Date WED 6-17-15 Initial MH/JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleanod
002 Wylie	1:00		✓	
003 Hamilton	12:45			
004 Overland	12:50		✓	
005 Clark	12:55			

open bottom
close top

Date 6-19-15 Initial JK/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:50		✓	~~RJK~~
003 Hamilton	1:40		✓	RC
004 Overland	1:15		✓	R.C
005 Clark	1:55		✓	R.C

Date 6-21-15 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1030		✓	
003 Hamilton	10:40		✓	
004 Overland	10:50		✓	
005 Clark	10:55		✓	

Date 6-22-15 Initial JK/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	9:35		(✓)	
003 Hamilton	9:40			
004 Overland	9:45			~~Blank~~
005 Clark	9:55			~~CJR~~

Date 6-24-15 Initial JK/MD

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			✓	
003 Hamilton			✓	
004 Overland	10:20		✓	R.C
005 Clark	10:30		✓	R.C

Date 6-26-15 Initial ET MD

Duquesne Overflows

Heavy Rain on 25th

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			✓	
003 Hamilton			✓	
004 Overland	1:00		✓	
005 Clark			✓	

Date 6-28-15 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10:30		✓	
003 Hamilton	10:40		✓	
004 Overland	10:50		✓	
005 Clark	11:00		✓	

Date 6-30-15 Initial MM/JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	8:53		✓	
003 Hamilton	8:36			
004 Overland	8:40		✓	
005 Clark	8:47			

Date 7-1-15 Initial ET-JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:05	✓	✓	
003 Hamilton	1	✓	✓	
004 Overland		✓	✓	
005 Clark	10:40	✓	✓	

Date 7-4-15 Initial MH/JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				FLOW HIGH FINISH 7/5
003 Hamilton				
004 Overland	8:10am	✓		
005 Clark			Check 7/5 Flow High	

Date 7-5-15 SUN Initial MH/JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:31		✓	R/C
003 Hamilton	1:21		✓	
004 Overland	1:15		✓	
005 Clark	1:26		✓	
		FROM RAIN ON 7/3		

Date 7-7-15 Initial JK/MD

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	11:00		✓	
003 Hamilton	10:55		✓	
004 Overland	10:50		✓	RC - Screen O.K.
005 Clark	10:40		✓	RC.

Date 7-8-15 Initial JK/CF

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			✓	
003 Hamilton			✓	
004 Overland	11:00		✓	RE
005 Clark	11:10		✓	R.C

Date 7-10 Initial MD/CF

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland	11:35		✓	
005 Clark	11:25		✓	

Date 7-14-15 Initial JK/CF

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	9:30		✓	
003 Hamilton	9:35		✓	
004 Overland	9:50		✓	slight overflow
005 Clark	10:00		✓	

Date 7-15-15 Initial ET/JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland				
005 Clark			✓	

Date 8.5.15 Initial JF/MD

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	2:25		✓	
003 Hamilton	2:04pm		✓	
004 Overland	2:10pm		✓	
005 Clark	2:20		✓	

Date 8-6-15 Initial MH/MD

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland	9:03am			Yes
005 Clark				

Date 8-13-15 Initial JK/MD

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			✓	
003 Hamilton			✓	✓
004 Overland			✓	Slight
005 Clark			✓	Slight

Date 8-21-15 Initial BT SPK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	12:00		✓	
003 Hamilton	12:00		✓	
004 Overland	12:00			SK
005 Clark				

Date 8/25/15 Initial JK/MH

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland	1 45			HOSED
005 Clark	2 25			HOSED

Date Thurs 9-3-15 Initial MH/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland	1 20PM			OK
005 Clark	1 26PM			OK

Date Tue 9-4-15 Initial MH/MD

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1 46		✓	
003 Hamilton	1 30			OK
004 Overland	1 35			OK
005 Clark	1 40		✓	

Date 9-4-15 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie		✓	✓	
003 Hamilton				OK
004 Overland				OK
005 Clark		✓	✓	

Date 9-10-15 Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	2:06pm		✓	
003 Hamilton	1:45pm		✓	
004 Overland	1:51pm		✓	
005 Clark	2:00pm			OK

Date [illegible] Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland				
005 Clark				

Date 9-14-15 Initial MH-ST-JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton	2:30		✓	
004 Overland				
005 Clark	2:15		✓	

Date [illegible] Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	9:40am		OK — CALLED OUT	
003 Hamilton				
004 Overland				
005 Clark				

Date 9-30-15 Initial JK/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			✓	
003 Hamilton			✓	
004 Overland	10:15		✓	KC
005 Clark	10:22		✓	KC

WED
Date 9-30-15 Initial MH/SM

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	2:06		✓	
003 Hamilton	1:47		✓	
004 Overland	1:52		✓	
005 Clark	2:00		✓	

Date 10-4 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1030	✓	✓	
003 Hamilton	1040	✓	✓	
004 Overland	1050	✓	✓	
005 Clark	1100	✓	✓	

Date 10-10-15 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1040	✓	✓	
003 Hamilton	1045	✓	✓	
004 Overland	1050	✓	✓	
005 Clark	1055		✓	

Date 10/16/15 Initial MH/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10:30			OK
003 Hamilton	10:16			OK
004 Overland	10:08			OK
005 Clark	1000			OK

Duquesne STP
Storm Sewer Overflows and By-Passes

Rain Date
Date 10-22-15 THURS

INT MH/ET/BC

Point Source	Name	Time	Observed Overflow	Chalk Missing?	Screen Cleaned	Cause or Comment
002	WYLIE	9:40AM				OK
003	HAMILTON					
004	OVERLAND AVE					
005	CLARK ST					

Looking For OVERFLOW
Dog PLANT LOW FLOW

Date 10 24 Initial EI JC

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			1	
003 Hamilton			1	
004 Overland			1	
005 Clark ✓			1	CALLED OUT

Date 10/27/15 Initial MH

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland	1:00PM			YES
005 Clark				

Date 10-25-15 Initial JK/ET

Duquesne Overflows

Rain 10-24

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10 05		✓	
003 Hamilton	10 10		✓	
004 Overland	10 05			
005 Clark	10 30		✓	

Date 10/29 Hours Initial JMH/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:56		✓	
003 Hamilton	1:39		✓	
004 Overland	1:45		✓	
005 Clark	1:50		✓	

Date 11-7-15 Initial ET-JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10 00		✓	
003 Hamilton	10 10		✓	
004 Overland	10 12		✓	
005 Clark	10 15		✓	

Date 11-11-15 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie			✓	
003 Hamilton			✓	
004 Overland			✓	
005 Clark				

Date 11/2/15 Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie				
003 Hamilton				
004 Overland	[illegible]		[illegible]	[illegible]
005 Clark	[illegible]		[illegible]	[illegible]

Date 11-19-15 Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:58pm		✓	
003 Hamilton	1:50pm		✓	
004 Overland	1:31pm		✓	
005 Clark	1:46pm		✓	

