	148.00	172.00	19.160
09/06/2018	ACTUAL	180.00	196.00	19.770
09/07/2018	ACTUAL	175.00	172.00	26.650
09/08/2018	ACTUAL	144.00	196.00	35.800
09/09/2018	ACTUAL	75.00	192.00	56.870
09/10/2018	ACTUAL	60.00	152.00	34.870
09/11/2018	ACTUAL	98.00	152.00	25.950
09/12/2018	ACTUAL	93.00	140.00	29.180
09/13/2018	ACTUAL	107.00	176.00	25.900
09/14/2018	ACTUAL	99.00	140.00	23.900
09/15/2018	ACTUAL	109.00	136.00	23.570
09/16/2018	ACTUAL	126.00	168.00	23.120
09/17/2018	ACTUAL	143.00	176.00	22.500
09/18/2018	ACTUAL	142.00	164.00	25.180
09/19/2018	ACTUAL	100.00	172.00	22.860
09/20/2018	ACTUAL	123.00	172.00	21.420
09/21/2018	ACTUAL	122.00	172.00	20.000
09/22/2018	ACTUAL	136.00	176.00	21.650
09/23/2018	ACTUAL	148.00	148.00	27.430
09/24/2018	ACTUAL	127.00	228.00	23.950
09/25/2018	ACTUAL	112.00	152.00	32.470

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: **3 2018 (July 1st to September 30th)**

Meter Chamber Code **DELCORA**

The following data is taken from: **DELCORA**

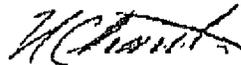
<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
09/26/2018	ACTUAL	74.00	236.00	29.280
09/27/2018	ACTUAL	78.00	132.00	33.570
09/28/2018	ACTUAL	79.00	148.00	33.000
09/29/2018	ACTUAL	123.00	192.00	26.450
09/30/2018	ACTUAL	84.00	156.00	25.390
Averages:		138.47	176.80	Total: 2088.800
Loadings:				
	B.O.D. (Thousands of Pounds):	2,412.19	Total Flow (MG):	2,088.800
	S.S. (Thousands of Pounds):	3,079.94	Credit Flow (MG):	0.000
Previous Cycle History			Billing Flow (MG):	2,088.800

Last Quarter Avg. B.O.D. (mg/l): **154.94**
 Last Quarter Avg. S.S. (mg/l): **189.87**
 Last Quarter Billing Flow (MG): **2,254.900**

Data marked with asterisk (*) is unreported due to either an analytical quality criterion not being met or loss of sample. When fewer than 12 samples are reported for measurement of BOD and/or SS, the arithmetic mean of the sample results for the previous four quarters data is used as a substitute for the 'missing' data in computing the average BOD and/or SS values.

During the above billing quarter the following number of days of actual flow readings were recorded: **JUL - 31 days; AUG - 31 days; SEP - 30 days;**

For any day when actual flow data is unavailable, an estimated day's flow is utilized for billing purposes. That estimate is calculated by using the arithmetic mean of the previous 90 days' actual readings.



Nicole Charlton
 Manager, IWBC

PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

CHARGES FOR LONG TERM CONTROL PLAN and MONTHLY WASTEWATER SERVICES

Account Number: 620 11020 15380 T01	
Revenue Source Code: 02-2B4596-8521	
Fiscal Year Invoice Num.	S-19-0114
Date of Mailing:	1/31/2019
Payment Due Date:	3/3/2019
Current Amount Due:	\$1,039,353.14

Mr. Robert J. Willert, Exec. Director
 Delaware County Regional Authority
 P. O. Box 999, 100 East Fifth St.
 Chester, PA 19016-0999

<i>Mail to: Phila. Water Department</i>
Attention: Alicia Robertson
Finance Division 5th Floor
ARAMARK Tower, 1101 Market St
Philadelphia, PA 19107 -2994

CHARGES FOR LONG TERM CONTROL PLAN AND WASTEWATER SERVICES TO DELCORA

Amount Due For
December 2018

For the Delaware County Regional Water Quality Control Authority's share of the long term control plan.

Billing Period:

	Current Assets	Assets prior to 7/1/11	Assets in Service after 7/1/11
Investment	\$5,164,495	(\$636,000)	\$4,528,495

Return on Investment 7.5%	\$339,637.11
Depreciation 2%	\$90,569.90
SMIP/GARP Amortization	<u>\$243,638.43</u>
Sub Total	\$673,845.44
Management Fee 12%	<u>\$80,861.45</u>
Total Share of Long Term Control Plan for FY 2019	<u>\$754,706.89</u>
Monthly Share of Long Term Control Plan (Amount Due equal to 1/12 of FY 2019)	<u>\$62,892.24</u>

Quarterly Billing for Wastewater Charges: October 2018 - December 2018

4th Qtr. - 2018	\$2,365,014.44
Less: October 2018	(700,367.18) ✓
November 2018	(688,186.36) ✓

TOTAL QUARTERLY BILLING FOR DELCORA Philadelphia Water Department | 1101 Market Street | Philadelphia, PA 19107-2994 **\$1,039,353.14**

An Equal Opportunity Employer

PHILADELPHIA WATER DEPARTMENT

Debra A. McCarty, Water Commissioner

Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora

For wastewater services rendered the Delaware County Regional Water Quality Control Authority for the metered connection located at the Southwest

	Average B. O. D.	Average S. S.	Quarterly Flow (MG)	
Water Pollution Control Plant:				
Delcora	119.22	140.66	2,815.060	

Annual Lump Sum Charge:				
\$324,000	*	25.00%		\$81,000.00

Capacity Charge:				
155 CFS	*	\$7,346.00 /cfs	*	25.00%
				\$284,657.50

Volume Charge:				
	MG	*	Conv. Factor	* \$/MCF
Delcora	2,815.060		133.69	\$1.5800
				\$594,625.69

Biochemical Oxygen Demand:				
	Flow	* Conv. Factor	* Avg	= Loading
		1000		* \$/KLBS
Delcora	2,815.06	8.34	119.22	2,799.00
				\$188.2200
				\$526,827.69

Suspended Solids Charge:				
	Flow	* Conv. Factor	* Avg	= Loading
		1000		* \$/KLBS
Delcora	2,815.06	8.34	140.66	3,302.36
				\$189.1100
				\$624,509.16

Delcora
Detailed Monthly Calculation of Charges for Wastewater Services to Delcora

Subtotal:	Quarterly Billing for Wastewater Charges Prior to Management Fee	\$2,111,620.04
Plus:	Management Fee of 12.00%	\$253,394.40
Total:	TOTAL QUARTERLY BILLING FOR DELCORA	\$2,365,014.44

Philadelphia Water Department | 1101 Market Street | Philadelphia, PA 19107-2994

An Equal Opportunity Employer

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 4 - 2018 (October 1st to December 31st)

Meter Chamber Code: DELCORA

The following data is taken from: DELCORA

Date		B.O.D. (mg/l)	S.S. (mg/l)	Flow (MG)
10/01/2018	ACTUAL	100.00	160.00	24.090
10/02/2018	ACTUAL	88.00	196.00	24.940
10/03/2018	ACTUAL	94.00	176.00	23.930
10/04/2018	ACTUAL	103.00	128.00	24.500
10/05/2018	ACTUAL	124.00	144.00	22.720
10/06/2018	ACTUAL	105.00	184.00	22.800
10/07/2018	ACTUAL	136.00	180.00	23.030
10/08/2018	ACTUAL	168.00	192.00	22.490
10/09/2018	ACTUAL	155.00	212.00	22.290
10/10/2018	ACTUAL	131.00	164.00	21.920
10/11/2018	ACTUAL	165.00	160.00	30.770
10/12/2018	ACTUAL	121.00	236.00	26.770
10/13/2018	ACTUAL	105.00	156.00	24.010
10/14/2018	ACTUAL	115.00	136.00	23.480
10/15/2018	ACTUAL	165.00	132.00	23.050
10/16/2018	ACTUAL	139.00	188.00	22.970
10/17/2018	ACTUAL	122.00	156.00	21.930
10/18/2018	ACTUAL	182.00	168.00	21.390
10/19/2018	ACTUAL	193.00	124.00	21.610
10/20/2018	ACTUAL	137.00	140.00	21.670
10/21/2018	ACTUAL	146.00	160.00	22.400
10/22/2018	ACTUAL	166.00	164.00	20.990
10/23/2018	ACTUAL	107.00	180.00	20.460
10/24/2018	ACTUAL	148.00	172.00	20.500
10/25/2018	ACTUAL	135.00	196.00	20.470
10/26/2018	ACTUAL	143.00	172.00	25.240
10/27/2018	ACTUAL	173.00	188.00	34.060
10/28/2018	ACTUAL	126.00	172.00	24.530
10/29/2018	ACTUAL	147.00	140.00	22.190

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 4 2018 (October 1st to December 31st)

Meter Chamber Code: DELCORA

The following data is taken from: DELCORA

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
10/30/2018	ACTUAL	171.00	188.00	21.550
10/31/2018	ACTUAL	145.00	168.00	20.880
11/01/2018	ACTUAL	168.00	168.00	21.210
11/02/2018	ACTUAL	195.00	220.00	25.920
11/03/2018	ACTUAL	181.00	200.00	28.180
11/04/2018	ACTUAL	135.00	136.00	23.580
11/05/2018	ACTUAL	145.00	116.00	29.340
11/06/2018	ACTUAL	119.00	116.00	43.800
11/07/2018	ACTUAL	90.00	124.00	27.400
11/08/2018	ACTUAL	115.00	132.00	25.100
11/09/2018	ACTUAL	102.00	144.00	35.000
11/10/2018	ACTUAL	95.00	132.00	28.000
11/11/2018	ACTUAL	108.00	144.00	26.400
11/12/2018	ACTUAL	138.00	136.00	29.600
11/13/2018	ACTUAL	123.00	160.00	45.400
11/14/2018	ACTUAL	95.00	112.00	28.300
11/15/2018	ACTUAL	91.00	120.00	46.500
11/16/2018	ACTUAL	90.00	140.00	56.100
11/17/2018	ACTUAL	66.00	84.00	33.300
11/18/2018	ACTUAL	103.00	100.00	31.300
11/19/2018	ACTUAL	124.00	112.00	29.400
11/20/2018	ACTUAL	105.00	120.00	27.700
11/21/2018	ACTUAL	125.00	136.00	27.100
11/22/2018	ACTUAL	140.00	172.00	26.800
11/23/2018	ACTUAL	158.00	140.00	25.400
11/24/2018	ACTUAL	134.00	136.00	51.200
11/25/2018	ACTUAL	134.00	196.00	44.300
11/26/2018	ACTUAL	81.00	88.00	51.700
11/27/2018	ACTUAL	57.00	84.00	36.300

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report**

DELCORA

For Quarter: **4 2018 (October 1st to December 31st)**

Meter Chamber Code: **DELCORA**

The following data is taken from: **DELCORA**

<u>Date</u>		<u>B.O.D. (mg/l)</u>	<u>S.S. (mg/l)</u>	<u>Flow (MG)</u>
11/28/2018	ACTUAL	83.00	88.00	32.200
11/29/2018	ACTUAL	95.00	112.00	30.400
11/30/2018	ACTUAL	96.00	132.00	29.100
12/01/2018	ACTUAL	95.00	120.00	30.400
12/02/2018	ACTUAL	124.00	140.00	38.200
12/03/2018	ACTUAL	93.00	96.00	30.500
12/04/2018	ACTUAL	122.00	136.00	28.700
12/05/2018	ACTUAL	108.00	120.00	28.300
12/06/2018	ACTUAL	119.00	141.00	26.400
12/07/2018	ACTUAL	109.00	124.00	26.900
12/08/2018	ACTUAL	138.00	144.00	26.600
12/09/2018	ACTUAL	149.00	180.00	26.800
12/10/2018	ACTUAL	119.00	172.00	25.700
12/11/2018	ACTUAL	102.00	104.00	25.100
12/12/2018	ACTUAL	86.00	64.00	25.200
12/13/2018	ACTUAL	127.00	156.00	24.900
12/14/2018	ACTUAL	126.00	100.00	24.200
12/15/2018	ACTUAL	141.00	140.00	32.100
12/16/2018	ACTUAL	125.00	176.00	38.800
12/17/2018	ACTUAL	105.00	116.00	30.100
12/18/2018	ACTUAL	94.00	120.00	27.100
12/19/2018	ACTUAL	118.00	120.00	26.500
12/20/2018	ACTUAL	130.00	144.00	43.200
12/21/2018	ACTUAL	110.00	136.00	65.600
12/22/2018	ACTUAL	77.00	148.00	45.500
12/23/2018	ACTUAL	95.00	124.00	40.100
12/24/2018	ACTUAL	124.00	56.00	38.600
12/25/2018	ACTUAL	134.00	132.00	35.200
12/26/2018	ACTUAL	133.00	120.00	34.800

**Philadelphia Water Department
Industrial Waste Unit - Quarterly Flow And Sampling Report
DELCORA**

For Quarter: 4 2018 (October 1st to December 31st)

Meter Chamber Code: DELCORA

The following data is taken from: DELCORA

Date		B.O.D. (mg/l)	S.S. (mg/l)	Flow (MG)
12/27/2018	ACTUAL	128.00	108.00	34.000
12/28/2018	ACTUAL	120.00	196.00	73.600
12/29/2018	ACTUAL	78.00	108.00	47.600
12/30/2018	ACTUAL	99.00	124.00	41.300
12/31/2018	ACTUAL	94.00	88.00	53.400
Averages:		119.22	140.66	Total: 2815.060

Loadings:

B.O.D. (Thousands of Pounds):	2,798.89	Total Flow (MG):	2,815.060
S.S. (Thousands of Pounds):	3,302.33	Credit Flow (MG):	0.000

Previous Cycle History

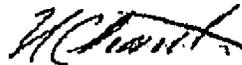
Billing Flow (MG): 2,815.060

Last Quarter Avg. B.O.D. (mg/l):	138.47
Last Quarter Avg. S.S. (mg/l):	176.80
Last Quarter Billing Flow (MG):	2,088.800

Data marked with asterisk (*) is unreported due to either an analytical quality criterion not being met or loss of sample. When fewer than 12 samples are reported for measurement of BOD and/or SS, the arithmetic mean of the sample results for the previous four quarters data is used as a substitute for the 'missing' data in computing the average BOD and/or SS values.

During the above billing quarter the following number of days of actual flow readings were recorded: OCT - 31 days; NOV - 30 days; DEC - 31 days;

For any day when actual flow data is unavailable, an estimated day's flow is utilized for billing purposes. That estimate is calculated by using the arithmetic mean of the previous 90 days' actual readings.



Nicole Charlton
Manager, IWBC



Eastern Service Area Sanitary Sewer Overflow Report For 2018

AREA	ADDRESS	DISCHARGE OBSERVE		DISCHARGE STOPP		REPORTED BY			COMMENTS
East	Central Delaware County Pump Station	1/12	14:40	1/12	14:58	P. Henry	1/12	16:40	Heavy rains caused high flows causing a bypass
East	Central Delaware County Pump Station	2/7	18:04	2/7	19:20				Overflow occurred during a rain event, but was caused by recent changes made to the pump control system
East	Muck PS	3/2	20:10	3/2	20:23	P. Bostick	3/2	20:34	Power outage to the station caused a disruption to the programming operation of the station.
East	Central Delaware County Pump Station	4/16	8:50	4/16	11:00	M. DiSantis	4/16	8:55	High flows caused by heavy rain. All pumps were in service during bypass.
East	Central Delaware County Pump Station	8/13	9:49	8/13	12:05	T. Czwallina	8/13	11:39	High flows caused by heavy rain started the third pump until the motorized discharge valve failed leading to a pump failure and bypass.
East	Muck PS	11/24	22:21	11/25	0:40	P. Bostick	11/25	3:15	Heavy rain caused high flows to the station causing a bypass. All pumps were in service at the time of the bypass.
East	Central Delaware County Pump Station	11/24	21:30	11/24	1:18	P. Bostick	11/25	3:15	Heavy rain caused high flows to the station causing a bypass. All pumps were in service at the time of the bypass.
East	Muck PS	12/28	11:16	12/28	13:08	P. Bostick	12/28	16:45	All pumps were in service at the time of the overflow. Excess flow to the station caused the overflow.

**Eastern Service Area
Wastewater Collected* (MGD)**

	2014	2015	2016	2017	2018
January	38.02	34.65	30.73	28.86	28.74
February	49.32	32.48	39.00	26.95	37.92
March	42.24	44.42	33.47	30.88	42.81
April	43.28	36.08	31.03	33.67	37.14
May	48.06	30.19	34.54	33.07	36.62
June	35.43	33.79	29.70	28.47	34.65
July	30.51	32.14	27.48	27.64	28.63
August	27.97	25.86	25.37	27.31	31.15
September	26.62	25.91	25.02	25.94	37.27
October	26.38	28.15	24.69	25.85	33.79
November	29.01	27.02	24.49	25.55	47.42
December	31.26	31.95	27.63	25.35	46.09
Average	35.67	31.89	29.43	28.29	36.85
Max 3 Month Avg.	44.94	37.66	34.50	32.54	42.44
2 Year Average					32.57

* This data represents all wastewater collected in the Eastern Service Area.

**Darby Creek Pump Station
Average Daily Flow (MGD)**

	2014	2015	2016	2017	2018
January	21.54	19.64	17.48	16.33	16.36
February	27.89	18.69	21.85	15.41	20.77
March	24.21	24.47	19.02	17.02	23.49
April	24.87	20.28	17.55	18.69	21.03
May	27.43	17.34	19.15	18.45	20.43
June	20.40	18.93	16.83	16.23	19.87
July	17.90	17.98	15.82	15.68	16.75
August	16.19	15.05	14.83	15.38	18.62
September	15.52	15.24	14.64	14.69	22.16
October	15.40	16.21	14.31	14.86	19.68
November	16.63	15.81	14.28	14.64	26.78
December	17.67	17.96	15.91	14.54	25.91
Average	20.47	18.13	16.80	15.99	20.99
Max 3 Month Avg.	25.66	21.15	19.47	18.06	24.12
2 Year Average					18.49

**Muckinipates Pump Station
Average Daily Flow (MGD)**

	2014	2015	2016	2017	2018
January	5.15	4.85	4.10	3.83	3.81
February	6.90	4.33	5.23	3.46	5.41
March	5.54	6.22	4.31	4.24	6.00
April	5.45	4.88	4.01	4.50	4.88
May	5.96	3.91	4.64	4.39	4.83
June	4.48	4.63	3.83	3.64	4.38
July	3.92	4.54	3.51	3.63	3.55
August	3.67	3.45	3.18	3.70	3.69
September	3.43	3.44	3.09	3.41	4.44
October	3.39	3.77	3.09	3.31	4.18
November	3.91	3.44	3.03	3.31	6.23
December	4.34	4.35	3.53	3.24	5.96
Average	4.68	4.32	3.80	3.72	4.78
Max 3 Month Avg.	5.96	5.14	4.55	4.38	5.46
2 Year Average					4.25

**Runnymede Drive Pump Station (Edgmont Twp.)
Average Daily Flow (MGD)**

	2014	2015	2016	2017	2018
January				0.10	0.11
February			0.05	0.10	0.12
March			0.05	0.11	0.11
April			0.07	0.11	0.11
May			0.07	0.11	0.11
June			0.08	0.11	0.11
July			0.08	0.11	0.11
August			0.08	0.10	0.11
September			0.08	0.11	0.12
October			0.09	0.11	0.12
November			0.09	0.12	0.14
December			0.10	0.11	0.14
Average	N/A	N/A	0.08	0.11	0.12
Max 3 Month Avg.	N/A	N/A	0.09	0.11	0.13
2 Year Average					0.11

**Central Delaware County Pump Station
Wastewater Collected* (MGD)**

	2014	2015	2016	2017	2018
January	11.33	10.15	9.15	8.70	8.58
February	14.53	9.46	11.91	8.08	11.74
March	12.50	13.72	10.14	9.61	13.33
April	12.96	10.92	9.46	10.48	11.23
May	14.67	8.94	10.76	10.23	11.37
June	10.56	10.24	9.04	8.60	10.40
July	8.69	9.62	8.15	8.32	8.33
August	8.12	7.36	7.37	8.23	8.85
September	7.68	7.22	7.30	7.83	10.67
October	7.59	8.17	7.29	7.68	9.93
November	8.47	7.76	7.19	7.61	14.41
December	9.26	9.64	8.19	7.57	14.22
Average	10.53	9.43	8.83	8.58	11.09
Max 3 Month Avg.	13.37	11.37	10.51	10.11	12.86
2 Year Average					9.83

* This represents all flow that is handled by CDPS.

** Flow can be diverted for treatment to either DELCORA's Western Regional Treatment Plant (WRTP), or The City of Philadelphia's Southwest Water Pollution Control Plant (SWWPCP).
(As of December 2002)

**Central Delaware Pump Station*
Average Daily Flow Treated at WRTP (MGD)**

	2014	2015	2016	2017	2018
January	10.88	9.96	9.11	8.37	8.41
February	11.79	9.41	11.59	7.98	10.89
March	11.84	13.22	10.08	9.35	12.53
April	12.45	10.69	9.42	10.42	10.99
May	13.78	5.30	10.57	10.00	11.22
June	10.43	9.79	9.03	8.54	10.32
July	8.55	9.57	8.10	8.25	8.31
August	8.03	7.45	6.80	8.15	8.72
September	7.58	7.24	5.67	7.81	10.36
October	7.48	7.58	4.98	7.60	9.89
November	8.32	6.26	4.83	7.58	13.44
December	9.15	9.10	4.98	7.55	10.18
Average	10.02	8.80	7.93	8.47	10.44
Max 3 Month Avg.	12.69	11.11	10.36	9.92	11.58
2 Year Average					9.45

* This represents the flow that is handled by CDPS and treated by DELCORA at the WRTP.

** Flow to DELCORA's WRTP began 12/10/2002

**Central Delaware Pump Station
Wastewater Pumped to SWWPCP (MGD)**

	2014	2015	2016	2017	2018
January	0.46	0.26	0.06	0.33	0.17
February	2.74	0.12	0.33	0.05	0.85
March	0.66	0.56	0.09	0.27	0.80
April	0.51	0.29	0.07	0.11	0.24
May	0.88	3.65	0.21	0.26	0.15
June	0.13	0.51	0.30	0.08	0.09
July	0.14	0.12	0.06	0.10	0.02
August	0.09	0.00	0.59	0.10	0.13
September	0.10	0.08	1.63	0.05	0.31
October	0.11	0.67	2.31	0.10	0.05
November	0.15	1.55	2.36	0.06	0.97
December	0.11	0.55	3.21	0.05	4.04
Average	0.51	0.70	0.94	0.13	0.65
Max 3 Month Avg.	1.30	1.50	2.63	0.22	1.69
2 Year Average					0.39

**Eastern Service Area
Flow Pumped to Philadelphia Southwest
Water Pollution Control Plant (MGD)**

	2014	2015	2016	2017	2018
January	27.14	24.75	21.64	20.48	20.33
February	37.53	23.14	27.41	18.92	27.03
March	30.41	31.26	23.42	21.53	30.29
April	30.83	25.45	21.64	23.30	26.15
May	34.27	24.89	23.99	23.10	25.40
June	25.01	24.06	20.96	19.95	24.34
July	21.96	22.64	19.39	19.41	20.32
August	19.95	18.50	18.59	19.18	22.43
September	19.04	18.77	19.36	18.15	26.91
October	18.89	20.65	19.71	18.27	23.90
November	20.69	20.81	19.66	18.01	33.98
December	22.11	22.86	22.65	17.83	35.91
Average	25.65	23.15	21.54	19.85	26.42
Max 3 Month Avg.	32.92	27.20	24.16	22.65	31.27
2 Year Average					23.13

Pump Station Flows (MGD)

Average Flows (MGD)

Pump Stations	Design Capacity	2014	2015	2016	2017	2018
Darby Creek	60	20.47	18.13	16.80	15.99	20.99
Muckinipates	24	4.68	4.32	3.80	3.72	4.78
Central Delaware (to WRTP)	40	10.02	8.80	7.93	8.47	10.44
Central Delaware (to Philadelphia)		0.51	0.70	0.94	0.13	0.65
Runnymede Drive (Edgmont Twp.)	0.35	N/A	N/A	0.00	0.11	0.12

Lift Stations	Design Capacity	2014	2015	2016	2017	2018
Folcroft		0.266	0.256	0.255	N/A	N/A

Annual Peak 60-Minute Flows (MGD)

	2014	2015	2016	2017	2018
Darby Creek	63.08	56.27	60.90	56.26	66.22
Muckinipates	18.83	22.30	20.87	20.58	23.66
Central Delaware (to WRTP)	21.26	21.10	20.64	20.36	25.56
Central Delaware (to Philadelphia)	25.61	22.89	17.98	17.97	23.20
Central Delaware (total flow)	45.72	40.76	37.31	37.92	39.73
Runnymede Drive (Edgmont Twp.)	N/A	N/A	1.04	0.60	0.76

Maximum Month Flows (MGD)

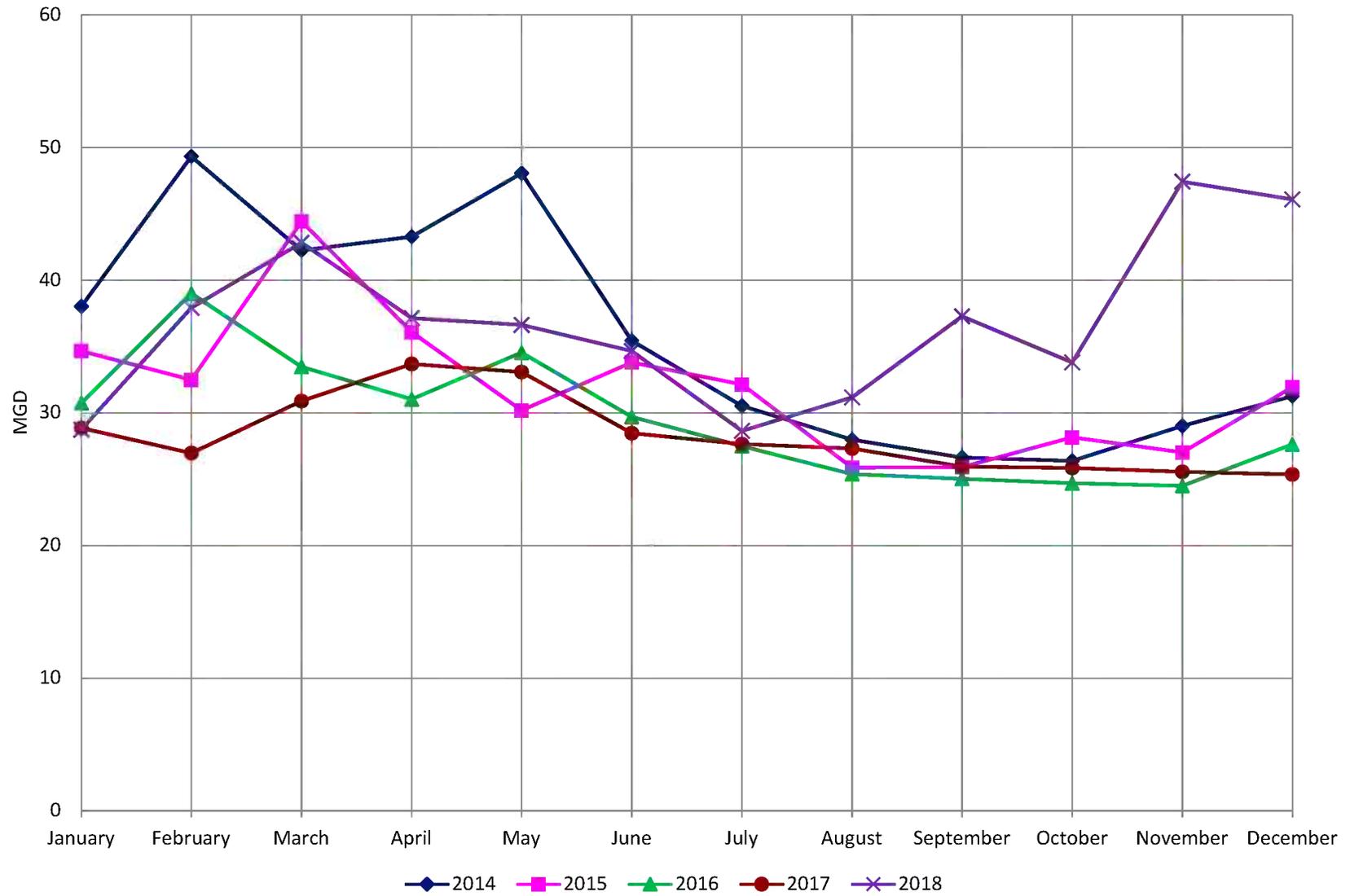
	2014	2015	2016	2017	2018
Darby Creek	27.89	24.47	21.85	18.69	26.78
Muckinipates	6.90	6.22	5.23	4.50	6.23
Central Delaware (to WRTP)	13.78	13.22	11.59	10.42	13.44
Central Delaware (to Philadelphia)	2.74	3.65	3.21	0.33	4.04
Central Delaware (total flow)	14.67	13.72	11.91	10.48	14.41
Runnymede Drive (Edgmont Twp.)	N/A	N/A	0.10	0.12	0.14

2-Year Projected Maximum Month Flows (MGD)

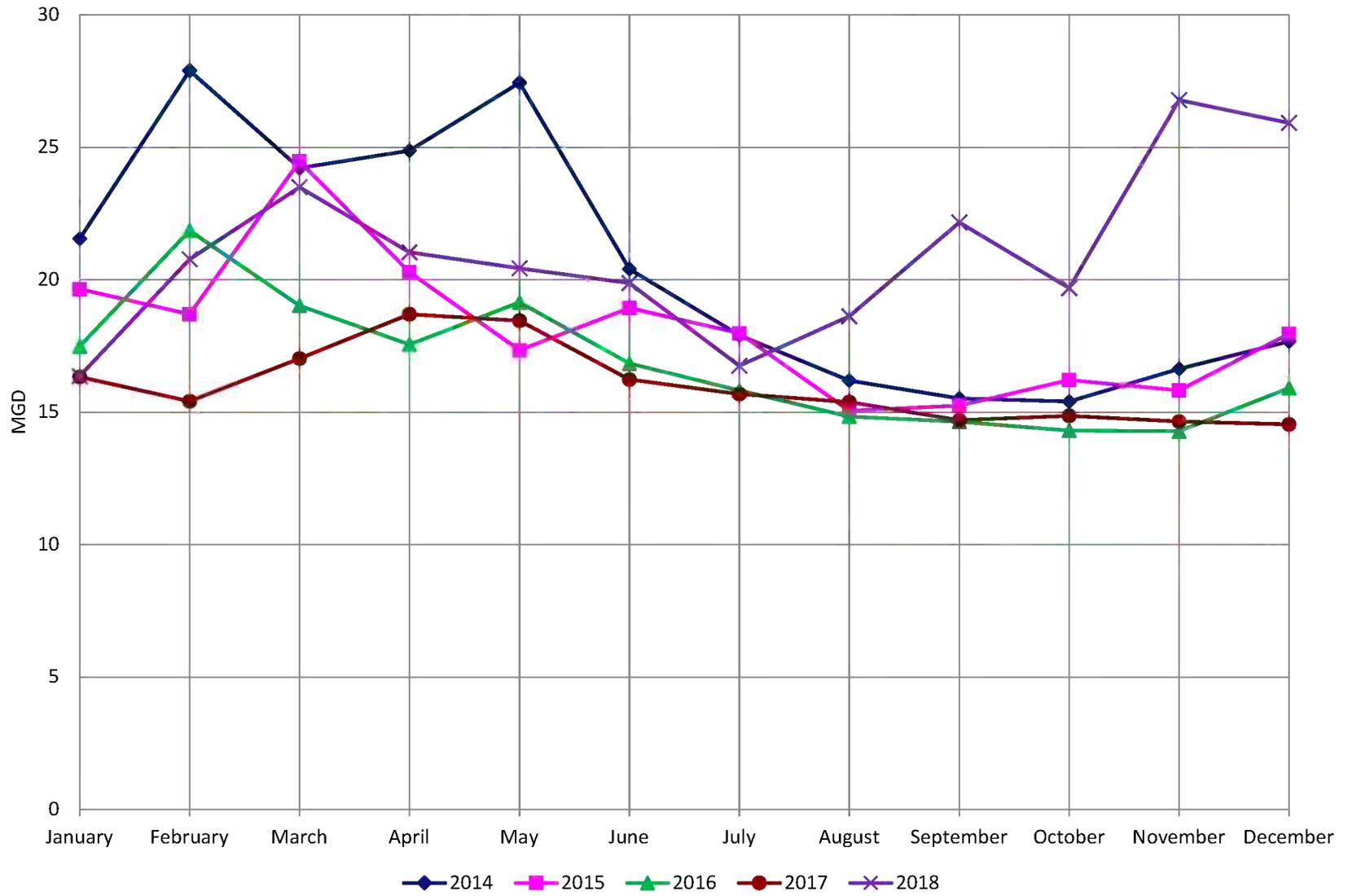
	2-Year Average Flow (MGD)	2017 Ave Flow (MGD)	2017 Max Flow (MGD)	Peak Ratio	Proj. 2-Year EDU Growth	2019 Proj. Max Flow (MGD)	Design Capacity (MGD)
Darby Creek	18.49	20.99	26.78	1.28	428.1	26.9	60.0
Muckinipates	4.25	4.78	6.23	1.30	4.0	6.2	24.0
Central Delaware (total flow)	9.83	11.09	14.41	1.30	257.2	14.5	40.0
Runnymede Drive (Edgmont Twp.)	0.11	0.12	0.14	1.19	28.0	0.1	0.0

Peak Ratio = 2017 Maximum / 2017 Average
 Projected 2-Year EDU Growth = Sum of 2017 & 2018 EDU Growth (4 EDU Minimum)
 EDUs are assigned a flow of 262.5 gallons/day

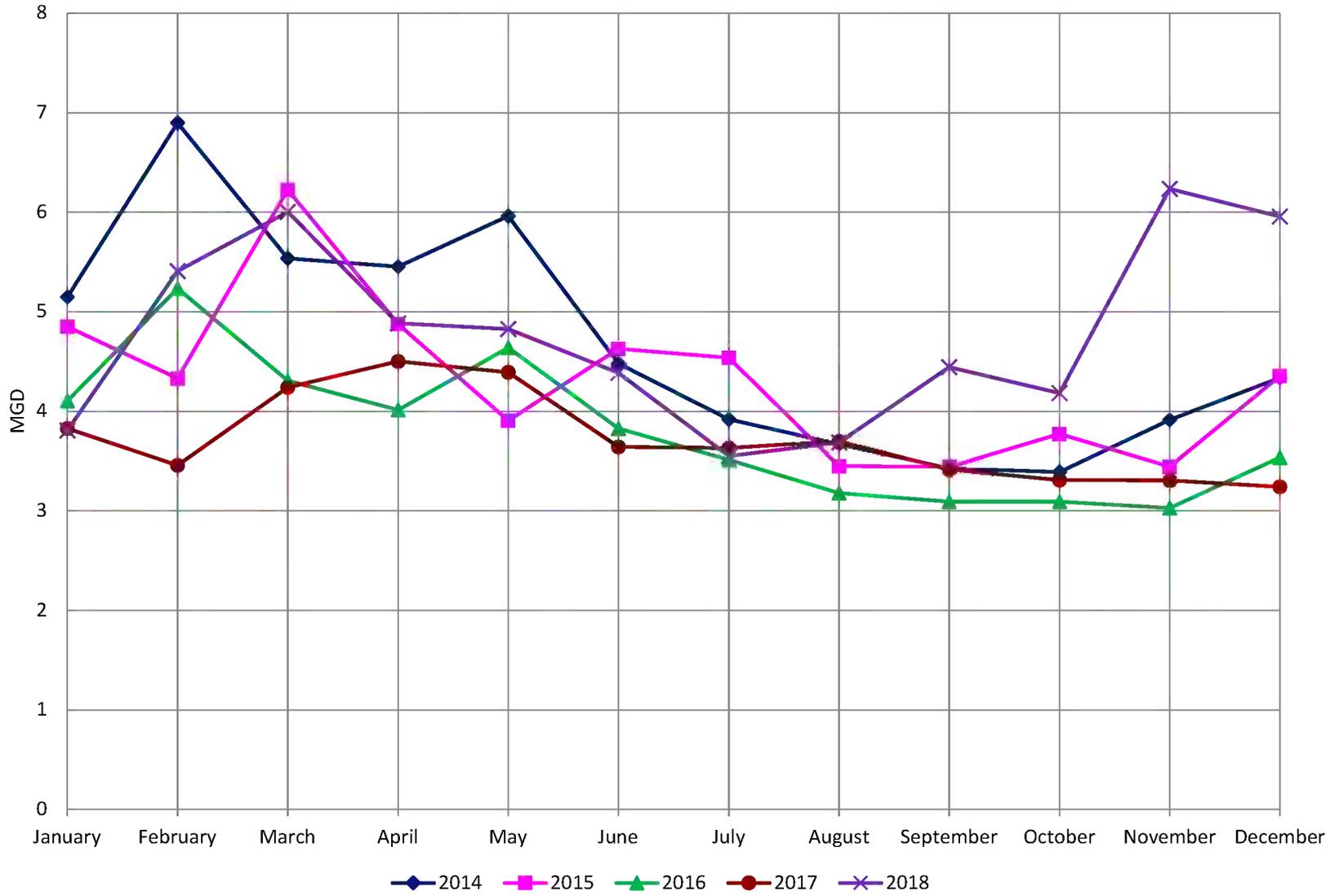
Eastern Pump Stations



Darby Creek Pump Station



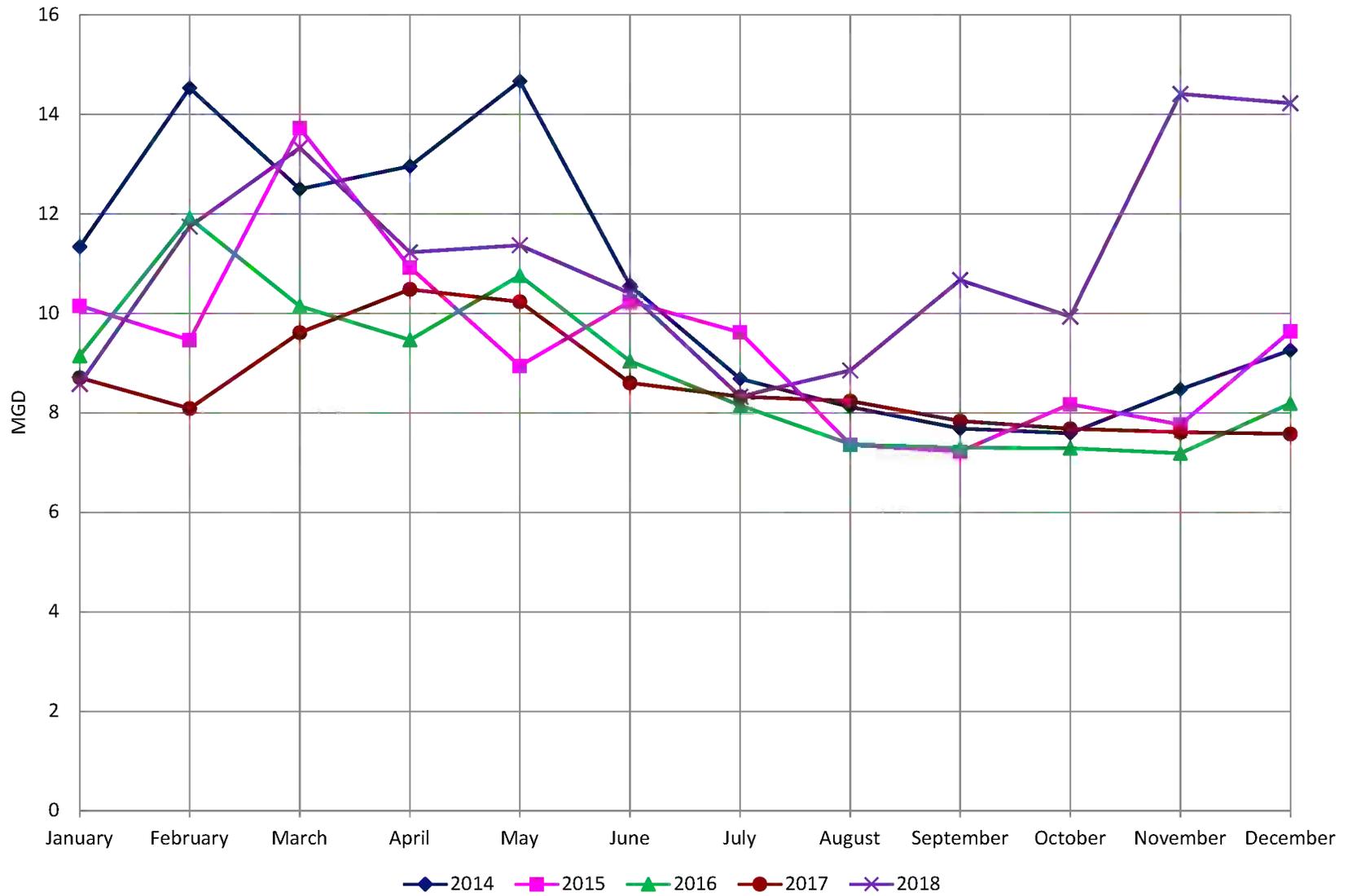
Muckinipates Pump Station



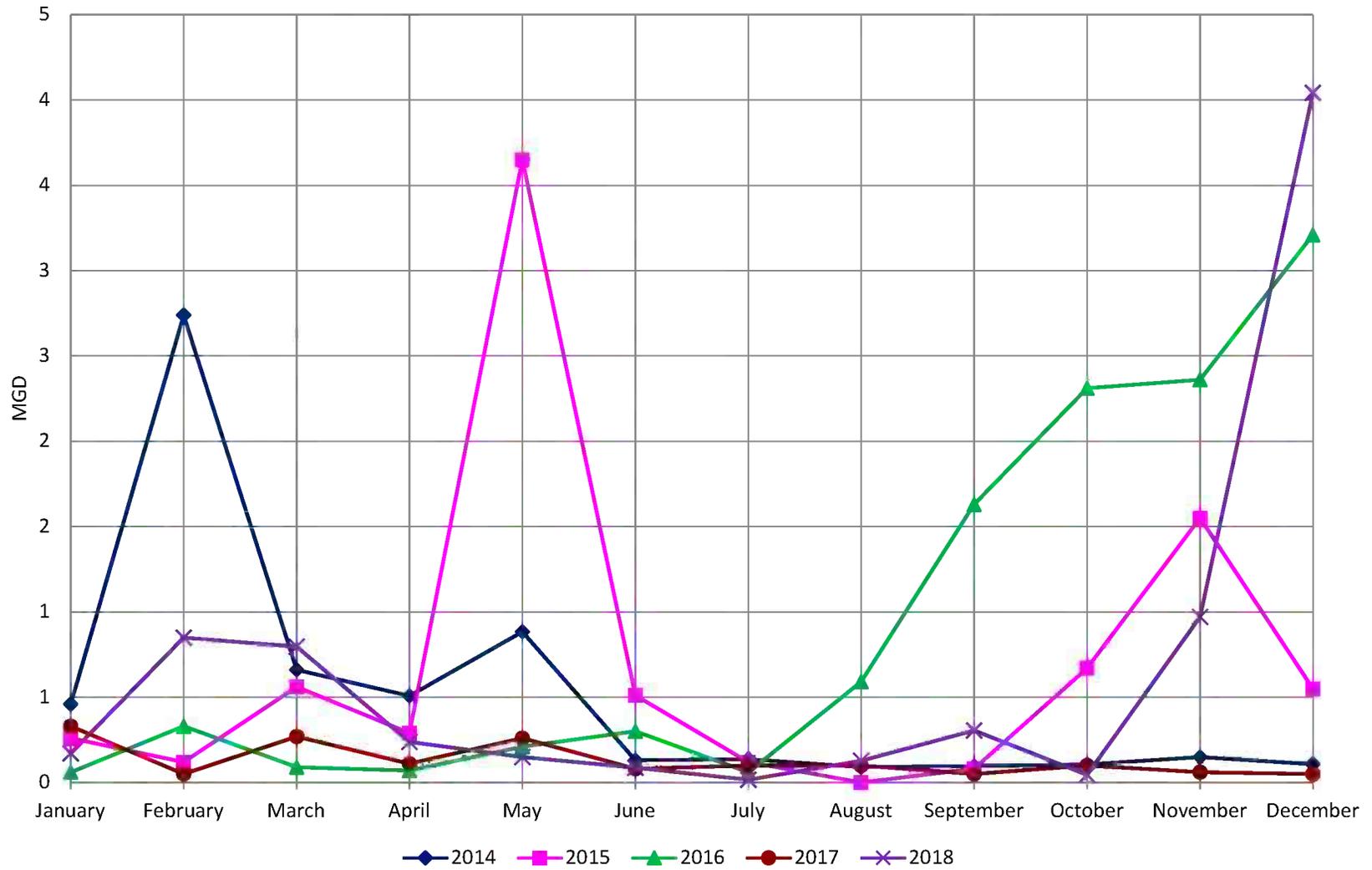
Runnymede Drive Pump Station



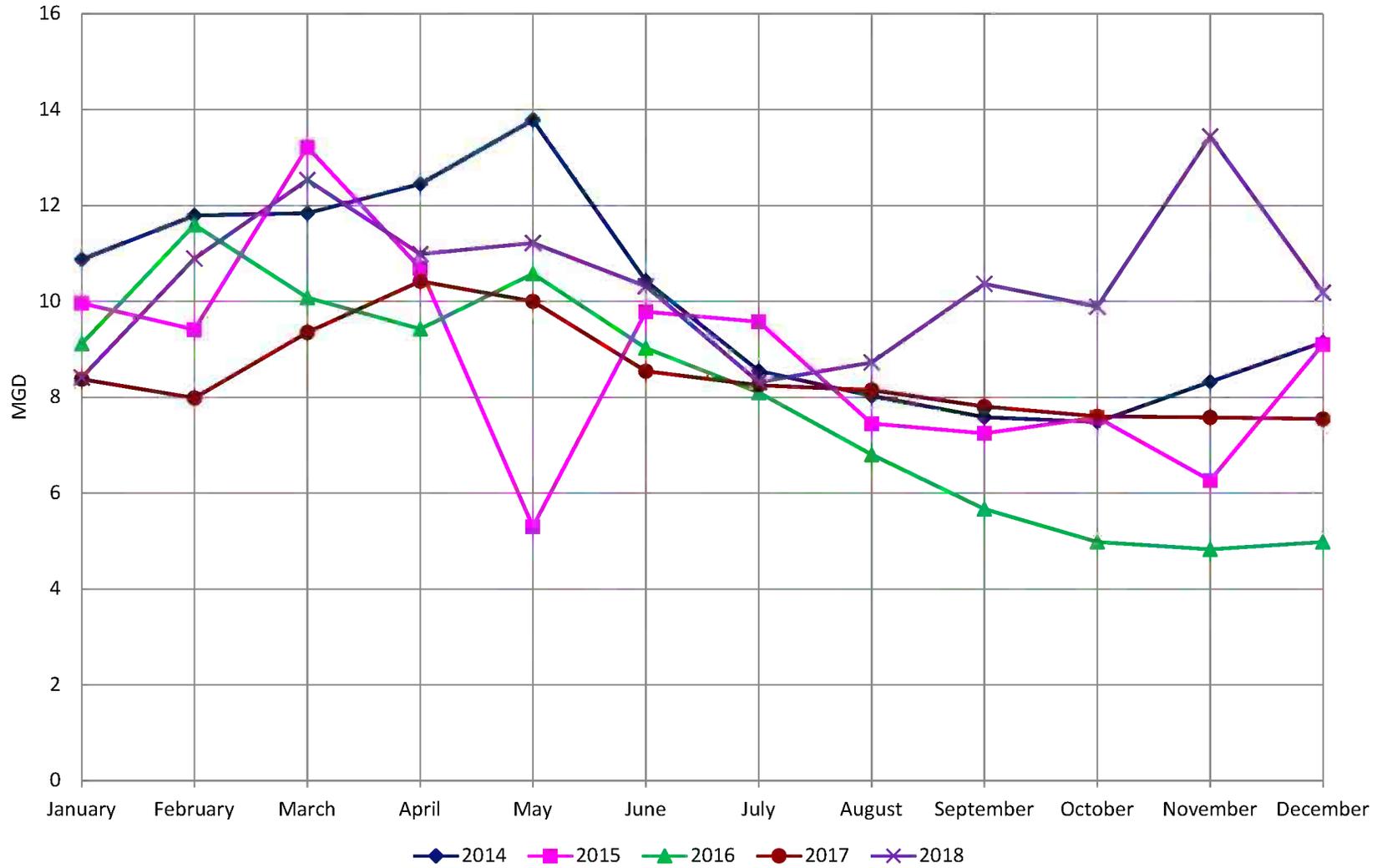
Central Delaware Pump Station



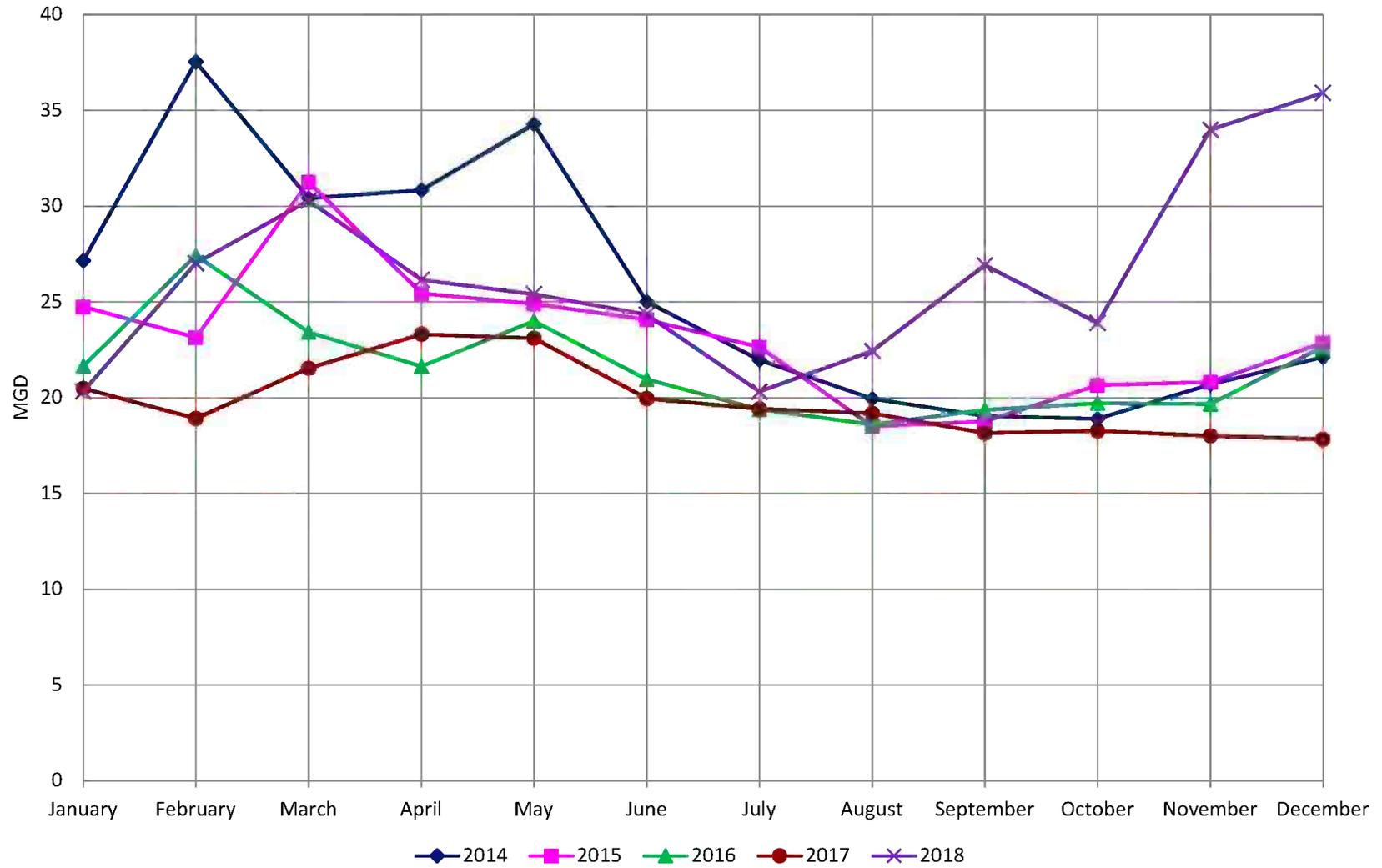
Central Delaware Pump Station Wastewater Pumped to SWWPCP



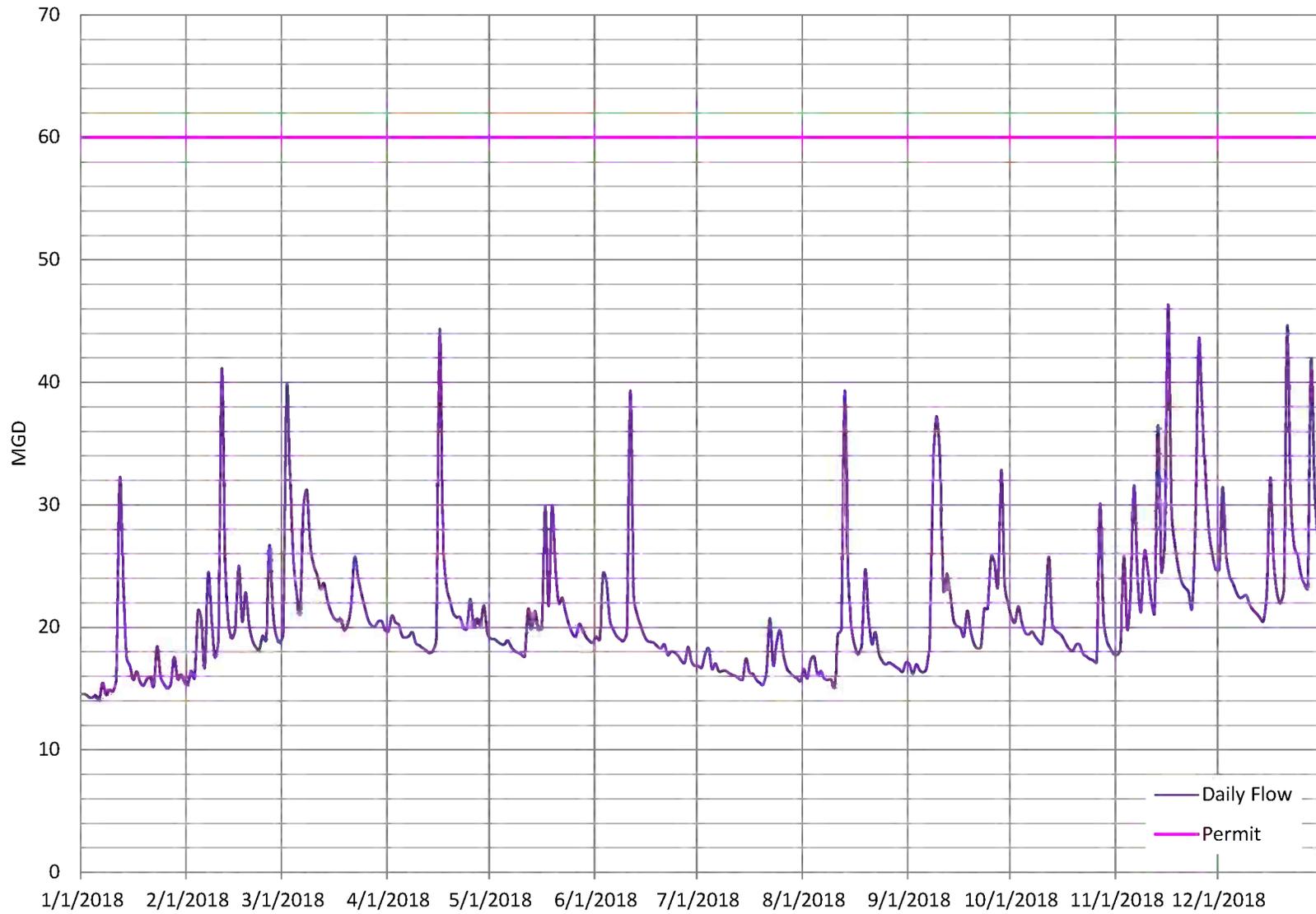
Central Delaware Pump Station Wastewater Pumped to WRTP



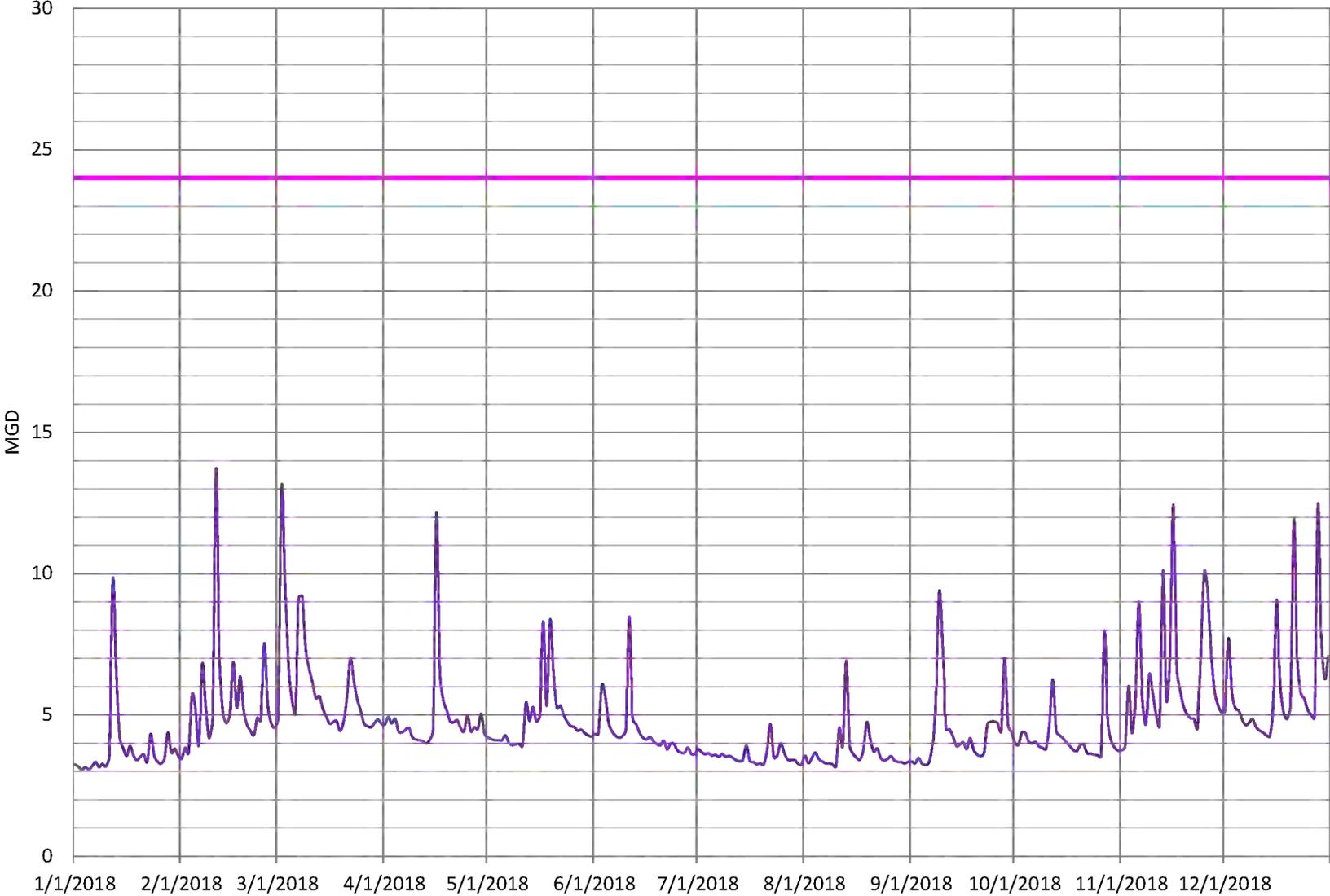
Eastern Service Area Wastewater Pumped to SWWPCP



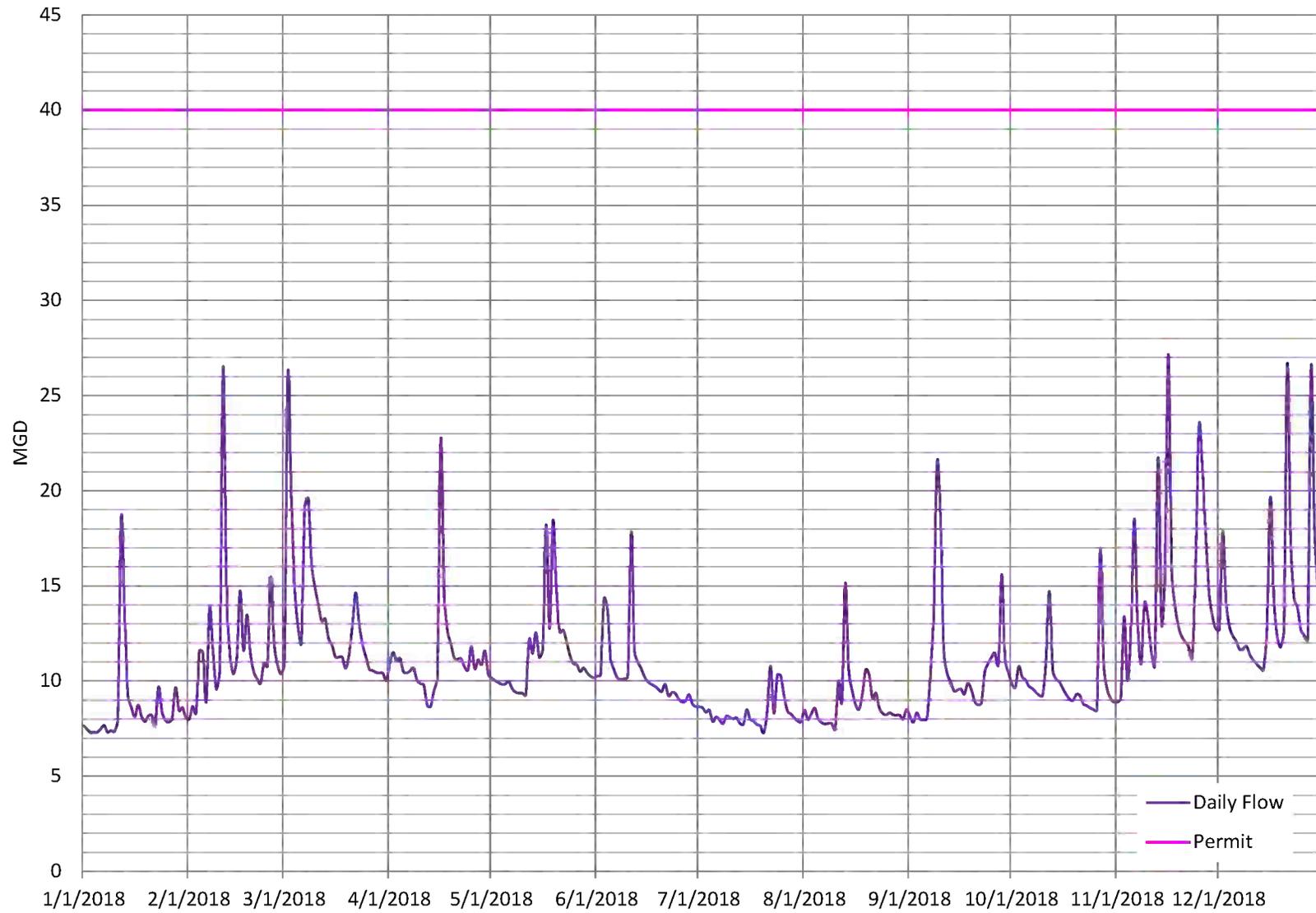
Darby Creek Pump Station



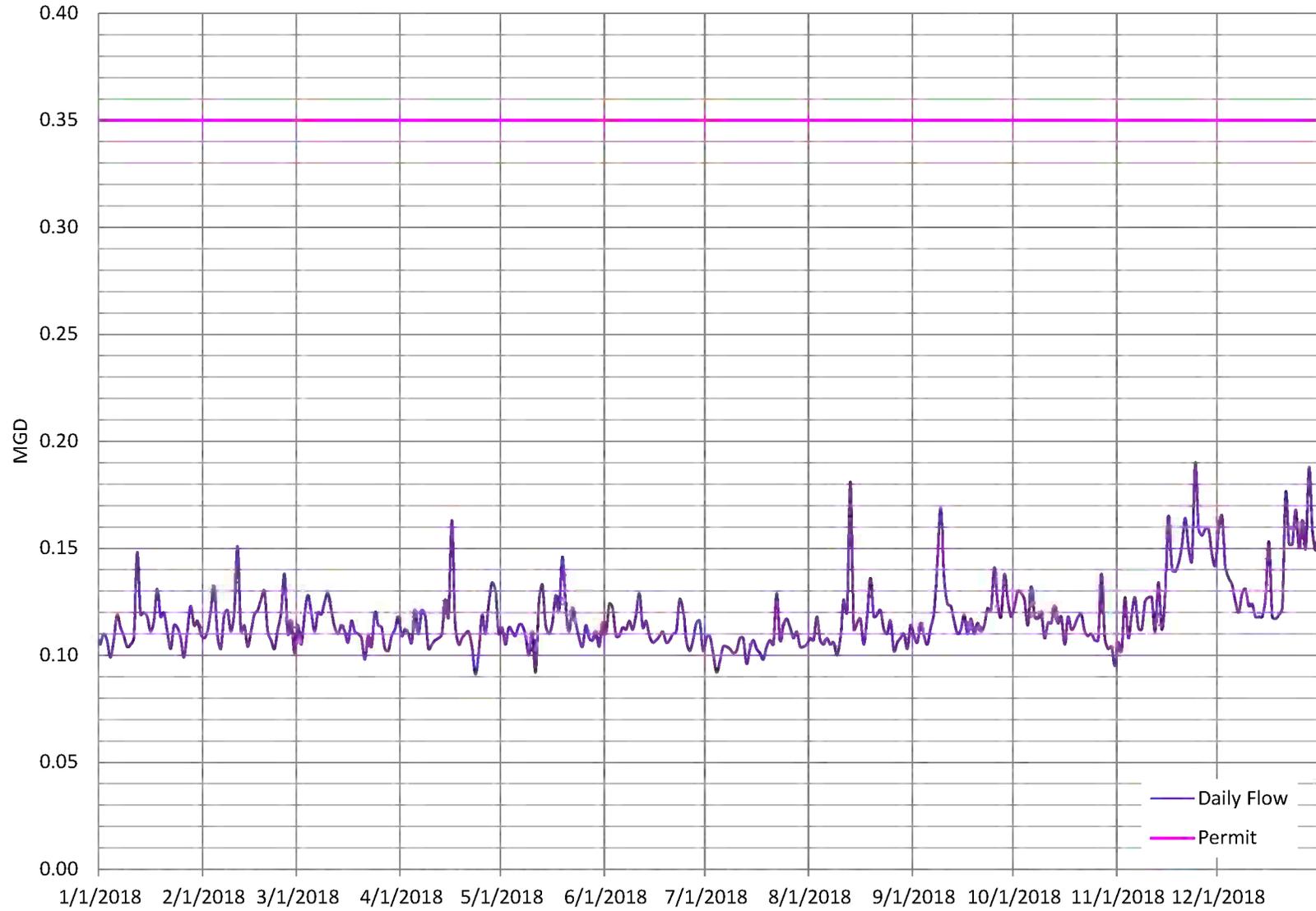
Muckinipates Pump Station



Central Delaware Pump Station



Runnymede Drive Pump Station



**FY 2018
SEWER PLANNING MODULE EXEMPTIONS**

PROJECT NUMBER (MAIL LOG #)	SITE LOCATION/ADDRESS	EDU'S	GPD'S	PUMP STA / TREATMENT FACILITY
2018-0409	145 King of Prussia Road Penn Medicine at Radnor (formerly Bio-Med) Radnor Twp. Engr: Pennoni Associates	0 - no increase	63,383	DCPS/PWD
2018-0721	1 Meadowood Road Radnor Twp. Delaware County Engr: Hilbec Engineering & Geosciences	2	525	DCPS/PWD
2018-0917	106 & 108 Cambria Court, Radnor Twp. Engr: Momenee, Inc.	1	262.5	DCPS/PWD
2018-1239	Estates at Coventry Woods- Phase 1 Springfield Twp Engr:Ebert Engineering	54	14058	DCPS/PWD
2018-1339	Simpson Gardens 2 Lansdowne Borough Engr:H. Gilroy Damon Associates	8.66	2274	DCPS/PWD
DCPS -- Darby Creek Pump Station MPS -- Muckinipates Pump Station				



DELAWARE COUNTY REGIONAL WATER QUALITY CONTROL AUTHORITY
P.O. Box 999 • Chester, PA 19016-0999

March 5, 2019

FED EX – NEXT DAY

Mr. Walter Milton
Philadelphia Water Department
Baxter Water Treatment Plant
9001 State Road
Philadelphia, PA 19136

RE: 2018 Pretreatment Report for DELCORA's Eastern Service Area

Dear Mr. Milton:

Please find enclosed the Pretreatment Report for DELCORA's Eastern Service Area, which discharges wastewater to the Southwest Philadelphia Treatment Plant.

