2015
Municipal Wasteload Management Report

Prepared for:

Ebensburg Municipal Authority

Ebensburg Borough, Cambria County
Pennsylvania

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TABLE OF CONTENTS

1. Introduction....1
2. Wastewater Treatment Facilities....1
3. Hydraulic Loadings and Projections....3
4. Organic Loadings and Projections....5
5. Wasteload Management Plan....6
6. Industrial Wastes....10
7. Sewer System Extensions....11
8. Sewer System Monitoring, Maintenance, Repair, & Rehabilitation....11
9. Condition of the Sewer System....13
10. Combined Sewer System - Annual CSO Report....15
11. Condition of the Pumping Stations....19
12. Sludge Production and Disposal....23
13. Certification of Preparer and Permittee....24

TABLES:

Table 1 - Average Monthly Hydraulic Loadings and Annual Flow Projections

Table 2 - Average Monthly Organic Loadings and Annual BOD Projections

Table 3 - 2015 Industrial Park, Industrial Park-South and Emerald Estates Pump Station Flow Estimates and Projections

EXHIBITS:

Hydraulic Loadings Graph

Organic Loadings Graph

ATTACHMENTS:

Flow Meter Calibration Certificate

2015 Annual Sewage Sludge Management Inventory

2015 Monthly CSO Data and Management Activities Summary

1. Introduction

Preparation of an annual Municipal Wasteload Management Report is required pursuant to Title 25, Chapter 94 of the PA Code. This chapter applies to the Ebensburg Municipal Authority (EMA) as the owner and operator of a public wastewater treatment plant (WWTP) and the associated collection and conveyance system. The purpose of the chapter is to manage wasteloads discharged to the sewer system to prevent the occurrence of overloaded facilities and to limit extensions and connections to all sewer systems that may be determined to be, or may become overloaded.

Please note, in reviewing this report, that portions of the following narrative, tables and graphs contain information that has been derived from or based, in part, upon narrative and data obtained from previous annual reports and documents prepared by L.R. Kimball of Ebensburg, PA.

2. Wastewater Treatment Facilities

The Ebensburg Municipal Authority (EMA) owns a wastewater collection and conveyance system and a treatment facility which serve customers in Ebensburg Borough and portions of Cambria Township in Cambria County. The wastewater collection, conveyance and treatment systems are operated and maintained by the Borough of Ebensburg under a management agreement with the EMA while the wastewater treatment plant is managed by the Severn Trent Environmental Services under a sub-contract with the Borough.

The EMA wastewater treatment facility operates under National Pollutant Discharge Elimination System (NPDES) Permit No. PA0022292 and discharges at Outfall 001 to the Howell's Run. The flow and organic loading limits established in the most recent NPDES permit are 2.0 MGD for hydraulic loading and 2,652 lbs/day average monthly loading of BOD for organic loading.

An upgrade of the treatment plant was completed in 1990 which converted the existing 1.25 MGD trickling filter plant to a 1.25 MGD activated sludge treatment plant utilizing the sequencing batch reactor (SBR) process. An expansion of the SBR treatment plant was completed in 2008 which increased the hydraulic treatment capacity of the plant to 2.0 MGD (5.5 MDG peak) and increased the organic loading capacity from 2,130 lbs/day to 2,652 lbs/day.

The current SBR treatment plant consists of a mechanical bar screen, a grit removal unit, a grit classifier, four SBR tanks, an ultraviolet disinfection system, an effluent reaeration tank, an effluent ultrasonic flow meter, a process water storage tank, two sludge thickeners, four aerobic digester tanks, and a sludge dewatering centrifuge.

The EMA collection and conveyance system also contains two (2) permitted Combined Sewer Overflows, referred to as the Griffith's Field Diversion Structure (Outfall 002) and the Shenkle Mill Road (aka Lakeview Road) Diversion Structure (Outfall 003). Both CSOs discharge to Howells Run. The CSOs serve the remaining combined sections of the collections system. The Griffith's Field CSO serves Sub-system 3 of the collection system while the Shenkle Mill Road CSO serves Sub-system 4. Both CSOs are equipped with flow meters which log operation of the CSOs. The CSOs are operated and maintained in accordance with the EMA CSO Long Term Control Plan and Nine Minimum Controls. Terms and conditions of the current NPDES permit for the WWTP call for both CSOs to be eliminated and for all flows to be conveyed to the WWTP. To accomplish this goal, the EMA is currently undertaking a comprehensive inflow and infiltration evaluation which will be utilized to develop a project or projects aimed at reducing extraneous wet weather flows entering the sewer system to levels that will eliminate discharges from the CSOs and enable the CSOs to be abandoned. It is anticipated that the projects will involve the separation of storm sewers from the sanitary sewer system and replacement of a substantial portion of the collection systems tributary to these CSOs. The status of the evaluation is discussed in more detail in Section 4 of this report

3. Hydraulic Loadings and Projections

Table 1-A (found in the "Tables" section at the end of this report) presents average daily flows for each month of the past five (5) year operating period. Average daily flow rates for each month shown represent the arithmetic mean of all daily flow measurements collected over each calendar month. Table 1-A also presents the annual average flow for each year of the previous five year operating period as well as the average of the maximum three consecutive monthly flows and the ratio between these flows. In 2015, the annual average monthly flow to the treatment plant was 0.913 MGD and the "rolling" maximum three consecutive months' average (MTCMA) flow was 1.381 MGD which occurred during the three month period of February through April, 2015. Both were below the limit of 2.0 MGD established in the plant's NPDES permit limit for Chapter 94 reporting. There also were no single months during which the average daily flow exceeded the permitted hydraulic loading limit. Thus, the treatment plant was not hydraulically overloaded in 2015 as defined under Title 25, Chapter 94 of the PA Code. The Hydraulic Loading Graph in Exhibit A (found in the Exhibits section at the end of this report) is a graphical representation of the data in Table 1-A.

Table 1-B presents information relative to projected hydraulic loadings for the ensuing five year operating period. The past five year average daily flow serves as the basis for the projections. For each year of the ensuing five year operating period, increased flows due to new system connections are added to the five year average flow to result in the projected annual average flows. The five year average ratio of the maximum three consecutive months' average flow to the annual average flow for the previous five year operating period serves as the projection factor to determine whether an impending hydraulic overload exists.

The annual average hydraulic projections are based on past trends in development and the Authority's knowledge of potential developments within their service area. During 2015, only three (3) new connections equivalent to three (3) EDUs were made within the collection system owned and operated by the EMA. Two (2) were located in Ebensburg Borough and one (1) was located in the Cambria Township service area. All three connections were for single family residential uses. The additional three (3) EDUs increased the estimated total service area EDU count to 3,426.

Although there are no immediate or definite plans for new connections from existing or proposed developments, several areas of the Borough and Cambria Township that are served by the Ebensburg WWTP may experience development during the five year planning period. Both the Emerald Estates single family residential development and the S&P Estates residential development may see additional growth, with a potential additional ten (10) EDUs in Emerald Estates and twenty (20) EDUs in the S&P Estates. Additional development may also occur in the Cambria County Industrial Park – South Complex, Phase I which currently has fifteen (15) lots available for development. The proposed South Complex Phase II, which is currently in the planning stages, will provide up to an additional eighteen (18) lots for light industrial development. The potential also exists for commercial development within the SR219 and SR22 interchange. Over the previous five year period, the service area has experienced an average growth of approximately eleven (11) EDUs per year. Therefore, in order to provide for potential additional development in these areas and for potential in-fill development elsewhere in the Borough and Township service areas, an average of fifteen (15) additional EDUs per year has been used for projecting flows to be contributed from the EMA service area over the next five year planning period.

The Hydraulic Loading Graph in Exhibit A graphically depicts the projection of the annual average daily flows and the MTCMA flows over the next five years through 2020 expressed by the data in Table 1-B.

As the data tables and graph indicate, the projected hydraulic loading will remain well under the treatment plant's NPDES permitted capacity through the next five year planning period. Based upon the existing and projected hydraulic loading data, the plant is currently not hydraulically overloaded and is not projected to become hydraulically overloaded, as defined by Title 25, Chapter 94 of the PA Code.

4. Organic Loadings and Projections

Table 2-A presents the average daily organic loading for each month of the past five (5) year operating period. Average daily loads for each month shown represent the arithmetic mean of the BOD_5 loading values calculated and recorded each calendar month. Table 2-A also presents the annual average organic load for each year of the previous five year operating period as well as the maximum monthly load and the ratio between these loads. Each organic loading value shown as a monthly average was computed by utilizing the daily flow for the day the BOD_5 analysis was performed and the result of the BOD_5 analysis. The following formula derived the BOD_5 in pounds per day: BOD_5 concentration (mg/l) x daily flow rate (MGD) x 8.34 lbs./gal. (conversion factor) = pounds of BOD_5 per day. The monthly average was then obtained by averaging all BOD_5 loadings calculated through the course of each respective month.

During 2015, the annual monthly average organic loading was calculated to be 957 lbs/day which is well below the plant's permitted capacity of 2,625 lbs/day. There also were no instances where the treatment plant experienced monthly average organic loadings that exceeded the plant's permitted organic capacity. The maximum monthly average organic loading recorded in 2015 was 1,554 lbs/day and was recorded in March. Therefore, the wastewater treatment plant was not organically overloaded in 2015 as defined under Title 25, Chapter 94 of the PA Code.

Table 2-B presents information relative to projected organic loadings for the ensuing five year operating period. The five year average organic load serves as the basis for the projections. For each year of the ensuing five year operating period, increased loads due to anticipated new system connections are added to the five year average load to result in the projected annual average organic load. The average ratio of the maximum monthly load to the annual average load for the previous five year operating period serves as the projection factor to determine whether an impending organic overload exists. Projections of the annual average and one-month maximum loadings show that organic loadings are expected to remain below the permit limit through the five year planning period.

Exhibit B provides a graphical representation of the above described past and projected organic loads. Based upon the current and projected organic loading data, the plant is currently not organically overloaded and is not projected to become organically overloaded within the next five year planning period, as defined by Title 25, Chapter 94.1 of the PA Code.

5. WASTELOAD MANAGEMENT PLAN

The projected annual average monthly flow, the projected peak three consecutive month's average monthly flow, the projected annual average monthly organic loading and the projected peak month's average monthly organic loading all fall below the permitted capacity of the plant for the next five years. However, due to the age and condition of the Borough collection and conveyance system and the presence of stormwater connections to the sewer system, a significant increase in flows is experienced during wet weather as a result of inflow and infiltration. Much of the collection and conveyance system is constructed of vitrified clay pipe and was installed in the early1900's. In addition, two sections of the collection system are combined sewer systems which contain direct connections of stormwater. To reduce the wet weather induced flows and to improve the system's hydraulic conveyance and treatment capacities, the EMA has undertaken a number of projects

over the past several years, which have been aimed at reducing sources of inflow and infiltration. Previous projects have included:

1. Installation approximately 6,400 LF of cured-in-place liner in the terra cotta sewer lines serving the Cambria County Industrial Park (1997)

2. Replacement of 5,010 LF of 8" VCP pipe with SDR35 PVC pipe and precast manholes (2007)

3. Replacement of 1,230 LF of 10" VCP with SDR35 PVC pipe and precast manholes (2007)

4. Replacement of 2,540 LF of 12" VCP with SDR35 PVC pipe and precast manholes (2007)

5. Replacement of 360 LF of 12" VCP with SDR26 PVC pipe and precast manholes (2007)

6. Replacement of 820 LF of 15" VCP with SDR35 PVC pipe and precast manholes (2007)

7. Replacement of 535 LF of 18" VCP with SDR35 PVC pipe and precast manholes (2007)

8. Replacement of 1,105 LF of 6" service laterals with SDR35 PVC pipe (2007)

9. Cleaning and video inspection of the sanitary sewers in the Cambria County Industrial Park, New Germany Road, Mini Mall Road and Industrial Park Drive. Main line defects identified were repaired or replaced. In addition, repairs/replacements were made to numerous defective lateral connections to the Industrial Park's terra cotta main that had previously been lined in 1997 (2010)

The work completed in 2007 removed inflow/infiltration from the Fairground Interceptor and a portion of the West Street Interceptor that flow to the Griffiths Field CSO. Despite these improvements, a certain level of inflow and infiltration continues to exist within the system and periodic operation of the operation of both CSO Outfalls has continued to occur. In light of this, the PA DEP has included a Schedule of Compliance in the most recent NPDES permit renewal for the WWTP that requires the two CSOs to be eliminated and that all flows within the sewer system to be conveyed to the treatment plant.

To accomplish this goal, the EMA initiated a new sewer system study in last quarter of 2015 which has been designed to characterize inflow and infiltration and plan for long term collection system repairs and improvements that are aimed at reducing the wet weather flows that result in discharges from the Authority's two CSOs. Because the system flows appear to react quickly in response to rainfall and snow melt, initial investigations are aimed at identifying and reducing inflow into the system. Following the initial inflow evaluation, a characterization of the infiltration experienced will be completed. The study is being completed through use of a combination of analytical methods including smoke testing, flow metering, visual observations, and limited internal inspection of the system. At completion, the study will provide a prioritization of system needs which will be utilized to define the scope of future improvement projects. A summary of the scope of work to be provided in this study includes:

1. Generation of an updated sewer collection system map. The updated map will be used to assist with the planning of future projects.

2. Preparation of a manhole inventory. The inventory involves the inspection and inventory of all accessible manholes in the Authority system. The inspection will provide various physical and condition data about each manhole, and observations regarding leakage and potential for surface water infiltration. The data collected will be used to classify repairs needed for each manhole and to prepare a prioritized list recommended manhole repairs.

3. Collection System Smoke Testing. Smoke testing at key manholes within the system will be used to identify defects that may be allowing inflow and infiltration into the system. Smoke testing will be conducted during dry weather, low groundwater conditions to improve the effectiveness of the testing. Defects identified will be documented by address, photo number and observation log entries.

4. Flow Metering. An analysis of system flows will be performed utilizing portable flow meters to obtain flow data under various weather conditions. Flow data obtained will be used to compare normal flows to wet weather flows in an effort to quantify relative infiltration amounts and to identify areas of apparent high infiltration and to screen those areas for internal examination. The flow metering plan includes initial flow monitoring in six major sub-systems, with follow-up monitoring in upstream locations to further pinpoint problem areas contributing excess flow.

5. Internal video inspections. Internal inspection of the lines will be conducted in areas where problems were identified through visual inspections during manhole inspections, smoke testing, flow metering and other observations.

6. Final report preparation. Following completion of the preceding activities, a final report will be prepared that summarizes the results of the field investigations and records review. Each defect identified will be assigned a repair priority. Preliminary cost estimates will be prepared for remediation of defects identified in the public system along with recommendations for remediation. A list and location of defects and inflow sources identified on private lines will also prepared for use by the Authority to notify customers of the defects or violations and the follow-up action to be completed by the customer.

