

**Application of Pennsylvania-American Water Company for Acquisition of Assets of
The Municipal Authority of the City of McKeesport
66 Pa. C.S. §1329
Application Filing Checklist – Water/Wastewater
Docket No. A-2017-_____**

20. Proof of Compliance. Provide proof of compliance with applicable design, construction and operation standards of DEP or of the county health department, or both, including:
- c. For **wastewater** system acquisitions, provide a copy of the Chapter 94 Municipal Wasteload Management Report that was most recently submitted to DEP.

RESPONSE:

- c. See enclosed Chapter 94 Municipal Wasteload Management Report for The Municipal Authority of the City of McKeesport.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT

**Chapter 94 Municipal Wasteload Management Report
Dravosburg Wastewater Treatment Plant
Operating Year 2015**

KLH



**KLH CONSULTANTS, INC.
5173 CAMPBELLS RUN ROAD
PITTSBURGH, PA 15205-9733**

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
Allegheny County, Pennsylvania

Dravosburg Wastewater Treatment Plant

Chapter 94 – Municipal Wasteload Management Report
Operating Year 2015

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MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
Allegheny County, Pennsylvania

Dravosburg Wastewater Treatment 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 Dravosburg Wastewater Treatment Plant (WWTP), its associated pump station, and tributary sewage collection and conveyance sewer systems during the operating year 2015. In addition, this report includes a projection of the anticipated loadings at the WWTP for the next five years (2016-2020) and at the sewage pumping station for the next two years. DEP forms and spreadsheets were utilized in order to complete the report.

The WWTP is owned by the Municipal Authority of the City of McKeesport and is operated under NPDES Permit No. PA0028401. The WWTP discharges treated effluent to the Monongahela River, as shown in Figure 1.