Please contact Michael Krause at 610-876-5523, extension 218; if you require additional information. Copies of all 2018 correspondences for the listed industries have already been forwarded to you. If anything is missing, please notify me at 610-876-5523, extension 213.

Sincerely,

Irene Fitzgerald
Laboratory & Pretreatment Manager

IF:bab
enclosure

cc: R. Willert, DELCORA via email
C. Hurst, DELCORA via email
M. Krause, DELCORA via email
R. Rios, DELCORA via email
File Copy w/encl.

ADMINISTRATION

610-876-5523

FAX: 610-876-2728

CUSTOMER SERVICE/BILLING

610-876-5526

FAX: 610-876-1460

PURCHASING & STORES

610-876-5523

FAX: 610-497-7959

PLANT & MAINTENANCE

610-876-5523

FAX: 610-497-7950

PART A – PRETREATMENT PERFORMANCE SUMMARY

I. General Information

Control Authority Name: DELAWARE COUNTY REGIONAL WATER CONTROL AUTHORITY (DELCORA)
Address: 100 East Fifth Street, Post Office Box 999
City: Chester **State:** Pennsylvania **Zip:** 19016-0999
Contact Person: Irene Fitzgerald, Laboratory & Pretreatment Manager
Contact Telephone Number: (610) 876-5523, extension 213
E-mail Address: fitzgeraldi@delcora.org
NPDES Number: PA 0026671 (City of Philadelphia's SWWPCP)
Permit Issuance Date: 9/1/2007 **Expiration Date:** 08/31/2012
Report Period: 01/01/2018 – 12/31/2018
Total Categorical IUs (CIU's): 5
 Total Middle Tier CIU (MTCIUs): 0 (N/A)
 Total Nonsignificant CIU (NSCIUs): 0 (N/A)
Total Significant Noncategorical IU's (SNIUs): 4

II. Compliance Monitoring Program

1. No. of SIU's with Current Control Documents	7
2. No. of SIU Facilities Inspected	7
3. No. of SIU Facilities Sampled	3
4. No. of SIU's Submitting Self-Monitoring Reports	7

III. Significant Industrial User Compliance

1. No. of SIU's Violating a Compliance Schedule/No. on a Schedule	0/0
2. No. of SIU's in SNC for the July to December Period	0
3. No. of SIU's in SNC at any Time During Calendar Year	0
4. No. of SIU's in SNC that were also in SNC during the Previous Calendar Year	0
5. No. of NSCIUs that violated any standards or requirements	0 (N/A)

IV. Enforcement Actions

1. Notices of Violations Issued to SIU's	4
2. Administrative Orders Issued to SIU's	0
3. Civil/Criminal Suites Filed	0
4. No. of SIU's from which Penalties have been Collected	0
5. Other Actions (sewer bans, etc.) Show Cause Hearing	0

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge. (See Part B. V of the instructions)

Robert J. Willert
Name of Authorized Representative

Executive Director
Title (Print)


Signature

3/4/19
Date

PART A – SECTION I ATTACHMENT

Categorical Industrial Users in DELCORA's Eastern Service Area

<u>Industrial User</u>	<u>Categorical Status</u>	<u>Average Permitted Flow</u>
1) Eaton Aerospace LLC 24 E. Glenolden Avenue Glenolden, PA 19036	Metal Finishing 40 CFR 433 Subpart 433.17	No flow (zero industrial discharge)
2) First Time US Generics 505 Park Way, #6 Broomall, PA 19008	Pharmaceutical Manufacturing 40 CFR 439 Subpart D	No flow (zero industrial discharge)
3) Hydrol Chemical 520 Commerce Drive Yeadon, PA 19050	Pesticide Chemicals 40 CFR 455 Subpart C	No flow (zero industrial discharge)
4) Multiflex Plating Company 109 Willows Avenue Collingdale, PA 19023	Metal Finishing 40 CFR 433 Subpart 433.17	15,000 gpd
5) Precious Metals Plating Co. 21 South Chester Pike Glenolden, PA 19036	Electroplating 40 CFR 413 Subpart A, B, D, E & F	No flow (zero industrial discharge)

Significant Noncategorical Industrial Users in DELCORA's Eastern Service Area

<u>Industrial User</u>	<u>Average Permitted Flow</u>
1) Choice Party Linens, Inc. 1200 Pennsylvania Avenue Prospect Park, PA 19076	30,000 gpd
2) Sunoco Logistics Partners L.P. Darby Creek Tank Farm Calcon Hook and Hook Roads Darby, PA 19023	60,000 gpd

Changes to Industrial Listing 2018

Additions

Reason

None

Deletions

Reason

Central Laundry Inc. / DBA Olympic Laundry

Industry Closed (8/15/2018)

PECO Energy Co. Darby B
Former MGP site

Permit Terminated (10/1/2018)

Note:

PART A – SECTION II ATTACHMENT

Significant Industrial User Control Documents

<u>Industrial User</u>	<u>Permit Issuance Date</u>	<u>Expiration Date</u>
1) Choice Party Linens, Inc. 1200 Pennsylvania Avenue Prospect Park, PA 19076	05-01-17	04-30-21
2) Eaton Aerospace LLC 24 E. Glenolden Avenue Glenolden, PA 19036	10-01-17	09-30-21
3) First Time US Generics 505 Park Way, #6 Broomall, PA 19008	04-06-17	08-31-20
4) Hydrol Chemical 520 Commerce Drive Yeadon, PA 19050	04-01-18	03-31-22
5) Multiflex Plating Company 109 Willows Avenue Collingdale, PA 19023	12-01-17	11-30-21
6) Precious Metals Plating Co. 21 South Chester Pike Glenolden, PA 19036	06-01-17	05-31-21
7) Sunoco Logistics Partners L.P. Darby Creek Tank Farm Calcon Hook and Hook Roads Darby, PA 19023	08-01-17	12-31-19

General Control Mechanisms

None.

Industrial Users With Mass Based Limits Replacing Concentration Limits

None

CIUs with Monitoring Waivers for Categorical Pollutants

None.

Significant Industrial User Sampling Visits, Inspections & Self-Monitoring Events

<u>Industry</u>	<u>Validation Sampling</u>	<u>Inspections</u>	<u>Self-Monitoring Events</u>
Choice Party Linens, Inc.	2	1	14
Eaton Aerospace LLC (Zero Discharger)	0	1	0
First Time US Generics (Zero Discharger)	0	1	0
Hydrol Chemical Company (Zero Discharger)	0	1	0
Multiflex Plating Company	2	1	12
Precious Metals Plating Co. (Zero Discharger)	0	1	0
Sunoco Logistics Partners L.P.	2	1	20

List of SIU's Not Inspected During the Reporting Period

<u>Industry</u>	<u>Reason</u>
-----------------	---------------

None.

List of SIU's Not Sampled During the Reporting Period

<u>Industry</u>	<u>Reason</u>
Eaton Aerospace LLC	Zero discharge.
First Time US Generics	Zero discharge.
Hydrol Chemical	Zero discharge.
Precious Metals Plating Co.	Zero discharge

PART A – SECTION III ATTACHMENT

SIU Compliance

- 1) SIU's in SNC at any time during 2018**
None
- 2) SIU's that were SNC for this reporting year that were SNC in prior year.**
None
- 3) List of previously designated NSCIUs that have violated any pretreatment standards or requirements.**
None (N/A).
- 4) List of SIUs on a Formal Compliance Schedule**
None
- 5) List of SIUs on a Non-Formal Compliance Schedule**
None.
- 6) Copy of newspaper listings of SIUs in SNC during the calendar year.**
None

PART A – SECTION IV ATTACHMENT

Enforcement Actions

1. Significant Users Receiving Notices of Violations and Number Issued to Each User:

<u>Industrial User</u>	<u>Notice of Assessed Fines</u>	<u>Notices of Violations</u>	<u>Administrative Orders</u>
Choice Party Linens, Inc.	0	1	0
Eaton Aerospace LLC	0	0	0
First Time US Generics	0	0	0
Hydrol Chemical Co.	0	0	0
Multi-Flex Plating Co.	0	2	0
Precious Metals Plating Co.	0	0	0
Sunoco Logistics Partners L.P.	0	1	0

2. Significant Industrial Users Receiving Administrative Orders:

None

3. Civil and Criminal Penalties filed:

None.

4. Significant Industrial Users Assessed Penalties:

<u>Industrial User</u>	<u>FINE</u>	<u>VIOLATIONS</u>
-------------------------------	--------------------	--------------------------

None

5. Penalties not collected in prior reporting year:

<u>Industrial User</u>	<u>FINE</u>	<u>VIOLATIONS</u>	<u>STATUS</u>
-------------------------------	--------------------	--------------------------	----------------------

None

6. Description of all Actions that have included Administrative Orders:

None.

7. Description of any "Other Actions":

Central Laundry Inc. / dba Olympic Supply – Permit Termination

Central Laundry Inc. / dba Olympic Supply changed management around May 2018. Subsequently, the IU stopped submitting Self-monitoring data for the May 2018 and June 2018 reports and no correspondence was received in July 2018 and August 2018. DELCORA went to the facility on August 16, 2018 to perform an unannounced inspection and to hand deliver NOVs and SNC notices; however, the gate was locked and a notice from the water company indicated that the water had been shut off due to nonpayment as of August 15, 2018 at 11:35 am. DELCORA terminated the permit as the facility closed operations. PWD and DELCORA determined that SNC penalties and publication are of no use since the company and owners' whereabouts are unknown. A new company has since taken over the facility as of October 11, 2018 and has been operating at less than 25,000 gpd. DELCORA will continue to monitor flow volumes and, if the average flow exceeds 25,000 gpd, DELCORA will work with PWD to either issue a pretreatment permit or to take enforcement action if the facility is nonresponsive.

8. SIU's in Violation but not Subjected to Enforcement:

None.

DELCORA

US EPA General Pretreatment Regulations require that "Control Authorities" publish, at least once per year, a list of industrial users that were in significant non-compliance with applicable pretreatment standards and requirements. US EPA defines "Significant Non-Compliance" as:

1. Chronic violations of a pretreatment limit in a rolling 6 month period.
2. Any discharge that causes damage to the treatment facility or the environment.
3. Failure to meet Compliance Schedule Milestones.
4. Failure to file reports within 30 days of their due date.
5. Failure to accurately report noncompliance.

DELCORA is the "Control Authority" for the areas served by the Western Regional Treatment Plant in Chester, and the Eastern Service Area Pump Stations. The following industrial users were in Significant Non-Compliance with standards and requirements during 2018.

EASTERN SERVICE AREA

Industry

Significant Non-Compliance

None

THE DELCORA STANDARDS, RULES,
AND REGULATIONS OF 2011

RESOLUTION NO. 2011-04

AS FIRST ADOPTED

APRIL 19, 2011

DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY
DELAWARE COUNTY, PENNSYLVANIA

rev. 9/2013-revised Local Limits

rev. 9/2014-revised Pretreatment Fees

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DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY
DELAWARE COUNTY, PENNSYLVANIA

RESOLUTION NO. 2011-04

ADOPTED

APRIL 19, 2011

ADOPTING STANDARDS, RULES AND REGULATIONS GOVERNING THE PROPER DISPOSITION OF ALL MANNER OF WASTEWATERS INTRODUCED INTO THE DELCORA WASTEWATER MANAGEMENT SYSTEM, INCLUDING THE ACCEPTANCE OF THESE WASTEWATERS AND THE CONNECTION TO AND THE CONTINUED USAGE OF DELCORA FACILITIES; ESTABLISHING THE PROCEDURES, ENFORCEMENT PROVISIONS AND FEE SYSTEM TO ADMINISTER THE REGULATIONS; AND OTHER MISCELLANEOUS MATTERS.

BE IT RESOLVED BY THE DELAWARE COUNTY REGIONAL WATER QUALITY CONTROL AUTHORITY (hereinafter referred to as DELCORA) as follows:

ARTICLE 100

GENERAL PROVISIONS

SECTION 101 - SHORT TITLE.

These Standards, Rules and Regulations shall be known as and may be cited as "The DELCORA Standards, Rules and Regulations of 2011."

SECTION 102 - DELCORA'S RESPONSIBILITY AND SERVICE AREAS.

(A) DELCORA was established by the Delaware County Commissioners on October 20, 1971, and organized in accordance with the Municipality Authorities Act of 1945 (P.L. 382, 53 P.S. 301 *et seq.* as amended and supplemented). DELCORA was authorized to exercise all powers granted under the Act to implement the county-wide wastewater management plan recommended by the November 1972 "Delaware County Regional Sewerage Project" report prepared by the Albright and Friel Division of Betz Environmental Engineers, Inc. DELCORA's role as implementation agency for the Delaware County Wastewater Management Plan involves the acquisition, holding, construction, improvement, maintenance, operation, owning and leasing of sewers, sewer systems, and sewerage treatment works (including works for the treatment and disposal of industrial wastewaters), and the contracting with individuals, corporations, municipal corporations, authorities, and other governmental bodies and regulatory agencies both

within and outside Delaware County as may be authorized and necessary in fulfilling the objectives of the regional plan.

(B) DELCORA shall define its service areas and establish the local limits for each by separate resolution, which resolution may be amended from time to time without affecting the validity of these Standards, Rules and Regulations.

SECTION 103 – PURPOSE.

(A) Wastewaters to be received, conveyed and treated by DELCORA will be discharged into waters of the Commonwealth of Pennsylvania, either from DELCORA owned facilities or through the City of Philadelphia's Southwest Water Pollution Control Plant. In order to effectively manage such wastewater facilities, it is essential that DELCORA set forth Standards, Rules and Regulations governing all manner of usage of its facilities and all attendant terms and conditions.

(B) Therefore, these Standards, Rules, and Regulations are necessary in order to ensure the following purposes:

(1) That all discharges comply with the provisions of the Clean Water Act of 1977, as amended, the Clean Streams Law of Pennsylvania, as amended, the Delaware River Basin Compact, and any other legislation which has been or may be enacted to govern such matters, and the corresponding rules and regulations, and permits which have been or may be duly adopted or issued pursuant to the above by United States Environmental Protection Agency (USEPA), Pennsylvania Department of Environmental Protection (PADEP), Delaware River Basin Commission (DRBC), or any other agency duly empowered to exercise such control;

(2) That DELCORA's wastewater collection, conveyance, and treatment facilities achieve their design operational performance and are efficiently and economically maintained;

(3) That pollutants are prevented from introduction into the system which may interfere with the treatment plant processes resulting in reduced performance, violation of permit conditions, degradation of receiving water quality, air quality or otherwise cause "Interference" as defined herein and in USEPA's pretreatment regulations, 40 CFR Part 403;

(4) That pollutants are prevented from introduction into the system which may Pass Through the system inadequately treated, causing violation of permit conditions, degradation of receiving water quality, air quality, or which otherwise may be incompatible with proper system function or cause "Pass Through" as defined herein and in USEPA's pretreatment regulations, 40 CFR Part 403;

- (5) That pollutants are prevented from introduction into the system which may result in the contamination of sludge or resultant ash which minimizes available disposal options or limits the opportunity to recycle, reclaim or reuse wastewaters, sludges, or resultant ash from the system;
- (6) That the structural integrity of all conveyance facilities, collection facilities, components facilities, and equipment comprising the DELCORA Wastewater Management System is maintained;
- (7) That the health, safety and welfare of personnel and the general populace and the non-endangerment of the environment is fostered and promoted;
- (8) That the cost associated with administering, operating and maintaining the DELCORA Wastewater Management System is equitably distributed in accordance with the benefit enjoyed in its existence and use; and
- (9) That DELCORA's system is in compliance with Environmental Protection Agency Pretreatment Standards, 40 CFR Part 401 et seq., as amended, at present and hereinafter, establishing the responsibility of local governmental entities, industry and the public to implement National Pretreatment Standards.
- (C) In order that the aforementioned purposes can be achieved, it is deemed necessary and proper to adopt Standards, Rules and Regulations governing discharges into the DELCORA system.

SECTION 104 - APPLICABILITY.

The DELCORA Standards, Rules and Regulations are applicable to all persons, municipalities, authorities, or industries, both within and outside Delaware County who are by contract, permit, or agreement Users of or discharge into the DELCORA Wastewater Management System. Users subject to this Resolution include both current Users and persons, municipalities, authorities, or industries which may hereafter become Users of the DELCORA Wastewater Management System. DELCORA's Standards, Rules and Regulations shall be applicable to all types of wastewater and all classes of Users whether by primary connection into a system administered by DELCORA or by secondary connection following collection and/or conveyance by any intermediate tributary User system into a DELCORA administered system and/or by discharge of trucked or hauled wastes to a designated point.

SECTION 105 - DECLARATION OF POLICIES AND GENERAL REQUIREMENTS.

(A) It is DELCORA's policy to establish hereby, by Resolution of its Board of Directors, Standards, Rules and Regulations governing the proper disposition of all manner of wastewaters introduced into the DELCORA Wastewater Management System. This Resolution is specifically directed toward acceptance of wastewaters, the connection to

and continued usage of DELCORA facilities comprising the system, establishment of procedures and enforcement provisions applicable to system usage, and the setting of fees for equitably distributing the costs to administer the regulations.

(B) It is also established that the following general policies and requirements shall prevail throughout:

(1) Uniformity of Standards. These Standards, Rules and Regulations shall be uniform and apply equally to all types of Users in the same class, in the same service area.

(2) Consistency With Other Programs. It shall be DELCORA's policy to be consistent with any regulations governing such matters as those addressed within these Standards, Rules and Regulations as may be duly established by any regulatory agency duly authorized and empowered to exercise such control. Agency regulations shall be deemed to constitute minimum standards of performance and DELCORA's intent to comply in satisfaction thereof may assume the form of either adherence to the Agency regulations, or the promulgation, alteration, or amendment of DELCORA regulations in affording administration of either an equivalent or more stringent standard. All dischargers tributary to DELCORA facilities in the Eastern Delaware County Service Area must also comply with all applicable standards of the Philadelphia Water Department so long as the user's discharge is conveyed to the City's Wastewater Collection System and where such standards are more stringent than the standards herein, the Philadelphia standards shall take precedence for the dischargers in the Eastern Service Area.

(3) Equivalent Municipal and Municipal Authority Requirements. All governmental entities discharging to the DELCORA Wastewater Management System shall enact suitable regulations or ordinances which at a minimum, offer equivalency with DELCORA's Standards, Rules and Regulations. The governmental entity shall also adopt an Ordinance or Resolution which imposes civil liability for the violation of DELCORA's Standards, Rules and Regulations. The maximum civil penalty liability shall equal a sum of at least one thousand dollars (\$1,000.00) per day per violation and up to the maximum penalty or fine allowed by law. Such enactment is not intended to supersede codes or ordinances dealing with local preferences or prerogatives but to assure the capability to cooperatively and comprehensively support DELCORA's administrative responsibilities. When DELCORA wishes to seek civil penalties against a User, DELCORA shall notify the appropriate governmental entity, in writing, requesting that the governmental entity institute proceedings or delegate its authority to do so to DELCORA, provided however, that if proceedings are not instituted by the governmental entity or DELCORA is not notified of their intent to do so within fifteen (15) days, then such delegation automatically is granted to DELCORA, and

DELCORA may proceed to institute suit for civil penalties in accordance with these Standards, Rules and Regulations.

(4) User Compliance. It shall be each User's responsibility to comply with all applicable Agency and DELCORA regulations in a time and manner as stipulated by the issuing Agency(s) or DELCORA.

(5) Variances.

(a) Each user must comply with the standards set forth herein unless the user first requests and secures a variance from DELCORA. DELCORA will not grant a variance unless the user provides information by which DELCORA conclusively determines:

(i) DELCORA's local limitations shall be based on the USEPA approved headworks analysis. The limitations shall be set forth by DELCORA resolution.

(ii) That the variance will not adversely impact the operation of DELCORA's system in any other manner.

(iii) In no event shall any variance allow the total loading allocated to all industrial users for any pollutant to exceed the maximum allowable industrial loading set forth in the most recent headworks analysis submitted by the Authority and approved by the USEPA as part of DELCORA's Pretreatment Program.

(iv) In no event shall any variance permit the violation of a categorical standard (as defined in Section 107(A)(10) or any pretreatment standard or requirement found in 40 CFR 403.

(b) Such variances must be requested and supported by technical information substantiating the variance requested and the lack of impact on DELCORA operations. Approval of a variance must also be given by the City of Philadelphia for users in the Eastern Service Area. Variance approvals shall only be valid if granted in writing.

(c) DELCORA prohibits changes or variances of any categorical standard and/or federal pretreatment requirements.

SECTION 106 - INDUSTRIAL WASTE CONTROL PROGRAM.

It is the intent of this Resolution to establish a system of legal authority, procedures and resources to control the introduction of wastewater discharges into the DELCORA system

which is consistent with Title III of the Clean Water Act and regulations promulgated pursuant to the same, as published in 40 CFR Parts 401-471.

SECTION 107 - DEFINITIONS AND ABBREVIATIONS.

(A) The following terms shall be construed to have the following meanings in these Standards, Rules and Regulations except in those instances where the context clearly indicates otherwise.

(1) Act (the Clean Water Act). The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. §1251 et seq.

(2) Agency (Regulatory Agency). Any Local, Municipal, State, Regional or Federal entity with jurisdiction over wastewater disposal or environmental matters in the POTW's service area.

(3) Approval Authority. The Director in a NPDES State with an approved State pretreatment program and the appropriate Regional Administrator of the USEPA in a non-NPDES State without an approved State pretreatment program.

(4) Authority (DELCORA). The Delaware County Regional Water Quality Control Authority, including agents or persons authorized to act on its behalf.

(5) Authorized Representative of Industrial User.

(a) If the User is a corporation:

(i) The president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

(ii) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for individual wastewater discharge permit or general permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(b) If the User is a partnership or sole proprietorship: a general partner or proprietor, respectively.

(c) If the User is a Federal, State, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.

(d) The individuals described in paragraphs a through c, above, may designate a Duly Authorized Representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to DELCORA.

(6) Best Management Practices (BMPs). BMPs are management and operational procedures that are intended to prevent pollutants from entering a facility's wastestream or from reaching a discharge point. BMPs are defined in Title 40 of the Code of Federal Regulations (CFR) 403.3(e) as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the general and specific prohibitions listed in sections 403.5(a)(1) and (b). BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

(7) Biochemical Oxygen Demand (BOD₅). The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure for five (5) days at twenty (20) degrees centigrade expressed in terms of concentration or loading.

(8) Building Lateral. A private sewer conveying wastewater from the premises of a User to the DELCORA Wastewater Management System or the City's Wastewater Collection System.

(9) Bypass. The intentional diversion of wastestreams from any portion of an Industrial User's pre-treatment facility.

(10) Categorical Pretreatment Standard or Categorical Standard. Any regulation containing pollutant discharge limits promulgated by USEPA in accordance with sections 307(b) and (c) of the Act (33 U.S.C. section 1317) that apply to a specific category of Users and that appear in 40 CFR Chapter I, Subchapter N, Parts 405-471.

(11) Categorical Industrial User. An Industrial User subject to a Categorical Pretreatment Standard or Categorical Standard.

- (12) Chain of Custody. Written documentation such as receipts and record book entries to show the history of possession, custody and/or control of a sample from collection through analysis.
- (13) City – the City of Philadelphia or the Philadelphia Water Department.
- (14) Chemical Oxygen Demand or COD. A measure of the oxygen required to oxidize all compounds, both organic and inorganic, in water.
- (15) Collection Facilities. The sewers, lift stations, pumping stations, force mains, and other POTW equipment, structures, and facilities used to collect wastewaters from individual Users within specific tributary districts and transport them to conveyance facilities for transmission to the treatment plant for processing.
- (16) Combined Sewer (Combined Collector). A pipe or conduit intended to carry varying proportions of sanitary wastewater, industrial wastewater, stormwater, and/or non-contact cooling water.
- (17) Commercial User. A source of discharge of sanitary wastewater to a public sewer system from premises used partially or entirely for commercial purposes with wastewater varying in composition, quantity, or quality from the characteristics or proportions exhibited by sanitary wastewater generated from typical domestic activities but such term does not include non-domestic source(s) of wastewater or industrial wastewater from commercial premises.
- (18) Composite Sample. A sample prepared by combining discrete samples collected from the wastestream either at periodic time intervals or in proportion to the wastestream flow. The frequency of discrete sample collection is a function of variability of pollutant(s) concentration(s) and/or wastestream flow.
- (19) Control Authority. DELCORA.
- (20) Conventional Wastewater Pollutants. Pollutants so designated in accordance with Section 304(a)(4) of the Act as being effectively managed by secondary treatment as defined by 40 CFR Part 133.
- (21) Conveyance Facilities. The interceptor, sewers, pumping stations, force mains, and other POTW equipment, structures, and facilities used to transport wastewater from tributary districts to centralized areas for wastewater treatment.
- (22) Daily Maximum Limit. The maximum allowable discharge limit of a pollutant during a calendar day or 24-hour period. Where Daily Maximum Limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of a day. Where Daily Maximum Limits are expressed in terms of

concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

(23) DELCORA Wastewater Management System. All components, piping, valving, equipment, structures, conveyance facilities, collection facilities and other sewerage facilities administered by DELCORA for purposes of wastewater collection, conveyance, and/or treatment.

(24) Direct Discharge. The discharge of treated or untreated wastewater directly to the waters of the Commonwealth of Pennsylvania which may occur through DELCORA's or the City's stormwater conduits or combined sewer outfall structures.

(25) Domestic Source. Source of sanitary wastewater from a residential user.

(26) Environmental Protection Agency (USEPA). The United States Environmental Protection Agency (USEPA), or where appropriate the term may also be used as a designation for the Regional Water Management Division Director, the Regional Administrator or other duly authorized official of said agency.

(27) Existing Source. Any source of discharge that is not a "New Source".

(28) Flashpoint. The temperature at which a liquid or volatile solid gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the test vessel. Flashpoint is determined by the test methods set forth in 40 CFR §261.21.

(29) Grab Sample. A sample that is taken from a wastestream without regard to the flow in the wastestream and over a period of time not to exceed fifteen (15) minutes.

(30) Hauled Wastewater. Wastewater of a domestic or non-domestic nature from a User, which is delivered via truck or tanker and discharged into an approved discharge point at the POTW.

(31) Hazardous Pollutants. Substances so defined pursuant to criteria established within Section 311 of the Act.

(32) Holding Tank Waste. Any waste from holding tanks such as vessels, chemical toilets, campers, trailers, septic tanks, vacuum-pump tank trucks or trucked or hauled pollutants and/or sludge.

(33) Indirect Discharge or Discharge. Introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b)(c) or (d) of the Act.

- (34) Industrial User. A source of indirect discharge to a POTW.
- (35) Industrial Wastewater. The liquid or water-borne wastes from industrial or manufacturing processes. Unless specifically stated otherwise, this term shall not include sanitary sewage or sanitary wastewater components.
- (36) Instantaneous Limit. The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.
- (37) Interference. A discharge, alone or in conjunction with a discharge or discharges from other sources, which:
- (a) inhibits or disrupts the POTW, its treatment processes, operations or maintenance activities, or its sludge and resultant ash processes, use, reuse, recycling or disposal; or
 - (b) causes a violation of any requirement of the POTW's operating permits (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use, recycling or reuse or disposal (including the resultant ash) in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local statutes and/or regulations): including but not limited to NPDES; Title V; solid waste processing permit; Section 405 of the Clean Water Act; the Solid Waste Disposal Act (SWDA); [including Title II more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA]; the Clean Air Act; the Toxic Substances Control Act; and the Marine Protection, Research and Sanctuaries Act.
- (38) Intermediate Conveyors (Intermediate Transmission). Any person(s) under express or implied contract or agreement with a POTW to accept secondary wastewater contributions through secondary system connection for subsequent conveyance or transmission into the POTW.
- (39) Local Limit. Specific discharge limits developed and enforced by DELCORA or the City of Philadelphia upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in 40 CFR 403.5(a)(1) and (b).
- (40) Mass Loading. The mass of pollutant(s) discharged from a user's connection with respect to either time, or in cases of certain Industrial Users, in terms of characteristic production units.

(41) Medical Waste. Isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

(42) Monthly Average. The sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

(43) Monthly Average Limit. The highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measure during a calendar month divided by the number of "daily discharges" measured during that month.

(44) National Prohibitive Discharge Standards (Prohibitive Discharge Standards, General Pretreatment Regulations). Any regulation containing pollutant discharge limits promulgated by the USEPA under the authority of Section 307(b) of the Act and as published in 40 CFR Part 403.

(45) New Source.

(a) Any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under Section 307 (c) of the Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:

(i) The building, structure, facility or installation is constructed at a site which no other source is located; or

(ii) The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

(iii) The production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.

(b) Construction on a site at which an Existing Source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of

paragraphs (a)(ii) and (a)(iii) of this subsection but otherwise alters, replaces, or adds to existing process or production equipment.

(c) Construction of a new source as defined under this subsection has commenced if the owner or operator has:

(i) Begun, or caused to begin as a continuous on site construction program:

(1) Any placement, assembly, or installation of facilities or equipment; or

(2) Significant site preparation work including clearing, excavation, or removals of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

(ii) Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

(46) National Pollution Discharge Elimination System Permit (NPDES Permit). A permit issued to the POTW pursuant to Section 402 of the Act (33 U.S.C. §1342).

(47) Non-Contact Cooling Water (NCCW). Water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

(48) Non-domestic source. A source of wastewater which contains pollutants other than sanitary wastewater.

(49) Pass Through. A discharge which exits the POTW into waters or the atmosphere of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or a violation of any air emission standards set pursuant to the Clean Air Act.

(50) Person. Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns, whether

Users or not. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

(51) pH. The logarithm (base 10) of the reciprocal of the hydrogen ion concentration in grams per liter of solution.

(52) Pollutant. Any liquid, solid or gaseous material including, but not limited to any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, Medical Wastes, radioactive materials, heat, wrecked or discharged equipment, rock, sand, cellar dirt, and industrial, municipal, non-domestic sewage waste and agricultural waste discharged into water including conventional wastewater pollutants (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor).

(53) Pollution. The man-made or man-induced alteration of the chemical, physical, biological, and/or radiological integrity of water.

(54) POTW (Publicly Owned Treatment Works). A treatment works as defined by Section 212, 33 S.S.C. §1292 of the Act, which is owned by a State or municipality [as defined by Section 502(4) of the Act, 33 U.S.C. §1362(4)]. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyance facilities only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in Section 502(4) of the Act, 33 U.S.C. §1362(4), or the Authority which has jurisdiction over the indirect discharges to and the discharges from such a treatment works. For the purposes of these Standards, Rules and Regulations, "POTW" shall also include any sewers, pipes and other conveyances that convey wastewaters to the DELCORA Wastewater Management System and/or the city's Wastewater Collection System from persons outside the City in the Eastern Service Area.

(55) Pretreatment or Treatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical or biological processes, process changes, or other means except as prohibited by 40 CFR §403.6(d). Pretreatment technology includes control equipment, such as equalization tanks or facilities, or protection against surges or slug loadings that might interfere with or otherwise be incompatible with the POTW. However, where wastewater from a regulated process is mixed in an equalization facility with unregulated wastewater or with wastewater from another regulated process, the effluent from the equalization facility must meet an adjusted pretreatment limit calculated in accordance with USEPA regulations, 40 CFR §403.6(e).

(56) Pretreatment Requirements. Any substantive or procedural requirement related to pretreatment, other than a Pretreatment Standard.

(57) Pretreatment Standards or Standards. Pretreatment Standards shall mean Prohibited Discharge Standards (both National and State), Categorical Pretreatment Standards, and Local Limits.

(58) Process Wastewater. Any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of: any raw material, intermediate product, finished product, by-product, or waste product, either discharged continuously, intermittently or as a batch discharge.

(59) Prohibited Discharge Standards or Prohibited Discharges. Absolute prohibitions against the discharge of certain substances; as set forth in Sections 200 and 201 of this ordinance.

(60) Representative Sample. A sample extracted from the wastestream whose characteristics are completely indicative of overall wastestream quantity, quality, variations in same, and of the process generating the wastestream.

(61) Residential User/Domestic Source. A source of discharge of sanitary wastewater and/or domestic sewage to a public sewer system from premises used for residential purposes only.

(62) Residuals (Sludge, Resultant Ash). The solid or semi-solid by-product remaining after the processing of raw wastewater within physical, chemical and/or biological treatment units of the POTW into a condition suitable for release to the environment.

(63) Sanitary Sewer (Sanitary Collector). A pipe or conduit intended for carrying sanitary wastewater together with minor incidental quantities of storm, surface, and groundwaters which are not intentionally admitted.

(64) Sanitary Wastewater (Sewage). The liquid or water-borne wastes from residential, commercial or industrial establishments containing only waste of a domestic nature; that is, waste products, excrement, or other discharge from the bodies of humans or animals in addition to wastes from residential or incidental culinary and laundry activities.

(65) Shall is mandatory; May is permissive.

(66) Significant Industrial User.

(a) Except as provided in subsection (b) of this paragraph, this term means:

(i) All Industrial Users subject to Categorical Pretreatment Standards under 40 CFR §403.6 and 40 CFR Chapter I, subchapter N; and

(ii) Any other Industrial User that:

(1) discharges an average of twenty-five thousand (25,000) gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling water and boiler blowdown wastewater);

(2) contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic organic capacity or inorganic capacity of the POTW treatment plant; or

(3) is designated as such by DELCORA on the basis that the Industrial User has a potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

(b) Upon a finding that an Industrial User meeting the criteria in (a)(ii) of this paragraph has no potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the POTW may at any time, in its sole discretion in accordance with 40 CFR 403.8(f)(6), and Section 309 herein, determine that such Industrial User is not a Significant Industrial User.

(67) Slug Load or Slug Discharge. Any discharge at a flow rate or concentration, which could cause a violation of the prohibited discharge standards set forth in Sections 201 and 202 of these regulations. A Slug Discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violates the POTW's regulations, Local Limits or Permit conditions.

(68) Split Sample. A technique whereby a sample is divided into multiple aliquots for multiple analytical investigations.

(69) State. The Commonwealth of Pennsylvania.

(70) Standard Industrial Classification (S.I.C.). A classification pursuant to the latest edition of the Standard Industrial Classification Manual issued by U.S.G.P.O. or the North American Industry Classification System (NAICS) pursuant to the

latest edition of US NAICS Manual as published by the U.S. Office of Management and Budget.

(71) Stormwater. Any flow occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

(72) Stormwater Sewer (Storm Sewer, Storm Drain). A pipe or conduit intended for carrying stormwater.

(73) Total Suspended Solids (TSS). The total matter in water, wastewater or other liquids, and which is retained by laboratory filtering, expressed in terms of weight and concentration [milligrams per liter (mg/L)].

(74) Toxic (Priority) Pollutants. Any pollutant or combination of pollutants which have been so declared in regulations promulgated pursuant to Section 307(a) of the Act, or pursuant to Pennsylvania Statutes and rules, or as otherwise may be so discerned and classified by responsible agencies due to toxic health effects to the general populace and surrounding environs.

(75) User(s). Any person, municipality, municipal authority, industry, or other legal entity which contributes, causes or permits the contribution of wastewater into the DELCORA Wastewater Management System or the City's Wastewater Collection System. User categories defined herein include Residential Users, Commercial Users, Industrial Users, Municipal Authority Users, Significant Industrial Users and Intermediate Conveyors. Any User class may be a Primary User or a Secondary User pursuant to these regulations.

(76) Unpolluted Water. Water which does not contain a level of contaminants or pollutants detectably higher than that of the source of the water such as precipitation, surfacewater, groundwater, or other nonpolluted waters. However, in no case shall leachate be considered unpolluted water.

(77) Wastewater. The liquid and water-borne wastes from dwellings, commercial buildings, industrial facilities, and institutions, together with any groundwater, surface water, and stormwater that may be present, whether treated or untreated, which is discharged into or permitted to enter the POTW collection facilities.

(78) Wastewater Treatment Plant (WWTP) or Treatment Plant. That portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial wastewater. Unless the context clearly indicates otherwise, this term is inclusive of both DELCORA's Treatment Plant and the City's Treatment Plant.

(79) Waters of the Commonwealth. All streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, reservoirs, aquifers, irrigation systems,

drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the Commonwealth or any portion thereof.

(80) Wastewater Discharge Permit (Permit). A document of expressed authorization setting forth the terms and conditions for connecting to and subsequently contributing wastewaters to the POTW.

(B) The following abbreviations shall have the designated meanings:

<u>BMP</u>	-	Best Management Practice
<u>BMR</u>	-	Baseline Monitoring Report
<u>BOD</u>	-	Biochemical Oxygen Demand
<u>CERCLA</u>	-	Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9601 <u>et seq.</u>
<u>CIU</u>	-	Categorical Industrial User
<u>CFR</u>	-	Code of Federal Regulations
<u>COD</u>	-	Chemical Oxygen Demand
<u>CWA</u>	-	“Clean Water Act”, also known as the Federal Water Pollution Control Act
<u>DELCORA</u>	-	Delaware County Regional Water Quality Control Authority
<u>DRBC</u>	-	Delaware River Basin Commission
<u>EDTA</u>	-	Ethylenediaminetetracetic Acid
<u>GPD</u>	-	Gallons Per Day
<u>IU</u>	-	Industrial User
<u>L</u>	-	Liter
<u>mg</u>	-	Milligrams
<u>mg/L</u>	-	Milligrams per liter
<u>MGD</u>	-	Millions of Gallons per Day

<u>NCCW</u>	-	Non-Contact Cooling Water
<u>NELAC</u>	-	National Environmental Laboratory Accreditation Conference
<u>NPDES</u>	-	National Pollutant Discharge Elimination System
<u>NTA</u>	-	Nitrilotriacetic Acid
<u>PADEP</u>	-	Pennsylvania Department of Environmental Protection
<u>POTW</u>	-	Publicly Owned Treatment Works
<u>PWD</u>	-	Philadelphia Water Department
<u>RCRA</u>	-	Resource Conservation and Recovery Act, 42 U.S.C. §6901, <u>et seq.</u>
<u>SIC</u>	-	Standard Industrial Classification
<u>SIU</u>	-	Significant Industrial User
<u>SNC</u>	-	Significant Non-Compliance
<u>SWDA</u>	-	Solid Waste Disposal Act, 42 U.S.C. 6901, <u>et seq.</u> , as amended by RCRA
<u>TPH</u>	-	Total Petroleum Hydrocarbons
<u>TSS</u>	-	Total Suspended Solids
<u>TTO</u>	-	Total Toxic Organics
<u>U.S.C.</u>	-	United States Code
<u>USEPA</u>	-	United States Environmental Protection Agency
<u>WWTP</u>	-	Waste Water Treatment Plant

ARTICLE 200

REGULATIONS

SECTION 201 - GENERAL.

(A) No User shall discharge or cause to be discharged, into a POTW, primarily or secondarily, directly or indirectly, through any tributary, conveyance facility, collection facility or other intermediate means of transmission, any pollutant, substance, material, waste, wastewater or any other solid, liquid or gaseous matter which:

(1) Causes Interference or Pass Through; or

(2) Impairs the operation or performance of any element of the DELCORA Wastewater Management System and/or the City's Wastewater Collection System. Such impairment includes, but is not limited to, reduced effectiveness of the system's collectors, structures, equipment and treatment process, degradation of receiving waters, endangerment of the health, safety and welfare of DELCORA and/or City personnel, the general populace and surrounding environs, or a discharge which otherwise constitutes a nuisance.

(B) All Users are subject to these Standards, Rules and Regulations whether or not the User is subject to any other national, state, or local pretreatment standard(s) of requirement(s).

(C) The sections which follow set forth the criteria for establishing whether or not a wastewater is suitable for introduction into the DELCORA Wastewater Management System and/or the City's Wastewater Collection System. It shall be the POTW's determination as to whether any aspect of a User's discharge qualifies the discharge as acceptable, prohibited or rejected, or whether certain conditions or restrictions such as pretreatment, quantity/quality/mass loading control, or cost recovery considerations render the discharge acceptable.

(D) In the event that the USEPA hereafter promulgates National Pretreatment Standards which are more stringent than those herein, then all Users shall be subject to those more stringent standards. Further, the POTW may incorporate such new standards in any permit issued or modified after the effective date of the USEPA National Pretreatment Standards without the need to revise this Resolution.

(E) In the event that the City hereafter adopts regulations, ordinances or key elements which are more stringent than those herein, then all Industrial Users in the Eastern Service Area shall be subject to those more stringent standards so long as the discharge from the industrial user is treated by the City's POTW Treatment Plant. Further, the POTW may incorporate such new standards in any permit issued or modified after the effective date of the City's regulations, ordinances or key elements.

SECTION 202 - SPECIFIC PROHIBITIONS.

(A) No User shall discharge or cause to be discharged the following substances to a POTW:

- (1) Any liquid, solid or gaseous pollutants which by reasons of the nature of quantity are, or may be, sufficient either alone or in interaction with other substances, to cause fire, explosion, or fire or explosion hazard in the POTW, including but not limited to wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR §261.21, as more fully set forth in Section 216 herein;
- (2) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.5 or higher than 10.0, as more fully set forth in Section 217 herein.
- (3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference as more fully set forth in Sections 204, 213, 214 & 218 herein;
- (4) Any pollutant, including oxygen demanding pollutants (BOD, COD, etc.) and suspended solids released in a discharge at a flow rate and/or pollutant concentration which will cause Interference or Pass Through with the POTW, as more fully set forth in Section 221 herein;
- (5) Heat in amounts which will inhibit biological activity in the POTW resulting in Interference or Pass Through, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C/104°F, as more fully set forth in Section 215 herein;
- (6) Vegetable oil, fats, lard, biodegradable oils, petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through, as more fully set forth in Section 218 herein;
- (7) Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems, as more fully set forth in Sections 207 and 219 herein;
- (8) Any trucked or hauled pollutants, or holding tank waste except at discharge points designated by the POTW, as more fully set forth in Sections 220 and 311 herein;

- (9) Unpolluted waters such as stormwater, surfacewater, groundwater, roof runoff, subsurface drainage, non-contact cooling water or other unpolluted waters unless a variance has been granted, as more fully set forth in Section 203 herein;
- (10) Any toxic or hazardous pollutants as more fully set forth in Section 207 herein;
- (11) Any radioactive material as more fully set forth in Section 210 herein;
- (12) Any pollutants in excess of local limitations as set forth in the User's permit and as more fully set forth in Sections 218, 219, 221 and 222 herein;
- (13) Any pollutant, noxious or malodorous liquids, gases or solids which either alone or in interaction with other wastes are sufficient to create a public nuisance or hazard to life or are sufficient to prevent entry into the sewers or treatment plant facilities for maintenance and repair without respiratory protection or other personal safety equipment as more fully set forth in Section 207 herein;
- (14) Any substance which may cause the POTW's effluent or any other product of the POTW such as residues, sludges, resultant ash or scums, to be unsuitable for reclamation, recycling or reuse, or to interfere with the reclamation process. In no case shall a substance discharged to the POTW cause the POTW to be in non-compliance with sludge or resultant ash use, reuse, recycling or disposal criteria, guidelines or regulations developed under Section 405 of the Act, to the Solid Waste Disposal Act (RCRA), the Clean Air Act, the Toxic Substances Control Act, or State law applicable to the sludge and resultant ash management methods being used by DELCORA and/or the City as more fully set forth in Section 208 herein;
- (15) Any substance which will cause the POTW to violate its NPDES and/or State Disposal System Permit or the receiving water quality standards as more fully set forth in Section 209 herein;
- (16) Any wastewater with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions as more fully set forth in Section 211 herein;
- (17) Any wastewater where there is a significant likelihood of producing toxic effects to biota in the influent, biological system or effluent of the POTW as more fully set forth in Section 207 herein; or
- (18) Sludges, screenings, or other residues from the pretreatment of industrial wastes;

(19) Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test;

(20) Detergents, surface-active agents, or other substances which might cause excessive foaming in the POTW;

(21) Medical Wastes, except as specifically authorized by DELCORA in an individual wastewater discharge permit.

(22) Any other materials or pollutants prohibited or limited in specific sections of this Article.

Pollutants, substances, or wastewater by this Section shall not be processed or stored in such a manner that they could be discharged to the POTW.

(B) In addition, the following activities are prohibited:

(1) No person shall discharge pollutants and/or wastewater into street inlets or through sewer manholes;

(2) No person who generates wastewater at one property shall discharge it at another property without approval from the POTW;

(3) No person shall discharge wastewater in quantities or at rates of flow which may have an adverse or harmful effect on or overload the POTW conveyance, collection facilities or wastewater treatment plant(s) or cause excessive additional treatment costs;

(4) No person shall discharge a wastewater flow contributing greater than 2,500 pounds per day of the five day Biochemical Oxygen Demand (BOD₅), or contributing greater than 1,750 pounds per day of total suspended solids or having a volume in excess of one (1) million gallons per day without specific approval in a permit issued by the POTW; and

(5) No person shall store or handle any material including hazardous substances defined by CERCLA, in any area draining to the POTW's collection facilities because discharge or leakage from such storage or handling may create an explosion hazard, may constitute a hazard to human beings, or animals or the receiving stream, or may have a deleterious effect in any other way upon the wastewater treatment facilities. Storage or handling of materials shall be subject to review by the POTW and the POTW may require a spill control plan with reasonable safeguards to prevent discharge or leakage of such materials into the DELCORA Wastewater Management System and/or the City's Wastewater Collection System.

(C) When the Authority determines that a User is contributing to the POTW amounts of wastewater described in paragraphs (A) (1 through 22) or is involved in activities described in paragraphs (B) (1 through 5) so as to cause Interference or Pass Through with the operation of the POTW, the Authority shall advise the User(s) of the impact of the contribution on the POTW and:

(1) may develop effluent limitation(s) for such User to correct the Interference or Pass Through with the POTW without the need to amend these Standards, Rules and Regulations; and

(2) may proceed with enforcement activities.

SECTION 203 - UNPOLLUTED WATERS.

(A) Unpolluted waters shall not be discharged into the POTW collection facilities unless allowed by paragraph (C) herein.

(B) With the exception of existing combined sewers in service prior to July 17, 1984, combined sewers are prohibited and all Users shall have separate conduits for collecting and conveying sanitary wastewater and unpolluted waters. No User shall intentionally discharge or allow to be discharged unpolluted waters to any DELCORA facility, but shall direct them to a stormwater drainage system, to a natural outlet, or as otherwise may be acceptable to the Regulatory Agencies.

(C) Unpolluted waters may be admitted by separate connection to an existing combined collector if:

(1) a release in accordance with paragraph (A) herein cannot be achieved;

(2) the practice is not in conflict with any applicable Agency policies or regulations; and

(3) DELCORA authorization is expressly sought and received.

Notwithstanding the above, the User shall immediately direct all unpolluted waters to a more appropriate point of disposal as soon as the same becomes available.

(D) In the event that a User must secure a NPDES permit from the PADEP or USEPA for its stormwater discharges, a copy of said permit shall be submitted to DELCORA.

SECTION 204 - OPERATIONAL IMPAIRMENT.

(A) No User shall discharge any pollutant which limits the POTW's ability to effectively operate its system to the fullest extent and capability.

(B) No User shall discharge solid or viscous materials which cause obstruction to the flow in the POTW resulting in Interference.

(C) No User shall discharge or allow a discharge(s) which would reduce collector hydraulic capacity, obstruct flow, cause premature failure and/or loss of integrity of any component of the POTW or prevent the various equipment from functioning as intended. Such materials include but are not limited to: grease, garbage, or other bulk solids with particles greater than one-half inch (1/2") in any dimension, guts or tissues, paunch, manure, bones, hair, hides or fleshings, entrails, whole blood, blood products, feathers, ashes, cinders, sand, spent lime, paint, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, rubber, plastics, gas, tar, asphalt, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud, or glass or metal grinding or polishing wastes or any material which can be disposed of as solid waste.

SECTION 205 - MAINTENANCE IMPAIRMENT.

No User shall discharge any material which either alone or in interaction with other materials prevents or impairs system maintenance and repair. Conditions, unsuitable for proper system maintenance include, but are not limited to, presence of a fire or explosion hazard, presence or creation of noxious or malodorous solids, liquids, or gases, or any other material which the Authority believes to be hazardous to human health, safety, welfare, or constitutes a public nuisance.

SECTION 206 - PERFORMANCE IMPAIRMENT.

No User shall discharge material of a type or amount which causes Interference or Pass Through or which impairs sludge or resultant ash use, reuse, recycling or disposal practices. Upon determination that such impairment is occurring, the Authority shall institute measures to prohibit or control the introduction of the materials to a level consistent with proper facility performance.

SECTION 207 - TOXIC/HAZARDOUS POLLUTANTS.

(A) No User shall discharge any toxic or hazardous pollutant which, by virtue of its presence, source, volume, quantity, quality, concentration, or other physical, chemical, or biological criteria, either alone or in interaction with other substances, results in the discharge having an adverse effect upon any element of the POTW, constitute a hazard to humans and their environs, cause the POTW to violate applicable standards, exceed any limitation set forth in any National Pretreatment Standard, create a toxic effect on the influent, biological system or effluent of the POTW, violate the Clean Air Act, cause or contribute to a violation of water quality criteria or otherwise be considered toxic or hazardous and subject to regulation and disposal under other regulatory programs.

(B) No User shall discharge any pollutant which by virtue of its presence, source, volume, quantity, quality, concentration or other physical, chemical or biological criteria, either alone or in interaction with other substances, which results in the presence of toxic gases, vapors or fumes within DELCORA's Wastewater Management System and/or the City's Wastewater Collection System, in a quantity that may cause acute worker health and safety problems.

(C) No User shall discharge any pollutant, noxious or malodorous liquids, gases or solids which either alone or by interaction with other wastes are sufficient to create a public nuisance or hazard to life or are sufficient or prevent entry into the sewers or treatment plant facilities for maintenance and repair without respiratory protection or other personal safety equipment.

(D) DELCORA may establish local limits and/or include more stringent standards in a User's permit without the need to revise this Resolution, to prevent aquatic toxicity of its discharge, Interference, Pass Through, violations of the Clean Air Act, violation(s) of water quality criteria or to prevent the presence of toxic gases, fumes or vapors within the system in a quantity that may cause acute worker health or safety problems, or create a public nuisance or hazard to life.

SECTION 208 - SLUDGE MANAGEMENT.

No User shall discharge any material which may cause the POTW's effluent or any other product of the POTW such as residues, sludges, resultant ash or scums to be unsuitable for reclamation and reuse or interfere with the reclamation process. In no case shall a material discharged to the POTW cause the POTW to be in noncompliance with sludge or resultant ash use, residue, recycling or disposal criteria, guidelines, or regulations developed under Section 405 of the Clean Water Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or state law applicable to the sludge or resultant ash management method being used.

SECTION 209 - REGULATORY CONSTRAINTS.

Any material, either alone or in interaction with other materials, which causes the POTW to violate its operating permits, the receiving water quality standards, or any other Agency constrictions governing wastewater and sludge management as may be imposed by USEPA, PADEP, DRBC, or other Agencies having jurisdiction in such matters, shall be either prohibited or controlled to an extent necessary to ensure compliance with all Agency mandates.

SECTION 210 - RADIOACTIVE WASTES.

No radioactive material wastes or isotopes shall be discharged to the DELCORA Wastewater Management System unless its characteristics are governed by and in compliance with all applicable Local, State and Federal regulations, and such discharge is

expressly approved by DELCORA. In no case shall a User discharge or allow to be discharged a wastewater containing any radioactive wastes or isotopes of such half life or conditions as may exceed limits established in the most stringent of the applicable State, Local or Federal regulations.

SECTION 211 - COLOR.

No User shall discharge material(s) either singly or in interaction with other material(s) which imparts color within its wastewater which cannot be removed by POTW treatment facilities and consequently imparts color to the receiving waters, violating applicable water quality standards.

SECTION 212 - CHELATING AGENTS.

No User shall discharge any material containing ammonia, ammonia salts, NTA or derivatives, EDTA or derivatives, or other materials producing metallic complexes or chelating agents of such amount that in DELCORA's determination is detrimental to the treatment process or facilities.

SECTION 213 - GARBAGE SHREDDERS.

No User shall discharge improperly shredded domestic refuse to the system. The installation and operation of any garbage grinder equaling or exceeding three quarters horsepower (3/4 HP) rating shall be subject to DELCORA's review and express, written approval.

SECTION 214 - USUAL SYSTEM DEMANDS.

(A) All wastewaters other than those exhibiting typical domestic sanitary sewage volume and strength characteristics shall be considered an unusual system demand which requires express, written DELCORA authorization. Any wastewater which contributes in excess of 10% of any measure of system utilization for any component of the system shall likewise be considered an unusual system demand which requires express, written DELCORA authorization.

(B) No User shall release a slug load, have a flow rate or a discharge that contains a concentration or quantity of pollutants that exceed for any time period longer than fifteen (15) minutes, more than two (2) times the average twenty-four (24) hour permitted concentration, quantities or flow during normal operation. Notwithstanding the above, no User shall discharge any pollutants, at flow rates, concentrations or mass loading which the User knows or has reason to know will cause an adverse effect within the DELCORA Wastewater Management System or the City's Wastewater Collection System, or cause Interference or Pass Through.

SECTION 215 - TEMPERATURE.

No user shall discharge a wastewater whose temperature inhibits or unduly accelerates the POTW treatment plant processes resulting in Interference, but in any case, no User shall discharge a wastewater whose temperature exceeds 120°F or which shall cause the wastewater entering the POTW to exceed 104°F.

SECTION 216 - FIRE OR EXPLOSION HAZARD.

(A) No User shall discharge any liquid, solid or gaseous pollutants which by reason of their nature or quantity are or may be sufficient either alone or in interaction with other substances to cause fire, explosion, or fire or explosion hazard in the POTW. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances which can create a fire or explosion hazard to the POTW.

(B) No User shall discharge wastewater which at anytime causes two successive explosion hazard meter reading exceeding five percent (5%) of the meter's lower explosive limit (L.E.L.) nor any single reading exceeding ten percent (10%) L.E.L. at either its point of introduction into the system or at any point within the system. Notwithstanding the above, no wastewater shall be introduced into the system whose Pensky Martens closed cup flash point is less than 140°F.

SECTION 217 - pH.

(A) No User shall discharge a wastewater with a pH less than 5.5 or greater than 10.0 as measured by a grab sample or wastewater which otherwise exhibits any other corrosive property capable of resulting in hazard or damage to collection facilities, conveyance facilities, structures, equipment and/or personnel or the POTW.

(B) No Industrial User measuring pH continuously at the point of discharge shall discharge wastes having a pH lower than 5.5 or higher than 10.0 at any time except for a period not to exceed a total of five (5) minutes in any one hour period. In the event that a periodic discharge of a pH lower than 5.5 or higher than 10.0 for a period exceeding five (5) minutes occurs, the Industrial User must notify DELCORA. The POTW may require that the Industrial User demonstrate that the pH will not exceed the range of 5.5 to 10.0 at a downstream point designated by the POTW. In no case may the Industrial User's discharge contain a pH less than 5.0 at the point of discharge into the POTW.

(C) In the event that the influent wastewater flow arriving at a treatment plant is outside the pH range of 6.5 to 8.5, POTW may limit the Industrial Users to that treatment plant to a pH range of 6.0 to 9.0, upon oral or written notice, for as long as POTW deems necessary.

(D) Hauled sludges and septic wastes shall not have a pH of less than 5.0 or greater than 11.0 or cause interference with the POTW.

SECTION 218 - OILS, GREASES.

No User shall discharge a wastewater whose total content of oils, waxes, and greases of mineral, petroleum, or unknown origin exceeds 100 p.p.m. at any time as shown by grab sample, or undergoes any form of phase separation due to temperature differentials which evolve solid or viscous substances which could impair the DELCORA Wastewater Management System and/or the City's Wastewater Collection System performance. The above concentration may be reduced by the POTW where it is demonstrated that the concentration is causing chronic or repeated adverse effects to the POTW.

SECTION 219 - FUMES AND GASES.

No User shall discharge any wastewater which because of its chemical nature or composition causes the sewer atmosphere to contain airborne chemical concentrations in exceedance of concentrations established by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) under 29 CFR Part 1910, regardless of duration of exposure experienced by any individual, whether an OSHA, DELCORA, or contractor's employee, unless specific authorization is granted by DELCORA.

SECTION 220 - TRUCKED OR HAULED POLLUTANTS.

(A) No person shall discharge any trucked or hauled pollutants into the DELCORA Wastewater Management System except at discharge points designated by the POTW.

(B) Prior to any discharge of trucked or hauled pollutants into the DELCORA Wastewater Management System, written approval must be obtained from the POTW pursuant to Section 311 herein.

SECTION 221 - CONVENTIONAL POLLUTANTS.

No User shall discharge any conventional pollutant in a discharge at a flow rate and/or pollutant concentration which will cause Interference or Pass Through with the POTW or which is in excess of the daily maximum level set for such pollutant in this Article or in a User's permit.

SECTION 222 - SPECIFIC POLLUTANT LIMITATIONS.

(A) Unless otherwise provided in these regulations, no User shall discharge wastewater with pollutant levels exceeding local limitations as set by DELCORA in separate resolution(s). DELCORA may revise, amend or alter the separate resolution(s) setting forth local limitations without the need to revise this Resolution.

(B) No person shall discharge wastewater containing any of the USEPA Priority Pollutants in excess of standard background or domestic sanitary concentrations into POTW facilities or shall have any connection to the POTW without obtaining written permission from DELCORA.

(C) Chlorine and Ammonia. Limits on free chlorine and/or free ammonia content of the wastewater shall be set on a case by case basis to protect the POTW. In particular instances where a mist-free atmosphere is needed during inspection and maintenance of a sewer, or to protect the POTW, and is otherwise not attainable, DELCORA may direct the User to further reduce its discharge of chlorine and ammonia, either on a temporary or permanent basis in order to permit such inspection and maintenance and protect the POTW.

(D) State requirements and limitations on discharges shall apply in any case where they are more stringent than Federal requirements and limitations or those in these regulations.

(E) DELCORA reserves the right to establish by permit more stringent limitations or requirements on discharges to the DELCORA Wastewater Management System and/or the City's Wastewater Collection System, if deemed necessary to comply with the objectives presented in Section 103 of this Resolution.

(F) Any current or future federal Categorical Pretreatment Standard published in 40 CFR Chapter I, Subchapter N, Parts 401-471, as amended, including standards promulgated for new sources, more stringent than limitations imposed under these regulations or by permit for sources in that category, shall supersede the limitations imposed under these Standards, Rules and Regulations. DELCORA may impose these more stringent limitations in permits without the need to revise this Resolution.

SECTION 223 - BEST MANAGEMENT PRACTICES.