7. Preparation and submission of a Remediation Plan. Following review of the final report by the EMA, a Remediation Plan will be prepared which outlines projects to be undertaken along with a proposed schedule of implementation for the projects. The Plan will then be submitted to PA DEP for approval.

Authorization was granted in October 2015 by the EMA to proceed with the sewer system evaluation. To date, work on the updated system mapping has been commenced and is expected to be completed in the Spring of 2016. The manhole inventories have been completed for all manholes that were accessible or able to be located in the field. Additional manhole inventories will be completed for manholes that may be located during the internal video inspection stages of the investigation. Any remaining manholes within a proposed project area that were not inspected during the initial inventory will be located and inspected during the design phase for that specific project area. Data gathered during the manhole inspections and sewer line video inspections will be incorporated into the mapping update to improve the accuracy of the system map and project design. Six flow meters were installed on November 11, 2015 and were monitored weekly through mid-January 2016. The initial flow metering data has been reviewed and additional areas have been selected for the second round of flow metering in order to further isolate potential problem areas. The first round of internal video inspections has also been commenced. Smoke testing will be scheduled once the system mapping is completed and weather and groundwater conditions are favorable for smoke testing.

At the completion of the investigation, a Remediation Plan will be prepared and submitted to PA DEP which has been based upon the findings and recommendations in the Inflow and Infiltration Investigation report. The Remediation Plan will include a proposed implementation schedule for the completion of the proposed projects that are expected to result in a significant reduction of inflow and infiltration and the ultimate elimination of CSO 002 and CSO 003.

6. Industrial Wastes

There currently are no known industrial customers that discharge process or non-domestic wastewater to the Ebensburg wastewater system. To date, wastewater discharges from the industrial users connected to the Ebensburg sewer system have resulted in no known adverse impacts on the collection or conveyance systems, treatment plant operations, or pass-through to the receiving stream.

In accordance with the current NPDES discharge permit, annual Whole Effluent Toxicity (WET) testing was performed August 25 through September 1 2015. Testing performed for both *Ceriodaphnia dublia* and *Pimphales promelas* passed the respective endpoints for both species tested. The successful results provide support to the assertion that the treatment plant operations and processes are not adversely impacted by discharges from industrial users connected to the wastewater collection system.

In 1989, the Borough of Ebensburg adopted a comprehensive amendment to its ordinances which regulate industrial wastewater discharges. The ordinance amendments have been reviewed and approved by the PA DEP as part of the WWTP upgrade project.

7. Sewer System Extensions and Connections

No sewer line extensions were constructed and only three (3) new sewer connection permits were issued within the EMA owned and operated service area in 2015. All three connections were for single family residences which added a total of three (3) EDUs to the system. Two of the connections were located in Ebensburg Borough and one was in Cambria Township.

No extensions of service are currently planned for construction within the EMA service areas in 2016 or the immediate future.

8. Sewer System Inspection, Maintenance and Monitoring

During 2015, maintenance, daily operation and administration of the WWTP were performed by licensed treatment plant operators and maintenance personnel of Severn Trent Services, a contract WWTP operations service. The WWTP has a preventative maintenance plan which is implemented by the operators. The plan includes routine measures such as greasing pump and blower motor bearings, oil and filter changes on blowers, and cleaning and service of the plant's emergency generator, UV disinfection system, centrifuge, mechanical bar screen, solids compactor and grit washing equipment.

Required analyses and sampling frequencies of treatment plant influent and effluent are performed in accordance with the Authority's NPDES Permit for the treatment plant. NPDES compliance monitoring is performed as follows: The hydraulic loading is monitored continuously, through use of the plant's ultrasonic effluent flow meter situated immediately ahead of the UV disinfection unit. The flow meter is checked and calibrated annually. 24-hour composite samples are collected twice per week from the WWTP's influent and effluent streams utilizing two refrigerated, automatic samplers. The influent samples are analyzed for BOD and total suspended solids while the effluent samples are analyzed for CBOD, suspended

solids, ammonia-N, total nitrogen and total phosphorus. Effluent pH and dissolved oxygen (DO) concentrations are measured from grab samples collected twice per week. An Ultraviolet (UV) system is utilized for effluent disinfection. Grab samples of the post-disinfection effluent are collected twice per week and are analyzed for fecal coliform levels.

As mentioned in the Industrial Wastes section of this report, the NPDES discharge permit that was reissued for the WWTP in 2013 requires annual chronic WET testing to be performed on the WWTP effluent. WET testing was completed in August and September 2015 with passing results for both the *Ceriodaphnia dubia* and *Pimephales promelas* endpoints analyzed.

The collection system and pumping stations are operated and maintained by the Ebensburg Public Works personnel under the direction of the Public Works Superintendent. Routine and preventive maintenance and repairs were performed as necessary during the year throughout the collection system. Portions of the collection system are sewer jetted and inspected with video equipment to identify sources of groundwater infiltration and line sections in need of repair or replacement. During 2015 two sections of broken sewer mains were discovered during the sidewalk installation project in the Borough. The broken mains were situated near storm drains and were believed to be taking on stormwater. Both were repaired during the project.

During 2015, fifty-four (54) pre-sale tests were conducted on the customer service lines prior to property transfer. Six (6) were in Cambria Township and the remainder were in Ebensburg Borough. All defects identified were corrected prior to transfer. In addition to pre-sale testing, the Borough sent violation notices to the owners of the twenty-eight (28) properties identified with defects during smoke testing conducted in the Crestwood and Industrial Park areas in 2014. Fifteen (15) corrections have been verified to date. The Borough will be following up with the remaining locations in 2016.

Operation of the CSO diversion structures is monitored through use of flow meters installed within the structures. The meters continuously monitor overflow discharges and flow to the WWTP. The meters record the frequency, volume and duration of the CSO overflows. Data recorded by the meters are reported on the monthly CSO Supplemental Report forms which are submitted to PA DEP along with the monthly WWTP Discharge Monitoring Reports. Tables summarizing precipitation and flow data recorded each month for both CSOs and are provided in "Attachments" section at the end of this report. The CSOs are checked following each precipitation event and on a minimum monthly basis.

Service complaints are investigated by the Borough personnel and are managed in a timely manner. The Borough, the EMA and Severn Trent Services each have the personnel, equipment and parts necessary to complete minor repairs and to conduct routine maintenance. Major repairs requiring specialized equipment and outside assistance are handled through local contractors, when needed.

9. Condition of the Sewer System

The wastewater treatment plant is relatively new, is in good operating condition and has operated well within the discharge limits of the current NPDES discharge permit. No major repairs or improvement projects have been necessary within the treatment plant in 2015. On the contrary, the collection and conveyance system may be considered to be generally in fair, and in some areas, poor condition. The collection system has adequate capacity to convey existing dry weather flows. However, the collection system is subject to high flows resulting from wet weather inflow and infiltration. The system is also a partially combined sewer system and contains two currently permitted CSO outfalls (Outfall 002 and Outfall 003) as discussed in previous sections of this report. The wet weather flows have resulted in periodic overflow from the CSOs. During 2015, fifty-three (53) overflow events were recorded at CSO 002 and forty-nine (49) were recorded at CSO 003. Although no major improvements, repairs or replacements were necessary to be performed

within the system during 2015, it is anticipated that significant improvements (line and manhole replacements or rehabilitation and storm water separations) will be determined to be necessary in a major portion of the system, pending the outcome of the sewer system investigation that is currently underway.

As discussed in the Wasteload Management section, the EMA commenced an Inflow and Infiltration Investigation during the last quarter of 2015 which is expected to continue through a majority of 2016. The investigation is aimed at identifying and characterizing sources of inflow and infiltration into the collection and conveyance system. The results of the investigation will be utilized to develop a remediation plan and implementation schedule for projects to be undertaken to reduce wet weather induced flows within the collection and conveyance systems to a level where the CSOs are no longer needed and are ultimately able to be eliminated.

An internal video inspection is also currently being completed within the Industrial Park collection and conveyance system by the Authority's engineering consultant in an effort to locate the source or sources of infiltration within that subsystem. Wet weather flows observed emanating from the subsystem and at the Industrial Park Pump Station in 2015 are higher than expected and this system has had a history of problems in the past. Findings from this separate investigation will be used by the Borough to identify specific areas of that section of the system in need of further investigation and/or potential repair and replacement.

An abnormally high peak flow period was recorded at the Industrial Park pump station in March 2015 which is believed to have been the result of the pipe liner becoming dislodged between two manholes and allowing infiltration to enter the manhole section. The liner had been installed in several sections of the Industrial Park collection system to reduce infiltration within that section of the service area. The liner was repaired but elevated flows continue to be present within that service area. It is suspected that the liner may have become separated in additional locations within the Industrial Park service area since large amounts of

stones and debris have been found in the collection system pipes. The Borough maintenance personnel have also found significant leakage where the liner terminates in the manholes. During 2016, the Borough plans to utilize chemical grout to reseal the liner and host pipe to reduce the leakage until such time that a more comprehensive rehabilitation project may be planned and scheduled.

10. Combined Sewer System Annual CSO Report

The two system CSOs are maintained in good operating condition. No in-stream water quality impacts or adverse effects on downstream water uses are known or have been observed to exist. The following is a summary of CSO operation and status of the Nine Minimum Controls for the 2015 operating year.

CSO Operations Summary:

a. Frequency, duration, volume and cause of CSO discharges for 2015 – Outfalls 002 and 003 are currently the only active and permitted CSOs on the EMA sewer system. There were a total of fifty-three (53) recorded discharge events from CSO Outfall 002 and a total of forty-nine (49) events from CSO Outfall 003 during the 2015 operating year. The discharge events were all the result of elevated wet weather flows due to precipitation or a combination of precipitation and snow melt. A detailed listing of each event for each CSO is provided on the monthly CSO flow summary tables and the DEP monthly CSO Supplemental Reports found in "Attachments" section at the end of this report.

b. Operational Status of all overflow points – Both the CSO 002 and 003 diversion facilities and their associated equipment were functional during the 2015 operating year.

c. Identification of known or potential in-stream water quality impacts, their causes and effects on downstream water uses – No adverse impacts were observed in the receiving stream as a result of the discharges from the two CSOs, and there were no known or reported in-stream water quality impacts due to these discharge events. Flows within the receiving stream were generally elevated and turbid due to the storm event and additional rain events preceding the overflow which resulted in a dilution of the CSO discharges.

d. Summary of all actions taken during the year to implement the Nine Minimum Controls (NMC) and the CSO Long Term Control Plan (CSO-LTCP) and their effectiveness – The CSOs are checked after each significant precipitation event and at least once per month by the WWTP personnel. Any necessary maintenance or repairs are performed immediately. All CSO discharge activity is recorded and reported on monthly CSO report forms which are submitted with the monthly DMR reports. The CSO facilities are cleaned as necessary to reduce the chance of flushing accumulated debris during discharge events. More detailed operational information is provided in the following Nine Minimum Controls section.

e. A summary and progress report on implementing necessary revisions to the NMC and LTCP – The EMA, in October 2015, authorized the preparation of an Inflow and Infiltration (I/I) Investigation which is aimed at identifying sources of I/I and prioritizing recommended projects and measures that may be implemented to reduce I/I entering the sewer system and ultimately enable the elimination of both CSO facilities. The Inflow and Infiltration Investigation is currently underway and is currently planned to be completed in 2016.

f. Precipitation Data Associated with CSO Discharge Events –See the monthly summary tables of CSO events provided in "Attachments" section at the end of this report which include precipitation data for each CSO overflow event.

g. CSO Inspection Summary – Both CSOs were checked on a routine monthly basis and after each significant precipitation event during 2015 to identify any obstructions, necessary maintenance or repair, and operation of the respective CSO. CSO flow meter data is downloaded during each monthly inspection. No blockages were identified during 2015. An internal inspection of the CSO chambers is performed at least annually and is cleaned as needed.

h. List of blockages (if any) corrected or other interceptor maintenance performed, including location, date, and time discovered, date and time corrected, and any discharges to the stream observed – No blockages occurred during 2015.

i. Dry Weather Overflows – No dry weather overflows occurred during 2015.

j. Wet Weather Overflows – A total of fifty-three (53) wet weather discharge events were recorded at CSO 002 and a total of forty-nine (49) were recorded at CSO 003. Details regarding the dates, discharge flow volumes, duration and cause are included in the Summary tables found in "Attachments" section at the end of this report.

k. Chronic or Continuous Discharges – There were no chronic or continuous CSO discharges occurred during 2015. All discharges were due to stormwater flow resulting from precipitation events which elevated flows within the combined sewer system and allowed combined flows to overflow the control weirs. Overflows subsided and ceased following termination of the precipitation event and associated stormwater runoff.

Nine Minimum Controls Implementation:

a. NMC-1 Regular Operation and Regular Maintenance Program – The contract operators of the WWTP (Severn Trent Services) conduct regular operation and maintenance of the WWTP in accordance with the Preventative Maintenance Plan (PMP) developed for the WWTP. Implementation of the PMP ensures that the WWTP is capable of handling peak flows to the greatest extent feasible during and after wet weather events. The CSOs are operated and maintained by the Borough Public Works personnel. The Borough personnel inspect the CSOs after each significant precipitation event and at least once per month. The CSO Activities list provided in the "Attachments" section at the end of this report includes a summary of CSO monitoring and management activities performed during the 2015 operating period

b. NMC-2 Maximum Use of the Collection System for Storage – During the last quarter of 2014, the Borough raised the CSO weir overflow elevations by ½" to increase storage in the collection system and to divert more wet weather flow to the WWTP. Based upon flow conditions observed by the Borough personnel during 2015, raising the weir elevations further will create overflows at the WWTP and therefore will not be possible. Routine sewer jetting of collection system lines in location where debris has been found to accumulate is also performed to maintain maximum conveyance and storage capacity of the collection system

c. NMC-3 Review and Modification of Pre-Treatment Requirements – As discussed in previous reports, the Borough adopted a comprehensive amendment to its ordinances regulating industrial waste discharges in 1989. The amendments were subsequently approved by PA DEP. Ebensburg continues to maintain and enforce these pre-treatment requirements. No significant industrial users are connected to the sanitary sewer system and no existing industrial customers are known to discharge wastewater other than sanitary sewage.

d. NMC-4 Maximization of Flow to the Sewage Treatment Plant – The CSO flow data is used to evaluate the operation of the CSOs to determine if adjustments may be made to the weir elevations to send more flow to the WWTP. This data, along with flow data for the WWTP were used in 2014 to increase the elevations of the weirs by ½". Based on flow data reviewed in 2015 and the observed impacts of the increased flows in the conveyance system to the WWTP, an additional adjustment to the weir elevations will not

be feasible since an increase will cause overflows at the WWTP. Flow data will continue to be collected and monitored in 2016 to provide information for future evaluations.

e. NMC-5 Elimination of CSOs During Dry Weather – Based upon historical data collected, discharges from the CSO facilities occur during wet weather events, unless a physical obstruction or blockage of the line to the WWTP would occur that would cause a backup in the line and subsequent overflow. During 2015, no dry weather discharges were recorded or known to occur. Inspection of the CSO facilities are conducted as least monthly to check to make sure they are flowing freely to the WWTP, and within 24 hours of a significant wet weather event to make sure debris has not accumulated that may be obstructing flows to the WWTP. Should a dry weather discharge event occur, it will be reported on the monthly CSO Supplemental forms that are submitted with the DMR reports. Signage at the CSO outfalls also informs the public to notify the Borough in the event of an observed overflow during dry weather.

f. NMC-6 Control of Solid and Floatable Materials – Street sweeping is conducted on a regular basis within the service area to reduce the amount of debris washed into the combined system during wet weather. Sweeping is typically performed two to three times per month in the business district and at least once during the Spring throughout the remainder of the Borough. Trash receptacles are provided throughout the downtown area and are picked up once per week which reduces littering and subsequently reduces litter from being washed into the storm inlets on the combined system. Yard waste is collected by the Borough at a drop-off location and leaves are collected in the fall at curbside up by the Borough Public Works Department using a leaf vac and are composted at the Borough compost facility. The yard waste and leaf collection and composting helps prevent inlets and sewer lines from becoming clogged with leaf debris and helps maintain the conveyance capacity of the sewer system to the WWTP.