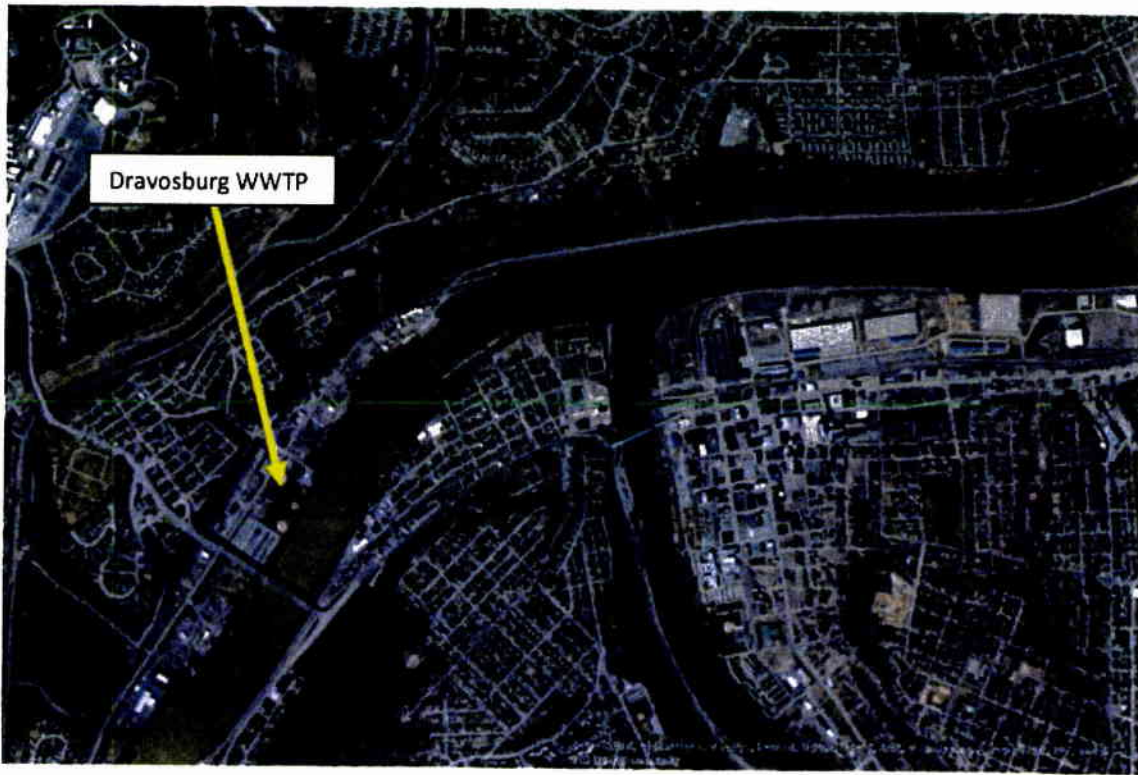


Figure 1: Dravosburg WWTP Location

The Dravosburg WWTP currently possesses a Hydraulic Design Capacity of 0.48 MGD along with an Organic Design Capacity of 2,780 lbs BOD5/day. The treatment plant is an extended aeration style activated sludge treatment plant which provides secondary treatment. The influent is a mixture of sanitary wastewater from the Richland conveyance system, sanitary wastewater from the Clay Street conveyance system, and combined wastewater from the Regulator Station. In 2001, the regulator and combined sewer overflow (CSO) pipe were reconstructed as part of the Army Corps Monongahela River Project. The reconstruction improved wastewater flows to the treatment plant by allowing more storage in the pipe, better control of flow, and stopping river water from entering the system. The CSO outfall is equipped with a flow meter to monitor bypass events at the WWTP.

Raw sewage enters the WWTP through a comminutor for the grinding of solids before the flow enters the wet well. Three raw sewage pumps in the wet well pump the sewage to the plant's receiving trough. The flow enters an aerated grit tank for the removal of heavy solids. The flow enters another trough where return activated sludge (RAS) is introduced into the sewage. The wastewater is treated in dual extended aeration tanks before continuing into dual final settling tanks, in which sludge and floatable material is removed. The plant utilizes dual chlorine contact tanks for disinfection. The treated effluent is discharged to the Monongahela River. An effluent flow meter was installed in 2010 to monitor the effluent of the WWTP.

In order to assist in maintenance, cleaning, repair or replacement of the various tanks and equipment, the WWTP has flow bypasses installed at each treatment process. The combined sewer regulator can be bypassed at the combined sewer floodgate by directing flow to the CSO or using the trunk line for temporary storage. Maintenance is performed on the working parts of the regulator without creating a bypass condition. The flow can be rerouted around the comminutor through a stationary bar screen when required. The raw sewage pumps can be individually bypassed by shutting valves on the intake, but at least one pump must always remain in operation during normal flow conditions. The grit tank has a trough around it, which can divert flow during maintenance periods. The extended aeration tanks can be shut off one at a time, but at least one tank must remain in operation. The final settling tanks and the chlorine contact tanks can also be removed from service for maintenance.

For the operating year 2015, the Dravosburg WWTP was neither hydraulically nor organically overloaded, and the plant is not projected to be overloaded within the next five (5) years.



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 the City of McKeesport - Dravosburg WWTP	Permit No.:	PA0028401
Mailing Address:	100 Atlantic Ave.	Effective Date:	12/28/99
City, State, Zip:	McKeesport, PA 15132	Expiration Date:	12/28/04
Contact Person:	Charles R. Schultz	Renewal Due Date:	
Title:	Superintendent	Municipality:	Dravosburg Borough
Phone:	(412) 673-9701	County:	Allegheny
Email:	cschultz@mck-macm.org	Consultant Name:	KLH Engineers, 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. <u>(25 Pa. Code § 94.12(a)(1))</u></p> <p>Check the appropriate boxes:</p> <p><input checked="" type="checkbox"/> Line graph for flows attached (Attachment 1b)</p> <p><input checked="" type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment 1a)</p> <p><input 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. <u>(25 Pa. Code § 94.12(a)(2))</u></p> <p>Check the appropriate boxes:</p> <p><input checked="" type="checkbox"/> Line graph for organic loads attached (Attachment 1c)</p> <p><input checked="" type="checkbox"/> DEP Chapter 94 Spreadsheet used (Attachment 1a)</p> <p><input 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))

The DEP Ch. 94 Spreadsheet was used. For the operating year 2015, the Dravosburg WWTP was neither hydraulically nor organically overloaded, and the plant is not projected to be overloaded within the next five (5) 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 new sewer extensions during the operating year 2015, and no major sewer extensions are projected for the upcoming year.

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))

Refer to 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:

Refer to Attachment [3]

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 4)

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 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 7)

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)

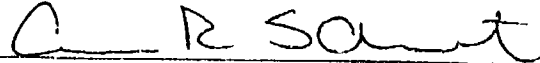
RESPONSIBLE OFFICIAL CERTIFICATION

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

Signature



(412) 673-9701

Telephone No.