(A) DELCORA may develop Best Management Practices (BMPs), by resolution or in individual wastewater discharge permits, to implement Local Limits and the requirements of Sections 201 and 202.

(B) Best Management Practices shall be used in addition to a state or national prohibition or categorical standard.

SECTION 224 - ACCIDENTAL DISCHARGE/SLUG DISCHARGE CONTROL PLANS.

(A) Each User shall provide protection from an uncontrolled release or accidental discharge of prohibited materials or other substances which may interfere with the POTW by developing a Spill Prevention Plan. Facilities to prevent accidental discharge of prohibited materials shall be provided and maintained at the owner or User's own cost

and expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to DELCORA for review, and shall be approved by DELCORA before construction of the facility. Alternatively, DELCORA, at its option, may develop such a plan for any User and charge said User for its development.

An accidental discharge/slug discharge control plan shall address, at a minimum, the following:

- (1) Description of discharge practices, including non-routine batch discharge;
- (2) Description of stored chemicals;
- (3) Procedures for immediately notifying DELCORA of any accidental or Slug Discharge, as required by Section 224 of this resolution; and
- (4) Procedures to prevent adverse impact from any accidental or Slug Discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response.

All existing Users shall complete such a plan within 3 months of notice to do so by DELCORA. No User who commences a new discharge to the POTW after the effective date of this Resolution shall be permitted to introduce pollutants into the system until accidental discharge procedures have been approved by DELCORA. Review and approval of such plans and operating procedures shall not relieve the Industrial User from the responsibility to comply with these Standards, Rules and Regulations.

(B) Notification

- (1) In the case of an uncontrolled release or accidental discharge of prohibited materials or substances, it is the responsibility of the User to immediately notify DELCORA of the incident by telephone. The notification shall include date, time, and location of discharge, type of waste including concentration and volume, duration of discharge, and any corrective actions taken by the User. If the User is within the Eastern Service Area, this notification shall also be given to the Philadelphia Water Department. A representative sample of the uncontrolled release or accidental discharge shall be properly retained by the User for DELCORA's inspection and/or analysis.
- (2) Written Notice. Within five (5) days following an uncontrolled release or accidental discharge, the User shall submit to DELCORA a detailed written report of the incident. The report shall summarize all information concerning the

uncontrolled release as well as cite measures to be instituted by User in order to prevent similar future occurrences and a proposed compliance schedule. User's notifications shall not relieve the User of any expense, loss, damage to person or property or other financial liability which may be incurred by the Authority or owners of any tributary or receiving municipal systems as a result of the release, nor does it relieve the User of any fines, civil penalties, damages or liabilities imposed by these Standards, Rules and Regulations or other applicable law.

(C) Notice to Employees. A notice shall be permanently posted on the User's bulletin board(s) or other prominent places advising employees who to call in the event of an uncontrolled release or accidental discharge. Employers shall advise all employees, who may cause or be injured by such a discharge, of the emergency notification procedure.

(D) Each user is required to notify DELCORA immediately of any changes at its facility affecting the potential for a Slug Discharge.

SECTION 225 - EXCESSIVE DISCHARGE/DILUTION.

No User shall ever increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in any National Pretreatment Standard, or in any other pollutant-specific limitation or pretreatment requirement developed by DELCORA or any federal, state or local Agency.

SECTION 226 - SERVICE SEVERANCE PROVISIONS.

All connections to the DELCORA Wastewater Management System, except residential connections for sanitary wastewater, shall incorporate means to sever the User's access to the system that are satisfactory to DELCORA prior to the acceptance of any discharge. Service severance may be instituted in such instances as violation of these Standards, Rules and Regulations, failure to satisfy service charge obligations, site abandonment or demolition, or other similar acts of commission or omission. Installation of means of severance shall be deemed to complement and supplement any local codes governing connection fixtures and discontinuance of service and shall not be construed as a substitute for said codes.

SECTION 227 - INDUSTRIAL CONNECTIONS.

All Users authorized to discharge industrial wastewater shall do so by means of separate sanitary and industrial connections from the premises or to the POTW. All industrial connections shall be provided with service severance provisions and control structure provisions as set forth in Section 226 and 228.

SECTION 228 - CONTROL STRUCTURE.

(A) Each Industrial User shall provide a control structure which includes monitoring facilities for the purpose of inspection, observation, sampling and flow measurement of the User's industrial contribution prior to the acceptance of the discharge by the POTW. The control structure shall be furnished with such equipment as is acceptable to DELCORA and which it considers to be suitable for required volume and strength determinations. The control structure shall incorporate a lockable isolation device in satisfaction of the service severance provisions required in Section 226. The Industrial User's control structure shall be planned, designed and constructed to be safe, accessible at all times, and secure from unauthorized tampering, and continuously operated and maintained at the User's expense in a manner acceptable to DELCORA. This control structure shall also be suitable for use by the POTW to conduct its own monitoring of User's effluent. The control structure shall be installed at location(s) in its process wastewater discharge line(s) as may be necessary in satisfying all Federal, State and Local monitoring requirements, or as may otherwise be acceptable to DELCORA.

(B) Whether constructed on public or private property, the control structure shall be constructed in accordance with the Authority's requirements and all applicable local construction standards and specifications.

SECTION 229 - PRETREATMENT/EQUALIZATION FACILITIES.

(A) Each User shall be responsible for instituting such measures as may be necessary in ensuring that their discharge complies with these Standards, Rules and Regulations and the National Pretreatment Standards. These provisions may include pretreatment/equalization facilities to eliminate or control the loading, the amount, or rate of introduction of regulated substances into the system.

(B) Certain User(s) shall be deemed to contribute wastes which exhibit an inherent tendency toward system operations and maintenance impairment based solely upon the type of activity conducted on the premises. These Users shall provide pretreatment facilities to correct conditions deemed to cause impairment regardless of the actual volume and strength involved unless their omission is explicitly sought and authorized by DELCORA. Pretreatment facilities installed for this purpose address principally flammable and obstructing materials. Typical control devices may include oil and grease interceptors, separators, traps, sumps, baskets, screens, strainers or other baffled, piped or valved systems which rely upon physical phase separation in order to effect selective removal of waste components by physical properties such as size, shape, weight, volume relationship, and texture. Representative locations for such facilities and conditions requiring correction are cited herein or as may otherwise be specified within applicable local codes.

(C) Users falling within the following categories are required to install and utilize control devices as follows:

(1) Flammables, Oil, Grease Control. Control devices shall be provided and maintained at User's expense at the following locations: vehicle service stations, repair shops and washdown areas, maintenance facilities, food preparation operations, commercial garages, or facilities using such materials as feedstock.

(2) Sediment Control. Control devices shall be provided and maintained at User's expense at the following locations: vehicle washdown areas, quarries, and building and construction supply facilities.

(3) Hair and Lint Control. Control devices shall be provided and maintained at User's expense at the following locations: commercial hair treatment shops and commercial laundries.

(D) Notwithstanding the above, it shall be each User's responsibility to provide the pretreatment/equalization facilities necessary to assure compliance with applicable regulations and any permits issued to the User. Any facilities required to pretreat wastewater to a level acceptable to the POTW shall be planned, designed, constructed, provided, owned, operated, and maintained by the User at User's expense and shall be located so as to be accessible to inspection and cleaning. Detailed reports and drawings indicating the location, type, and capacity of all pretreatment facilities as well as associated operating procedures shall be submitted to DELCORA for review. DELCORA must expressly approve said facilities and procedures in writing prior to construction of the facilities. However, such review and acceptance of plans and procedures shall not relieve the User from the responsibility of modifying the facilities as necessary to produce an effluent acceptable to the POTW in a time and manner as directed by the Authority. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to the Authority and be subject to the Authority's express, written, approval prior to User's initiation of the changes.

SECTION 230 - CONSTRUCTION STANDARDS.

DELCORA's "Standard Specifications for the Construction of Sanitary Sewers and Appurtenances", October 2000, as amended, shall serve as the basis of performance required in the construction of all sewerage works within its jurisdiction. This shall not preclude their being superseded or supplemented by additional DELCORA guidelines, DELCORA contract documents, or other more stringent Federal, State, or local performance criteria governing such considerations as health, plumbing, and building construction.

SECTION 231 - USER RESIDUALS MANAGEMENT.

All Users shall plan, design, construct, operate, maintain, or otherwise implement measures to ensure that the transport, treatment, storage, or disposal of all waste products or residuals (other than approved wastewaters) generated by a User's

manufacturing or treatment processes is done in a manner which excludes introduction of such materials into DELCORA's Wastewater Management System. These measures shall also include records fully demonstrating the proper disposition of these materials in full accordance with applicable law and regulations and shall be made available for DELCORA's inspection and photocopying upon request. Records required by USEPA and/or PADEP for such activities will generally satisfy this.

SECTION 232 - STRINGENCY/RIGHT OF REVISION.

DELCORA'S Standards, Rules, and Regulations shall be considered to conform with minimum standards of performance relative to sewer system usage regulations as may be duly established by any governmental unit duly authorized and empowered to exercise such regulatory control. DELCORA reserves the right to cause adherence to these Standards, Rules and Regulations or to otherwise promulgate, alter, or amend this Resolution in affording administration of an equivalent or more stringent nature by adoption of a Resolution setting forth same. Regulatory compliance shall be achieved within the time therein stipulated. Alternatively, DELCORA may effect changes to applicable permits to individual Users or classes of Users as occasioned by new regulations or to otherwise comply with objectives set forth in Section 103.

SECTION 233 – BYPASS.

(A) For the purposes of this Section,

(1) Bypass means the intentional diversion of wastestreams from any portion of a User's treatment facility.

(2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(B) A User may allow any bypass to occur which does not cause Pretreatment Standards or Requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs (C) and (D) of this Section.

(C) Bypass Notifications

(1) If a User knows in advance of the need for bypass, it shall submit prior notice to DELCORA, at least (10) days before the date of the bypass, if possible.

(2) A User shall submit oral notice to DELCORA of an unanticipated bypass that exceeds applicable Pretreatment Standards within twenty-four (24) hours from

the time it becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the User becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. DELCORA may waive the written report on a case-by-case basis if the oral report has been received within twenty-four (24) hours.

(D) Bypass

(1) Bypass is prohibited, and DELCORA may take an enforcement action against a User for a bypass, unless

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) The user submitted notices as required under paragraph (C) of this section.

(2) DELCORA may approve an anticipated bypass, after considering its adverse effects, if DELCORA determines that it will meet the three conditions listed in paragraph (D)(1) of this Section.

ARTICLE 300

ADMINISTRATION

SECTION 301 - ALL WASTEWATER DISCHARGE REGULATED.

It shall be unlawful for any person, industry, municipality, User or authority to install a connection to or discharge any wastewater into the DELCORA Wastewater Management System except as authorized in accordance with the provisions of this Resolution.

SECTION 302 - EXISTING RESIDENTIAL AND COMMERCIAL USERS.

All Residential and Commercial Users of any sewer system prior to July 17, 1984, are deemed to possess a Wastewater Connection Permit authorizing such connection/discharge. However, this shall not preclude either DELCORA, an authority, a municipality, or other agency having jurisdiction over such matters from reconditioning such a permit requiring additional regulation of wastewater quantity or quality if such reconditioning is deemed necessary by DELCORA to ensure compliance with these Standards, Rules and Regulations.

SECTION 303 - NEW PRIMARY RESIDENTIAL USERS.

After July 17, 1984, no connections or reconnections of residential premises directly to the DELCORA system can be made without first obtaining a DELCORA Connection Permit as prescribed herein prior to effectuating such connection and/or discharge. Residential Users shall follow the procedures for permitting in Section 307.

SECTION 304 - NEW SECONDARY RESIDENTIAL USERS.

After July 17, 1984, no connections or reconnections of residential premises to any system intermediate to DELCORA can be made without first obtaining a functionally equivalent authorization from the appropriate municipality and/or authority certifying compliance with their regulations and the service agreement between DELCORA, the municipality and/or the authority prior to effectuating such connection and/or discharge.

SECTION 305 - NEW PRIMARY COMMERCIAL USERS.

After July 17, 1984, no connection or reconnections of commercial facilities to the DELCORA system can be made without first obtaining a DELCORA Connection Permit as prescribed herein prior to effectuating such connection and/or discharge. Commercial Users shall follow the procedures for permitting in Section 307.

SECTION 306 - NEW SECONDARY COMMERCIAL USERS.

After July 17, 1984, no connections or reconnections of commercial facilities to any system intermediate to DELCORA can be made without first obtaining a functionally equivalent authorization from the appropriate municipality/authority certifying compliance with their regulations and the service agreement between DELCORA, the authority and/or the municipality prior to effectuating such connection and/or discharge.

SECTION 307 - PERMIT APPLICATION - RESIDENTIAL AND COMMERCIAL DISCHARGES.

(A) Persons required to obtain a DELCORA Connection Permit for residential and commercial discharge(s) shall complete and file with DELCORA an application in the form prescribed by DELCORA and accompanied by the applicable permit processing fee.

(B) In support of the application, the applicant shall submit the following information:

- (1) Applicant (owner) name, address, and telephone number;
- (2) Site location/address;
- (3) Applicant's self-determination of applicable User class;
- (4) Site classification (the contribution shall be classified as being either residential or commercial and shall be further classified by the number of units involved, using types and terms characteristic of the class of usage indicated);
- (5) Wastewater volume and strength characteristics indicating average characteristics as well as any variations in same; if other than domestic in origin;
- (6) Pertinent details concerning any pretreatment facilities required for applicant's contribution including pollutants to be controlled, method of control, and relevant design criteria (loading rates, volumes, etc.) (Not required for residential discharges);
- (7) Two sets of location plans depicting all site structures, size and location of drainage piping, valving, and other appurtenances involved including any pretreatment facilities and points of connection to public facilities; and
- (8) Name, address, and telephone number of the contractor/plumber executing the connection.

(C) DELCORA will evaluate the data and information furnished by the applicant and may require additional information. After evaluation and acceptance of the data furnished, DELCORA may issue a connection permit subject to the terms and conditions provided

herein. DELCORA may require the submission of an industrial discharge permit in accordance with Section 310 if the wastewater is of non-domestic origin.

SECTION 308 - INDUSTRIAL USERS.

All persons discharging industrial wastewater, whether direct to the DELCORA system or through intermediate system(s), must obtain a DELCORA Wastewater Discharge Permit pursuant to Section 310. Secondary Industrial Users must also obtain any connection(s) or discharge(s) permit(s) required by the owner of the tributary sewer system. Industrial Users connected to the DELCORA Wastewater Management System or to a tributary system who do not have a DELCORA Wastewater Discharge Permit must file an application immediately.

SECTION 309 - SIGNIFICANT INDUSTRIAL USERS.

(A) An Industrial User that:

- (1) Is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or
- (2)
 - (i) Discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blowdown wastewater);
 - (ii) Contributes a process wastestream which makes up 5 percent (5%) or more of the average dry weather hydraulic organic capacity or inorganic capacity of the POTW treatment plant; or
 - (iii) Is determined by the POTW to have a potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement;

shall be designated by the POTW as a Significant Industrial User unless the POTW, in its sole discretion, makes a finding that the Industrial User meeting the criteria of Paragraph (A)(2) above, has no potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement. Designation as a Significant Industrial User shall be sufficient to require the Significant Industrial User to comply with the provisions herein regarding this class of Users.

(B) DELCORA shall notify each Significant Industrial User of its status within thirty (30) days of DELCORA's designation of a User as such.

(C) Notwithstanding the above, DELCORA may list or delist an Industrial User as a Significant Industrial User, on DELCORA's own initiative based on the criteria in

paragraph (A) herein. DELCORA shall notify said User of DELCORA's determination within thirty (30) days of DELCORA's re-designation of a User.

(D) Within thirty (30) days of the date of the notice of designation as a Significant Industrial user, the User so designated may file a petition with DELCORA requesting that the User be delisted as a Significant Industrial User. Such petition shall contain sufficient data and information to demonstrate to DELCORA's satisfaction that the User has no potential to adversely affect the POTW's operation or for violating any pretreatment standard or requirement. Within sixty (60) days of receipt of a petition, the POTW may grant or deny said petition.

(E) Significant Industrial Users shall follow the procedures for permitting in Section 310.

SECTION 310 - PERMIT APPLICATION - INDUSTRIAL WASTEWATER.

(A) Persons required to obtain a DELCORA Wastewater Discharge Permit for industrial wastewater pursuant to Sections 308 and 309, shall complete and file with DELCORA an application in the form prescribed by DELCORA and accompanied by the applicable permit processing fee.

(B) In support of the application, the applicant shall submit the following information in units and terms appropriate for evaluation:

- (1) Applicant/owner's name, address, and location, (if different from the address);
- (2) Applicant's self-determination of applicable User class;
- (3) SIC number according to the Standard Industrial Classification Manual;
- (4) Description of activities, facilities and plant processes on the premises including all materials which are or could be discharged;
- (5) Each product produced by type, amount, process or processes and rate of production;
- (6) Type and amount of raw materials processed (average and maximum per day);
- (7) Number and type of employees, and hours of operations of plant and proposed or actual hours of operation of pretreatment system;
- (8) Time and duration of contribution;

(9) Plant water balance including average daily, instantaneous and 30 minute peak wastewater flow rates, and including daily, monthly and seasonal variations, if any;

(10) Wastewater constituents and characteristics including but not limited to those mentioned in Section 201 and 202 of this Resolution as determined by a reliable analytical laboratory; sampling and analysis shall be performed in accordance with procedures established by the USEPA pursuant to Section 304(g) of the Act and contained in 40 CFR Part 136, as amended;

(11) Process schematics, site plans, floor plans, mechanical and plumbing plans and details to show size, location and elevation of all sewers, sewer connections, and appurtenances including piping and valving configuration, meter(s), sampler(s), lockable isolator(s) from origin of wastewater generation through pretreatment (if applicable) to point of connection(s) to municipal system;

(12) Where known, the nature and concentration of any pollutants in the discharge which are limited by any municipal, authority, state, or federal pretreatment standards, and a statement regarding whether or not the applicable regulations are being met on a consistent basis and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required for the User to meet applicable requirements;

(13) (a) If additional pretreatment and/or O&M will be required to meet the pretreatment standards, the shortest schedule by which the User will provide such additional pretreatment. The completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard.

(b) The following conditions shall apply to this schedule:

(i) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the User to meet the applicable pretreatment standards which shall include such elements as concept design, treatment system design, operations manual development, system(s) construction, system(s) startup, system(s) optimization, and confirmation of compliance. No increment referenced in this paragraph shall exceed nine (9) months.

(ii) Not later than seven (7) days following each date in the schedule and the final date for compliance, the User shall submit a progress report to DELCORA including, as a minimum, whether or not it complied with the increment of progress to be met on such

date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps being taken by the User to return the construction to the schedule established. In no event shall more than nine (9) months elapse between such progress reports to DELCORA.

(14) A statement of Pretreatment considerations including the purpose (i.e. pollutants to be removed), control method employed, proposed loading rates, unit volumes, design capacities and including reports and drawings as available;

(15) Any other information as may be deemed by DELCORA to be necessary to evaluate the permit application; and

(16) Signature of the authorized representative of the Industrial User.

(C) DELCORA will evaluate the data furnished by the applicant and may require additional information. After evaluation and acceptance of the data furnished, DELCORA may issue a wastewater discharge permit subject to the terms and conditions provided herein.

SECTION 311 - HOLDING TANK AND HAULED WASTES.

(A) No person shall discharge holding tank wastes, trucked or hauled pollutants, sludge, scums or other residuals to the POTW except at a discharge point designated by the POTW and then only after prior written approval by the POTW.

(B) To obtain written approval by the POTW to discharge holding tank wastes, trucked or hauled pollutants, the person must submit the following information to the POTW:

(1) Name and address of person generating the waste, including any identification numbers such as USEPA generator numbers and/or the identification numbers;

(2) Name and address of transporter of waste, including any identification numbers such as an USEPA transporter number and/or tax identification number;

(3) Description of the type, volume and characteristics of the waste;

(4) Description of the process which generated the waste;

(5) The results of the current RCRA chemical analysis of the waste to determine if it exhibits hazardous characteristics or chemicals;

(6) Any other information requested by the POTW;

- (7) Signature and certification under Sections 334 and 335 herein.

Upon receipt of these materials, the POTW may accept or deny the application to discharge holding tank waste, hauled or trucked pollutants, sludge, scum or other residuals.

(C) The POTW may place any of the conditions noted in Section 316 herein on its approval to accept holding tank waste, trucked or hauled pollutants and may issue a permit.

(D) Trucked and hauled wastes and pollutants are subject to all of the provisions in these Standards, Rules and Regulations.

SECTION 312 - COMMUNICATIONS.

(A) All communications involving permit acquisition, duration, renewal, modification, termination, suspension, revocation, notifications, or any other type of activity where confirmation of transmittal, receipt, and referral to responsible individuals is of the essence, including applications for written approvals, shall be conducted in writing, using U.S. Postal Service, Certified Mail, Return Receipt Requested, or by hand delivery, or any other system affording equivalent protection.

(B) Where enforcement action is involved, the notice shall cite the nature of the alleged violation, the enforcement action required by the Authority as the result of the violations and the actions being undertaken by the User in response.

SECTION 313 - APPLICATION SUBMISSION AND REVIEW PROCEDURES.

(A) All persons required to obtain a DELCORA Wastewater Discharge Permit shall make application to DELCORA in a form acceptable to DELCORA accompanied by the appropriate fees. Upon receipt of a Wastewater Discharge Permit application, DELCORA shall evaluate the application for its completeness and advise the applicant that the application is complete or that the application is incomplete and cite the deficiencies to be rectified by submission of additional documentation.

(B) Upon acceptance of data furnished, DELCORA shall declare the application complete and initiate evaluation of its technical merits. Where secondary industrial Wastewater Discharge Permits are involved, DELCORA shall either transmit a copy of the complete application to all Intermediate Conveyors or alternatively notify them of the availability of application documents for inspection at DELCORA's offices. Affected parties must transmit any comments relative to their ability to service the applicant's wastewater disposal needs to DELCORA within thirty (30) days of receipt of the application or the public notice. Failure to receive comments shall be construed as lack of objection with conditions presented within the permit application.

SECTION 314 - PUBLIC NOTICE OF PERMIT ISSUANCE.

(A) Public notice of a proposed wastewater discharge permit ("permit") may be published by the POTW in a newspaper of daily circulation within the geographical area of the discharge. The notice shall include at least the following:

- (1) Name and address of each permittee;
- (2) Each permittee's activity or operation which results in the discharge described in the wastewater discharge permit;
- (3) Address and phone number of premises where a copy of the proposed permit may be requested;
- (4) Notice of the thirty (30) day comment period required by this Section.

(B) There shall be a thirty (30) day period following publication of notice during which written comments may be submitted by the permittee or interested persons located within the POTW's wastewater processing service area. The POTW will make its final determination on a proposed permit following the comment period. The period for comment may be extended at the discretion of DELCORA for up to thirty (30) additional days.

SECTION 315 - PERMIT ISSUANCE PROCEDURES.

(A) Upon consideration of comments received relative to the permit application and criteria enumerated within Sections 309 and 310, DELCORA shall advise the applicant that his application for a Wastewater Discharge Permit has been either:

- (1) Approved subject to the terms and conditions recited within its permit as outlined within Section 316 and including but not limited to necessary quantity or quality control or incremental cost assessments (surcharge); or
- (2) Denied due to either the inability of an Intermediate Conveyor to properly manage the applicant's waste, the prohibition from accepting the applicant's waste or, in DELCORA's discretion, its inability to ensure the proper management of the applicant's waste in conjunction with applicable criteria for waste acceptability.

(B) Upon a determination relative to issuance of a Wastewater Discharge Permit, DELCORA shall notify the applicant and, where appropriate, Intermediate Conveyors of DELCORA's intended action. This notification shall set forth the permit terms and conditions (including its effective date) or shall cite the basis for denying issuance of the permit.

(C) Interested parties shall have thirty (30) days to object or respond to DELCORA's intended action by requesting an Administrative Hearing pursuant to Section 325 herein. Failure to request an Administrative Hearing within the time prescribed, renders the permit terms and conditions final and binding.

SECTION 316 - PERMIT CONDITIONS.

(A) Wastewater Discharge Permits shall be expressly subject to all provisions of this Resolution and all other applicable regulations, user charges and fees established by the Authority.

(B) Industrial permits may contain the following:

(1) Statement of purpose, term, regulated effluent(s), applicable regulations and causes for withdrawal of authorization to discharge.

(2) Limits on the average and maximum wastewater constituents and characteristics.

(3) Limits on the average and maximum rate and time of discharge or requirements for flow regulation and equalization

(4) Any variance from the typical requirements that the Authority is empowered with the discretion to modify and has considered substantial justification to warrant such a modification.

(5) Requirements for installation and maintenance of monitoring facilities, including provision for observing, measuring, sampling and stopping industrial effluent.

(6) Specifications for monitoring programs which may include sampling locations, frequency of sampling, number, types and standards for tests, institution of quality assurance/quality control measures, and reporting schedule.

(7) Site access provisions.

(8) Authority's option to monitor the effluent, the results of which prevail in case of discrepancy or dispute.

(9) Available enforcement mechanisms.

(10) Requirements for notification of slug discharges.

(11) Requirements for notification of the Authority for any new introduction of wastewater constituents or any substantial change in the volume or character of

the wastewater constituents being introduced into DELCORA's Wastewater Management System and/or the City's Wastewater Collection System.

(12) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the Authority and affording the Authority to access and photocopy them.

(13) Requirements for notification of the authority or facility changes that affect the potential of slug discharge and requirements for submission of technical reports, discharge reports, the development and implementation of slug control measures, or other notifications.

(14) Requirements for notification of applicability of regulations promulgated by any Agency having jurisdiction in such matters after the effective date of the permit.

(15) Provisions allowing for the reopening of a permit when Agency regulations cause changed or additional requirements than those covered by these Standards, Rules and Regulations or permits issued pursuant thereto.

(16) Requirements for access to and photocopying of records developed for other Agency programs which involve matters of wastewater management.

(17) The unit charge, incremental cost assessment/surcharge, or schedule of User charges and fees currently in effect for the wastewater to be discharged to a public sewer.

(18) Compliance schedules.

(19) Best Management Plans. (BMPs)

(20) Requirement of specific performance of the terms and conditions of any permit or contract and/or payment of liquidated damages by the User.

(21) Signature and certification requirements.

(22) Other conditions as deemed appropriate by DELCORA to ensure compliance with this Resolution.

SECTION 317 - PERMIT ADMINISTRATION.

(A) The permit becomes effective when signed by DELCORA. Upon its issuance, a User's Wastewater Discharge Permit shall be considered its authorization to use the DELCORA Wastewater Management System, including all contributing components,

provided that the User complies with the terms and conditions of the permit and these Standards, Rules and Regulations.

(B) Except as noted in Section 320, said authorization shall be of fixed duration, shall be non-transferable, and shall be subject to periodic review and subsequent modification, termination, suspension, or revocation as stipulated elsewhere within this Article.

(C) The permittee shall be subject to enforcement action prescribed within Article 400 or as may otherwise be appropriate for improper use of the DELCORA system and for violation(s) of the permit.

SECTION 318 - PERMIT DURATION.

(A) Industrial wastewater permits authorizing industrial use shall be issued for specific time period with provision to expire on a specific date but in any event, shall expire within five (5) years of the date of issuance.

(B) DELCORA Wastewater Discharge Permits authorizing primary Residential or Commercial User contributions shall be in full force and effect for the duration that the permitted premises exhibits a specified material occupancy, producing wastewater of specified type, class, quantity, and quality, and is otherwise in conformance with all applicable regulations and excepting an enforcement action which may negate it.

SECTION 319 - PERMIT RENEWAL.

(A) Permittees which have demonstrated satisfactory past performance and wish to continue system usage shall apply to DELCORA for permit renewal a minimum of one hundred and eighty (180) days prior to expiration of the User's existing permit. DELCORA may either grant the renewal, modify and reissue the permit or deny the renewal or the permit in accordance with this Resolution. The User shall be notified of any proposed changes in the permit at least thirty (30) days prior to the effective date of the change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

(B) All permit renewal communications shall be conducted in writing via the U.S. Postal Service using Certified Mail, Return Receipt Requested.

(C) Failure to acquire renewal shall not relieve the User from compliance with all conditions accompanying the permit's expiration, including the cessation of system usage.

(D) Where a permit has been appealed, the appeal shall only stay the disputed provision, not the entire permit unless the stay of the disputed provision would pose an immediate threat to the POTW or the public health safety and welfare. The remainder of the permit is enforceable.

SECTION 320 - PERMIT TRANSFER.

(A) Wastewater Discharge Permits are issued to a specific Industrial User at a specific premises for specific conditions and are non-transferable except as stated herein. A Wastewater Discharge Permit issued for Industrial Users shall not be reassigned or transferred or sold to a new owner, new User, different premises, or new or changed conditions without the approval of the Authority. The User must give the Authority at least thirty (30) days notice of a proposed transfer. If expressly sought and approved, any succeeding owner or user shall also comply with the terms and conditions of the existing permit until a new permit is issued by DELCORA. This section shall not prevent the Authority from requiring the submission of Wastewater Discharge Permit application documents from any succeeding owner or User for the conditions referenced above.

(B) A Wastewater Discharge Permit authorizing Residential or Commercial Users of the system may be transferred with title providing that previous material occupancy and wastewater characteristics will be maintained.

SECTION 321 - PERMIT MODIFICATION.

(A) Wastewater Discharge Permits are subject to modification at the User's initiative due to desired changes in site activities which would result in wastewater contribution characteristics differing from those which may have been previously authorized. Application for the modified conditions must be made in accordance with provisions governing issuance of any original permit. Any changes in site activities which would cause the wastewaters to exceed the requirements of the Wastewater Discharge Permit, Service Agreement, or this Resolution shall not be undertaken unless they are approved and duly incorporated into a modified permit by DELCORA.

(B) Wastewater Discharge Permits are subject to modification at the Authority's initiative in order to ensure compliance with new regulations or to otherwise ensure attainment of goals established within Section 103. Modified permits will be prepared subject to the same issuance provisions as set forth within Section 315 with effective dates consistent with either those established within the new regulations or those established within a schedule of compliance intended to expeditiously resolve any conditions preventing attainment of Section 103 goals.

(C) (1) Within one hundred and eighty (180) days of the promulgation of a National Categorical Pretreatment Standard, the wastewater discharge permit of any User subject to such standards shall be revised to require compliance with such standard within the time frame prescribed by such standard. In addition, the User with an existing wastewater discharge permit shall submit to the POTW, within ninety (90) days after the promulgation of an applicable Federal Categorical Pretreatment Standard, the information required by Section 310.

(2) Where a person, newly subject to a National Categorical Pretreatment Standard, was not previously required to submit an application for a wastewater discharge permit pursuant to Section 310, the person shall apply for a wastewater discharge permit within ninety (90) days after the promulgation of the applicable National Categorical Pretreatment Standard.

SECTION 322 - PERMIT TERMINATION.

A permittee's authorization to discharge wastewater to the DELCORA system shall be deemed to have terminated when the subject premises undergoes complete closure or changes in ownership, nature or business conducted, or type and characteristics of wastewater generated. No resumption of discharge of wastewater from the premises shall occur unless sought and authorized consistent with provisions for permit application, submission, review, transfer and issuance recited elsewhere within Article 300.

SECTION 323 - SERVICE AND PERMIT SUSPENSION.

(A) DELCORA may suspend the wastewater treatment service and/or a Wastewater Discharge Permit by issuing a Suspension Order when such suspension is necessary, in the opinion of DELCORA, to stop an actual or threatened discharge which:

- (1) Presents or may present an imminent or substantial endangerment to the health or welfare of persons;
- (2) Presents or may present an imminent or substantial endangerment to the environment;
- (3) May cause or actually causes Interference or Pass Through with the DELCORA Wastewater Management System, and/or the City's Wastewater Collection System; or
- (4) Causes DELCORA or the City to violate any condition of their NPDES Permits.

(B) Any User issued a Suspension Order shall immediately stop or eliminate its discharge to the POTW.

(C) In the event of a failure of the User to immediately comply voluntarily with the Suspension Order, DELCORA shall take such steps as deemed necessary including, but not limited to immediate severance of the sewer connection to prevent or minimize damage to the DELCORA Wastewater Management System, the City Wastewater Collection System or endangerment to any individuals and/or revocation of the permit.

(D) DELCORA may reinstate the Wastewater Discharge Permit and/or the wastewater treatment service upon proof of the elimination of the non-complying discharge. Such

proof may be presented to DELCORA at a Pre-Hearing Conference to be held within twenty-four hours after the issuance of a Suspension, if requested by the User.

(E) Any User issued a Suspension Order is entitled to an Administrative Hearing pursuant to Section 325 of this Resolution; however, the Suspension Order shall remain in effect until otherwise determined as a result of the Administrative Hearing or Pre-Hearing Conference.

(F) A detailed written statement submitted by the User describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to DELCORA within ten (10) working days of the date of occurrence which gave rise to the issuance of the Suspension Order.

SECTION 324 - PERMIT REVOCATION.

(A) Any User who violates the conditions of this Resolution, or applicable State, Federal or local law, including but not limited to the conditions noted below, is subject to having his wastewater discharge permit revoked in accordance with the procedures of this Resolution:

- (1) Presents or may present an imminent or substantial hazard to life and property;
- (2) Presents or may present a threat of impairment of any element of the POTW's system to the extent that it fails to fulfill its intended function;
- (3) Presents or may present a general endangerment to the environment;
- (4) Violation of any permit provisions or otherwise applicable regulations;
- (5) Falsification of User-supplied information such as a permit application, various reports, records, and the like;
- (6) Failure to comply with the terms and provisions of any enforcement action, notice or order(s).
- (7) Denial of site access, failure to provide information or other failure to cooperate with the Authority or obstruct other necessary Authority functions pursuant to this Resolution; or
- (8) Failure to pay service charges.

(B) Revocation of a User's Permit requires the User to immediately cease all wastewater contributions.

(C) Any User receiving a Notice of Permit Revocation shall have the same rights to a Pre-Hearing Conference and an Administrative Hearing as described in Section 325 and Section 326.

SECTION 325 - ADMINISTRATIVE HEARING.

(A) A person determined by DELCORA to have violated any permit condition or regulation promulgated by DELCORA shall be given written notice of the violation which shall be sent by Certified Mail, Return Receipt Requested. The Notice of Violation shall also state that such person has the right to a hearing pursuant to the Local Agency Law, 2 Pa.C.S.A. §§101-106 and 551-555. Such person must request such a hearing within twenty (20) days of the date of receipt of the Notice of Violation, order, notice or other action.

(B) DELCORA may order any User who causes or allows an unauthorized discharge to enter the DELCORA Wastewater Management System to show cause before the duly appointed Hearing Officer why enforcement action should not be taken. A notice shall be served on the User specifying the time and place of a hearing to be held by the duly appointed Hearing Officer regarding the violations, the reasons why the action is to be taken, the proposed enforcement action, and directing the User to show cause before the duly appointed Hearing Officer why the proposed enforcement action should not be taken. The notice of the hearing shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days before the hearing. Service may be made on any agent or officer of a corporation.

(C) The Board of Directors of DELCORA hereby appoints the Chairman of the Board or his designee as Hearing Officer with full power and authority to:

- (1) Issue in the name of DELCORA, Notice(s) of Hearing(s) requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings;
- (2) Take evidence; and
- (3) Adjudicate any matter under appeal.

(D) At any hearing held pursuant to this Section, all testimony will be taken under oath and may be stenographically recorded and a full and complete record may be kept of the proceedings. In the event all testimony is not stenographically recorded and a full and complete record of the proceedings is not deemed necessary by DELCORA, such testimony shall be stenographically recorded and a full and complete record of the proceeding shall be kept at the request of any party agreeing to pay the costs thereof.

(E) After the duly appointed Hearing Officer has reviewed the evidence, he or she shall issue an adjudication in writing, which shall contain findings and the reasons for the adjudication, and shall be served upon all parties or their counsel personally, or by mail.

(F) Any party may request a Pre-Hearing Conference in order to attempt to resolve any dispute. The request should be made in writing to the Executive Director of DELCORA.

(G) Ongoing Disputes. It is the intent of this Board that the change to the Standards, Rules and Regulations set forth in this Resolution shall govern any appeals ongoing as of its effective date, and that the Chairman or his designee replace the Executive Director as Hearing Officer for such ongoing appeals. The foregoing notwithstanding, nothing shall prohibit the Chairman from appointing the Executive Director as his designee to remain as Hearing Officer to preside over any such ongoing dispute. This Resolution shall not be interpreted to invalidate any action taken by the Executive Director in his capacity as Hearing Officer prior to its effective date in any ongoing or previously adjudicated appeal.

SECTION 326 - JUDICIAL REVIEW.

Any party may appeal the decision of the DELCORA Administrative Hearing Officer pursuant to the Pennsylvania Local Agency Law, 2 Pa.C.S.A. §§751-754 within the time prescribed. Failure to appeal within the prescribed time renders the determination of the Hearing Officer final and binding.

SECTION 327 - STANDARD OF PERFORMANCE FOR WASTEWATER MEASUREMENT AND ANALYTICAL TESTING

(A) All measurements, tests, and analyses of the characteristics of wastewaters shall be determined in accordance with the latest version of 40 CFR Part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants".

(B) Unless otherwise noted or required by any other regulations, all samples shall be obtained from an appropriate monitoring facility or control structure and must be representative of the conditions occurring at that time. The particular constituents involved shall determine such variables as sample type and sample collection, preservation and holding techniques. The permittee shall observe appropriate chain of custody procedures to ensure sample integrity from collection through analysis.

(C) All analytical procedures shall incorporate quality assurance and quality control provisions in order to ensure the reliability and validity of laboratory data. Permittees should consult the latest edition of U.S. EPA Publication USEPA-600/4-79-019, "Handbook for Analytical Quality Control in Water and Wastewater Laboratories".

(D) All analyses shall be conducted at an accredited PADEP or NELAC – accredited laboratory with demonstrated competency in water and wastewater testing and which is acceptable to DELCORA.

(E) DELCORA reserves the right to conduct split sample verification in support of permittee-furnished data. DELCORA's results shall be considered conclusive.

SECTION 328 - CONFIDENTIALITY.

(A) Information and data on a User obtained from reports, questionnaires, permits, permit applications and monitoring programs and from inspections shall be available to the public or other governmental agency without restriction unless the User specifically requests that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the User.

(B) Any information or other submission (exclusive of User effluent data) may be stamped with the words "CONFIDENTIAL BUSINESS INFORMATION" on each page containing such information as the means for making such request. DELCORA will not consider any data on the User's wastewater discharge to the DELCORA wastewater management system as confidential, and such information will remain available to the public or other governmental agency without restriction regardless of any claim for confidentiality or granting of confidential status for any other User information. Confidential business information shall be kept by DELCORA in a secure location with only limited, authorized access.

(C) When requested by the person furnishing a report, the portions of a report which might disclose trade secrets/or secret processes shall not be made available for inspection by the public but shall be made available upon written request to governmental agencies for uses related to this Resolution, the National Pollutant Discharge Elimination System (NPDES) Permit, State Disposal System permit and/or the Pretreatment Program; provided however, that such portions of a report shall be available for use by the State, Local and Federal government(s) or any State or Federal agency, DELCORA and/or the City of Philadelphia, in judicial review or enforcement proceedings involving the person furnishing the report. Wastewater constituents, characteristics and effluent data will not be recognized as confidential information.

SECTION 329 - INTERMEDIATE CONVEYOR REPORTS (CHAPTER 94).

Each municipality or municipal authority contributing wastewater to the DELCORA Wastewater Management System and/or the City's Wastewater Collection System either by connection to DELCORA facilities or by connection to other system(s) ultimately tributary to DELCORA facilities, shall prepare and submit to DELCORA an annual report summarizing significant developments in the management of wastewater within its jurisdiction. The content of this report shall be consistent with information required by PADEP's Chapter 94 Municipal Wasteload Management Report. In general, the annual

report shall summarize all permit activity, all changes (increases and reductions) in wastewater contribution to the User's system, current and future hydraulic and organic loadings, the current system wastewater facilities location plan, and sewer use regulations. This report shall be forwarded to DELCORA no later than March 1st following the calendar year covered by the report.

SECTION 330 - SELF MONITORING REPORTS.

(A) Any User, including Significant Industrial Users shall demonstrate compliance with terms and conditions of its Wastewater Discharge Permit, as well as regulations underlying this permit, by periodically monitoring its effluent and reporting the results of this monitoring to DELCORA. The reporting periods shall run from January 1 to June 30 and from July 1 to December 31 unless otherwise noted in the permit. Users shall submit their reports within thirty (30) days after the end of each reporting period. Users shall submit their reports at least semi-annually regardless of whether or not a permit has been issued.

(B) Effluent monitoring and reporting requirements will be established by the POTW upon consideration of such factors as wastewater complexity, variability, volume and strength.

(C) The permittee will be required to adhere to the specific sample type, sample frequency, parametric coverage, flow measurement and report form, contact, frequency and submission requirements set forth in its permit. In addition, the User shall comply with all general requirements for sampling and analysis as set forth in Section 327 herein.

(D) Failure to provide the required report within thirty (30) days after the due date shall be deemed significant noncompliance.

(E) This report, at a minimum, shall contain:

- (1) Name of permittee;
- (2) Identity of the facility;
- (3) The Reference to User's permit number;
- (4) Flow monitoring data, volume, rates, as prescribed in the permit;
- (5) All data from the sampling event during the reporting period which conforms to Section 327 of these Regulations. All data must be representative of conditions occurring during the reporting period and reflect each parameter specified in the permit including the sample results, the sample frequency, sample type, and chain of custody records;

- (6) A summary of any and all violations of these Standards, Rules and Regulations and/or permit violations occurring within the reporting period, including the date, the nature of the violation, the cause of the violation, if known, and actions taken to correct the violation;
 - (7) Certification as required by Section 334 herein;
 - (8) Signature(s) as required by Section 335 herein; and
 - (9) Any other information required by the POTW.
- (F) DELCORA, at its option, may perform the sampling and analysis required by this section in lieu of the noncategorical Significant Industrial User. In the event that DELCORA chooses to exercise this option, the noncategorical Significant Industrial User will not be required to submit this report.
- (G) In cases where the Pretreatment Standard requires compliance with a Best Management Practice (BMP) or pollution prevention alternative, the User must submit documentation required by DELCORA or the Pretreatment Standard necessary to determine the compliance status of the User.
- (H) Exemptions to the requirements herein shall be provided by DELCORA in writing.

SECTION 331 - SAMPLING REQUIREMENTS.

(A) The reports required by DELCORA must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period. DELCORA requires that frequency of monitoring necessary to assess and assure compliance by Industrial Users with applicable Pretreatment Standards and Requirements. Grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. For all other pollutants, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless time proportional composite sampling or grab sampling is authorized by DELCORA. Where time-proportional composite sampling or grab sampling is authorized by DELCORA, the samples must be representative of the Discharge and the decision to allow the alternative sampling must be documented in the Industrial User file for that facility or facilities. Using protocols (including appropriate preservation) specified in 40 CFR part 136 and appropriate USEPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: For cyanide, total phenols, and sulfides, the samples may be composited in the laboratory or in the field; for volatile organics and oil & grease, the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved USEPA methodologies may be authorized by DELCORA, as appropriate.

(B) For sampling required in support of baseline monitoring and 90-day compliance reports required by Section 332(A), a minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, the Control Authority may authorize a lower minimum. For the reports required by paragraphs (D) and (E) of this Section, DELCORA shall require the number of grab samples necessary to assess and assure compliance by Industrial Users with Applicable Pretreatment Standards and Requirements.

(C) All analyses shall be performed in accordance with procedures established by the USEPA pursuant to section 304(h) of the Act and contained in 40 CFR part 136 and amendments thereto or with any other test procedures approved by the USEPA.

(D) Periodic reports on continued compliance.

(1) Any Industrial User subject to a categorical Pretreatment Standard after the compliance date of such Pretreatment Standard, or, in the case of a New Source, after commencement of the discharge into POTW, shall submit to DELCORA during the months of June and December, unless required more frequently in the Pretreatment Standard or by DELCORA or the USEPA, a report indicating the nature and concentration of pollutants in the effluent which are limited by such categorical Pretreatment Standards. In addition, this report shall include a record of measured or estimated average and maximum daily flows for the required reporting period. DELCORA may require more detailed reporting of flows. In cases where the Pretreatment Standard requires compliance with a Best Management Practice (or pollution prevention alternative), the User shall submit documentation required by DELCORA or the Pretreatment Standard necessary to determine the compliance status of the User. At the discretion of DELCORA and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., DELCORA may modify the months during which the above reports are to be submitted.

(E) Reporting requirements for Industrial Users not subject to categorical Pretreatment Standards.

(1) DELCORA must require appropriate reporting from those Industrial Users with Discharges that are not subject to categorical Pretreatment Standards. Significant Non-categorical Industrial Users must submit to DELCORA at least once every six months (on dates specified by DELCORA) a description of the nature, concentration, and flow of the pollutants required to be reported by DELCORA. In cases where a local limit requires compliance with a Best Management Practice or pollution prevention alternative, the User must submit documentation required by DELCORA to determine the compliance status of the User. These reports must be based on sampling and analysis performed in the

period covered by the report, and in accordance with the techniques described in 40 CFR 136, Guidelines Establishing Test Procedures for the Analysis of Pollutants and amendments thereto. This sampling and analysis may be performed by DELCORA in lieu of the significant non-categorical Industrial User.

SECTION 332 - REPORTING REQUIREMENTS.

(A) Baseline Monitoring Reports

(1) Within either one hundred eighty (180) days after the effective date of a categorical Pretreatment Standard, or the final administrative decision on category determination under 40 CFR 403.6(a)(4), whichever is later, existing Categorical Industrial Users currently discharging to or scheduled to discharge to DELCORA shall submit to DELCORA a report which contains the information listed in paragraph (2), below. At least ninety (90) days prior to commencement of their discharge, New Sources, and sources that become Categorical Industrial Users subsequent to the promulgation of an applicable categorical Standard, shall submit to DELCORA a report which contains the information listed in paragraph (2), below. A New Source shall report the method of pretreatment it intends to use to meet applicable Standards. A New Source also shall give estimates of its anticipated flow and quantity of pollutants to be discharged.

(2) Users described above shall submit the information set forth below.

(a) Identifying information. The User shall submit the name and address of the facility including the name of the operator and owners;

(b) Permits. The User shall submit a list of any environmental control permits held by or for the facility;

(c) Description of operations. The User shall submit a brief description of the nature, average rate of production, and Standard Industrial Classification of the operations(s) carried out by such Industrial User. This description should include a schematic process diagram which indicates points of discharge to DELCORA from the regulated processes.

(d) Flow measurement. The User shall submit information showing the measured average daily and maximum daily flow, in gallons per day, to DELCORA from each of the following:

(i) Regulated process streams; and

(ii) Other streams as necessary to allow use of the combined wastestream formula of 40 CFR 403.6(e). DELCORA may

allow for verifiable estimates of these flows where justified by cost or feasibility considerations.

(e) Measurement of pollutants.

(i) The User shall provide the following information required regarding the measurement of pollutants.

a. The categorical Pretreatment Standards applicable to each regulated process and any new categorically regulated processes for Existing Sources.

b. The results of sampling and analysis identifying the nature and concentration, and/or mass, where required by the Standard or by DELCORA, of regulated pollutants in the discharge from each regulated process.

c. Instantaneous, Daily Maximum, and long-term average concentrations, or mass, where required, shall be reported.

d. The sample shall be representative of daily operations and shall be analyzed in accordance with procedures set out in Section 331 of this ordinance. Where the Standard requires compliance with a BMP or pollution prevention alternative, the User shall submit documentation as required by DELCORA or the applicable Standards to determine compliance with the Standard.

(ii) The User shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph.

(iii) Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment, the User should measure the flows and concentrations necessary to allow use of the combined wastestream formula in 40 CFR 403.6(e) to evaluate compliance with the Pretreatment Standards. Where an alternative concentration or mass limit has been calculated in accordance with 40 CFR 403.6(e), this adjusted limit along with supporting data shall be submitted to DELCORA.

(iv) Sampling and analysis shall be performed in accordance with Section 331.

(v) DELCORA may allow the submission of a baseline report which utilizes only historical data so long as the data provides

information sufficient to determine the need for industrial pretreatment measures;

(vi) The baseline report shall indicate the time, date and place of sampling and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant Discharges to DELCORA.

(f) Compliance Certification. A statement, reviewed by the User's Authorized Representative as defined in Section 107 (A) (5) and certified by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required to meet the Pretreatment Standards and Requirements.

(g) Compliance Schedule. If additional pretreatment and/or O&M will be required to meet the Pretreatment Standards, the shortest schedule by which the User will provide such additional pretreatment and/or O&M must be provided. The completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard. A compliance schedule pursuant to this Section must meet the requirements set forth in Section 332 (B) of this ordinance

(h) Signature and Report Certification. All baseline monitoring reports must be certified in accordance with Section 332 (A) and signed by an Authorized Representative as defined in Section 107 (A) (5).

(B) Compliance Schedule Progress Reports

The following conditions shall apply to the compliance schedule required by Section 332 (A) (2) (g).

(1) The schedule shall contain progress in increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the User to meet the applicable Pretreatment Standards (such events include, but are not limited to, hiring an engineer, completing preliminary and final plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation);

(2) No increment referred to above shall exceed nine (9) months;

(3) The User shall submit a progress report to DELCORA no later than fourteen (14) days following each date in the schedule and the final date of compliance including as a minimum, whether or not it complied with the increment of progress,

the reason for any delay, and, if appropriate, the steps being taken by the User to return to the established schedule; and

(4) In no event shall more than nine (9) months elapse between such progress reports to DELCORA.

(C) Reports on Compliance with Categorical Pretreatment Standard Deadline

Within ninety (90) days following the date for final compliance with applicable categorical Pretreatment Standards, or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any User subject to such Pretreatment Standards and Requirements shall submit to DELCORA a report containing the information described in Section 330 and Section 332(A)(2)(d)(e) and (f). For Users subject to equivalent mass or concentration limits established in accordance with the procedures in Section 602 per **40 CFR 403.6(c)**, this report shall contain a reasonable measure of the User's long-term production rate. For all other Users subject to categorical Pretreatment Standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the User's actual production during the appropriate sampling period. All compliance reports must be signed and certified in accordance with Sections 334 and 335. All sampling will be done in conformance with Section 331.

SECTION 333 - PREPARATION/SUBMISSION OF OTHER REPORTS.

The passage of legislation and subsequent promulgation of regulations involving the management of wastewater and its residuals by agencies empowered to function in this regard may necessitate preparation of reports, drawings, or other forms of documentation. Should DELCORA be accorded the responsibility of implementing those regulations, then any new or additional requirements shall be considered as conditions whose compliance will be sought as part of a User's permit. Should DELCORA not be delegated responsibility for the implementation of those regulations, the permittee shall comply with the regulations with the responsible agency in a time and manner consistent with the regulations. All documentation prepared for this purpose shall also be submitted to DELCORA as a condition of the User's permit with DELCORA.

SECTION 334 - CERTIFICATION REQUIREMENT.

(A) All reports submitted pursuant to these Standards, Rules and Regulations, including baseline monitoring reports, reports on compliance with categorical pretreatment standards, Significant Industrial User reports and periodic reports on continued compliance, shall include the certification statement set forth in 40 CFR 403.6(a)(2)(ii) which states:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(B) All Significant Industrial Users subject to categorical pretreatment standards shall include in any report submitted pursuant to these Standards, Rules and Regulations, any applicable certifications as required in the categorical pretreatment standards.

SECTION 335 - SIGNATORY REQUIREMENT.

Baseline monitoring reports, reports on compliance with categorical pretreatment standards, Significant Industrial User reports and periodic reports on continued compliance shall be signed as specified in 40 CFR §403.12(l) and shall be subject to the provisions of Sections 334, 335, and 413 herein.

SECTION 336 - RECORD KEEPING REQUIREMENTS.

(A) All Users subject to the reporting requirements established herein or in the National Pretreatment Standards shall maintain records of all information resulting from any required monitoring activities, any additional records of information obtained pursuant to monitoring activities undertaken by the User independent of such requirements, and documentation associated with Best Management Practices established under Section 223. Such records shall include for all samples:

- (1) The date, exact place, method and time of sampling and the name(s) of the person(s) taking the samples;
- (2) The dates analyses were performed;
- (3) The identity of a laboratory and/or persons who performed the analysis;

(4) The analytical techniques/methods used; and

(5) The results of such analyses.

(B) Records required to be maintained in this section shall be retained for a minimum of three (3) years. This period of retention shall be extended during the course of any unresolved litigation regarding the User or the POTW or when requested by the POTW, the PADEP, or the USEPA.

(C) Records required to be maintained by the User shall be made available for inspection and copying by the POTW, the PADEP, and the USEPA.

SECTION 337 - NOTIFICATION OF CHANGED DISCHARGE.

All Industrial Users shall notify DELCORA as soon as possible, in writing, in advance, of any substantial change in the volume or character of pollutants in their discharge, including the listed or characteristic hazardous wastes for which the Industrial User has submitted initial notification under Section 338 herein and/or as required by 40 CFR 403.12(p).

SECTION 338 - NOTIFICATION OF DISCHARGE OF LISTED OR CHARACTERISTIC WASTES.

(A) All Industrial Users shall notify DELCORA, the USEPA Region III Director of the Waste Management Division, and the PADEP, in writing of any discharge into the POTW, of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include:

(1) The name of the hazardous waste as set forth in 40 CFR Part 261;

(2) The USEPA hazardous waste number;

(3) The type of discharge (continuous, batch or other); and

(4) If the User discharges more than one hundred (100) kilograms of such waste per calendar month to the POTW, the notification shall also contain the following information to the extent that such information is known and readily available to the Industrial User:

(a) An identification of the hazardous constituents contained in the wastes;

(b) An estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month; and

- (c) An estimation of the mass of constituents in the wastestream expected to be discharged during the following twelve (12) months.
- (B) (1) Initial notification(s) under this section by Industrial Users permitted as of August 23, 1990, shall be made before March 1, 1991.
- (2) Industrial Users who commence discharging after August 23, 1990, shall provide notification no later than one hundred eighty (180) days after the discharge of any listed or characteristic hazardous waste under 40 CFR Part 261.
- (C) Only one notification shall be submitted for each hazardous waste discharged. However, notwithstanding the preceding sentence, all Industrial Users shall also comply with Section 337 herein.
- (D) This notification does not apply to pollutants already reported under self-monitoring reports under Sections 329, 330 and/or 331 herein.
- (E) Users are exempt from the requirements of paragraphs (A), (B), (C) and (D) above, during a calendar month in which they discharge no more than fifteen (15) kilograms of hazardous wastes unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261(e). Discharge of more than fifteen (15) kilograms of non-acute hazardous wastes in a calendar month or of any quantity of actual hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification. Subsequent months during which the Industrial User discharges more than such quantities of any hazardous waste do not require additional notification except that all Users shall also comply with Section 337 herein.
- (F) In the case of any new regulations under Section 3001 of RCRA identifying additional characteristics of hazardous waste, the User must comply with paragraph (A) above, with regards to the discharge of such substance within ninety (90) days of the effective date of such regulations.
- (G) In the case of any notification made under paragraph (A) above, the Industrial User shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated, to the degree determined to be economically practical.

SECTION 339 - NOTIFICATION OF POTENTIAL PROBLEMS.

All Users shall notify DELCORA immediately of all discharges that could cause problems to the POTW, including any slug loadings, uncontrolled releases or accidental discharges, in conformance with Section 224 herein.

SECTION 340 - NOTIFICATION OF VIOLATIONS.

(A) If sampling by an Industrial User indicates a violation of its permit or these Standards, Rules and Regulations, the User shall notify DELCORA within 24 hours of becoming aware of the violation.

(B) If sampling by an Industrial User indicates a violation, the User shall repeat the sampling and analysis, and submit the results of the repeated analysis to DELCORA within thirty (30) days after becoming aware of the violation, except that the User is not required to resample if:

(1) DELCORA or the City performs sampling at the Industrial User at a frequency of at least once per month; or

(2) DELCORA or the City performs sampling at the Industrial User between the time when the User performs its initial sampling and the time when the User receives the results of this sampling.

(C) All sampling shall be performed in conformance with Section 327 and 331 herein.

SECTION 341 - SITE ACCESS AND INSPECTION.

POTW personnel shall be admitted to any site which is connected to the DELCORA Wastewater Management System for the purpose of inspection, record examination, monitoring, enforcement or any other form of surveillance deemed necessary in determining a User's compliance with these Standards, Rules and Regulations. The User shall allow the POTW to secure copies of any documents and production of such other information relevant to determining compliance with this Resolution. The POTW shall exert every effort to be reasonable in the exercise of this provision including, where feasible, scheduling such access in advance during times when the site is normally occupied. However, this shall not preclude the POTW from securing entrance upon minimal or with no notification at unusual times regardless of site occupancy if there is urgent cause for such admittance, or if reasons for access are not consistent with advance notice. In either case, whether scheduled or unannounced, site access shall not be unduly withheld; the presentation of suitable credentials shall entitle the bearer prompt site admittance. It shall be the User's responsibility to incorporate this requirement in any applicable security procedures employed so that prompt admittance for the performance of these specific responsibilities will not be impeded. Site personnel shall conduct POTW personnel to the necessary site locations and accompany them throughout the duration of the visit until they are conducted from the premises. Site access shall include provisions for the installation, operation and maintenance of sampling and monitoring devices and/or equipment by the POTW.

SECTION 342 - DELCORA DETERMINATIONS FINAL.

DELCORA detection and notification to any User concerning deficiencies involving compliance with any aspect of these Standards, Rules and Regulations shall be considered final and binding.

ARTICLE 400

ENFORCEMENT AND PENALTIES

SECTION 401 - VIOLATIONS.

(A) Any violation of these Standards, Rules and Regulations is an instance of noncompliance. Any person or permit holder or User shall be in violation of these regulations and subject to any and all penalties and remedies as set forth herein, if any of the following events occur:

- (1) Failure to supply the POTW with accurate information of the type, format, frequency and content as the POTW may request;
- (2) Failure to notify the POTW immediately after User becomes aware or should have become aware by exercise of reasonable diligence, of any release or discharge of any substances, pollutants, materials, wastes, wastewaters or any other solid, liquid or gaseous matter which may impair the operation or performance of any element of the DELCORA Wastewater Management System or the City's Wastewater Collection System;
- (3) Failure to meet any compliance schedule issued by the POTW;
- (4) Exceeding the effluent limits set by the POTW;
- (5) Failure to comply with the monitoring requirements established by the POTW;
- (6) Tampering, altering or in any way changing the information and data collected on the monitoring systems required by the POTW;
- (7) Failure or refusal to provide the POTW access to any site or facility as required by this Resolution;
- (8) Failure or refusal to provide the POTW access, review and photocopies, if requested, of documents or records maintained by the User or under the direction of the User as required by this Resolution;
- (9) Failure to pay service charges and any special billings when due;
- (10) Any other violation of applicable statute(s) or regulation(s); or
- (11) Any other violation of the User's permit or this Resolution.

(B) Violations may be minor violations or major violations. Major violations are those that exceed the limits frequently and/or by a large quantity; impede the determination of compliance status; have the potential to cause or may have actually caused adverse environmental effects, health problems; or cause interference with POTW treatment plant's capability.

(C) Whenever DELCORA finds that any User has violated or is violating these Standards, Rules and Regulations, or any prohibition, limitation, or requirements contained herein or in a User's permit, DELCORA may serve by regular or certified mail upon such person a written Notice stating the nature of the violation. Notice by regular mail shall be deemed sufficient notice. The Notice provided by DELCORA shall set forth the findings of DELCORA, the section of the regulations or other law which has been violated, and the action required to correct the violation within a specified period of time.

SECTION 402 - SIGNIFICANT NONCOMPLIANCE.

(A) An Industrial User is in significant noncompliance if the violation meets one or more of the following criteria:

(1) Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent (66%) or more of all of the measurements for the same pollutant parameter taken during a six (6) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Article 200 and Section 201;

(2) Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of all of the measurements for each pollutant parameter taken during a six (6) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Article 200 and Section 201 multiplied by the applicable TRC value. The TRC values are:

(a) TRC = 1.4 for BOD, TSS, fats, oils and grease;

(b) TRC = 1.2 for all other pollutants except pH

(3) Any other violation of a Pretreatment Standard or Requirement as defined in Article 200, Section 201, and Section 401 (Daily, Maximum or long-term average, Instantaneous Limit, or narrative standard) that DELCORA determines has caused, alone or in combination with other discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public);

- (4) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment, or has resulted in the POTW's exercise of its emergency authority to halt or prevent such a discharge;
 - (5) Failure to meet, within ninety (90) days after the scheduled date, a compliance schedule milestone contained in a User permit, control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;
 - (6) Failure to provide, within thirty (30) days after the due date, required reports including but not limited to baseline monitoring reports, ninety (90) day compliance reports, periodic self-monitoring reports, Significant Industrial User reports and reports on compliance with compliance schedules;
 - (7) Failure to accurately report noncompliance; and/or
 - (8) Any other violation or group of violations, which may include violation of Best Management Practices (BMPs), which DELCORA determines will adversely affect the operation or implementation of the local Pretreatment program.
- (B) Any violation that meets the criteria of paragraph (A) above shall be considered a major violation.
- (C) At least once a year, DELCORA shall publish in the largest daily newspaper published in Delaware County, a notice to the public of Industrial Users which were in significant noncompliance. This notice shall include the name(s) and address(es) of the User and may also include additional information such as the duration of the violation, nature of the violation, compliance action taken (if any), whether the User is currently complying with a compliance schedule and whether the User has returned to compliance. At the discretion of DELCORA, the type of enforcement action undertaken may also be reported. This provision does not prohibit the publication of this notice in more frequent intervals or by the City for Users in the Eastern Service Area.
- (D) DELCORA may also take such other enforcement response actions it deems necessary to bring the User into compliance with these Standards, Rules and Regulations.

SECTION 403 - ENFORCEMENT RESPONSE ACTIONS.

- (A) If any person, User or other party is determined to be in noncompliance with these or any other regulations or ordinances promulgated by DELCORA or any other governmental agency with jurisdiction, any or all of the following enforcement response action(s) may be imposed:

- (1) The suspension or revocation of any permit issued or the refusal to issue a permit;
 - (2) The reimbursement of any fines levied against DELCORA by any other agency as a result of said violation;
 - (3) The termination of wastewater treatment service;
 - (4) The payment of all monetary damages including system reconstruction damages incurred by the POTW as a result of said violation;
 - (5) The payment of damages, liquidated or otherwise, or extra service fees as set forth in the DELCORA Enforcement Response Guide and/or other resolutions;
 - (6) Payment of the cost of any additional monitoring or personnel required by the POTW in its sole discretion in determining that the violation has been satisfactorily corrected;
 - (7) The payment of all administrative, legal and other fees incurred as a result of the violation;
 - (8) Public notification of the violation;
 - (9) Inspection(s), telephonic, or written communications, and/or a notice of violation;
 - (10) The issuance of compliance orders or other administrative orders;
 - (11) Specific performance of the terms and conditions of any permit or contract shall be enforced;
 - (12) Injunctive or other equitable relief;
 - (13) Referral of the matter for criminal enforcement and/or the imposition of fines and/or penalties; or
 - (14) Any other legal remedy available to DELCORA.
- (B) DELCORA shall consider the following factors in determining whether noncompliance is a minor violation or a major violation:
- (1) Type of violation;
 - (2) Duration of the violation;

- (3) Compliance history of the violator;
- (4) Good faith of the violator; and
- (5) Harm caused by the violation.

These factors shall be utilized to select an appropriate enforcement response action.

(C) Appropriate enforcement response actions may range from no action, an informal response action or formal response action dependent upon the nature of the violation (minor or major) as determined by DELCORA. Pursuit of one enforcement action by the POTW does not preclude other enforcement activities.

(D) Formal enforcement response actions may include:

- (1) Administrative orders and compliance schedules;
- (2) Civil suit for injunctive relief, civil penalties, fines and/or damages;
- (3) Criminal proceedings; and/or
- (4) Termination of service and/or revocation of a permit.