   The installation of screening mechanisms in each of the outfall facilities, as proposed in the 2014 Chapter 94 Report, has been deferred indefinitely since the CSOs are planned to be eliminated.

g. NMC-7 Pollution Prevention Program – The Borough currently implements both a recycling and yard waste collection program which help to reduce the potential for debris to enter the combined sewer system.

   The Borough has also developed a public education program to inform the public of the need to remove sources of extraneous water from the sewer system and the impact to the sewer system and receiving streams of dumping of cleaning chemicals, oils and hazardous materials into the sewer

system and storm inlets. The program has previously consisted of public meetings, news releases and printed materials.

Ebensburg provides a semi-annual newsletter to customers with articles regarding the need to remove sources of extraneous water from the sewer system to prevent overloading the system during wet weather and the need to avoid dumping of pollutants into the sanitary or storm sewer systems to prevent adverse impacts to the WWTP and receiving stream during wet weather discharge events. News releases and notification letters have been provided to customers prior to smoke and dye testing to explain the reasons for the testing and need to remove the extraneous water from the sewer system. The Ebensburg Borough website also includes a section that explains the smoke testing procedures, pre-sale dye testing requirements and the effects of illegal stormwater connections to the sanitary sewer system.

h. NMC-8 Public Notification of Overflow Occurrences and their Impacts – Signage is provided at both CSO outfall locations with includes warnings to the public of the potential hazards of contact with the discharge water and also provides Borough contact information in the event of an observed dry weather discharge event. The public education program and Borough website have provided information to the public regarding the risks and impacts of the discharges from the overflows.

i. NMC-9 Monitoring to Characterize the CSO Impacts and the Efficiency of Controls - Please see the "Attachments" section of this report for dates of CSO activities and related events during 2015. Characterization of the frequency, duration, and volume of CSO discharges on a monthly basis may be found in the monthly CSO Supplemental Reports and also on the CSO Flow Summary Tables found in Attachments section at the end of this report.

11. Condition of the Pumping Stations

There are currently six (6) sanitary sewage pumping stations within the EMA sewer service area. However, only four (4) of the six (6) are owned and operated by the EMA. The four EMA pump stations include the Cambria County Industrial Park Pump Station, the Cambria County Industrial Park-South Park Pump Station, the Emerald Estates Pump Station and the Ebensburg Water Treatment Plant Pump Station. The two privately owned, operated and maintained pump stations include the Cambria Co-Gen Plant Pump Station and the Ebensburg Center Pump Station.

None of the EMA pump stations are equipped with flow meters. Therefore, recorded pump runtimes are utilized to estimate flows. In addition, since the pump stations are not visited daily, daily runtime records are not available to calculate an actual peak day flow. Therefore, it is only possible to estimate flow. Flow estimates and projections are based upon the recorded pump run times, pump station rated capacities, the maximum runtime recorded during any read period, a calculated ratio of the maximum recorded runtime to the average annual daily runtime, a calculated daily peaking factor and projected growth within the pump station service area.

The average annual daily flow rate is calculated by dividing the total valid runtime hours recorded during the year by the number of days in the valid annual read period, and multiplying the result by rated capacity of the pump. The maximum weekly read period daily flow rate is similarly calculated by dividing the read period runtime hours of the weekly read period with the highest valid recorded runtime hours by the number of days in that read period and then multiplying the result by the rated pump capacity. A read period runtime may be considered to be an invalid record if a pump clog or pump control malfunction has been noted to have occurred by the system operators and the malfunction has caused the pumps to run for extended periods of time without pumping flow. Where an invalid read period has occurred, the weekly read period is not included in the runtime hours, read period days, or the annual average flow calculations since these periods would erroneously, and in many cases drastically, inflate the calculated flows and resulting peaking factors for the pump station.

The pump station's estimated maximum daily flow rate is calculated by dividing the average daily runtime hours calculated for the read period with the highest valid recorded runtime by the calculated annual average daily runtime to derive a weekly peaking factor. The weekly peaking factor is then multiplied by an assumed peaking factor of 1.3 to derive a daily peaking factor. The resulting daily peaking factor is then multiplied by the calculated average annual daily flow to derive an estimated daily peak flow for the pump station. The calculated daily

peaking factor is also applied to projected average daily flow to be generated by the additional EDUs to be connected in the service area during the next two year period to derive a peak daily flow to be contributed by the additional EDUs. The estimated peak flow from the new EDUs is then added to peak daily flow rate calculated for the pump station to derive the two-year peak daily flow rate.

Cambria County Industrial Park Pump Station – As the name indicates, this pump station serves the businesses in Cambria County Industrial Park, including the PA DEP Ebensburg District Office, the State Police Barracks, the Marine Reserve Office, a taxidermy school, a computer business, a health spa, Fiberblade, a multiple restaurants, a convenience store and garage buildings. The rated capacity of this pump station is approximately 388,880 gpd, with one pump in operation.

Based upon the 2015 pump runtime meter records, the average daily flow for this pump station in 2015 was estimated to be 99,380 gpd and the peak daily flow was estimated to be 408,038 gpd. Assuming the connection of an additional two (2) EDUs over the next two years, the projected peak day flow will increase to 410,353 gpd. Based upon these flow estimates, the rated capacity of the pump station was exceeded for a short period of time during early March, which likely required both pumps to operate during peak flow periods. Both pumps were able to handle the flows during this period and the high flows did not result in a sewer system overflow.

As discussed in the Condition of the Sewer System section of this report, the high flows experienced in March were likely due to the separation and dislodging of the pipe liner system in one section of the collection system upstream from the pump station which allowed a significant amount of groundwater to enter the system. The liner has since been repaired in that location and in 2016 the Borough maintenance personnel plan to reseal the liner termination points in several manholes to reduce leakage at these locations. It is believed that the repairs made to date have reduced the loading on the pump station that was observed in March to

levels below the pump station's rated capacity, however elevated wet weather flows continue to be apparent within the tributary system. Since the service area tributary to this pump station has continued to exhibit higher than expected flows during wet weather, the Borough has scheduled a video inspection of the system to be completed in February 2016 to identify potential sources of inflow and infiltration and areas in need of further investigation and potential repair or replacement. With respect to maintenance of the pump station, both pumps were replaced in 2015.

Cambria County Industrial Park Pump Station – South Park Pump Station – This pump station is tributary to the Cambria County Industrial Park Station and currently serves only the Gamesa Plant. At this time the Gamesa plant is not in business and is occupied only by a security guard. Therefore flows to this pump station are minimal. This pump station has a rated capacity of 167,040 gpd. Based upon 2015 pump station runtimes, the average daily flow was estimated to be 1,401 gpd and the peak daily flow was estimated to be 4,790 gpd. This station is operating well below its design capacity and is expected to continue to do so through the two year planning period. No major repairs or replacements were necessary for this pump station in 2015

Emerald Estates Pump Station - This pump station serves the Emerald Estates residential subdivision. The pump station has a rated capacity of 362,880 gpd. The station is not equipped with a flow meter so recorded pump runtimes are utilized to estimate runtimes. Based upon the 2015 pump runtime meter records, the average daily flow for this pump station in 2015 was estimated to be 8,043 gpd and the peak daily flow was estimated to be 28,665 gpd. Assuming the connection of an additional two (2) EDUs over the next two years, the projected peak day flow will increase to 30,139 gpd. Based upon these flow estimates, the pump station operated within its rated capacity in 2015 and is expected to continue to do so through the next two year planning period. During 2015, one pump was replaced at this pump station.

Ebensburg Water Treatment Plant Pump Station – This pump station serves the Ebensburg Water Treatment Plant. The rated capacity of the pump station is 245,000 gpd. During 2015, the average daily flow was approximately 20,000 gpd. Flow rates fluctuate daily depending upon water product rates and quantities of water that are wasted at any given time. During trial operation of the Dissolved Air Floatation (DAF) treatment unit at the water plant, the pump station may have experienced peak flow rates as high as 100,000 gpd. During 2015, this pump station operated within its design capacity and is expected to continue to do so during the two year planning period. Only routine maintenance was required for this pump station in 2015

Detailed pump station runtimes, flow estimates and projections for the Emerald Estates and Industrial Park Pump Stations are found on Table 3 in the "Tables" section at the end of this report.

12. Sludge Production & Disposal – Annual Sludge Management Inventory

Waste sludge from the SBR process is processed in a series of four aerobic digesters for stabilization. The existing aerobic digesters were converted from the original treatment plant's clarifier units and anaerobic digesters and have a combined volume of approximately 448,000 gallons. Once stabilized the sludge is dewatered utilizing a sludge dewatering centrifuge which typically produces dewatered sludge with a solids content ranging from 17% to 20%. During 2015, the WWTP produced 972.7 wet tons of sludge. At an average solids content of 18.37%, the 972.7 wet tons of sludge was equivalent to 178.7 dry tons. All dewatered sludge was disposed at the Laurel Highlands Landfill.

In accordance with the current NPDES permit an Annual Sewage Sludge Management Inventory has been prepared for the 2015 operating year and is included in Attachments section at the end of this report. Actual WAS volumes pumped to the digester and WAS concentrations were not recorded in 2015.

Therefore, theoretic values from the DEP Sludge Estimating worksheet for an SBR process with aerobic digesters were utilized for the calculations in the Sludge Management Inventory

During 2015, the WWTP accepted hauled in wastewater from two sources. A total of 2,500 gallons of filter backwash sludge was received from the Cresson Swimming Pool and 130,000 gallons of liquid sludge was received from the High Ridge Water Authority

CERTIFICATION OF PREPARER AND PERMITTEE:

I hereby certify that the information provided herein is true and correct to the best of my knowledge and belief.

R. Michael McClain
Stiffler, McGraw & Assoc., Inc. _____

_____
Signature of Preparer/Date

Bernard Kozlovac, Wastewater, Project Manager
Severn Trent Services _____

_____
Authorizing Signature of
Permittee/Date

Daniel L. Penatzer, Borough Manager
Borough of Ebensburg _____

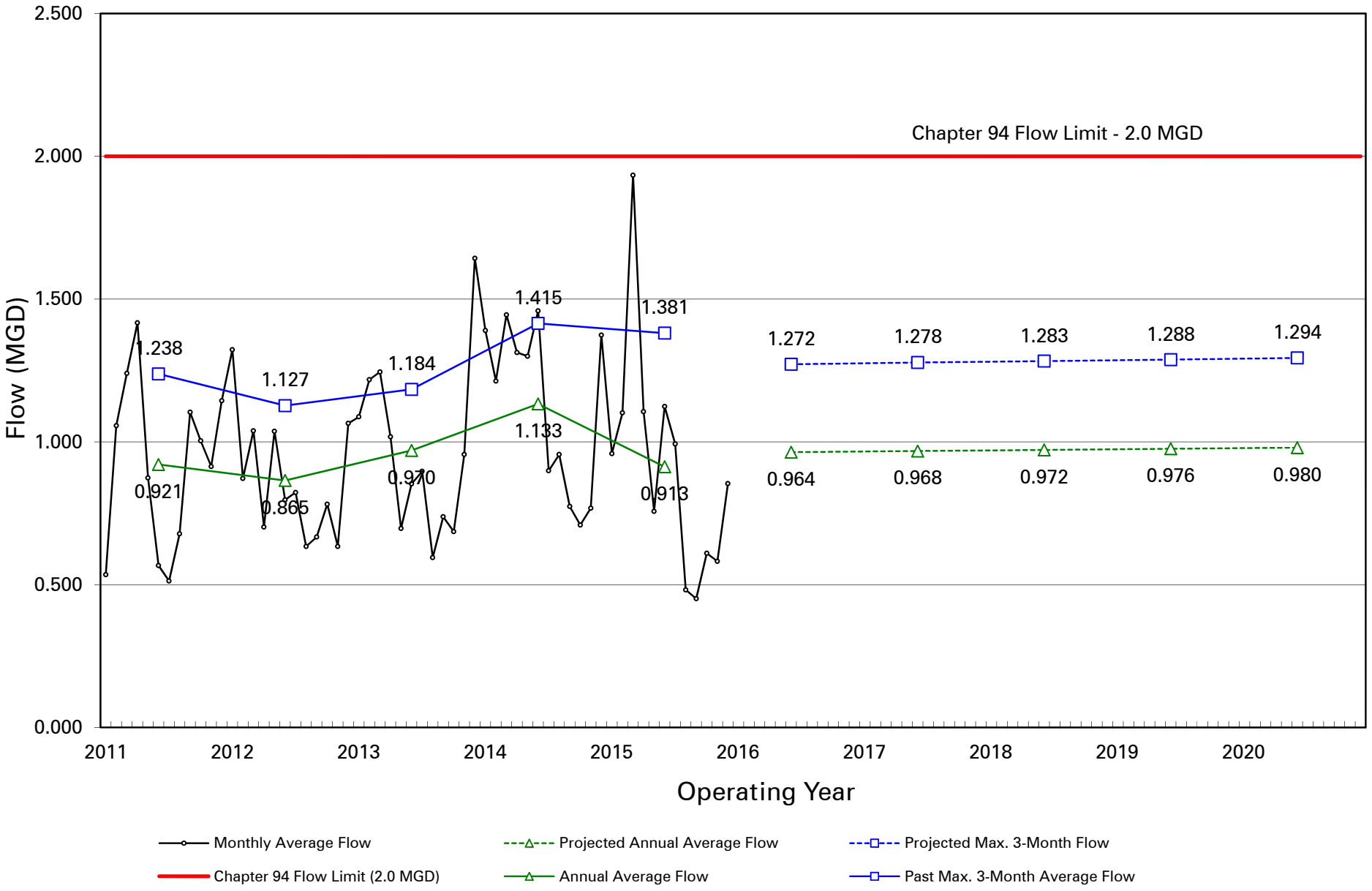
_____
Authorizing Signature of
Permittee/Date