Date 12/1/15 Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:35pm		✓	
003 Hamilton	1:15pm		✓	
004 Overland	1:10pm		✓	
005 Clark	1:29pm		✓	

Date 12/15/15 Initial [illegible]

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	2:24	✓	✓	
003 Hamilton	2:30	✓	✓	
004 Overland	2:16	✓	✓	
005 Clark	2:17pm	✓	✓	

Date 12/18/15 Initial MH/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10:05		✓	
003 Hamilton	9:47		✓	
004 Overland	9:58		✓	
005 Clark	10:00		✓	

Date , 2 - 2 3 - 15 Initial ET JK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie		5	✓	
003 Hamilton		5	✓	
004 Overland				
005 Clark				

Date 12 24-15 Initial MH/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10:46		✓	
003 Hamilton	10:33		✓	
004 Overland	10:38		✓	
005 Clark	10:42		✓	

Date 12 - 28-15 Initial JK/ET

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	10:38		✓	
003 Hamilton	10:42		✓	
004 Overland	10:45		✓	
005 Clark	10:50		✓	

Date 12-29-15 Initial MH/SK

Duquesne Overflows

Name	Time	Overflow	Possible Event	Screen Cleaned
002 Wylie	1:02		V	
003 Hamilton	12:53		OK	
004 Overland	12:47		OK	
005 Clark	12:57		OK	

month
Date
year

basin location	basin type amount removed	good	repair

month
Date
year

basin location	basin type amount removed	good	repair

month
Date
year

basin location	basin type amount removed	good	repair

month July
Date
year [illegible]

basin location	basin type / amount removed	good	repair
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

Month	Total (24-hour) Precipitation (in)	Total Overflow (MG)
January	2.32	0.143
February	1.32	0.213
March	4.15	7.938
April	4.29	1.344
May	2.3	0.813
June	9.4	1.345
July	2.67	0.754
August	1.88	0.254
September	4.01	0.741
October	3.18	0.231
November	1.85	0.068
December	3.76	0.149
TOTAL	**41.13**	**13.9934**

January Daily Rainfall	
Date	**Precipitation (in)**
1-Jan	
2-Jan	
3-Jan	0.78
4-Jan	0.08
5-Jan	
6-Jan	
7-Jan	
8-Jan	
9-Jan	
10-Jan	
11-Jan	0.05
12-Jan	0.28
13-Jan	
14-Jan	
15-Jan	
16-Jan	
17-Jan	
18-Jan	
19-Jan	0.01
20-Jan	0.05
21-Jan	0.18
22-Jan	
23-Jan	
24-Jan	0.14
25-Jan	0.13
26-Jan	0.11
27-Jan	
28-Jan	0.01
29-Jan	0.49
30-Jan	
31-Jan	0.01
Total	**2.32**

February Daily Rainfall	
Date	**Precipitation (in)**
1-Feb	0.45
2-Feb	0.22
3-Feb	
4-Feb	0.03
5-Feb	
6-Feb	
7-Feb	
8-Feb	
9-Feb	0.03
10-Feb	
11-Feb	
12-Feb	0.02
13-Feb	
14-Feb	0.01
15-Feb	
16-Feb	
17-Feb	
18-Feb	
19-Feb	
20-Feb	
21-Feb	0.41
22-Feb	0.15
23-Feb	
24-Feb	
25-Feb	
26-Feb	
27-Feb	
28-Feb	
29-Feb	
Total	**1.32**

March Daily Rainfall	
Date	**Precipitation (in)**
1-Mar	0.60
2-Mar	0.01
3-Mar	0.59
4-Mar	0.74
5-Mar	
6-Mar	
7-Mar	0.05
8-Mar	
9-Mar	
10-Mar	0.66
11-Mar	
12-Mar	0.01
13-Mar	0.22
14-Mar	0.66
15-Mar	
16-Mar	
17-Mar	
18-Mar	
19-Mar	
20-Mar	0.26
21-Mar	
22-Mar	
23-Mar	
24-Mar	0.06
25-Mar	0.12
26-Mar	0.16
27-Mar	
28-Mar	
29-Mar	
30-Mar	0.01
31-Mar	
Total	**4.15**

April Daily Rainfall	
Date	**Precipitation (in)**
1-Apr	
2-Apr	0.15
3-Apr	0.24
4-Apr	0.13
5-Apr	
6-Apr	0.05
7-Apr	0.36
8-Apr	0.32
9-Apr	0.44
10-Apr	0.55
11-Apr	
12-Apr	
13-Apr	0.07
14-Apr	0.09
15-Apr	
16-Apr	0.29
17-Apr	
18-Apr	
19-Apr	0.27
20-Apr	0.28
21-Apr	
22-Apr	0.41
23-Apr	
24-Apr	
25-Apr	0.08
26-Apr	
27-Apr	0.05
28-Apr	
29-Apr	
30-Apr	0.51
Total	**4.29**

May Daily Rainfall	
Date	**Precipitation (in)**
1-May	0.03
2-May	
3-May	
4-May	
5-May	0.03
6-May	
7-May	
8-May	
9-May	
10-May	
11-May	0.21
12-May	0.06
13-May	0.01
14-May	
15-May	
16-May	0.13
17-May	0.13
18-May	0.92
19-May	0.01
20-May	
21-May	0.12
22-May	
23-May	
24-May	
25-May	
26-May	0.10
27-May	0.06
28-May	
29-May	0.01
30-May	0.03
31-May	0.16
Total	**2.01**

June Daily Rainfall	
Date	**Precipitation (in)**
1-Jun	
2-Jun	0.03
3-Jun	
4-Jun	
5-Jun	0.69
6-Jun	
7-Jun	
8-Jun	0.47
9-Jun	0.03
10-Jun	
11-Jun	
12-Jun	0.08
13-Jun	0.04
14-Jun	1.40
15-Jun	1.25
16-Jun	0.52
17-Jun	
18-Jun	0.90
19-Jun	0.01
20-Jun	0.61
21-Jun	0.03
22-Jun	
23-Jun	0.26
24-Jun	
25-Jun	0.55
26-Jun	
27-Jun	1.53
28-Jun	0.03
29-Jun	0.23
30-Jun	0.73
Total	**9.39**

July Daily Rainfall	
Date	**Precipitation (in)**
1-Jul	0.01
2-Jul	
3-Jul	0.09
4-Jul	1.16
5-Jul	
6-Jul	0.07
7-Jul	0.21
8-Jul	0.29
9-Jul	0.31
10-Jul	0.04
11-Jul	
12-Jul	0.04
13-Jul	0.01
14-Jul	0.35
15-Jul	
16-Jul	
17-Jul	
18-Jul	0.04
19-Jul	
20-Jul	
21-Jul	0.05
22-Jul	
23-Jul	
24-Jul	
25-Jul	
26-Jul	
27-Jul	
28-Jul	
29-Jul	
30-Jul	
31-Jul	
Total	**2.67**

