

2018 Municipal Wasteload Management Report

Prepared for:

Ebensburg Municipal
Authority

NPDES 0022292

*Ebensburg Borough, Cambria County
Pennsylvania*

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EXHIBITS:

Hydraulic Loadings Graph
Organic Loadings Graph

ATTACHMENTS:

Flow Meter Calibration Certificate
Annual Sewage Sludge Management Inventory
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 prior to 2015 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 Inframark 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 MGD 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 collection system. 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 commenced the preparation of a comprehensive inflow and infiltration evaluation during last quarter of 2015. The evaluation continued through early 2016 and was completed in June of 2016 with a report on the findings and recommendations for remediating the inflow and infiltration conditions identified. The evaluation and report recommendations have been utilized to develop a rather sizeable project that is aimed at reducing extraneous wet weather flows entering the sewer system to levels that are expected to result in the elimination of discharges from the CSOs and to enable the CSOs to be abandoned. As designed,

the project will involve the separation of storm sewers from the sanitary sewer system and the replacement of a substantial portion of the Borough's collection system all of which is tributary to the two CSOs. The project was bid in January 2018, a contract for construction of the project was awarded in February and construction of the project was commenced in May of 2018. The project and its status are discussed in more detail in Section 5 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 2018, the annual average monthly flow to the treatment plant was 1.255 MGD and the "rolling" maximum three consecutive months' average (MTCMA) flow was 1.457 MGD which occurred during the three-month period of September through November 2018. 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 three consecutive month periods, nor any single month, during which the permitted average daily hydraulic loading was exceeded. Thus, the treatment plant was not hydraulically overloaded in 2018 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 2018, three (3) new residential connections and one (1) office connection, equivalent to four (4) EDUs were made within the collection system owned and operated by the EMA. Two (2) were located in Ebensburg Borough and two (2) were located in the Cambria Township service area. The additional four (4) EDUs increased the estimated total service area EDU count to 3,449.

With respect to future development, a small six (6) lot residential subdivision has previously been proposed for development on Park Street in the Borough as initially discussed in the 2017 report. No connections have been made within that proposed development to date. In addition, there are several existing developments within the Borough and Cambria Township that are served by the Ebensburg WWTP which may experience further growth during the five-year planning period. Both the Emerald Estates single family residential development and the S&P Estates residential development may see a combined additional growth of twenty (20) to twenty-five (25) EDUs. Additional development may also occur in the Cambria County Industrial Park – South Complex, Phase I which currently has nine (9) parcels available for development. A proposed South Complex Phase II may also 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 six (6) 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 ten (10) 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 2023 expressed by the data in Table 1-B.

As the data tables and graph indicate, the projected hydraulic loading is projected to remain 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-year operating period. Average daily loads for each month shown represent the arithmetic mean of the BOD₅ 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 BOD₅ analysis was performed and the result of the BOD₅ analysis. The following formula derived the BOD₅ in pounds per day: BOD₅ concentration (mg/l) x daily flow rate (MGD) x 8.34 lbs./gal. (conversion factor) = pounds of BOD₅ per day. The monthly average was then obtained by averaging all BOD₅ loadings calculated through the course of each respective month.

During 2018, the annual monthly average organic loading was calculated to be 1,558 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 2018 was 1,936 lbs/day, which was recorded in November. Since no monthly average organic loadings exceeded the 2,625 lbs/day permit limit, the wastewater treatment plant was not organically overloaded in 2017 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 early 1900's. In addition, much of the collection system is comprised of 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. Unfortunately, despite the completion of the rehab, replacement and improvement projects, inflow and infiltration has continued to exist within the system and periodic operation of both CSO Outfalls has continued to occur. In light of this, the PA DEP included a Schedule of Compliance in the NPDES renewal permit issued for the WWTP in 2013 that required 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 completed a new sewer system evaluation in mid-2016 which included a report on the findings and recommendations for remediating the extraneous flows induced by wet weather inflow and infiltration. The report provided a summary of system defects and a prioritization of system needs which in turn have been utilized to define the scope of a sanitary sewer system improvements project to be undertaken by the Authority.

The study revealed numerous significant defects to be present throughout the system and the overall condition of the collection and conveyance systems to be very poor. Results of flow metering documented that high wet weather flows are not emanating from any single or specific areas of the system. Rather, they are a system-wide condition resulting from the apparent poor condition of the aging and deteriorated terra cotta sewer mains, manholes and service laterals, the existence of indirect connections of stormwater that were not able to be identified and suspected illegal connections within the private sector. These findings have demonstrated that a system-wide replacement would be warranted.

Since the cost to undertake a complete replacement of the entire system would be prohibitive, the report recommended that the replacement efforts be concentrated in the areas tributary to the CSOs and that the project, or projects, include the replacement of all sanitary sewer collection and interceptor lines, manholes and laterals that have not previously been replaced within the respective project area.

Following its review and consideration of the report findings and recommendations, the EMA determined that, from an affordability standpoint, it would be capable of undertaking a sewer system replacement/storm water separation project with a project cost of approximately \$9,000,000. To accomplish a project that would fit within this budget, the sewer system metering subbasins were ranked and estimated project cost estimates were prepared for each. The severity of identified defects, recorded wet weather flow contributions, and the subbasins where a replacement project would be most effective in reducing inflow and infiltration were used to develop the rankings. Based upon these criteria, the Authority authorized the implementation of a sewer system replacement and storm sewer separation project that would include sewer Areas 2, 3, 5 and 6. In addition to these areas, with Areas 1 and 4 as alternate bids within the project in the event that bid prices would be received that are considerably lower than projected.