Date

3-29-2016

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).

Steve Greenberg, P.E.

Name of Preparer

Signature

412-494-0510

Telephone No.

3-29-16

Date

ATTACHMENT 1

PaDEP Chapter 94 Spreadsheet

Reporting Year:

Facility Name:

Permit No.:

Persons/EDU:

Existing Hydraulic Design Capacity: MGD
 Upgrade Planned In Next 5 Years? Year:
 Future Hydraulic Design Capacity: MGD

Existing Organic Design Capacity: lbs BOD5/day
 Upgrade Planned In Next 5 Years? Year:
 Future Organic Design Capacity: lbs BOD5/day

Monthly Average Flows for Past Five Years (MGD)

Month	2011	2012	2013	2014	2015
January	0.312	0.383	0.24536	0.31465	0.24385
February	0.566	0.245	0.24436	0.34396	0.24079
March	0.441	0.321	0.23639	0.245	0.41465
April	0.469	0.182	0.20837	0.287	0.31703
May	0.296	0.174	0.14923	0.3039	0.17975
June	0.181	0.141	0.24287	0.2557	0.3164
July	0.17	0.169	0.36639	0.16597	0.22126
August	0.181	0.118	0.16439	0.19568	0.09226
September	0.217	0.147	0.12443	0.10973	0.09226
October	0.281	0.14	0.14697	0.12442	0.14816
November	0.291	0.164	0.1964	0.19	0.1274
December	0.339	0.305	0.39874	0.23355	0.193

Annual Avg	0.312	0.207	0.226906	0.23079671	0.215551
Max 3-Mo Avg	0.492	0.338	0.264904	0.35245048	0.324157
Max : Avg Ratio	1.58	1.63	1.17	1.53	1.50
Existing EDUs	850.0	850.0	850.0	852.0	854.0
Flow/EDU (GPD)	367.1	243.5	266.9	270.9	252.4
Flow/Capita (GPD)					
Exist. Overload?	NO	NO	NO	NO	NO

Projected Flows for Next Five Years (MGD)

	2016	2017	2018	2019	2020
New EDUs	2.0	2.0	2.0	2.0	2.0
New EDU Flow	0.0006	0.0006	0.0006	0.0006	0.0006
Proj. Annual Avg	0.23905	0.23965	0.24025	0.24085	0.24145
Proj. Max 3-Mo Avg	0.35419	0.35508	0.35596	0.35685	0.35774
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					

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

Month	2011	2012	2013	2014	2015
January	126	150	91	68	142
February	69	94	101	105	183
March	201	134	105	73	263
April	235	111	111	78	238
May	197	122	49	68	114
June	162	111	31	42	148
July	88	94	49	49	42
August	51	48	45	66	29
September	60	49	28	40	16
October	70	74	52	55	23
November	64	111	71	72	28
December	194	94	115	105	27