Exhibits

EBENSBURG MUNICIPAL AUTHORITY

Wastewater Treatment Plant Hydraulic Loading Graph

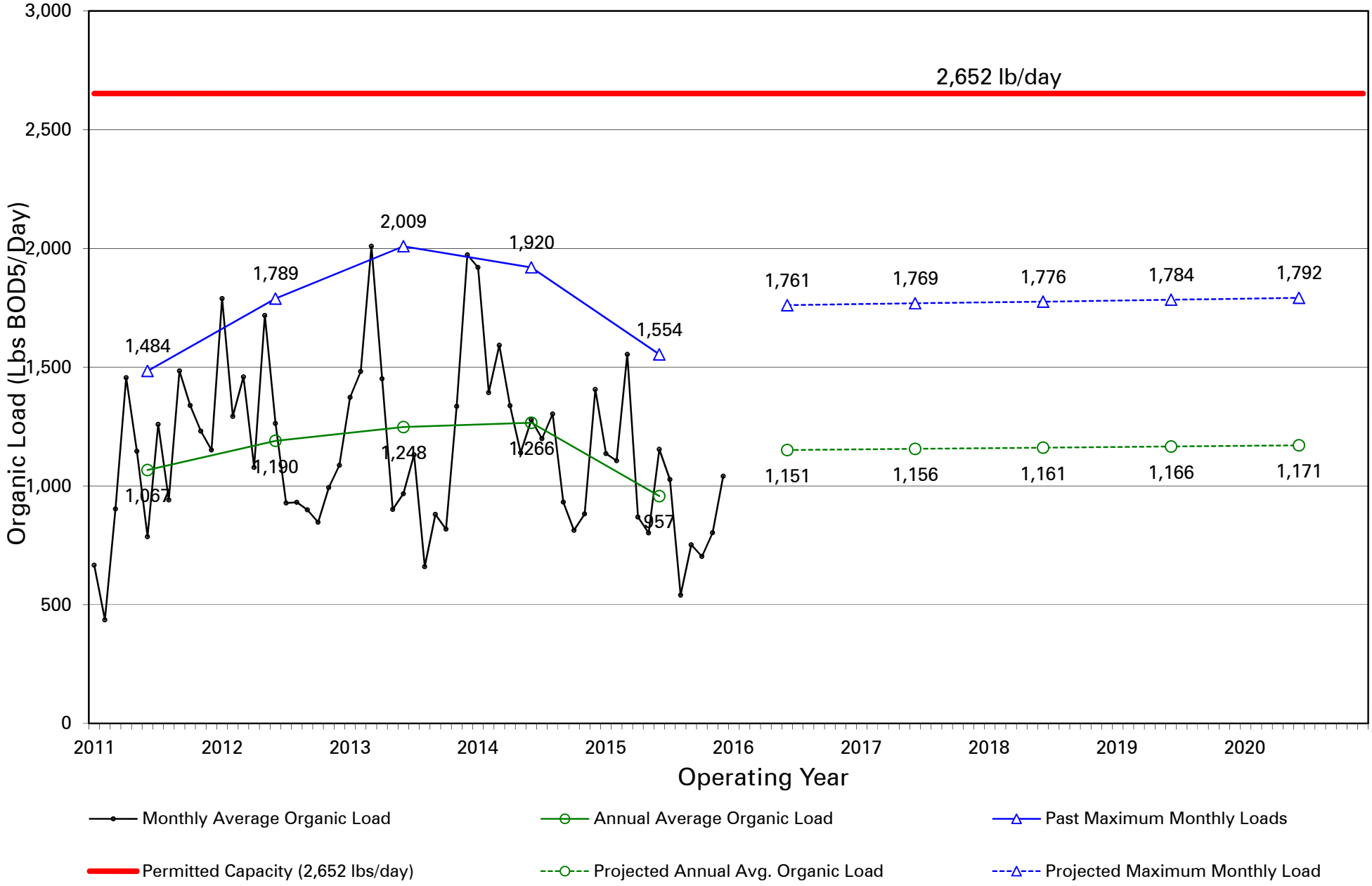
EXHIBIT A



EBENSBURG MUNICIPAL AUTHORITY

Wastewater Treatment Plant Organic Loading Graph

EXHIBIT B



Tables

EBENSBURG MUNICIPAL AUTHORITY
WASTEWATER TREATMENT FACILITY
TABLE 1 - A
HYDRAULIC LOADINGS (MGD)

HYDRAULIC LOADINGS (MGD)						
	Year					
Month	**2011**	**2012**	**2013**	**2014**	**2015**	
Jan	0.535	**1.323**	**1.088**	**1.390**	0.959	
Feb	**1.057**	0.872	**1.218**	**1.213**	**1.102**	
Mar	**1.240**	1.039	**1.245**	1.445	**1.934**	
Apr	**1.417**	0.702	1.018	1.313	**1.106**	
May	0.874	1.037	0.697	1.300	0.757	
Jun	0.567	0.797	0.853	1.459	1.124	
Jul	0.513	0.823	0.897	0.899	0.993	
Aug	0.678	0.634	0.595	0.956	0.482	
Sep	1.104	0.667	0.738	0.774	0.451	
Oct	1.004	0.782	0.686	0.709	0.610	Five Year Averages
Nov	**0.914**	0.634	0.956	0.768	0.582	
Dec	**1.144**	1.065	**1.643**	1.374	0.854	
Annual Average	0.921	0.865	0.970	1.133	0.913	0.960
MTCMA	1.238	1.127	1.184	1.415	1.381	1.269
Ratio	1.34	1.30	1.22	1.25	1.51	1.32
No. of EDUs	3,369	3,375	3,402	3,423	3,426	
Flow/EDU (gpd)	273	256	285	331	266	282

NOTES:
MTCMA is the "Rolling" Maximum Three Consecutive Months' Average Flow
Ratio is the MTCMA divided by the Annual Average Flow for the particular year.

TABLE 1 - B
PROJECTED HYDRAULIC LOADINGS (MGD)

FIVE YEAR PROJECTED HYDRAULIC LOADINGS (MGD) - 2016 - 2020							
Year	Previous Flow (MGD)	Projected Additional EDUs	Increased Flow (MGD)	Projected Flow (MGD)	Projection Factor (5 Yr Ratio)	Projected MTCMA (MGD)	Permitted Capacity (MGD)
2016	0.960	15	0.004	0.964	1.32	1.272	2.0
2017	0.964	15	0.004	0.968	1.32	1.278	2.0
2018	0.968	15	0.004	0.972	1.32	1.283	2.0
2019	0.972	15	0.004	0.976	1.32	1.288	2.0
2020	0.976	15	0.004	0.980	1.32	1.294	2.0

NOTES:
The current five year average annual hydraulic loading is used as the basis for hydraulic loading projections.
Each new EDU added to the system is estimated to contribute a hydraulic load equal to the current 5 year average flow per EDU.

EBENSBURG MUNICIPAL AUTHORITY
WASTEWATER TREATMENT FACILITY
TABLE 2 - A
ORGANIC LOADINGS (lbs/day)

ORGANIC LOADINGS (LBS/DAY)						
	Year					
Month	**2011**	**2012**	**2013**	**2014**	**2015**	
Jan	666	1,789	1,373	1,920	1,136	
Feb	436	1,293	1,482	1,393	1,106	
Mar	903	1,459	2,009	1,592	1,554	
Apr	1,456	1,078	1,451	1,338	869	
May	1,146	1,718	901	1,140	802	
Jun	786	1,263	967	1,278	1,154	
Jul	1,259	928	1,131	1,199	1,027	
Aug	941	931	660	1,303	540	
Sep	1,484	899	880	932	752	
Oct	1,339	847	818	813	703	Five Year Averages
Nov	1,231	993	1,335	882	803	
Dec	1,151	1,087	1,973	1,406	1,041	
Annual Average	1,067	1,190	1,248	1,266	957	**1,146**
Maximum Month	1,484	1,789	2,009	1,920	1,554	1,751
Ratio	1.39	1.50	1.61	1.52	1.62	1.53
No. EDUs	3,369	3,375	3,402	3,423	3,426	
Lbs BOD5/EDU	0.32	0.35	0.37	0.37	0.28	0.34

NOTES:
Ratio is the Maximum Monthly Load divided by the Annual Average Load for the particular year.
Bold number represents maximum month loadings

TABLE 2 - B
PROJECTED ORGANIC LOADINGS (lbs/day)

FIVE YEAR PROJECTED ORGANIC LOADINGS (LBS/DAY) 2016 - 2020							
Year	Previous Load (lbs/day)	Projected Additional EDUs	Increased Load (lbs/day)	Projected Load (lbs/day)	Projection Factor (5 Yr Ratio)	Projected Max. Mo. (lbs/day)	Permitted Capacity (lbs/day)
2016	1,146	15	5	1,151	1.53	1,761	2,652
2017	1,151	15	5	1,156	1.53	1,769	2,652
2018	1,156	15	5	1,161	1.53	1,776	2,652
2019	1,161	15	5	1,166	1.53	1,784	2,652
2020	1,166	15	5	1,171	1.53	1,792	2,652

NOTES:
The current five year average annual organic loading is used as the basis for organic loading projections.
Each new EDU added to the system is estimated to contribute an organic load equal to the current 5 year average load per EDU.

Table 3
Ebensburg Municipal Authority Wastewater Pump Stations
2015 Flow Estimates and 2-Year Flow Projections

2015 Pump Station Parameters	Emerald Estates	Industrial Park	Industrial Park South
Pump Station Capacity (GPM)	252	270	116
Pump Station Capacity (GPD)	362,880	388,800	167,040
2015 Average Daily Runtime (hr/day)	0.53	6.13	0.20
Calculated 2014 Average Daily Flow (GPD)	8,043	99,380	1,401
2015 Estimated Flow/EDU (GPD)	282	282	282
Pump Station's Max Recorded Runtime Period	Jun 22 - Jun 29	Feb 25 - Mar 20	Mar 13 - Mar 30
Number of Days in Peak Period	7	16	17
Peak Period Total Runtime Hours	10.03	310	9
Peak Period Avg. Runtime (hr/day)	1.43	19.38	0.53
Est Avg Flow during peak Period (GPD)	21,665	313,875	3,685
2015 PS Peak Read Period to Annual Avg Peaking Factor	2.69	3.16	2.63
2015 Estimated Daily Peaking Factor *(Peak period/annual avg peak factor x 1.3)*	3.50	4.11	3.42
Estimated Peak Day's Flow - GPD *(Average daily flow x estimated daily peaking factor)*	28,164	408,038	4,790
Projected 2-Year Additional EDUs*	2	2	1
Estimated Avg Flow per EDU (GPD)**	282	282	282
Estimated Additional Avg Daily Flow from New EDUs through next 2-yrs *(Additional EDUs x flow per EDU)*	564	564	282
Projected Avg Daily PS Flow thru 2017 *(2015 Avg daily flow + avg flow from new EDUs)*	8,607	99,944	1,683
Est. Peak Flow from New EDUs (GPD) *(New EDUs flow x peaking factor)*	1,975	2,316	964
Projected 2-Year Peak Daily PS Flow *(peak day flow + new EDU peak day flow)*	30,139	410,353	5,754

**No additional connections are in the current planning stages. Two (2) additional EDUs per station per year have used in the calculations for Emerald Estates and the Industrial Park PS and one (1) EDU for the Industrial Park South PS to provide for possible growth during the two year plannig period.*

***GPD per EDU values are based upon five year average flow per EDU recorded for the WWTP*

2015 Municipal Authority of the Ebensburg Municipal Authority Wastewater Pump Stations - Runtime Summaries

Date	1/8	1/23	2/11	2/25	3/13	3/30	4/6	5/8	5/22	5/28	6/4	6/12	6/22	6/29	7/6	7/14	7/23	7/28	8/6	8/9	8/13	8/22	8/29	9/3	9/19	10/1	10/12	10/22	11/4	11/12	11/23	12/2	12/7	12/21	12/31	Annual Totals	
Emerald Estates #1 Hr Mtr	555	558	563	566	573	581	582	592	595	596	598	599	603.58	608.63	612.83	617.50	620.70	622.10	623.90	624.10	624.50	625.30	626.10	626.20	629.00	632.40	634.50	636.30	638.70	640.20	642.00	643.80	645.00	647.80	651.70		
Emerald Estates #2 Hr Mtr	538	541	545	549	555	563	564	574	577	578	580	581	585.42	590.40	594.60	599.15	602.20	603.50	605.20	605.40	605.80	606.50	607.30	607.30	610.10	613.20	615.20	616.00	619.00	620.50	622.00	623.80	625.00	627.50	631.20		
Emerald Estates #1 runtime hrs		3	5	3	7	8	1	10	3	1	2	1	4.58	5.05	4.2	4.67	3.2	1.4	1.8	0.2	0.4	0.8	0.8	0.1	2.8	3.4	2.1	1.8	2.4	1.5	1.8	1.8	1.2	2.8	3.9		
Emerald Estates #2 run time hrs		3	4	4	6	8	1	10	3	1	2	1	4.42	4.98	4.2	4.55	3.05	1.3	1.7	0.2	0.4	0.7	0.8	0	2.8	3.1	2	0.8	3	1.5	1.5	1.8	1.2	2.5	3.7		
Total PS Runtime Hours		6	9	7	13	16	2	20	6	2	4	2	9	10.03	8.4	9.22	6.25	2.7	3.5	0.4	0.8	1.5	1.6	0.1	5.6	6.5	4.1	2.6	5.4	3	3.3	3.6	2.4	5.3	7.6	189.9	Total Annual PS Run Time Hours
Days in read period		15	19	14	16	17	7	32	14	6	7	8	10	7	7	8	9	5	9	3	4	9	7	5	16	12	11	10	13	8	11	9	5	14	10	357	Total Days in read period
Avg run time hours/day		0.40	0.47	0.50	0.81	0.94	0.29	0.63	0.43	0.33	0.57	0.25	0.90	1.43	1.20	1.15	0.69	0.54	0.39	0.13	0.20	0.17	0.23	0.02	0.35	0.54	0.37	0.26	0.42	0.38	0.30	0.40	0.48	0.38	0.76	0.53	Avg daily run time
																																				1.43	Max Avg Daily Run Time
																																				2.69	Peaking Factor - Max to Average