Design and permits acquisition for the project were completed in 2017 and an application for funding assistance was submitted to PENNVEST on August 9, 2017. The Authority was successful in receiving a funding offer from the PENNVEST Board at its October 18, 2018 meeting which included a low interest (1.0%) loan in the amount of \$9,000,000. In response to this successful award of funding the Authority authorized the project be advertised for bids. Bids were subsequently received for the project on January 15, 2018. The low bid was received from Sippel Development Company, Inc. of Zelienople PA. Based upon its review of the bid submitted by Sippel, the Authority issued an award of a contract for the Base Bid project and also Alternates 2, 3 and 4 for a total contract amount of \$8,420,967.

The project contract, as awarded, includes the replacement of an approximate 58,100 LF of 6" through 21" collection and conveyance lines with new PVC lines, the replacement of an approximate 344 manholes with new, precast concrete manholes, the replacement of 892 of customer service lateral connections and an estimated 21,280 LF of laterals from the Authority's main line to the property line or easement boundary. Observation ports will also be installed on each service lateral at the property line or easement boundary. This portion of the project will also include the installation of an approximate 1,885 LF of 15" to 24" storm sewer. Notice to Proceed for construction of the project was issued May of 2018, with substantial completion to be accomplished under the current contract schedule by May 24, 2019 and final completion by July 23, 2019.

In addition to the aforementioned public sector improvements being undertaken by the Authority to manage wasteloads and to reduce hydraulic loadings within the sanitary sewer system, measures are also being implemented to impact wet weather contributions emanating from the private sector. During 2018, the Authority continued to require that all private service laterals be tested prior to property transfer and added a requirement that the service laterals of all properties

within two designated areas of the collection system outside of the sewer replacement project that have exhibited high wet weather flows also be tested prior to deadlines established for each of the areas. The Authority also enhanced the requirements for testing the service laterals to include pressure testing between the observation stack at the property line and the building trap (or cleanout) at the foundation wall. Properties not having observation stacks, traps or cleanouts are being required to install them prior to testing. If the lines fail the testing, repairs are required to be performed to correct the defects.

The pressure testing requirement became effective January 1, 2017. During 2018, 270 private laterals were tested outside of the project area. A majority of all those tested require repair work to pass follow-up testing. Notices were sent to owners of the properties where the laterals did not pass the testing, with deadlines for completing the necessary repairs. The Borough is currently seeking civil penalties for those locations that did not pass and the deadline for repairs has been exceeded. Presale testing was also performed on 12 private laterals which revealed 14 defects that required correction to pass follow-up testing.

To further improve the reduction of wet weather flows originating from the private sector, a similar service lateral pressure testing program will also be implemented by Authority in conjunction with the sewer system replacement project for all service laterals connected to the system. On a routine basis following implementation of this program the Authority personnel will inspect observation ports installed on the service laterals during wet weather conditions to identify customer connections that are still contributing excess or wet weather flows. Owners of the properties where excess flows are identified will then be required to locate the source of the flows and correct any defects or illegal connections identified. Of the laterals tested in the project area, 74 have passed to date.

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 28 through September 4, 2018. 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 in 2018 and no extensions are currently planned for construction within the EMA service areas in 2019 or the immediate future. A total of four (4) new sewer connection permits totally four (4) EDUs were issued within the EMA owned and operated service area. Three (3) of the connections were for single family residences and one (1) was a facility for the Cambria County Association for the Blind and Handicapped. Two (2) of the connections were located in Ebensburg Borough and the remaining two (2) were in Cambria Township.

8. Sewer System Inspection, Maintenance and Monitoring

During 2018, maintenance, daily operation and administration of the WWTP were performed by licensed treatment plant operators and maintenance personnel of Inframark, 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 2018 with passing results for both the *Ceriodaphnia dubia* and *Pimephales promelas* endpoints analyzed.

An application for the renewal of the NPDES discharge permit for the WWTP, which is set to expire on April 30, 2018, was prepared and submitted to the PA DEP in October of 2017. As of the date of this report, issuance of the renewal permit is pending.

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 2018, property lateral inspections were continued as described in Section 5 and notification of deadlines for the repair of defects identified were sent to property owners. The Public Works Department personnel also performed repairs to defects found in the sections of service lateral located between the main and property or easement line.

During its inflow and infiltration investigations, the Public Works personnel located a defect in the Industrial Park line that was contributing a significant amount of infiltration to the Industrial Park system and downstream pump station. The investigation determined that the mainline was apparently broken during the installation of a telephone pole. The damaged line was repaired by the Borough personnel upon discovery. Wet weather flows into that section of system and subsequent loadings on the Industrial Park Pump Station have exhibited a notable reduction since the repair was made.

Prior to the repair of the Industrial Park line, a sewer backup occurred in early July of 2018 at the Taxidermy School which is connected to the manhole into which the Industrial Park Pump Station discharges. The line was jetted following the notification of the backup and repairs were made to the break discovered in the Industrial Park line. No further issues at this location have occurred since the line cleaning was performed and the break discovered in the Industrial Park line was repaired. In light of the condition of the Industrial Park line and the on-going problems that have been experienced within that system, the Borough applied for a grant to replace the line. Unfortunately, the funding request was not approved and the replacement project been deferred until such time that sufficient funding may be acquired to undertake the project.

As discussed in Section 5, testing of 270 private laterals was completed during 2018 within the area outside of the sewer system replacement project area. A majority of all those tested require repair work to pass follow-up testing. Notices were provided to the owners of the properties where the laterals did not pass the testing, with deadlines for completing the necessary repairs. The Borough is currently seeking civil penalties for those locations that did not pass and the deadline for repairs has been exceeded. Presale testing was also performed on 12 private laterals which revealed 14 defects that required correction to pass follow-up testing. And within the sewer system replacement project area, 74 laterals have successfully passed the testing performed.