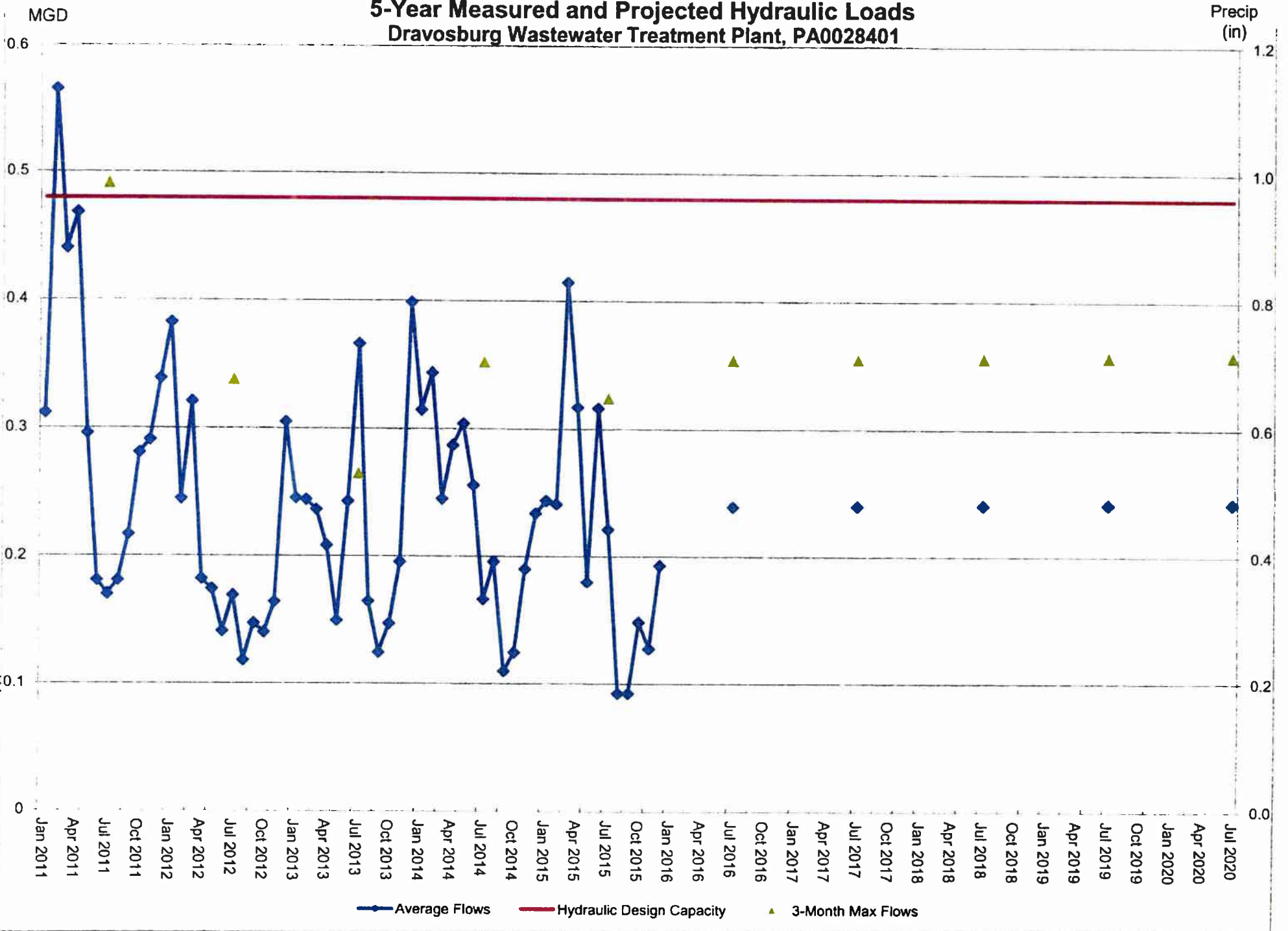
Annual Avg	126	99	71	68	104
Max Mo Avg	235	150	115	105	263
Max : Avg Ratio	1.86	1.51	1.63	1.54	2.52
Existing EDUs	850	850	850	852	854
Load/EDU	0.149	0.117	0.083	0.080	0.122
Load/Capita					
Exist. Overload?	NO	NO	NO	NO	NO