August Daily Rainfall	
Date	**Precipitation (in)**
1-Aug	
2-Aug	
3-Aug	1.13
4-Aug	
5-Aug	
6-Aug	
7-Aug	
8-Aug	0.02
9-Aug	
10-Aug	
11-Aug	0.02
12-Aug	
13-Aug	
14-Aug	
15-Aug	
16-Aug	
17-Aug	
18-Aug	0.55
19-Aug	0.01
20-Aug	0.14
21-Aug	
22-Aug	
23-Aug	
24-Aug	
25-Aug	
26-Aug	
27-Aug	
28-Aug	
29-Aug	
30-Aug	0.01
31-Aug	
Total	**1.88**

September Daily Rainfall	
Date	**Precipitation (in)**
1-Sep	
2-Sep	0.10
3-Sep	0.16
4-Sep	0.12
5-Sep	0.02
6-Sep	
7-Sep	
8-Sep	
9-Sep	0.01
10-Sep	0.43
11-Sep	
12-Sep	0.37
13-Sep	0.08
14-Sep	
15-Sep	
16-Sep	
17-Sep	
18-Sep	
19-Sep	0.31
20-Sep	
21-Sep	
22-Sep	
23-Sep	
24-Sep	
25-Sep	
26-Sep	
27-Sep	
28-Sep	0.30
29-Sep	1.71
30-Sep	0.41
Total	**4.02**

October Daily Rainfall	
Date	**Precipitation (in)**
1-Oct	
2-Oct	
3-Oct	0.62
4-Oct	
5-Oct	
6-Oct	
7-Oct	
8-Oct	
9-Oct	0.48
10-Oct	
11-Oct	
12-Oct	
13-Oct	0.08
14-Oct	
15-Oct	
16-Oct	0.03
17-Oct	
18-Oct	0.02
19-Oct	
20-Oct	
21-Oct	
22-Oct	0.15
23-Oct	0.01
24-Oct	0.38
25-Oct	0.08
26-Oct	0.01
27-Oct	0.18
28-Oct	1.01
29-Oct	0.13
30-Oct	
31-Oct	
Total	**3.18**

November Daily Rainfall	
Date	**Precipitation (in)**
1-Nov	0.02
2-Nov	
3-Nov	
4-Nov	
5-Nov	
6-Nov	0.29
7-Nov	
8-Nov	
9-Nov	
10-Nov	0.71
11-Nov	
12-Nov	0.18
13-Nov	
14-Nov	
15-Nov	
16-Nov	
17-Nov	
18-Nov	0.28
19-Nov	0.10
20-Nov	
21-Nov	0.06
22-Nov	
23-Nov	
24-Nov	
25-Nov	
26-Nov	
27-Nov	
28-Nov	0.21
29-Nov	
30-Nov	
Total	**1.85**

December Daily Rainfall	
Date	**Precipitation (in)**
1-Dec	0.36
2-Dec	0.52
3-Dec	
4-Dec	
5-Dec	
6-Dec	
7-Dec	0.01
8-Dec	
9-Dec	0.01
10-Dec	
11-Dec	
12-Dec	
13-Dec	
14-Dec	0.22
15-Dec	0.01
16-Dec	
17-Dec	0.61
18-Dec	
19-Dec	
20-Dec	
21-Dec	0.02
22-Dec	0.34
23-Dec	
24-Dec	0.48
25-Dec	0.05
26-Dec	0.41
27-Dec	0.46
28-Dec	0.24
29-Dec	0.02
30-Dec	
31-Dec	
Total	**3.76**

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT

Chapter 94 Municipal Wasteload Management Report
City of McKeesport Water Pollution Control Plant
Operating Year 2015
Resubmission September 2016

KLH
ENGINEERS, INC
5173 CAMPBELLS RUN ROAD
PITTSBURGH, PA 15205-9733

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT

Allegheny County, Pennsylvania

City of McKeesport Water Pollution Control Plant

Chapter 94 – Municipal Wasteload Management Report
Operating Year 2015

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MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT

Allegheny County, Pennsylvania

City of McKeesport Water Pollution Control Plant
Chapter 94 – Municipal Wasteload Management Report
Operating Year 2015

EXECUTIVE SUMMARY

In compliance with Section 94.12, of Chapter 94, Title 25 of the Pennsylvania Code and the Rules and Regulations of the Pennsylvania Department of Environmental Protection (PADEP), this report is submitted by the Municipal Authority of the City of McKeesport (Authority) as a summary of the loadings and conditions existing at the McKeesport Water Pollution Control Plant (WPCP), its tributary conveyance sewer systems, and pump stations during the operating year 2015. In addition, this report includes a projection of the anticipated loadings at the WPCP for the next five years (2016-2020). DEP forms and spreadsheets were utilized in order to complete the report.

The McKeesport WPCP is owned by the Authority and operated under NPDES Permit No. PA0026913. The location of the WPCP is shown in Figure 1.