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 Inframark 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 2018. Routine maintenance of note in 2018 included:

1. Replacement of a quartz sleeve and lamps in the UV system
2. Replacement of a motor on an air valve
3. Replaced the drive belt on the sludge centrifuge
4. Installed WIMS system for record keeping and DMR reporting

With the exception of the replacement of the lamps in Bank B of the UV system and implementation of the new E-Maintenance Program, no major equipment or process upgrades, replacements or repairs are anticipated for 2019 or the near future.

In contrast to the good condition of the WWTP, the condition of collection and conveyance systems, prior to the completion of the major sewer system replacement project which is currently underway, is generally poor. The poor condition is

compounded by the lack of manholes to access the system for proper routine maintenance and cleaning. The collection system has adequate capacity to convey existing dry weather flows. However, the aging and deteriorated condition of the sewer collection system has resulted in the system being 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 2018, overflows were recorded to have occurred on ninety-seven days (fifty-three events) at CSO 002, while overflows were recorded on sixty-two days (thirty events) at CSO 003. Although the number of events is higher than those recorded in 2017, the amount of precipitation recorded in 2018 was extraordinary, i.e. 70.55", which was considerably higher than the 47" average annual rainfall for the area.

As discussed in Section 5, the Borough commenced construction of a comprehensive sewer replacement project in May of 2018, within service areas tributary to the two CSOs. The project is intended to reduce inflow and infiltration within both areas to a level that will enable the CSOs to be abandoned. Based upon the current construction contract schedule, construction of the project is to be substantially complete by May 24, 2019, with final completion by July 23, 2019.

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 2018 operating year.

CSO Operations Summary:

- a. Frequency, duration, volume and cause of CSO discharges for 2018** – Outfalls 002 and 003 are currently the only active and permitted CSOs on the EMA sewer system. There was a total of fifty-three (53) recorded discharge events from CSO Outfall 002 and a total of thirty (30) events from CSO Outfall 003 during the 2018 operating year. Multiple consecutive days of recorded discharge are counted as one event. The discharge events were all the result of elevated wet weather flows due to precipitation, snow melt or a combination of both. Discharges from CSO 002 were recorded on a total of ninety-seven (97) dates during 2018 and from CSO 003 on sixty-two (62) dates. 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 2018 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 by the WWTP personnel after each precipitation event and randomly (at least once per month) to confirm that overflows are not occurring during dry weather. 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 commenced the construction of a major sewer system replacement and storm water separation project within the sewer service areas tributary to both CSOs. Construction of the project commenced in May of 2018 and based upon the construction contract, is scheduled to be completed by the end of July of 2019. The project is intended to reduce sufficient wet weather inflow and infiltration from entering the sewer system to enable both CSOs to be permanently eliminated. The sewer system replacements completed thus far within the areas tributary to CSO 002 (Lakeview) appear to be moving successfully toward achieving this goal as the frequency and volume of flows recorded at CSO 002 have declined markedly toward the end of 2018.

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. In reviewing the CSO events and precipitation data, it is noted

that measurable precipitation was recorded on 222 days in the Ebensburg area during 2018 which totaled over 70" and which greatly exceeded the normal annual precipitation total of 43" to 47".

g. CSO Inspection Summary –

Both CSOs were checked on a routine monthly basis and after precipitation events during 2018 to identify any obstructions, necessary maintenance or repair, and operation of the respective CSO. CSO flow meter data is downloaded during each monthly inspection. All CSO events were the result of apparent wet weather (rain, snow melt or both) induced, hydraulic overloading. No dry weather sewer system overflows were recorded during 2018. 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 2018.

i. Dry Weather Overflows –

No dry weather overflows were recorded during 2018.

j. Wet Weather Overflows –

Discharges were recorded at CSO 002 on a total of ninety-seven (97) days during fifty-three (53) separate CSO events. Discharges were recorded at CSO 003 on a total of sixty-two (62) dates during thirty (30) separate CSO events. 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 –

The frequency and intensity of precipitation events was significantly elevated in 2018. There were numerous periods during the year when precipitation or precipitation combined with snow melt occurred on consecutive days which resulted in continuous, or sequential-day discharges from the CSOs. All discharges were due to stormwater flow and subsequent elevated flows within the combined sewer system which allowed the combined flows to overflow the control weirs. Overflows subsided and ceased following termination of the precipitation/snow melt event and associated stormwater runoff.

Nine Minimum Controls Implementation:

a. NMC-1 Regular Operation and Regular Maintenance Program –

The contract operators of the WWTP from Inframark 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 precipitation events and at least once per month to confirm that dry weather flows have not, or are not occurring. During the 2018 operating year, the Borough continued CSO monitoring and management activities and continued its program of regular street sweeping, inlet cleaning, leaf and trash pickup to minimize debris accumulation within the combined sewer system that would contribute to reduced conveyance and storage capacity of the sewer system or result in obstructions and backups within the system that would cause an overflow from the CSO.

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, 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 upon flow data from 2015 and 2016 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 2019 through the completion of the sewer system replacement project to gage the effectiveness of the project in order to determine if sufficient extraneous flow has been removed from the system to enable the CSOs to be eliminated.

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 2018, 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. It is anticipated that the CSOs will be able to be eliminated following completion of the major sewer system replacement project which is currently under construction.

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 previously 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 which has regularly included articles regarding the need, and requirement, 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, property transfer pre-sale customer lateral pressure testing requirements and the effects of illegal stormwater connections to the sanitary sewer system.