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

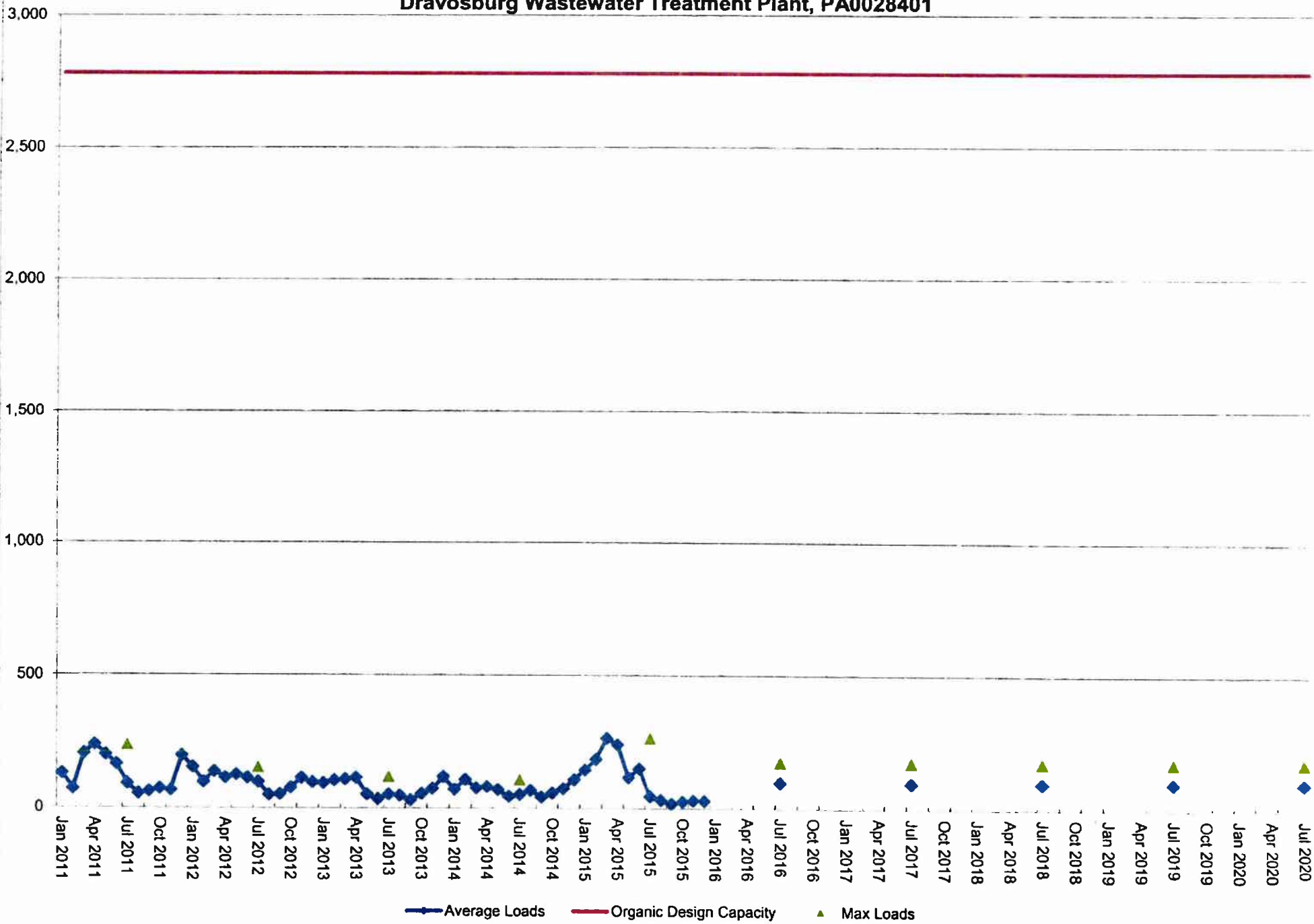
	2016	2017	2018	2019	2020
New EDUs	2	2	2	2	2
New EDU Load	0.220	0.220	0.220	0.220	0.220
Proj. Annual Avg	94	94	94	95	95
Proj. Max Avg	170	171	171	171	172
Proj. Overload?	NO	NO	NO	NO	NO

5-Year Measured and Projected Hydraulic Loads

Dravosburg Wastewater Treatment Plant, PA0028401



5-Year Measured and Projected Organic Loads Dravosburg Wastewater Treatment Plant, PA0028401



ATTACHMENT 2

Sewer System Monitoring, Maintenance, Repair, and Rehabilitation

SEWER SYSTEM MONITORING, MAINTENANCE, REPAIR, AND REHABILITATION

In accordance with § 94.12(a)(5)

The Municipal Authority of the City of McKeesport is responsible for the operation and maintenance of the Dravosburg WWTP, approximately 9 miles of its collector and interceptor sewers and the pump station. These responsibilities include the administration, operation, maintenance and monitoring of the plant and sewer system.

The routine monitoring employed at the WWTP is conducted in compliance with state permit requirements and federal National Pollutant Discharge Elimination System (NPDES) permit requirements. The parameters monitored are as follows:

- Total Flow
- CBOD₅
- Total Suspended Solids (TSS)
- pH
- Fecal Coliform
- Total Residual Chlorine (TRC)

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.

Maintenance of the sewage collection and conveyance system includes the inspection of manholes, sewers and the pump station. Cleaning is conducted on an as needed basis. The pump station is checked frequently for unusual conditions and the pumps are inspected internally for wear or damage. Repairs are made as necessary. Emergency maintenance operations include repair of broken sewer or force main and alleviating a blocked sewer line or manhole.

CONDITION OF THE SEWER SYSTEM
 In accordance with § 94.12(a)(6)

The service area of the Dravosburg WWTP is divided into four major conveyance systems. The McClure Street trunkline is a combined sewer system which serves a portion of the Borough of Dravosburg. This portion was revised as part of the Monongahela River Locks and Dam Project, which removed the brick sewer line and replaced it with a 60" and 72" pipe. Included in the McClure Street section of the system are the Riverview gravity section and the Bettis Road Pump Station service area. The third major conveyance system serves the Richland Avenue area. This system is strictly sanitary and serves a portion of the Borough of Dravosburg. The fourth major conveyance system serves the North Hills area. This system is strictly sanitary and serves a portion of the Borough of Dravosburg.