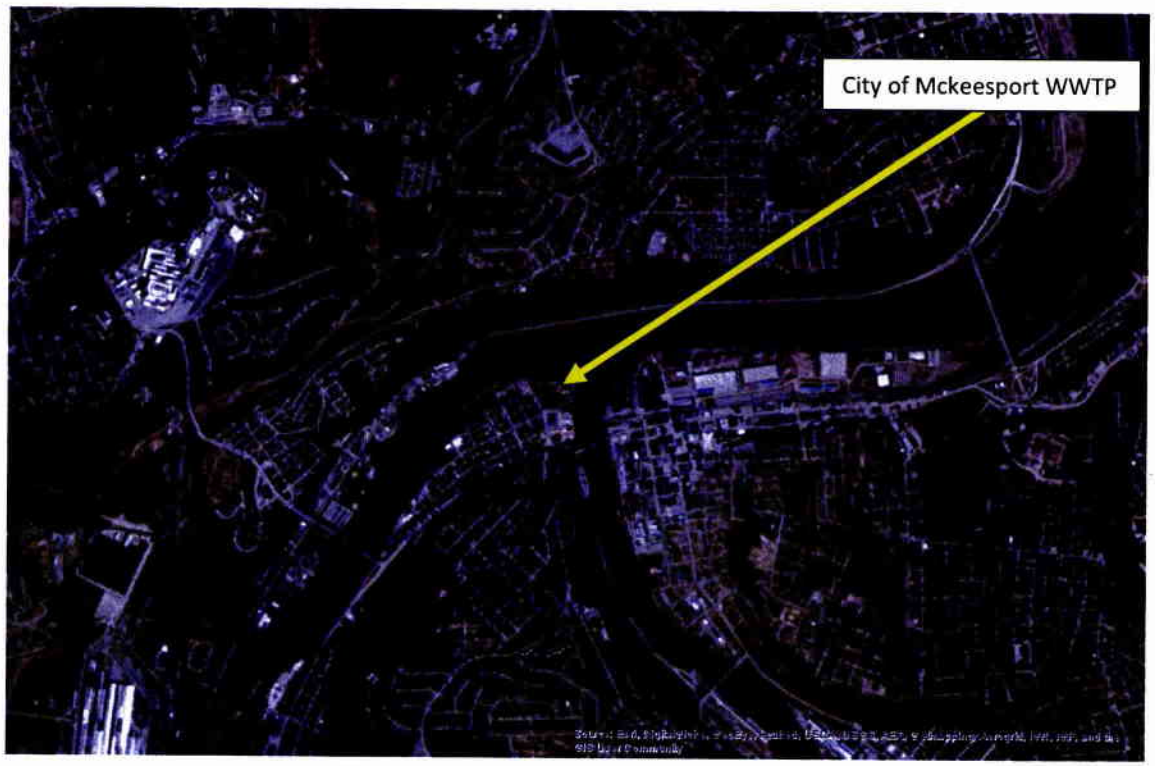


Figure 1: McKeesport WPCP Location

The Municipal Authority of the City of McKeesport's sewage disposal system provides for collection, transportation, treatment and disposal of sanitary sewage from the City of McKeesport and other surrounding municipalities including White Oak, East McKeesport, Lincoln Borough, Liberty, Port Vue, Versailles, Glassport, North Versailles and Elizabeth Township. The Wasteload Management Reports (WMRs) for all of the tributary municipalities can be found in Attachment [7]. The communities included in the present service area are shown in Table 1.

Table 1: Tributary Municipality Customer Base

Municipality	Total Population	Residential Customers
East McKeesport Borough	505	237
Elizabeth Township	3,197	1,349
Glassport Borough	57	24
Liberty Borough	2,564	1,091
Lincoln Borough	255	81
City of McKeesport	19,731	8,769
North Versailles Township	6,962	2,925
Port Vue Borough	3,612	1,696
Versailles Borough	1,724	852
White Oak Borough	7,861	3,116
TOTAL	46,468	20,140

The initial system consisted of 32 stormwater diversion chambers, 5.8 miles of interceptor sewers, 1.4 miles of force mains, four collection system pumping stations, a plant pumping station and a wastewater treatment plant having an average design capacity of 9.50 mgd. In 1977, additional facilities to provide a secondary level of treatment were added at the wastewater treatment plant and the capacity of the plant was increased from 9.50 mgd to 11.50 mgd. Hydraulically, the WPCP can handle a peak flow of 20.0 mgd. The plant retains an organic loading capacity of 19,950 lbs BOD5/day.

In January 2009, the Authority acquired the sewage collection system from the City of McKeesport. The acquisition of the City of McKeesport sewage collection system included more than 550,000 feet of sewers ranging in size from 6" to 42" and two pump stations. The acquisition moved the Authority from being a bulk treatment-only Authority with ten customers to a service Authority with more than 7,400 customers.

The Authority's interceptor system includes twenty-eight combined sewer overflows (CSOs). Steps to eliminate these overflows are taken whenever it is economically possible. Most of the redevelopment and street reconstruction projects in the City of McKeesport include the construction of both new sanitary and storm sewers. This storm sewer separation reduces both the volume of combined sewer overflow being discharged to local waterways and peak hydraulic loadings to the treatment plant.

Figure 2 is an illustration is of the plant flow diagram with sample points and receiving stream.

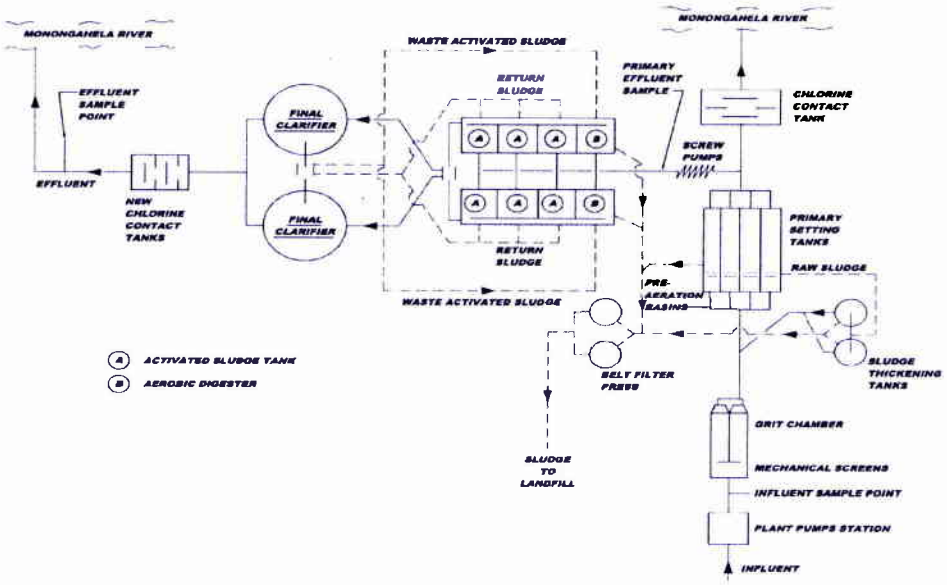


Figure 2: WPCP Treatment Schematic

The Authority and its tributary municipalities initiated an Act 537 Sewage Facilities Study to identify the technical and institutional state of the wastewater infrastructure in the service area, and to provide alternatives and recommendations based on existing and future physical and regulatory conditions. The Study and resulting report was completed and formally adopted by all involved parties in November 2006 and approved by the PADEP on July 20, 2007.

The study and Plan report addressed and evaluated options with respect to the existing and required wastewater infrastructure for the following issues:

- Service Area Extension & Capacity Expansion
- Wet Weather Flow Issues

- Financial and Institutional Issues

The analysis presented in the Act 537 Plan identified that:

- The MACM interceptor system and WPCP has adequate capacity to respectively convey and treat average dry weather flow from the existing and proposed service areas. Future projected average daily flows at the WPCP are estimated to be 10.177 mgd.
- The cumulative maximum peak flow that would occur within the existing and possible expanded MACM service area during a 2-year, 24-hour storm would be approximately 42.5 mgd.
- During wet weather situations, current and expected flow rates exceed the hydraulic capacity of the interceptor systems, pumping stations and treatment facility.

In order to comply with the PADEP & the United States Environmental Protection Agency (EPA) requirements, a Long Term Control Plan (LTCP) was prepared, which works in concert with the ACT 537 Plan. Both plans define the following objectives related to the future MACM combined sewer system operation:

- Capture and convey to the WPCP at a minimum 350% of an average dry weather flow from the combined sewer watersheds.
- Capture and convey 100% of wet weather flow from the sanitary sewer-only watersheds.
- Eliminate sanitary sewer overflow (SSO) at the Long Run Interceptor.
- Capture, convey and provide complete treatment at the WPCP for a minimum of 85% of the total runoff from the entire watershed on an annual average basis.