Routine media publicity regarding the current sewer replacement project and the program implemented by the Borough for mandatory lateral inspections and repairs has also resulted in an enhanced public awareness of the CSO system and the environmental implications of such a system, along with the importance of both preventing the pollution of storm water and eliminating sources of inflow and infiltration that contribute to the operation of the CSO system.

h. NMC-8 Public Notification of Overflow Occurrences and their Impacts –

Signage is provided at both CSO outfall locations which 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 –

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 (4) 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. Monitoring of pump runtime data is utilized by the collection system operator to gauge the operation of the pump station and to determine if problems exist at any particular station. During 2018 the pump stations were interfaced with the Flex Net system that is utilized by the Borough to monitor customer water usage. The Flex Net system enables the operator to monitor real-time operation of the pump station to determine its operational status. The Flex Net system is capable of generating a report that lists each pump operation during the day, but unfortunately does not generate a total daily runtime summary that can be used to estimate daily flows. In addition, since real-time monitoring of the pump stations was made available with implementation of the Flex Net system, a manual log of pump runtime data was not maintained during 2018 that could be used to estimate average daily flows and read period peaks. Therefore, estimates of average and peak flows has not been able to be calculated for 2018, nor projected for 2019. However, based upon routine monitoring of the pump station operations via the Flex Net system by the collection system operator, the pump stations generally operated within their design capacities during 2018. There were instances during the extreme wet weather events that occurred in 2018 where operation of both pumps was necessary to maintain flow. Operation of both pumps at the Industrial Park pump station was observed for a period of time during early July following a precipitation event. The excess flow through the pump station was

believed to be due to infiltration resulting from the sewer main line that was damaged during telephone pole installation. Flows returned to normal levels following repair of the damaged section of the sewer main. Barring another year of extreme precipitation events such as experienced in 2018, the pump stations are expected to operate within design limits through the next two-year period.

To enhance the ability to evaluate pump station operations, and to enable calculation of estimated flow loadings and future flow projections, the collection system operator has begun reviewing and manually recording daily runtime data for each pump station generated by the Flex Net system starting on January 1, 2019.

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, 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.

As discussed in the preceding, runtime data was not logged by the operator in 2018, so flow estimates were not able to be calculated. Based upon routine monitoring of the pump station by the collection system operator via the Flex Net system, the pump station normally pumps down the wet well approximately once every 20 minutes at approximately 4.5 to 5 minutes per cycle which works out to 5.4 to 6 hours per day. At this operating cycle, the station operated within its design capacity. A peak operational period did occur on July 7, 2018 when both pumps operated for a continuous period of time, presumably as result of wet weather flows entering the system from the main line that was damaged during installation of the telephone pole. As noted earlier in this Section, pump cycles returned to normal after the damaged sewer main was repaired. As little development is expected to occur within the

service area of this pump station within the immediate future, this pump station is expected to operate within its design capacity over the next two-year planning period.

No major repairs or replacements were necessary for this pump station in 2018 and none are planned for 2019.

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 and several office personnel. Therefore flows to this pump station are minimal. This pump station has a rated capacity of 167,040 gpd. Pump station runtime data was also not logged during 2018. The pump station typically operates just once per day during normal dry weather conditions and approximately twice per day during wet weather. Based upon these minimal pumping cycles, and since the Gamesa Plant is not in business, it is believed that this pump station operated 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 2018 and none are planned for 2019.

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. Runtime data was also not logged for this pump station. This pump station normally cycles just six (6) times per day and more often wet weather. As only a couple homes per year are expected to be added to the service area in each of the next two years, the pump station is not expected to become overloaded during the next two years. However, since operation of pumps during wet weather has been noted to increase, the Borough Public Works personnel plan to perform wet weather

inspections of lateral observation ports and manholes within the subdivision's collection system in 2019 to identify possible sump pump connections to the system and sections of the system that may be contributing excessive flows during wet weather conditions.

No major repairs or replacements were necessary for this pump station in 2018 and none are planned for 2019.

Ebensburg Water Treatment Plant Pump Station – This pump station serves the Ebensburg Water Treatment Plant and is only utilized to pump filter backwash water on an as needed basis, and a minimal amount of sanitary sewage generated by the water treatment plant personnel. The rated capacity of the pump station is 245,000 gpd. Flow rates fluctuate daily depending upon water product rates and quantities of water that are wasted at any given time. During 2018, 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 2018 and no major repairs or equipment replacements are anticipated in 2019.

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 centrifuge which typically produces dewatered sludge with a solids content ranging from 18% to 21%. During 2018, the WWTP produced 921.74 wet tons of sludge at an average solids content of 19.16% which is equivalent to 176.57 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 2018 operating year and is included in Attachments section at the end of this report. WAS volumes pumped to the digester are estimated based upon sludge pump runtimes, assumed pumping rate and pump cycles. WAS concentrations were not recorded in 2018. 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 2018, the WWTP accepted a total of 156,000 gallons of hauled-in liquid sludge from High Ridge Water Authority. The sludge from the High Ridge Water Authority was dewatered on the WWTP's drying beds and is currently awaiting disposal.

13. 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

Mark Wirfel, Wastewater Plant Manager
Severn Trent Services

Authorizing Signature of
Permittee/Date

Daniel L. Penatzer, Borough Manager
Borough of Ebensburg

Authorizing Signature of
Permittee/Date

Tables

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

HYDRAULIC LOADINGS (MGD)						
Month	Year					
	2014	2015	2016	2017	2018	
Jan	1.390	0.959	0.726	1.3639	1.0506	
Feb	1.213	1.102	1.143	1.3786	1.7736	
Mar	1.445	1.934	0.811	1.2922	1.1606	
Apr	1.313	1.106	0.796	1.1430	1.2753	
May	1.300	0.757	0.844	1.1597	1.1269	
Jun	1.459	1.124	0.770	1.2771	1.1277	
Jul	0.899	0.993	0.424	0.9640	0.9091	
Aug	0.956	0.482	0.497	0.7861	0.8848	
Sep	0.774	0.451	0.487	0.6083	1.5366	
Oct	0.709	0.610	0.588	0.5880	1.3520	Five Year Averages
Nov	0.768	0.582	0.592	0.9726	1.4813	
Dec	1.374	0.854	1.251	0.7771	1.3813	
Annual Average	1.133	0.913	0.744	1.026	1.255	1.014
MTCMA	1.357	1.381	0.917	1.345	1.457	1.291
Ratio	1.20	1.51	1.23	1.31	1.16	1.28
No. of EDUs	3,423	3,426	3,440	3,445	3,449	
Flow/EDU (gpd)	331	266	216	298	364	295