(E) DELCORA shall investigate instances of noncompliance by one or more of the following methods:

- (1) Inspections including monitoring, sampling, document review (including as-built and as-designed plans and specifications), record review and interviews;
- (2) Communications, written and/or oral;
- (3) Review of past and current reports submitted by the User;
- (4) Review of laboratory practices, procedures, protocols and/or quality assurance/quality control procedures;
- (5) Requests for information;
- (6) Interviews, meetings, statements; and/or
- (7) Civil litigation discovery practices.

Investigations may be conducted by DELCORA staff, DELCORA's consultants or in the alternative, DELCORA's Solicitor.

(F) DELCORA shall issue an "Enforcement Response Guide" detailing its policy on enforcement. The Enforcement Response Guide may be updated or revised at any time without the need of amending this Resolution. The Enforcement Response Guide does not limit the range of enforcement response actions which DELCORA may undertake but rather it describes ranges of responses which may be appropriate for specific instances of noncompliance.

(G) Users in the Eastern Service Area, for as long as discharges of such Users are treated by the City, shall also be subject to the enforcement policies of the City as set forth in the City's Enforcement Response Guide.

SECTION 404 - PROCEDURE FOR REVOCATION OF PERMIT.

(A) Whenever DELCORA finds that any User has violated or is violating these regulations, the wastewater discharge permit, or any prohibition, limitation, or requirement contained herein, DELCORA shall serve by certified mail upon such person a written notice stating the nature of the violation.

(B) Within thirty (30) days of the date of the Notice of Violation the User must respond in writing. The response must state why the violation occurred, the steps taken to prevent its reoccurrence, and whether the violation has been corrected. If the User is unable to correct the violation within thirty (30) days, his response must include a plan for the satisfactory correction thereof.

(C) DELCORA shall consider the User's response, if any, before rendering its final determination Order. DELCORA's final determination Order may direct that:

- (1) The User's Permit be immediately revoked;
- (2) The User's Permit be revoked on a specific future date unless adequate treatment facilities, devices or other related appurtenances shall have been installed and existing treatment facilities, devices or other related appurtenances are properly operated; or
- (3) The User's Permit shall continue in effect.

(D) Further orders and directives may be issued as are necessary and appropriate.

(E) If a User fails to immediately comply with DELCORA's final determination order, DELCORA may enforce the order by taking any or all of the actions stated in Section 403 and 405. In addition, DELCORA may seek any other administrative, legal, or equitable relief available.

(F) After termination, the User may apply to DELCORA to once again contribute wastewater into the DELCORA system. DELCORA may accept, deny, or condition acceptance of the application pursuant to Section 406.

SECTION 405 - ENFORCEMENT OF PERMIT REVOCATION.

If the User fails to immediately cease all wastewater discharges upon revocation of his wastewater discharge permit, DELCORA may order any of the following actions to be taken:

- (A) Immediate severance of the User's sewer connection; or
- (B) Any other action designed to immediately terminate the User's wastewater discharge.

SECTION 406 - REISSUANCE OF PERMIT AFTER REVOCATION.

(A) Where a User has failed to comply with the provisions of these Standards, Rules and Regulations or any order or previous permit issued hereunder, DELCORA may decline to reissue a Permit.

(B) A User must submit to DELCORA a plan to comply with the provisions of these regulations or any order or previous permit issued hereunder. At the very least, the plan must outline: (1) what will be done to comply; (2) what has been done to comply, and (3) what time frame will be required to comply.

(C) Prior to re-issuing a permit, DELCORA may require the User to:

- (1) File with DELCORA a performance bond payable to DELCORA, in a sum not to exceed a value determined by DELCORA to be necessary to achieve consistent compliance; or
- (2) Submit proof that it has obtained liability insurance acceptable to DELCORA, sufficient to restore or repair the POTW for damages that may be caused by the User's discharge.

SECTION 407 - LEGAL ACTION.

If any person discharges sewage, industrial wastes, or other wastes into DELCORA's Wastewater Management system or commits non-discharge violations including, but not limited to failure to submit reports, failure to allow on site inspections contrary to the provisions of these regulations, Federal or State Pretreatment Requirements, the permit, or any order of DELCORA, DELCORA may commence an action for appropriate legal and/or equitable relief in the appropriate court. DELCORA may delegate its authority to

pursue legal and/or equitable relief against the Users in the Eastern Service Area to the City of Philadelphia.

SECTION 408 - INJUNCTIVE RELIEF.

Whenever a User has violated or continues to violate the provisions of these regulations or permit or order issued hereunder, DELCORA may petition the court for the issuance of a temporary restraining order, a preliminary or permanent injunction (as may be appropriate) which restrains or compels the activities on the part of the Industrial User.

SECTION 409 - CEASE AND DESIST ORDERS.

When DELCORA finds that a User has violated or continues to violate these Standards, Rules and Regulations or any permit or order issued hereunder, DELCORA may issue an order to cease and desist all such violations and direct those persons in non-compliance to:

- (A) Comply forthwith; or
- (B) Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and terminating the discharge.

SECTION 410 - SERVICE SEVERANCE.

(A) Whenever a User has violated or continues to violate the provisions of these Standards, Rules and Regulations or an order or permit issued hereunder, wastewater discharge service to the Industrial User may be severed after notice of the violation and an opportunity to respond, and service will only recommence, in DELCORA's sole discretion, at the User's expense, after it has satisfactorily demonstrated its ability to comply and remain in compliance with these Standards, Rules and Regulations.

(B) In order to halt or prevent any discharge or pollutants to the POTW which reasonably appears to present an imminent or substantial endangerment to the health or the welfare of persons, wastewater discharge service to the Industrial User may be severed immediately after informal notice to the discharger and service will only recommence, at the User's expense, after the User has satisfactorily demonstrated its ability to comply.

(C) In order to halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment or which threatens to interfere with the operation of the POTW, after notice to the discharger and an opportunity to respond, wastewater discharge service may be severed and service will only recommence, at the User's expense, after it has satisfactorily demonstrated its ability to comply.

SECTION 411 - CRIMINAL SANCTIONS.

DELCORA may institute criminal proceedings against any person or User who violates these or any other regulations promulgated by DELCORA or any other governmental unit or Agency including but not limited to the U.S. Environmental Protection Agency and the Pennsylvania Department of Environmental Protection provided, however, that such action constitutes a violation of any State or Federal criminal statute as may be in effect at the time of the violation.

SECTION 412 - CIVIL AND EQUITABLE RELIEF.

If any person discharges wastewater, industrial wastewater, or other materials into the DELCORA Wastewater Management System contrary to the provisions of this Resolution, Federal or State requirements, or a permit, order, or regulation of DELCORA, DELCORA or the municipality in which the User is located, may commence an action for appropriate legal and/or equitable relief in courts of the Commonwealth of Pennsylvania or any other court having jurisdiction to grant the requested civil or equitable relief.

SECTION 413 - ADMINISTRATIVE PENALTIES.

(A) Assessment. In addition to proceeding under any other remedy available at law or equity for violation of pretreatment standards and/or requirements, DELCORA may assess a civil penalty upon an industrial user for the violation. The penalty may be assessed whether or not the violation was willful or negligent. The civil penalty shall not exceed \$25,000 per day for each violation regardless of jurisdictional boundaries. Each violation for each separate day shall constitute a separate and distinct offense under this section.

(B) Operational Upsets. For purposes of this section, a User's single operational upset which leads to simultaneous violations of more than one pretreatment standard or requirement shall be treated as a single violation as required by the Federal Water Pollution Control Act, 33 U.S.C. §1319(g)(3). In addition to any civil penalty imposed under this section, DELCORA may also recover its costs for re-establishing the operation of its affected facilities.

(C) Appeal. The Industrial User charged with the penalty shall have thirty (30) days to pay the proposed penalty in full, or, if the Industrial User wishes to contest either the amount of the penalty or the fact of the violation, the Industrial User must, within thirty (30) days, file with DELCORA an appeal of the action and request a hearing pursuant to The Local Agency Law, §§101-106 and 551-555. Failure to appeal within this period shall result in a waiver of all legal rights to contest the violation or the amount of the penalty.

SECTION 414 - FALSE STATEMENTS.

DELCORA may also institute enforcement proceedings of any type provided for in these Regulations against any person or User who knowingly makes any false statement(s), representation(s) or certification(s) in any application, record, report, plan or other document filed or required to be maintained pursuant to these regulations, or any wastewater discharge permit, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under these regulations.

SECTION 415 – LEGAL FEES.

The Hearing Officer shall have the authority to award DELCORA its attorney fees actually incurred in connection with the underlying violation of these Standards, Rules and Regulations.

ARTICLE 500

CHARGES AND FEES

SECTION 501 - PROGRAM ADMINISTRATION FEES.

(A) It is the intent of DELCORA to recover all costs of service through fees and User charges, and to properly assess all costs in relation to the service provided.

(B) DELCORA will periodically establish a fee schedule for administration of the permit program and these regulations. Fees will include Wastewater Discharge Permit fees, Administrative Hearing Fees, and such other fees which may be further prescribed to conduct the function established by this Resolution or by other applicable enactments. The fees will be included in separate resolutions describing DELCORA service charges which are enacted on an annual basis.

(C) DELCORA reserves the right to impose additional charges for processing permits which are unusually complex, or where testing, analyses and evaluation required of the applicant must be duplicated. In such situations, DELCORA will notify the applicant in advance of the additional fee due.

(D) All fees are due upon application for a permit and are not refundable should the permit not be issued.

SECTION 502 - USER SERVICE CHARGE.

(A) Separate resolutions describe DELCORA Service Charges imposed upon all Users of its facilities to produce the revenues required annually to cover system expenses.

(B) It is the responsibility of Municipal and Municipal Authority Users to levy sewer rents upon and collect revenues from Commercial, Industrial, Institutional and Residential Users in their service areas in amounts sufficient to generate the revenues required annually to meet their obligations to DELCORA under their Service Agreements.

ARTICLE 600

LOCAL LIMITATIONS AND NATIONAL CATEGORICAL STANDARDS

SECTION 601 – AUTHORITY.

DELCORA is authorized to establish Local Limits pursuant to 40 CFR 403.5(c). Local limits will be approved by the USEPA and adopted by the DELCORA Board of Directors by Authority resolution.

SECTION 602 – NATIONAL CATEGORIAL PRETREATMENT STANDARDS.

Users must comply with the categorical Pretreatment Standards found at 40 CFR Chapter I, Subchapter N, Parts 405 - 471.

(A) Where a categorical Pretreatment Standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, DELCORA may impose equivalent concentration or mass limits in accordance with Section 602 E.

(B) When the limits in a categorical Pretreatment Standard are expressed only in terms of mass of pollutant per unit of production, DELCORA may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual Industrial Users.

(C) When wastewater subject to a categorical Pretreatment Standard is mixed with wastewater not regulated by the same Standard, DELCORA shall impose an alternate limit in accordance with 40 CFR 403.6(e).

(D) A categorical Industrial User may obtain a net/gross adjustment to a categorical Pretreatment Standard in accordance with the following paragraphs of this Section.

(1) Categorical Pretreatment Standards may be adjusted to reflect the presence of pollutants in the Industrial User's intake water in accordance with this Section. Any Industrial User wishing to obtain credit for intake pollutants must make application to DELCORA. Upon request of the Industrial User, the applicable Standard will be calculated on a "net" basis (i.e., adjusted to reflect credit for pollutants in the intake water) if the requirements of paragraph (2) of this Section are met.

(2) Criteria

(a) Either (i) The applicable categorical Pretreatment Standards contained in 40 CFR subchapter N specifically provide that they shall be

applied on a net basis; or (ii) The Industrial User demonstrates that the control system it proposes or uses to meet applicable categorical Pretreatment Standards would, if properly installed and operated, meet the Standards in the absence of pollutants in the intake waters.

(b) Credit for generic pollutants such as biochemical oxygen demand (BOD), total suspended solids (TSS), and oil and grease should not be granted unless the Industrial User demonstrates that the constituents of the generic measure in the User's effluent are substantially similar to the constituents of the generic measure in the intake water or unless appropriate additional limits are placed on process water pollutants either at the outfall or elsewhere.

(c) Credit shall be granted only to the extent necessary to meet the applicable categorical Pretreatment Standard(s), up to a maximum value equal to the influent value. Additional monitoring may be necessary to determine eligibility for credits and compliance with Standard(s) adjusted under this Section.

(d) Credit shall be granted only if the User demonstrates that the intake water is drawn from the same body of water as that into which the POTW discharges. DELCORA may waive this requirement if it finds that no environmental degradation will result.

(E) When a categorical Pretreatment Standard is expressed only in terms of pollutant concentrations, an Industrial User may request that DELCORA convert the limits to equivalent mass limits. The determination to convert concentration limits to mass limits is within the discretion of DELCORA. DELCORA may establish equivalent mass limits only if the Industrial User meets all the conditions set forth in Sections 602 (E)(1)(a) through 602 (E)(1)(e) below.

(1) To be eligible for mass limits, the Industrial User must:

(a) Employ, or demonstrate that it will employ, water conservation methods and technologies that substantially reduce water use during the term of its individual wastewater discharge permit;

(b) Currently use control and treatment technologies adequate to achieve compliance with the applicable categorical Pretreatment Standard, and not have used dilution as a substitute for treatment;

(c) Provide sufficient information to establish the facility's actual average daily flow rate for all wastestreams, based on data from a continuous effluent flow monitoring device, as well as the facility's long-term average production. Both the actual average daily flow rate and the long term

average production rate must be representative of current operating conditions;

(d) Not have daily flow rates, production levels, or pollutant levels that vary so significantly that equivalent mass limits are not appropriate to control the Discharge; and

(e) Have consistently complied with all applicable categorical Pretreatment Standards during the period prior to the Industrial User's request for equivalent mass limits.

(2) An Industrial User subject to equivalent mass limits must:

(a) Maintain and effectively operate control and treatment technologies adequate to achieve compliance with the equivalent mass limits;

(b) Continue to record the facility's flow rates through the use of a continuous effluent flow monitoring device;

(c) Continue to record the facility's production rates and notify DELCORA whenever production rates are expected to vary by more than 20 percent from its baseline production rates determined in Section 602 E(1)(c). Upon notification of a revised production rate, DELCORA will reassess the equivalent mass limit and revise the limit as necessary to reflect changed conditions at the facility; and

(d) Continue to employ the same or comparable water conservation methods and technologies as those implemented pursuant to paragraphs 602 (E)(1)(a) of this Section so long as it discharges under an equivalent mass limit.

(3) When developing equivalent mass limits, DELCORA:

(a) Will calculate the equivalent mass limit by multiplying the actual average daily flow rate of the regulated process(es) of the Industrial User by the concentration-based Daily Maximum and Monthly Average Standard for the applicable categorical Pretreatment Standard and the appropriate unit conversion factor;

(b) Upon notification of a revised production rate, will reassess the equivalent mass limit and recalculate the limit as necessary to reflect changed conditions at the facility; and

(c) May retain the same equivalent mass limit in subsequent individual wastewater discharger permit terms if the Industrial User's actual average

daily flow rate was reduced solely as a result of the implementation of water conservation methods and technologies, and the actual average daily flow rates used in the original calculation of the equivalent mass limit were not based on the use of dilution as a substitute for treatment pursuant to Section 225. The Industrial User must also be in compliance with Section 233 regarding the prohibition of bypass.

(F) DELCORA may convert the mass limits of categorical Pretreatment Standards of 40 CFR Parts 414, 419, and 455 to concentration limits for purposes of calculating limitations applicable to individual Industrial Users. The conversion is at the discretion of DELCORA.

(G) Once included in its permit, the Industrial User must comply with the equivalent limitations developed in this Section in lieu of the promulgated categorical Standards from which the equivalent limitations were derived.

(H) Many categorical Pretreatment Standards specify one limit for calculating maximum daily discharge limitations and a second limit for calculating maximum Monthly Average, or 4-day average, limitations. Where such Standards are being applied, the same production or flow figure shall be used in calculating both the average and the maximum equivalent limitation.

(I) Any Industrial User operating under a permit incorporating equivalent mass or concentration limits calculated from a production-based Standard shall notify DELCORA within five (5) business days after the User has a reasonable basis to know that the production level will significantly change within the next calendar month. Any User not notifying DELCORA of such anticipated change will be required to meet the mass or concentration limits in its permit that were based on the original estimate of the long term average production rate.

ARTICLE 700

MISCELLANEOUS PROVISIONS

SECTION 701 - SEVERABILITY STATEMENT.

If any provision, paragraph, word, or article of this Resolution is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, sections, and articles shall not be affected and shall continue in full force and effect.

SECTION 702 - CONFLICT STATEMENT.

All other resolutions and parts of other resolutions which are inconsistent or conflicting with any part of this Resolution are hereby repealed to the extent of such inconsistency or conflict.

SECTION 703 - ESTABLISHMENT OF EFFECTIVE DATE.

This Resolution shall have force and effect immediately upon its adoption.

SECTION 704 - REPEALER.

All resolutions or parts of resolutions inconsistent herewith are repealed to the extent of such inconsistencies. Resolution No. 91-03, as amended and codified by Resolutions No. 95-06 and No. 95-12, are hereby repealed in their entirety.

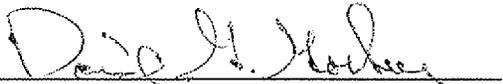
RESOLVED this 19th day of APRIL, 2011.

[SEAL]

DELAWARE COUNTY REGIONAL WATER
QUALITY CONTROL AUTHORITY

BY: 
Stanley Kester, Chairman

ATTEST:


David Gorbey, Secretary

**DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY**

**RESOLUTION NO. 2013-12
ADOPTED JULY 16, 2013**

**ESTABLISHING LOCAL LIMITS FOR
DISCHARGE TO DELCORA FACILITIES
UNDER THE INDUSTRIAL PRETREATMENT
PROGRAM**

BE IT RESOLVED by the Delaware County Regional Water Quality Control Authority (“DELCORA”) that in accordance with Resolution 2013-12, that Local Limits for discharge to DELCORA facilities shall be as follows:

SECTION 101 – Short Title

This resolution shall be known and may be cited as The DELCORA Local Limitations.

SECTION 102 – Purpose

A. In order to effectively administer its Pretreatment Program, comply with the provisions of the Clean Water Act, 33 USC §§1251 et seq., as amended, to fulfill the purposes set forth in DELCORA Standards, Rules, and Regulations, it is essential and necessary to impose local limitations upon all classes of non-domestic users.

B. In order that the aforementioned purposed can be achieved, it is deemed necessary and proper to adopt Local Limitations.

SECTION 103 - Authority

DELCORA is authorized to establish Local Limits pursuant to 40 CFR Part 403.5 C.

SECTION 104 - Applicability

A. DELCORA is comprised of an Eastern and Western Service Areas. Limits for the Western Service Area are established to protect against Pass-through and Interference at the DELCORA Western Regional Treatment Plant. Limits for the Eastern Service Area are established to protect against Pass-through and Interference at the City of Philadelphia Southwest Water Pollution Control Plant.

B. The municipalities of the Eastern and Western Service Areas are defined in Attachment 1. The local limits where the discharge occurs will be applied. For discharges to the Central Delaware County Authority, the most stringent limit will apply.

SECTION 105 – Local Limitations for the Eastern Service Area

A. For the Eastern Service Area, no person shall discharge wastewater containing in excess of the following:

Eastern Service Area & Philadelphia Limits

<u>Pollutant</u>	<u>Daily Maximum (mg/L)</u>	<u>Monthly Average (mg/L)</u>
Arsenic	0.15	0.10
Cadmium	0.2	0.1
Chromium, Total	7.0	4.0
Copper	4.5	2.7
Cyanide, Total	10.0	
Lead	0.69	0.43
Mercury	0.01	0.005
Nickel	4.1	2.6
Selenium	0.2	0.1
Silver	0.43	0.24
Zinc	4.2	2.6

B. No person shall discharge any of the substances listed below to the Publicly Owned Treatment Work “POTW”, without obtaining prior written approval of the City of Philadelphia.

- Acrylonitrile
- Aldrin
- Alpha BHC
- Aluminum
- Benzene
- Benzo (a) pyrene
- Benzotrachloride
- Beryllium
- Bis (2-ethylhexyl) phthalate (DEHP)
- Bromobenzene
- Bromodichloromethane
- BromoforCarbon tetrachloride
- Chlordane
- Chlorobenzene
- Chlorodibromomethane
- Chloroethane
- Chloroform
- 2-Chlorophenol
- Cumene (Isopropylbenzene)
- DDT/DDE/DDD
- Dibutylphthalate
- Dichlorobromomethane

bis (2-chloroethyl) ether
Dieldrin
Dioxins
Dimethyl Sulfoxide (DMSO)
Dimethylnitrosamine
Ethylbenzene
Heptachlor
Hexachlorobutadiene
Hexachlorobenzene
Iron
Lindane
Dichlorobenzene
Methyl chloride (Chloromethane)
Methyl Ethyl Ketone
Methyl Isobutyl Ketone
Molybdenum
Xylenes
o-Chlorotoluene
o-Dichlorobenzene
p-Dichlorobenzene
p-Chlorotoluene
Phenanthrene
Phenols
Pyrene
Styrene
Tetrachloroethylene (Perchloroethylene)
Titanium
Toluene
Toxaphene (chlorinated camphene)
Trichloroethylene
Vinyl chloride
Tetrachloroethane
1,1,2-Trichloroethane
Dichloroethane
1,1-Dichloroethylene
1,1-Dichloropropene
trans-1,2-Dichloroethylene
1,2,3-Trichloropropane
cis-1,2-Dichloroethylene
1,2-Dibromo-3-Chloropropane
1,2-Dichloropropane
1,3-Dichloropropane
1,3-Dichloropropene
2,2-Dichloropropane
2,4-Dinitrophenol
2,4-Dinitrotoluene
3,3-Dichlorobenzidene
Volatile Organic Sulfides

C. The City reserves the right to modify this list of materials prohibited from entering the POTW.

D. Polychlorinated Biphenyls (PCBs): The PCB content of waste shall be nondetectable by EPA method 608.

SECTION 106 – Local Limitations for the Western Service Area

A. For the Western Service Area, no person shall discharge wastewater containing in excess of the following:

Western Regional Treatment Plant Proposed

<u>Pollutant</u>	<u>Maximum Day Limit, mg/L</u>
Antimony	0.71
Arsenic	0.166
Cadmium	0.07
Chromium, Total	10.8
Copper	1.33
Cyanide, Total	0.30
Lead	1.54
Mercury	0.011
Nickel	4.64
Selenium	0.45
Silver	0.22
Zinc	5.82
Phenols (24hr)	16
PCB 1016	ND ⁽¹⁾
PCB 1221	ND ⁽¹⁾
PCB 1232	ND ⁽¹⁾
PCB 1242	ND ⁽¹⁾
PCB 1248	ND ⁽¹⁾
PCB 1254	ND ⁽¹⁾
PCB 1260	ND ⁽¹⁾
Benzene	1.5
Ethylbenzene	1.5
Toluene	1.5
Xylenes	1.5
Total CWA Section 307 toxic pollutants unless controlled otherwise elsewhere within these regulations	30
All other CWA Priority Pollutants not elsewhere regulated	No discharge without prior written approval of the Authority.

Notes:

1. Polychlorinated Biphenyls (PCBs): The PCB content of waste shall be nondetectable by EPA method 608. DELCORA reserves the right to require any User reporting a detection level above 5 ug/l to demonstrate that a lower detection limit is not achievable.

B. PROHIBITED POLLUTANTS

No person shall discharge wastewater containing any of the EPA Priority Pollutants listed herein into DELCORA's facilities without first obtaining written permission from DELCORA.

Acetone
Aluminum
Barium
Bromobenzene
Bromochloromethane
Carbazole
Carbon Disulfide
p-Chloroaniline
o-Chlorotoluene
p-Chlorotoluene
Cobalt
Cumene
Dibenzofuran
Dichlorobromomethane
Diisobutylenes
Endrin Ketone
2-Hexanone
Isopropylbenzene
2-Methylnaphthalene
2-Methylphenol (o-Cresol)
4-Methylphenol (p-Cresol)
Methoxychlor
MEK (Methyl Ethyl Ketone) (2-Butanone)
MIBK (Methyl Isobutyl Ketone)
Molybdenum
o-Nitroaniline
m-Nitroaniline
p-Nitroaniline
Styrene
Tin
Titanium
Vanadium
Xylenes (Total)
1,1,1,2 – Tetrachloroethane
1,1 – Dichloropropane

- 1,2,3 – Trichloropropane
- 1,2 – Dibromoethane
- 1,2 – Dibromo-3-Chloropropane
- 1,3 – Dichloropropane
- 2,2 – Dichloropropane
- 2,4,5 – Trichlorophenol

DELCORA reserves the right to modify this list of prohibited pollutants at any time as may become necessary by virtue of new State or Federal regulations.

SECTION 107 – Repealer

All resolutions or parts of resolutions inconsistent herewith are repealed to the extent of such inconsistencies. This resolution repeals Resolution 2011-01.

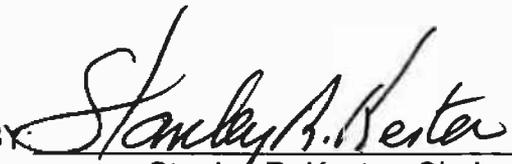
SECTION 109 – Effective Date

This Resolution shall be effective October 1, 2013.

RESOLVED this 16th day of July, 2013.

DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY

[SEAL]

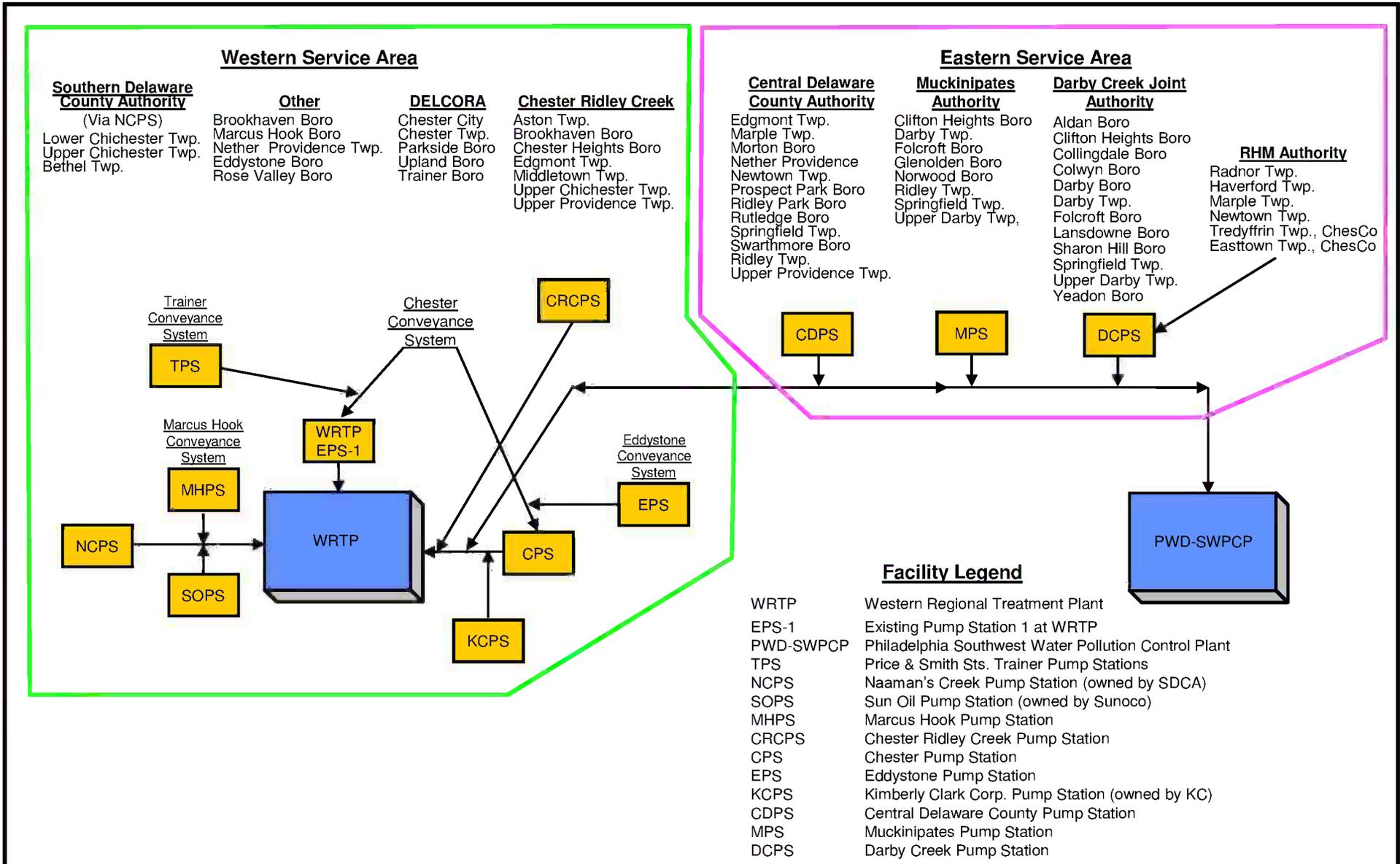
BY 
Stanley R. Kester, Chairman

ATTEST:


David G. Gorbey, Secretary

ATTACHMENT 1

EASTERN & WESTERN SERVICE AREAS



Delaware County Regional Water
Quality Control Authority



FIGURE 2
DELCORA'S CONVEYANCE SYSTEM

DELCORA ENFORCEMENT RESPONSE PLAN

INTRODUCTION AND PURPOSE

Delaware County Regional Water Quality Control Authority (DELCORA), as the owner and operator of the publicly owned treatment works, has the primary responsibility for enforcing all pretreatment requirements found in the Clean Water Act, the regulations enacted thereto, DELCORA's Wastewater Control Regulations and the DELCORA wastewater discharge permit. (Hereinafter, all requirements and obligations found in these documents shall be referred to as "pretreatment requirements"). The purpose of this Enforcement Response Plan is to ensure that DELCORA's responsibility is carried out in a consistent, systematic, and timely fashion. The goals of this Enforcement Response Plan are as follows:

1. to identify all instances of non-compliance with the pretreatment requirements;
and
2. to ensure that the industrial user returns to compliance as quickly as possible
and to ensure its continuing compliance thereafter; and
3. to penalize industrial users for their violations of the pretreatment requirements;
and
4. to deter future violations of the pretreatment requirements; and
5. to recover any expenses incurred by DELCORA attributable to an industrial
user's non-compliance.

This Enforcement Response Plan consists of six (6) sections.

TABLE OF CONTENTS

1. SECTION I - IDENTIFYING NON-COMPLIANCE

This section will discuss how non-compliance will be investigated and identified. It will identify those individuals responsible for determining non-compliance and specify time frames for making non-compliance determinations.

2. SECTION II - ENFORCEMENT RESPONSES

This section will discuss the appropriate enforcement response for all anticipated types of industrial user pretreatment requirement violations. Individuals responsible for implementing the enforcement response will be identified and time frames for the initiation and completion of the enforcement response established.

3. SECTION III - CALCULATION OF FINES

This section will identify those instances of non-compliance which require DELCORA to seek fines against the industrial user (IU). Also, the method used to calculate these fines will be addressed. Mitigating factors, which may be considered by DELCORA in reducing the fine amount, will then be addressed.

4. SECTION IV - COMPLIANCE SCHEDULES

Compliance Agreements will be the standard method of bringing an IU back into compliance. The content of the document will be discussed in this section.

5. SECTION V - AMENDMENTS TO ENFORCEMENT RESPONSE PLAN

6. SECTION VI - SUMMARY OF ENFORCEMENT RESPONSE PLAN OBLIGATIONS OF DELCORA PERSONNEL

SECTION I - IDENTIFYING NON-COMPLIANCE

The pretreatment technician (PT), along with the Manager of the Pretreatment Unit (Manager) or his designee, have the responsibility of determining non-compliance with all pretreatment requirements. The PT will determine if violations of any pretreatment requirements have occurred by taking the following action:

- A. Review of Baseline Monitoring Reports (BMR), 90 Day Compliance Reports (90DCR), Periodic Compliance Reports (PCR), Spill or Slug Discharge Reports (oral and written), Responses to NOV's, Compliance Schedule Reports, and other Reporting Obligations as Contained in the IU's Permit

The Manager will determine when all reports are due. Failure to make timely reports should be discovered within 10 days after the report's due date and the appropriate enforcement response discussed in Section II should be initiated.

All reports should be reviewed within 30 days upon receipt to determine if they are complete and whether they indicate any violation of the pretreatment requirements.

- B. Independent Sampling Verification

The PT will independently sample all significant industrial users (SIU) at least twice per year and all industrial users (IU) at least once per year. The PT may sample an IU as many times per year as the Manager deems necessary in order to determine: 1) the potential for pretreatment violations; 2) the frequency, duration, and magnitude of the violations; 3) whether the IU is taking remedial actions to correct his violations of the pretreatment requirements; and 4) to ensure that the industrial user returns as quickly as possible to full compliance.

All samples shall be taken using standard chain of custody forms.

The DELCORA Central Laboratory or a designated contract laboratory will then analyze the sample for all parameters as designated by the PT and transmit its laboratory analysis to the Pretreatment Unit as follows: (1) for organics analysis: within 60 days of sample date; (2) for inorganics and conventional pollutants: within 30 days of sample date. Within 10 days thereafter, the laboratory's report will be reviewed by the PT for discharge violations. All lab results must be reproduced as a file copy to be attached to the chain of custody forms which will be placed in the IU's verification monitoring report (VMR) files. All IU's will be sent a copy of the lab results.

- C. Inspections

All SIU's shall undergo a formal (comprehensive) inspection at least once per calendar year. All IU's shall undergo an informal inspection by the pretreatment technician at least once per year. The Manager and/or PT may conduct as many inspections of an IU as the Manager deems necessary to determine: 1) the potential for pretreatment violations, 2) the frequency, duration, and magnitude of the violations, 3) whether the IU is taking the corrective action as promised or as agreed to in his permit agreement or consent order, and 4) to ensure to the Manager's satisfaction that the industrial user is using its best efforts to return to compliance or prevent future non-compliance.

Formal pretreatment inspection forms shall be completed for the annual inspection and may be utilized for each subsequent inspection occurring that year. All completed inspection forms shall be placed in the IU's correspondence file. All IU's will be sent a copy of the completed formal inspection form.

D. Screening Process for Identifying SIU's

The formalized screening process for identifying SIU's is carried out on a continuing basis by the pretreatment unit within the process group and the Manager or his designee. This process determines whether industries and/or other non-domestic dischargers should be considered SIU's. This is accomplished through the use of annually-generated industrial directories, water company sales records, sewer sales records, business license listings or any other information which may become available.

Where information indicates that an IU could be classified as an SIU, then that industry shall undergo a formal inspection prior to a final determination by the Manager. A copy of the formal inspection shall be kept on file in the Pretreatment Unit. From this information, a permit shall be drafted and publicly noticed. A final permit shall then be issued. Upon issuance, the Manager or his designee shall assign a PT to monitor the permit.

E. Compliance Schedules

Certain industries will be operating under compliance schedules. These compliance schedules will establish milestone dates for actions to ensure compliance with pretreatment requirements (for example, hire an expert, purchase equipment, have equipment on line, etc.). The compliance schedule will also require the industry to notify the PT at each step as to whether the action has been completed. Compliance schedules may be contained in compliance agreements, administrative orders, consent decrees or the permit.

The PT must carefully monitor these compliance schedules to determine if the action has been completed on a timely basis and whether the proper notifications have been submitted. Violation of any compliance schedule deadline or notification requirement should be identified within 15 days after the milestone or reporting date has passed and the appropriate enforcement response discussed in Section II.A. should be initiated.

F. Records

The PT shall maintain all supporting documentation regarding all pretreatment violations and enforcement activities in the IU's active file for three (3) years. After three (3) years, the records shall be placed in storage.

SECTION II – ENFORCEMENT RESPONSES

A. Enforcement Response Options and Selection

All violations of the pretreatment requirements are instances of non-compliance and will receive a specific enforcement response. Pretreatment requirements are a matter of strict liability. Hence, good faith or lack of negligence on the industrial user's part is no defense to a violation of the pretreatment requirements.

The enforcement responses will range from notices of violation to formal civil litigation and/or termination of service, depending on the severity of the violation. A list of the enforcement responses, along with the personnel who will be implementing these responses, are described in Section II.E.

While similar violations will receive similar enforcement responses, as outlined in Section II. F, there is some inherent discretion within each enforcement response selection. For example, some violations will trigger either administrative action, formal civil litigation or permit revocation. The selection of the specific enforcement response option shall be at DELCORA's sole discretion.

B. Significant Non-Compliance (SNC)

An Industrial User is in significant non-compliance if the violation meets one or more of the following criteria:

1. Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent (66%) or more of all of the measurements for the same pollutant parameter taken during a six (6) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Article 200 and Section 201 of DELCORA's Sewer Use Ordinance;
2. Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of all of the measurements for each pollutant parameter taken during a six (6) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Article 200 and Section 201 of DELCORA's Sewer Use Ordinance, multiplied by the applicable TRC value. The TRC values are:
 - a) TRC = 1.4 for BOD, TSS, fats, oils and grease;
 - b) TRC = 1.2 for all other pollutants except pH;

Note: The City of Philadelphia uses different criteria and their criteria will apply in the Eastern Service Area.

3. Any other violation of a Pretreatment Standard or Requirement as defined in Article 200, Section 201, and Section 401 of DELCORA's Sewer Use Ordinance (Daily, maximum or long-term average, Instantaneous limit, or narrative standard) that DELCORA determines has caused, alone or in combination with

other discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public);

4. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment, or has resulted in the POTW's exercise of its emergency authority to halt or prevent such a discharge;
5. Failure to meet, within ninety (90) days after the scheduled date, a compliance schedule milestone contained in a User permit, control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;
6. Failure to provide, within thirty (30) days after the due date, required reports including but not limited to baseline monitoring reports, ninety (90) day compliance reports, periodic self-monitoring reports, Significant Industrial User reports, and reports on compliance with compliance schedules;
7. Failure to accurately report non-compliance; and/or
8. Any other violation or group of violations, which may include a violation of Best Management Practices (BMPs), which DELCORA determines will adversely affect the operation or implementation of the local Pretreatment program.

C. Enforcement Response to SNC

Violations of the pretreatment requirements which constitute significant non-compliance are considered to be the most serious violations and therefore require a strong and immediate enforcement response. The enforcement response to any instance of significant non-compliance will be as follows:

1. All instances of significant non-compliance will be immediately called to the attention of the Manager or his designee.
2. If the SNC is such that imminent harm occurs to the DELCORA treatment plant, its employees or the environment, the Manager and, if required, the pretreatment attorney, will take immediate steps to cease the violation. This action may be either an immediate permit revocation, civil action with injunction or any other steps necessary to prevent the harm from continuing including the immediate termination of sewer service.
3. If the SNC is such that it will not cause imminent harm to the DELCORA treatment plant, its employees or the environment, then the Manager will promptly send the offending IU a Notice of Violation (as attached in Exhibit A) informing him that he is in significant non-compliance and that formal civil litigation and/or administrative action (which may include the revocation of the IU's wastewater discharge permit or termination of service) will be commenced if the matter cannot be resolved within 30 days from the date of that notice. DELCORA's Executive Director, at his discretion, should he decide to pursue civil litigation, may attach to this Notice of Violation a copy of a complaint in

equity which will be filed if a resolution does not occur within 30 days. The filing of this complaint or the initiation of administrative action may be delayed at the Executive Director's discretion and only in the following situations: (1) additional information needs to be gathered by DELCORA in order to frame the proper allegations and corrective measures asked for in the complaint or administrative order or; (2) where effluent violations result in SNC and the IU has agreed in writing to retain the services of a licensed, professional engineer specializing in wastewater pretreatment to design a pretreatment system. Additional time may be allowed for the engineer to prepare his report so that a compliance schedule can be formulated.

4. The pretreatment attorney, the Manager or his designee, and/or PT shall be available to meet with the offending industrial user during this 30 day period following the Notice of SNC.
5. If an agreement is reached involving the implementation of a compliance schedule, that compliance schedule shall be attached to, and become part of, the IU's Wastewater Discharge Permit.
6. SNC fines will be based on severity and/or duration.
7. If the SNC results in DELCORA being fined, damages to DELCORA or additional treatment costs being incurred by DELCORA, then the offending IU shall pay these costs to DELCORA.
8. At least once a year, DELCORA shall publish in the largest daily newspaper published in Delaware County, a notice to the public Industrial Users which were in significant non-compliance. This notice shall include the name(s) and address(es) of the User and may also include additional information such as the duration of the violation, nature of the violation, compliance action taken (if any), whether the User is currently complying with a compliance schedule and whether the User has returned to compliance. At the discretion of DELCORA, the type of enforcement action undertaken may also be reported. This provision does not prohibit the publication of the notice in more frequent intervals or by the City for Users in the Eastern Service Area.
9. In addition to utilizing the actions contained in numbers 1-8 immediately above, nothing shall preclude the pretreatment attorney, Executive Director or the Manager or his designee from taking additional actions to ensure an immediate return to compliance.

D. Enforcement Response Options

<u>Abbreviation</u>	<u>Response</u>
AO	Administrative Order
ATC	Additional Treatment Costs (Payment for all additional treatment costs incurred by DELCORA as a result of an IU's non-compliance with pretreatment requirements)
CL	Civil Litigation (which may include injunctive relief, if appropriate)
CR	Cost Recovery (Payment for all damages incurred by DELCORA as a result of an IU's non-compliance with pretreatment requirements)
CRIM	Referral for Criminal Prosecution
CS	Compliance Schedule
FD	Fine Discretionary
FM	Fine Mandatory
FR	Fine Recovery (The reimbursement of any fines levied against DELCORA by any other agency as a result of an IU's non-compliance with pretreatment requirements)
M	Meeting with IU to resolve non-compliance
NOV	Notice of Violation (Attached as Exhibit A)
R	Revocation of Wastewater Discharge Permit
SNC	Enforcement Response to Significant Non-Compliance (Section II.C)
T	Termination of Sewer Service

E. Enforcement Response Personnel

<u>Abbreviation</u>	<u>Personnel</u>
ATT	DELCORA's Pretreatment Attorney
M	Manager, Pretreatment Unit or Designee
L	Laboratory Personnel
PT	Pretreatment Technicians
ED	Executive Director or Director of Engineering (Designee)

F. Enforcement Responses

1. Effluent Limit Violation – by SIU

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Infrequent, no harm to DELCORA or environment	NOV	PT, M
b) Recurring, no harm to DELCORA or environment	level 1: NOV, M, FD level 2: CS, FM	PT, M M, ED
c) Violation causes harm to DELCORA or environment	SNC	M, ATT, ED
d) Chronic violations (see Section II. B.1)	SNC	M, ATT, ED
e) Accidental or slug discharge, isolated no harm	level 1: NOV, ATC level 2: CS, FD	PT, M M, ED
f) Accidental or slug discharge, recurring no harm	level 1: NOV, M, FD, ATC level 2: CS, FM, AO	PT, M M, ATT, ED
g) Accidental or slug discharge, harm to DELCORA	SNC	M, ATT, ED
h) Interference or pass through	SNC	M, ATT, ED
i) Any intentional violation without prior notice to and approval by DELCORA	level 1: CRIM, FM, AO, CL, FR, CR, ATC level 2: T	M, ATT, ED ED, ATT

2. POTW Verification Sampling Violation

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Effluent limit violation for any parameter	NOV, FD	PT, M
b) Resample, violations continue to be detected	level 1: NOV, M, CS, FD level 2: CL, AO, FM	PT, M M, ATT, ED

3. Self Monitoring (Sampling) Violation

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Failure to monitor as frequently as required in permit (1st violation)	NOV	PT, M
b) Recurring failure to monitor as required in permit after notification by DELCORA	level 1: NOV, M, FD level 2: AO, CL, FM	PT, M M, ATT, ED
c) Incomplete monitoring, monitoring fails to test for all permit parameters, 1st violation	NOV	PT, M
d) Incomplete monitoring, monitoring fails to test for all permit parameters, recurring violations	level 1: NOV, FD, M level 2: AO, CL, FM	PT, M M, ATT, ED
e) Failure to monitor in accordance with the procedures contained in the permit, 1st violation	NOV	PT, M
f) Failure to monitor in accordance with procedures contained in the permit, recurring	level 1: NOV, FD, M level 2: AO, CL, FM	PT, M M, ATT, ED

4. Reporting Violations

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Report is between 5 and 30 days late, isolated event	NOV, FD	PT, M

b) Report is between 5 and 30 days late, recurring events	NOV, M, FM	PT, M
c) Report is over 30 days late	SNC	M, ATT, ED
d) Report is improperly signed or certified (1st violation)	NOV	PT, M
e) Report is improperly signed or certified after notice by DELCORA	NOV, M, FD	PT, M
f) Failure to give one hour telephone notice to report accidental discharge, (spill or slug load) no harm (1st violation)	NOV	PT, M
g) Failure to give one hour telephone notice to report accidental discharge, (spill or slug load) no harm, recurring	level 1: NOV, M, FD level 2: AO, FM	PT, M M, ED
h) Failure to give one hour telephone notice to report accidental discharge, (spill or slug load), results in harm	SNC	M, ATT, ED
i) Failure to submit written report within five (5) days after accidental discharge (no harm) 1st violation	NOV	PT, M
j) Failure to submit written report within five (5) days after accidental discharge (recurring)	level 1: NOV, M, FD level 2: AO, FM	PT, M M, ED
k) Failure to notify DELCORA within 24 hours of becoming aware of a sample which violates the industrial user's effluent limits and to report the next sample that shows a return to compliance (1st violation)	NOV, FD	PT, M

l) Failure to notify DELCORA within 24 hours of becoming aware of a sample which violates the industrial user's effluent limits and to report the next sample that shows a return to compliance (recurring)	level 1: NOV, M, FD level 2: AO, CL, FM	PT, M M, ATT, ED
m) Failure to report non-compliance accurately	SNC, CRIM, T	M, ATT, ED

5. Compliance Schedule Violations ⁽¹⁾

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Missed milestone date by less than 45 days	NOV, FD	PT, M
b) Missed milestone date by 45 days or more ⁽²⁾	SNC, T	M, ATT, ED
c) Failure to give notice as required in the compliance schedule (initial violation)	NOV, FD	PT, M
d) Failure to give notice as required in the compliance schedule, recurring	level 1: NOV, M, FD level 2: AO, FM	PT, M M, ED

⁽¹⁾ Penalties for violation of compliance schedule milestone dates may be contained in the compliance schedule itself, administrative order or consent decree. Where these penalty provisions exist, penalties for those violations will be levied in accordance with those terms and conditions. If no such provisions exist then the penalties will be levied in accordance with the above enforcement responses.

⁽²⁾ If an IU wishes to avoid being in SNC, it must notify DELCORA in writing prior to being 45 days late and must explain its reasons for the delay. If DELCORA believes that the delay is caused by factors completely outside of the control of the industrial user then DELCORA may extend the milestone deadline. Such extension would therefore prevent the IU from violating its milestone date and therefore the IU would not be in SNC. DELCORA will not grant extensions unless the IU clearly establishes its entitlement in a timely manner.

6. Unauthorized Discharges (No Permit)

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) IU unaware of requirement, no harm to DELCORA or environment	NOV, FD	PT, M
b) IU unaware of requirement, harm to DELCORA or environment	NOV, FM, AD	M, ATT, ED
c) Failure to apply for a permit continues after notice by DELCORA	level 1: NOV, FD level 2: AO, FM, T	PT, M M, ED
d) IU has failed to renew its wastewater discharge permit	level 1: NOV, FD level 2: AO, FM, T	PT, M M, ED

7. Other Permit Violations

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Waste streams are diluted in lieu of treatment, unintentional	level 1: NOV, FD, M level 2: CS, AO, CL, FD	PT, M M, ATT, ED
b) Waste streams are diluted in lieu of treatment, intentional	NOV, FM, CL, CRIM, T	M, ATT, ED
c) Inadequate record keeping, initial	NOV	PT, M
d) Inadequate record keeping, recurring, after notice by DELCORA	level 1: NOV, FD, M level 2: AO, FM	PT, M M, ATT, ED
e) Failure to mitigate non-compliance, initial	NOV, FD, ATC, CR	PT, M, ED
f) Failure to mitigate non-compliance after notice by DELCORA	level 1: NOV, FM, M, ATC, CR level 2: AO, CL, R, T	PT, M M, ATT, ED
g) Failure to allow inspector to inspect premises or to provide records as requested	level 1: NOV, FD, M level 2: AO, CL, FM, CRIM	PT, M M, ATT, ED

h) Failure to notify DELCORA in advance of any substantial change in volume or character of pollutants including any change in its hazardous waste notification	NOV, FD	PT, M
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8. Violations of Best Management Practices (BMP)

<u>Nature of Violation</u>	<u>Enforcement Response</u>	<u>Personnel</u>
a) Violations of BMPs	NOV, FD depending on the circumstances	PT, M

G. Time Frame for Responses

1. Initial Enforcement Response (level 1)

- | | |
|-----------------------------------|---|
| a) Late Reports - | Enforcement response should be initiated within 5 days after determination that report is late. |
| b) Report Review - | After a report has been reviewed and any non-SNC violation determined, the appropriate response shall be initiated within 5 days. |
| c) All other non-SNC - violations | Enforcement response of the pretreatment standards should be initiated within 10 days of discovery by DELCORA of the violation. |

2. Escalating Enforcement Response (level 2)

The level 2 enforcement response should be initiated within 30 days after it is judged by DELCORA personnel that the level 1 response is ineffective in correcting the violation.

3. Significant Non-Compliance

Enforcement responses should be initiated according to the time frames established in Section II. C.

H. Additional Responses

The enforcement responses contained in Section II.F. are general guidelines and do not limit or restrict DELCORA's ability to take any other or more severe enforcement actions where DELCORA, in its sole discretion, deems it appropriate.

SECTION III – CALCULATION OF FINES

- A. Section II. F., Enforcement Response, states those violations for which fines are mandatory or discretionary.
- B. For those violations for which fines are discretionary, DELCORA will consider the following factors in determining whether fines should be assessed:
1. Reasons for non-compliance
 2. Compliance History - DELCORA will examine the IU's history of compliance for the specific violation as well as for all other permit terms and conditions
 3. Good faith compliance efforts - Good faith compliance efforts consist of the following actions:
 - a) whether the IU has responded to the NOV within 30 days
 - b) the actions the IU has taken or will take to ensure a return to compliance
 - c) the timeliness of these corrective actions
- C. Where the violation of a pretreatment standard requires a fine, either where a fine is mandatory or DELCORA has determined that a fine is appropriate pursuant to Section II. F. and III. B., the fine shall be \$1,000 per violation per day. The \$1,000 per violation per day fine is subject to increase to the maximum amount as allowed by law.
- D. Calculation of Maximum Fines
The maximum amount of fines for pretreatment violations will be calculated as follows:
1. Fines for violations of the daily maximum effluent limit shall be \$1,000 per day, up to the maximum allowed by law, for each and every parameter violated.
 2. Violations of the monthly average effluent for any parameter shall be considered as violations for each and every day within that month and therefore a \$1,000 per day fine, up to the maximum allowed by law, for all days in that month will be assessed.
 3. For each day any report is late, a \$100 fine will be assessed.
 4. If an IU fails to self monitor then a fine of \$1,000, up to the maximum allowed by law, will be assessed for each parameter that the IU fails to monitor.
 5. Accidental Spill. A \$1,000 fine will be assessed for each of the following: 1) the accidental spill, 2) the failure to give DELCORA one hour notice, if appropriate, and 3) the failure to follow-up with a five day notice of the spill, if appropriate.
 6. All other violations will be assessed a penalty of \$1,000 per day, up to the maximum allowed by law, for each day that the violation continues.

E. Reduction of Maximum Fines

The calculations in Section III. D. 1. through 6. are the maximum fines which can be assessed against an IU for violating the pretreatment requirements.

DELCORA has the discretion to reduce the maximum fine in accordance with the general guidelines listed immediately below and contained in this section. In determining whether a fine reduction is warranted, DELCORA will consider the following factors ("factors"):

1. Reasons for violation
2. Magnitude of violation
3. Duration of violation
4. Effect of violation on receiving water or sludge
5. Effect of violation on the treatment plant or its employees
6. Compliance history of industrial user
7. IU's response to violation. How quickly IU has responded to NOV and timeliness of its remedial actions.

Where DELCORA has determined that a reduction in the maximum fine is warranted, DELCORA shall use the following general guidelines in reducing the fine:

1. First, the maximum fine shall always be calculated. The maximum fine is calculated in accordance with Section III. D. 1. through 6.
2. A "reduced fine amount" is next calculated. The reduced fine shall be the fine which the IU must pay to DELCORA within thirty (30) days, unless an appeal is properly filed. The reduced fine is calculated as follows:
 - a. All daily effluent violations are totaled and multiplied by \$1,000 per violation per day. A reduction in the amount per violation per day may be allowed based on the factors previously outlined in this section.
 - b. Each monthly average violation, which normally would be calculated as 30 days of violations, may be treated as low as one day of violation if DELCORA determines that such reduction is warranted given the factors previously outlined in this section.
 - c. Similarly, reporting violations are fined at \$100 per day for each day late. However, this may be reduced based on the factors previously outlined in this section
 - d. All violations of self-monitoring are assessed at \$1,000 per parameter not monitored. A reduction in the amount per violation per day may be allowed based on the factors previously outlined in this section.
 - e. The reduced fine will be the sum of a. through d.

- f. In certain situations, the reduced fine may be further reduced by up to 30% if all of the following conditions are met:
 - 1) DELCORA is convinced that the IU is using its very best efforts to immediately return to compliance; and 2) DELCORA is convinced that the violation will not recur; and 3) DELCORA determines that this additional reduction is warranted under the factors previously discussed in this section.

SECTION IV - COMPLIANCE SCHEDULES

A. Introduction

Some violations of the pretreatment requirements will require that a Compliance Schedule be entered into. The Compliance Schedule will have as its major goal the establishment of milestone dates for the completion of certain specified events leading the IU to full compliance with all pretreatment requirements as quickly as possible.

B. Compliance Schedules

1. While compliance schedules may be appropriate in other instances of non-compliance, they will most often be used to correct effluent limit violations. While precise milestone events may differ from case to case, as a general rule they should, at a minimum, contain the following events with a corresponding milestone completion date:

- a. Hire a licensed professional engineer specializing in wastewater pretreatment to evaluate the industrial user's processes and to develop a pretreatment system designed to bring the IU into full compliance with all pretreatment requirements.
- b. Licensed professional engineer must submit a detailed plan of the proposed pretreatment system to DELCORA for its review. The plan must state in detail all steps necessary for the IU to achieve full compliance with all pretreatment requirements.
- c. Purchase all necessary pretreatment equipment. Along with the IU's standard compliance notification, the IU must attach copies of the purchase orders for the equipment.
- d. Install all necessary pretreatment equipment.
- e. Debug and test the pretreatment equipment and have it on line and in operation.
- f. Test period - maintain a 95% compliance rate for a period of 90 consecutive days as to all pretreatment requirements.

2. Within ten (10) working days after the completion date for each milestone event, the IU must notify DELCORA in writing as to whether the event has been completed. If the event was not completed, the notice must state the reasons for the failure, the expected completion date of the event, and the steps to be taken to avoid further delays. This notice does not excuse the IU for its failure to meet the milestone dates.

SECTION V - AMENDMENTS TO ENFORCEMENT RESPONSE PLAN

The Enforcement Response Plan may be amended at any time and for any reason at the sole discretion of DELCORA.

SECTION VI - SUMMARY OF ENFORCEMENT RESPONSE PLAN OBLIGATIONS OF DELCORA PERSONNEL

This section briefly summarizes the obligations of the Pretreatment Group personnel found in Section I through V of the Enforcement Response Plan.

<u>Obligation</u>	<u>Time Frame</u>	<u>Personnel</u>
<u>I. Reports</u>		
A. determine timeliness of all reports	w/in 10 working days of due dates	PT
B. review all reports	w/in 10 working days of receipt	PT, M
C. initiate appropriate enforcement response for all non-SNC violations	a) w/in 10 working days after timeliness determination has been made	PT, M
	b) w/in 10 working days after report has been reviewed	PT, M
D. initiate level 2 enforcement if necessary	w/in 30 days after level 1 has failed	M, ATT, ED
E. initiate appropriate enforcement response for any SNC violation	w/in 30 days after discovery of violation in accordance w/ Section II.C. of the Enforcement Response Plan	M, ATT, ED
<u>II. Independent Sampling</u>		
A. sample all SIU's	at least twice per year	PT
B. sample all IU's	at least once per year	PT

III. Analyze Samples

A. organics	w/in 60 days of sample event	Lab
B. inorganics & conventional pollutants	w/in 30 days of sample event	Lab
C. review lab results	w/in 10 working days of receipt from lab	PT, M

IV. Effluent Limits

A. initiate appropriate enforcement response for any effluent limit violation	a) w/in 10 working days of receipt of lab results b) if SNC, in accordance with Section II.C.	PT, M M, ATT, ED
B. initiate level 2 enforcement if necessary	w/in 30 days after level 1 enforcement has failed	M, ATT, ED

V. IU Self-Monitoring

A. initiate appropriate enforcement response for any self-monitoring violation	w/in 10 working days of discovery of violation	PT, M
B. initiate level 2 enforcement if necessary	w/in 30 days after level 1 has failed	M, ATT, ED

VI. Inspections

A. formal inspection of all SIU's	at least once per calendar year	M
B. informal inspection of all IU's	at least once per year	PT
C. initiate enforcement response	w/in 10 working days after discovery of violation through inspection	M

VII. Compliance Schedule

- | | | |
|--|---|------------|
| A. initiate appropriate enforcement response for any missed milestone dates | w/in 10 working days of any missed milestone date | M |
| B. initiate SNC enforcement if necessary for continuing missed milestone dates | w/in 60 days after any missed milestone date | M, ATT, ED |

VIII. All Other Permit Violations

- | | | |
|---|---|------------|
| A. initiate appropriate enforcement response | a) w/in 10 working days of discovery of violation | M |
| | b) if SNC, in accordance with Section II.C. | M, ATT, ED |
| B. initiate level 2 enforcement, if necessary | w/in 30 days after level 1 enforcement has failed | M, ATT, ED |

\\Delcoraserver\PublicAdministration\Masters\Enforcement Response Plan - Rev 8-11-2011.Doc
\\Delcoraserver\Public\Dept Of Engineering\PreTreatment Program\Rules And Regulations\Enforcement Response Plans\2011 Enforcement Response Plan.Doc
Approved edits 8/16/2011 at Board of Directors meeting
First Approved 4/19/2011 at Board of Directors meeting
rev. 4/15/2011
rev. 8/11/2011

EXHIBIT A
NOTICE OF VIOLATION
SAMPLE LETTER

DATE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

NAME
COMPANY
ADDRESS
CITY, STATE, ZIP CODE

Re: Notice of Violation

Dear _____:

In accordance with the Enforcement Response Guide, DELCORA is officially serving notice of the following violations of DELCORA's Standards, Rules and Regulations of 1991.

<u>DATE</u>	<u>VIOLATION</u>	<u>REFERENCE</u>
April 21, 2010	Failure To Monitor (BOD 5, TSS)	Permit #1DE-01-04 Part II A
April 29, 2010	Failure To Monitor (BOD 5, TSS)	Permit #1DE-01-04 Part II A
April 30, 2010	Failure To Monitor (TSS)	Permit #1DE-01-04 Part II A

The above information is based on composite and/or grab samples not taken by (PERMIT COMPANY NAME) personnel at (ADDRESS OF LOCATION).

This letter does not waive, either expressly or by implication, the power or authority of DELCORA to further prosecute for any and all violations arising prior to or after the issuance of this letter or the conditions upon which this letter is based.

If additional information regarding this matter is required, feel free to contact me at (610) 876-5523, extension 213.

Sincerely,

Laboratory & Pretreatment Manager

cc: Director of Engineering, DELCORA
File Copy

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be clearly documented and verified. The text then moves on to describe the various methods used to collect and analyze data, highlighting the need for consistency and precision in the process.

In the second section, the author details the specific steps involved in the data collection process. This includes identifying the sources of information, establishing a reliable system for gathering data, and ensuring that the information is up-to-date and relevant. The text also addresses the challenges of data collection and offers practical solutions to overcome these obstacles.

The third part of the document focuses on the analysis of the collected data. It explains how to interpret the results, identify trends, and draw meaningful conclusions from the information. The author provides examples of how data analysis can be used to inform decision-making and improve organizational performance.

Finally, the document concludes with a summary of the key findings and a call to action. It encourages readers to apply the principles and methods discussed in the text to their own work, ensuring that they are using the most effective and efficient ways to collect and analyze data.

**DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY**

RESOLUTION NO. 2014-10

ADOPTED SEPTEMBER 16, 2014

REPEALING RESOLUTION 2008-03 AND ESTABLISHING PERMIT
FEES FOR CONNECTION AND DISCHARGE TO DELCORA OWNED
SEWER SYSTEMS, FOR REPAIRS OR RECONSTRUCTION OF
SUCH CONNECTIONS

BE IT RESOLVED by the Delaware County Regional Water Quality Control Authority ("DELCORA") that in accordance with Resolution No. 2011-04; Sections 301, 303, 305, 307, 308, 309, 310, 313, 314, and 501, fees for connection and discharge to DELCORA owned sewer systems, for repairs or reconstruction of such connections shall be as follows:

Section 1. Primary Residential and Commercial Users Sewer Connection Permits

A. New Lateral Connections, 6 Inches in Diameter or Less:

Single Connections: \$250
Multiple Connections: \$250 for the first connection
 \$100 for each additional connection

B. New Lateral Connections, Over 6 Inches in Diameter:

Single Connections: \$340
Multiple Connections: \$340 for the first connection
 \$100 for each additional connection

C. Repair, Capping or Reconstruction of Lateral Connections:

Single Connections: \$190
Multiple Connections: \$190 for the first connection
 \$125 for each additional connection

D. For new developments, where the owner will install new sewer mains and transfer ownership of the mains to DELCORA:

DELCORA will require the developer to enter into a Developer's Agreement to escrow funds for engineering review, sewer capacity determinations, construction inspection, as-built plans, geographic information system plan conversions, sewer televising and testing, and sewer connection permits.

For in-fill developments and building conversions:

Where existing sewer lines will be used, DELCORA reserves the right to bill the developer for sewer capacity studies to ensure that the sewer lines will handle increased flows.

Section 2. All terms used herein shall be consistent with the definitions in Resolution No. 2011-04, DELCORA Standards, Rules & Regulations.

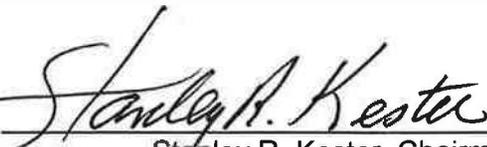
Section 3. The fees stated in the Resolution are effective January 1, 2015, and shall remain in effect until modified by DELCORA.

Section 4. Resolution 2008-03 and all other resolutions or parts of resolutions inconsistent herewith are hereby repealed to the extent of such inconsistency.

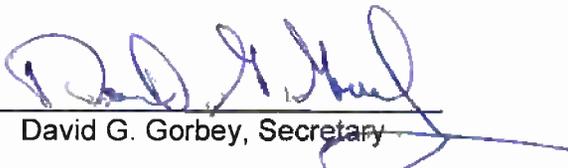
RESOLVED this 16th day of **September, 2014.**

[SEAL]

**DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY**

BY: 
Stanley R. Kester, Chairman

ATTEST:


David G. Gorbey, Secretary

**DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY**

RESOLUTION NO. 2014-11

ADOPTED SEPTEMBER 16, 2014

REPEALING RESOLUTION 2008-03 AND ESTABLISHING PERMIT
FEES FOR INTRODUCTION OF INDUSTRIAL WASTEWATERS INTO
ANY SEWER SYSTEMS WHERE SUCH WASTEWATERS WILL
ULTIMATELY FLOW INTO DELCORA OWNED FACILITIES.