The conclusion of the study determined that several capital projects must be constructed to accommodate the peak wastewater loadings supplied by the service area and comply with regulatory wet weather flow policies. As a result, the projects recommended by the selected alternative in the plan include:

- Long Run Interceptor Upgrade
- Cliff Street Pump Station Improvements
- 28th Avenue Pump Station Improvements
- Long Run Pump Station and Force Main Upgrade
- West Shore Pump Station and Force Main Construction
- MACM WPCP Expansion and Improvements

In June 2008, the Authority reached an agreement with the Elizabeth Township Sanitary Authority to accept flow from the Buena Vista service area. Based on this agreement, the Authority WPCP peak design capacity was increased to 56 mgd.

The City of McKeesport WPCP was hydraulically overloaded for three consecutive months from October to December.

The plant is not organically overloaded, and is not projected to be organically overloaded in the next five years.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2015

☒ 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:	**Municipal Authority of McKeesport**	Permit No.:	**PA0026913**
Mailing Address:	**100 Atlantic Ave.**	Effective Date:	
City, State, Zip:	**McKeesport, PA 15132**	Expiration Date:	
Contact Person:	**Charles R. Schultz**	Renewal Due Date:	
Title:	**Superintendent**	Municipality:	**McKeesport**
Phone:	**(412) 673-9701**	County:	**Allegheny**
Email:	**cschultz@mck-macm.org**	Consultant Name:	**KLH Engineers, Inc.**

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 1b**)
   ☒ DEP Chapter 94 Spreadsheet used (**Attachment 1a**)
   ☐ 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 1c**)
   ☒ DEP Chapter 94 Spreadsheet used (**Attachment 1a**)
   ☐ 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))

   The DEP Ch. 94 Spreadsheet was used. The City of McKeesport WPCP was hydraulically overloaded for three consecutive months from October to December, and is projected to be hydraulically overloaded in the next five years. The plant is not organically overloaded, and is not projected to be organically overloaded in the next five years.

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:

There were no sewer extensions built during 2015 within the City of McKeesport. Refer to Attachment [7] for information about sewer extensions constructed outside of the City of McKeesport.

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 [2].

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 collector and interceptor sewers owned and maintained by the Authority is fair to good. Sewers are under constant inspection and maintenance. Much of the sewers were built before the advent of present day construction materials and techniques and several sewersheds have substantial quantities of infiltration and inflow.

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 – **7**)
☒ Discussion of condition of each pump station attached (**Attachment 3**)

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 4**)
☐ 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 5**)

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 9**)

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 6**)

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 R. Schultz
Name of Responsible Official

C R Schultz
Signature

(412) 673-9701
Telephone No.

3-29-2016
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).

Steven H. Greenberg
Name of Preparer

Signature

(412) 494-0510
Telephone No.

3-29-16
Date

ATTACHMENT 1

PaDEP Chapter 94 Spreadsheet

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PADEP Chapter 94 Spreadsheet
Sewage Treatment Plants

Reporting Year: 2015

Facility Name: City of McKeesport Water Pollution Control

Permit No.: PA0026913

Persons/EDU: 3.5

Existing Hydraulic Design Capacity: 11.5 MGD
Upgrade Planned in Next 5 Years? YES **Year:**
Future Hydraulic Design Capacity: MGD

Existing Organic Design Capacity: 19,950 lbs BOD5/day
Upgrade Planned in Next 5 Years? YES **Year:**
Future Organic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2011	2012	2013	2014	2015
January	10.25806	13.4	11.61	11.0	10.1
February	13.70357	11.1	11.71	12.1	11.0
March	14.85484	13.3	11.08	10.4	15.8
April	15.84667	9.8	10.55	11.2	13.0
May	12.26129	10.0	8.9	11.6	8.0
June	9.64	8.6	10.33	11.3	12.7
July	9.51613	9.9	12.27	9.0	12.0
August	9.65161	8.9	8.61	9.9	8.5
September	10.53333	8.4	8.14	8.0	9.9
October	11.54839	8.5	8.33	8.1	12.35
November	12.16667	8.7	9.15	8.8	11.51
December	12.97419	12.1	11.91	10.0	15.4
Annual Avg	11.9128962	10.2	10.22	10.1	11.69
Max 3-Mo Avg	14.8016923	12.8	11.81	11.7	13.27
Max : Avg Ratio	1.24	1.25	1.16	1.16	1.14
Existing EDUs	19,225.0	20,206.0	20,206.0	20,208.0	20,229.0
Flow/EDU (GPD)	619.7	504.8	505.8	499.8	577.9
Flow/Capita (GPD)	177.0	144.2	144.5	142.8	165.1
Exist. Overload?	YES	YES	YES	NO	YES

Monthly Average BOD5 Loads for Past Five Years (lbs/day)

Month	2011	2012	2013	2014	2015
January	6,877	5,179	3,995	4,134	4,130
February	7,063	5,979	4,125	3,993	3,738
March	5,339	5,422	3,651	3,779	3,480
April	5,940	5,787	3,566	3,183	3,285
May	5,130	5,667	3,921	3,500	2,522
June	5,622	4,694	3,388	3,311	2,069
July	4,369	4,415	2,826	3,850	2,502
August	3,351	3,993	2,691	4,414	1,996
September	3,050	3,585	3,476	3,219	2,188
October	3,516	3,651	4,143	3,070	3,008
November	3,491	4,452	4,036	3,387	3,638
December	4,824	3,905	3,883	3,480	4,239
Annual Avg	4,881	4,727	3,642	3,610	3,066
Max Mo Avg	7,063	5,979	4,143	4,414	4,239
Max : Avg Ratio	1.45	1.26	1.14	1.22	1.38
Existing EDUs	19,225	20,206	20,206	20,208	20,229
Load/EDU	0.254	0.234	0.180	0.179	0.152
Load/Capita	0.073	0.067	0.051	0.051	0.043
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2016	2017	2018	2019	2020
New EDUs	11.0	11.0	11.0	11.0	11.0
New EDU Flow	0.006	0.006	0.006	0.006	0.006
Proj. Annual Avg	10.83058	10.83658	10.84258	10.84858	10.85458
Proj. Max 3-Mo Avg	12.88091	12.88804	12.89518	12.90232	12.90945
Proj. Overload?	YES	YES	YES	YES	YES