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) - 2019 - 2023							
Year	Previous Flow (MGD)	Projected Additional EDUs	Increased Flow (MGD)	Projected Flow (MGD)	Projection Factor (5 Yr Ratio)	Projected MTCMA (MGD)	Permitted Capacity (MGD)
2019	1.014	10	0.003	1.017	1.28	1.302	2.0
2020	1.017	10	0.003	1.020	1.28	1.306	2.0
2021	1.020	10	0.003	1.023	1.28	1.309	2.0
2022	1.023	10	0.003	1.026	1.28	1.313	2.0
2023	1.026	10	0.003	1.029	1.28	1.317	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)						
Month	Year					
	2014	2015	2016	2017	2018	
Jan	1,920	1,136	931	1,566	1,234	Five Year Averages
Feb	1,393	1,106	1,033	1,510	1,902	
Mar	1,592	1,554	879	1,410	1,407	
Apr	1,338	869	973	1,427	1,823	
May	1,140	802	1,209	1,348	1,422	
Jun	1,278	1,154	1,073	1,373	1,551	
Jul	1,199	1,027	595	1,074	1,213	
Aug	1,303	540	760	959	1,160	
Sep	932	752	616	785	1,750	
Oct	813	703	780	930	1,715	
Nov	882	803	806	1,536	1,936	
Dec	1,406	1,041	1,838	1,068	1,585	
Annual Average	1,266	957	958	1,249	1,558	1,198
Maximum Month	1,920	1,554	1,838	1,566	1,936	1,763
Ratio	1.52	1.62	1.92	1.25	1.24	1.51
No. EDUs	3,423	3,426	3,440	3,445	3,449	
Lbs BOD5/EDU	0.37	0.28	0.28	0.36	0.45	0.35

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) 2019 - 2023							
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)
2019	1,198	10	4	1,202	1.51	1,815	2,652
2020	1,202	10	4	1,206	1.51	1,821	2,652
2021	1,206	10	4	1,210	1.51	1,827	2,652
2022	1,210	10	4	1,214	1.51	1,833	2,652
2023	1,214	10	4	1,218	1.51	1,839	2,652

NOTES:

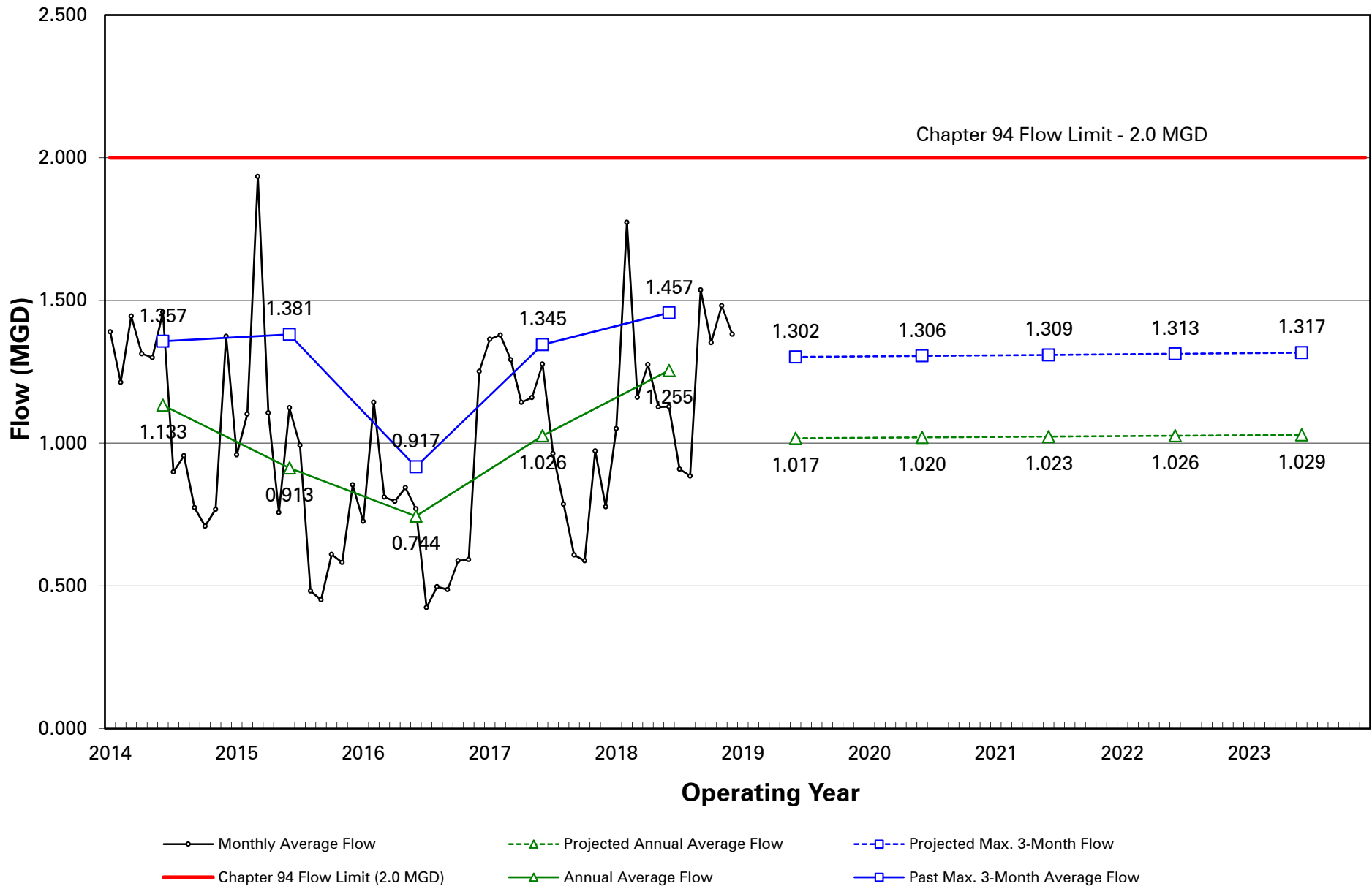
The current five year average annual organic loading is used as the basis for organic loading projections.
Each new EDU added to the system is estimated to contribute an organic load equal to the current 5 year average load per EDU.