Date	1/8	1/23	2/11	2/25	3/13	3/30	4/6	5/8	5/22	5/28	6/4	6/12	6/19	6/26	6/29	7/10	7/17	7/24	8/7	8/21	8/30	9/13	9/19	10/4	10/12	10/26	11/9	11/12	11/18	11/23	12/2	12/9	12/21	12/24	12/27	12/28	12/30		
Industrial Park #1 Hr Mtr	5580	5623	5748	5832	6028	6120.9	6147.0	6277.0	6321.0	6335.0	6347.0	6366.0	6397.4	6434.9	6453.1	6504.6	6531.0	6546.4	6564.8	6580.5	6590.1	6600.5	6605.4	6628.5	6640.0	6655.0	6683.6	6691.8	6703.7	6715.8	6728.6	6749.0	6769.0	6778.0	6784.5	6792.3	6800.4		
Industrial Park #2 Hr Mtr	4750	4775	4830	4855	4969	5070.5	5095.0	5221.0	5263.0	5276.0	5288.0	5306.0	5334.0	5369.9	5387.0	5434.7	5459.9	5474.7	5492.7	5507.6	5516.4	5526.2	5530.0	5552.7	5563.0	5577.0	5604.4	5612.1	5623.0	5633.9	5646.6	5665.0	5684.0	5692.0	5701.3	5705.8	5713.5		
Industrial Park #1 runtime hrs		43	125	84	196	92.9	26.1	130	44	14	12	19	31.4	37.5	18.2	51.5	26.4	15.4	18.4	15.7	9.6	10.4	4.9	23.1	11.5	15	28.6	8.2	11.9	12.1	12.8	20.4	20	9	6.5	7.8	8.1		
Industrial Park #2 runtime hrs		25	55	25	114	101.5	24.5	126	42	13	12	18	28	35.9	17.1	47.7	25.2	14.8	18	14.9	8.8	9.8	3.8	22.7	10.3	14	27.4	7.7	10.9	10.9	12.7	18.4	19	8	9.3	4.5	7.7		
Total PS Runtime Hours		68	180	109	310	194.4	50.6	256	86	27	24	37	59.4	73.4	35.3	99.2	51.6	30.2	36.4	30.6	18.4	20.2	8.7	45.8	21.8	29	56	15.9	22.8	23	25.5	38.8	39	17	15.8	12.3	15.8	2183.9	Total Annual PS Run Time Hours
Days in read period		15	19	14	16	17	7	32	14	6	7	8	7	7	3	11	7	7	14	14	9	14	6	15	8	14	14	3	6	5	9	7	12	3	3	1	2	356	Total Days in read period
Avg run time hours/day		4.53	9.47	7.79	19.38	11.44	7.23	8.00	6.14	4.50	3.43	4.63	8.49	10.49	11.77	9.02	7.37	4.31	2.60	2.19	2.04	1.44	1.45	3.05	2.73	2.07	4.00	5.30	3.80	4.60	2.83	5.54	3.25	5.67	5.27	12.30	7.90	6.13	Avg daily run time
																																						19.38	Max Avg Daily Run Time
																																						3.16	Peaking Factor - Max to Average

	1/8	1/23	2/11	2/25	3/13	3/30	4/6	5/8	5/22	5/28	6/4	6/12	6/19	6/26	7/10	7/17	7/24	8/7	8/15	8/21	8/30	9/13	9/19	10/4	10/12	10/26	11/9	11/23	12/2	1/15		
Indust. Park South #1 hr mtr	704	705	707	709	713	718	719	723	725	725	725	726	726.74	727.83	729.1	729.9	730.3	731	731.1	731.30	731.4	731.5	731.7	732.6	733.4	734	735.2	736.2	736.3	741.3		
Indust. Park South #2 hr mtr	915	917	918	921	925	929	930	935	936	936	937	937	938.02	939.17	940.6	941.23	941.67	942.3	942.5	942.6	942.7	942.8	943	943.8	944.6	945.3	946.5	947	947.6	952.6		
Indust Park South #1 runtime hrs		1	2	2	4	5	1	4	2	0	0	1	0.74	1.09	1.27	0.8	0.4	0.7	0.1	0.2	0.1	0.1	0.2	0.9	0.8	0.6	1.2	1	0.1	5		
Indust Park South #2 runtime hrs		2	1	3	4	4	1	5	1	0	1	0	1.02	1.15	1.43	0.63	0.44	0.63	0.2	0.1	0.1	0.1	0.2	0.8	0.8	0.7	1.2	0.5	0.6	5		
Total Run Hours		3	3	5	8	9	2	9	3	0	1	1	1.76	2.24	2.7	1.43	0.84	1.33	0.3	0.3	0.2	0.2	0.4	1.7	1.6	1.3	2.4	1.5	0.7	10	74.9	Total Annual PS Run Time Hours
Days in read period		15	19	14	16	17	7	32	14	6	7	8	7	7	14	7	7	14	8	6	9	14	6	15	8	14	14	14	9	44	372	Total Days in read period**
Avg run time hours/day		0.20	0.16	0.36	0.50	0.53	0.29	0.28	0.21	0.00	0.14	0.13	0.25	0.32	0.19	0.20	0.12	0.10	0.04	0.05	0.02	0.01	0.07	0.11	0.20	0.09	0.17	0.11	0.08	0.23	0.20	Avg daily run time
																															0.53	Max Avg Daily Run Time
																															2.63	Peaking Factor - Max to Average

Attachments

Flow Meter Calibration Certificate

KWM Controls

KWM CONTROLS INC.

P.O. Box 430 Carnegie, PA 15106 412-276-4227 Fax 412-276-7488

Certificate of Calibration

Company Name: Servern Trent Enviromental Services
Name: Bernie
Address: 291 Trout Lane
Ebensburg, Pa 15931

Phone #

Date: 2-26-15

Type: Eastech, Partlow
Serial#: 12590, 1431998
Model#: 2210, 9111

Problem: Annual Calibration.

Action: I checked out and calibrated the flow meter and found that the flow meter was reading about .5" high. The range of the meter is 0-10 MGD. The flow meter and recorder are calibrated and reading the correct flows.

Annual Sewage Sludge Management Inventory

Ebensburg Borough Wastewater Treatment Plant
2015 Solids Management Inventory

Month	Average Flow (MGD)	Avg Influent BOD (mg/l)	Avg Influent BOD (lbs/day)	Tot Influent BOD (Dry Tons)	Avg Effluent CBOD (mg/l)	Avg Effluent BOD (mg/l)	Avg Effluent BOD lbs/day	Tot Effluent BOD (Dry Tons/Mo)	Estimated Waste Sludge Solids Conc* (Table 2)	2015 Actual Sludge Wasted (gal)	2015 Actual Sludge Wasted* (Dry tons)	2015 Actual Sludge Disposed (Dry Tons)	Expected Sludge Wasted (gal)	Expected Sludge Wasted (Dry Tons)	Expected Sludge Disposed (Dry Tons)
JAN	0.959	135	1136.0	17.61	2.1	2.52	21.6	0.33	7,500	Not avail	Not avail	15.00	302,250	9.45	6.62
FEB	1.102	118	1106.0	15.48	2.1	2.52	24.0	0.34	7,500	Not avail	Not avail	14.40	273,000	8.54	5.98
MAR	1.934	104	1554.0	24.09	2.4	2.88	47.8	0.74	7,500	Not avail	Not avail	12.40	302,250	9.45	6.62
APR	1.106	105	869.0	13.04	1.9	2.28	19.3	0.29	7,500	Not avail	Not avail	15.00	292,500	9.15	6.40
MAY	0.757	123	802.0	12.43	1.9	2.28	15.5	0.24	7,500	Not avail	Not avail	15.90	302,250	9.45	6.62
JUN	1.124	125	1154.0	17.31	1.9	2.28	23.0	0.35	7,500	Not avail	Not avail	16.60	292,500	9.15	6.40
JUL	0.993	126	1027.0	15.92	1.9	2.28	18.6	0.29	7,500	Not avail	Not avail	18.80	302,250	9.45	6.62
AUG	0.482	146	540.0	8.37	1.9	2.28	8.6	0.13	7,500	Not avail	Not avail	16.00	302,250	9.45	6.62
SEP	0.451	159	752.0	11.28	1.9	2.28	10.6	0.16	7,500	Not avail	Not avail	12.30	292,500	9.15	6.40
OCT	0.610	162	703.0	10.90	2.0	2.4	10.7	0.17	7,500	Not avail	Not avail	12.60	302,250	9.45	6.62
NOV	0.582	170	803.0	12.05	2.1	2.52	12.1	0.18	7,500	Not avail	Not avail	14.70	292,500	9.15	6.40
DEC	0.854	155	1041.0	16.14	2.0	2.4	16.2	0.25	7,500	Not avail	Not avail	15.00	302,250	9.45	6.62
Average	0.913	136	957.3			2.4	19.0		7,500	Not avail			296,563		
Annual Tot				174.60				3.47		Not avail	Not avail	178.70	3,558,750	111.30	77.91
Avg Daily										Not avail			9,750		

Expected Sludge Production vs. Actual

Monitoring Period:	Jan 1, 2015 - Dec 31, 2015	
Lbs BOD removed from plant *[avg influent BOD (lb/day) - avg effluent BOD(lb/day)]*:	938.3	lbs/day
BOD to TSS conversion factor *[Table 1 - Sequencing Batch Reactor]*:	0.65	factor
Conversion lb/day BOD removed to lb/day TSS removed *[BOD removed x TSS/BOD factor]*:	609.9	lbs/day
Expected Sludge Feed Rate to Digesters: *[TSS removed x1,000,000/waste sludge conc. X 8.34]*	9,750	gal/day
Actual Sludge Feed Rate to Digesters *[Total gal wasted/365 days]*:	Not avail	gal/day
Total Digester Volume:	448,000	gal
Expected Digester Hydraulic Detention Time *[Digester capacity/expecteded sludge feed rate]*	46	days**
Actual Digester Hydraulic Detention Time *[Digester capacity/actual sludge feed rate]*:	Not avail	days**
Estimated Volatile Solids Reduction Factor *[percent as decimal Table 3]*:	0.30	
Expected Digested Solids Production Estimate *[TSS removed x (1.0-Estimated VS reduction factor)]*:	427	lbs/day
Expected Sludge Production - Monitoring Period ***[calc. digester solids produced/2000x365]*****:**	**77.9**	tons
Actual Dry Tons Sludge Disposed - Monitoring Period ***[monthly biosolids production rept]*****:**	**178.7**	tons

Notes:

**Waste Sludge Solids Concentration was not analyzed in 2015 - Concentration is based on Table 2 Expected Concentrations for SBR system*

Calculations are based on DEP Sludge Estimating Worksheet derived from EPA Handbook "Improving POTW Performance Using Composite Correction Program Approach"

SLUDGE GENERATION CALCULATION

Facility Name: Ebensburg WWTP
Permit Number: 22292
Date of Calculation: 2/8/2016

Required Information For Calculation

Average Daily Flow (mgd):	0.913	Digester Capacity (gal):	448000
Influent BOD (mg/l):	136	%Solids of Outgoing Sludge:	18.37
Effluent BOD (mg/l):	2.4	Monitoring Period (days):	365

Wastewater Treatment Processes

Place an "X" in the box beside the corresponding treatment process. Select a maximum of Primary Clarification and one other treatment process.

Primary Clarification [ ]	Contact Stabilization [ ]	RBC [ ]
Conventional Activated Sludge [ ]	SBR [x]	ABF [ ]
Extended Aeration [ ]	Trickling Filter [ ]	Small Plant with low SOR [ ] (<500 gpd/sq ft)

Operational Information

BOD Removed (lbs/day): 1017
TSS Removed (lbs/day): 661

Digester Information

Type of Digester

Place an "X" in the box beside the corresponding treatment process.

Aerobic Digestion [x] Anaerobic Digestion [ ] None [ ]

Sludge Feed Rate to Digesters (gpd): 13214.153
Digester Hydraulic Detention Time (days): 34
Estimated Total Solids Reduction (%): 0.35

Sludge Generation

dry lbs/day	430	wet lbs/day	2340
dry tons/monitoring period	78	wet tons/monitoring period	427
gal/day	281	gal/monitoring period	102397

Amount of Sludge Reported as Being Generated by the Facility

wet tons/monitoring period: 0
OR
dry tons/monitoring period: 178.7

Enter only one of the above values. The remaining value should be "0".

Is the amount reported by the generator within 15% of the calculated value? NO

NO explanation: GREATER THAN 15% RANGE

What type of information was used to calculate the above information: Monthly DMR and Supplemental Reports

Dates used: 1/1/2015 TO 12/31/2015

Name of person performing the calculation: RMM

Ebensburg Municipal Authority WWTP
2015 Annual Sludge Disposal Summary

Month	Sludge Disposed Laurel Highland Landfill		
	Wet Tons	%Solids	Dry Tons
Jan	82.86	18.10	15.0
Feb	83.48	17.25	14.4
Mar	69.98	17.72	12.4
Apr	83.35	18.00	15.0
May	83.64	19.01	15.9
Jun	85.87	19.33	16.6
Jul	94.96	19.80	18.8
Aug	85.77	18.65	16.0
Sep	66.37	18.53	12.3
Oct	70.16	17.96	12.6
Nov	81.86	17.96	14.7
Dec	84.41	17.77	15.0
Total	**972.71**	**18.37**	**178.7**

Ebensburg Borough WWTP
2015 Annual Annual Hauled-In Waste Summary

Date	Source	Waste Type	Gallons	%Solids	Dry tons
6/17/2015	Keystone Water Service - Cresson Pool Tank	Filter Backwash Sludge	2,500	10	1.04
Sep-15	High Ridge Water Authority	Liquid Sludge	130,000	3.1	16.64
Total			132,500		17.68

2015
CSO Data
and
Activities

Sewer Activities 2015

- Download CSO meters monthly and change batteries when needed. CSO structures are checked after storm events to verify overflows have stopped.
- Two CSO meters were replaced
- Streets are swept weekly weather permitting
- Trash cans are emptied throughout the business district weekly
- Leaves are vacuumed daily as needed in October and November on all streets
- No major improvements noted to the sanitary system although two serious cross connects were repaired during the sidewalk project. Sanitary lines near inlets that were being repaired were sealed to eliminate storm water from draining into the sanitary lines.
- The large storm drain line through the Fastenal property was relocated during the Sheetz project. The line was near the sanitary line under the Fastenal building and water migrated from the partly obstructed storm into the sanitary. The new storm line was relocated around the Fastenal site with 24 inch ADS away from the sanitary.
- New pumps were installed in the Emerald and Industrial Park pump stations. The Emerald system is free of infiltration but the Industrial Park is seeing elevated flows do to infiltration. We are currently evaluating the Park to determine solutions and repair. The Park has been a problem since it was built and we continue to identify and repair problems.
- The improvements at the water plant has reduced the amount of waste water discharged into the sanitary system.