The total pipe lengths of all sewers in the Dravosburg WWTP conveyance system are as follows:

Table 1: Dravosburg Sewer System – Pipe Components

Pipe Diameter (inches)	Length (feet)
8	24,577
10	7,957
12	7,396
15	320
18	2,376
20	360
24	1,440
60	428
72	2,227
brick eggshape	613
6" force main	1,100
Total (feet)	48,794
Total (miles)	9.24

The general condition of the sewer system is fair, with parts of the system being relatively new. The central combination sewer system is the oldest area in the system and has shown problems in the past. The Riverview area has had some internal problems in the past.

ATTACHMENT 3

Pumping Stations

PUMPING STATIONS

In accordance with § 94.12(a)(7)

There is one pump station in the Dravosburg WWTP conveyance system, and it is located along Bettis Road. The pump station was rebuilt in 2006. The Bettis Road Pump Station has a design capacity of 0.252 mgd.

There is little to no development expected in the area which is tributary to the Bettis Road Pump Station. Therefore, no increase in peak flows is anticipated within the next two years.

ATTACHMENT 4
Sewage Sludge Management Inventory

Sewage Sludge Management Inventory

Table 2 provides information on the monthly quantity (dry tons) of biosolids (sludge) production. No sludge was hauled from the WWTP during the operating year 2015.

Table 2: Biosolids Disposal (2015)

Month	Dry Tons
January	0.00
February	0.00
March	0.00
April	0.00
May	0.00
June	0.00
July	0.00
August	0.00
September	0.00
October	0.00
November	0.00
December	0.00
Total	0.00

ATTACHMENT 5

Flow Meter Calibration Certificate



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 xmt.

Manufacturer Amtek Model No. 101

Serial No. _____ Tag No. _____

Calibration Data:

Test Equipment:

Units of Measurement

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

- 1. Fluke 8060 A DVM
- 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:

Kim Poyfale
NAME

2 Apr 815
DATE

ATTACHMENT 6

CSO Report

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
Allegheny County, Pennsylvania

DRAVOSBURG
Annual Combined Sewer Overflow Status Report
Operating Year 2015

1.0 Introduction

The Municipal Authority of the City of McKeesport (Authority) owns, operated and maintains the Dravosburg Wastewater Treatment Plant (WWTP), its associated pump station, and tributary sewage collection and conveyance sewer systems. The Authority operates the plant under National Pollutant Discharge Elimination System (NPDES) Permit No. PA0028401. As required by the NPDES Permit, the Authority is required to submit an Annual Combined Sewer Overflow (CSO) Status Report to the Pennsylvania Department of Environmental Protection (PADEP) on March 31 of each year with the annual Municipal Wasteload Management Report required by 25 PA Code Chapter 94, Section 94.12. This report shall meet those requirements.

The Authority owns, operates and maintains one (1) CSO outfall which serves as a combined sewer overflow necessitated by storm water entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and is permitted to discharge only for such reason. The permitted CSO outfall is located at the Dravosburg WWTP.

2.0 Summary of CSO Discharges for 2015

During the operating year 2015, CSO discharges occurred within the Dravosburg combined sewer system. Each discharge is monitored for cause, frequency, duration and quantity of flow. The data is recorded and reported as an attachment to the monthly discharge monitoring report (DMR) using the Department-provided DMR for CSOs. Monitoring is undergone in compliance with the requirements of the NPDES Permit. The CSO DMRs for the operating year 2015 are included in this Attachment. A summary of the total monthly and annual wet weather CSO discharges is provided in the following Table.

Table 1: Annual CSO Status Summary

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

3.0 Water Quality Impacts

CSOs contain untreated domestic, commercial and industrial wastes, as well as surface runoff. Thus, many different types of contaminants may be present in the discharges. Contaminants may include pathogens, oxygen-demanding pollutants, suspended solids, nutrients, toxics and floatable matter. The presence of such contaminants in CSOs can cause a variety of adverse impacts on the physical characteristics of surface water, impair the viability of aquatic habitats, and pose a potential threat to drinking water supplies.