Exhibits

EBENSBURG MUNICIPAL AUTHORITY

Wastewater Treatment Plant Hydraulic Loading Graph

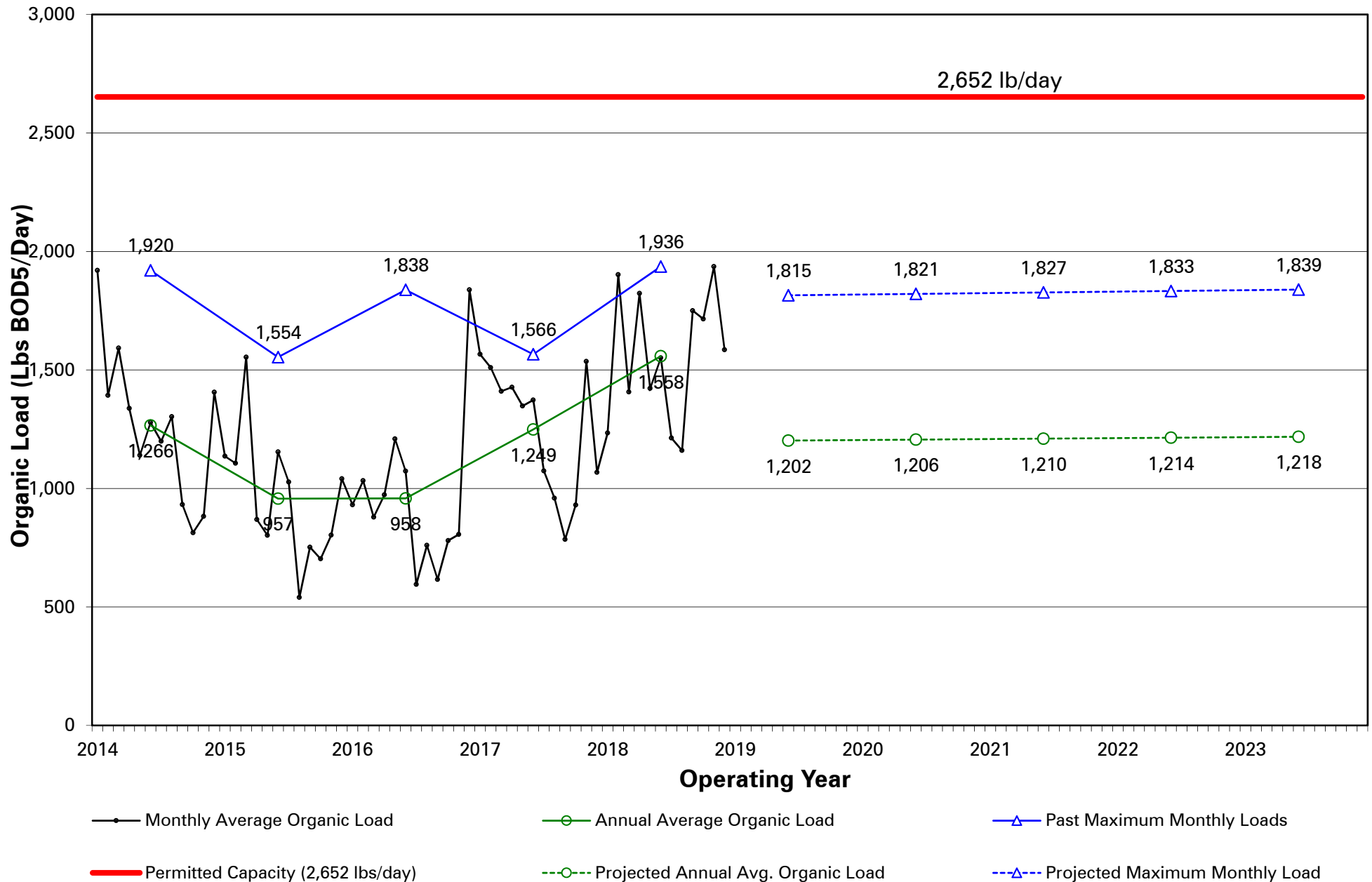
EXHIBIT A



EBENSBURG MUNICIPAL AUTHORITY

Wastewater Treatment Plant Organic Loading Graph

EXHIBIT B



Attachments

Flow Meter Calibration Certificate



KWM CONTROLS INC.