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

January									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1			0.119900			0.127191			0.9628
2			0.134725			0.118451			0.8755
3		0.04	0.223384			0.185500			0.8899
4		0.55	0.299892			0.239862			1.2634
5	0.12	0.09	0.236722			0.186606			1.5467
6		0.09	0.179730			0.173004			1.1951
7		0.09	0.150963			0.154253			1.1271
8		0.03	0.148103			0.145907			1.4296
9		0.14	0.139782			0.139754			1.0473
10		0.01	0.109160			0.129455			1.0684
11	0.03		0.126220			0.130674			0.9342
12	0.09	0.17	0.180697			0.146460			1.0315
13		0.07	0.125211			0.115839			1.1330
14			0.125256			0.108377			0.9771
15			0.139553			0.103628			0.9247
16			0.131722			0.098870			0.7994
17			0.115602			0.093162			0.7799
18	0.02		0.108633			0.093295			0.8074
19		0.04	0.113338			0.091995			0.8355
20	0.02		0.115515			0.089774			0.8372
21	0.04	0.07	0.124498			0.092479			0.8922
22		0.28	0.115479			0.091883			0.9140
23	0.05	0.02	0.119276			0.093871			0.6531
24		0.31	0.110856			0.107603			0.8433
25		0.04	0.119271			0.109358			0.8191
26		0.38	0.109760			0.100590			0.9089
27		0.21	0.108716			0.092413			0.8515
28		0.03	0.103583			0.088139			0.8202
29			0.100393			0.089116			0.9226
30		0.35	0.094048			0.086194			0.8024
31		0.04	0.089078			0.086577			0.8218
Min	0.02	0.01	0.0890776			0.086194			0.6531
Avg	0.05	0.15	0.1360989			0.119686			0.9585
Max	0.12	0.55	0.2998920			0.239862			1.5467
No Precip (based on WWTP gauge)									
Min			0.100393			0.089116			0.7799
Avg			0.121752			0.105254			0.8821
Max			0.139553			0.130674			0.9771

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: January Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3					0.04	
4					0.55	
5					0.09	
6					0.09	
7					0.09	
8					0.03	
9					0.14	
10					0.01	
11					0.00	
12					0.17	
13					0.07	
14					0.00	
15					0.00	
16					0.00	
17					0.00	
18					0.00	
19					0.04	
20					0.00	
21					0.07	
22					0.28	
23					0.02	
24					0.31	
25					0.04	
26					0.38	
27					0.21	
28					0.03	
29					0.00	
30					0.38	
31					0.04	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 2/4/15

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: January Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3					0.04	
4					0.55	
5					0.09	
6					0.09	
7					0.09	
8					0.03	
9					0.14	
10					0.01	
11					0.00	
12					0.17	
13					0.07	
14					0.00	
15					0.00	
16					0.00	
17					0.00	
18					0.00	
19					0.04	
20					0.00	
21					0.07	
22					0.28	
23					0.02	
24					0.31	
25					0.04	
26					0.38	
27					0.21	
28					0.03	
29					0.00	
30					0.38	
31					0.04	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 2/5/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

February									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1			0.0822057			0.086479			0.8738
2	0.02	1.05	0.3066630			0.223906			0.8161
3		0.06	0.1652640			0.130311			1.5815
4	0.01	0.03	0.1707070			0.140700			1.1499
5		0.13	0.1459090			0.133337			1.0395
6			0.1239370			0.126463			0.9983
7			0.1374570			0.130014			1.036
8	0.01		0.2495430			0.201424			0.9616
9	0.01	0.17	0.5703310	0.0004	0.5	0.400155			1.3814
10		0.10	0.2724310			0.296245			2.301
11			0.2225530			0.236956			1.5923
12		0.04	0.1964460			0.201260			1.3
13		0.03	0.1612740			0.178432			0.8154
14		0.09	0.1711660			0.160638			1.0277
15		0.21	0.1496530			0.147615			1.0966
16			0.1455730			0.141694			1.1309
17	0.01	0.07	0.1395590			0.128869			1.2719
18			0.1411860			0.120673			1.1412
19		0.18	0.1440350			0.114793			1.2477
20		0.04	0.1360180			0.108552			1.135
21			0.1347850			0.105121			0.9033
22		0.45	0.1265960			0.100880			0.9684
23		0.02	0.1268690			0.100246			0.9522
24	0.02		0.1229590			0.099722			1.0525
25			0.1149030			0.099248			0.9233
26			0.1154200			0.100074			0.9042
27		0.04	0.1092190			0.101060			0.7546
28			0.1119210			0.101434			0.5119
Min	0.01	0.02	0.082206	0.0004	0.5	0.086479			0.5119
Avg	0.01	0.17	0.171235	0.0004	0.5	0.150582			1.1024
Max	0.02	1.05	0.570331	0.0004	0.5	0.400155			2.3010
No Precip (based on WWTP gauge)									
Min			0.0822057			0.0864788			0.5119
Avg			0.1418702			0.12910846			1.0024
Max			0.2495430			0.236956			1.5923

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: February Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.02	
3					0.00	
4					0.01	
5					0.00	
6					0.00	
7					0.00	
8					0.01	
9	M	0.0004	0.5	Rain Event	0.01	
10					0.00	
11					0.00	
12					0.00	
13					0.00	
14					0.00	
15					0.00	
16					0.00	
17					0.01	
18					0.00	
19					0.00	
20					0.00	
21					0.00	
22					0.00	
23					0.00	
24					0.02	
25					0.00	
26					0.00	
27					0.00	
28					0.00	
29						
30						
31						

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 3/11/2015

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BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: February Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.02	
3					0.00	
4					0.01	
5					0.00	
6					0.00	
7					0.00	
8					0.01	
9					0.01	
10					0.00	
11					0.00	
12					0.00	
13					0.00	
14					0.00	
15					0.00	
16					0.00	
17					0.01	
18					0.00	
19					0.00	
20					0.00	
21					0.00	
22					0.00	
23					0.00	
24					0.02	
25					0.00	
26					0.00	
27					0.00	
28					0.00	
29						
30						
31						

See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 3/11/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

March									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1	0.03	0.07	0.117131			0.104379			0.8772
2		0.63	0.126599			0.103831			0.6619
3	0.06		0.304776	0.1396	4.0	0.091282	0.0595	3.5	1.0370
4	0.4	2.2	0.911003	1.029	22.0	0.091282	0.6182	24.0	2.1949
5		0.46	0.443427			0.139164	0.0036	2.5	3.6415
6	0.07	0.03	0.267448			0.332847			1.8560
7	0.05		0.246631			0.269417			1.6724
8	0.08		0.298378			0.275196			1.3165
9	0.15	0.17	0.463562	0.1186	9.0	0.146933	0.0356	8.0	1.4111
10	0.4		0.469249	0.2403	9.5	0.225871	0.1196	9.5	2.3735
11	0.01	0.35	0.476353	0.8015	24.0	0.225871	0.5640	24.0	3.0049
12			0.081774	0.3132	24.0	0.225871	0.3001	24.0	4.4195
13	0.07		0.052002	0.0749	12.0	0.225871	0.1079	24.0	3.6050
14	0.66	0.43	0.008402	1.3519	24.0	0.225871	0.9366	24.0	3.1555
15	0.01	0.37	0.001367	0.4001	23.0	0.225871	0.3797	24.0	4.1303
16			0.024716	0.1048	10.5	0.225871	0.1131	20.0	2.8978
17			0.000234	0.2696	23.0	0.225871	0.0735	24.0	2.4369
18			0.071562			0.000829			2.8131
19			0.276090			0.367066			1.7460
20	0.08	0.21	0.207370			0.326501			1.3290
21	0.3	0.28	0.150568	0.0235	6.0	0.125930	0.0049	3.5	1.2534
22			0.178027			0.339659			1.5737
23			0.209330			0.298477			1.5299
24	0.04	0.05	0.198124			0.261625			1.2785
25	0.08		0.210362			0.247641			1.3010
26	0.07	0.1	0.285672			0.252379			1.2040
27	0.01	0.05	0.258914			0.244184			1.2705
28		0.02	0.216752			0.213999			1.0814
29			0.199197			0.193556			0.9695
30	0.04	0.02	0.206705			0.174172			0.9011
31	0.02		0.191062			0.163271			0.9621
Min	0.01	0.02	0.000234	0.0235	4.0	0.000829	0.0036	2.5	0.6619
Avg	0.13	0.34	0.230735	0.4056	15.9	0.211954	0.2551	16.538462	1.9324
Max	0.66	2.2	0.911003	1.3519	24.0	0.367066	0.9366	24	4.4195
No Precip (based on WWTP gauge)									
Min			0.000234			0.000829			0.9621
Avg			0.187559			0.225050			2.0436
Max			0.469249			0.367066			4.4195

800-FM-BPNPSM0442 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: March Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.03	
2					0.00	
3	M	0.1396	4.0	Heavy Rain Event	0.06	
4	M	1.0290	22.0	Heavy Rain Event	0.40	
5					0.00	
6					0.07	
7					0.05	
8					0.08	
9	M	0.1186	9.0	Heavy Rain Event	0.15	
10	M	0.2403	9.5	Heavy Rain Event	0.40	
11	M	0.8015	24.0	Heavy Rain Event	0.01	
12	M	0.3133	24.0	Heavy Rain Event	0.00	
13	M	0.0749	12.0	Heavy Rain Event	0.07	
14	M	1.3519	24.0	Heavy Rain Event	0.66	
15	M	0.4001	23.0	Heavy Rain Event	0.01	
16	M	0.1408	10.5		0.00	
17	M	0.2696	23.0		0.00	
18					0.00	
19					0.00	
20					0.08	
21	M	0.0204	6.0	Heavy Rain Event	0.30	
22					0.00	
23					0.00	
24					0.04	
25					0.08	
26					0.07	
27					0.01	
28					0.00	
29					0.00	
30					0.04	
31					0.02	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 4/2/2015

800-FM-BPNPSMO442 3/2012

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: March Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.03	
2					0.00	
3	M	0.0595	3.5	Heavy Rain Event	0.06	
4	M	0.6182	24.0	Heavy Rain Event	0.40	
5	M	0.0036	2.5		0.00	
6					0.07	
7					0.05	
8					0.08	
9	M	0.0360	8.0	Heavy Rain Event	0.15	
10	M	0.1196	9.5	Heavy Rain Event	0.40	
11	M	0.5640	24.0	Heavy Rain Event	0.01	
12	M	0.3002	24.0		0.00	
13	M	0.1079	24.0	Heavy Rain Event	0.07	
14	M	0.9366	24.0	Heavy Rain Event	0.66	
15	M	0.3797	24.0	Heavy Rain Event	0.01	
16	M	0.1131	20.0		0.00	
17	M	0.2118	24.0		0.00	
18	M	0.0735	8.0		0.00	
19					0.00	
20					0.08	
21	M	0.0049	3.5	Heavy Rain Event	0.30	
22					0.00	
23					0.00	
24					0.04	
25					0.08	
26					0.07	
27					0.01	
28					0.00	
29					0.00	
30					0.04	
31					0.02	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: B Kozlovac
Date: 4/2/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

April									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1	0.04		0.179444			0.149320			0.8582
2	0.16		0.192031			0.158897			0.8117
3	0.35	0.18	0.276808			0.210725			0.8574
4	0.06	0.3	0.348000			0.262053			1.0588
5			0.213588			0.206311			1.0759
6	0.04		0.205160			0.186969			0.9091
7	0.14	0.01	0.236264			0.190292			0.8424
8	0.14	0.21	0.215242			0.189308			0.8780
9	0.37	0.04	0.179795	0.0104	1.0	0.173801	0.0013	0.8	0.8700
10	0.72	0.35	0.293382	0.3755	12.0	0.112594	0.2059	14.0	1.0914
11		0.78	0.162916			0.069060			2.6463
12			0.138230			0.342631			1.5672
13	0.09		0.130036			0.276916			1.1735
14	0.15	0.25	0.177478			0.272480			1.1380
15			0.177255			0.224025			1.0775
16	0.08		0.144946			0.206634			0.9600
17	0.08	0.18	0.133644			0.203163			0.8803
18		0.02	0.092942			0.181754			0.8866
19	0.32		0.094441			0.172214			0.7266
20	1.15	0.75	0.395402	0.2273	8.0	0.156110	0.0545	6.0	0.9420
21	0.05	0.46	0.318019			0.032092			1.8939
22	0.45	0.05	0.364481	0.0048	2.0	0.080489	0.0017	2.0	1.5890
23		0.39	0.285554			0.080489			1.6824
24			0.236428			0.080489			1.4267
25			0.210142			0.080489			1.1093
26			0.183745			0.080489			0.9928
27	0.12		0.162169			0.080489			0.9011
28	0.01	0.06	0.143544			0.080489			0.8438
29	0.05		0.136304			0.080489			0.7654
30	0.83	0.04	0.227788	0.0752	4.0	0.080489	0.0177	3.0	0.7240
Min	0.01	0.01	0.0929417	0.0048	1.0	0.032092	0.0013	0.8	0.7240
Avg	0.26	0.25	0.2085059	0.1386	5.4	0.156725	0.0562	5.2	1.1060
Max	1.15	0.78	0.3954020	0.3755	12.0	0.342631	0.2059	14.0	2.6463
No Precip (based on WWTP gauge)									
Min			0.094441			0.080489			0.7266
Avg			0.171709			0.166168			1.0254
Max			0.236428			0.342631			1.5672

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: April Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.04	
2					0.16	
3					0.35	
4					0.06	
5					0.00	
6					0.04	
7					0.14	
8					0.14	
9	M	0.0104	1.0	Heavy Rain Event	0.37	
10	M	0.3755	12.0	Heavy Rain Event	0.72	
11					0.00	
12					0.00	
13					0.09	
14					0.15	
15					0.00	
16					0.08	
17					0.08	
18					0.00	
19					0.32	
20	M	0.2273	8.0	Heavy Rain Event	1.15	
21					0.05	
22	M	0.0048	2.0	Heavy Rain Event	0.45	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.12	
28					0.01	
29					0.05	
30	M	0.0752	4.0	Heavy Rain Event	0.83	
~~31~~						

**See instructions for explanation.*

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 5/20/15

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: April Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.04	
2					0.16	
3					0.35	
4					0.06	
5					0.00	
6					0.04	
7					0.14	
8					0.14	
9	M	0.0013	0.75	Heavy Rain Event	0.37	
10	M	0.2059	14.0	Heavy Rain Event	0.72	
11					0.00	
12					0.00	
13					0.09	
14					0.15	
15					0.00	
16					0.08	
17					0.08	
18					0.00	
19					0.32	
20	M	0.0545	6.0	Heavy Rain Event	1.15	
21					0.05	
22	M	0.0017	2.0	Heavy Rain Event	0.45	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.12	
28					0.01	
29					0.05	
30	M	0.0177	3.0	Heavy Rain Event	0.83	
~~31~~						

*See instructions for explanation.