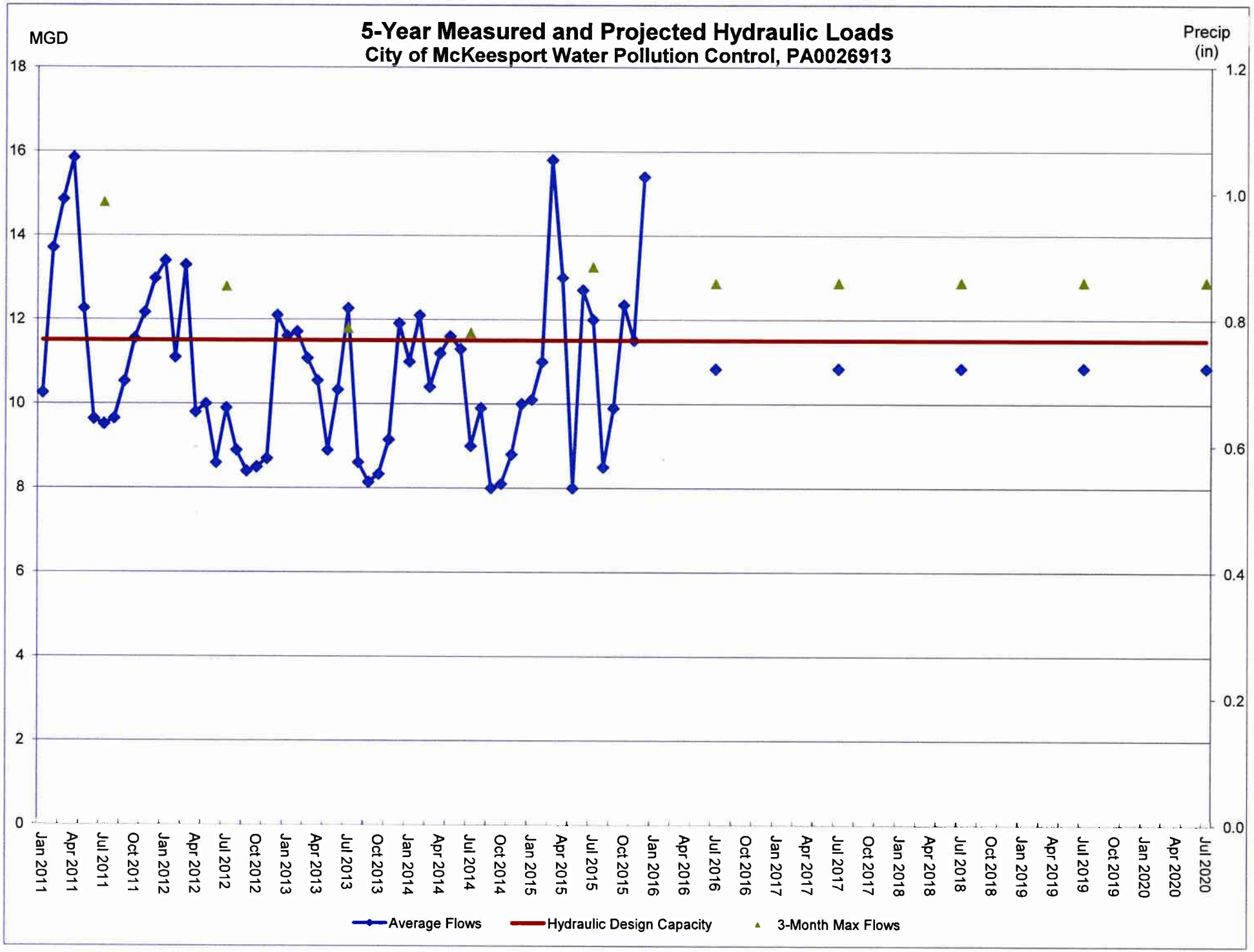
Projected BOD5 Loads for Next Five Years (lbs/day)

	2016	2017	2018	2019	2020
New EDUs	11	11	11	11	11
New EDU Load	2.196	2.196	2.196	2.196	2.196
Proj. Annual Avg	3,988	3,990	3,992	3,994	3,996
Proj. Max Avg	5,148	5,150	5,153	5,156	5,159
Proj. Overload?	NO	NO	NO	NO	NO

Show Precipitation Data on Hydraulic Graph?

Total Monthly Precipitation for Past Five Years (Inches)

Month	2011	2012	2013	2014	2015
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					


5-Year Measured and Projected Hydraulic Loads
City of McKeesport Water Pollution Control, PA0026913
MGD
Precip (in)
18
16
14
12
10
8
6
4
2
0
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan 2011
Apr 2011
Jul 2011
Oct 2011
Jan 2012
Apr 2012
Jul 2012
Oct 2012
Jan 2013
Apr 2013
Jul 2013
Oct 2013
Jan 2014
Apr 2014
Jul 2014
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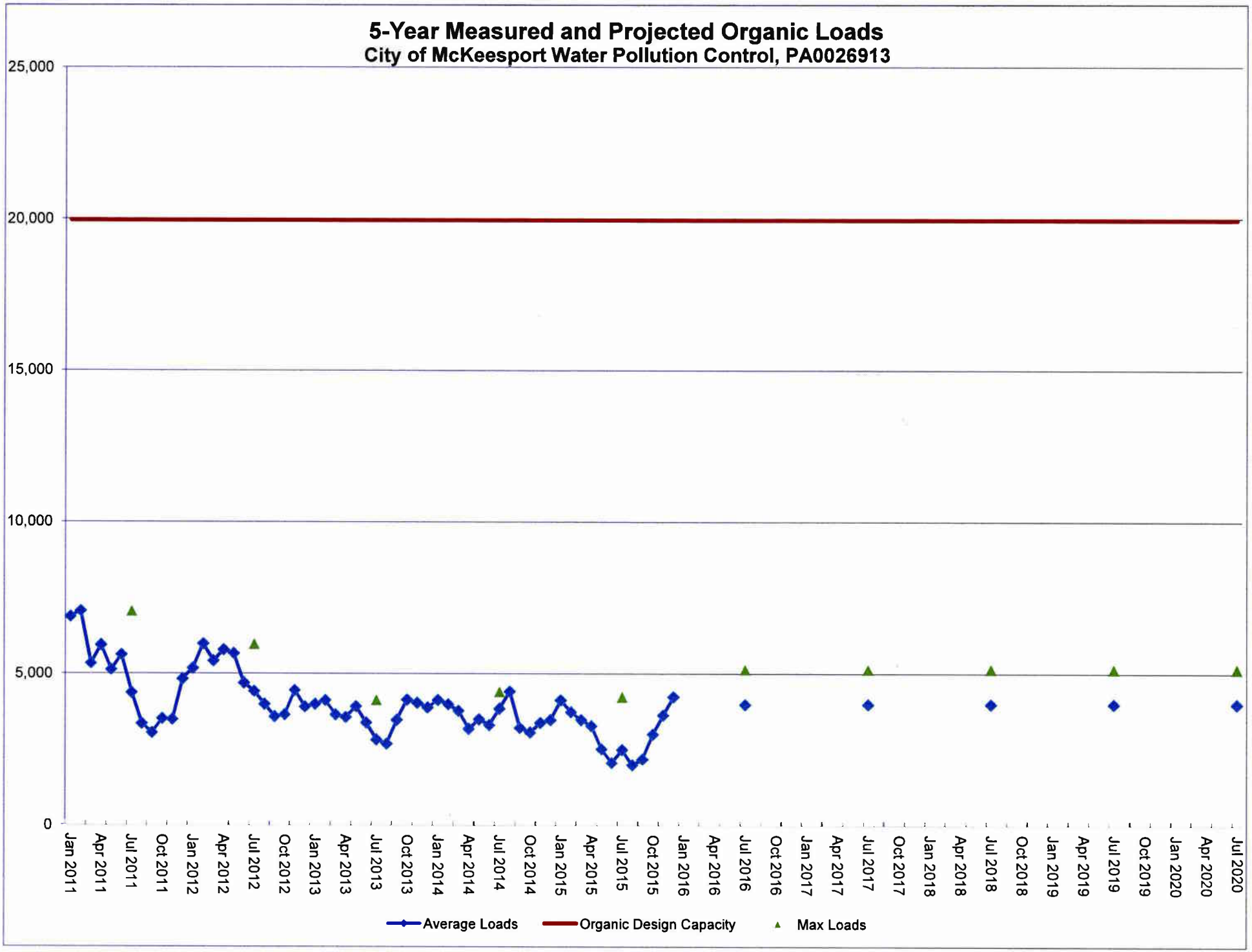
Oct 2019
Jan 2020
Apr 2020
Jul 2020
Average Flows
Hydraulic Design Capacity
3-Month Max Flows