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

Certificate of Calibration

Customer Infamark LLC
291 Trout Ln
Ebensburg Pa 15931

Date 12-31-18

Type: Eastech
Serial#: 12590
Model#: 2210
Chart Recorder: Future Design 24 Hr
Serial # 03-0439

Flow Range: 0-10 MGD
Primary Element: 42" weir
Signal: 4-20maDC
Location: Ebensburg WWTP
Effluent

	Pre Calibration	Post Calibration	Flow Reading
Reading thru primary element	.0" .0 MGD	0" 0 MGD	
Signal Reading maDC			
0%	4.00 maDC	4.00 maDC	0 MGD
25%	8.00 maDC	8.00 maDC	2.5 MGD
50%	12.00 maDC	12.00 maDC	5.0 MGD
75%	16.00 maDC	16.00 maDC	7.5 MGD
100%	20.00 maDC	20.00 maDC	10 MGD

Additional comments :

Annual Sewage Sludge Management Inventory

Ebensburg Borough Wastewater Treatment Plant 2018 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)	2018 Actual Sludge Wasted (gal)	2018 Actual Sludge Wasted* (Dry tons)	2018 Actual Sludge Disposed (Dry Tons)	Expected Sludge Wasted (gal)	Expected Sludge Wasted (Dry Tons)	Expected Sludge Disposed (Dry Tons)
JAN	1.051	158	1,234	19.13	1.9	2.3	18.0	0.28	7,500	510,400	15.96	14.91	493,990	15.45	10.04
FEB	1.774	146	1,902	26.63	2.0	2.4	31.9	0.45	7,500	330,000	10.32	12.46	446,185	13.95	9.07
MAR	1.161	153	1,407	21.81	1.9	2.3	20.8	0.32	7,500	716,650	22.41	21.45	493,990	15.45	10.04
APR	1.275	156	1,823	27.35	1.9	2.2	30.6	0.46	7,500	480,700	15.03	15.71	478,055	14.95	9.72
MAY	1.127	155	1,422	22.04	1.8	2.2	20.4	0.32	7,500	456,500	14.28	16.15	493,990	15.45	10.04
JUN	1.128	154	1,551	23.27	1.8	2.2	22.6	0.34	7,500	325,600	10.18	15.53	478,055	14.95	9.72
JUL	0.909	154	1,213	18.80	1.8	2.2	18.0	0.28	7,500	289,850	9.07	10.57	493,990	15.45	10.04
AUG	0.885	159	1,160	17.98	2.0	2.4	17.8	0.28	7,500	237,050	7.41	13.79	493,990	15.45	10.04
SEP	1.537	141	1,750	26.25	1.9	2.3	28.7	0.43	7,500	224,400	7.02	10.25	478,055	14.95	9.72
OCT	1.352	154	1,715	26.58	1.9	2.3	25.8	0.40	7,500	334,950	10.48	13.65	493,990	15.45	10.04
NOV	1.481	143	1,936	29.04	2.2	2.7	36.6	0.55	7,500	422,400	13.21	12.89	478,055	14.95	9.72
DEC	1.381	142	1,585	24.57	1.9	2.3	25.6	0.40	7,500	587,950	18.39	19.22	493,990	15.45	10.04
Average	1.255	151	1,558			2.3	24.7		7,500	409,704			484,695		
Annual Tot				283.44				4.49		4,916,450	153.76	176.57	5,816,335	181.91	118.24
Avg Daily										13,470			15,935		

Expected Sludge Production vs. Actual

Monitoring Period:	Jan 1, 2018 - Dec 31, 2018
Lbs BOD removed from plant [avg influent BOD (lb/day) - avg effluent BOD(lb/day)]:	1533.5 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]:	996.7 lbs/day
Expected Sludge Feed Rate to Digesters: [TSS removed x1,000,000/waste sludge conc. X 8.34]	15,935 gal/day
Actual Sludge Feed Rate to Digesters [Total gal wasted/365 days]:	13,470 gal/day
Total Digester Volume:	448,000 gal
Expected Digester Hydraulic Detention Time [Digester capacity/expecteded sludge feed rate]	28 days**
Actual Digester Hydraulic Detention Time [Digester capacity/actual sludge feed rate]:	33 days**
Estimated Volatile Solids Reduction Factor [percent as decimal Table 3]:	0.35
Expected Digested Solids Production Estimate [TSS removed x (1.0-Estimated VS reduction factor)]:	648 lbs/day
Expected Sludge Production - Monitoring Period [calc. digester solids produced/2000x365]:	118.2 tons
Actual Dry Tons Sludge Disposed - Monitoring Period [monthly biosolids production rept]:	176.6 tons

Notes:

*Waste Sludge Solids Concentration was not analyzed in 2018 - 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"

**Ebensburg Municipal Authority WWTP
2018 Annual Sludge Disposal Summary**

Month	Sludge Disposed Laurel Highland Landfill		
	Wet Tons	%Solids	Dry Tons
Jan	82.34	18.11	14.913
Feb	68.41	18.22	12.463
Mar	116.37	18.43	21.448
Apr	86.06	18.25	15.709
May	83.11	19.43	16.146
Jun	83.5	18.60	15.530
Jul	49.58	21.31	10.566
Aug	69.16	19.94	13.788
Sep	49.83	20.58	10.254
Oct	67.86	20.11	13.646
Nov	66.32	19.44	12.892
Dec	99.2	19.37	19.215
Total	921.74	19.16	176.570

2018 Ebensburg Wastewater Treatment Plant - Waste Activated Sludge Summary

[illegible]

Ebensburg Borough
Wastewater Treatment Facility
2018 - Conversion of DMR Influent BOD Concentrations to lbs