BE IT RESOLVED by the Delaware County Regional Water Quality Control Authority ("DELCORA") that in accordance with Resolution No. 2011-04, Sections 301, 303, 305, 307, 308, 309, 310, 313, 314, and 501, fees for wastewater discharge permits for the discharge of industrial wastewaters into DELCORA owned or tributary sewer systems shall be as follows:

Section 1. Pretreatment Program Fees

A. Non-refundable application processing fee for wastewater discharge permit for the discharge of non-domestic wastewater to a DELCORA owned or tributary sewer system applicable to new and renewing industrial users:

1. Categorical Industrial User (CIU)

- | | |
|-------------------------------|-----------|
| a) Zero Discharge | \$ 200.00 |
| b) 1 – 24,999 gallons per day | \$ 450.00 |

2. Significant Industrial User (SIU) and CIU

- | | |
|---|-----------|
| a) 25,000 – 99,999 gallons per day | \$ 450.00 |
| b) 100,000 – 999,999 gallons per day | \$ 700.00 |
| c) 1,000,000 or greater gallons per day | \$ 950.00 |

3. Non-Significant Industrial User (NSIU) – any industrial user or non-domestic user discharging <25,000 gallons per day, exempt from Federal Limitations but required by DELCORA to maintain an industrial user permit:

- | | |
|-------------------------------|-----------|
| a) 0 – 24,999 gallons per day | \$ 200.00 |
|-------------------------------|-----------|

4. Temporary Discharge Permit – permitted discharge period shall not exceed 90 days in duration:

- | | |
|---------|-----------|
| a) NSIU | \$ 250.00 |
|---------|-----------|

5. Fee for modification of wastewater discharge permit

- | | |
|---------------|-----------|
| a) SIU or CIU | \$ 500.00 |
| b) NSIU | \$ 250.00 |

B. Non-refundable pretreatment maintenance fee for all industrial users issued a wastewater discharge permit:

1. Applicable to Categorical Industrial User (CIU), Significant Industrial User (SIU), and Non-Significant Industrial User (NSIU)

a) Annual Fee \$ 300.00

2. Not applicable to industrial users issued a Temporary Discharge Permit

The application processing fees are based off of permitted flows. In addition to the above fees, industrial users may be charged the cost of any special consultants, laboratory tests, or special evaluations required by DELCORA to evaluate the discharge from new or existing users. DELCORA may bill for analytical services required in the administration of the pretreatment program.

Section 2. All terms used herein shall be consistent with the definitions in Resolution No. 2011-04, DELCORA Standards, Rules & Regulations.

Section 3. The fees stated in the Resolution are effective January 1, 2015, and shall remain in effect until modified by DELCORA.

Section 4. Resolution 2008-03 and all other resolutions or parts of resolutions inconsistent herewith are hereby repealed to the extent of such inconsistency.

RESOLVED this 16th day of September, 2014.

**DELAWARE COUNTY REGIONAL
WATER QUALITY CONTROL AUTHORITY**

[SEAL]

ATTEST:

BY: 
Stanley R. Kester, Chairman


David G. Gorbey, Secretary

**Central Delaware County
Authority**



CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2018

- Permittee is owner and/or operator of a POTW or other sewage treatment facility
 Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	Central Delaware County Authority	Permit No.:	PA N/A
Mailing Address:	212B Unity Terrace	Effective Date:	N/A
City, State, Zip:	Rutledge, PA 19070	Expiration Date:	N/A
Contact Person:	Charles J. Lillicrapp, Jr.	Renewal Due Date:	N/A
Title:	Chairman	Municipality:	N/A
Phone:	610-544-9944	County:	Delaware
Email:	cdca@craftech.com	Consultant Name:	Catania Engineering Associates, Inc.
CHAPTER 94 REPORT COMPONENTS			
<p>1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))</p> <p>Check the appropriate boxes:</p> <p><input type="checkbox"/> Line graph for flows attached (Attachment)</p> <p><input type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment)</p> <p><input checked="" type="checkbox"/> Section 1 is not applicable (report is for a collection system).</p>			
<p>2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))</p> <p>Check the appropriate boxes:</p> <p><input type="checkbox"/> Line graph for organic loads attached (Attachment)</p> <p><input type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment)</p> <p><input checked="" type="checkbox"/> Section 2 is not applicable (report is for a collection system).</p>			

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

Please note that the Chapter 94 Spreadsheet was used to show monthly average flows and projections; it is understood that this report is for a collection system only.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment**)
- List summarizing each extension or project attached (**Attachment**)
- Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

No sewer extensions were constructed or approved within the past calendar year. A copy of the sanitary sewer system map is attached.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

See attachment.

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

Based upon the video inspection program, the system is in fair to good condition. There are no known areas of capacity exceedance and no areas of capacity exceedance expected in the next five years. See attached for the SSO noted for the 2018 calendar year.

Crum Creek Pump Station is projected to be 24 MGD.

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

- The collection system does not contain pump stations
- The collection system does contain pump stations (Number – 1)
- Discussion of condition of each pump station attached (**Attachment**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

- a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.
- b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.
- c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

- Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)
- Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

- This report demonstrates an existing hydraulic overload condition.
- This report demonstrates a projected hydraulic overload condition.
- This report demonstrates an existing organic overload condition.
- This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

- Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

- Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

- Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

- Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Charles J. Lillicrapp, Jr.

Name of Responsible Official

Signature



610-544-9944

Telephone No.

Date

3-25-2019

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Charles Catania Jr.



Name of Preparer

Signature

610-532-2884



Telephone No.

Date

Facility Name:

Reporting Year:

Permit No.:

Persons/EDU:

Existing Hydraulic Design Capacity:
Upgrade Planned in Next 5 Years?

MGD
Year:

Existing Organic Design Capacity:
Upgrade Planned in Next 5 Years?

lbs BOD5/day
Year:

Future Hydraulic Design Capacity:

MGD

Future Organic Design Capacity:

lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2014	2015	2016	2017	2018
January	0.36561	0.32983	0.29602	0.28065	0.27677
February	0.51889	0.34038	0.41099	0.28571	0.41929
March	0.40313	0.44435	0.32788	0.30968	0.43
April	0.43187	0.38618	0.31622	0.35	0.37433
May	0.47306	0.28882	0.34779	0.33226	0.36677
June	0.35193	0.33225	0.303	0.28687	0.34667
July	0.28019	0.31259	0.26325	0.26774	0.26871
August	0.26177	0.24047	0.23841	0.26452	0.28968
September	0.26603	0.23629	0.24334	0.26333	0.35567
October	0.24474	0.26692	0.23517	0.24839	0.32032
November	0.28227	0.25215	0.2395	0.25333	0.48033
December	0.29855	0.31135	0.26438	0.24518	0.45871
Annual Avg	0.34733811	0.3100326	0.2904964	0.28228623	0.36560445
Max 3-Mo Avg	0.45129619	0.38363669	0.35199545	0.33064516	0.41978853
Max : Avg Ratio	1.30	1.24	1.21	1.17	1.15
Existing EDUs	36,334.0	36,197.0	36,197.0	36,517.0	36,517.0
Flow/EDU (GPD)	9.8	8.6	8.0	7.7	10.0
Flow/Capita (GPD)	2.7	2.4	2.3	2.2	2.9

Annual Avg
Max Mo Avg
Max : Avg Ratio
Existing EDUs
Load/EDU
Load/Capita
Exist. Overload?

Projected Flows for Next Five Years (MGD)

	2019	2020	2021	2022	2023
New EDUs	10.0	10.0	10.0	10.0	10.0
New EDU Flow	0.0001	0.0001	0.0001	0.0001	0.0001
Proj. Annual Avg	0.31925	0.31935	0.31945	0.31955	0.31965
Proj. Max 3-Mo Avg	0.38737	0.38749	0.38762	0.38774	0.38786
Proj. Overload?					

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (inches)

Month	2014	2015	2016	2017	2018
January	3.56	4.52	2.63	2.48	2.85
February	5.12	2.36	4.36	1.3	6.02
March	4.23	5.52	2.01	4.33	4.74
April	6.69	3.58	1.75	3.15	3.94
May	2.91	1.2	6.65	6.33	5.21
June	5.46	8.89	1.87	1.86	3.34
July	4.3	3.16	3.88	5.35	3.08
August	3.55	0.98	1.7	5.66	4.11
September	1.69	6.27	3.52	3.66	9.76
October	2.54	3.76	2.06	3.66	3.08
November	4.07	1.89	2.17	1.3	9.03
December	3.27	5.14	2.72	1.31	6.38

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

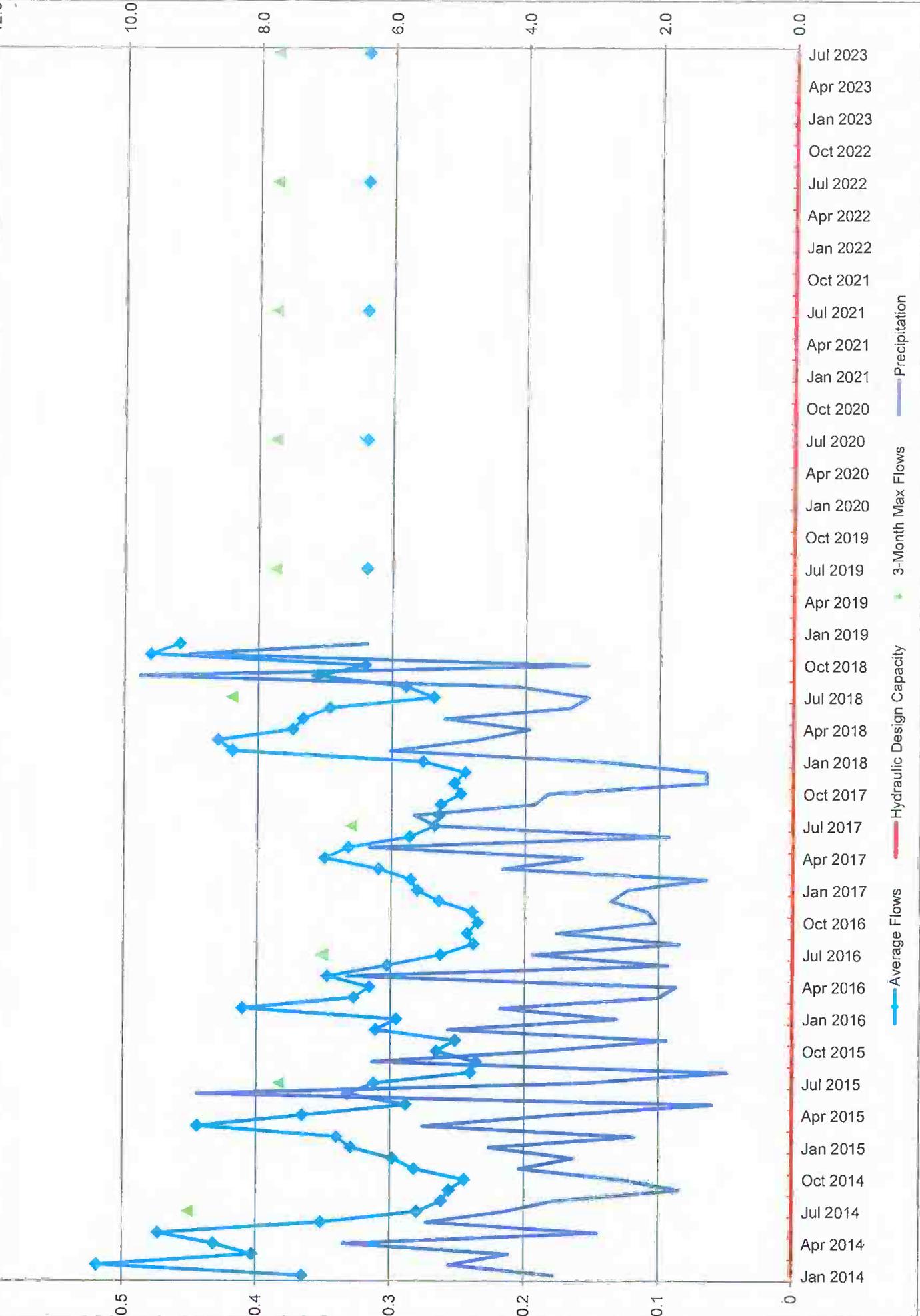
Month	2014	2015	2016	2017	2018
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Annual Avg	36,334	36,197	36,197	36,517	36,517
Max Mo Avg					
Max : Avg Ratio					
Existing EDUs	36,334	36,197	36,197	36,517	36,517
Load/EDU					
Load/Capita					
Exist. Overload?					

Projected BOD5 Loads for Next Five Years (lbs/day)

	2019	2020	2021	2022	2023
New EDUs	10	10	10	10	10
New EDU Load	5,840	5,840	5,840	5,840	5,840
Proj. Annual Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Proj. Max Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Proj. Overload?					

5-Year Measured and Forecasted Hydraulic Loads

MGD (left axis) and Precip (in) (right axis)





**PADEP Chapter 94 Spread:
Sewage Treatment PI**

Reporting Year: **2018**

Facility Name: **Central Delaware County Authority-Crum Creek Pump Station**

Permit No.:

Persons/EDU: **3.5**

Existing Hydraulic Design Capacity:
Upgrade Planned in Next 5 Years? MGD Year:

Future Hydraulic Design Capacity:
 MGD

Existing Organic Design Capacity:
Upgrade Planned in Next 5 Years? lbs BOD5/day Year:

Future Organic Design Capacity:
 lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2014	2015	2016	2017	2018
January	0.18419	0.14387	0.13258	0.17323	0.19161
February	0.20399	0.15143	0.17568	0.17571	0.2175
March	0.18677	0.18677	0.13258	0.17184	0.21935
April	0.181	0.16733	0.194	0.20087	0.17733
May	0.19868	0.13323	0.13323	0.15806	0.12548
June	0.163	0.14833	0.14933	0.16633	0.172
July	0.13513	0.13613	0.13613	0.11323	0.17065
August	0.12581	0.11968	0.11968	0.1271	0.13839
September	0.12067	0.12367	0.12367	0.18	0.17267
October	0.11516	0.12645	0.12645	0.14452	0.11516
November	0.12767	0.12833	0.12833	0.16633	0.13033
December	0.13355	0.14129	0.14129	0.14839	0.21226

Annual Avg 0.15562935 0.14145955 0.14109424 0.15962494 0.17022805
 Max 3-Mo Avg 0.19390092 0.1651787 0.1674809 0.18277215 0.20948925
 Max : Avg Ratio 1.25 1.17 1.19 1.15 1.23
 Existing EDUs 36,334.0 36,197.0 36,197.0 36,517.0 36,517.0
 Flow/EDU (GPD) 4.3 3.9 3.9 4.4 4.7
 Flow/Capita (GPD) 1.2 1.1 1.1 1.2 1.3
 Exist. Overload?

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2014	2015	2016	2017	2018
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Annual Avg 36,334 36,197 36,197 36,517 36,517
 Max Mo Avg
 Max : Avg Ratio
 Existing EDUs 36,334 36,197 36,197 36,517 36,517
 Load/EDU
 Load/Capita
 Exist. Overload?

Projected Flows for Next Five Years (MGD)

	2019	2020	2021	2022	2023
New EDUs	0.0	0.0	0.0	0.0	0.0
New EDU Flow	0	0	0	0	0
Proj. Annual Avg	0.15361	0.15361	0.15361	0.15361	0.15361
Proj. Max 3-Mo Avg	0.1836	0.1836	0.1836	0.1836	0.1836
Proj. Overload?					

Projected BOD5 Loads for Next Five Years (lbs/day)

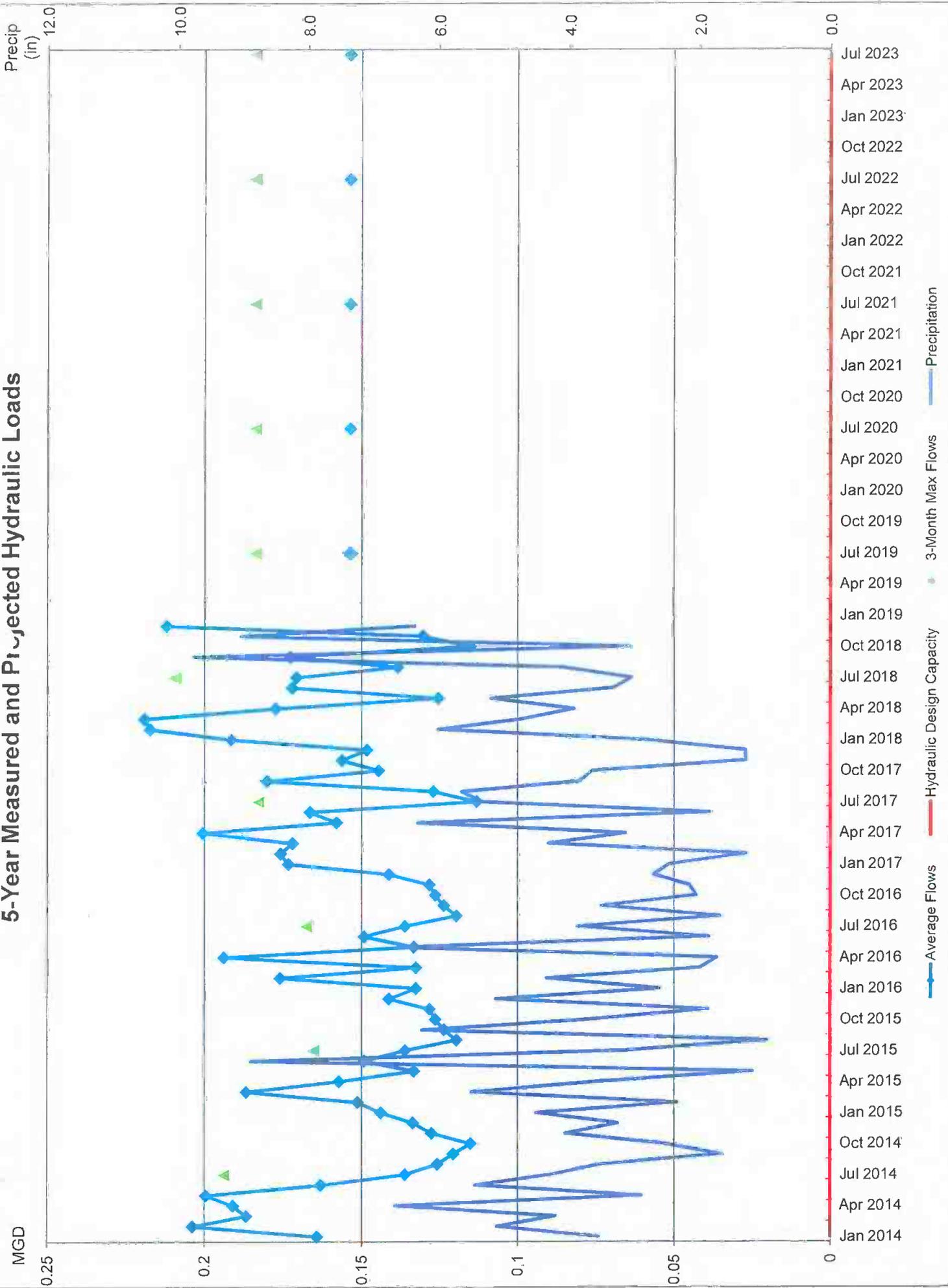
	2019	2020	2021	2022	2023
New EDU Load	0	0	0	0	0
Proj. Annual Avg	0.000	0.000	0.000	0.000	0.000
Proj. Max Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Proj. Overload?	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

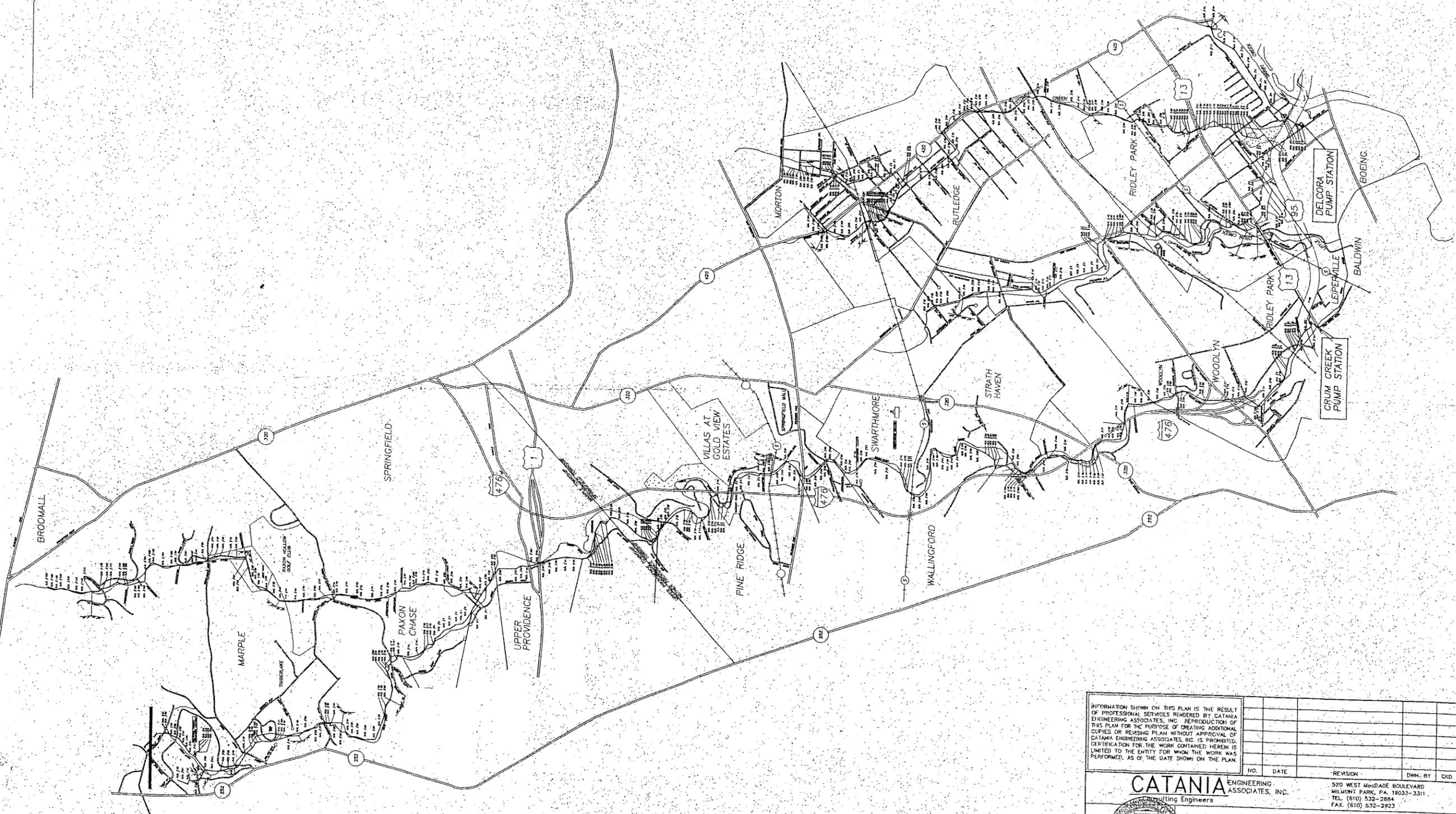
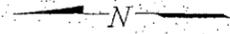
Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (inches)

Month	2014	2015	2016	2017	2018
January	3.58	4.52	2.63	2.48	2.85
February	5.12	2.36	4.36	1.3	6.02
March	4.23	5.52	2.01	4.33	4.74
April	6.69	3.58	1.75	3.15	3.94
May	2.91	1.2	6.65	6.33	5.21
June	5.46	8.89	1.87	1.86	3.34
July	4.3	3.16	3.88	5.35	3.06
August	3.55	0.88	1.7	5.66	4.11
September	1.69	6.27	3.52	3.86	9.76
October	2.54	3.76	2.06	3.66	3.08
November	4.07	1.89	2.17	1.3	9.03
December	3.27	5.14	2.72	1.31	6.38

5-Year Measured and Projected Hydraulic Loads





REFERENCE DRAWINGS
 CENTRAL DELAWARE COUNTY AUTHORITY
 JOHN P. DAMON AND ASSOCIATES, INC.
 CIVIL ENGINEERS
 WALLINGFORD, PA

INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF PROFESSIONAL SERVICES RENDERED BY CATANIA ENGINEERING ASSOCIATES, INC. REPRODUCTION OF THIS PLAN FOR THE PURPOSE OF CREATING ADDITIONAL COPIES OR REVISING PLAN WITHOUT APPROVAL OF CATANIA ENGINEERING ASSOCIATES, INC. IS PROHIBITED. CERTIFICATION FOR THE WORK CONTAINED HEREIN IS LIMITED TO THE ENTITY FOR WHOM THE WORK WAS PERFORMED, AS OF THE DATE SHOWN ON THE PLAN.

NO.	DATE	REVISION	DWN. BY	CHK. BY

CATANIA ENGINEERING ASSOCIATES, INC.
 Consulting Engineers

520 WEST MOONDADE BOULEVARD
 MILFORD PARK, PA. 19033-3311
 TEL. (610) 532-2884
 FAX. (610) 532-2923



SANITARY SEWER SYSTEM
 FOR
CENTRAL DELAWARE COUNTY AUTHORITY
 MAIN MAP

DWG. BY	N.J.C.	DSG. BY	NTS	SCALE	1/8" = 1'	DRAWING NO.	84250
CHK. BY	A.J.P.			DATE	11/18/02	SHEET	4 OF 4 SHEETS

VERIFIED BY: JOHN P. DAMON AND ASSOCIATES, INC.

Sanitary Sewer Monitoring Report

The CDCA regularly monitors, maintains, and repairs its system. Line cleaning and video inspections are performed on regular intervals. The interceptor line and manholes are inspected annually and a system inspection is completed after each major storm event to monitor any irregularities within the system such as manhole damage, exposed pipe, or sinkholes over the sewer line. Emergency repair work is performed when required.

In 2003, the CDCA began a twelve year program of monitoring, maintenance, rehabilitation, and repair. This program was updated and expanded in 2008 to continue through 2021. Monitoring and line cleaning is performed according to this program through video inspection and various line cleaning methods. Based on video from the inspections, a yearly Sanitary Sewer Assessment Report is created and a maintenance schedule is outlined. High priority, low priority, and I&I abatement issues are identified and addressed. The personnel and equipment used for routine monitoring, maintenance, repair, and rehabilitation is obtained through an outside contractor.

The CDCA, in coordination with DELCORA, instituted a system-wide flow metering system in 2006. A Flow Metering Quality Control Program which includes meter calibration and verification processes has been implemented. Standardized calibration of the flow metering equipment is performed and calibration reports are maintained by an outside contractor for DELCORA. Yearly review of metering data is performed by the CDCA Maintenance Committee and recommendations for metering program improvement are developed.

- a. **Monitoring and Maintenance:** In 2018, Mr. Rehab, LLC performed part of the line cleaning and video inspection services as outlined in the CDCA Line Cleaning and Video Inspection Program outline.
- b. **Repair and Rehabilitation:** Interceptor maintenance in 2018 was performed by A.J Jurich, Inc. Issues identified through the video monitoring and maintenance program as well as problems that arose through 2018 were addressed. The Authority maintains records of all work performed, personnel and equipment utilized.
- c. **Flow Data Analysis, Quality Assurance, and I&I Monitoring:** DELCORA has placed flow metering equipment throughout the CDCA service area. Locations of flow meters should be noted on individual township maps. CSL Services, Inc. has been retained by DELCORA to calibrate and maintain the flow monitoring equipment through 2018. Calibration data is maintained by CSL. Flow metering and maintenance is performed according to the CDCA Flow Metering Quality Control Program. Data from the flow meters are used to evaluate where I & I occurs in the system. Analysis of the flow-meter data was performed periodically by the CDCA Maintenance Committee for abnormal data. Individual municipalities that had unusual readings were contacted to assist them in the identification and correction of infiltration into the system.

CDCA has implemented a program in the past year that allows member municipalities to utilize spare flow meters purchased by CDCA to further investigate potential sources of inflow and infiltration. CDCA has a total of 6 meters available for use and member municipalities can request to use them when they are available.

Sanitary Sewer Overflow (SSO) Report to PADEP– Water Management

DEP fax: 484-250-5971

Please check the appropriate box Dry Weather Overflow Wet Weather Overflow

1. Date, Name, Phone # of person completing this report	Date : January 16, 2018 Name : Charles Catania Jr, PE Phone #: 610-532-2884
2. Your organization name and address ?	Name: Central Delaware County Authority (CDCA) County: Delaware Address: 212B Unity Terrace Township/Municipality: Rutledge PA 19070
Sewer system owner and permit number	Central Delaware County Authority; Permit #
3. Date found and <u>specific</u> location of SSO. Including Municipality/County (if different from #2) ?	Date: January 12, 2018 Municipality: Ridley Township Location(Street & #): Angelo Dr County: Delaware
4. How was SSO discovered? By whom ?	Construction Inspector checking construction site during heavy rain event
5. Start and end time of SSO (actual or estimate?)	Estimate 2PM start time, end time 3:30 PM
6. Date, time and name of person who notified PADEP originally to notify of SSO ?	Date : January 12, 2018 Time: 4:00PM Name: Charles Catania Jr, PE (Authority Engr)
7. Description and actual or estimated volume of SSO	Unknown volume of mainly graywater, no solids evident
8. Where, <u>precisely</u> , did SSO go ? (land, roadway, basement, swale, storm sewer, creek, etc) Please include creek name or street location.	SSO discharged into Crum Creek approximately 250 feet upstream of Chester Pike
9. What caused SSO ? How was it stopped ?	Pump station was pumping approximately 10.5 MGD when it can pump out over 14 MGD. Actual cause under investigation. By alternating pump combination, was able to increase flow rate to approximately 12 MGD and SSO subsided
10. Describe extent of contamination and how it was cleaned up	Area treated with lime
11. What actions will be taken to prevent a re-occurrence ? When ?	Pumps will be inspected to determine why flow rate was less than capacity
12. Other Comments ?	Follow up inspection of the four pumps found that pump #3 had become partially clogged with rags. Pump rotation had pump #3 as lead pump.
13. Downstream notifications made: (All downstream users such as public water supplies must be notified)	N/A

Sanitary Sewer Overflow (SSO) Report to PADEP– Water Management

DEP fax: 484-250-5971

Please check the appropriate box



Dry Weather Overflow



Wet Weather Overflow

1. Date, Name, Phone # of person completing this report	Date : July 23, 2018 Name : Charles Catania Phone #: 610-532-2884
2. Your organization name and address ?	Name: Central Delaware County Authority (CDCA) County: Delaware Address: 212B Unity Terrace Township/Municipality: Rutledge, PA 19070
Sewer system owner and permit number	n/a
3. Date found and <u>specific</u> location of SSO. Including Municipality/County (if different from #2)?	Date: July 20, 2018 Municipality: Ridley Twp Location(Street & #): 204 E Chester Pike County: Delaware
4. How was SSO discovered? By whom?	Ridley Twp public works personnel were notified of sewage leak. Public works superintendent contacted CDCA engineer noon on Friday.
5. Start and end time of SSO (actual or estimate?)	Unknown, received notice July 20, 2018, 12 noon; flow stopped July 20, 2018 approximately 1:30 pm
6. Date, time and name of person who notified PADEP originally to notify of SSO?	Date : July 20, 2018 Time: 12:42 pm Name: Charles Catania
7. Description and actual or estimated volume of SSO	unknown
8. Where, <u>precisely</u> , did SSO go? (land, roadway, basement, swale, storm sewer, creek, etc) Please include creek name or street location.	SSO leaked through stone retaining wall along parking lot of Parkwoode Towers Apartments, 204 E Chester Pike, across parking lot and into Stoney Creek
9. What caused SSO? How was it stopped?	Construction project downstream had a temporary bypass in place; temporary bypass system had mechanical failure which led to surcharge in system; apparent joint leak in interceptor led to SSO. Fixing bypass stopped SSO
10. Describe extent of contamination and how it was cleaned up	Minor discoloration of a section of creek, no solids. Parking lot washed down to vacor truck and discharged back into sanitary sewer
11. What actions will be taken to prevent a re-occurrence? When?	Bypass system had personnel watching pumps. Bypass operation is expected to be completed now. Interceptor will be tested and open joint grouted
12. Other Comments?	Temporary collection ditch and automatic dewatering pump left in place at SSO site as precaution for further SSO leak until pipe is tested.
13. Downstream notifications made: (All downstream users such as public water supplies must be notified)	

Sanitary Sewer Overflow (SSO) Report to PADEP– Water Management

DEP fax: 484-250-5971

Please check the appropriate box

Dry Weather Overflow

Wet Weather Overflow

1. Date, Name, Phone # of person completing this report	Date : August 15, 2018 Name : Charles Catania Jr, PE Phone #: 610-532-2884
2. Your organization name and address ?	Name: Central Delaware County Authority (CDCA) County: Delaware Address: 212B Unity Terrace Township/Municipality: Rutledge PA 19070
Sewer system owner and permit number	Central Delaware County Authority; Permit #
3. Date found and specific location of SSO. Including Municipality/County (if different from #2) ?	Date: August 14, 2018 Municipality: Ridley Township Location(Street & #): Angelo Dr County: Delaware
4. How was SSO discovered? By whom ?	Inspector checking system after flood event
5. Start and end time of SSO (actual or estimate?)	Unknown but assumed to be August 13 during flood event
6. Date, time and name of person who notified PADEP originally to notify of SSO ?	Date : August 14 Time: 3:00PM Name: Charles Catania Jr, PE (Authority Engr)
7. Description and actual or estimated volume of SSO	Unknown volume of mainly graywater, no solids evident
8. Where, <u>precisely</u> , did SSO go ? (land, roadway, basement, swale, storm sewer, creek, etc) Please include creek name or street location.	SSO discharged into Crum Creek approximately 250 feet upstream of Chester Pike
9. What caused SSO ? How was it stopped ?	Flood event due to extreme heavy rain; flow subsided
10. Describe extent of contamination and how it was cleaned up	Area treated with lime
11. What actions will be taken to prevent a re-occurrence ? When ?	Pump station currently in design for capacity upgrade
12. Other Comments ?	There was no direct evidence of SSO. After extreme storm events, the system is checked for damage. Inspector found manhole casting ajar from manhole from apparent SSO.
13. Downstream notifications made: (All downstream users such as public water supplies must be notified)	N/A

Pump Station Summary

The Crum Creek Pump Station is owned by CDCA. The Pump Station has four 100 HP variable speed raw sewage pumps each rated at 5,000 GPM. Emergency stand-by power is provided to the Pump Station via a diesel generator. The permitted capacity of the pump station is 16 MGD.

Industrial Waste Report

DELCORA is currently responsible for issuance of Industrial Waste Permits to companies discharging to the Central Delaware County Authority. The regulation governing discharge of the industrial wastes as well as any program for surveillance and monitoring of industrial waste discharges is maintained by DELCORA.

There are no known industrial permits for the CDCA system.

The Delaware County Regional Water Quality Control Authority



Edgmont Township

CRUM CREEK SEWER DISTRICT

TRIBUTARY MUNICIPALITY

“2018 Chapter 94 Report”

February 2019

Prepared by:

Bradford Engineering Associates, Inc.

2710 Concord Road, Suite 3

Aston, PA 19014

610.497.6200

610.500.5677 fax

info@bea-inc.com

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1. Chapter 94 Municipal Wasteload Management Annual Report	1
2. Description of Sewer System	5

Attachments

Hydraulic Analysis	A
Map of the Sewer System	B
Maintenance Records	C
Pump Station Flow Records and Analysis.....	D



CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: **2018**

- Permittee is owner and/or operator of a POTW or other sewage treatment facility
 Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION

Permittee Name: DELCORA	Permit No.: PA2314403,2314404,2314405
Mailing Address: 100 E. Fifth Street	Effective Date: 7-21-14
City, State, Zip: Chester, PA 19016	Expiration Date:
Contact Person: Robert Willert	Renewal Due Date:
Title: Executive Director	Municipality: Edgmont Township
Phone: 610.876.5523	County: Delaware County
Email: willertr@delcora.org	Consultant Name: Bradford Engineering

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

Check the appropriate boxes:

- Line graph for flows attached (**Attachment A**)
 DEP Chapter 94 Spreadsheet used (**Attachment**)
 Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

Check the appropriate boxes:

- Line graph for organic loads attached (**Attachment**)
 DEP Chapter 94 Spreadsheet used (**Attachment**)
 Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

Table 3 evaluates the projects in the Crum Creek System. See Attachment A

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment B**)
- List summarizing each extension or project attached (**Attachment**)
- Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

Approximately 34,434 lf of sanitary sewer was televised in 2016. Approximatley 4,378 feet was cleaned. Manhole inserts with odor control were installed in three manholes.

The system is monitored by DELCORA's maintenance staff. A representative is onsite three times per week inspecting the pump stations. Additionally, an advance SCADA monitors pump station performance and operating conditions. This is essentially monitored by DELCORA 24-hrs a day as part of their overall system monitoring program. Attachement C are copies of the maintenance work on the system.

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

The system is in good condition overall. There are no known surcharge conditions and most of the system is fairly new. There were a number of capped sewer installed throughout Edgmont Township over the past 30 plus years. These systems were installed in the Crum Creek District in accordance with Township Ordinances. The Crum Creek Sewer Project was completed in 2016. This project essentially connected all of the exsiting capped sewer and commuity sewer system as well as installed new sewer to provide public sewer to the entire District. See map in Attachement B for details.

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

- The collection system does not contain pump stations
- The collection system does contain pump stations (Number – 3)
- Discussion of condition of each pump station attached (**Attachment D**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

- a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.
- b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.
- c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

- Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)
- Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

- This report demonstrates an existing hydraulic overload condition.
- This report demonstrates a projected hydraulic overload condition.
- This report demonstrates an existing organic overload condition.
- This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

- Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

- Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

Annual CSO Report attached (**Attachment**)

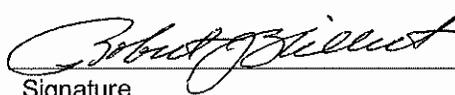
12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Robert J. Willert



Name of Responsible Official

Signature

610-876-5523

February 25, 2019

Telephone No.

Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Walter Fazler, PE



Name of Preparer

Signature

610.497.6200

February 25, 2019

Telephone No.

Date

Narrative Describing the Edgmont Crum Creek Sewer District

DELCORA is the owner and operator of the public sewer system in a section of Edgmont Township known as the Crum Creek Sewer District. The following is an excerpt from the latest revision to the Edgmont Township Act 537 Plan. This is a description of the current public sewer facilities in Edgmont Township.

Edgmont Township is a township of the second class located in the north central portion of Delaware County Pennsylvania. Total area is approximately 9.7 square miles. Its northern boundary is on the Delaware County-Chester County line where it lies adjacent to Westtown and Willistown Townships, Chester County. In Delaware County, it is bordered by Thornbury Township on the west, Middletown Township on the south, and Upper Providence Township on the southeast. On the east, the Township is bordered by Crum Creek, the Springton Reservoir, and Newtown Township.

The Crum Creek Sewer District was the focus of the 2010 Special Study. It is located in the northeast section of the Township. Broadly described, the District is bounded to the north by Chester County, to the east by Newtown Township, to the South by Upper Providence Township and to the west by the Ridley Creek State Park.

Previous Planning

An Act 537 Plan for the Crum Creek District was completed in 2007 (2007 Study) based on the potential for membership in the CDCA. The advantage of joining CDCA is the availability of a more extensive (350,000 gpd) disposal option that is cost effective, environmentally sound, and able to be implemented within a reasonable time frame to meet Edgmont's needs.

CDCA owns a conveyance system that discharges to the Delaware County Regional Water Quality Control Authority (DELCORA) system for final conveyance and treatment. DELCORA currently has the capacity available to meet Edgmont's needs and is willing to accept sewage flows from Edgmont Township. The plan outlined in the

2007 Study would provide for discharge to the CDCA facilities via the Newtown Township conveyance system.

2007 Study amends 2004 Plan:

1. Pursuant to the 2007 Study, Edgmont Township would enter an agreement with DELCORA to design, permit, finance, build, own, operate and maintain the proposed sewage facilities in the Crum Creek District and to accept, treat and dispose of the sewage from Edgmont Township. This is a change from the sewage treatment and land application contemplated under the 2004 (Aqua) Plan.
2. Edgmont Township would enter into an agreement with Newtown Township to accept and convey sewage to CDCA.
3. Edgmont Township would enter into an agreement with CDCA to accept and convey sewage to DELCORA.
4. Edgmont Township would adopt an ordinance establishing the Crum Creek Sewer District and require connection to the public sewer system.

Edgmont Township 2010 Special Study evaluates alternatives:

The current Special Study (2010 Study) is being undertaken to further develop and evaluate additional alternatives for both the collection system and conveyance methods to reach the CDCA system, as well as to provide for current sewage needs in the West Chester Pike corridor of Edgmont Township that exceed the Crum Creek District. The 2010 Study will look to identify cost effective options and alternatives that can be implemented in a time frame suitable to the needs of Edgmont Township. In addition to many internal service options, three major alternatives were reviewed for conveyance to the CDCA system. The conveyance options included pumping through Newtown Township in combination with Newtown flows, pumping through Newtown Township individually, and pumping through Upper Providence Township individually.

Alternatives Of Choice

The 2010 Special Study revises and updates the 2007 Plan and provides for the adoption of the following items:

Alternate 2. All of Service District C and District F (West Chester Pike corridor West) will be formally included in the Crum Creek District. Modifications to the CDCA service agreement will be required.

Conveyance of wastewater to the CDCA system will be implemented via adoption of **Alternates 1D and 1G.** These alternates provide for an internal collection system comprised of conventional gravity collection system, low-pressure system and pump station and force mains for Districts A-E. These districts will convey the flow to a regional pump station to be constructed by Edgmont on the West side of the Geist reservoir. The main pump station would discharge to the CDCA system via a route through Newtown Township along Gradyville Road.

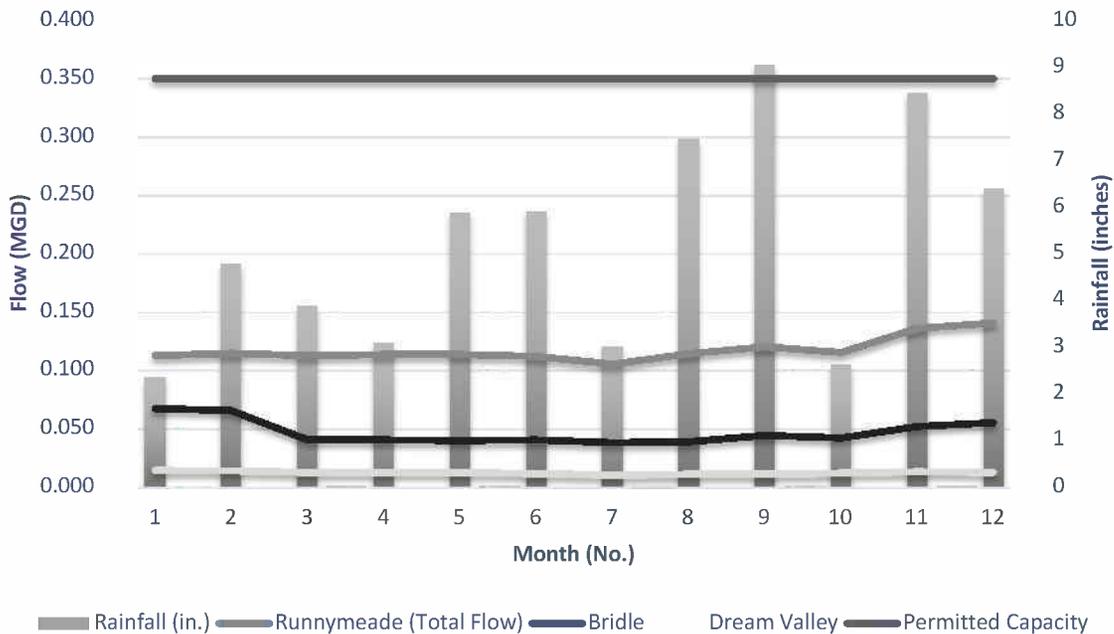
ATTACHMENT A

Current Hydraulic Loading

Table 1 indicates the current hydraulic loading in the system. A line graph depicting the monthly average monthly flows is shown in Chart 1. The monthly rainfall is also shown for reference. Rainfall was taken from the National Weather Service rain gauge at the Brandywine River. The permitted capacity of the Crum Creek System is 0.350 MGD:

Pump Station	Bridle	Runnymede	Dream Valley	Total Flow	Permitted Capacity	Rainfall (in.)
January	0.068	0.113	0.014	0.113	0.350	2.36
February	0.066	0.115	0.014	0.115	0.350	4.78
March	0.041	0.113	0.013	0.113	0.350	3.89
April	0.041	0.114	0.013	0.114	0.350	3.11
May	0.040	0.114	0.013	0.114	0.350	5.89
June	0.041	0.113	0.012	0.113	0.350	5.92
July	0.038	0.106	0.011	0.106	0.350	3.03
August	0.039	0.114	0.011	0.114	0.350	7.47
September	0.045	0.120	0.011	0.120	0.350	9.05
October	0.042	0.116	0.012	0.116	0.350	2.63
November	0.052	0.136	0.013	0.136	0.350	8.45
December	0.055	0.141	0.013	0.141	0.350	6.39
Average	0.047	0.118	0.013	0.118	0.350	5.248

2018 Total Flow



5 Year Hydraulic Loading Projections

The following table was developed utilizing the Map in Attachment B of this report. The flow was calculated using an average daily flow of 262.5 gallons per day per EDU. It should be noted that the flow projects shown in Table 2A are not approved flow and are being used as an engineering tool to predict infrastructure capacity.

TABLE 2				
Projects that have received Planning Approval				
Subdivision Name	Connection Point	Number of EDUs	Number of EDU's Remaining	Estimated ADF Remaining (gpd) *
Crum Creek District A	Bridle PS	100.00	14.00	3,675.00
Crum Creek District B	Bridle PS	162.00	8.00	2,100.00
Crum Creek District C	Bridle PS	105.00	15.00	3,937.50
Crum Creek District C1	Bridle PS	15.00	-	-
Crum Creek District D	Bridle PS	65.00	9.00	2,362.50
Crum Creek District E	Bridle/Runnymede PS	919.00	97.00	25,462.50
Crum Creek District F	Bridle PS	171.00	171.00	44,887.50
				-
				-
Total		1537.00	314.00	82,425.00
*Based on 262.5 gpd/EDU				

TABLE 2A				
Projects that may require public sewer				
Subdivision Name	Connection Point	Number of EDUs	Number of EDU's Remaining	Estimated ADF Remaining (gpd) *
Runnymede Phase 7	Runnymede	249	249	65,362.50
				-
				-
				-
				-
				-
Total		249	249	65,363
*Based on 262.5 gpd/EDU				
Note: EDU Projections are for planning purposes. Assignment of EDUs does not guarantee capacity or assignment of capacity to the parcel or project listed.				

Adjusted Annual Average Flow

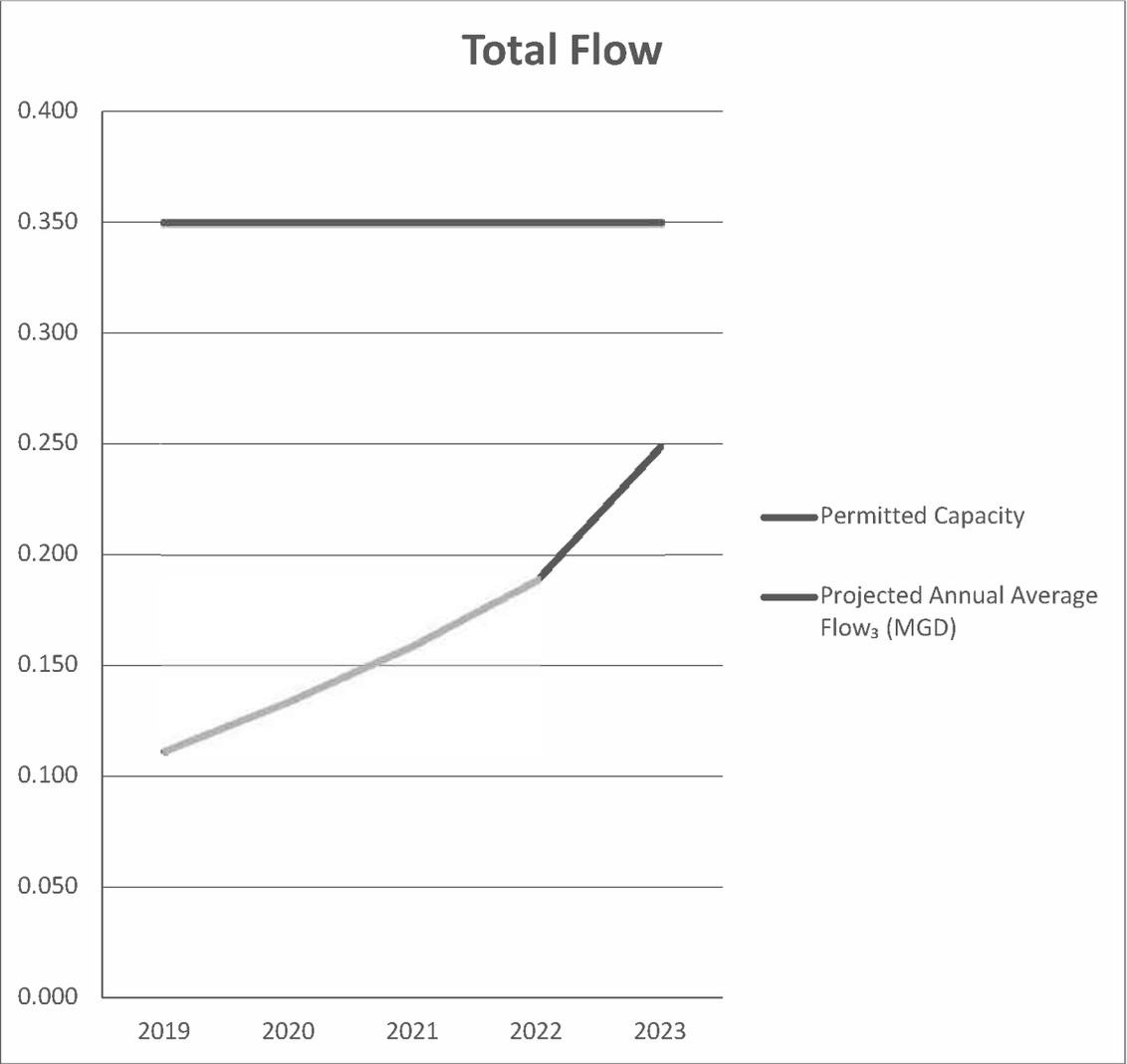
Tables 3 was developed using the PaDEP example for calculating the five-year adjusted annual average flow. Flow projections are a best guess number and largely depend on regional economic conditions.

TABLE 3							
Calculation of Adjusted Annual Average Flow							
Year	AA Flow in MGD	All EDUs connected					Adjusted AA Flow
		2014	2015	2016	2017	2018	
2014	0.000		0.000	0.098	0.006	0.001	0.105
2015	0.000			0.098	0.006	0.001	0.105
2016	0.098				0.006	0.001	0.105
2017	0.108					0.001	0.109
2018	0.118						0.118
5 Year Average	0.065					5 Year Average	0.108

Annual Average Flow Projection for the Next 5 Years

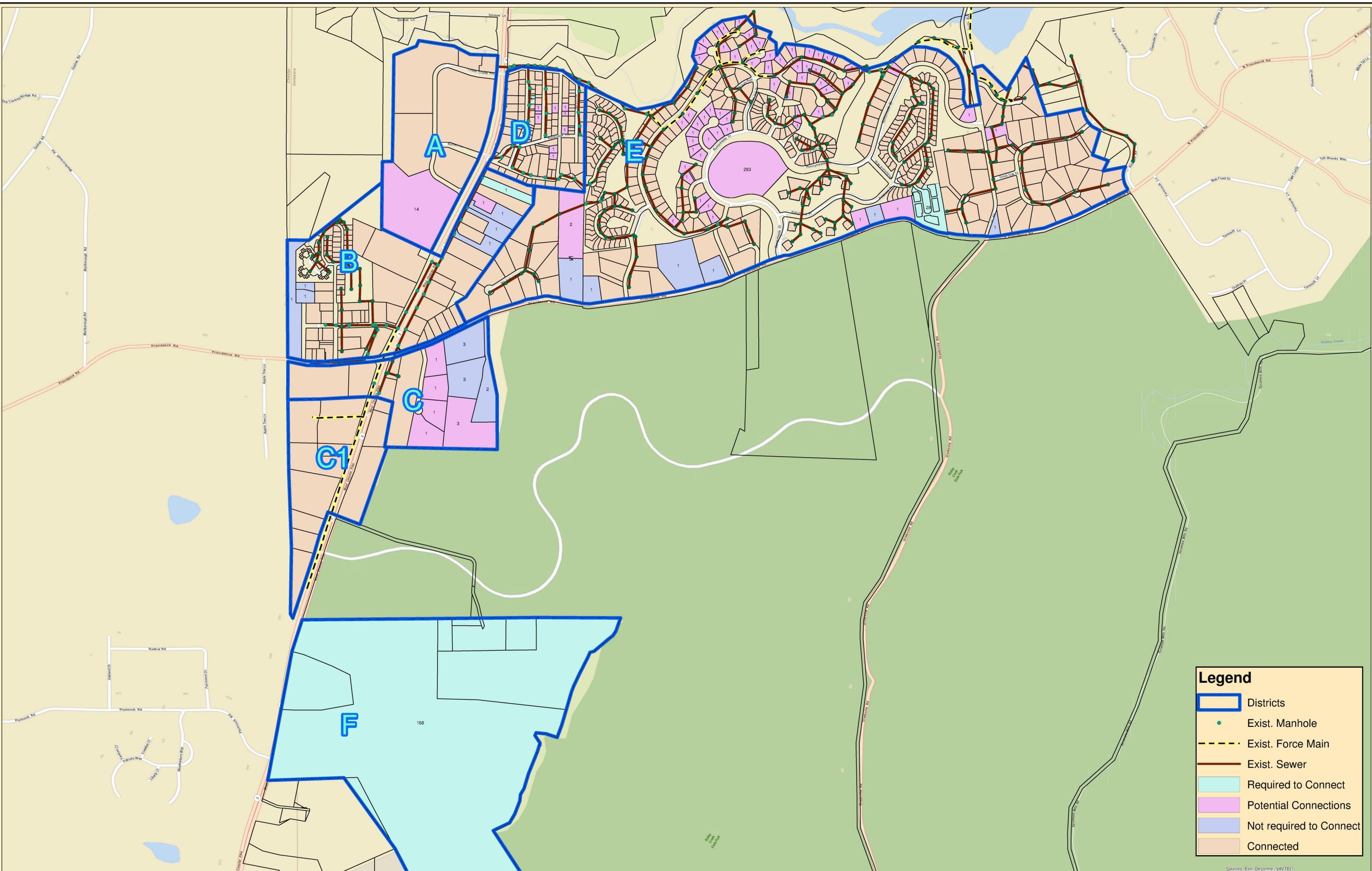
The following Table 4 and Chart were developed using the PaDEP example for calculating the five-year adjusted annual average flow. Flow projections are a best guess number and largely depend on regional economic conditions.

TABLE 4					
Adjusted Projections					
Year	Previous Year's Annual Average Flow ₁	New EDUs	Increased Flow ₂ (MGD)	Projected Annual Average Flow ₃ (MGD)	Permitted Capacity
2019	0.108	11	0.003	0.111	0.350
2020	0.111	85	0.022	0.134	0.350
2021	0.134	95	0.025	0.158	0.350
2022	0.158	113	0.030	0.188	0.350
2023	0.188	231	0.061	0.249	0.350
Notes					
1. The 2019 projection starts with the 5-year adjusted annual average as calculated in Table 3					
2. Increase Flow = New EDUs x 262.5 / 1,000,000.					
3. Projected Annual Average Flow = Previous Years Annual Average Flow + Increased Flow					
4. Projections include all contemplated projects from Table 2A					



ATTACHMENT B

MAP OF THE SEWER SYSTEM



Legend

- Districts
- Exist. Manhole
- Exist. Force Main
- Exist. Sewer
- Required to Connect
- Potential Connections
- Not required to Connect
- Connected



Sources: Esri, DeLorme, NAVTEC

ATTACHMENT C

MAINTENANCE RECORDS

GS 8 B On-Site Verification Record

GS 8 B STANDARD SETTINGS

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 The Converter type, engineering units, diameter and frequency have drop down boxes, allowing the user to simply choose from the list.
 This spreadsheet will automatically choose inch or metric (depending upon the converter), and state which GK(L) to use.
 Printing of the programming results is allowed by simply choosing "Print" through your File menu.

Important: If there is a flowrate value present at the zero setting, you must compensate to obtain proper evaluation values.
 You can zero your converter, but this might mean that you would have to redo a zero calibration once you reconnect with your primary head.
 If you are unable to redo a zero calibration after reconnecting, then you should use the offset-compensated tables on the second sheet of this spreadsheet (Calculator + Zero Compensation).

Date Recorded: 2/23/18

Serial #: C155000731

Tag #: Bridle Way Pump Station

Flow Tube Model #: Enviromag 2000 F

Commission #:

Tested by: William Doleski

DATA INPUT AREAS (in green)			
INPUT VARIABLES			
Converter	=	IFC 300(GK)	
Q Fullscale	=	1000	USGal/min
Select Meter Dia.	=	Inch	mm
		6	150
DN	=	150	mm
Diameter	=	6.0	inch (ref only)
I _{0%}	=	4	mA
I _{100%}	=	20	mA
P _{100%} (Hz)	=	1000	Hz
GK	=	3.2181	<use GK
GKL	=		<do not use
K	=	Value automatically chosen from K value table	

$$X = \frac{Q_{100\%} * K * F}{GK(L) * DN^2} = \frac{263546.369}{72407.25} = 3.640$$

Y_{MAX} = **2.0**
 Max Knob Setting = **C**

Output Current	I	=	12.792	mA
Output Frequency	Freq MAX	=	549.484	Hz
Calibrated Flowrate	Q	=	549.484	USGal/min

GS 8 B Knob Setting	Current Output (mA)	Frequency Output (Hz)	Calculated Flowrate (USGal/min)	Observed Flowrate (USGal/min)	Deviation
0	4.00	0.00	0.00	0.000	
A	6.20	137.37	137.37	137.500	0.09%
B	8.40	274.74	274.74	275.000	0.09%
C	12.79	549.48	549.48	549.700	0.04%
D					
E					

GS 8 B On-Site Verification Record

GS 8 B STANDARD SETTINGS

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 To use this calculator, you will only need to input the requested information in the bright green cells from your data tags.
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 This spreadsheet will automatically choose inch or metric (depending upon the converter), and state which GK(L) to use.
 Printing of the programming results is allowed by simply choosing "Print" through your File menu.

Important: If there is a flowrate value present at the zero setting, you must compensate to obtain proper evaluation values.
 You can zero your converter, but this might mean that you would have to redo a zero calibration once you reconnect with your primary head.
 If you are unable to redo a zero calibration after reconnecting, then you should use the offset-compensated tables on the second sheet of this spreadsheet (Calculator + Zero Compensation).

Date Recorded: 6/19/18

Serial #: C155000731

Tag #: Bridle Way Pump Station

Flow Tube Model #: Enviromag 2000 F

Commission #:

Tested by: W Doleski J Mullins

DATA INPUT AREAS (in green)			
INPUT VARIABLES			
Converter	=	IFC 300(GK)	
Q Fullscale	=	1000	USGal/min
Select Meter Dia.	=	Inch mm	
		6 150	
DN	=	150	mm
Diameter	=	6.0	inch (ref only)
I _{0%}	=	4	mA
I _{100%}	=	20	mA
P _{100%} (Hz)	=	1000	Hz
GK	=	3.2181	<use GK
GKL	=		<do not use
K	=	Value automatically chosen from K value table	

$$X = \frac{Q_{100\%} * K * F}{GK(L) * DN^2} = \frac{263546.369}{72407.25} = 3.640$$

$$Y_{MAX} = \begin{matrix} 2.0 \\ C \end{matrix}$$

Output Current	I	=	12.792	mA
Output Frequency	Freq MAX	=	549.484	Hz
Calibrated Flowrate	Q	=	549.484	USGal/min

GS 8 B Knob Setting	Current Output (mA)	Frequency Output (Hz)	Calculated Flowrate (USGal/min)	Observed Flowrate (USGal/min)	Deviation
0	4.00	0.00	0.00	0.000	
A	6.20	137.37	137.37	138.400	0.75%
B	8.40	274.74	274.74	276.000	0.46%
C	12.79	549.48	549.48	549.000	-0.09%
D					
E					

Version: Rev 1.3.2-USA

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Bridle Way Flowmeter

Instrument Data

Customer Name: Delcora
Instrument Tag: Bridle Way Flowmeter
Manufacturer: Krohne
Model Number: IFC 300
Serial Number: C15500731
Calibrated Range: 0-1000 GPM
Description: Bridle Way Flowmeter
Instrument Accuracy: 1.5000%

Test Results

Cal. Date: 12/07/18
Next Due: 03/07/19

	As Found	As Left
Zero Error	-0.0062%	-0.0062%
Span Error	-0.0062%	-0.0062%
Max. Error	0.0447%	0.0447%
Min. Error	-0.0062%	-0.0062%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	0.0000	1000.0000	GPM	Krohne GS8B	U1127700018808
Output Value	4.0000	20.0000	mA	Martel MC1200	9474060

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	3.9990	-0.0062%	
13.7370%	137.3700	137.6000	6.1970	6.1970	0.0230%	
27.4740%	274.7400	275.0000	8.3950	8.3980	0.0447%	
54.9480%	549.4800	549.5000	12.7910	12.7950	0.0270%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	3.9990	-0.0062%	
13.7300%	137.3700	137.6000	6.1970	6.1970	0.0230%	
27.4740%	274.7400	275.0000	8.3950	8.3980	0.0447%	
54.9480%	549.4800	549.5000	12.7910	12.7950	0.0270%	

Tag Notes

Shutdown:

FT = 0.0 GPM
mA = 3.999
LOI = 0.0 GPM
GK 3.2181

Meter and SCADA scaling do not match.

Technician ISA Level III
Certification

Technician Signature

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Bridle Way Flowmeter

Instrument Data

Customer Name: Delcora
Instrument Tag: Bridle Way Flowmeter
Manufacturer: Krohne
Model Number: IFC 300
Serial Number: C15500731
Calibrated Range: 0-1000 GPM
Description: Bridle Way Flowmeter
Instrument Accuracy: 1.5000%

Test Results

Cal. Date: 09/21/18
Next Due: 12/21/18

	As Found	As Left
Zero Error	0.0000%	0.0000%
Span Error	0.0000%	0.0000%
Max. Error	4.5270%	0.0542%
Min. Error	0.0000%	-0.0050%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	0.0000	1000.0000	GPM	Krohne GS8B	U1127700018808
Output Value	4.0000	20.0000	mA	Martel MC1200	9474060

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	4.0000	0.0000%	
13.7370%	137.3700	137.6000	6.1970	6.2020	0.0542%	
27.4740%	274.7400	274.8000	8.3950	8.4000	0.0373%	
54.9480%	549.4800	594.5000	12.7910	12.7950	4.5270%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	4.0000	0.0000%	
13.7300%	137.3700	137.6000	6.1970	6.2020	0.0542%	
27.4740%	274.7400	274.8000	8.3950	8.4000	0.0373%	
54.9480%	594.8000	594.5000	12.7910	12.7950	-0.0050%	

Tag Notes

Shutdown:

FT = 0.0 GPM
mA = 3.999
LOI = 0.0 GPM
GK 3.2181

Technician ISA Level III
Certification

Technician Signature

GS 8 B On-Site Verification Record

GS 8 B STANDARD SETTINGS

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 If you are unable to redo a zero calibration after reconnecting, then you should use the offset-compensated tables on the second sheet of this spreadsheet (Calculator + Zero Compensation).