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Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 5//20/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

May									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1	0.03	0.87	0.217231			OS			1.2506
2		0.01	0.175901			OS			1.0933
3			0.165116			OS			0.8733
4			0.148290			OS			0.8177
5	0.12		0.153706			OS			0.7639
6	0.33	0.16	0.188529	0.0130	0.5	OS	0.0040	0.5	0.8098
7		0.55	0.182395			OS			0.8882
8	0.06		0.166295			OS			0.8151
9			0.162777			OS			0.7078
10			0.160887			OS			0.6740
11	0.29		0.206458	0.0040	0.5	OS	0.0007	0.5	0.6891
12	0.04	0.25	0.214323			OS			0.7735
13	0.01		0.187424			OS			0.7122
14			0.189940			OS			0.6809
15			0.181741			OS			0.6208
16	0.13	0.04	0.182266			OS			0.6043
17	1.35	0.77	0.455508	0.1281	4.0	OS	0.0361	3.0	0.6263
18	0.08	0.47	0.198503			OS			1.5116
19	0.05	0.06	0.176236			OS			0.9065
20			0.169643			0.087895			0.7840
21	0.16	0.12	0.181487			0.154165			0.7973
22	0.01	0.11	0.182523			0.135879			0.7309
23			0.157163			0.118673			0.6822
24			0.158083			0.113740			0.5735
25			0.169055			0.115686			0.5411
26			0.182525			0.110557			0.2925
27	0.1		0.160191			0.110570			0.6419
28		0.14	0.097390			0.099766			0.6876
29			0.109253			0.096896			0.5698
30	0.26	0.02	0.110845			0.093730			0.5116
31	0.27	0.02	0.108818			0.103712			0.5282
Min	0.01	0.01	0.097390	0.0040	0.5	0.087895	0.0007	0.5	0.2925
Avg	0.21	0.26	0.177436	0.0484	1.7	0.111772	0.0136	1.3	0.7471
Max	1.35	0.87	0.455508	0.1281	4.0	0.154165	0.0361	3.0	1.5116
No Precip (based on WWTP gauge)									
Min			0.109253			0.087895			0.2925
Avg			0.166385			0.107717			0.6729
Max			0.206458			0.118673			0.8733

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: May Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.03	
2					0.00	
3					0.00	
4					0.00	
5					0.12	
6	M	0.0130	0.50	Heavy Rain Event	0.33	
7					0.00	
8					0.06	
9					0.00	
10					0.00	
11	M	0.0040	0.50	Heavy Rain Event	0.29	
12					0.04	
13					0.01	
14					0.00	
15					0.00	
16					0.13	
17	M	0.1282	4.0	Heavy Rain Event	1.35	
18					0.08	
19					0.05	
20					0.00	
21					0.16	
22					0.01	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.10	
28					0.00	
29					0.00	
30					0.26	
31					0.27	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services
Signature: Bernard Kozlovac
Date: 6/5/15

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: May Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.03	
2					0.00	
3					0.00	
4					0.00	
5					0.12	
6	M	0.0040	0.50	Heavy Rain Event	0.33	
7					0.00	
8					0.06	
9					0.00	
10					0.00	
11	M	0.0007	0.50	Heavy Rain Event	0.29	
12					0.04	
13					0.01	
14					0.00	
15					0.00	
16					0.13	
17	M	0.0361	3.0	Heavy Rain Event	1.35	
18					0.08	
19					0.05	
20					0.00	
21					0.16	
22					0.01	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.10	
28					0.00	
29					0.00	
30					0.26	
31					0.27	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 6/5/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

June									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1		0.18	0.108818			0.103712			0.5577
2	0.07	0.03	0.100384			0.093790			0.5016
3	0.01		0.077488			0.095211			0.5037
4			0.079120			0.089169			0.4954
5	0.17		0.100995			0.088121			0.5118
6	0.01	0.23	0.100908			0.096004			0.5334
7			0.095219			0.082886			0.5256
8	0.33	0.03	0.078023			0.085793			0.4726
9	0.08	0.42	0.123524			0.100588			0.7285
10			0.133531			0.101065			0.5883
11			0.099187			0.087825			0.5194
12	0.33		0.090510	0.00606	0.3	0.084546	0.00095	0.3	0.4841
13	0.27	0.34	0.099853	0.00807	0.5	0.095562	0.00043	0.3	0.5543
14	0.77	0.16	0.083203	0.04839	1.0	0.097852	0.01648	1.0	0.5429
15	1.18	1.35	0.131861	0.26561	12.0	0.126233	0.07627	9.0	1.0176
16	0.34	1.36	0.473202	0.06614	9.0	0.135946	0.02007	8.0	1.7767
17	0.07	0.39	0.374331			0.085439			1.8649
18	0.37	0.04	0.223049			0.312303			1.1793
19	0.07	0.34	0.203441			0.244389			1.0118
20	1.83	0.07	0.193206	0.58420	6.0	0.213828	0.20924	6.0	0.9807
21	0.46	1.52	0.260633	0.33925	24.0	0.143083	0.06324	16.0	2.0303
22	0.01	0.51	0.302504	0.06517	6.0	0.525899			2.3178
23	0.41	0.02	0.219684	0.05942	3.0	0.362907	0.01714	1.0	1.7220
24	0.04	0.61	0.165528			0.311382	0.00000		1.6201
25	0.71		0.158764	0.00736	1.0	0.312691	0.00033	0.3	1.2689
26	0.58	0.27	0.140809			0.271590			1.3548
27	1.41	0.45	0.120043	0.08537	19.0	0.241689	0.35806	15.0	1.0830
28	0.56	1.49	0.231011	0.31076	24.0	0.049988	0.14659	24.0	3.0215
29	0.14	0.1	0.151538	0.00025	1.0	0.049988	0.00044	1.0	2.3150
30	0.02	0.02	0.190605			0.014446			1.6439
Min	0.01	0.02	0.077488	0.00025	0.25	0.014446	0.00000	0.3	0.4726
Avg	0.41	0.45	0.163699	0.14200	8.211538462	0.156798	0.06994	6.8	1.1243
Max	1.83	1.52	0.473202	0.58420	24	0.525899	0.35806	24.0	3.0215
No Precip (based on WWTP gauge)									
Min			0.077488			0.082886			0.4841
Avg			0.104352			0.117689			0.6122
Max			0.158764			0.312691			1.2689

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: June Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.07	
3					0.01	
4					0.00	
5					0.17	
6					0.01	
7					0.00	
8					0.33	
9					0.08	
10					0.00	
11					0.00	
12	M	.0061	.25	Heavy Rain Event	0.33	
13	M	.0081	.5	Heavy Rain Event	0.27	
14	M	.0484	1.0	Heavy Rain Event	0.77	
15	M	.2656	12.0	Heavy Rain Event	1.18	
16	M	.0661	9.0	Heavy Rain Event	0.34	
17					0.07	
18					0.37	
19					0.07	
20	M	.5842	6.0	Heavy Rain Event	1.83	
21	M	.3393	24.0	Heavy Rain Event	0.46	
22	M	.0065	6.0	Heavy Rain Event	0.01	
23	M	.0594	3.0	Heavy Rain Event	0.41	
24					0.04	
25	M	.0074	1.0	Heavy Rain Event	0.00	
26					0.27	
27	M	.8537	19.0	Heavy Rain Event	0.45	
28	M	.3108	24.0	Heavy Rain Event	1.49	
29	M	.0003	1.0	Heavy Rain Event	0.10	
30					0.02	
31						

**See instructions for explanation.*

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 7/13/15

800-FM-BPNPSM0442 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: June Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.07	
3					0.01	
4					0.00	
5					0.17	
6					0.01	
7					0.00	
8					0.33	
9					0.08	
10					0.00	
11					0.00	
12	M	0.0010	0.25	Heavy Rain Event	0.33	
13	M	0.0004	0.25	Heavy Rain Event	0.27	
14	M	0.0165	1.0	Heavy Rain Event	0.77	
15	M	0.0763	9.0	Heavy Rain Event	1.18	
16	M	0.0201	8.0	Heavy Rain Event	0.34	
17					0.07	
18					0.37	
19					0.07	
20	M	0.2092	6.0	Heavy Rain Event	1.83	
21	M	0.0632	16.0	Heavy Rain Event	0.46	
22					0.01	
23	M	0.0171	1.0	Heavy Rain Event	0.41	
24					0.04	
25	M	0.0003	0.25	Heavy Rain Event	0.00	
26					0.27	
27	M	0.3581	15.0	Heavy Rain Event	0.45	
28	M	0.1466	24.0	Heavy Rain Event	1.49	
29	M	0.0004	1.0	Heavy Rain Event	0.10	
30					0.02	
31						

See instructions for explanation.

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Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 7/13/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

July									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1		0.1	0.182255			0.353049			1.3476
2			0.146199			0.265640			1.0882
3			0.106996			0.218696			0.9804
4		1.26	0.091052	0.2751	10.0	0.194810	0.0873	7.0	0.9849
5		0.1	0.221693			0.055996			1.9693
6		0.1	0.187330	0.0113	1.0	0.328304			1.2455
7		0.46	0.167768	0.0063	1.0	0.267449			1.3077
8		0.15	0.201046			0.279209			1.3620
9		0.12	0.199368	0.1274	6.0	0.297154	0.0458	5.0	1.2798
10		0.65	0.178530			0.195331			1.5588
11			0.215917			0.130227			1.7931
12			0.169956			0.311585			1.2693
13			0.131069			0.246719			1.0704
14		0.1	0.105401	0.1031	3.0	0.211279	0.0474	2.0	0.9131
15		0.78	0.119800			0.169012			1.3655
16		0.02	0.187952			0.315499			1.0992
17			0.110264			0.237383			1.0048
18		0.4	0.080659	0.0157	1.0	0.200784	0.0027	0.5	0.8328
19			0.097542			0.196999			0.9546
20			0.067423			0.173929			0.7636
21		0.02	0.069459			0.152717			0.7320
22			0.117001			0.140012			0.7020
23			0.142139			0.131171			0.4410
24			0.136418			0.117447			0.6475
25			0.132368			0.120128			0.6630
26			0.107974			0.112514			0.5679
27		0.19	0.128965			0.115760			0.6114
28			0.063033			0.103284			0.5900
29			0.099077			0.098060			0.5144
30		0.3	0.096922			0.098395			0.5579
31			0.125256			0.118132			0.5763
Min		0.02	0.063033	0.0063	1.0	0.055996	0.0027	0.5	0.4410
Avg		0.32	0.135059	0.0898	3.7	0.192151	0.0458	3.6	0.9934
Max		1.26	0.221693	0.2751	10.0	0.353049	0.0873	7.0	1.9693
No Precip (based on WWTP gauge)									
Min			0.063033			0.098060			0.4410
Avg			0.123039			0.170120			0.8517
Max			0.215917			0.311585			1.7931

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: July Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.10	
2					0.00	
3					0.00	WWTP Rain Gauge used because of
4	M	.2751	10.0	Heavy Rain Event	1.26	problems with Borough rain gauge
5					0.10	
6	M	.0113	1.0	Heavy Rain Event	0.10	
7	M	.0063	1.0	Heavy Rain Event	0.46	
8					0.15	
9	M	.1274	6.0	Heavy Rain Event	0.12	
10					0.65	
11					0.00	
12					0.00	
13					0.00	
14	M	.1031	3.0	Heavy Rain Event	0.10	
15					0.78	
16					0.02	
17					0.00	
18	M	.0157	1.0	Heavy Rain Event	0.40	
19					0.00	
20					0.00	
21					0.02	
22					0.00	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.19	
28					0.00	
29					0.00	
30					0.30	
31					0.00	

**See instructions for explanation.*

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Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 8/5/15

)0-FM-BPNPSM0442 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: July Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.10	
2					0.00	
3					0.00	
4	M	.0873	7.0	Heavy Rain Event	1.26	
5					0.10	
6					0.00	
7					0.46	
8					0.15	
9	M	.0458	5.0	Heavy Rain Event	0.12	
10					0.65	
11					0.00	
12					0.00	
13					0.00	
14	M	.0474	2.0	Heavy Rain Event	0.10	
15					0.78	
16					0.02	
17					0.00	
18	M	.0027	0.5	Heavy Rain Event	0.40	
19					0.00	
20					0.00	
21					0.02	
22					0.00	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.19	
28					0.00	
29					0.00	
30					0.30	
31					0.00	

*See instructions for explanation.

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Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 8/5/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

August									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1			0.093826			0.100393			0.5935
2			0.088302			0.093070			0.5126
3	0.36		0.086955	0.0050	0.25	0.092880	0.0012	0.25	0.5401
4	0.02	0.16	0.091097			0.097807			0.6103
5			0.053581			0.100345			0.5388
6			0.080450			0.091236			0.4957
7			0.074535			0.086770			0.4992
8			0.074131			0.096119			0.4186
9			0.067679			0.085853			0.4212
10			0.064938			0.082241			0.3609
11	0.12	0.15	0.066227			0.087162			0.4125
12		0.02	0.066547			0.093778			0.4238
13			0.062335			0.083950			0.4300
14			0.062109			0.082166			0.4258
15			0.065977			0.078914			0.4559
16			0.062132			0.076366			0.3610
17			0.061527			0.073399			0.3923
18	0.35	0.12	0.060784			0.074744			0.4130
19	0.66	0.12	0.084464	0.0338	1.0	0.083568	0.0185	1.0	0.4853
20	0.39	0.85	0.068755	0.0055	1.0	0.087080			0.6391
21		0.47	0.022122			0.132780			0.8023
22			0.001172			0.105179			0.5010
23			0.001002			0.097430			0.4254
24			0.000709			0.088521			0.4381
25			0.006893			0.086568			0.5263
26			0.022841			0.085904			0.4446
27			0.017211			0.085163			0.5456
28			0.009944			0.081711			0.6068
29			0.011489			0.083392			0.4953
30	0.02		0.005447			0.075118			0.3607
31			0.010714			0.076075			0.3690
Min	0.02	0.02	0.000709	0.004979	0.25	0.073399	0.001182	0.25	0.3607
Avg	0.27	0.27	0.049868	0.01474133	0.75	0.088570	0.009852	0.63	0.4821
Max	0.66	0.85	0.093826	0.033752	1.0	0.132780	0.018522	1	0.8023
No Precip (based on WWTP gauge)									
Min			0.000709			0.073399			0.3607
Avg			0.045246			0.087032			0.4649
Max			0.093826			0.105179			0.6068

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: August Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3	M	0.0050	0.25	Heavy Rain Event	0.00	
4					0.16	
5					0.00	
6					0.00	
7					0.00	
8					0.00	
9					0.00	
10					0.00	
11					0.15	
12					0.02	
13					0.00	
14					0.00	
15					0.00	
16					0.00	
17					0.00	
18					0.12	
19	M	0.0338	1.0	Heavy Rain Event	0.12	
20	M	0.0055	1.0	Heavy Rain Event	0.85	
21					0.47	
22					0.00	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.00	
28					0.00	
29					0.00	
30					0.00	
31					0.00	

*See instructions for explanation.