5-Year Measured and Projected Organic Loads
City of McKeesport Water Pollution Control, PA0026913
25,000
20,000
15,000
10,000
5,000
0
Jan 2011
Apr 2011
Jul 2011
Oct 2011
Jan 2012
Apr 2012
Jul 2012
Oct 2012
Jan 2013
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Jul 2019
Oct 2019
Jan 2020
Apr 2020
Jul 2020
Average Loads
Organic Design Capacity
Max Loads

ATTACHMENT 2

Sewer System Monitoring, Maintenance, Repair, and Rehabilitation

SEWER SYSTEM MONITORING, MAINTENANCE, REPAIR, AND REHABILITATION
In accordance with § 94.12(a)(5)

Operating personnel work under the Executive Director, a certified treatment plant operator, to provide continuous full-time system operation and maintenance. Fiscal records for the Authority and other administrative duties are performed by or under the direction of the Executive Director. The Operations Manager and Facility Manager are responsible for WPCP process and maintenance, respectively.

Daily attendance of the system consists of a regular eight (8) hour day, five (5) days per week, two (2) hours on Saturday and two (2) hours on Sunday. The treatment plant contains a security system, which is electronically monitored 24 hours every day. Vital technical elements such as high wet well level, pump failures, pressure loss or power failures are a part of the monitoring system. The superintendent or his designated representative is on 24-hour call and can be reached in case of emergency.

A routine monitoring and maintenance program has been established by the Executive Director and is carried out by the maintenance crew under his supervision and direction. Sewers and manholes are checked weekly. If structural damage or blockages are found, corrective measures and repairs are undertaken immediately, if necessary. The Authority's jet/vactor truck and CCTV equipment are utilized on a regular basis to maintain and investigate the condition of the collection system. This process began in November 2010 immediately after the Authority acquired the system. The Authority also purchased flow monitors for permanent installation at the CSO structures. The CSO Report is included as Attachment 8. Cleaning is conducted on an as needed basis and repairs are made as necessary. Emergency maintenance operations include repair of broken sewer and alleviating a blocked sewer line or manhole.

Major equipment maintenance operations at the WWTP are grouped into three general service categories: preventative maintenance, corrective maintenance and major repairs. Preventative maintenance consists of functions that are generally performed while the plant is operating. Corrective maintenance measures are minor repairs made while the plant is still in operation with minimum equipment downtime. Major repairs result in a process unit being out of service. Major, corrective and preventative maintenance are performed periodically at the WWTP. Records are kept to indicate all work done.

Repairs and/or rehabilitation are carried out by the maintenance personnel. Emergency maintenance or repairs are conducted on an as-needed basis. A 24-hour emergency number is on file at the local police headquarters and a work crew can be assembled whenever required. Major repairs or rehabilitation, which requires assistance, is readily available from one of the

several contractors within the Borough area. Complaints are immediately investigated and problems are corrected as quickly as possible.

Inspection of laterals from any new customer's building or a new sewer extension is performed by the superintendent and is installed in accordance with the Sewer Users Ordinance. All sewer tap-ins for new customers are made by Borough Employees using 6" plastic pipe from the main to the user's property line. Customers are responsible from property line onward, with installation in accordance with the above mentioned user ordinance.
The Authority's NPDES permit, issued on April 22, 2008, included a compliance schedule for the management and control of CSOs. The Authority is making every effort possible to control combined sewer overflows within the system. The maintenance performed in 2015 was considered typical and preventative, consisting of repairing gates in the regulators and cleaning debris out of the gates and lines.

The general condition of the collector and interceptor sewers owned and maintained by the Authority is fair to good. As described in the previous section, sewers are under constant inspection and maintenance. Much of the sewers were built before the advent of present day construction materials and techniques and several sewersheds have substantial quantities of infiltration and inflow.

ATTACHMENT 3

Pumping Stations

PUMPING STATIONS
In accordance with § 94.12(a)(7)

There are seven (7) sewage pumping stations within the Municipal Authority of the City of McKeesport service area. They are the RIDC No. 1, RIDC No. 2, Long Run Pump Station, 28th Avenue Pump Station, Cliff Street Pump Station, Perry Street Pump Station and the WPCP Pump Station.

Table 1 demonstrates the pump stations that were constructed or refurbished and modified during the recent improvements project. The table also identifies the capacity of each station and the peak day pumping rate since the SCADA system was able to record data in August 2015.

Table 2

Pump Station	Condition	Capacity	Peak Day Experienced
WWTP Pump Station	Recently Refurbished with new pumps	23.5 MGD	16.1 MGD
West Shore Pump Station	Newly Constructed	31.5 MGD	20.42 MGD
28th Street Pump Station	Recently Refurbished with new pumps	7.94 MGD	5.33 MGD
Cliff Street Pump Station	Recently Refurbished with new pumps	7.42 MGD	6.79 MGD
Long Run Pump Station	Recently Refurbished with new pumps	9.7 MGD	2.79 MGD
Ripple Road Pump Station	Newly Constructed	5.0 MGD	1.58 MGD

As noted in the table the pump stations have sufficient capacity and flow monitoring is to be performed in accordance with the Authority's LTCP to evaluate the ability of the collection system to adequately handle projected flows.

With respect to the Perry Street Lift Station and RIDC 1 and 2, there is limited digital data recorded. That stated, no changes to the service area for these have occurred and the capacity is considered adequate.

Refer to Attachment [9] for City of McKeesport Pump Station data.

Refer to Attachment [7] for information on pumping stations owned and operated by the tributary municipalities.

ATTACHMENT 4

Industrial Waste

INDUSTRIAL WASTE
In accordance with § 94.12(a)(8)

The Municipal Authority of the City of McKeesport has developed and implemented an EPA approved Industrial Pretreatment Program. The Executive Director has established a permit system and program for monitoring. Industrial wastes at the present time do not adversely affect the operation and maintenance of the McKeesport WPCP. Refer to Attachment [7] for information on the tributary municipalities' industrial waste programs.