Date Recorded: 2/23/18

Serial #: C15500730

Tag #: Dream Valley Pump Station

Flow Tube Model #: Enviromag 2000 F

Commission #:

Tested by: William Doleski

DATA INPUT AREAS (in green)			
INPUT VARIABLES			
Converter	=	IFC 300(GK)	
Q Fullscale	=	750	USGal/min
Select Meter Dia.	=	Inch mm	
		4 100	
DN	=	100	mm
Diameter	=	4.0	inch (ref only)
I _{0%}	=	4	mA
I _{100%}	=	20	mA
P _{100%} (Hz)	=	1000	Hz
GK	=	2.7266	<use GK
GKL	=		<do not use
K	=	Value automatically chosen from K value table	

$$X = \frac{Q_{100\%} * K * F}{GK(L) * DN^2} = \frac{197659.7768}{27266} = 7.249$$

Y_{MAX} = 5.0
 Max Knob Setting = D

Output Current	I	=	15.036	mA
Output Frequency	Freq MAX	=	689.720	Hz
Calibrated Flowrate	Q	=	517.290	USGal/min

GS 8 B Knob Setting	Current Output (mA)	Frequency Output (Hz)	Calculated Flowrate (USGal/min)	Observed Flowrate (USGal/min)	Deviation
0	4.00	0.00	0.00	0.000	
A	5.10	68.97	51.73	52.000	0.52%
B	6.21	137.94	103.46	104.000	0.52%
C	8.41	275.89	206.92	207.110	0.09%
D	15.04	689.72	517.29		
E					

Version: Rev 1.3.2-USA

GS 8 B On-Site Verification Record

GS 8 B STANDARD SETTINGS

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 The Converter type, engineering units, diameter and frequency have drop down boxes, allowing the user to simply choose from the list.
 This spreadsheet will automatically choose inch or metric (depending upon the converter), and state which GK(L) to use.
 Printing of the programming results is allowed by simply choosing "Print" through your File menu.

Important: If there is a flowrate value present at the zero setting, you must compensate to obtain proper evaluation values.
 You can zero your converter, but this might mean that you would have to redo a zero calibration once you reconnect with your primary head.
 If you are unable to redo a zero calibration after reconnecting, then you should use the offset-compensated tables on the second sheet of this spreadsheet (Calculator + Zero Compensation).

Date Recorded: 6/19/18

Serial #: C15500730

Tag #: Dream Valley Pump Station

Flow Tube Model #: Enviromag 2000 F

Commission #:

Tested by: W Doleski/J Mullins

DATA INPUT AREAS (in green)			
INPUT VARIABLES			
Converter	=	IFC 300(GK)	
Q Fullscale	=	750	USGal/min
Select Meter Dia.	=	Inch mm	
		4 100	
DN	=	100	mm
Diameter	=	4.0	inch (ref only)
I _{0%}	=	4	mA
I _{100%}	=	20	mA
P _{100%} (Hz)	=	1000	Hz
GK	=	2.7266	<use GK
GKL	=		<do not use
K	=	Value automatically chosen from K value table	

$$X = \frac{Q_{100\%} * K * F}{GK(L) * DN^2} = \frac{197659.7768}{27266} = 7.249$$

Y_{MAX} = 5.0
 Max Knob Setting = D

Output Current	I	=	15.036	mA
Output Frequency	Freq MAX	=	689.720	Hz
Calibrated Flowrate	Q	=	517.290	USGal/min

GS 8 B Knob Setting	Current Output (mA)	Frequency Output (Hz)	Calculated Flowrate (USGal/min)	Observed Flowrate (USGal/min)	Deviation
0	4.00	0.00	0.00	0.000	
A	5.10	68.97	51.73	52.000	0.52%
B	6.21	137.94	103.46	104.000	0.52%
C	8.41	275.89	206.92	207.110	0.09%
D	15.04	689.72	517.29	517.300	0.00%
E					

Version: Rev 1.3.2-USA

Calibration Report



ICEA

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and Engineering Association

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P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Dream Valley Flowmeter

Instrument Data

Customer Name: Delcora
Instrument Tag: Dream Valley Flowmeter
Manufacturer: Krohne
Model Number: IFC 300
Serial Number: C15500730
Calibrated Range: 0-750 GPM
Description: Dream Valley Flowmeter
Instrument Accuracy: 1.5000%

Test Results

Cal. Date: 12/07/18
Next Due: 03/07/19

	As Found	As Left
Zero Error	-0.0188%	-0.0188%
Span Error	-0.0197%	-0.0197%
Max. Error	0.0346%	0.0346%
Min. Error	-0.0188%	-0.0188%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	0.0000	750.0000	GPM	Krohne GS8B	U1127700018808
Output Value	4.0000	20.0000	mA	Martel MC1200	9474060

Input		As Found Data		Output	
% Value	Calculated	Actual	Calculated	Actual	% Error
0%	0.0000	0.0000	4.0000	3.9970	-0.0188%
6.8970%	51.7275	51.9400	5.1030	5.1040	0.0346%
13.7900%	103.4250	103.6600	6.2060	6.2060	0.0313%
27.5890%	206.9175	207.1300	8.4140	8.4130	0.0221%
68.9720%	517.2900	517.3300	15.0350	15.0340	-0.0009%

Input		As Left Data		Output	
% Value	Calculated	Actual	Calculated	Actual	% Error
0%	0.0000	0.0000	4.0000	3.9970	-0.0188%
6.8970%	51.7275	51.9400	5.1030	5.1040	0.0346%
13.7900%	103.4250	103.6600	6.2060	6.2060	0.0313%
27.5890%	206.9175	207.1300	8.4140	8.4130	0.0221%
69.9720%	517.2900	517.3300	15.0350	15.0340	-0.0009%

Tag Notes

GK 2.7266

Technician ISA Level III
Certification

Technician Signature

Calibration Report



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P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Dream Valley Flowmeter

Instrument Data

Customer Name: Delcora
Instrument Tag: Dream Valley Flowmeter
Manufacturer: Krohne
Model Number: IFC 300
Serial Number: C15500730
Calibrated Range: 0-750 GPM
Description: Dream Valley Flowmeter
Instrument Accuracy: 1.5000%

Test Results

Cal. Date: 09/21/18
Next Due: 12/21/18

	As Found	As Left
Zero Error	0.0000%	0.0000%
Span Error	0.0576%	0.0576%
Max. Error	0.0893%	0.0893%
Min. Error	0.0000%	0.0000%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	0.0000	750.0000	GPM	Krohne GS8B	U1127700018808
Output Value	4.0000	20.0000	mA	Martel MC1200	9474060

Input		As Found Data		Output	
% Value	Calculated	Actual	Calculated	Actual	% Error
0%	0.0000	0.0000	4.0000	4.0000	0.0000%
6.8970%	51.7275	51.9600	5.1030	5.1110	0.0810%
13.7900%	103.4250	103.7200	6.2060	6.2140	0.0893%
27.5890%	206.9175	207.1000	8.4140	8.4220	0.0743%
68.9720%	517.2900	517.3000	15.0350	15.0440	0.0576%

Input		As Left Data		Output	
% Value	Calculated	Actual	Calculated	Actual	% Error
0%	0.0000	0.0000	4.0000	4.0000	0.0000%
6.8970%	51.7275	51.9600	5.1030	5.1110	0.0810%
13.7900%	103.4250	103.7200	6.2060	6.2140	0.0893%
27.5890%	206.9175	207.1000	8.4140	8.4220	0.0743%
69.9720%	517.2900	517.3000	15.0350	15.0440	0.0576%

Tag Notes

GK 2.7266

Technician ISA Level III
Certification

Technician Signature

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Runnymede Flowmeter

Instrument Data

Customer Name: Delcora
Instrument Tag: Runnymede Flowmeter
Manufacturer: Krohne
Model Number: IFC 300
Serial Number: C15501259
Calibrated Range: 0-1500 GPM
Description: Runnymede Flowmeter
Instrument Accuracy: 1.5000%

Test Results

Cal. Date: 12/07/18
Next Due: 03/07/19

	As Found	As Left
Zero Error	-0.0250%	-0.0250%
Span Error	-0.0250%	-0.0250%
Max. Error	0.0514%	0.0514%
Min. Error	-0.0552%	-0.0552%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	0.0000	1500.0000	GPM	Krohne GS8B	U1127700018808
Output Value	4.0000	20.0000	mA	Martel MC1200	9474060

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	3.9960	-0.0250%	
20.4200%	306.3100	306.8000	7.2670	7.2700	0.0514%	
40.8400%	612.6300	612.8000	10.5340	10.5310	-0.0074%	
81.6800%	1225.2600	1224.9000	17.0660	17.0610	-0.0552%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	3.9960	-0.0250%	
20.4200%	306.3100	306.8000	7.2670	7.2700	0.0514%	
40.8400%	612.6300	612.8000	10.5340	10.5310	-0.0074%	
81.6800%	1225.2600	1224.9000	17.0660	17.0610	-0.0552%	

Tag Notes

GK 2.486

Shutdown:
Recorder = 3.9 GPM
mA = 3.997
FT = 0.0
LOI = 0.0

Technician ISA Level III
Certification

Technician Signature

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Runnymede Flowmeter

Instrument Data

Customer Name: Delcora
Instrument Tag: Runnymede Flowmeter
Manufacturer: Krohne
Model Number: IFC 300
Serial Number: C15501259
Calibrated Range: 0-1500 GPM
Description: Runnymede Flowmeter
Instrument Accuracy: 1.5000%

Test Results

Cal. Date: 09/21/18
Next Due: 12/21/18

	As Found	As Left
Zero Error	-0.0125%	-0.0125%
Span Error	-0.0125%	-0.0125%
Max. Error	0.1147%	0.1147%
Min. Error	-0.0882%	-0.0882%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	0.0000	1500.0000	GPM	Krohne GS8B	U1127700018808
Output Value	4.0000	20.0000	mA	Martel MC1200	9474060

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	3.9980	-0.0125%	
20.4200%	306.3100	307.0000	7.2670	7.2780	0.1147%	
40.8400%	612.6300	612.1900	10.5340	10.5310	-0.0481%	
81.6800%	1225.2600	1224.5000	17.0660	17.0600	-0.0882%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	0.0000	0.0000	4.0000	3.9980	-0.0125%	
20.4200%	306.3100	307.0000	7.2670	7.2780	0.1147%	
40.8400%	612.6300	612.1900	10.5340	10.5310	-0.0481%	
81.6800%	1225.2600	1224.5000	17.0660	17.0600	-0.0882%	

Tag Notes

GK 2.486

Shutdown:
Recorder = 2.25 GPM
mA = 3.998
FT = 0.0
LOI = 0.0

Technician ISA Level III
Certification

Technician Signature

GS 8 B On-Site Verification Record

GS 8 B STANDARD SETTINGS

This spreadsheet is protected, thus entry is only allowed in the drop-down boxes & bright green cells.
 To use this calculator, you will only need to input the requested information in the bright green cells from your data tags.
 The Converter type, engineering units, diameter and frequency have drop down boxes, allowing the user to simply choose from the list.
 This spreadsheet will automatically choose inch or metric (depending upon the converter), and state which GK(L) to use.
 Printing of the programming results is allowed by simply choosing "Print" through your File menu.

Important: If there is a flowrate value present at the zero setting, you must compensate to obtain proper evaluation values.
 You can zero your converter, but this might mean that you would have to redo a zero calibration once you reconnect with your primary head.
 If you are unable to redo a zero calibration after reconnecting, then you should use the offset-compensated tables on the second sheet of this spreadsheet (Calculator + Zero Compensation).

Date Recorded: 2/23/18

Serial #: C15501259

Tag #: Runnymead Pump Station

Flow Tube Model #: Enviromag 2000 F

Commission #: _____

Tested by: William Doleski

DATA INPUT AREAS (in green)			
INPUT VARIABLES			
Converter	=	IFC 300(GK)	
Q Fullscale	=	1000	USGal/min
Select Meter Dia.	=	Inch mm	
		8 200	
DN	=	200	mm
Diameter	=	8.0	inch (ref only)
I _{0%}	=	4	mA
I _{100%}	=	20	mA
P _{100%} (Hz)	=	1000	Hz
GK	=	4.0364	<use GK
GKL	=		<do not use
K	=	Value automatically chosen from K value table	

$$X = \frac{Q_{100\%} * K * F}{GK(L) * DN^2} = \frac{263546.369}{161456} = 1.632$$

$$Y_{MAX} = \begin{matrix} 1.0 \\ B \end{matrix}$$

Max Knob Setting

Output Current	I	=	13.802	mA
Output Frequency	Freq MAX	=	612.628	Hz
Calibrated Flowrate	Q	=	612.628	USGal/min

GS 8 B Knob Setting	Current Output (mA)	Frequency Output (Hz)	Calculated Flowrate (USGal/min)	Observed Flowrate (USGal/min)	Deviation
0	4.00	0.00	0.00	0.000	
A	8.90	306.31	306.31	307.000	0.22%
B	13.80	612.63	612.63	613.300	0.11%
C				1225.400	
D					
E					

Version: Rev 1.3.2-USA

GS 8 B On-Site Verification Record

GS 8 B STANDARD SETTINGS

This spreadsheet is protected, thus entry is only allowed in the drop-down boxes & bright green cells.
 To use this calculator, you will only need to input the requested information in the bright green cells from your data tags.
 The Converter type, engineering units, diameter and frequency have drop down boxes, allowing the user to simply choose from the list.
 This spreadsheet will automatically choose inch or metric (depending upon the converter), and state which GK(L) to use.
 Printing of the programming results is allowed by simply choosing "Print" through your File menu.

Important: If there is a flowrate value present at the zero setting, you must compensate to obtain proper evaluation values.
 You can zero your converter, but this might mean that you would have to redo a zero calibration once you reconnect with your primary head.
 If you are unable to redo a zero calibration after reconnecting, then you should use the offset-compensated tables on the second sheet of this spreadsheet (Calculator + Zero Compensation).

Date Recorded: 6/19/18

Serial #: C15501259

Tag #: Runnymede Pump Station

Flow Tube Model #: Enviromag 2000 F

Commission #:

Tested by: William Doleski

DATA INPUT AREAS (in green)			
INPUT VARIABLES			
Converter	=	IFC 300(GK)	
Q Fullscale	=	1500	USGal/min
Select Meter Dia.	=	Inch mm	
		8 200	
DN	=	200	mm
Diameter	=	8.0	inch (ref only)
I _{0%}	=	4	mA
I _{100%}	=	20	mA
P _{100%} (Hz)	=	1000	Hz
GK	=	4.0364	<use GK
GKL	=		<do not use
K	=	Value automatically chosen from K value table	

$$X = \frac{Q_{100\%} * K * F}{GK(L) * DN^2} = \frac{395319.5535}{161456} = 2.448$$

$$Y_{MAX} = \begin{matrix} 2.0 \\ C \end{matrix}$$

Output Current	I	=	17.069	mA
Output Frequency	Freq MAX	=	816.838	Hz
Calibrated Flowrate	Q	=	1225.257	USGal/min

GS 8 B Knob Setting	Current Output (mA)	Frequency Output (Hz)	Calculated Flowrate (USGal/min)	Observed Flowrate (USGal/min)	Deviation
0	4.00	0.00	0.00	0.000	
A	7.27	204.21	306.31	307.000	0.22%
B	10.53	408.42	612.63	613.000	0.06%
C	17.07	816.84	1225.26	1225.000	-0.02%
D					
E					

Version: Rev 1.3.2-USA

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Runnymead PS Flow Recorder

Instrument Data

Customer Name: Delcora
Instrument Tag: Runnymead PS Flow Recorder
Manufacturer: Honeywell
Model Number: TMV16R-40
Serial Number: 15W37C000000983463
Calibrated Range: 4-20 Ma
Description: Runnymead PS Flow Recorder
Instrument Accuracy: 0.5000%

Test Results

Cal. Date: 12/07/18
Next Due: 03/07/19

	As Found	As Left
Zero Error	0.2833%	0.2833%
Span Error	0.3700%	0.3700%
Max. Error	0.2833%	0.2833%
Min. Error	0.0867%	0.0867%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	4.0000	20.0000	mA	Martel MC1200	9474060
Output Value	0.0000	1500.0000	GPM	Visual from LOI	

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	4.2500	0.2833%	
25%	8.0000	8.0000	375.0000	378.4700	0.2313%	
50%	12.0000	12.0000	750.0000	753.2100	0.2140%	
75%	16.0000	16.0000	1125.0000	1127.4300	0.1620%	
100%	20.0000	20.0000	1500.0000	1501.3000	0.0867%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	4.2500	0.2833%	
25%	8.0000	8.0000	375.0000	378.4700	0.2313%	
50%	12.0000	12.0000	750.0000	753.2100	0.2140%	
75%	16.0000	16.0000	1125.0000	1127.4300	0.1620%	
100%	20.0000	20.0000	1500.0000	1501.3000	0.0867%	

Tag Notes

Technician ISA Level III
Certification

Technician Signature

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Runnymead PS Flow Recorder

Instrument Data

Customer Name: Delcora
Instrument Tag: Runnymead PS Flow Recorder
Manufacturer: Honeywell
Model Number: TMV16R-40
Serial Number: 15W37C000000983463
Calibrated Range: 4-20 Ma
Description: Runnymead PS Flow Recorder
Instrument Accuracy: 0.5000%

Test Results

Cal. Date: 02/23/18
Next Due: 06/23/18

	As Found	As Left
Zero Error	0.0747%	0.0747%
Span Error	-0.7360%	-0.7360%
Max. Error	0.0747%	0.0747%
Min. Error	-0.8107%	-0.8107%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	4.0000	20.0000	mA	Martel MC1200	9474060
Output Value	0.0000	1500.0000	GPM	Visual from LOI	

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	1.1200	0.0747%	
25%	8.0000	8.0000	375.0000	372.4800	-0.1680%	
50%	12.0000	12.0000	750.0000	744.2400	-0.3840%	
75%	16.0000	16.0000	1125.0000	1115.8000	-0.6133%	
100%	20.0000	20.0000	1500.0000	1487.8400	-0.8107%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	1.1200	0.0747%	
25%	8.0000	8.0000	375.0000	372.4800	-0.1680%	
50%	12.0000	12.0000	750.0000	744.2400	-0.3840%	
75%	16.0000	16.0000	1125.0000	1115.8000	-0.6133%	
100%	20.0000	20.0000	1500.0000	1487.8400	-0.8107%	

Tag Notes

SCADA:

Shutdown
FT = 0.0 MGD
LOI = 0
mA = 3.999
Recorder = 1.12 GPM

Technician ISA Level III
Certification

Technician Signature

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Runnymead PS Flow Recorder

Instrument Data

Customer Name: Delcora
Instrument Tag: Runnymead PS Flow Recorder
Manufacturer: Honeywell
Model Number: TMV16R-40
Serial Number: 15W37C000000983463
Calibrated Range: 4-20 Ma
Description: Runnymead PS Flow Recorder
Instrument Accuracy: 0.5000%

Test Results

Cal. Date: 06/19/18
Next Due: 09/19/18

	As Found	As Left
Zero Error	0.0173%	0.0173%
Span Error	-0.9160%	-0.9160%
Max. Error	0.0173%	0.0173%
Min. Error	-0.9333%	-0.9333%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	4.0000	20.0000	mA	Martel MC1200	9474060
Output Value	0.0000	1500.0000	GPM	Visual from LOI	

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	0.2600	0.0173%	
25%	8.0000	8.0000	375.0000	371.7000	-0.2200%	
50%	12.0000	12.0000	750.0000	744.0000	-0.4000%	
75%	16.0000	16.0000	1125.0000	1115.0000	-0.6667%	
100%	20.0000	20.0000	1500.0000	1486.0000	-0.9333%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	0.2600	0.0173%	
25%	8.0000	8.0000	375.0000	371.7000	-0.2200%	
50%	12.0000	12.0000	750.0000	744.0000	-0.4000%	
75%	16.0000	16.0000	1125.0000	1115.0000	-0.6667%	
100%	20.0000	20.0000	1500.0000	1486.0000	-0.9333%	

Tag Notes

SCADA:

Shutdown

FT = 0.0 MGD
LOI = 0
mA = 3.997
Recorder = 0.26 GPM

Technician ISA Level III
Certification

Technician Signature

Calibration Report



ICEA

Instrument Contracting
and Engineering Association

Smith Instrument Company, Inc.
P.O. Box 404
Downingtown, PA 19335
Phone: 610-594-6650
Fax: 610-594-6658
e-mail: bdoleski@smithservice.com

Runnymead PS Flow Recorder

Instrument Data

Customer Name: Delcora
Instrument Tag: Runnymead PS Flow Recorder
Manufacturer: Honeywell
Model Number: TMV16R-40
Serial Number: 15W37C000000983463
Calibrated Range: 4-20 Ma
Description: Runnymead PS Flow Recorder
Instrument Accuracy: 0.5000%

Test Results

Cal. Date: 09/21/18
Next Due: 12/21/18

	As Found	As Left
Zero Error	0.1500%	0.1500%
Span Error	-0.2093%	-0.2093%
Max. Error	0.1500%	0.1500%
Min. Error	-0.3593%	-0.3593%

Calibration Data

	Low	High	Unit	Calibrator	Serial #
Input Value	4.0000	20.0000	mA	Martel MC1200	9474060
Output Value	0.0000	1500.0000	GPM	Visual from LOI	

% Value	Input		As Found Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	2.2500	0.1500%	
25%	8.0000	8.0000	375.0000	375.4300	0.0287%	
50%	12.0000	12.0000	750.0000	749.0400	-0.0640%	
75%	16.0000	16.0000	1125.0000	1121.7800	-0.2147%	
100%	20.0000	20.0000	1500.0000	1494.6100	-0.3593%	

% Value	Input		As Left Data		Output	
	Calculated	Actual	Calculated	Actual	% Error	
0%	4.0000	4.0000	0.0000	2.2500	0.1500%	
25%	8.0000	8.0000	375.0000	375.4300	0.0287%	
50%	12.0000	12.0000	750.0000	749.0400	-0.0640%	
75%	16.0000	16.0000	1125.0000	1121.7800	-0.2147%	
100%	20.0000	20.0000	1500.0000	1494.6100	-0.3593%	

Tag Notes

SCADA:

Shutdown

FT = 0.0 MGD
LOI = 0
mA = 3.998
Recorder = 2.25 GPM

Technician ISA Level III
Certification

Technician Signature

ATTACHMENT D

Sewage Pumping Stations

ATTACHMENT D

Sewage Pumping Stations

The following is a discussion of the Crum Creek Sewer District's 3 pump stations. The tables below are based on discharge meter readings for each. This method does not permit the determination of actual peak flows received by the stations. The tables indicate an estimated peak flow based on the WQM Permits.

Even with the WQM peaking factors, a level considered conservatively safe when reviewing station capacity, the reserve capacity is felt to be adequate for even the most severe wet weather conditions.

The tables also list the five-year estimated growth for each station based on the areas listed in Table 2.

The system is monitored by DELCORA's maintenance staff. A representative is onsite three times per week inspecting the pump stations. Additionally, an advance SCADA monitors pump station performance and operating conditions. This is essentially monitored by DELCORA 24-hrs a day as part of their overall system monitoring program.

Tables 5A, 5B and 5C are summary of the Pump Station Hydraulic Conditions along with the 5-year projections. Following the summaries are the monthly pump station flow data.

TABLE 5A					
Adjusted Projections Bridle Pump Station					
Year	Previous Year's Annual Average Flow (MGD) ₁	New EDUs	Increased Flow ₂ (MGD)	Projected Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
2019	0.055	9	0.002	0.202	0.792
2020	0.058	18	0.005	0.218	0.792
2021	0.062	28	0.007	0.244	0.792
2022	0.070	27	0.007	0.269	0.792
2023	0.077	160	0.042	0.416	0.792

Notes

1. The 2018 projection starts with the December Average Daily Flow
2. Increase Flow = New EDUs x 262.5 / 1,000,000.
3. Projected Annual Average Flow = Previous Years Annual Average
4. Projections include all contemplated projects from Table 2A



TABLE 5B					
Adjusted Projections Runnymede Pump Station					
Year	Previous Year's Annual Average Flow (MGD) ₁	New EDUs	Increased Flow ₂ (MGD)	Projected Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
2019	0.141	11	0.003	0.503	1.224
2019	0.144	85	0.022	0.581	1.224
2020	0.166	109	0.029	0.681	1.224
2021	0.195	120	0.032	0.791	1.224
2022	0.226	238	0.062	1.010	1.224

Notes

1. The 2018 projection starts with the December Average Daily Flow
2. Increase Flow = New EDUs x 262.5 / 1,000,000.
3. Projected Annual Average Flow = Previous Years Annual Average
4. Projections include all contemplated projects from Table 2A

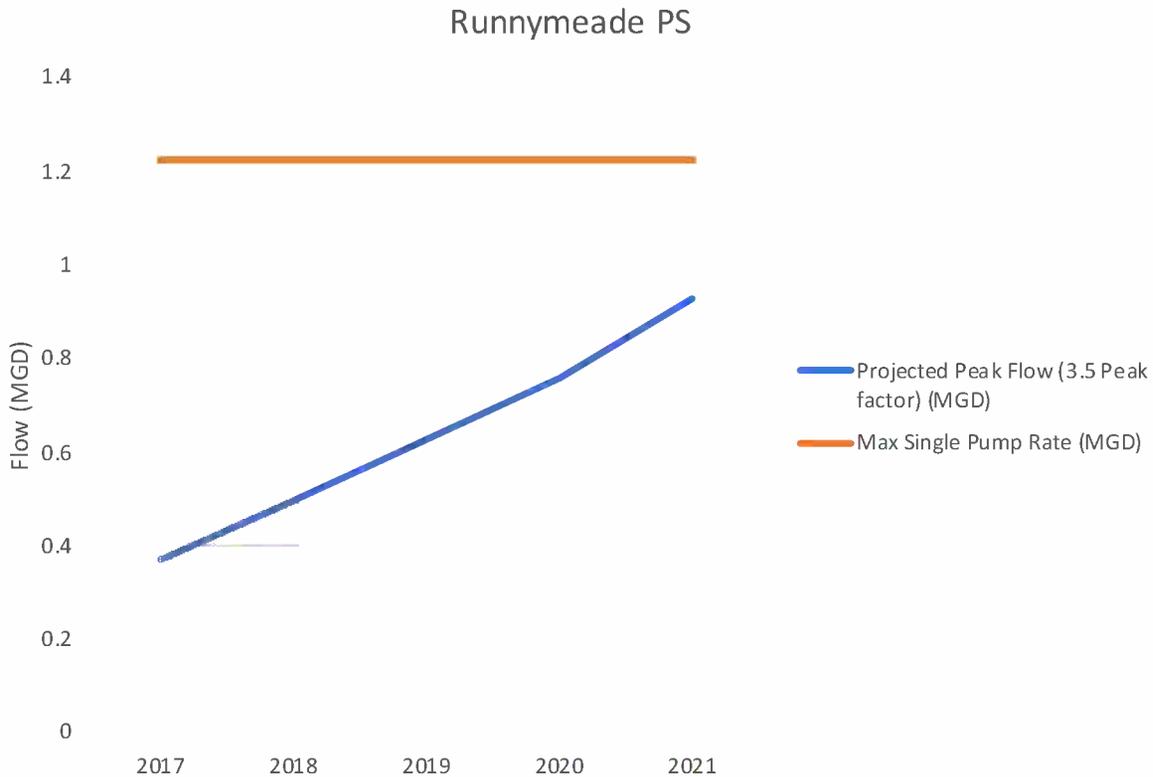
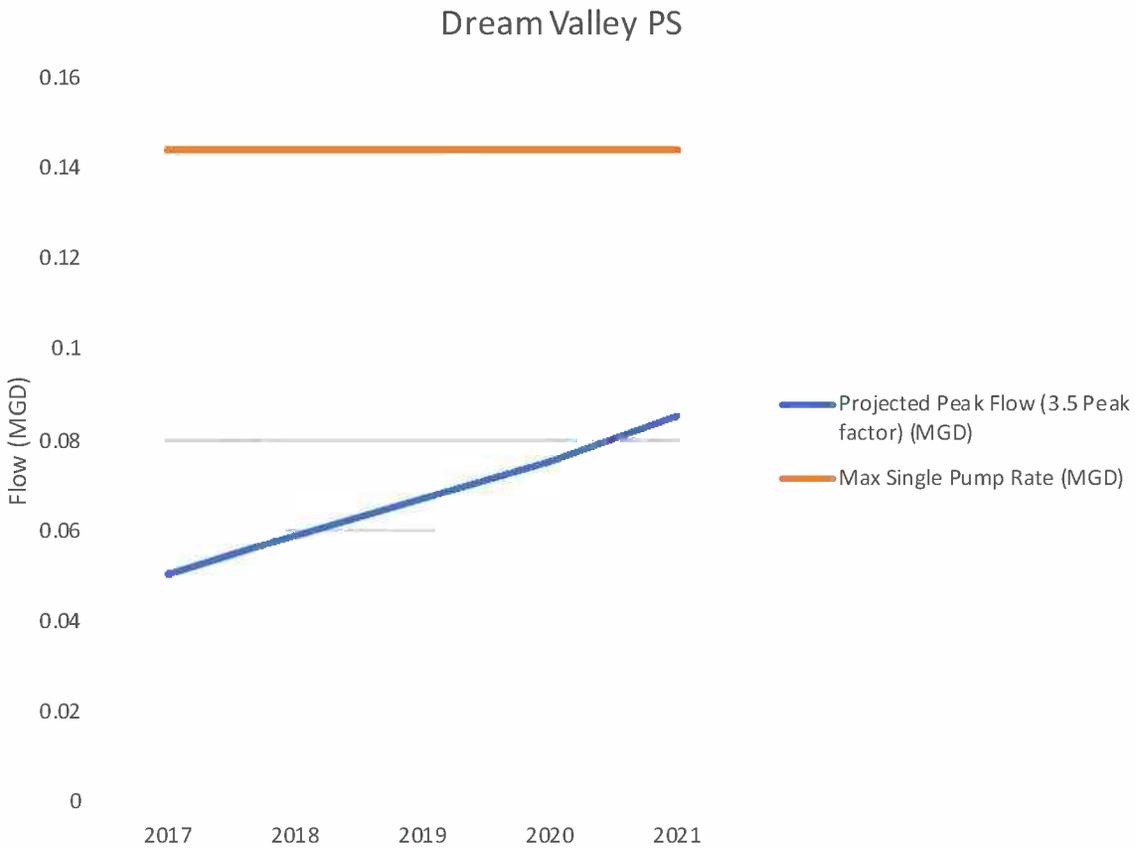


TABLE 5C					
Adjusted Projections Dream Valley Pump Station					
Year	Previous Year's Annual Average Flow (MGD) ₁	New EDUs	Increased Flow ₂ (MGD)	Projected Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
2019	0.013	0	0.000	0.050	0.144
2019	0.014	7	0.002	0.059	0.144
2020	0.017	7	0.002	0.067	0.144
2021	0.019	7	0.002	0.075	0.144
2022	0.022	7	0.003	0.085	0.144

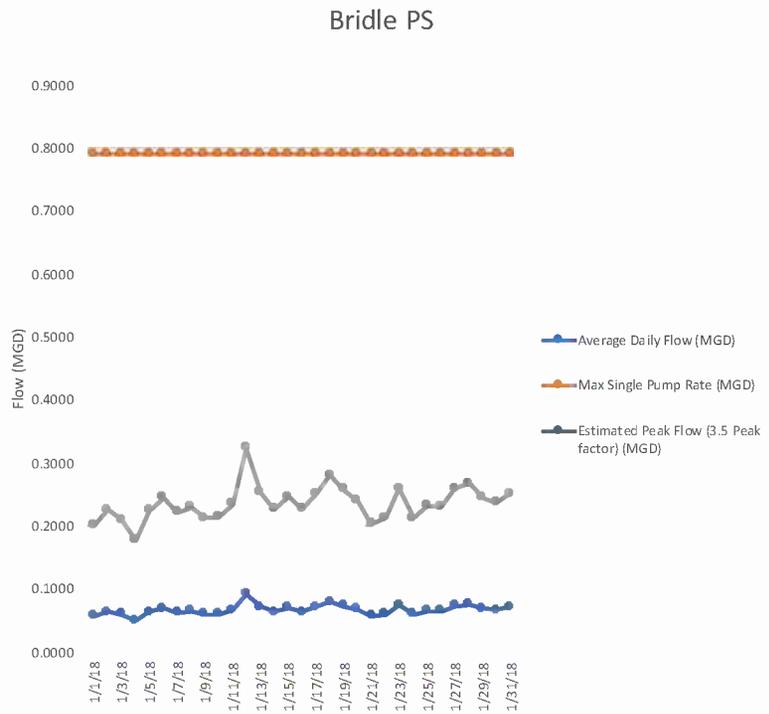
Notes

1. The 2018 projection starts with the December Average Daily Flow
2. Increase Flow = New EDUs x 262.5 / 1,000,000.
3. Projected Annual Average Flow = Previous Years Annual Average Flow + Increased Flow
4. Projections include all contemplated projects from Table 2A

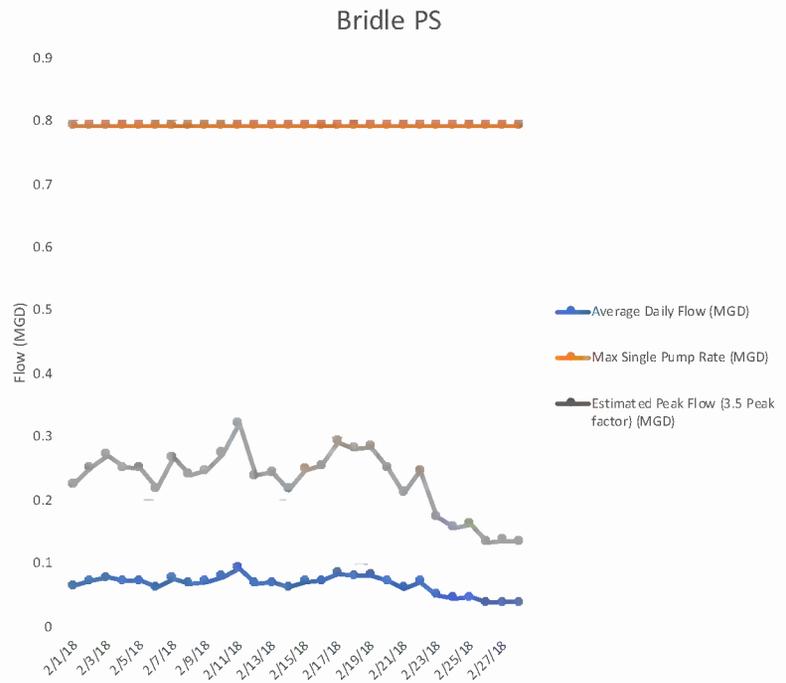


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
1/1/18	0.0577	0.202	0.792
1/2/18	0.0648	0.227	0.792
1/3/18	0.0603	0.211	0.792
1/4/18	0.0508	0.178	0.792
1/5/18	0.0642	0.225	0.792
1/6/18	0.0701	0.245	0.792
1/7/18	0.0637	0.223	0.792
1/8/18	0.0658	0.230	0.792
1/9/18	0.0610	0.213	0.792
1/10/18	0.0613	0.215	0.792
1/11/18	0.0674	0.236	0.792
1/12/18	0.0926	0.324	0.792
1/13/18	0.0727	0.254	0.792
1/14/18	0.0651	0.228	0.792
1/15/18	0.0706	0.247	0.792
1/16/18	0.0652	0.228	0.792
1/17/18	0.0721	0.252	0.792
1/18/18	0.0804	0.281	0.792
1/19/18	0.0740	0.259	0.792
1/20/18	0.0689	0.241	0.792
1/21/18	0.0582	0.204	0.792
1/22/18	0.0608	0.213	0.792
1/23/18	0.0745	0.261	0.792
1/24/18	0.0609	0.213	0.792
1/25/18	0.0665	0.233	0.792
1/26/18	0.0661	0.231	0.792
1/27/18	0.0742	0.260	0.792
1/28/18	0.0768	0.269	0.792
1/29/18	0.0701	0.245	0.792
1/30/18	0.0679	0.238	0.792
1/31/18	0.0723	0.253	0.792

Min 0.051
Max 0.093
Ave 0.068

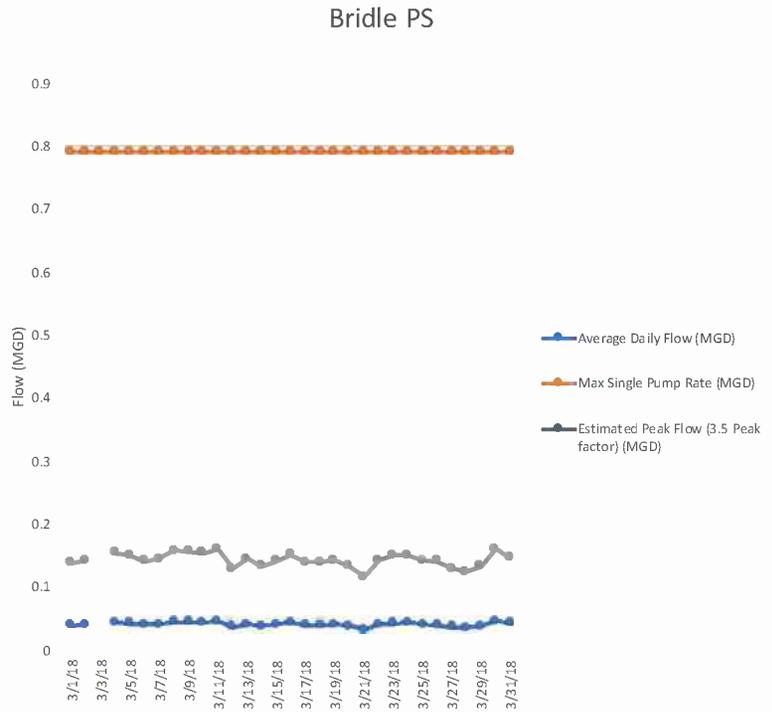


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
2/1/18	0.0643536	0.225	0.792
2/2/18	0.0720144	0.252	0.792
2/3/18	0.0773424	0.271	0.792
2/4/18	0.071712	0.251	0.792
2/5/18	0.0716976	0.251	0.792
2/6/18	0.0623808	0.218	0.792
2/7/18	0.0762336	0.267	0.792
2/8/18	0.0686304	0.240	0.792
2/9/18	0.0703152	0.246	0.792
2/10/18	0.078336	0.274	0.792
2/11/18	0.0919296	0.322	0.792
2/12/18	0.0682848	0.239	0.792
2/13/18	0.069696	0.244	0.792
2/14/18	0.0619056	0.217	0.792
2/15/18	0.0708768	0.248	0.792
2/16/18	0.0727344	0.255	0.792
2/17/18	0.0832896	0.292	0.792
2/18/18	0.08028	0.281	0.792
2/19/18	0.081072	0.284	0.792
2/20/18	0.0718128	0.251	0.792
2/21/18	0.0603792	0.211	0.792
2/22/18	0.0704304	0.247	0.792
2/23/18	0.0494928	0.173	0.792
2/24/18	0.0446976	0.156	0.792
2/25/18	0.0461088	0.161	0.792
2/26/18	0.0379872	0.133	0.792
2/27/18	0.0388224	0.136	0.792
2/28/18	0.038448	0.135	0.792



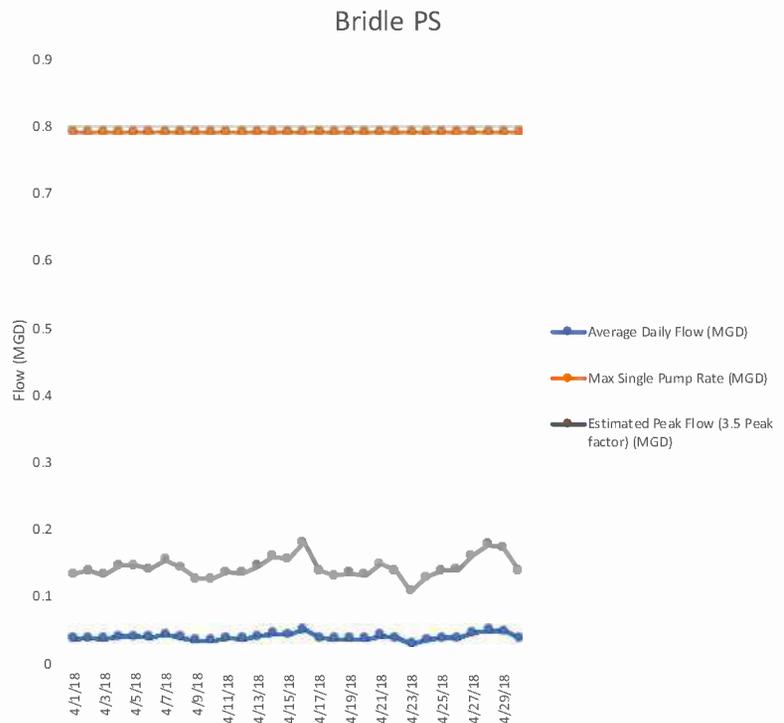
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
3/1/18	0.0398016	0.139	0.792
3/2/18	0.040824	0.143	0.792
3/3/18			0.792
3/4/18	0.044208	0.155	0.792
3/5/18	0.0430416	0.151	0.792
3/6/18	0.0406512	0.142	0.792
3/7/18	0.0415728	0.146	0.792
3/8/18	0.0453744	0.159	0.792
3/9/18	0.0447552	0.157	0.792
3/10/18	0.0443664	0.155	0.792
3/11/18	0.0459504	0.161	0.792
3/12/18	0.037152	0.130	0.792
3/13/18	0.0416016	0.146	0.792
3/14/18	0.0383616	0.134	0.792
3/15/18	0.0405936	0.142	0.792
3/16/18	0.0435168	0.152	0.792
3/17/18	0.040032	0.140	0.792
3/18/18	0.0402048	0.141	0.792
3/19/18	0.0407808	0.143	0.792
3/20/18	0.0383904	0.134	0.792
3/21/18	0.0335088	0.117	0.792
3/22/18	0.0407952	0.143	0.792
3/23/18	0.042912	0.150	0.792
3/24/18	0.0431712	0.151	0.792
3/25/18	0.0408384	0.143	0.792
3/26/18	0.040392	0.141	0.792
3/27/18	0.0371808	0.130	0.792
3/28/18	0.0355392	0.124	0.792
3/29/18	0.0380448	0.133	0.792
3/30/18	0.045936	0.161	0.792
3/31/18	0.0420912	0.147	0.792

Min 0.034
Max 0.046
Ave 0.041



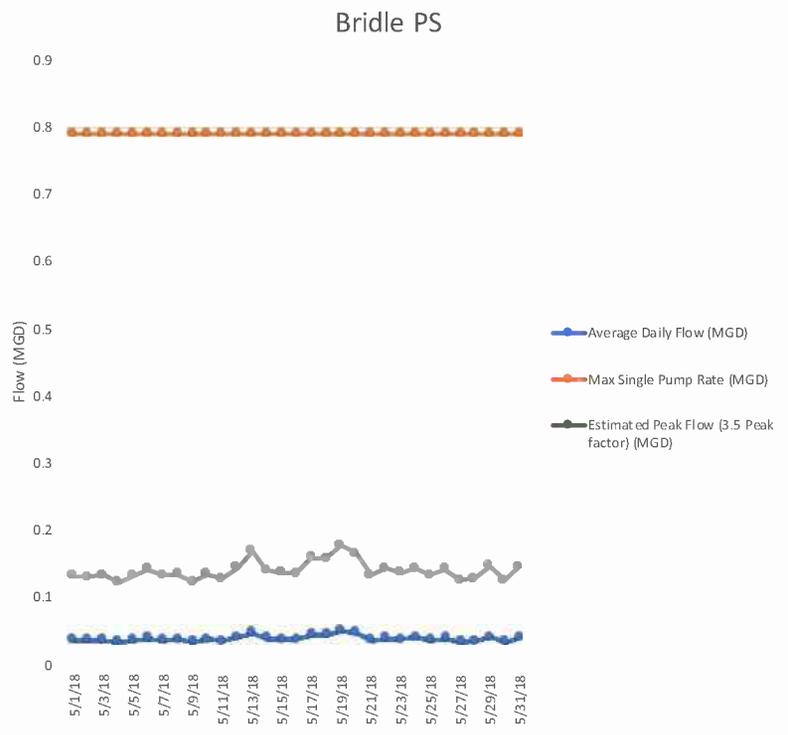
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
4/1/18	0.038376	0.134	0.792
4/2/18	0.0395424	0.138	0.792
4/3/18	0.0377856	0.132	0.792
4/4/18	0.0417312	0.146	0.792
4/5/18	0.0416736	0.146	0.792
4/6/18	0.0402768	0.141	0.792
4/7/18	0.0443232	0.155	0.792
4/8/18	0.0409536	0.143	0.792
4/9/18	0.036	0.126	0.792
4/10/18	0.0361296	0.126	0.792
4/11/18	0.0387792	0.136	0.792
4/12/18	0.0384912	0.135	0.792
4/13/18	0.0414144	0.145	0.792
4/14/18	0.0455616	0.159	0.792
4/15/18	0.0446112	0.156	0.792
4/16/18	0.0518256	0.181	0.792
4/17/18	0.0394992	0.138	0.792
4/18/18	0.0374976	0.131	0.792
4/19/18	0.0384048	0.134	0.792
4/20/18	0.0379728	0.133	0.792
4/21/18	0.0425088	0.149	0.792
4/22/18	0.0394704	0.138	0.792
4/23/18	0.0306	0.107	0.792
4/24/18	0.0366768	0.128	0.792
4/25/18	0.039672	0.139	0.792
4/26/18	0.0398016	0.139	0.792
4/27/18	0.04608	0.161	0.792
4/28/18	0.0507888	0.178	0.792
4/29/18	0.0496656	0.174	0.792
4/30/18	0.0397008	0.139	0.792

Min 0.031
Max 0.052
Ave 0.041

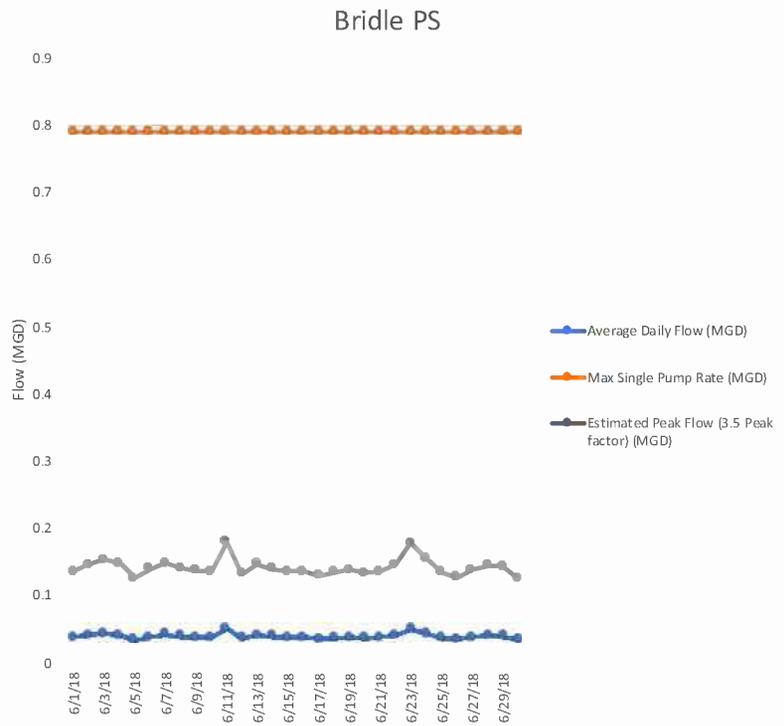


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
5/1/18	0.0380016	0.133	0.792
5/2/18	0.0374256	0.131	0.792
5/3/18	0.0382608	0.134	0.792
5/4/18	0.0350064	0.123	0.792
5/5/18	0.0378576	0.133	0.792
5/6/18	0.0407088	0.142	0.792
5/7/18	0.0383184	0.134	0.792
5/8/18	0.0387072	0.135	0.792
5/9/18	0.0353808	0.124	0.792
5/10/18	0.0386352	0.135	0.792
5/11/18	0.0367776	0.129	0.792
5/12/18	0.041256	0.144	0.792
5/13/18	0.0483696	0.169	0.792
5/14/18	0.0402192	0.141	0.792
5/15/18	0.039168	0.137	0.792
5/16/18	0.0389232	0.136	0.792
5/17/18	0.0457488	0.160	0.792
5/18/18	0.0451728	0.158	0.792
5/19/18	0.0509328	0.178	0.792
5/20/18	0.0473616	0.166	0.792
5/21/18	0.038232	0.134	0.792
5/22/18	0.0409536	0.143	0.792
5/23/18	0.0392112	0.137	0.792
5/24/18	0.0412128	0.144	0.792
5/25/18	0.0383328	0.134	0.792
5/26/18	0.040536	0.142	0.792
5/27/18	0.0361008	0.126	0.792
5/28/18	0.0366912	0.128	0.792
5/29/18	0.0419328	0.147	0.792
5/30/18	0.036072	0.126	0.792
5/31/18	0.0418896	0.147	0.792

Min 0.035
Max 0.051
Ave 0.040



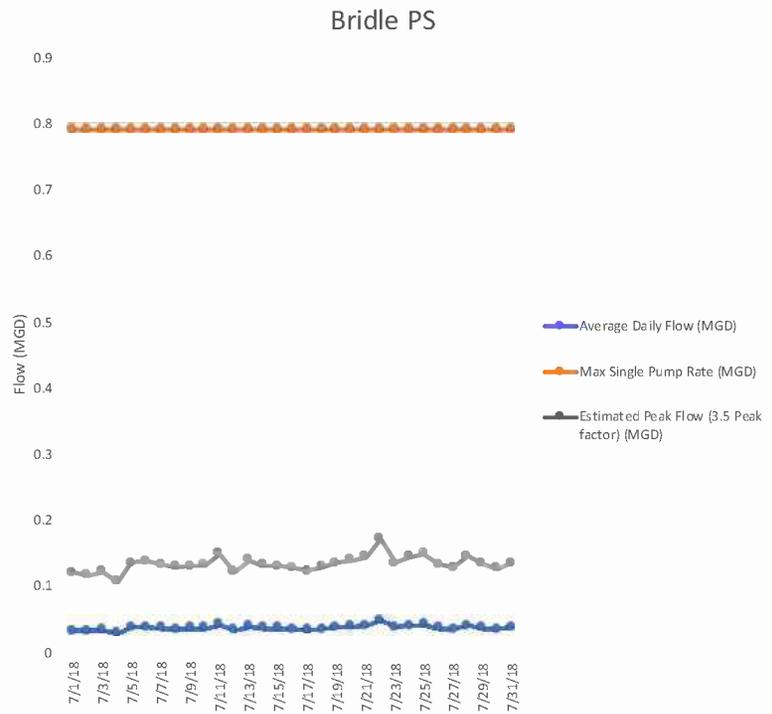
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
6/1/18	0.0387648	0.136	0.792
6/2/18	0.0418752	0.147	0.792
6/3/18	0.0439632	0.154	0.792
6/4/18	0.0422928	0.148	0.792
6/5/18	0.0360864	0.126	0.792
6/6/18	0.039816	0.139	0.792
6/7/18	0.0424656	0.149	0.792
6/8/18	0.0404352	0.142	0.792
6/9/18	0.0394416	0.138	0.792
6/10/18	0.0389808	0.136	0.792
6/11/18	0.0513216	0.180	0.792
6/12/18	0.0379008	0.133	0.792
6/13/18	0.0420192	0.147	0.792
6/14/18	0.0400896	0.140	0.792
6/15/18	0.0389088	0.136	0.792
6/16/18	0.0390096	0.137	0.792
6/17/18	0.0372816	0.130	0.792
6/18/18	0.0384912	0.135	0.792
6/19/18	0.0397152	0.139	0.792
6/20/18	0.0381168	0.133	0.792
6/21/18	0.0390672	0.137	0.792
6/22/18	0.0417168	0.146	0.792
6/23/18	0.0509472	0.178	0.792
6/24/18	0.0447552	0.157	0.792
6/25/18	0.0385632	0.135	0.792
6/26/18	0.0365184	0.128	0.792
6/27/18	0.039528	0.138	0.792
6/28/18	0.041256	0.144	0.792
6/29/18	0.0409104	0.143	0.792
6/30/18	0.0357696	0.125	0.792



Min 0.036
 Max 0.051
 Ave 0.041

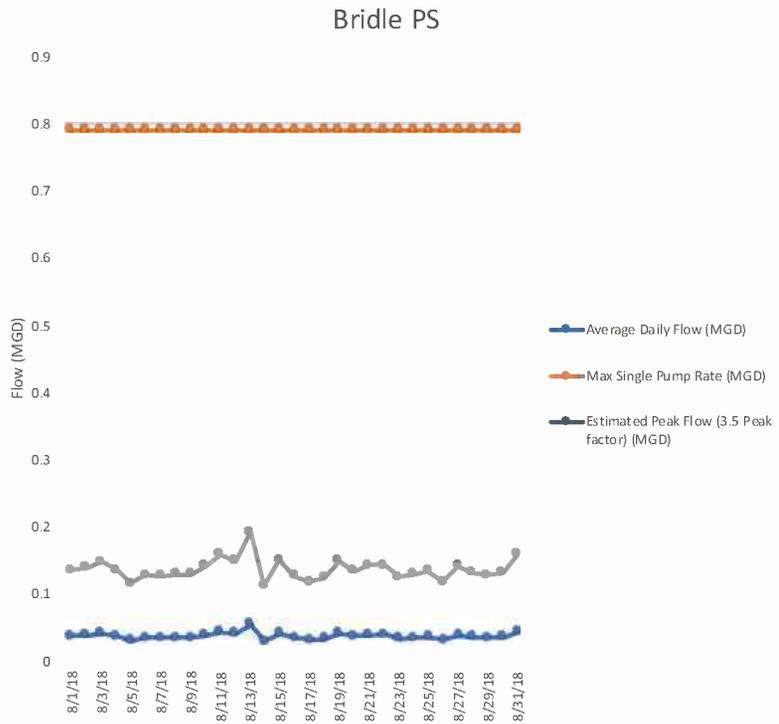
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
7/1/18	0.03456	0.121	0.792
7/2/18	0.0337248	0.118	0.792
7/3/18	0.035136	0.123	0.792
7/4/18	0.0306144	0.107	0.792
7/5/18	0.0389664	0.136	0.792
7/6/18	0.0395568	0.138	0.792
7/7/18	0.0382608	0.134	0.792
7/8/18	0.037008	0.130	0.792
7/9/18	0.037584	0.132	0.792
7/10/18	0.0379728	0.133	0.792
7/11/18	0.0428976	0.150	0.792
7/12/18	0.035064	0.123	0.792
7/13/18	0.0399456	0.140	0.792
7/14/18	0.0377424	0.132	0.792
7/15/18	0.0374544	0.131	0.792
7/16/18	0.0369216	0.129	0.792
7/17/18	0.0354816	0.124	0.792
7/18/18	0.0371232	0.130	0.792
7/19/18	0.0390096	0.137	0.792
7/20/18	0.0401472	0.141	0.792
7/21/18	0.041544	0.145	0.792
7/22/18	0.0491328	0.172	0.792
7/23/18	0.0389376	0.136	0.792
7/24/18	0.0414288	0.145	0.792
7/25/18	0.0429408	0.150	0.792
7/26/18	0.03816	0.134	0.792
7/27/18	0.0368352	0.129	0.792
7/28/18	0.0417312	0.146	0.792
7/29/18	0.0386064	0.135	0.792
7/30/18	0.0364464	0.128	0.792
7/31/18	0.039024	0.137	0.792

Min 0.031
Max 0.049
Ave 0.038

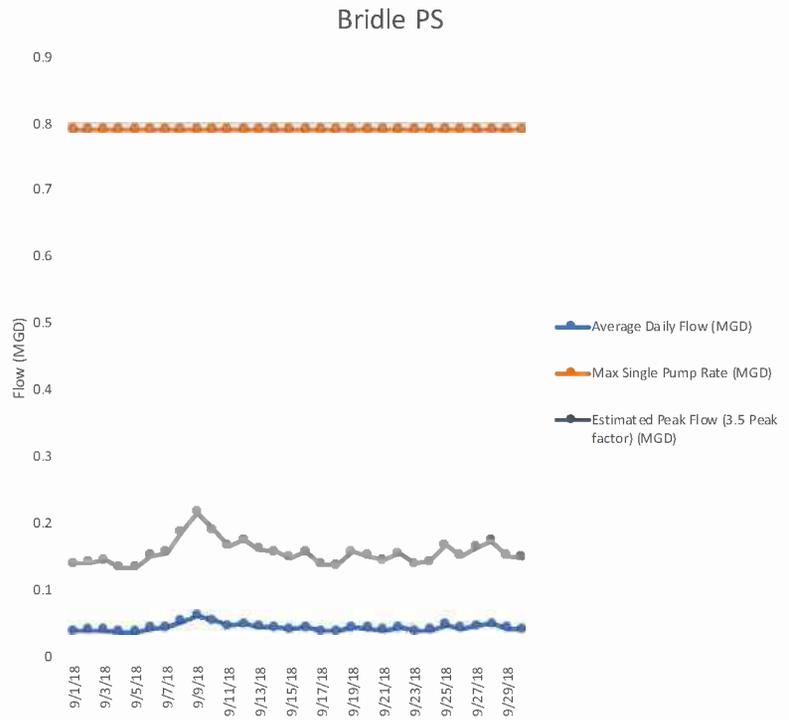


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
8/1/18	0.0389952	0.136	0.792
8/2/18	0.0400608	0.140	0.792
8/3/18	0.0426384	0.149	0.792
8/4/18	0.0387504	0.136	0.792
8/5/18	0.0333072	0.117	0.792
8/6/18	0.0368928	0.129	0.792
8/7/18	0.0363312	0.127	0.792
8/8/18	0.0372528	0.130	0.792
8/9/18	0.03708	0.130	0.792
8/10/18	0.0405936	0.142	0.792
8/11/18	0.0454896	0.159	0.792
8/12/18	0.0427824	0.150	0.792
8/13/18	0.055368	0.194	0.792
8/14/18	0.0323136	0.113	0.792
8/15/18	0.0430704	0.151	0.792
8/16/18	0.036432	0.128	0.792
8/17/18	0.0340416	0.119	0.792
8/18/18	0.0356112	0.125	0.792
8/19/18	0.0428976	0.150	0.792
8/20/18	0.0386784	0.135	0.792
8/21/18	0.0409392	0.143	0.792
8/22/18	0.0411984	0.144	0.792
8/23/18	0.0359136	0.126	0.792
8/24/18	0.0371664	0.130	0.792
8/25/18	0.0385488	0.135	0.792
8/26/18	0.0341136	0.119	0.792
8/27/18	0.0407232	0.143	0.792
8/28/18	0.0378	0.132	0.792
8/29/18	0.0368064	0.129	0.792
8/30/18	0.038016	0.133	0.792
8/31/18	0.0456768	0.160	0.792

Min 0.032
Max 0.055
Ave 0.039



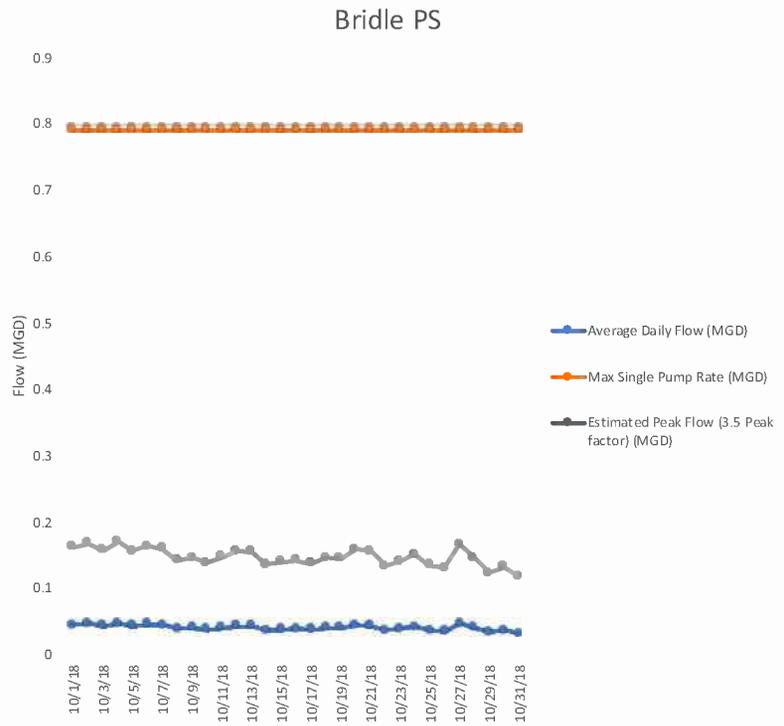
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
9/1/18	0.0400176	0.140	0.792
9/2/18	0.0404064	0.141	0.792
9/3/18	0.0414432	0.145	0.792
9/4/18	0.038088	0.133	0.792
9/5/18	0.0381744	0.134	0.792
9/6/18	0.043056	0.151	0.792
9/7/18	0.0446688	0.156	0.792
9/8/18	0.053568	0.187	0.792
9/9/18	0.061632	0.216	0.792
9/10/18	0.0541296	0.189	0.792
9/11/18	0.0474336	0.166	0.792
9/12/18	0.0499392	0.175	0.792
9/13/18	0.045936	0.161	0.792
9/14/18	0.0447984	0.157	0.792
9/15/18	0.0424368	0.149	0.792
9/16/18	0.0449856	0.157	0.792
9/17/18	0.0394848	0.138	0.792
9/18/18	0.0394128	0.138	0.792
9/19/18	0.045	0.158	0.792
9/20/18	0.0433152	0.152	0.792
9/21/18	0.0414144	0.145	0.792
9/22/18	0.0441504	0.155	0.792
9/23/18	0.0399024	0.140	0.792
9/24/18	0.0405072	0.142	0.792
9/25/18	0.0478368	0.167	0.792
9/26/18	0.0432576	0.151	0.792
9/27/18	0.0465984	0.163	0.792
9/28/18	0.0495216	0.173	0.792
9/29/18	0.0431568	0.151	0.792
9/30/18	0.0423504	0.148	0.792



Min 0.038
 Max 0.062
 Ave 0.045

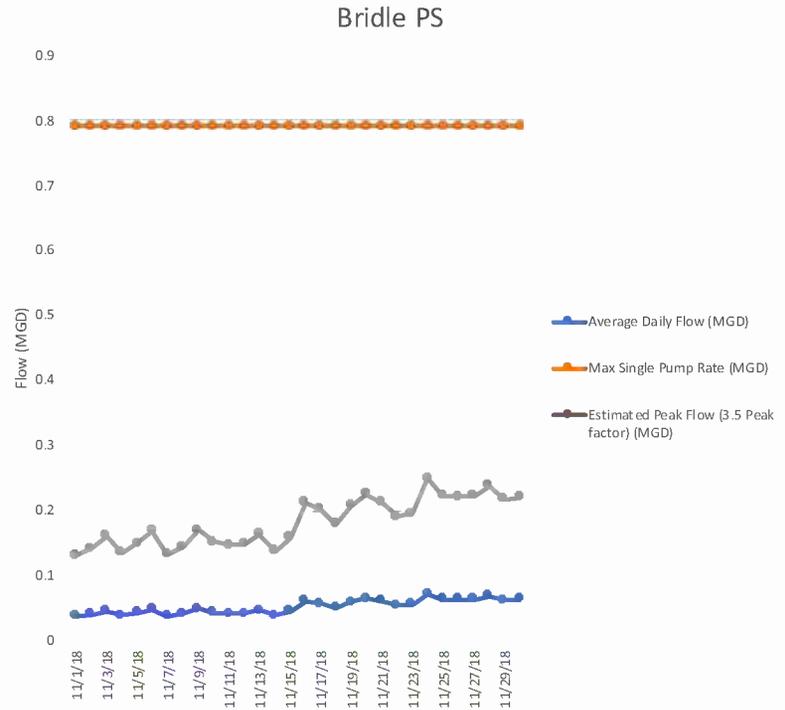
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
10/1/18	0.0464112	0.162	0.792
10/2/18	0.0479376	0.168	0.792
10/3/18	0.045216	0.158	0.792
10/4/18	0.0488304	0.171	0.792
10/5/18	0.0448992	0.157	0.792
10/6/18	0.0467568	0.164	0.792
10/7/18	0.0456768	0.160	0.792
10/8/18	0.040968	0.143	0.792
10/9/18	0.0419904	0.147	0.792
10/10/18	0.039744	0.139	0.792
10/11/18	0.0422784	0.148	0.792
10/12/18	0.044856	0.157	0.792
10/13/18	0.0444816	0.156	0.792
10/14/18	0.0388512	0.136	0.792
10/15/18	0.0400896	0.140	0.792
10/16/18	0.0409392	0.143	0.792
10/17/18	0.039528	0.138	0.792
10/18/18	0.0418608	0.147	0.792
10/19/18	0.0416736	0.146	0.792
10/20/18	0.0456192	0.160	0.792
10/21/18	0.044784	0.157	0.792
10/22/18	0.03816	0.134	0.792
10/23/18	0.040536	0.142	0.792
10/24/18	0.0433152	0.152	0.792
10/25/18	0.0386928	0.135	0.792
10/26/18	0.0375696	0.131	0.792
10/27/18	0.0477936	0.167	0.792
10/28/18	0.0417024	0.146	0.792
10/29/18	0.0353808	0.124	0.792
10/30/18	0.038016	0.133	0.792
10/31/18	0.033768	0.118	0.792