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Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 9/16/15

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: August Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3	M	0.0012	0.25	Rain Event	0.00	WWTP Rain Gauge used because of problems with Borough rain gauge
4					0.16	
5					0.00	
6					0.00	
7					0.00	
8					0.00	
9					0.00	
10					0.00	
11					0.15	
12					0.02	
13					0.00	
14					0.00	
15					0.00	
16					0.00	
17					0.00	
18					0.12	
19	M	0.0185	1.0	Rain Event	0.12	
20					0.85	
21					0.47	
22					0.00	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.00	
28					0.00	
29					0.00	
30					0.00	
31					0.00	

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 9/16/15

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

September									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1			0.006026			0.071845			0.3932
2			0.010406			0.068337			0.4111
3			0.007730			0.071905			0.4669
4			0.007917			0.072064			0.3822
5		0.26	0.012645			0.070353			0.3762
6			0.006390			0.065846			0.3473
7			0.005623			0.066732			0.3824
8			0.004334			0.066990			0.3965
9			0.002825			0.065462			0.4375
10		0.12	0.002576			0.062675			0.4774
11		0.13	0.014151			0.090042			0.499
12		0.18	0.001130			0.070226			0.3939
13		0.16	0.014838			0.086913			0.4983
14		0.1	0.012480			0.096903			0.4654
15			0.008462			0.075403			0.3895
16			0.011524			0.070813			0.3956
17			0.010763			0.070889			0.4562
18			0.008974			0.072322			0.3765
19			0.011494			0.069256			0.3769
20		0.34	0.024091	0.0050	0.5	0.083138	0.0005	0.25	0.4323
21			0.000061			0.079244			0.4054
22		0.05	0.003747			0.073490			0.4187
23			0.015719			0.067572			0.3567
24			0.013927			0.068150			0.3621
25			0.011828			0.068204			0.4277
26			0.008285			0.069870			0.3682
27		0.02	0.008664			0.071489			0.3539
28			0.009094			0.070976			0.3357
29		0.08	0.012651	0.1537	10	0.071550	0.1080	4.0	0.4027
30		2.6	0.112611	0.1036	6.5	0.103798	0.0084	2.0	1.7475
Min		0.02	0.000061	0.0050	0.5	0.062675	0.0005	0.25	0.3357
Avg		0.37	0.012699	0.0874	5.7	0.073749	0.0390	2.08	0.4511
Max		2.6	0.112611	0.1537	10	0.103798	0.1080	4.0	1.7475
No Precip (based on WWTP gauge)									
Min			0.000061			0.065462			0.3357
Avg			0.008494			0.070099			0.3930
Max			0.015719			0.079244			0.4669

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: September Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3					0.00	
4					0.00	
5					0.26	
6					0.00	
7					0.00	
8					0.00	
9					0.00	
10					0.12	
11					0.13	
12					0.18	
13					0.16	
14					0.10	
15					0.00	
16					0.00	
17					0.00	
18					0.00	
19					0.00	
20	M	0.0050	.25	Heavy Rain Event	0.34	
21					0.00	
22					0.05	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.02	
28					0.00	
29	M	0.1537	10.0	Heavy Rain Event	0.08	
30	M	0.1036	6.50	Heavy Rain Event	2.60	
31						

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services
Signature: Bernard Kozlovac
Date: 10/7/2015

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: September Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3					0.00	WWTP Rain Gauge used because of problems with Borough rain gauge
4					0.00	
5					0.26	
6					0.00	
7					0.00	
8					0.00	
9					0.00	
10					0.12	
11					0.13	
12					0.18	
13					0.16	
14					0.10	
15					0.00	
16					0.00	
17					0.00	
18					0.00	
19					0.00	
20	M	0.0005	.25	Rain Event	0.34	
21					0.00	
22					0.05	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.02	
28					0.00	
29	M	0.1080	4.0	Heavy Rain Event	0.08	
30	M	0.0084	2.0	Heavy Rain Event	2.60	
31						

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 10/72015

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

October									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1		0.02	0.104901			0.231616			1.1405
2			0.022869			0.170466			0.7587
3		0.17	0.023890			0.123645			0.5473
4		0.38	0.163329			0.181558			0.9590
5			0.064927			0.115719			0.6068
6			0.060458			0.098120			0.5366
7			0.109846			0.085360			0.5352
8			0.098704			0.079400			0.4684
9			0.096401	0.0127	1.0	0.069831	0.0057	1.0	0.5125
10		0.53	0.220733			0.104849			0.8024
11			0.109122			0.093400			0.5526
12			0.082858			0.081835			0.4979
13		0.11	0.071602			0.075480			0.4915
14		0.05	0.079102			0.081804			0.5558
15		0.05	0.053916			0.071353			0.4800
16		0.05	0.052588			0.061851			0.5247
17		0.04	0.039156			0.065887			0.4957
18		0.02	0.048881			0.063478			0.4529
19		0.08	Invalid Rdg			0.061693			0.4442
20			Invalid Rdg			0.057836			0.4053
21			Invalid Rdg			0.059325			0.4228
22			Invalid Rdg			0.060194			0.3797
23		0.02	Invalid Rdg			0.056087			0.4240
24			Invalid Rdg			0.053547			0.4383
25		0.42	Invalid Rdg			0.060489			0.5092
26			0.125006			0.099394			0.5641
27			0.059411			0.061441			0.4154
28		0.66	0.052216	0.0063	1.0	0.059722	0.0007	1.0	0.5378
29		0.66	0.396988			0.257411			1.5125
30		0.02	0.262057			0.218572			1.1223
31			0.138122			0.139885			0.8064
Min		0.02	0.022869	0.006275	1.0	0.053547	0.000671	1.0	0.3797
Avg		0.205	0.105712	0.009503	1.0	0.100040	0.003197	1.0	0.6097
Max		0.66	0.396988	0.012731	1.0	0.257411	0.005723	1.0	1.5125
No Precip (based on WWTP gauge)									
Min			0.022869			0.061441			0.4154
Avg			0.087975			0.099532			0.5686
Max			0.138122			0.170466			0.8064

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: October Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.02	
2					0.00	
3					0.17	
4					0.38	
5					0.00	
6					0.00	
7					0.00	
8					0.00	
9	M	0.0127	1.0	Rain Event	0.53	
10					0.00	
11					0.00	
12					0.11	
13					0.05	
14					0.05	
15					0.05	
16					0.04	
17					0.02	
18					0.08	
19					0.00	
20					0.00	
21					0.00	
22					0.02	
23					0.00	
24					0.42	
25					0.00	
26					0.00	
27					0.00	
28	M	0.0063	1.0	Heavy Rain Event	0.66	
29					0.66	
30					0.02	
31					0.00	

See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 11/12/2015

800-FM-BPNPSM0442 3/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: October Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.02	
2					0.00	
3					0.17	WWTP Rain Gauge used because of problems with Borough rain gauge
4					0.38	
5					0.00	
6					0.00	
7					0.00	
8					0.00	
9	M	0.0057	1.0	Rain Event	0.53	
10					0.00	
11					0.00	
12					0.11	
13					0.05	
14					0.05	
15					0.05	
16					0.04	
17					0.02	
18					0.08	
19					0.00	
20					0.00	
21					0.00	
22					0.02	
23					0.00	
24					0.42	
25					0.00	
26					0.00	
27					0.00	
28	M	0.0007	1.0	Heavy Rain Event	0.66	
29					0.66	
30					0.02	
31					0.00	

See instructions for explanation.

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Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 11/12/2015

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

November									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1	0.02		0.110509			0.117549			0.6542
2			0.094058			0.106868			0.5914
3			0.085568			0.095413			0.5188
4			0.106081			0.083535			0.474
5			0.088418			0.075170			0.4864
6		0.01	0.096572			0.071629			0.4724
7	0.09		0.058098			0.079894			0.5543
8			0.013062			0.067753			0.4756
9			0.007059			0.065118			0.4218
10	0.13	0.17	0.046558			0.062552			0.5149
11	0.58		0.191869			0.161985			0.8613
12	0.18	0.08	0.137094			0.125086			0.7354
13	0.04	0.01	0.151968			0.127635			0.8503
14			0.108704			0.103490			0.6297
15			0.086106			0.091213			0.5586
16			0.071962			0.085480			0.5192
17		0.02	0.069343			0.079883			0.5035
18		0.06	0.066114			0.076477			0.5394
19	0.59	0.32	0.065600	0.0023	0.5	0.077749			0.6388
20	0.09		0.222725			0.165597			0.9352
21			0.097106			0.098883			0.6767
22	0.02	0.01	0.099104			0.096892			0.5990
23			0.082665			0.092915			0.5537
24			0.071909			0.084207			0.5271
25			0.077680			0.077437			0.5832
26			0.065994			0.078906			0.5336
27			0.047437			0.071682			0.4618
28	0.02	0.03	0.048409			0.066198			0.5077
29	0.19		0.074394			0.084146			0.5728
30		0.01	0.059059			0.075067			0.4971
Min	0.02	0.01	0.007059	0.0023	0.5	0.062552			0.4218
Avg	0.18	0.07	0.086707	0.0023	0.5	0.091547			0.5816
Max	0.59	0.32	0.222725	0.0023	0.5	0.165597			0.9352
No Precip (based on WWTP gauge)									
Min			0.007059			0.065118			0.4218
Avg			0.088070			0.094362			0.5795
Max			0.222725			0.165597			0.9352

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: November Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3					0.00	
4					0.00	
5					0.00	
6					0.01	
7					0.00	
8					0.00	
9					0.00	
10					0.17	
11					0.00	
12					0.08	
13					0.01	
14					0.00	
15					0.00	
16					0.00	
17					0.02	
18					0.06	
19	M	0.0023	0.5	Heavy Rain Event	0.32	
20					0.00	
21					0.00	
22					0.01	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.00	
28					0.03	
29					0.00	
30					0.01	
31						

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 12/07/2015

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: November Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.00	
2					0.00	
3					0.00	
4					0.00	
5					0.00	
6					0.01	
7					0.00	
8					0.00	
9					0.00	
10					0.17	
11					0.00	
12					0.08	
13					0.01	
14					0.00	
15					0.00	
16					0.00	
17					0.02	
18					0.06	
19					0.32	
20					0.00	
21					0.00	
22					0.01	
23					0.00	
24					0.00	
25					0.00	
26					0.00	
27					0.00	
28					0.03	
29					0.00	
30					0.01	
31						

*See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services
Signature: Bernard Kozlovac
Date: 12/07/2015

Ebensburg Wastewater System
2015 CSO Flows and WWTP Flow Summary

December									
Date	Office Rain Gauge Precip *(in)*	Plant Rain Gauge Precip *(in)*	Griffith Field Flows to Plant *(MGD)*	Griffith Field CSO 002 Discharge *(MGD)*	Griffith Field Event Duration *(Hrs)*	Lakeview Rd Field Flows to Plant *(MGD)*	Lakeview Rd CSO 003 Discharge *(MGD)*	Lakeview Rd Event Duration *(Hrs)*	WWTP Effluent Flows *(MGD)*
1	0.19	0.02	0.051405			0.068712			0.5017
2	0.27	0.65	0.101153	0.0219	4.0	0.096785	0.0124	3.0	0.6269
3	0.02	0.44	0.407082			0.193775			1.5482
4	0.01		0.209108			0.183327			0.9815
5			0.148030			0.155267			0.8142
6			0.118652			0.138734			0.6790
7			0.114548			0.121657			0.6704
8			0.095724			0.106970			0.6216
9	0.01		0.076265			0.095345			0.6661
10		0.05	0.076403			0.089053			0.5750
11			0.071323			0.085018			0.5499
12		0.01	0.063813			0.079960			0.5504
13			0.051673			0.075497			0.5230
14	0.02		0.282438			0.075587			0.5342
15		0.16	0.073392			0.085781			0.6160
16		0.02	0.090377			0.079801			0.5525
17	0.01	0.13	0.071224			0.068272			0.5123
18		0.26	0.177558			0.136296			0.7584
19		0.08	0.111687			0.097413			0.6255
20			0.084874			0.088100			0.5389
21	0.01		0.077783			0.082824			0.5481
22	0.1	0.37	0.079277	0.0044	1.0	0.082712	0.0007	0.5	0.6120
23	0.02	0.21	0.255826			0.195686			1.1644
24	0.05	0.34	0.175871			0.159028			0.9691
25		0.03	0.242520			0.224044			1.1301
26	0.09	0.11	0.160428			0.178171			0.9366
27	0.2	0.42	0.237187	0.0255	6.0	0.192744	0.0187	5.0	1.1030
28	0.01	0.28	0.463350			0.194681			1.7948
29	0.03	0.46	0.377242	0.0100	4.0	0.327653	0.0097	3.0	1.6824
30			0.489330			0.086886			1.7572
31		0.02	0.283773			0.287749			1.3448
Min	0.01	0.01	0.051405	0.004428	1	0.068272	0.0007	0.5	0.5017
Avg	0.07	0.21	0.171591	0.015459	3.8	0.133340	0.0104	2.9	0.8545
Max	0.27	0.65	0.489330	0.025518	6	0.327653	0.0187	5	1.7948
No Precip (based on WWTP gauge)									
Min			0.051673			0.075497			0.5230
Avg			0.151646			0.107934			0.7403
Max			0.489330			0.183327			1.7572

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: December Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 002
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.19	
2	M	0.0219	4.0	Heavy Rain Event	0.27	
3					0.02	
4					0.01	
5					0.00	
6					0.00	
7					0.00	
8					0.00	
9					0.01	
10					0.00	
11					0.00	
12					0.00	
13					0.00	
14					0.02	
15					0.00	
16					0.00	
17					0.01	
18					0.00	
19					0.00	
20					0.00	
21					0.01	
22	M	0.0044	1.0	Rain Event	0.10	
23					0.02	
24					0.05	
25					0.00	
26					0.09	
27	M	0.0255	6.0	Heavy Rain Event	0.20	
28					0.01	
29	M	0.0100	4.0	Rain Event	0.03	
30					0.00	
31					0.00	

See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 1/11/16

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

CSO SUPPLEMENTAL REPORT
DETAILED OUTFALL REPORT

Facility Name: Ebensburg Borough Municipal Authority
Municipality: Cambria Township County: Cambria
Watershed: 18-E

Month: December Year: 2015
NPDES Permit No.: PA0022292 Outfall No. 003
Renewal application due **180 days** prior to expiration
This permit will expire on 4-30-2018

Day	Identification*	Discharge Volume (MG)*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.19	
2	M	0.0124	3.0	Heavy Rain Event	0.27	
3					0.02	
4					0.01	
5					0.00	
6					0.00	
7					0.00	
8					0.00	
9					0.01	
10					0.00	
11					0.00	
12					0.00	
13					0.00	
14					0.02	
15					0.00	
16					0.00	
17					0.01	
18					0.00	
19					0.00	
20					0.00	
21					0.01	
22	M	0.0007	1.0	Rain Event	0.10	
23					0.02	
24					0.05	
25					0.00	
26					0.09	
27	M	0.0188	5.0	Heavy Rain Event	0.20	
28					0.01	
29	M	0.0097	3.0	Rain Event	0.03	
30					0.00	
31					0.00	

See instructions for explanation.

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Prepared By: Bernard Kozlovac
Title: Project Manager - Severn Trent Services

Signature: Bernard Kozlovac
Date: 1/11/2016