4.0 Implementation of the Nine Minimum Controls

The Nine Minimum Controls (NMCs) are identified in the Environmental Protection Agency (EPA) CSO Control Policy as minimum technology-based controls that can be used to address CSO problems without extensive engineering studies or significant construction costs, prior to the implementation of long-term control measures. The NMCs are listed and efforts to implement them are outlined as follows:

1. Proper operation and regular maintenance programs for the sewer system and the CSOs

The Municipal Authority of the City of McKeesport conducts inspection and maintenance of the outfall on a regular basis. Inspections are conducted and evidence of overflows is recorded on a field inspection log. Whenever blockages or clogging is found, the debris is cleared and removed from the CSO regulator. The number of regulator inspections and blockages found and corrected are provided in this Attachment.

The Authority also conducts catch basin cleaning, repairs and replacement as necessary. The 2015 catch basin repair and replacement records are included in this Attachment.

2. Maximum use of the collection system for storage

The Authority makes every effort possible to maximize storage within the collection system. The regulator gate is set to achieve maximum storage.

3. Review and modification of pretreatment requirements to assure CSO impacts are minimized

There are no industrial dischargers served by the Dravosburg WWTP. The service area has no industrial sources and does not expect any to move into the area. Therefore, there are no industrial impacts on the Dravosburg CSO.

4. Maximization of flow to the publicly owned treatment works for treatment

The Authority makes all efforts possible to maximize flow to the treatment plant. The regulator gate is adjusted as necessary to maximize this effort.

5. Prohibition of CSOs during dry weather

Dry weather CSO discharges are prohibited and none were experienced during the operating year 2015. If a dry weather overflow is experienced, however, the Allegheny County Health Department is notified immediately.

6. Control of solid and floatable materials in CSOs

The Borough of Dravosburg performs routine street-sweeping in effort to implement the NMCs. Additionally, the regulator contains a screen which collects solids. The solids are then removed by Authority personnel. These efforts help to control solids and floatables in the CSO.

7. Pollution prevention

The street sweeping program helps to prevent pollution, as it keeps solids and floatables from entering the combined sewer system and being discharged into the river through a CSO outfall. Additionally, the screen in the CSO regulator collects solids and floatables that make it into the sewer system. Authority personnel clean the regulator on a routine basis.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts

The Authority conducts water pollution training at several schools including White Oak Middle School, South Allegheny Elementary School and Cornell Middle School. This allows the Authority to reach out to the children about the importance of protecting our waterways for the future. The Authority spoke with approximately 400 students in 2014.

In addition, the Authority has a booth at the International Village at Renzie Park each year. Games are available for adults and children along with literature about water pollution prevention. The Authority spends time answering questions from concerned home owners from

the McKeesport area and beyond. This annual event allows the Authority to reach out to hundreds of people.

The Authority always has an employee on the Household Hazardous Waste Collections Task Force and numerous volunteers that attend several events annually.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls

As previously discussed, the Authority conducts routine inspections of the CSO regulator. These inspections occur after major wet weather events. Chalk is utilized on the walls of the outfall structure to identify any suspected overflow event. The Authority has installed a flow meter to monitor overflows at the outfall. Total daily rainfall is monitored using a rain gauge installed at the City of McKeesport treatment plant. The daily total inches of rain that caused each CSO discharge during 2015 is reported monthly in the supplemental DMR for CSOs and is included in this Attachment.

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	0.01
3-Jan	
4-Jan	0.10
5-Jan	0.02
6-Jan	0.21
7-Jan	
8-Jan	
9-Jan	
10-Jan	0.08
11-Jan	0.01
12-Jan	0.41
13-Jan	0.20
14-Jan	0.12
15-Jan	
16-Jan	
17-Jan	0.02
18-Jan	0.13
19-Jan	
20-Jan	
21-Jan	
22-Jan	
23-Jan	
24-Jan	
25-Jan	
26-Jan	
27-Jan	0.15
28-Jan	
29-Jan	
30-Jan	0.01
31-Jan	
Total	1.47

February Daily Rainfall	
Date	Precipitation (in)
1-Feb	
2-Feb	0.27
3-Feb	0.01
4-Feb	
5-Feb	0.45
6-Feb	0.03
7-Feb	
8-Feb	0.02
9-Feb	
10-Feb	
11-Feb	0.05
12-Feb	0.01
13-Feb	
14-Feb	0.15
15-Feb	0.03
16-Feb	
17-Feb	0.01
18-Feb	0.18
19-Feb	0.18
20-Feb	0.09
21-Feb	0.28
22-Feb	
23-Feb	0.01
24-Feb	
25-Feb	
26-Feb	0.01
27-Feb	
28-Feb	
29-Feb	
Total	1.78