Min 0.034
 Max 0.049
 Ave 0.042



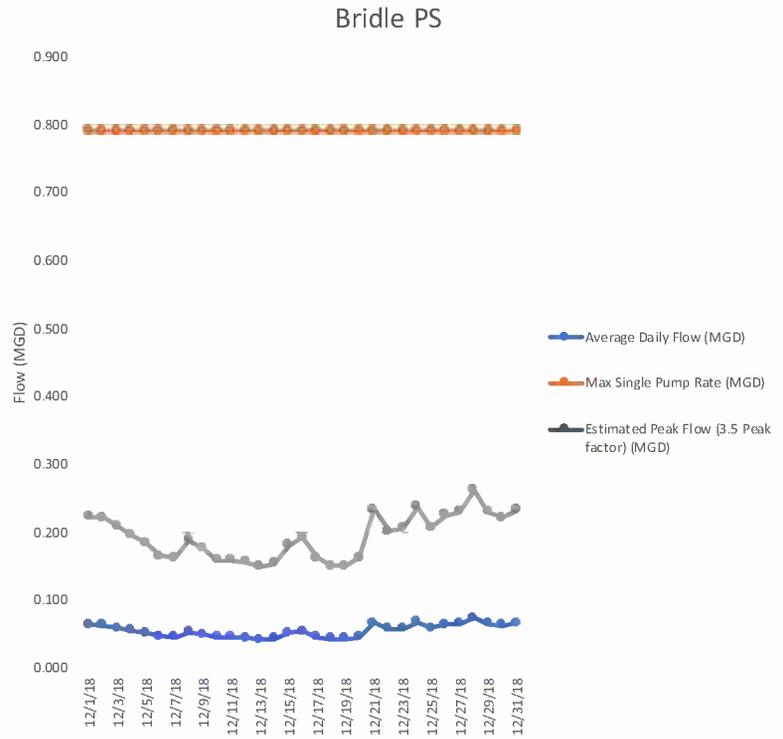
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
11/1/18	0.0374976	0.1312416	0.792
11/2/18	0.0406512	0.142	0.792
11/3/18	0.0461232	0.161	0.792
11/4/18	0.0385776	0.135	0.792
11/5/18	0.042624	0.149	0.792
11/6/18	0.048096	0.168	0.792
11/7/18	0.0379584	0.133	0.792
11/8/18	0.0413856	0.145	0.792
11/9/18	0.0487296	0.171	0.792
11/10/18	0.0435168	0.152	0.792
11/11/18	0.0418464	0.146	0.792
11/12/18	0.0423072	0.148	0.792
11/13/18	0.0468144	0.164	0.792
11/14/18	0.0393984	0.138	0.792
11/15/18	0.0454464	0.159	0.792
11/16/18	0.0608544	0.213	0.792
11/17/18	0.0576576	0.202	0.792
11/18/18	0.0510624	0.179	0.792
11/19/18	0.0593712	0.208	0.792
11/20/18	0.0644256	0.225	0.792
11/21/18	0.0608688	0.213	0.792
11/22/18	0.054504	0.191	0.792
11/23/18	0.0559728	0.196	0.792
11/24/18	0.0714528	0.250	0.792
11/25/18	0.0634752	0.222	0.792
11/26/18	0.0631008	0.221	0.792
11/27/18	0.0637344	0.223	0.792
11/28/18	0.068112	0.238	0.792
11/29/18	0.0620496	0.217	0.792
11/30/18	0.0629424	0.220	0.792

Min 0.037
Max 0.071
Ave 0.052



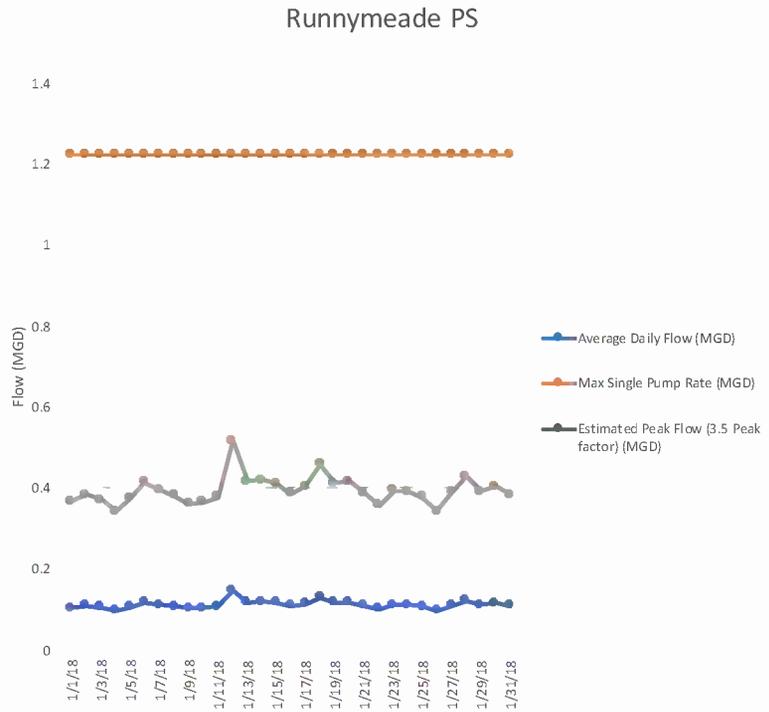
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
12/1/18	0.0639072	0.224	0.792
12/2/18	0.0634896	0.222	0.792
12/3/18	0.0599616	0.210	0.792
12/4/18	0.0558576	0.196	0.792
12/5/18	0.0527904	0.185	0.792
12/6/18	0.0472464	0.165	0.792
12/7/18	0.0464112	0.162	0.792
12/8/18	0.0537552	0.188	0.792
12/9/18	0.0502992	0.176	0.792
12/10/18	0.0454752	0.159	0.792
12/11/18	0.0455904	0.160	0.792
12/12/18	0.0446544	0.156	0.792
12/13/18	0.0427392	0.150	0.792
12/14/18	0.044136	0.154	0.792
12/15/18	0.0517824	0.181	0.792
12/16/18	0.0548352	0.192	0.792
12/17/18	0.0464688	0.163	0.792
12/18/18	0.0430704	0.151	0.792
12/19/18	0.0431712	0.151	0.792
12/20/18	0.0463536	0.162	0.792
12/21/18	0.0669312	0.234	0.792
12/22/18	0.0577296	0.202	0.792
12/23/18	0.0586944	0.205	0.792
12/24/18	0.0679248	0.238	0.792
12/25/18	0.0592992	0.208	0.792
12/26/18	0.064512	0.226	0.792
12/27/18	0.0657504	0.230	0.792
12/28/18	0.07488	0.262	0.792
12/29/18	0.0656928	0.230	0.792
12/30/18	0.0633168	0.222	0.792
12/31/18	0.0666288	0.233	0.792

Min 0.043
Max 0.075
Ave 0.055

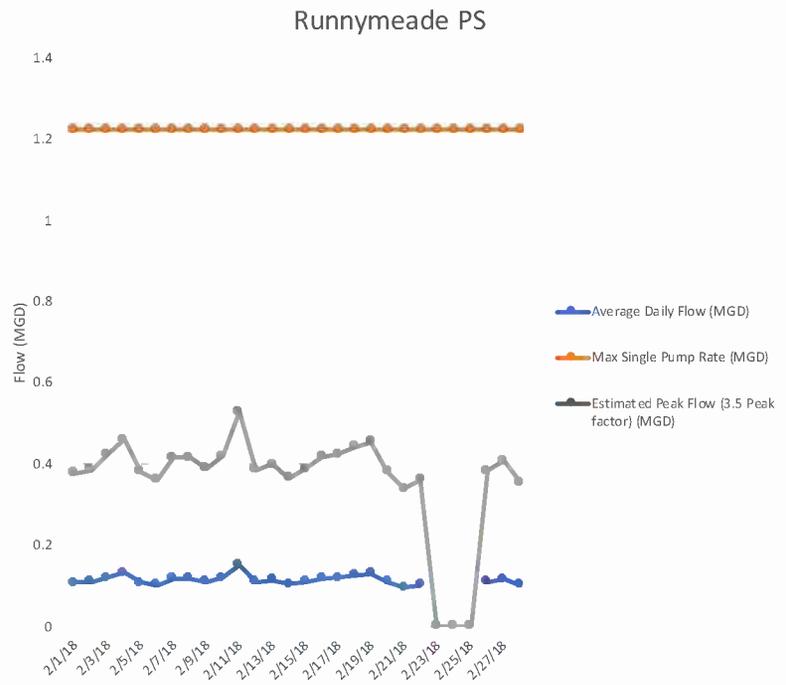


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
1/1/18	0.10507248	0.368	1.224
1/2/18	0.10992384	0.385	1.224
1/3/18	0.10662768	0.373	1.224
1/4/18	0.09846288	0.345	1.224
1/5/18	0.10692144	0.374	1.224
1/6/18	0.11871792	0.416	1.224
1/7/18	0.11336256	0.397	1.224
1/8/18	0.10909728	0.382	1.224
1/9/18	0.1037088	0.363	1.224
1/10/18	0.10477728	0.367	1.224
1/11/18	0.10816704	0.379	1.224
1/12/18	0.14831856	0.519	1.224
1/13/18	0.11901888	0.417	1.224
1/14/18	0.12012768	0.420	1.224
1/15/18	0.1179288	0.413	1.224
1/16/18	0.11060928	0.387	1.224
1/17/18	0.11573136	0.405	1.224
1/18/18	0.13133376	0.460	1.224
1/19/18	0.11788272	0.413	1.224
1/20/18	0.11926	0.417	1.224
1/21/18	0.111272	0.389	1.224
1/22/18	0.102541	0.359	1.224
1/23/18	0.113086	0.396	1.224
1/24/18	0.112313	0.393	1.224
1/25/18	0.107992	0.378	1.224
1/26/18	0.098489	0.345	1.224
1/27/18	0.1115	0.390	1.224
1/28/18	0.122549	0.429	1.224
1/29/18	0.112011	0.392	1.224
1/30/18	0.115956	0.406	1.224
1/31/18	0.109905	0.385	1.224

Min 0.098
 Max 0.148
 Ave 0.113

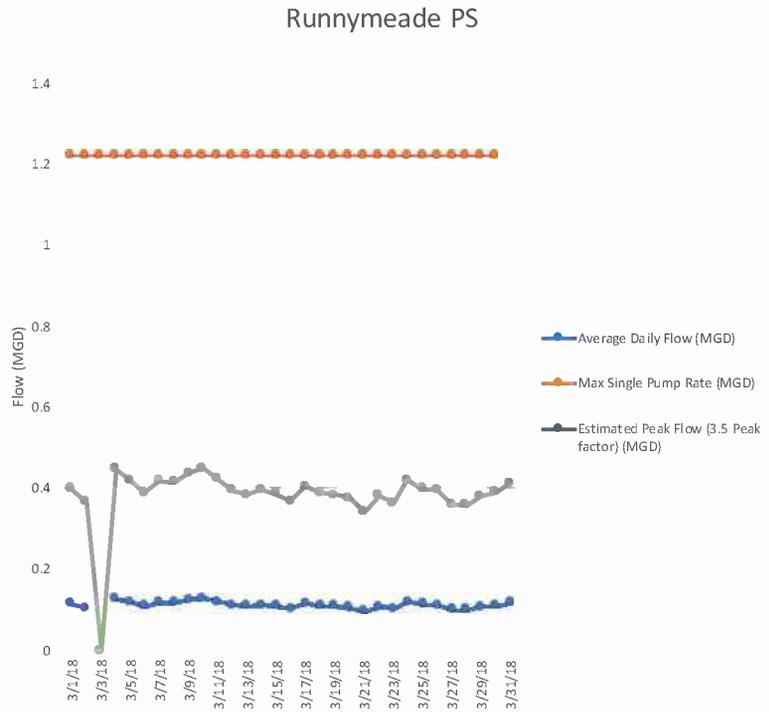


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
2/1/18	0.107582	0.377	1.224
2/2/18	0.110088	0.385	1.224
2/3/18	0.12094	0.423	1.224
2/4/18	0.131498	0.460	1.224
2/5/18	0.109008	0.382	1.224
2/6/18	0.103072	0.361	1.224
2/7/18	0.118603	0.415	1.224
2/8/18	0.118487	0.415	1.224
2/9/18	0.111113	0.389	1.224
2/10/18	0.119701	0.419	1.224
2/11/18	0.151233	0.529	1.224
2/12/18	0.110285	0.386	1.224
2/13/18	0.11405	0.399	1.224
2/14/18	0.104338	0.365	1.224
2/15/18	0.110421	0.386	1.224
2/16/18	0.119181	0.417	1.224
2/17/18	0.121116	0.424	1.224
2/18/18	0.126371	0.442	1.224
2/19/18	0.129504	0.453	1.224
2/20/18	0.109209	0.382	1.224
2/21/18	0.09661	0.338	1.224
2/22/18	0.102978	0.360	1.224
2/23/18		0.000	1.224
2/24/18		0.000	1.224
2/25/18		0.000	1.224
2/26/18	0.109477	0.383	1.224
2/27/18	0.116244	0.407	1.224
2/28/18	0.101212	0.354	1.224
			1.224
			1.224



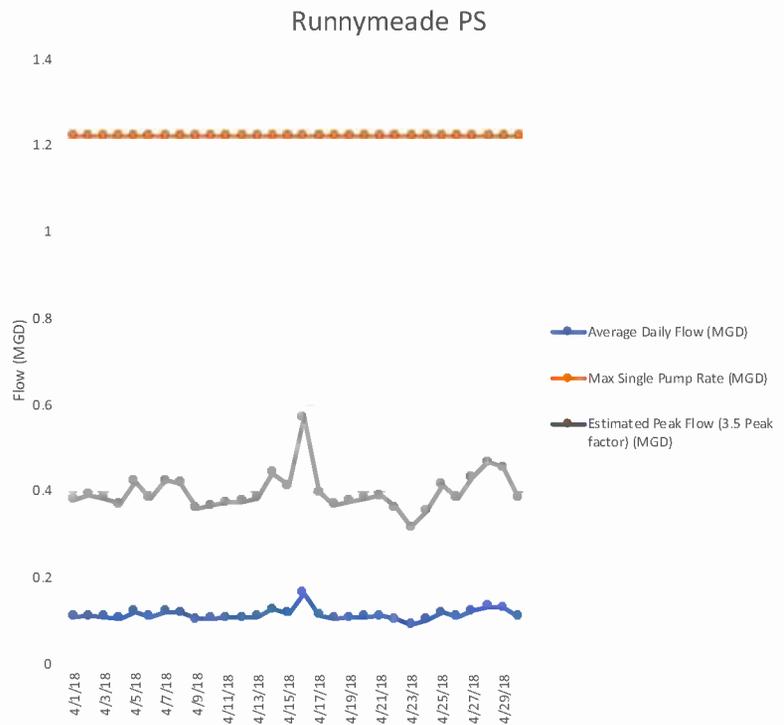
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
3/1/18	0.113915	0.399	1.224
3/2/18	0.104954	0.367	1.224
3/3/18		0.000	1.224
3/4/18	0.127665	0.447	1.224
3/5/18	0.120226	0.421	1.224
3/6/18	0.110838	0.388	1.224
3/7/18	0.11959	0.419	1.224
3/8/18	0.118856	0.416	1.224
3/9/18	0.124887	0.437	1.224
3/10/18	0.128691	0.450	1.224
3/11/18	0.120709	0.422	1.224
3/12/18	0.112517	0.394	1.224
3/13/18	0.110174	0.386	1.224
3/14/18	0.113485	0.397	1.224
3/15/18	0.110522	0.387	1.224
3/16/18	0.105453	0.369	1.224
3/17/18	0.115974	0.406	1.224
3/18/18	0.11081	0.388	1.224
3/19/18	0.11013	0.385	1.224
3/20/18	0.107593	0.377	1.224
3/21/18	0.097871	0.343	1.224
3/22/18	0.109218	0.382	1.224
3/23/18	0.10393	0.364	1.224
3/24/18	0.120284	0.421	1.224
3/25/18	0.114054	0.399	1.224
3/26/18	0.113113	0.396	1.224
3/27/18	0.103136	0.361	1.224
3/28/18	0.102287	0.358	1.224
3/29/18	0.108601	0.380	1.224
3/30/18	0.111541	0.390	1.224
3/31/18	0.118131	0.413	1.224

Min 0.098
Max 0.129
Ave 0.113



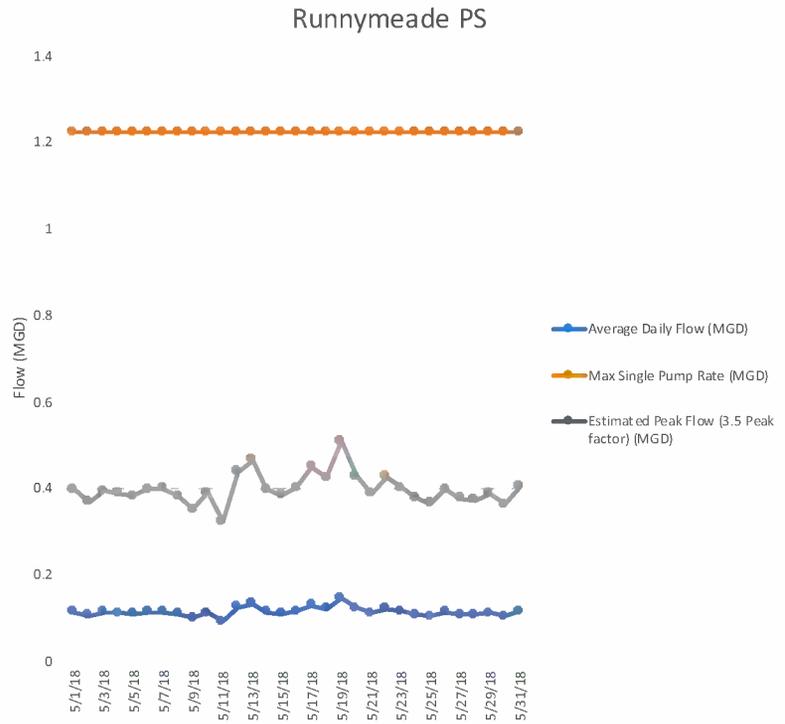
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
4/1/18	0.108458	0.380	1.224
4/2/18	0.111929	0.392	1.224
4/3/18	0.109633	0.384	1.224
4/4/18	0.105709	0.370	1.224
4/5/18	0.120495	0.422	1.224
4/6/18	0.109759	0.384	1.224
4/7/18	0.121295	0.425	1.224
4/8/18	0.119427	0.418	1.224
4/9/18	0.102829	0.360	1.224
4/10/18	0.104711	0.366	1.224
4/11/18	0.106656	0.373	1.224
4/12/18	0.107752	0.377	1.224
4/13/18	0.109753	0.384	1.224
4/14/18	0.126259	0.442	1.224
4/15/18	0.117888	0.413	1.224
4/16/18	0.163405	0.572	1.224
4/17/18	0.113748	0.398	1.224
4/18/18	0.10507	0.368	1.224
4/19/18	0.107492	0.376	1.224
4/20/18	0.109849	0.384	1.224
4/21/18	0.111165	0.389	1.224
4/22/18	0.103776	0.363	1.224
4/23/18	0.090621	0.317	1.224
4/24/18	0.100758	0.353	1.224
4/25/18	0.118793	0.416	1.224
4/26/18	0.109789	0.384	1.224
4/27/18	0.123533	0.432	1.224
4/28/18	0.13351	0.467	1.224
4/29/18	0.130192	0.456	1.224
4/30/18	0.109886	0.385	1.224

Min 0.091
Max 0.163
Ave 0.114



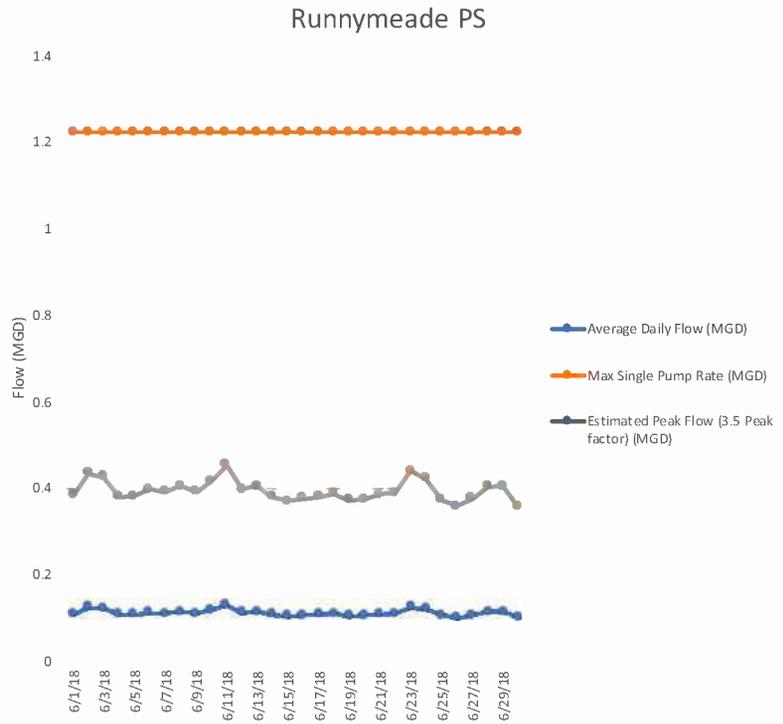
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
5/1/18	0.113423	0.397	1.224
5/2/18	0.105211	0.368	1.224
5/3/18	0.112471	0.394	1.224
5/4/18	0.110751	0.388	1.224
5/5/18	0.109201	0.382	1.224
5/6/18	0.113614	0.398	1.224
5/7/18	0.114005	0.399	1.224
5/8/18	0.109213	0.382	1.224
5/9/18	0.100044	0.350	1.224
5/10/18	0.111301	0.390	1.224
5/11/18	0.092278	0.323	1.224
5/12/18	0.125046	0.438	1.224
5/13/18	0.132804	0.465	1.224
5/14/18	0.11374	0.398	1.224
5/15/18	0.109866	0.385	1.224
5/16/18	0.114938	0.402	1.224
5/17/18	0.128258	0.449	1.224
5/18/18	0.121378	0.425	1.224
5/19/18	0.145653	0.510	1.224
5/20/18	0.122507	0.429	1.224
5/21/18	0.110589	0.387	1.224
5/22/18	0.121838	0.426	1.224
5/23/18	0.114675	0.401	1.224
5/24/18	0.108092	0.378	1.224
5/25/18	0.104239	0.365	1.224
5/26/18	0.113824	0.398	1.224
5/27/18	0.107547	0.376	1.224
5/28/18	0.106575	0.373	1.224
5/29/18	0.110913	0.388	1.224
5/30/18	0.103831	0.363	1.224
5/31/18	0.114992	0.402	1.224

Min 0.092
Max 0.146
Ave 0.114



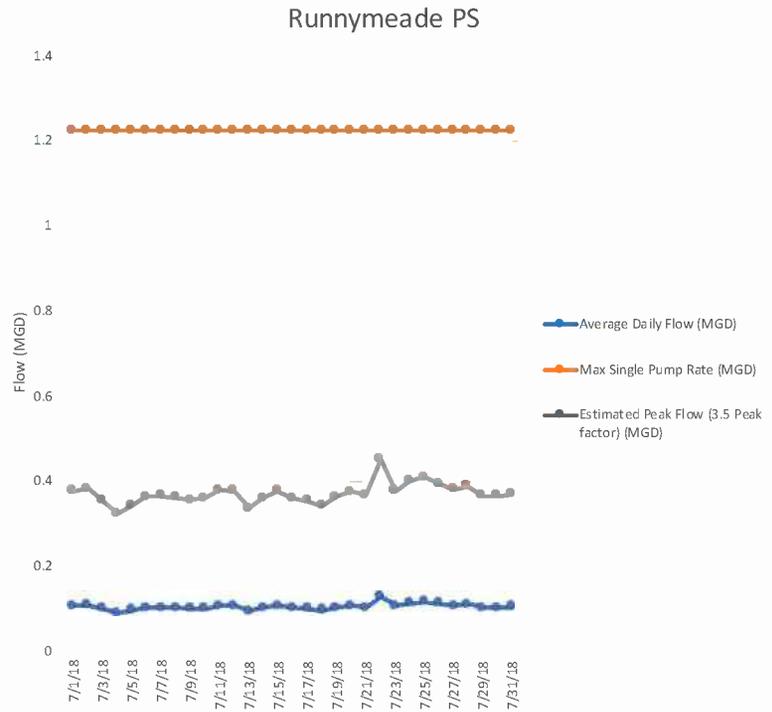
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
6/1/18	0.109789	0.384	1.224
6/2/18	0.124086	0.434	1.224
6/3/18	0.122065	0.427	1.224
6/4/18	0.108515	0.380	1.224
6/5/18	0.108863	0.381	1.224
6/6/18	0.11341	0.397	1.224
6/7/18	0.112037	0.392	1.224
6/8/18	0.115672	0.405	1.224
6/9/18	0.112049	0.392	1.224
6/10/18	0.118851	0.416	1.224
6/11/18	0.12943	0.453	1.224
6/12/18	0.11333	0.397	1.224
6/13/18	0.115958	0.406	1.224
6/14/18	0.108796	0.381	1.224
6/15/18	0.1057	0.370	1.224
6/16/18	0.107431	0.376	1.224
6/17/18	0.108487	0.380	1.224
6/18/18	0.110662	0.387	1.224
6/19/18	0.106251	0.372	1.224
6/20/18	0.107197	0.375	1.224
6/21/18	0.110048	0.385	1.224
6/22/18	0.111366	0.390	1.224
6/23/18	0.125599	0.440	1.224
6/24/18	0.120715	0.423	1.224
6/25/18	0.106633	0.373	1.224
6/26/18	0.102303	0.358	1.224
6/27/18	0.107324	0.376	1.224
6/28/18	0.115155	0.403	1.224
6/29/18	0.116018	0.406	1.224
6/30/18	0.101693	0.356	1.224

Min 0.102
Max 0.129
Ave 0.113



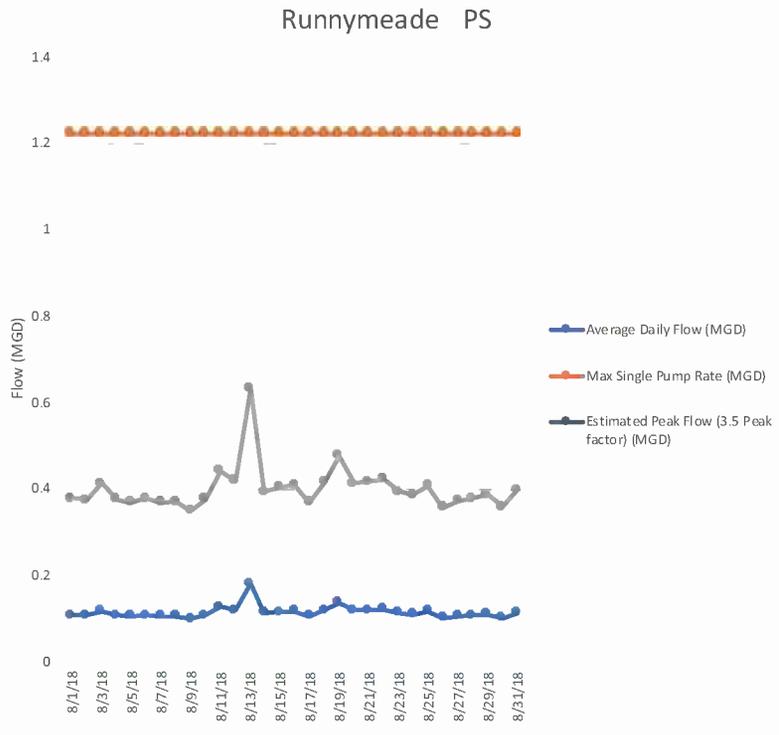
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
7/1/18	0.107701	0.377	1.224
7/2/18	0.10913	0.382	1.224
7/3/18	0.100917	0.353	1.224
7/4/18	0.092346	0.323	1.224
7/5/18	0.097365	0.341	1.224
7/6/18	0.103677	0.363	1.224
7/7/18	0.104269	0.365	1.224
7/8/18	0.10322	0.361	1.224
7/9/18	0.101204	0.354	1.224
7/10/18	0.102265	0.358	1.224
7/11/18	0.108181	0.379	1.224
7/12/18	0.107655	0.377	1.224
7/13/18	0.095913	0.336	1.224
7/14/18	0.102758	0.360	1.224
7/15/18	0.10742	0.376	1.224
7/16/18	0.102776	0.360	1.224
7/17/18	0.100956	0.353	1.224
7/18/18	0.097517	0.341	1.224
7/19/18	0.103795	0.363	1.224
7/20/18	0.107018	0.375	1.224
7/21/18	0.10445	0.366	1.224
7/22/18	0.128864	0.451	1.224
7/23/18	0.10732	0.376	1.224
7/24/18	0.114034	0.399	1.224
7/25/18	0.116841	0.409	1.224
7/26/18	0.11265	0.394	1.224
7/27/18	0.108339	0.379	1.224
7/28/18	0.110616	0.387	1.224
7/29/18	0.104237	0.365	1.224
7/30/18	0.104409	0.365	1.224
7/31/18	0.105372	0.369	1.224

Min 0.092
Max 0.129
Ave 0.106



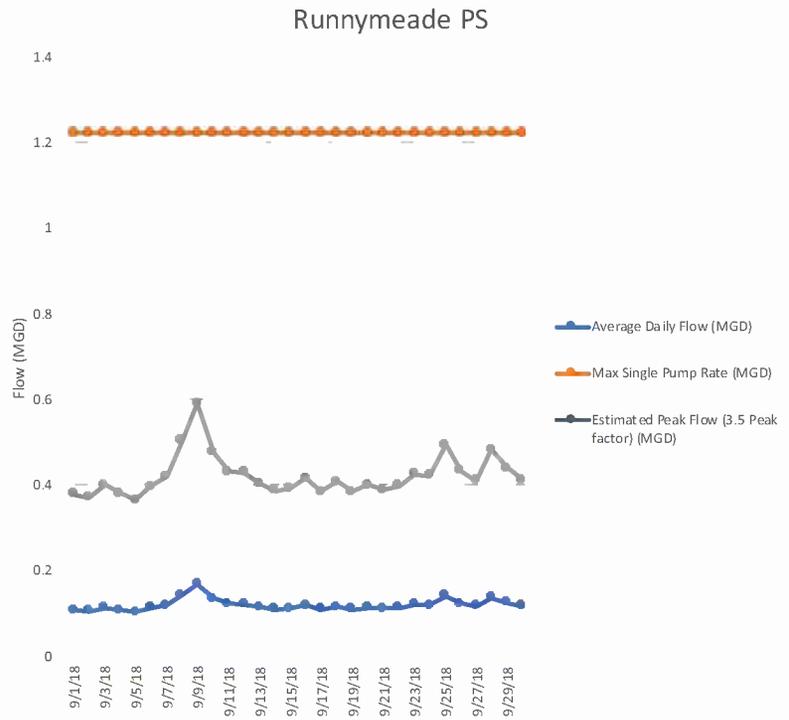
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
8/1/18	0.108073	0.378	1.224
8/2/18	0.106986	0.374	1.224
8/3/18	0.118061	0.413	1.224
8/4/18	0.107306	0.376	1.224
8/5/18	0.105302	0.369	1.224
8/6/18	0.107902	0.378	1.224
8/7/18	0.105305	0.369	1.224
8/8/18	0.105874	0.371	1.224
8/9/18	0.099684	0.349	1.224
8/10/18	0.107584	0.377	1.224
8/11/18	0.126335	0.442	1.224
8/12/18	0.119898	0.420	1.224
8/13/18	0.180892	0.633	1.224
8/14/18	0.112387	0.393	1.224
8/15/18	0.115383	0.404	1.224
8/16/18	0.116719	0.409	1.224
8/17/18	0.105274	0.368	1.224
8/18/18	0.118315	0.414	1.224
8/19/18	0.136342	0.477	1.224
8/20/18	0.118216	0.414	1.224
8/21/18	0.119264	0.417	1.224
8/22/18	0.120869	0.423	1.224
8/23/18	0.112313	0.393	1.224
8/24/18	0.110185	0.386	1.224
8/25/18	0.116297	0.407	1.224
8/26/18	0.10196	0.357	1.224
8/27/18	0.106273	0.372	1.224
8/28/18	0.108104	0.378	1.224
8/29/18	0.110178	0.386	1.224
8/30/18	0.102606	0.359	1.224
8/31/18	0.113706	0.398	1.224

Min 0.100
Max 0.181
Ave 0.114



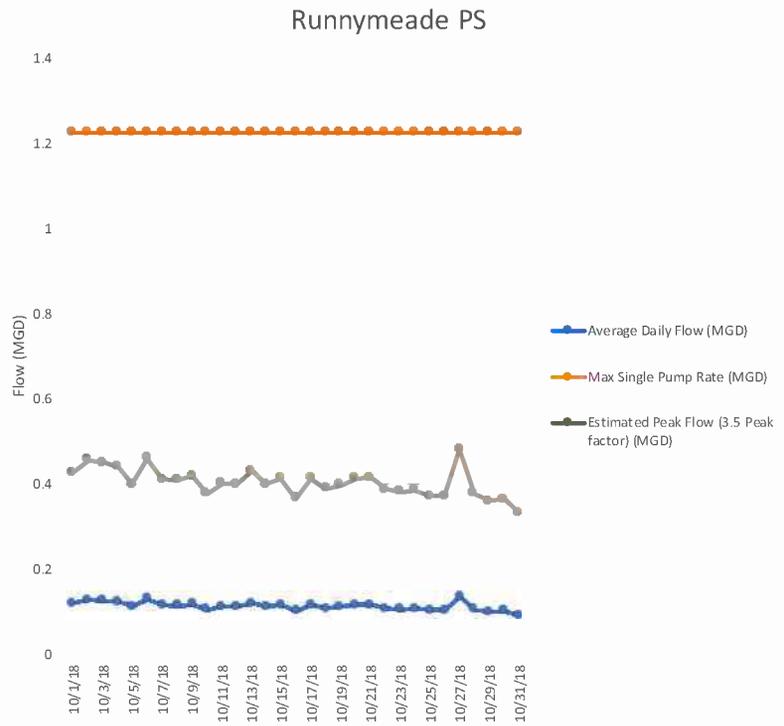
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
9/1/18	0.108622	0.380	1.224
9/2/18	0.106215	0.372	1.224
9/3/18	0.114783	0.402	1.224
9/4/18	0.108881	0.381	1.224
9/5/18	0.104719	0.367	1.224
9/6/18	0.113317	0.397	1.224
9/7/18	0.120209	0.421	1.224
9/8/18	0.14397	0.504	1.224
9/9/18	0.169004	0.592	1.224
9/10/18	0.136052	0.476	1.224
9/11/18	0.123479	0.432	1.224
9/12/18	0.122591	0.429	1.224
9/13/18	0.115742	0.405	1.224
9/14/18	0.110406	0.386	1.224
9/15/18	0.112043	0.392	1.224
9/16/18	0.119225	0.417	1.224
9/17/18	0.110263	0.386	1.224
9/18/18	0.116838	0.409	1.224
9/19/18	0.10978	0.384	1.224
9/20/18	0.114694	0.401	1.224
9/21/18	0.111328	0.390	1.224
9/22/18	0.113917	0.399	1.224
9/23/18	0.121945	0.427	1.224
9/24/18	0.120899	0.423	1.224
9/25/18	0.141174	0.494	1.224
9/26/18	0.123716	0.433	1.224
9/27/18	0.117501	0.411	1.224
9/28/18	0.138064	0.483	1.224
9/29/18	0.125665	0.440	1.224
9/30/18	0.11786	0.413	1.224

Min 0.105
Max 0.169
Ave 0.120



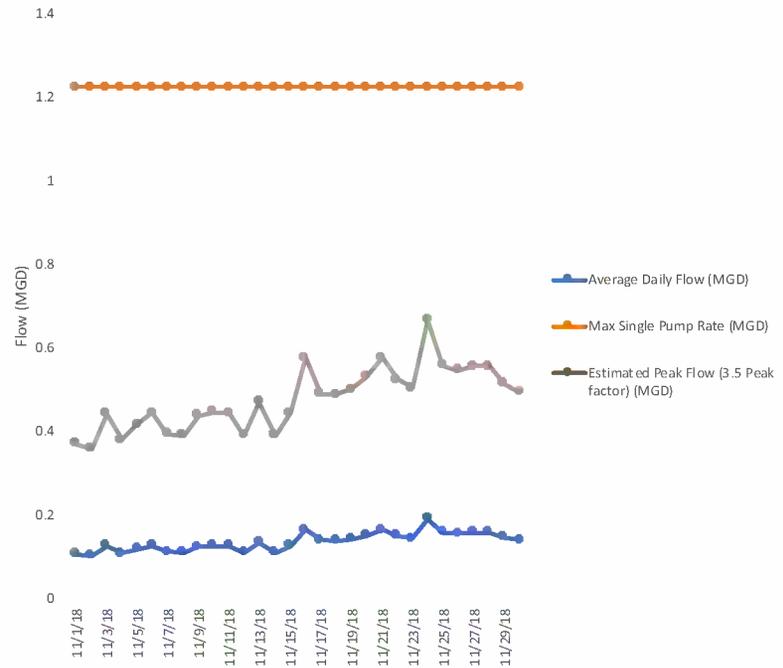
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
10/1/18	0.122477	0.429	1.224
10/2/18	0.130324	0.456	1.224
10/3/18	0.128661	0.450	1.224
10/4/18	0.126241	0.442	1.224
10/5/18	0.114239	0.400	1.224
10/6/18	0.131792	0.461	1.224
10/7/18	0.117509	0.411	1.224
10/8/18	0.117281	0.410	1.224
10/9/18	0.120192	0.421	1.224
10/10/18	0.108279	0.379	1.224
10/11/18	0.115045	0.403	1.224
10/12/18	0.11447	0.401	1.224
10/13/18	0.123077	0.431	1.224
10/14/18	0.11462	0.401	1.224
10/15/18	0.11837	0.414	1.224
10/16/18	0.104896	0.367	1.224
10/17/18	0.118395	0.414	1.224
10/18/18	0.111455	0.390	1.224
10/19/18	0.113712	0.398	1.224
10/20/18	0.118419	0.414	1.224
10/21/18	0.118852	0.416	1.224
10/22/18	0.11128	0.389	1.224
10/23/18	0.109441	0.383	1.224
10/24/18	0.110345	0.386	1.224
10/25/18	0.106453	0.373	1.224
10/26/18	0.106687	0.373	1.224
10/27/18	0.137762	0.482	1.224
10/28/18	0.108022	0.378	1.224
10/29/18	0.103171	0.361	1.224
10/30/18	0.104326	0.365	1.224
10/31/18	0.095442	0.334	1.224

Min 0.095
Max 0.138
Ave 0.116



Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
11/1/18	0.105923	0.3707305	1.224
11/2/18	0.102265	0.358	1.224
11/3/18	0.126598	0.443	1.224
11/4/18	0.108393	0.379	1.224
11/5/18	0.118769	0.416	1.224
11/6/18	0.126686	0.443	1.224
11/7/18	0.112532	0.394	1.224
11/8/18	0.111484	0.390	1.224
11/9/18	0.125373	0.439	1.224
11/10/18	0.127407	0.446	1.224
11/11/18	0.12692	0.444	1.224
11/12/18	0.111385	0.390	1.224
11/13/18	0.134357	0.470	1.224
11/14/18	0.111572	0.391	1.224
11/15/18	0.126989	0.444	1.224
11/16/18	0.164718	0.577	1.224
11/17/18	0.140145	0.491	1.224
11/18/18	0.139387	0.488	1.224
11/19/18	0.142675	0.499	1.224
11/20/18	0.151266	0.529	1.224
11/21/18	0.164362	0.575	1.224
11/22/18	0.149734	0.524	1.224
11/23/18	0.144225	0.505	1.224
11/24/18	0.190088	0.665	1.224
11/25/18	0.159194	0.557	1.224
11/26/18	0.155968	0.546	1.224
11/27/18	0.158914	0.556	1.224
11/28/18	0.158984	0.556	1.224
11/29/18	0.146975	0.514	1.224
11/30/18	0.141454	0.495	1.224

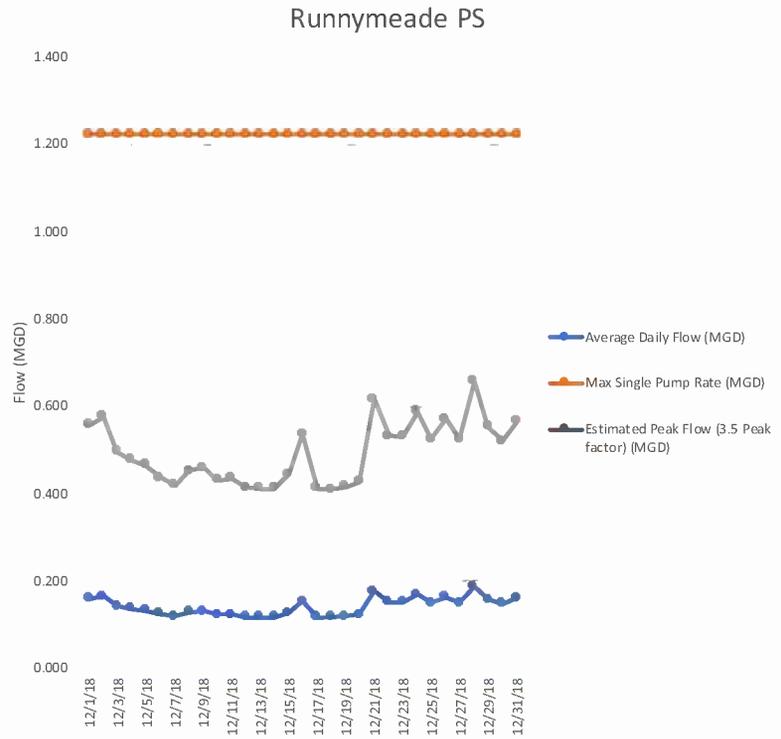
Runnymede PS



Min 0.102
Max 0.190
Ave 0.136

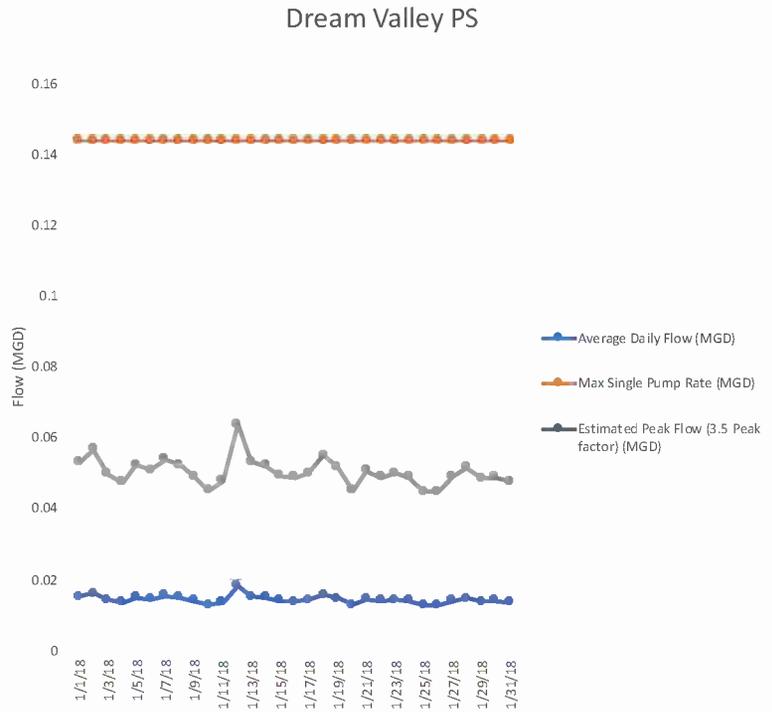
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
12/1/18	0.159021	0.557	1.224
12/2/18	0.164697	0.576	1.224
12/3/18	0.142049	0.497	1.224
12/4/18	0.136308	0.477	1.224
12/5/18	0.133295	0.467	1.224
12/6/18	0.12486	0.437	1.224
12/7/18	0.11968	0.419	1.224
12/8/18	0.129252	0.452	1.224
12/9/18	0.131395	0.460	1.224
12/10/18	0.123101	0.431	1.224
12/11/18	0.12415	0.435	1.224
12/12/18	0.118159	0.414	1.224
12/13/18	0.117875	0.413	1.224
12/14/18	0.117622	0.412	1.224
12/15/18	0.126764	0.444	1.224
12/16/18	0.153118	0.536	1.224
12/17/18	0.117895	0.413	1.224
12/18/18	0.117246	0.410	1.224
12/19/18	0.118864	0.416	1.224
12/20/18	0.122356	0.428	1.224
12/21/18	0.176321	0.617	1.224
12/22/18	0.152158	0.533	1.224
12/23/18	0.151745	0.531	1.224
12/24/18	0.168268	0.589	1.224
12/25/18	0.149876	0.525	1.224
12/26/18	0.163109	0.571	1.224
12/27/18	0.149807	0.524	1.224
12/28/18	0.187741	0.657	1.224
12/29/18	0.158322	0.554	1.224
12/30/18	0.148989	0.521	1.224
12/31/18	0.161293	0.565	1.224

Min 0.117
Max 0.188
Ave 0.141

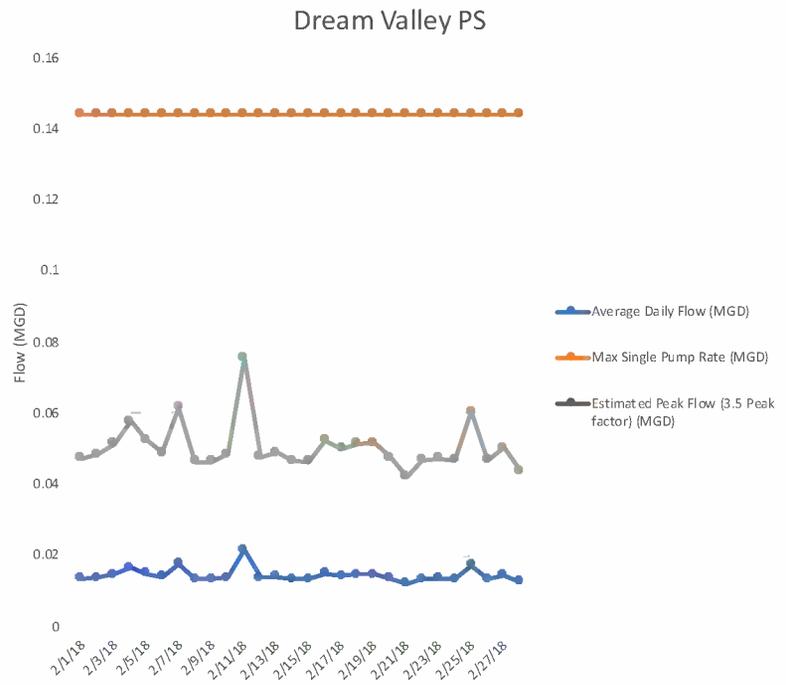


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
1/1/18	0.0151488	0.053	0.144
1/2/18	0.0162	0.057	0.144
1/3/18	0.0142272	0.050	0.144
1/4/18	0.0135648	0.047	0.144
1/5/18	0.0149472	0.052	0.144
1/6/18	0.0145296	0.051	0.144
1/7/18	0.0154368	0.054	0.144
1/8/18	0.0149184	0.052	0.144
1/9/18	0.0140256	0.049	0.144
1/10/18	0.0128592	0.045	0.144
1/11/18	0.0136656	0.048	0.144
1/12/18	0.0182592	0.064	0.144
1/13/18	0.0152064	0.053	0.144
1/14/18	0.0148608	0.052	0.144
1/15/18	0.0140976	0.049	0.144
1/16/18	0.0139248	0.049	0.144
1/17/18	0.0142848	0.050	0.144
1/18/18	0.0157392	0.055	0.144
1/19/18	0.0147168	0.052	0.144
1/20/18	0.0128736	0.045	0.144
1/21/18	0.0144576	0.051	0.144
1/22/18	0.0139824	0.049	0.144
1/23/18	0.014256	0.050	0.144
1/24/18	0.0139824	0.049	0.144
1/25/18	0.012816	0.045	0.144
1/26/18	0.012816	0.045	0.144
1/27/18	0.01404	0.049	0.144
1/28/18	0.0147168	0.052	0.144
1/29/18	0.0138672	0.049	0.144
1/30/18	0.013968	0.049	0.144
1/31/18	0.0136512	0.048	0.144

Min 0.013
 Max 0.018
 Ave 0.014



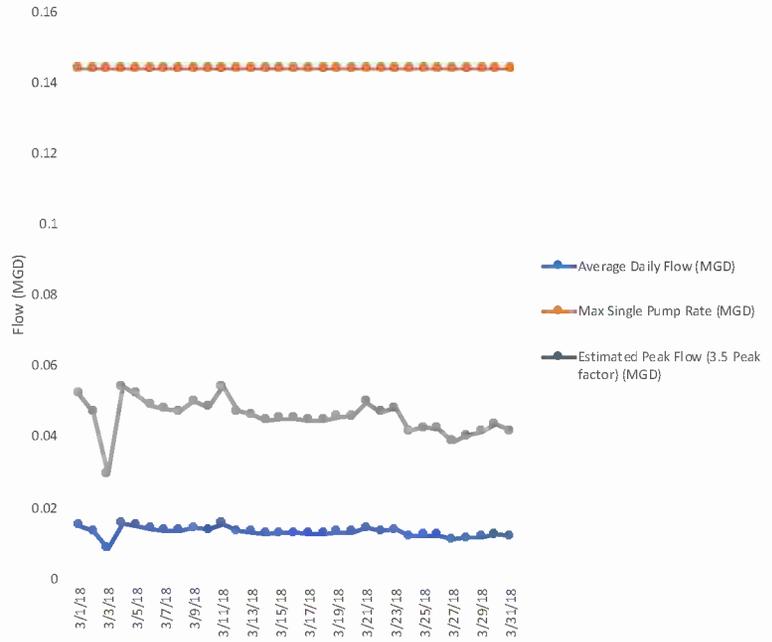
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
2/1/18	0.0135072	0.047	0.144
2/2/18	0.013824	0.048	0.144
2/3/18	0.0146736	0.051	0.144
2/4/18	0.0164736	0.058	0.144
2/5/18	0.0150192	0.053	0.144
2/6/18	0.013968	0.049	0.144
2/7/18	0.0176112	0.062	0.144
2/8/18	0.0132336	0.046	0.144
2/9/18	0.013248	0.046	0.144
2/10/18	0.0138528	0.048	0.144
2/11/18	0.0216288	0.076	0.144
2/12/18	0.0136512	0.048	0.144
2/13/18	0.0139392	0.049	0.144
2/14/18	0.0132768	0.046	0.144
2/15/18	0.013248	0.046	0.144
2/16/18	0.0149904	0.052	0.144
2/17/18	0.0142704	0.050	0.144
2/18/18	0.0147168	0.052	0.144
2/19/18	0.0147744	0.052	0.144
2/20/18	0.0135504	0.047	0.144
2/21/18	0.012024	0.042	0.144
2/22/18	0.0133488	0.047	0.144
2/23/18	0.0135072	0.047	0.144
2/24/18	0.0133776	0.047	0.144
2/25/18	0.0172656	0.060	0.144
2/26/18	0.0133632	0.047	0.144
2/27/18	0.0143568	0.050	0.144
2/28/18	0.0124848	0.044	0.144



Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
3/1/18	0.0148608	0.052	0.144
3/2/18	0.0134352	0.047	0.144
3/3/18	0.0084096	0.029	0.144
3/4/18	0.0155088	0.054	0.144
3/5/18	0.0148608	0.052	0.144
3/6/18	0.0139392	0.049	0.144
3/7/18	0.01368	0.048	0.144
3/8/18	0.0134928	0.047	0.144
3/9/18	0.014256	0.050	0.144
3/10/18	0.013824	0.048	0.144
3/11/18	0.0154944	0.054	0.144
3/12/18	0.013464	0.047	0.144
3/13/18	0.0132336	0.046	0.144
3/14/18	0.0127584	0.045	0.144
3/15/18	0.012888	0.045	0.144
3/16/18	0.0129024	0.045	0.144
3/17/18	0.012744	0.045	0.144
3/18/18	0.012744	0.045	0.144
3/19/18	0.013032	0.046	0.144
3/20/18	0.013104	0.046	0.144
3/21/18	0.0142128	0.050	0.144
3/22/18	0.0134496	0.047	0.144
3/23/18	0.013752	0.048	0.144
3/24/18	0.01188	0.042	0.144
3/25/18	0.0121536	0.043	0.144
3/26/18	0.0121104	0.042	0.144
3/27/18	0.0110304	0.039	0.144
3/28/18	0.0114912	0.040	0.144
3/29/18	0.011808	0.041	0.144
3/30/18	0.012456	0.044	0.144
3/31/18	0.0119088	0.042	0.144

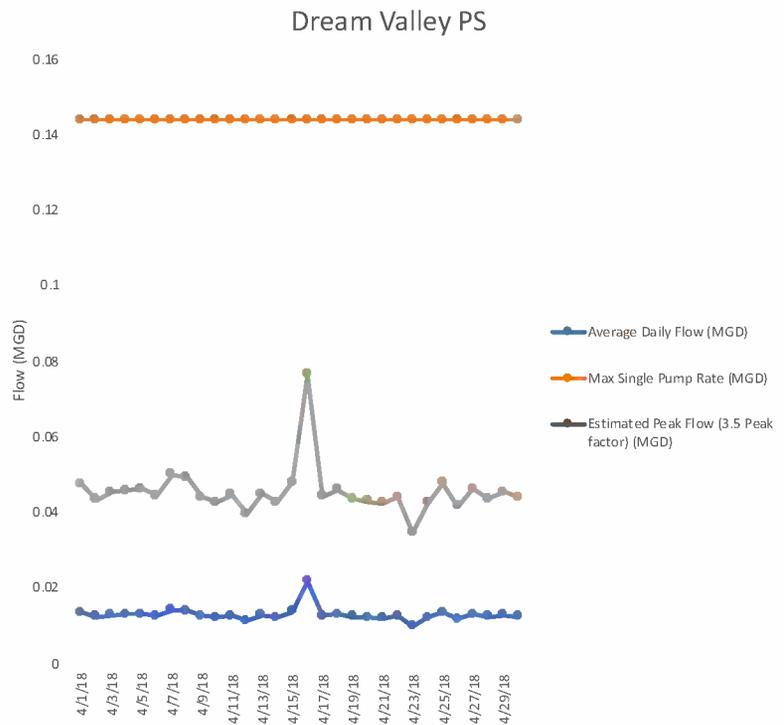
Min 0.008
 Max 0.016
 Ave 0.013

Dream Valley PS



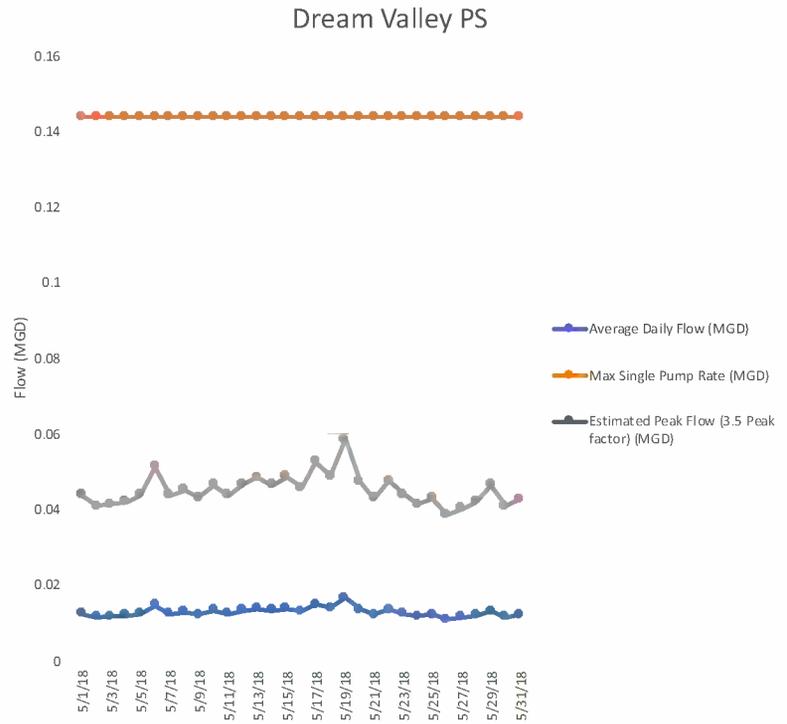
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
4/1/18	0.0135792	0.048	0.144
4/2/18	0.0123984	0.043	0.144
4/3/18	0.0129888	0.045	0.144
4/4/18	0.0130752	0.046	0.144
4/5/18	0.013248	0.046	0.144
4/6/18	0.0127152	0.045	0.144
4/7/18	0.0142992	0.050	0.144
4/8/18	0.0141264	0.049	0.144
4/9/18	0.0126144	0.044	0.144
4/10/18	0.01224	0.043	0.144
4/11/18	0.012816	0.045	0.144
4/12/18	0.0113328	0.040	0.144
4/13/18	0.0128592	0.045	0.144
4/14/18	0.0122112	0.043	0.144
4/15/18	0.0137664	0.048	0.144
4/16/18	0.0218592	0.077	0.144
4/17/18	0.0126864	0.044	0.144
4/18/18	0.0131472	0.046	0.144
4/19/18	0.012456	0.044	0.144
4/20/18	0.0122976	0.043	0.144
4/21/18	0.0121392	0.042	0.144
4/22/18	0.0126144	0.044	0.144
4/23/18	0.0099216	0.035	0.144
4/24/18	0.0121824	0.043	0.144
4/25/18	0.01368	0.048	0.144
4/26/18	0.01188	0.042	0.144
4/27/18	0.013248	0.046	0.144
4/28/18	0.0124416	0.044	0.144
4/29/18	0.0129744	0.045	0.144
4/30/18	0.0125856	0.044	0.144

Min 0.010
Max 0.022
Ave 0.013

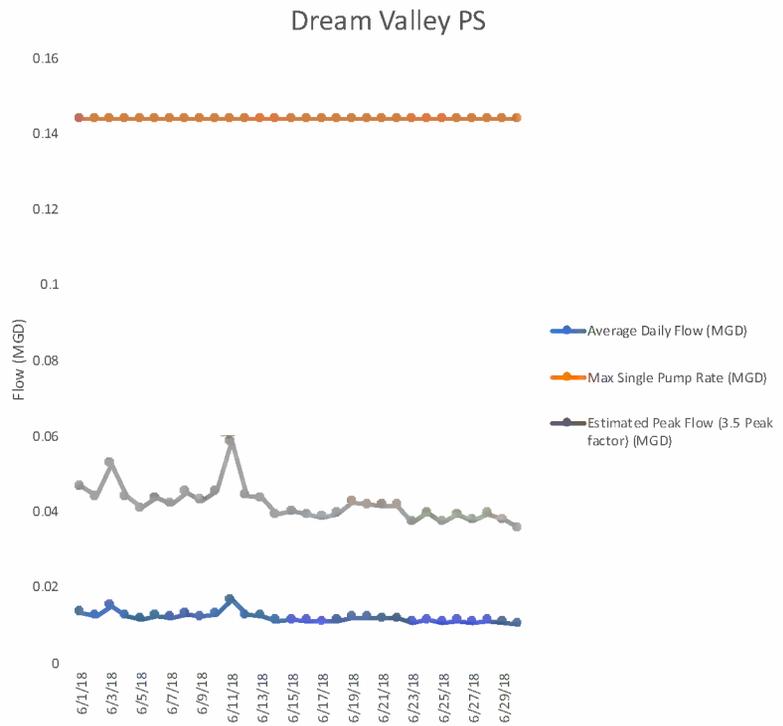


Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
5/1/18	0.0125568	0.044	0.144
5/2/18	0.0117072	0.041	0.144
5/3/18	0.0118368	0.041	0.144
5/4/18	0.0120384	0.042	0.144
5/5/18	0.012528	0.044	0.144
5/6/18	0.014688	0.051	0.144
5/7/18	0.012528	0.044	0.144
5/8/18	0.012888	0.045	0.144
5/9/18	0.0123696	0.043	0.144
5/10/18	0.0132768	0.046	0.144
5/11/18	0.0125568	0.044	0.144
5/12/18	0.0133344	0.047	0.144
5/13/18	0.0138384	0.048	0.144
5/14/18	0.0132912	0.047	0.144
5/15/18	0.013896	0.049	0.144
5/16/18	0.013104	0.046	0.144
5/17/18	0.0150336	0.053	0.144
5/18/18	0.0139824	0.049	0.144
5/19/18	0.0167904	0.059	0.144
5/20/18	0.013536	0.047	0.144
5/21/18	0.0122832	0.043	0.144
5/22/18	0.0135792	0.048	0.144
5/23/18	0.0125856	0.044	0.144
5/24/18	0.0118224	0.041	0.144
5/25/18	0.0122688	0.043	0.144
5/26/18	0.0110592	0.039	0.144
5/27/18	0.0115344	0.040	0.144
5/28/18	0.0120384	0.042	0.144
5/29/18	0.0132624	0.046	0.144
5/30/18	0.0117216	0.041	0.144
5/31/18	0.0122112	0.043	0.144