ATTACHMENT 5

Sewage Sludge Management Inventory

SEWAGE SLUDGE MANAGEMENT INVENTORY

During the operating year 2014, dewatered sludge was hauled to the Westmoreland Waste site (Permit No. 100277). Part C of the NPDES Permit for the McKeesport WPCP requires that monthly influent, effluent and sludge analysis for all local limit parameters be performed, as well as annual priority pollutant scan for influent and sludge. The samples were taken regularly during 2015 and the test results can be found in Attachment [8].

Table 2 provides information on monthly sludge production as wet and dry tons and on average percentage solids in the sludge removed for disposal. In 2015, 783 dry tons of sludge was removed from the plant.

Table 2: Biosolids Production (2015)

Month	Sludge Production Wet Tons	Average Percent Solids	Sludge Production Dry Tons
January	475	16.8%	79.8
February	308	16.2%	49.9
March	258	16.7%	43.1
April	352	17.0%	59.8
May	491	18.3%	89.9
June	410	20.6%	84.5
July	408	20.4%	83.2
August	246	20.7%	50.9
September	409	20.0%	81.8
October	358	18.8%	67.3
November	195	16.5%	32.2
December	345	17.5%	60.4
Total	**4,255**		**783**

Solids Management (Sludge) Calculator

This worksheet calculates the expected sludge volume that should be produced by various treatment processes over a one-year period.
Enter data into green cells - hit the Tab key to move between cells. Red cells are calculated.

Facility Name: **City of Mckeesport WPCP** Permit No.: **PA0026913**

Evaluation Period: **1/1/2015** (Enter Date) to **12/31/2015** (Enter Date)

Design Flow: **11.5** MGD Actual Annual Average Flow: **11.69** MGD

Type of Biological Treatment Process: **Activated Sludge with Primary Clarification** Treatment Factor: **0.7**

Type of Digestion Process: **Anaerobic Digestion, HDT = 30** Digestion Factor: **0.65**

Total Population Served by Treatment Plant: **50,573**

Average Annual Influent BOD5 Load (per Ch. 94 Report): **3,066.0** lbs/day

Average Annual Influent BOD5 Load (Expected based on Population): **8,597.3** lbs/day *(Population x 0.17)*

% of Influent BOD5 Load per Ch. 94 Report / Influent Load Expected: **35.7%** *(Influent Load per Ch. 94 Report / Influent Load based on Population)*

Average Annual Effluent Concentration of **CBOD5**: **7.67** mg/L ***Assume 9.204 mg/L BOD5***

Average Annual Pounds (lbs) of BOD5 Discharged: **897.34** lbs/day *(Actual Flow x Effluent BOD5 Concentration x 8.34)*

Influent BOD5 Load per Person per Day (based on Ch. 94): **0.061** *(Influent BOD5 Load per Ch. 94 Report / Population - 0.17 to 0.22 is typical)*

Pounds of BOD5 Removed (based on Ch. 94): **2,168.7** lbs/day *(Influent BOD5 Load per Ch. 94 Report - BOD5 Discharged)*

Pounds of BOD5 Removed (based on Population): **7,700.0** lbs/day *(Influent BOD5 Load Expected based on Population - BOD5*

Sludge Removed from Treatment Plant (Previous Year): **1,345.0** Dry Tons = **2,690,000** Dry lbs

Sludge Production and Wasting Calculations

Based on Chapter 94 Report		***Based on Population***	
2,168.7	BOD5 Removed / Day (lbs)	7,700.0	BOD5 Removed / Day (lbs)
X 0.7	Treatment Factor	X 0.7	Treatment Factor
1,518.06	Daily Solids Production (lbs)	5,389.99	Daily Solids Production (lbs)
X 0.65	Digestion Factor	X 0.65	Digestion Factor
986.74	Daily Digested Solids (lbs)	3,503.49	Daily Digested Solids (lbs)
X 365	Days per Year	X 365	Days per Year
360,160	Solids Generated / Year (lbs)	1,278,775	Solids Generated / Year (lbs)
- 2,690,000	Solids Actually Wasted / Year (lbs)	2,690,000	Solids Actually Wasted / Year (lbs)
-2,329,840	Difference (lbs)	*-1,411,225*	Difference (lbs)
747%	% of Expected Volume Wasted *(85 - 115% is generally acceptable)*	210%	% of Expected Volume Wasted *(85 - 115% is generally acceptable)*
1.5%	Percent Solids of Wasted Solids	18.3%	Percent Solids of Removed Solids
2,878,978	Volume of Solids to Remove Annually (gallons)	837,871	Volume of Solids to Remove Annually (gallons)
- 21,502,798	Volume of Solids Actually Removed Annually (gallons)	- 1,762,524	Volume of Solids Actually Removed Annually (gallons)
#########	Difference (gallons)	*-924,654*	Difference (gallons)

ATTACHMENT 6

Flow Meter Calibration Certificate

TIM

TOTAL INSTRUMENT MAINTENANCE
423 Stoneybrook Drive
Elizabeth, PA 15037

FIELD CALIBRATION CERTIFICATE

NOTE: This is a multi-part form. For legible copies, please press firmly when entering data.

Certificate No CC T.I.M.-1563

Customer Information: _____ **Ref PO No** _____

Company M.A.C.M.

Site Address 100 Atlantic Ave.

City McKeesport State: Pa Zip 15132

Contact Information:

Name Chuck Schultz

Title Supt.

Street Address Same as above

City _____ State: _____ Zip _____

Tel [ ] _____

Instrument Data:

Description Ultrasonic flow xmtr

Manufacturer Amtek Model No. 101

Serial No. _____ Tag No. _____

Calibaration Data:

Units of Measurement

1. 4-20 mADC
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Test Equipment:

1. Fluke 8060A DVOM
2. _____
3. _____
4. _____
5. _____

Reference Data:
Ambient temperature (°F): 57°

Relative Humidity (%) _____

The instrumentation described above has been accurately calibrated under ambient conditions in accordance with the Manufacturer's documented procedures and specification. The test equipment used is calibrated and is traceable to the National Institute of Standards and technology.

Calibrated by: _____ NAME

2 Apr. 15 DATE

10/04

ATTACHMENT 7

Tributary WMRs

GLENN
ENGINEERING

January 4, 2016

Municipal Authority of the City of McKeesport
100 Atlantic Avenue
McKeesport, PA 15132

Attention: Chuck Schultz, Superintendent

Re: Act 537 Annual Progress Report – Borough of Liberty

Dear Mr. Schultz:

I am pleased to forward the eighth Annual Act 537 Report submitted on behalf of the Borough of Liberty for the year 2015.

I trust the enclosed form does address the tasks completed to date, however, should you wish any modifications or additional information, please do not hesitate to contact me at 412-824-5672, extension 111 or at susang@glennengr.com .

Cordially,

Donald M. Glenn, P.E.
Borough Engineer

Enclosure

c: Borough of Liberty

14920 Route 30 • North Huntingdon, PA 15642
412-824-5672 • Fax 412-824-9587
www.glennengr.com