March Daily Rainfall	
Date	Precipitation (in)
1-Mar	
2-Mar	
3-Mar	0.01
4-Mar	0.15
5-Mar	
6-Mar	
7-Mar	
8-Mar	0.05
9-Mar	
10-Mar	
11-Mar	
12-Mar	0.84
13-Mar	
14-Mar	
15-Mar	0.05
16-Mar	
17-Mar	
18-Mar	
19-Mar	0.12
20-Mar	
21-Mar	0.05
22-Mar	
23-Mar	
24-Mar	
25-Mar	
26-Mar	
27-Mar	
28-Mar	0.04
29-Mar	0.67
30-Mar	0.11
31-Mar	
Total	2.09

April Daily Rainfall	
Date	Precipitation (in)
1-Apr	
2-Apr	0.50
3-Apr	0.36
4-Apr	0.65
5-Apr	
6-Apr	
7-Apr	0.04
8-Apr	0.07
9-Apr	
10-Apr	
11-Apr	0.25
12-Apr	0.01
13-Apr	
14-Apr	0.18
15-Apr	0.23
16-Apr	
17-Apr	
18-Apr	
19-Apr	
20-Apr	
21-Apr	
22-Apr	0.04
23-Apr	
24-Apr	
25-Apr	0.25
26-Apr	
27-Apr	
28-Apr	0.48
29-Apr	0.17
30-Apr	0.75
Total	3.98

May Daily Rainfall	
Date	Precipitation (in)
1-May	0.02
2-May	
3-May	0.18
4-May	
5-May	
6-May	
7-May	0.17
8-May	
9-May	
10-May	0.54
11-May	
12-May	0.24
13-May	0.52
14-May	0.03
15-May	0.84
16-May	0.25
17-May	0.13
18-May	
19-May	
20-May	
21-May	
22-May	
23-May	
24-May	
25-May	
26-May	
27-May	0.01
28-May	1.42
29-May	0.03
30-May	
31-May	
Total	4.38

June Daily Rainfall	
Date	Precipitation (in)
1-Jun	
2-Jun	
3-Jun	0.55
4-Jun	0.22
5-Jun	0.11
6-Jun	
7-Jun	
8-Jun	0.09
9-Jun	
10-Jun	
11-Jun	0.30
12-Jun	1.00
13-Jun	0.74
14-Jun	
15-Jun	
16-Jun	
17-Jun	
18-Jun	0.42
19-Jun	0.36
20-Jun	0.01
21-Jun	0.58
22-Jun	0.01
23-Jun	
24-Jun	0.47
25-Jun	0.39
26-Jun	
27-Jun	
28-Jun	0.23
29-Jun	0.31
30-Jun	0.03
Total	5.82

July Daily Rainfall	
Date	Precipitation (in)
1-Jul	
2-Jul	
3-Jul	0.06
4-Jul	
5-Jul	
6-Jul	
7-Jul	
8-Jul	0.09
9-Jul	
10-Jul	
11-Jul	
12-Jul	
13-Jul	0.42
14-Jul	
15-Jul	
16-Jul	
17-Jul	
18-Jul	0.05
19-Jul	0.84
20-Jul	0.01
21-Jul	
22-Jul	
23-Jul	0.01
24-Jul	
25-Jul	
26-Jul	0.44
27-Jul	0.59
28-Jul	0.09
29-Jul	
30-Jul	0.03
31-Jul	
Total	2.63

August Daily Rainfall	
Date	Precipitation (in)
1-Aug	0.05
2-Aug	0.28
3-Aug	1.41
4-Aug	0.01
5-Aug	
6-Aug	
7-Aug	
8-Aug	
9-Aug	
10-Aug	
11-Aug	0.22
12-Aug	0.98
13-Aug	0.04
14-Aug	
15-Aug	
16-Aug	
17-Aug	0.03
18-Aug	0.06
19-Aug	
20-Aug	1.30
21-Aug	0.07
22-Aug	0.29
23-Aug	0.01
24-Aug	
25-Aug	
26-Aug	
27-Aug	0.12
28-Aug	
29-Aug	
30-Aug	
31-Aug	1.08
Total	5.95