Min 0.011
 Max 0.017
 Ave 0.013



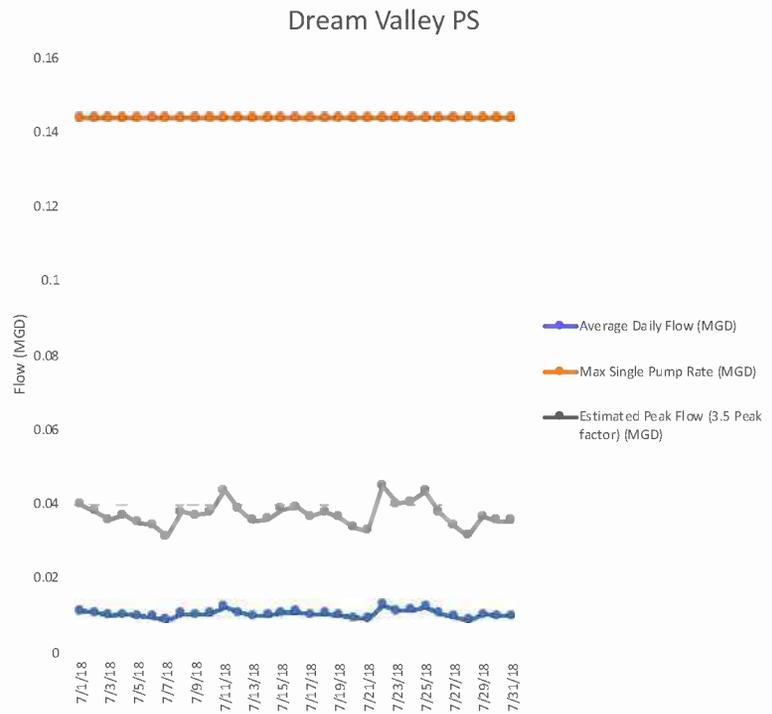
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
6/1/18	0.0133632	0.047	0.144
6/2/18	0.0125856	0.044	0.144
6/3/18	0.0150768	0.053	0.144
6/4/18	0.0125712	0.044	0.144
6/5/18	0.0117072	0.041	0.144
6/6/18	0.012456	0.044	0.144
6/7/18	0.0120528	0.042	0.144
6/8/18	0.0129312	0.045	0.144
6/9/18	0.0122976	0.043	0.144
6/10/18	0.0130032	0.046	0.144
6/11/18	0.0167904	0.059	0.144
6/12/18	0.0126432	0.044	0.144
6/13/18	0.0124992	0.044	0.144
6/14/18	0.0112176	0.039	0.144
6/15/18	0.011448	0.040	0.144
6/16/18	0.0111888	0.039	0.144
6/17/18	0.0110448	0.039	0.144
6/18/18	0.0112464	0.039	0.144
6/19/18	0.012168	0.043	0.144
6/20/18	0.0119808	0.042	0.144
6/21/18	0.0119232	0.042	0.144
6/22/18	0.0118944	0.042	0.144
6/23/18	0.0106704	0.037	0.144
6/24/18	0.0113472	0.040	0.144
6/25/18	0.010656	0.037	0.144
6/26/18	0.0112032	0.039	0.144
6/27/18	0.0107856	0.038	0.144
6/28/18	0.0112464	0.039	0.144
6/29/18	0.0108144	0.038	0.144
6/30/18	0.0102096	0.036	0.144



Min 0.010
Max 0.017
Ave 0.012

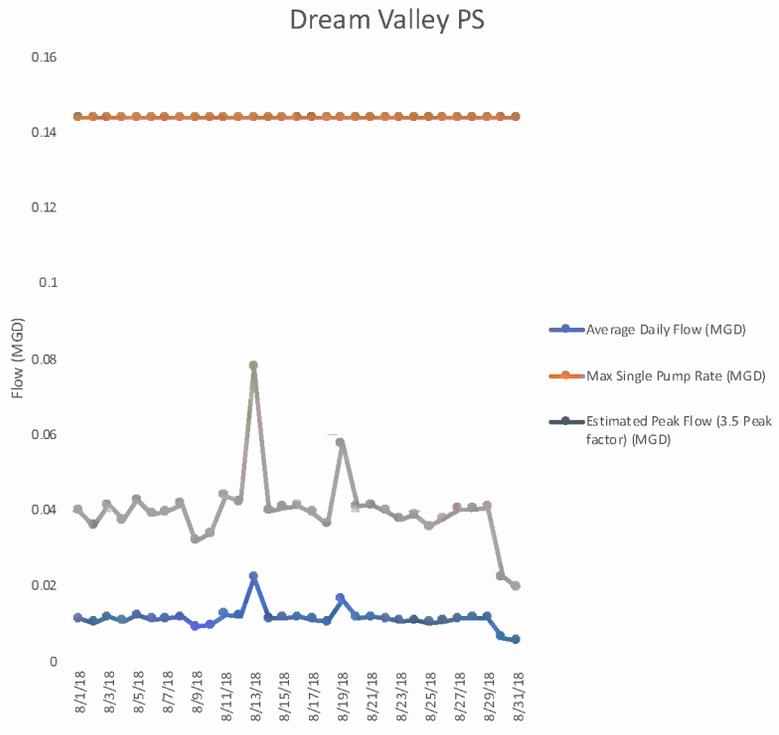
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
7/1/18	0.0114192	0.040	0.144
7/2/18	0.0109008	0.038	0.144
7/3/18	0.0101952	0.036	0.144
7/4/18	0.0105552	0.037	0.144
7/5/18	0.0100368	0.035	0.144
7/6/18	0.0098496	0.034	0.144
7/7/18	0.0089424	0.031	0.144
7/8/18	0.0108	0.038	0.144
7/9/18	0.0105552	0.037	0.144
7/10/18	0.0107568	0.038	0.144
7/11/18	0.0124992	0.044	0.144
7/12/18	0.0110448	0.039	0.144
7/13/18	0.0101664	0.036	0.144
7/14/18	0.0102672	0.036	0.144
7/15/18	0.0110304	0.039	0.144
7/16/18	0.0111888	0.039	0.144
7/17/18	0.0104832	0.037	0.144
7/18/18	0.0108144	0.038	0.144
7/19/18	0.0103968	0.036	0.144
7/20/18	0.0096336	0.034	0.144
7/21/18	0.0093744	0.033	0.144
7/22/18	0.0128448	0.045	0.144
7/23/18	0.0114336	0.040	0.144
7/24/18	0.0115632	0.040	0.144
7/25/18	0.0124128	0.043	0.144
7/26/18	0.0107424	0.038	0.144
7/27/18	0.0097776	0.034	0.144
7/28/18	0.0089856	0.031	0.144
7/29/18	0.0104256	0.036	0.144
7/30/18	0.0101376	0.035	0.144
7/31/18	0.0101664	0.036	0.144

Min 0.009
Max 0.013
Ave 0.011



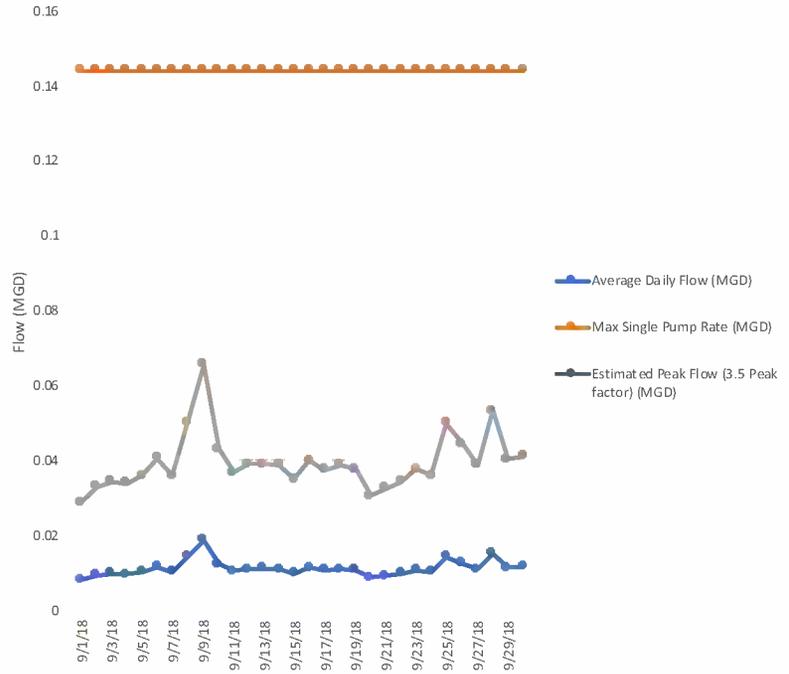
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
8/1/18	0.0113904	0.040	0.144
8/2/18	0.0102816	0.036	0.144
8/3/18	0.0118224	0.041	0.144
8/4/18	0.0106848	0.037	0.144
8/5/18	0.0121968	0.043	0.144
8/6/18	0.0111168	0.039	0.144
8/7/18	0.0113184	0.040	0.144
8/8/18	0.0119088	0.042	0.144
8/9/18	0.0091152	0.032	0.144
8/10/18	0.0096768	0.034	0.144
8/11/18	0.0125424	0.044	0.144
8/12/18	0.0121104	0.042	0.144
8/13/18	0.022248	0.078	0.144
8/14/18	0.0114192	0.040	0.144
8/15/18	0.0116352	0.041	0.144
8/16/18	0.011808	0.041	0.144
8/17/18	0.0112464	0.039	0.144
8/18/18	0.0104112	0.036	0.144
8/19/18	0.0165168	0.058	0.144
8/20/18	0.0116928	0.041	0.144
8/21/18	0.0118368	0.041	0.144
8/22/18	0.0114048	0.040	0.144
8/23/18	0.0107424	0.038	0.144
8/24/18	0.0110592	0.039	0.144
8/25/18	0.010224	0.036	0.144
8/26/18	0.0108	0.038	0.144
8/27/18	0.0115056	0.040	0.144
8/28/18	0.01152	0.040	0.144
8/29/18	0.0116496	0.041	0.144
8/30/18	0.0064224	0.022	0.144
8/31/18	0.0055872	0.020	0.144

Min 0.006
 Max 0.022
 Ave 0.011



Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
9/1/18	0.0082656	0.029	0.144
9/2/18	0.0094896	0.033	0.144
9/3/18	0.009864	0.035	0.144
9/4/18	0.0096912	0.034	0.144
9/5/18	0.0103104	0.036	0.144
9/6/18	0.0116064	0.041	0.144
9/7/18	0.0102816	0.036	0.144
9/8/18	0.0142848	0.050	0.144
9/9/18	0.0187344	0.066	0.144
9/10/18	0.0123264	0.043	0.144
9/11/18	0.0105552	0.037	0.144
9/12/18	0.0111456	0.039	0.144
9/13/18	0.0111744	0.039	0.144
9/14/18	0.011088	0.039	0.144
9/15/18	0.0100224	0.035	0.144
9/16/18	0.0114192	0.040	0.144
9/17/18	0.0107568	0.038	0.144
9/18/18	0.011088	0.039	0.144
9/19/18	0.0108	0.038	0.144
9/20/18	0.0087552	0.031	0.144
9/21/18	0.0093024	0.033	0.144
9/22/18	0.0098352	0.034	0.144
9/23/18	0.0107712	0.038	0.144
9/24/18	0.0102672	0.036	0.144
9/25/18	0.0143136	0.050	0.144
9/26/18	0.0127008	0.044	0.144
9/27/18	0.0111168	0.039	0.144
9/28/18	0.0152352	0.053	0.144
9/29/18	0.0115776	0.041	0.144
9/30/18	0.0117216	0.041	0.144

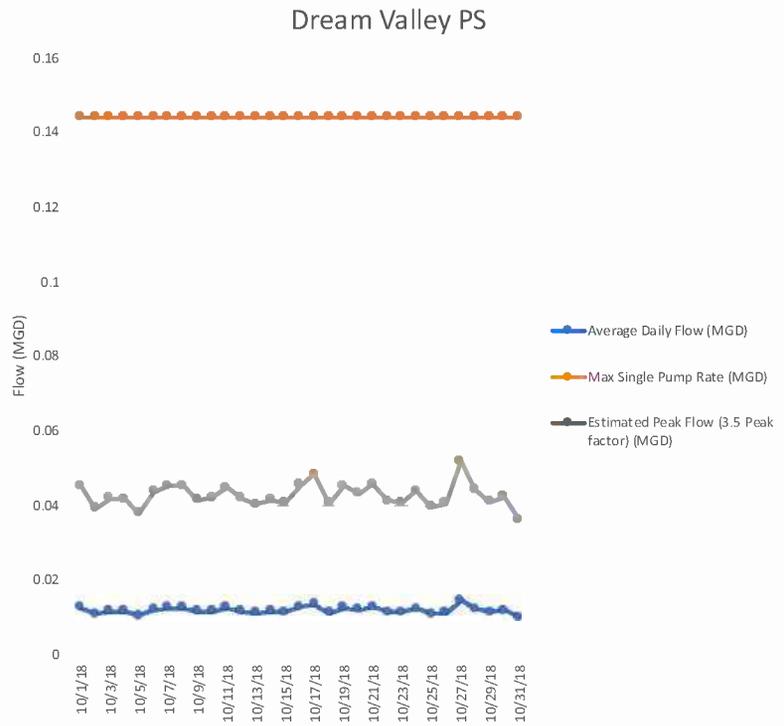
Dream Valley PS



Min 0.008
 Max 0.019
 Ave 0.011

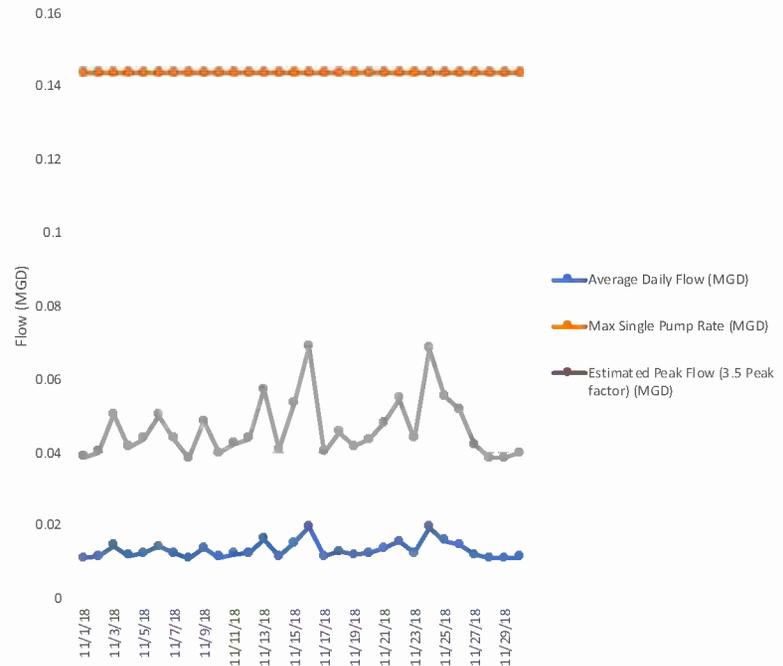
Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
10/1/18	0.0129312	0.045	0.144
10/2/18	0.011232	0.039	0.144
10/3/18	0.0119664	0.042	0.144
10/4/18	0.0118944	0.042	0.144
10/5/18	0.0108144	0.038	0.144
10/6/18	0.0124704	0.044	0.144
10/7/18	0.01296	0.045	0.144
10/8/18	0.0129168	0.045	0.144
10/9/18	0.01188	0.042	0.144
10/10/18	0.0120384	0.042	0.144
10/11/18	0.0127872	0.045	0.144
10/12/18	0.0119664	0.042	0.144
10/13/18	0.0115632	0.040	0.144
10/14/18	0.0118656	0.042	0.144
10/15/18	0.0116928	0.041	0.144
10/16/18	0.0130176	0.046	0.144
10/17/18	0.013824	0.048	0.144
10/18/18	0.0115776	0.041	0.144
10/19/18	0.0129456	0.045	0.144
10/20/18	0.0123696	0.043	0.144
10/21/18	0.0130752	0.046	0.144
10/22/18	0.0117936	0.041	0.144
10/23/18	0.011664	0.041	0.144
10/24/18	0.0125568	0.044	0.144
10/25/18	0.0113184	0.040	0.144
10/26/18	0.0116208	0.041	0.144
10/27/18	0.0148752	0.052	0.144
10/28/18	0.0127152	0.045	0.144
10/29/18	0.011736	0.041	0.144
10/30/18	0.012096	0.042	0.144
10/31/18	0.0103824	0.036	0.144

Min 0.010
Max 0.015
Ave 0.012



Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
11/1/18	0.0110304	0.0386064	0.144
11/2/18	0.0114624	0.040	0.144
11/3/18	0.0144	0.050	0.144
11/4/18	0.011808	0.041	0.144
11/5/18	0.0125136	0.044	0.144
11/6/18	0.0142848	0.050	0.144
11/7/18	0.012456	0.044	0.144
11/8/18	0.0109728	0.038	0.144
11/9/18	0.0138672	0.049	0.144
11/10/18	0.0113616	0.040	0.144
11/11/18	0.0121104	0.042	0.144
11/12/18	0.0124848	0.044	0.144
11/13/18	0.016344	0.057	0.144
11/14/18	0.0116064	0.041	0.144
11/15/18	0.0152496	0.053	0.144
11/16/18	0.0196848	0.069	0.144
11/17/18	0.0114336	0.040	0.144
11/18/18	0.0129744	0.045	0.144
11/19/18	0.01188	0.042	0.144
11/20/18	0.0124272	0.043	0.144
11/21/18	0.0136944	0.048	0.144
11/22/18	0.0156096	0.055	0.144
11/23/18	0.0124848	0.044	0.144
11/24/18	0.0195264	0.068	0.144
11/25/18	0.0157968	0.055	0.144
11/26/18	0.0147888	0.052	0.144
11/27/18	0.0120096	0.042	0.144
11/28/18	0.0110016	0.039	0.144
11/29/18	0.011016	0.039	0.144
11/30/18	0.0113904	0.040	0.144

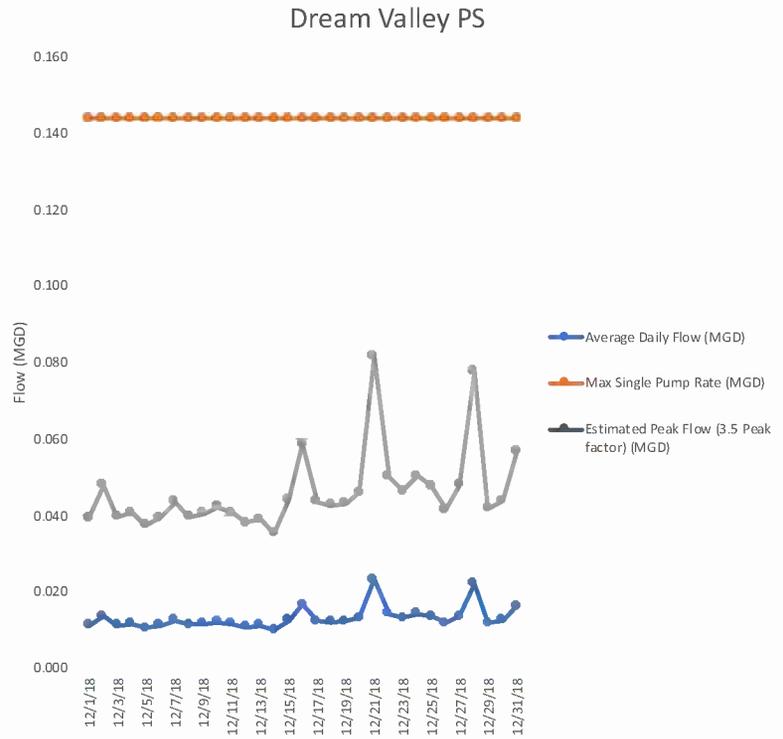
Dream Valley PS



Min 0.011
Max 0.020
Ave 0.013

Date	Average Daily Flow (MGD)	Estimated Peak Flow (3.5 Peak factor) (MGD)	Max Single Pump Rate (MGD)
12/1/18	0.0112896	0.040	0.144
12/2/18	0.01368	0.048	0.144
12/3/18	0.0113328	0.040	0.144
12/4/18	0.0116208	0.041	0.144
12/5/18	0.0106848	0.037	0.144
12/6/18	0.0112752	0.039	0.144
12/7/18	0.012456	0.044	0.144
12/8/18	0.0113616	0.040	0.144
12/9/18	0.0116064	0.041	0.144
12/10/18	0.0120528	0.042	0.144
12/11/18	0.0116208	0.041	0.144
12/12/18	0.010872	0.038	0.144
12/13/18	0.0111744	0.039	0.144
12/14/18	0.0100656	0.035	0.144
12/15/18	0.0126144	0.044	0.144
12/16/18	0.0167472	0.059	0.144
12/17/18	0.0124416	0.044	0.144
12/18/18	0.0121824	0.043	0.144
12/19/18	0.0123264	0.043	0.144
12/20/18	0.0131328	0.046	0.144
12/21/18	0.0233712	0.082	0.144
12/22/18	0.0142992	0.050	0.144
12/23/18	0.0132768	0.046	0.144
12/24/18	0.0143712	0.050	0.144
12/25/18	0.0136656	0.048	0.144
12/26/18	0.0118944	0.042	0.144
12/27/18	0.01368	0.048	0.144
12/28/18	0.0221904	0.078	0.144
12/29/18	0.0119664	0.042	0.144
12/30/18	0.0125424	0.044	0.144
12/31/18	0.0162	0.057	0.144

Min 0.010
 Max 0.023
 Ave 0.013



Marple Township

**CHAPTER 94
MUNICIPAL WASTELOAD MANAGEMENT
2018 ANNUAL REPORT**

**FOR THE
TOWNSHIP OF MARPLE
DELAWARE COUNTY, PA**

Prepared by:

PENNONI ASSOCIATES INC.
1900 Market Street, Suite 300
Philadelphia, PA 19103

MARPL 00538

February 2019

SIGNATURE PAGE

PERMITTEE:

NAME:



Anthony Hamaday, Township Manager

ORGANIZATION: Township of Marple

ADDRESS: Township Building
227 South Sproul Road
Broomall, PA 19008

PHONE: (610) 356-4040

PREPARER:

NAME:



Joseph A. Mastronardo, PE

ORGANIZATION: Pennoni Associates Inc.

ADDRESS: 1900 Market Street, Suite 300
Philadelphia, PA 19103

PHONE: (215) 222-3000

This report has been prepared in accordance with Title 25, Part 1, Subpart C, Article 11, Chapter 94, of the Commonwealth of Pennsylvania Regulations.

MUNICIPAL WASTELOAD MANAGEMENT
2018 ANNUAL REPORT

MARPLE TOWNSHIP
DELAWARE COUNTY, PA

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[§ 94.12.Sec. (a) (1), (2), (3)]

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MUNICIPAL WASTELOAD MANAGEMENT
2018 ANNUAL REPORT

MARPLE TOWNSHIP
DELAWARE COUNTY, PA

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Appendix B	Breakdown of Township Flows in Central Delaware County Authority (CDCA) System (2018)

WASTELOAD MANAGEMENT 2018 ANNUAL REPORT

MARPLE TOWNSHIP DELAWARE COUNTY, PA

1.0 INTRODUCTION

This Report is submitted in compliance with the latest regulation set forth under Title 25, Part I, Subpart C, Article II, Chapter 94 Municipal Wasteload Management Regulations of the Pennsylvania Department of Environmental Protection (DEP) concerning sewerage facilities.

1.1 Delineation of Sewerage Service Areas

Marple Township (Township) borders Haverford Township to the northeast; Springfield Township to the southeast; Upper Providence Township to the southwest; Newtown Township to the northwest; and Radnor Township to the north. The Township is primarily suburban residential; however, the Township zoning ordinance allows for a number of other land uses including commercial, office, apartment, multi-family and open space. The topography of the Township is defined primarily by two (2) drainage basins, the Crum Creek and Darby Creek Basins. The size of the entire Township is approximately 10.50 square miles; 97% of the Township is sewered. A copy of the Township Sewer Map has been previously provided and available upon request.

The Township does not own and operate a wastewater treatment facility; however, the Township does own and maintain a dedicated sanitary sewer collection and conveyance system (not a combined sewer system). The system consists of sanitary sewers including one (1) public pumping stations. The Township has Sewer Agreements with surrounding (downstream) municipalities and authorities, including Radnor-Haverford-Marple Sewer Authority (RHM), Central Delaware County Authority (CDCA) and DELCORA to provide for sewer conveyance and treatment. These Agreements establish the following items: terms of the relationship; identify connection points; address flow, loadings and billings information; and other necessary requirements for the Township's portion of wastewater which passes through the downstream municipalities.

1.2 Description of Existing Sewage Facilities

The Township is split by two (2) conveyance systems. The Eastern portion of the Township (4.5 square miles) discharges to the Radnor-Haverford-Marple (RHM) Interceptor, and the Western portion of the Township (6.0 square miles) discharges to the Central Delaware County Authority (CDCA) Interceptor. Both interceptors convey sewage to DELCORA for treatment at their facility and at the City of Philadelphia WWTP.

1.2.1 Collection System

There is approximately 105 miles of sanitary sewer pipe within the Township; the sewer lines range in size from 4-inch to as large as 18-inch and consist mainly of 8-inch lines. Only a very small section (1% of system) is 18-inch sewer, which is located where the RHM line reaches the eastern Township boundary with Haverford Township. The vast majority of piping is vitrified clay (terracotta pipe) with an average age of 50 to 60 years. The approximate size/material breakdown is as follows:

Size/Material	Length
8-inch SDR-35 PVC pipe	21,120 feet (4 miles)
8-inch VCP	522,720 feet (99 miles)
10-inch VCP	7,392 feet (1.4 miles)
12-inch VCP	4,224 feet
18-inch	528 feet

1.2.2 Pumping Station

There is one (1) pumping station within the Township, located at the Cedar Grove Farms development. The Cedar Grove Farms pumping station serves seventy (70) residential lots, each generating approximately 500 GPD of flow, which equates to a total flow of 35,000 GPD. The station consists of two (2) 7-horsepower submersible, alternating lift pumps; each pump operates at a peak flow capacity of 100 GPM. Some individual houses in both the Cedar Grove Farms and Beatty Hills developments utilize grinder pumps that are located and operated on the homeowners' properties. Low and high pressure force mains are

located in the areas where the grinder pumps and the Cedar Grove Farms pump station discharge.

2.0 HYDRAULIC LOADINGS [§ 94.12.Sec. (a) (1), (2), (3)]

Marple Township does not own a sewage treatment plant. However, the following presents the historical flows for the past five (5) years for each collection system.

2.1 RHM System

Based upon metered flow information provided to Marple Township from RHM (see Appendix A), the flows are summarized as follows:

Table 1					
RHM Historical and Present Sewer Flows (2014 - 2018)					
Month	2014	2015	2016	2017	2018
Average Monthly ⁽¹⁾ (MG)	48.4	41.2	36.4	34.3	47.7
Annual Average (MGD)	1.591	1.356	1.196	1.128	1.568
5-Year Average Hydraulic Flow:					1.368
Maximum Month ⁽²⁾ (MGD)	2.197	2.197	1.511	1.284	2.117
Max. Month Total Rainfall (inches)	7.85	7.85	6.32	5.73	8.96
Hydraulic Ratio (Max/Annual Average Flow)	1.381	1.620	1.263	1.139	1.350
5-Year Average Hydraulic Ratio:					1.350

(1) Based on RHM’s flow metered data. (Appendix A)
 (2) Based on RHM's metered maximum month total flow in MG. (Appendix A)

2.2 CDCA System

Based upon metered flow information provided to Marple Township from CDCA (see Appendix B), the flows are summarized as follows:

Table 2					
CDCA Historical and Present Sewer Flows (2014 - 2018)					
Month	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Average Monthly ⁽¹⁾ (MG)	39.4	38.8	40.9	37.8	46.2
Annual Average (MGD)	1.296	1.274	1.345	1.274	1.557
5 -Year Average Hydraulic Flow:					1.349
Maximum Month ⁽²⁾ (MGD)	1.673	1.629	1.558	1.464	1.691
Hydraulic Ratio (Max/Annual Average Flow)	1.291	1.278	1.159	1.149	1.086
5 -Year Average Hydraulic Ratio:					1.193

(1) Based on CDCA's flow metered data. (Appendix B)

(2) Based on CDCA's metered maximum month total flow in MG. (Appendix B)

3.0 **5-YEAR HYDRAULIC LOADING PROJECTIONS** [§ 94.12.Sec. (a) (1), (2), (3)]

The following presents the projected flows for the next five (5) years for each collection system:

3.1 RHM System

Per Table 1, the 5-year average hydraulic flow is 1.349 MGD which designates the 2019 "Previous Year Annual Average Flow" in Table 3. The new connections projected in the next five years are due to the Marple Associates development, consisting of the construction of a Giant Supermarket, LA Fitness, Royal Farms Convenience Store and an office building. For infill residential development, a conservative assumed ("flat-line") projection of 6 EDU's per year and an assumed unit flow rate of 262.5 GPD per EDU was utilized. Note the maximum monthly flow was calculated utilizing the 5-year average hydraulic ratio per Table 1.

TABLE 3: 5-Year Hydraulic Loading Projection							
Projected Years	Previous Year Annual Average Flow	New Connection	Unit Flow	Increased Flow from New Connections	Projected Annual Average Flow	Hydraulic Ratio	Maximum Monthly Flow
	(MGD)	(EDU)	(GPD/EDU)	(MGD)	(MGD)		(MGD)
2019	1.368	22	262.5	0.006	1.374	1.35	1.855
2020	1.374	24	262.5	0.006	1.380	1.35	1.863
2021	1.380	26	262.5	0.007	1.387	1.35	1.873
2022	1.387	6	262.5	0.002	1.388	1.35	1.875
2023	1.388	6	262.5	0.002	1.390	1.35	1.877

3.2 CDCA System

Per Table 2, the 5-year average hydraulic flow is 1.349 MGD which designates the 2019 “*Previous Year Annual Average Flow*” in Table 4. The new connections indicated for years one and two are based on the Ravenscliff development, the Village of the Four Seasons Development, and the Gradyville Road Subdivision. The Ravenscliff development consists of three (3) phases. Phase 1 and 2 have been completed, and Phase 3 (138 townhouses) is currently under construction. For infill residential development, a conservative assumed (“flat-line”) projection of 6 EDU’s per year (a unit flow rate of 267 GPD per EDU was utilized). All connections have been accounted for in Table 4, based on an assumed schedule. Additionally, a unit flow rate of 267 GPD per EDU was utilized. Note the maximum monthly flow was calculated using the 5-year average hydraulic ratio per Table 2.

**TABLE 4:
5-Year Hydraulic Loading Projection**

Projected Years	Previous Year Annual Average Flow (MGD)	New Connection (EDU)	Unit Flow (GPD/EDU)	Increased Flow from New Connections (MGD)	Projected Annual Average Flow (MGD)	Hydraulic Ratio	Maximum Monthly Flow (MGD)
2019	1.349	27	267.0	0.007	1.356	1.19	1.618
2020	1.356	35	267.0	0.009	1.366	1.19	1.629
2021	1.366	16	267.0	0.004	1.370	1.19	1.634
2022	1.370	6	267.0	0.002	1.372	1.19	1.636
2023	1.372	6	267.0	0.002	1.373	1.19	1.638

4.0 SEWER EXTENSIONS [§ 94.12Sec. (a) (4)]

There were no sewer extensions in Marple Township in 2018.

5.0 SEWER SYSTEM MONITORING, MAINTENANCE, REPAIR, & REHABILITATION [§ 94.12.Sec. (a) (5)]

The Township has a full staff that does periodic monitoring of the sewer system in addition to the long-term maintenance of all of the lines. Specifically, the Township’s public works department performs scheduled services including monitoring, maintenance and repairs. A breakdown of the specific monitoring and maintenance items completed in 2018 is as follows:

2017 MAINTENANCE RECORD			
Date	Maintenance	Quantity/Description	Location/Date
1/9/18 – 12/28/18	TV Line	40,290 linear feet	Throughout System
7/2/18 – 11/19/18	Root Control (RazoRooter®)	22,049 linear feet, 1,749 ounces	Throughout System
1/15/18 - 8/27/18	Manhole Repair and Rehabilitation	73 Manholes	Throughout System

The Township includes sewer repair and/or rehabilitation in its annual capital improvement program. Work is performed on an as-needed basis, either by the Township Public Works Department or private contractors.

5.1 Engineering Studies

There were no engineering studies performed within the township in 2018.

6.0 CONDITION OF SEWER SYSTEM [§ 94.12.Sec. (a) (6)]

The existing system is in good working order with. The Township has an in-house public works staff that, as required, does periodic maintenance of the system. Additionally, the Township will continue to plan for increased demands that are anticipated for the system. Furthermore, portions of the line are periodically videotaped for the purpose of maintaining the system and preventative maintenance. At the present time, any portions of the system that appear to be experiencing infiltration and inflow (I/I) problems are addressed and repaired on a case-by-case basis.

6.1 Population Statistics

The U.S. Census 2000 and 2010 Population Estimates and DVRPC 2020 Population Forecast for Marple Township were utilized for estimating population growth trend in the Township as shown in Table 5 below:

Description	Total Population	Average Household Size
2000 U.S. Census:	23,737	2.64
2010 Population Estimate, U.S. Census:	23,428	2.71
2012 Population Estimate, ACS ⁽¹⁾ :	23,452	2.70
2020 Population Forecast, DVRPC ⁽²⁾ :	23,362	-

⁽¹⁾ Source: U.S. Census. "2008-2012 American Community Survey 5-Year Estimate."

⁽²⁾ Source: Delaware Valley Regional Planning Commission, "Regional, County and Municipal Population and Employment Forecasts", August 2007.

As indicated, only a small fluctuation in population is expected to over the next ten (10) years; thus, sewage flows and connections are anticipated to modestly increase.

6.2 Historical and Present Sewer Flows

The historical and present sewer flows for both systems have been shown in Tables 1 and 2, Section 2.0.

6.3 Projected Sewer Flows

The projected sewer flows for both systems have been shown in Tables 3 and 4, Section 3.0.

The overall capacity of the Township's sanitary sewer collection system is adequate for present and projected flows. No projects to increase the sewer capacity are scheduled at this time. Also, the Township's maintenance program to identify problem areas and minimize I/I will also serve to limit increases in future flows.

6.4 Discussion of Repaired, Replaced, or Rehabilitated Sewers

There were no portions of the sewer collection system in 2018 that have been identified as requiring repair, replacement, or rehabilitation, except as follows.

These repairs did not result in a sanitary sewer overflow.

2018 SANITARY SEWER BLOCKAGES	
Location	Description
401 Milford Rd.	Main
2609 Springfield Rd.	Main
101 Brookthorpe Terr.	Lateral
2158 Brookthorpe Terr.	Lateral
Pennview	Lateral
2158 Brookthorpe Terr.	Lateral
3060 West Chester Pike	Lateral
15 Pine Tree Dr.	Lateral
3060 West Chester Pike	Lateral
2404 Patricia Dr.	Lateral
3060 West Chester Pike	Lateral
478 Hildale Rd.	Lateral
216 Cranbourne Dr.	Lateral
2773 Highland Ave.	Lateral
704 St. Francis Dr.	Lateral
2648 Springfield Rd.	Lateral
Broomall Gas Station (WCP)	Lateral
14 Franklin Getz Dr.	Lateral
2505 Highland Ave.	Lateral
26 Grove Ln.	Lateral
2427 West Chester Pike	Lateral
Drexle Ave.	Main
718 Cedar Grove Rd.	Lateral
29 Ferguson Ave.	Lateral
714 Elena Dr.	Lateral
126 Beachtree Dr.	Lateral
110 Brookthorpe Terr.	Main
4 Schoolhouse Ln.	Lateral
Alameda Rd.	Lateral

2018 SANITARY SEWER BLOCKAGES	
Location	Description
104 Lincoln Cir.	Lateral
440 Candlewood Rd.	Lateral
1283 Anthony Rd.	Lateral
Presbyterian Church	Main
Marple Rd.	Lateral
KFC	Lateral
1283 Anthony Rd.	Lateral
49 Ferguson	Lateral
2615 Caranel	Lateral
80 4 th Ave.	Main
2020 Park Ln.	Main
Bella Ln.	Main
237 Fawn Hill Ln.	Main
44 Schoolhouse Ln.	Main
46 Malin Rd.	Main
Med. Center	Lateral
206 Brookthorpe Cir.	Lateral
2736 Stoneybrook Rd.	Lateral
200 Oldfield Way	Lateral
228 Brookthorpe Cir.	Lateral
10 Rose Tree Dr.	Lateral
243 Talbot Dr.	Lateral
16 Ann Rd.	Lateral
32 N. Sproul Rd.	Lateral
Wawa	Lateral
Alameda Rd.	Lateral
206 Morton Ave.	Main
2611 Oriole Ln.	Lateral
501 Paxon Hollow Rd.	Lateral
527 S. Central Blvd.	Main
2501 Highland Ave.	Lateral

6.5 Sanitary Sewer Surcharges and Overflows

6.5.1 RHM System

There were no sanitary sewer overflows in the RHM System in 2018.

6.5.2 CDCA System

There were no sanitary sewer overflows in the CDCA System in 2018.

7.0 PUMPING STATION [§ 94.12.Sec. (a) (7)]

The Cedar Grove Pump Station was put on-line in early 1992 and has been functioning within design parameter(s) since that time. The two (2) pumps in the station were replaced in 2000 with the same model pumps. No problems have been encountered with the station and no additional flows outside of the Cedar Grove Farms development have been introduced into the system.

8.0 INDUSTRIAL WASTES [§ 94.12.Sec. (a) (8)]

No known industrial wastes are currently discharged into the RHM and CDCA systems from Marple Township.

9.0 CORRECTIVE ACTION PLAN [§ 94.12.Sec. (a) (9)]

The Township continues to maintain the sanitary sewer system including identification and removal of illegal connections. The Township does not anticipate any overloads.

*** END ***

APPENDIX A

RHM
2018 MONTHLY FLOW DATA

2018	Marple Manholes					Total Monthly Flow	Average Daily Flow	Total Rainfall (in.)	
	M1	M2	M3A	M3	M4				M5
January	7.75	18.28	0.99	1.65	5.70	0.69	35.06	1.131	3.29
February	7.44	19.46	0.97	1.63	5.74	0.62	35.87	1.281	2.1
March	10.22	25.55	1.37	2.02	7.45	0.69	47.31	1.526	4.48
April	10.15	23.68	1.44	1.76	7.12	0.67	44.82	1.494	3.22
May	11.82	25.35	1.13	1.83	7.48	0.72	48.32	1.559	5.73
June	14.19	24.45	0.91	1.76	7.01	0.69	49.01	1.634	3.53
July	11.75	21.84	0.77	1.55	6.58	0.73	43.21	1.394	4.71
August	10.59	23.42	0.69	1.83	7.81	0.73	45.07	1.454	4.89
September	11.60	26.40	1.51	2.13	8.68	0.69	51.02	1.701	1.69
October	11.92	25.94	1.72	2.02	8.10	0.72	50.42	1.626	4.04
November	13.66	30.97	1.51	2.61	8.97	0.68	58.41	1.947	1.29
December	14.56	33.52	2.11	2.88	9.74	0.72	63.53	2.049	1.82
Total Yearly Flow	135.63	298.86	15.12	23.67	90.39	8.36	572.04	18.80	40.79
Average Monthly Flow	11.30	24.91	1.26	1.97	7.53	0.70	47.7	1.566	

Note: flows are in million gallons

APPENDIX B

**CDCA
2018 MONTHLY FLOW DATA**

2018	MH-01	Total Monthly Flow	Average Daily Flow
January	39.52	39.52	1.275
February	41.21	41.21	1.472
March	51.44	51.44	1.659
April	45.81	45.81	1.527
May	46.99	46.99	1.516
June	44.86	44.86	1.495
July	38.29	38.29	1.235
August	42.05	42.05	1.356
September	48.06	48.06	1.602
October	46.57	46.57	1.502
November	53.03	53.03	1.768
December	56.61	56.61	1.826
Total Yearly Flow	554.43	554.43	18.23
Average Monthly Flow	46.20	46.2	1.519

Note: flows are in million gallons

Morton Borough



CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2018

- Permittee is owner and/or operator of a POTW or other sewage treatment facility
 Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	Borough of Morton	Permit No.:	PAN/A
Mailing Address:	500 Highland Ave	Effective Date:	N/A
City, State, Zip:	Morton, PA 19070	Expiration Date:	N/A
Contact Person:	Martha Preston	Renewal Due Date:	N/A
Title:	Borough Secretary	Municipality:	Morton Borough
Phone:	610-543-4565	County:	Delaware
Email:	mpreston@mortonpa.org	Consultant Name:	Catania Engineering Associates, Inc.
CHAPTER 94 REPORT COMPONENTS			
<p>1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))</p> <p>Check the appropriate boxes:</p> <p><input type="checkbox"/> Line graph for flows attached (Attachment)</p> <p><input type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment)</p> <p><input checked="" type="checkbox"/> Section 1 is not applicable (report is for a collection system).</p>			
<p>2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))</p> <p>Check the appropriate boxes:</p> <p><input type="checkbox"/> Line graph for organic loads attached (Attachment)</p> <p><input type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment)</p> <p><input checked="" type="checkbox"/> Section 2 is not applicable (report is for a collection system).</p>			

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

Please note that the Chapter 94 Spreadsheet was used to show monthly average flows and projections; it is understood that this report is for a collection system only.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment**)
- List summarizing each extension or project attached (**Attachment**)
- Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

No sewer extensions were constructed or approved within the past calendar year. A copy of the sanitary sewer system map is attached.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

Borough forces are used for inspection of the sanitary sewer system. Contract forces are used for troubleshooting and routine maintenance. The Borough executed a contract in late 2018 for line cleaning and video inspection of a portion of the sanitary lines. Attached is a copy of a plan depicting the location.

The Borough currently has 5 flow meters installed that monitor approximately 53% of the total flow throughout the Borough. These flow meters are part of a system wide program coordinated by DELCORA, which collects data continuously and saves data in 15 minute increments.

Flow meter data is analyzed annually, and areas with high / low flow data is researched further and is used to help target areas that need to be inspected further.

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

A 4-phase video inspection program was implemented in 2014, with phase one completed in the summer of 2014. The result of the video inspection indicated the sewers are in fair to good condition, with no high priority repairs necessary.

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

- The collection system does not contain pump stations
- The collection system does contain pump stations (Number –)
- Discussion of condition of each pump station attached (**Attachment**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

- a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.
- b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.
- c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

- Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)
- Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

- This report demonstrates an existing hydraulic overload condition.
- This report demonstrates a projected hydraulic overload condition.
- This report demonstrates an existing organic overload condition.
- This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

- Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

- Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

- Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

- Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

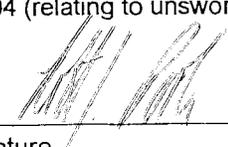
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Robert J. Poole

Name of Responsible Official

610-543-4565

Telephone No.

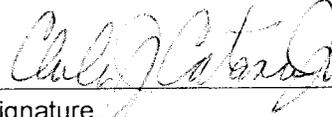

Signature


Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

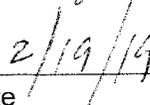
Charles Catania Jr.



Name of Preparer

Signature

610-532-2884



Telephone No.

Date



PADEP Chap Sewage

Facility Name: Reporting Year:
 Existing Hydraulic Design Capacity: Persons/EDU:
 Upgrade Planned in Next 5 Years? lbs BOD5/day
 Future Hydraulic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2014	2015	2016	2017	2018
January	0.70968	0.59972	0.52814	0.47004	0.5203
February	0.75408	0.49342	0.63506	0.46553	0.65887
March	0.88396	0.63007	0.57410	0.55863	0.7333
April	0.89598	0.53672	0.52607	0.60265	0.67663
May	0.81222	0.43584	0.67076	0.69804	0.65865
June	0.49057	0.52873	0.45682	0.51367	0.60279
July	0.43011	0.50245	0.46885	0.51265	0.49322
August	0.36320	0.39954	0.44100	0.49654	0.49475
September	0.33561	0.37761	0.42342	0.43303	0.57487
October	0.34086	0.41865	0.49962	0.4421	0.53711
November	0.37335	0.39618	0.3985	0.40748	0.6063
December	0.49220	0.51675	0.43004	0.44605	0.38384

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2014	2015	2016	2017	2018
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Annual Avg
 Max 3-Mo Avg
 Max : Avg Ratio
 Existing EDUs
 Load/Capita
 Exist. Overload?

Annual Avg	0.519343389	0.47797156	0.496325145	0.495937635	0.610438343
Max 3-Mo Avg	0.715590781	0.550070231	0.579126967	0.586636509	0.685195987
Max : Avg Ratio	1.38	1.15	1.17	1.18	1.12
Existing EDUs	1,460.0	1,460.0	1,460.0	1,460.0	1,460.0
Flow/EDU (GPD)	355.7	327.4	339.9	339.7	418.1
Flow/Capita (GPD)	101.6	93.5	97.1	97.1	119.5

Projected Flows for Next Five Years (MGD)

	2019	2020	2021	2022	2023
New EDUs	1.0	1.0	1.0	1.0	1.0
New EDU Flow	0.0004	0.0004	0.0004	0.0004	0.0004
Proj. Annual Avg	0.5204	0.5208	0.5212	0.5216	0.522
Proj. Max 3-Mo Avg	0.62458	0.62506	0.62554	0.62602	0.6265
Proj. Overload?					

Projected BOD5 Loads for Next Five Years (lbs/day)

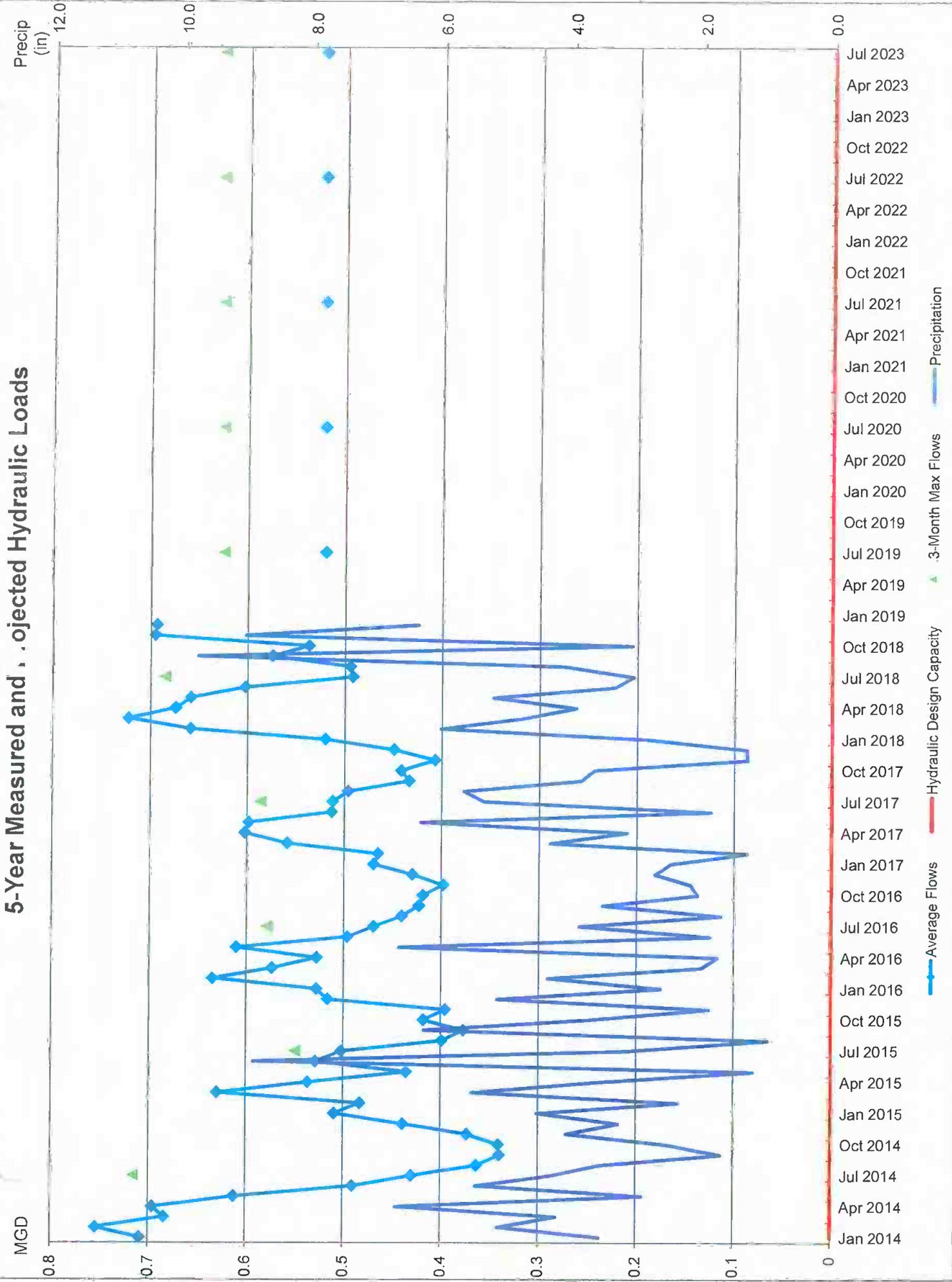
	2019	2020	2021	2022	2023
New EDU Load	0.584	0.584	0.584	0.584	0.584
Proj. Annual Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Proj. Max Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Proj. Overload?					

Total Monthly Precipitation for Past Five Years (Inches)

Month	2014	2015	2016	2017	2018
January	3.56	4.52	2.63	2.48	2.85
February	5.12	2.36	4.36	1.3	6.02
March	4.23	5.52	2.01	4.33	4.74
April	6.69	3.58	1.75	3.15	3.94
May	2.91	1.2	6.65	6.33	5.21
June	5.46	8.89	1.87	1.88	3.34
July	4.3	3.16	3.88	5.35	3.06
August	3.55	0.98	1.7	5.66	4.11
September	1.69	6.27	3.52	3.86	9.76
October	2.54	3.76	2.06	3.66	3.08
November	4.07	1.89	2.17	1.3	9.03
December	3.27	5.14	2.72	1.31	6.38

Show Precipitation Data on Hydraulic Graph?

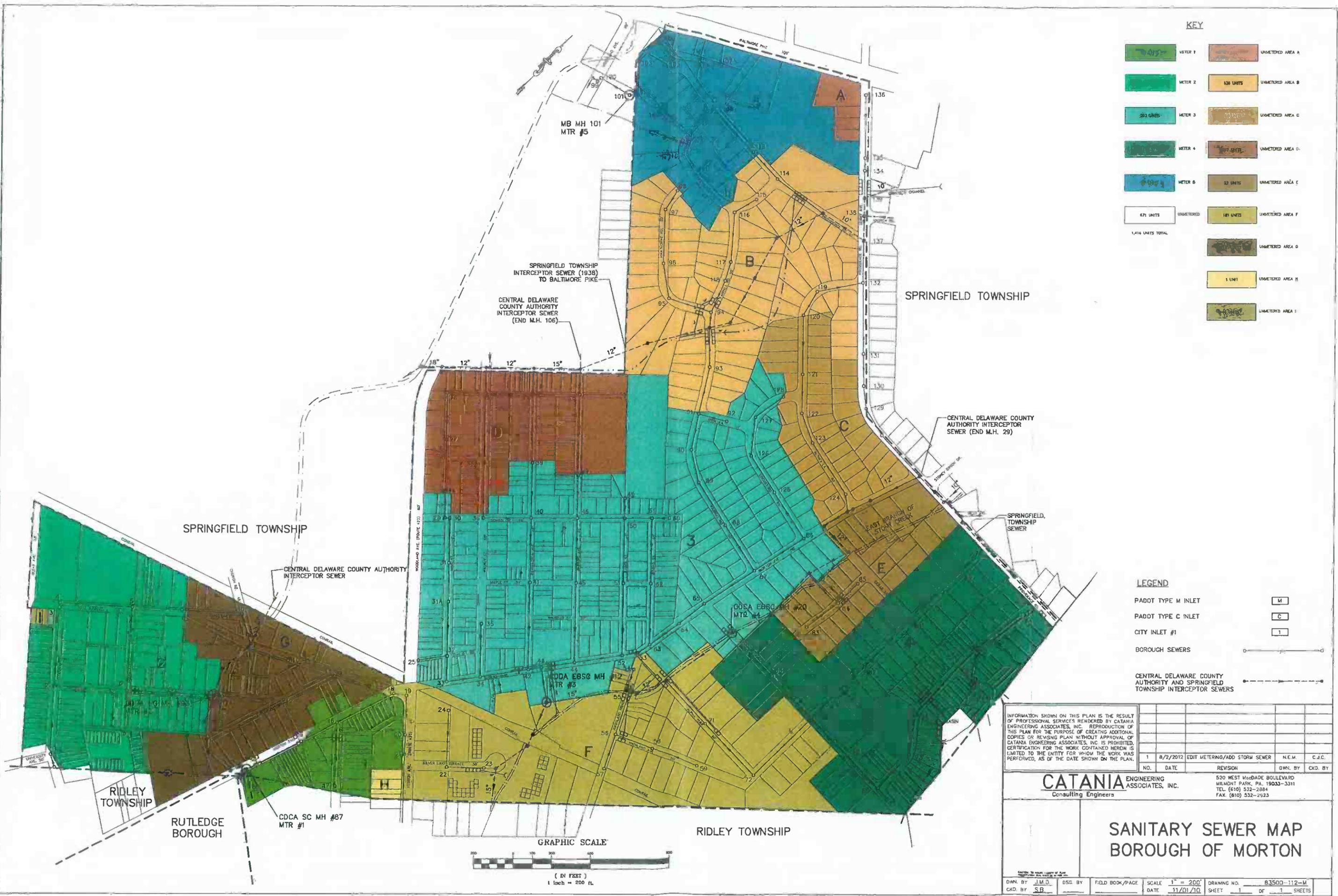
5-Year Measured and Projected Hydraulic Loads



MORTON BOROUGH MONTHLY FLOW METER DATA

Meter No.	Meter Location	Total EDUs Served	January		February		March		April		May		June		Comments
			Recorded Volume	Gallons EDU/Day											
1	61 Morton Ave (along curb line, at Stony Creek)	64	630,267	318	1,134,761	633	1,202,629	606	931,720	485	418,510	407	673,727	351	
2A	Near 56 Bridge St (in road, at Stony Ck)														Meter Removed. EDUs Reassigned to Unmetered.
2B	Near 56 Bridge St (in road, at Stony Ck)	147	1,829,127	401	2,054,781	499	2,342,456	514	1,895,987	430	2,186,877	480	1,815,294	412	
3	111 N. Morton Ave, (behind Door/Window Co.)	295	3,800,776	416	4,199,889	508	5,165,401	565	4,956,567	560	4,918,843	538	4,557,622	515	
4	15 Sycamore Ave (in road)	181	1,188,427	212	1,362,723	269	1,965,823	350	1,773,712	327	1,801,474	321	1,503,298	277	
5	At CVS (100 ft behind bumpster, inside fence, site painted)	81	1,035,777	412	952,118	420	1,100,457	438	1,086,577	447	1,024,074	408	890,045	396	
	Unmetered Areas (average volume from all meters)	692	7,644,774	356	8,743,953	451	10,611,357	495	9,591,195	462	9,676,194	451	8,571,129	413	Uses average volume/EDU from all Morton Borough meters for estimate.
	TOTAL	1,460	16,129,148		18,448,225		22,388,123		20,235,758		20,025,972		18,011,115		

Meter No.	Meter Location	Total EDUs Served	July		August		September		October		November		December		Comments
			Recorded Volume	Gallons EDU/Day											
1	61 Morton Ave (along curb line, at Stony Creek)	64	524,895	265	550,114	277	776,979	405	537,566	271	1,001,410	522	886,438	447	
2A	Near 56 Bridge St (in road, at Stony Ck)														Meter Removed. EDUs Reassigned to Unmetered.
2B	Near 56 Bridge St (in road, at Stony Ck)	147	1,442,623	317	1,531,446	336	1,997,032	453	1,743,666	383	2,148,388	487	2,078,440	456	
3	111 N. Morton Ave, (behind Door/Window Co.)	295	3,729,502	408	3,814,792	417	4,000,145	452	4,126,788	451	5,159,392	583	5,227,336	572	
4	15 Sycamore Ave (in road)	181	1,381,921	246	1,213,859	216	1,237,334	228	1,209,450	216	1,364,237	251	1,835,424	327	
5	At CVS (100 ft behind bumpster, inside fence, site painted)	81	949,253	378	957,537	381	1,060,487	436	1,141,141	454	1,299,019	535	1,284,169	511	
	Unmetered Areas (average volume from all meters)	692	7,233,737	337	7,269,377	339	8,174,229	394	7,891,873	368	9,886,631	476	10,192,409	475	Uses average volume/EDU from all Morton Borough meters for estimate.
	TOTAL	1,460	15,261,931		15,337,125		17,246,206		16,650,484		20,859,077		21,504,216		



KEY

	METER 1		UNMETERED AREA A
	METER 2		UNMETERED AREA B
	METER 3		UNMETERED AREA C
	METER 4		UNMETERED AREA D
	METER 5		UNMETERED AREA E
	UNMETERED		UNMETERED AREA F
1,416 UNITS TOTAL			UNMETERED AREA G
			UNMETERED AREA H
			UNMETERED AREA I

LEGEND

PADOT TYPE M INLET	
PADOT TYPE C INLET	
CITY INLET #1	
BOROUGH SEWERS	
CENTRAL DELAWARE COUNTY AUTHORITY AND SPRINGFIELD TOWNSHIP INTERCEPTOR SEWERS	

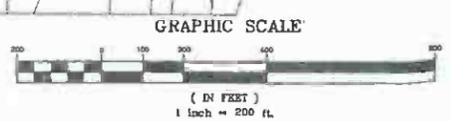
INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF PROFESSIONAL SERVICES RENDERED BY CATANIA ENGINEERING ASSOCIATES, INC. REPRODUCTION OF THIS PLAN FOR THE PURPOSE OF CREATING ADDITIONAL COPIES OR REVISING PLAN WITHOUT APPROVAL OF CATANIA ENGINEERING ASSOCIATES, INC. IS PROHIBITED. CERTIFICATION FOR THE WORK CONTAINED HEREIN IS LIMITED TO THE ENTITY FOR WHOM THE WORK WAS PERFORMED, AS OF THE DATE SHOWN ON THE PLAN.

NO.	DATE	REVISION	DWN. BY	CKD. BY
1	8/2/2012	EDIT METERING/ADD STORM SEWER	N.E.M.	C.J.C.

CATANIA ENGINEERING ASSOCIATES, INC.
Consulting Engineers
520 WEST WOODADE BOULEVARD
WILMONT, PA. 19033-3311
TEL. (610) 532-2884
FAX. (610) 532-2923

**SANITARY SEWER MAP
BOROUGH OF MORTON**

DWN. BY	J.M.D.	DSG. BY		FIELD BOOK/PAGE		SCALE	1" = 200'	DRAWING NO.	83500-112-M
CKD. BY	S.B.					DATE	11/01/10	SHEET	1 OF 1 SHEETS



Industrial Waste Report

There is one industrial user for the Borough: Mobile Car Wash located at Leamy Avenue and Baltimore Pike. No known problems are associated with the industrial wastewater discharges.

Nether Providence Township



CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2018

- Permittee is owner and/or operator of a POTW or other sewage treatment facility
 Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	Nether Providence Township	Permit No.:	PAN/A
Mailing Address:	214 Sykes Lane	Effective Date:	N/A
City, State, Zip:	Wallingford, PA 19086	Expiration Date:	N/A
Contact Person:	Gary Cummings	Renewal Due Date:	N/A
Title:	Township Manager	Municipality:	Nether Providence
Phone:	610-566-4516	County:	Delaware
Email:	gcummings@netherprovidence.org	Consultant Name:	Catania Engineering Associates, Inc.
CHAPTER 94 REPORT COMPONENTS			
<p>1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))</p> <p>Check the appropriate boxes:</p> <p><input type="checkbox"/> Line graph for flows attached (Attachment)</p> <p><input type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment)</p> <p><input checked="" type="checkbox"/> Section 1 is not applicable (report is for a collection system).</p>			
<p>2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))</p> <p>Check the appropriate boxes:</p> <p><input type="checkbox"/> Line graph for organic loads attached (Attachment)</p> <p><input type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment)</p> <p><input checked="" type="checkbox"/> Section 2 is not applicable (report is for a collection system).</p>			

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

Please note that the Chapter 94 Spreadsheet was used to show monthly average flows and projections; it is understood that this report is for a collection system only.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment**)
- List summarizing each extension or project attached (**Attachment**)
- Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

No sewer extensions were constructed or approved within the past calendar year. A copy of the sanitary sewer system map is attached.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

Nether Providence Township public works department has a sewer maintenance schedule for cleaning and inspecting lines. During these cleanings the crew is looking for blockages, broken pipes, roots in lines and I&I issues.

Nether Providence, in coordination with DELCORA has flow metering equipment to monitor flows through the sanitary system. CSL Services, Inc. was contracted by DELCORA to calibrate and maintain the flow monitoring equipment throughout 2018. Calibration reports are maintained by DELCORA. Flow data is utilized to assist in the identification of areas that require attention.

See attachment for more information.

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

- System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

The general condition of the sewer system is good. No SSOs were reported for the 2018 calendar year.

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

- The collection system does not contain pump stations
- The collection system does contain pump stations (Number – 1)
- Discussion of condition of each pump station attached (**Attachment**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

- a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.
- b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.
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Check the appropriate boxes:

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Check the appropriate boxes:

- This report demonstrates an existing hydraulic overload condition.
- This report demonstrates a projected hydraulic overload condition.
- This report demonstrates an existing organic overload condition.
- This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

- Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

- Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

- Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

- Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Gary Cummings

Name of Responsible Official

Signature

610-566-4516

Telephone No.

Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Charles Catania Jr.



Name of Preparer

Signature

610-532-2884



Telephone No.

Date

**PADEP Chapter 94 Spread:
Sewage Treatment Pl**

Reporting Year:

Permit No.:

Persons/EDU:

Facility Name:

Existing Organic Design Capacity:

Existing Hydraulic Design Capacity:

Upgrade Planned in Next 5 Years?

Upgrade Planned in Next 5 Years?

Future Organic Design Capacity:

Future Hydraulic Design Capacity:

lbs BOD5/day

Year:

lbs BOD5/day

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2014	2015	2016	2017	2018
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Monthly Average Flows for Past Five Years (MGD)

Month	2014	2015	2016	2017	2018
January	1.55807	1.20116	1.17	1.02426	0.98641
February	1.99487	1.16213	1.51404	0.91081	1.28476
March	1.76404	1.66449	1.31848	1.19116	1.45387
April	1.79288	1.30678	1.27999	1.28731	1.3723
May	1.67622	1.12618	1.40151	1.23107	1.36185
June	1.27647	1.27421	1.10978	1.06908	1.16595
July	0.97238	1.14909	0.99524	0.96309	0.92801
August	0.8666	0.96145	0.89593	0.96628	0.96698
September	0.79532	0.96288	0.86382	0.92347	1.10344
October	0.77478	1.02565	0.85574	0.89798	1.07083
November	0.94074	0.99881	0.85993	0.90237	1.5067
December	0.97325	1.22955	0.96659	0.91084	1.52041

Annual Avg 1.28214404 1.17168935 1.10208632 1.02480914 1.22879308
 Max 3-Mo Avg 1.8506323 1.3777976 1.37083409 1.23651158 1.39600953
 Max : Avg Ratio 1.44 1.18 1.24 1.21 1.14
 Existing EDUs 2,829 2,829 2,829 2,829 2,829
 Flow/EDU (GPD) 453.2 414.2 389.6 362.3 433.6
 Flow/Capita (GPD) 129.5 118.3 111.3 103.5 123.9
 Exist. Overload?

Projected BOD5 Loads for Next Five Years (lbs/day)

	2019	2020	2021	2022	2023
New EDUs	1.0	1.0	1.0	1.0	1.0
New EDU Load	0.0004	0.0004	0.0004	0.0004	0.0004
Proj. Annual Avg	1.1619	1.1623	1.1627	1.1631	1.1635
Proj. Max 3-Mo Avg	1.44254	1.44304	1.44353	1.44403	1.44453
Proj. Overload?					

Projected Flows for Next Five Years (MGD)

	2019	2020	2021	2022	2023
New EDUs	1.0	1.0	1.0	1.0	1.0
New EDU Flow	0.0004	0.0004	0.0004	0.0004	0.0004
Proj. Annual Avg	1.1619	1.1623	1.1627	1.1631	1.1635
Proj. Max 3-Mo Avg	1.44254	1.44304	1.44353	1.44403	1.44453
Proj. Overload?					

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2014	2015	2016	2017	2018
January	3.56	4.52	2.63	2.48	2.85
February	5.12	2.36	4.36	1.3	6.02
March	4.23	5.52	2.01	4.33	4.74
April	6.69	3.58	1.75	3.15	3.94
May	2.91	1.2	6.55	6.33	5.21
June	5.46	8.89	1.87	1.86	3.34
July	4.3	3.16	3.88	5.35	3.06
August	3.55	0.98	1.7	5.66	4.11
September	1.69	6.27	3.52	3.86	9.76
October	2.54	3.76	2.06	3.66	3.08
November	4.07	1.89	2.17	1.3	9.03
December	3.27	5.14	2.72	1.31	6.38