Month	Influent Flow (mgd)	Influent BOD (mg/L)	Influent BOD Loading (lbs)	Month	Flow (mgd)	Influent BOD (mg/L)	Influent BOD Loading (lbs)
Jan	0.8660	154	1112.26	Jul	0.8139	138	936.73
	0.9285	150	1161.55		0.7945	177	1172.83
	0.5971	164	816.69		0.7463	160	995.86
	0.6562	158	864.69		0.6340	166	877.73
	1.2085	168	1693.25		0.6531	175	953.20
	1.0235	164	1399.90		0.8775	152	1112.39
	1.1434	153	1459.00		0.8054	144	967.25
	1.0865	163	1477.01		1.3819	144	1659.61
	1.0302	152	1305.96		2.0969	128	2238.48
	0.8443	149	1049.18				
		158	1234 Monthly Avg			154	1213 Monthly Avg
Feb	0.8053	168	1128.32	Aug	1.5050	118	1481.10
	0.8410	161	1129.24		0.9403	183	1435.10
	2.1553	148	2660.33		0.8896	180	1335.47
	2.0282	138	2334.30		0.7078	158	932.68
	2.2645	134	2530.71		0.7437	166	1029.61
	1.6457	142	1948.97		0.7378	158	972.21
	1.8497	132	2036.30		0.9605	136	1089.44
	1.2257	142	1451.57		0.7113	160	949.16
					0.8678	168	1215.89
		146	1902 Monthly Avg			159	1160 Monthly Avg
Mar	1.3460	138	1549.14	Sep	0.6770	145	818.70
	1.0085	156	1312.10		0.6307	143	752.19
	0.8846	149	1099.26		2.4577	146	2992.59
	0.8169	136	926.56		1.8430	160	2459.30
	0.8327	161	1118.10		1.7617	165	2424.28
	0.8567	170	1214.63		1.3317	150	1665.96
	0.9991	166	1383.19		1.1611	132	1278.23
	2.1178	150	2649.37		2.2407	86	1607.12
		153	1407 Monthly Avg			141	1750 Monthly Avg
Apr	1.6082	158	2119.16	Oct	1.1827	154	1519.01
	2.0544	146	2501.52		1.4992	142	1775.47
	1.1850	165	1630.68		1.3345	168	1869.79
	0.9374	176	1375.95		1.2064	141	1418.65
	2.4002	140	2802.47		1.2893	155	1666.68
	1.5260	147	1870.85		1.0866	151	1368.40
	1.0801	160	1441.29		0.9686	146	1179.41
	1.1800	172	1692.69		0.7900	172	1133.24
	0.8463	138	974.02		2.7199	122	2767.44
		156	1823 Monthly Avg		1.5293	192	2448.84
						154	1715 Monthly Avg
May	0.7909	152	1002.61	Nov	1.6931	152	2146.31
	0.9488	151	1194.86		1.2510	172	1794.53
	0.8222	166	1138.29		1.4353	146	1747.68
	1.7105	156	2225.43		1.2920	140	1508.54
	1.6422	163	2232.44		2.0463	133	2269.80
	1.1449	120	1145.82		1.6170	128	1726.18
	1.1220	149	1394.26		2.2592	138	2600.16
	0.8871	166	1228.14		1.5506	131	1694.09
	0.8499	174	1233.34				
		155	1422 Monthly Avg			143	1936 Monthly Avg
Jun	1.2211	143	1456.31	Dec	1.6889	126	1774.76
	0.9131	171	1302.21		1.2072	127	1278.64
	0.9081	158	1196.62		0.9899	144	1188.83
	1.4367	152	1821.28		0.9248	136	1048.95
	1.0873	160	1450.89		1.5348	140	1792.03
	1.7616	159	2335.99		1.1630	148	1435.51
	1.2153	138	1398.71		1.3380	140	1562.25
	1.1768	147	1442.73		1.0548	156	1372.34
		154	1551 Monthly Avg		2.1046	160	2808.38
						142	1585 Monthly Avg

Ebensburg Borough
Wastewater Treatment Facility
2018 - Conversion of DMR Effluent CBOD Concentrations to BOD lbs

Month	Effluent Flow (mgd)	Effluent CBOD (mg/L)	Effluent CBOD to BOD Conversion (mg/L)	Effluent BOD Loading (lbs)	Month	Flow (mgd)	Effluent CBOD (mg/L)	Effluent CBOD to BOD Conversion (mg/L)	Effluent BOD Loading (lbs)
Jan	0.866	2.0	2.4	17.3	Jul	0.8139	2.0	2.4	16.3
	0.9285	1.8	2.2	16.7		0.7945	1.8	2.2	14.3
	0.5971	1.9	2.3	11.4		0.7463	1.8	2.2	13.4
	0.6562	1.9	2.3	12.5		0.634	1.8	2.2	11.4
	1.2085	2.1	2.5	25.4		0.6531	1.8	2.2	11.8
	1.0235	1.8	2.2	18.4		0.8775	1.8	2.2	15.8
	1.1434	1.8	2.2	20.6		0.8054	1.8	2.2	14.5
	1.0865	2.0	2.4	21.7		1.3819	1.9	2.3	26.3
	1.0302	1.8	2.2	18.6		2.0969	1.8	2.2	37.8
	0.8443	2.0	2.4	16.9					
		1.9	2.3	18.0 Monthly Avg			1.8	2.2	18.0 Monthly Avg
Feb	0.8053	1.9	2.3	15.3	Aug	1.505	2.0	2.4	30.1
	0.841	1.8	2.2	15.2		0.9403	2.6	3.1	24.5
	2.1553	1.9	2.3	41.0		0.8896	2.1	2.5	18.7
	2.0282	2.0	2.4	40.6		0.7078	2.0	2.4	14.2
	2.2645	2.4	2.9	54.4		0.7437	1.8	2.2	13.4
	1.6457	1.8	2.2	29.6		0.7378	1.8	2.2	13.3
	1.8497	1.8	2.2	33.3		0.9605	1.8	2.2	17.3
	1.2257	2.1	2.5	25.8		0.7113	1.8	2.2	12.8
						0.8678	1.8	2.2	15.6
		2.0	2.4	31.9 Monthly Avg			2.0	2.4	17.8 Monthly Avg
Mar	1.346	2.2	2.6	29.6	Sep	0.677	1.9	2.3	12.9
	1.0085	1.8	2.2	18.2		0.6307	1.8	2.2	11.4
	0.8846	1.8	2.2	15.9		2.4577	2.0	2.4	49.2
	0.8169	2.0	2.4	16.4		1.843	2.1	2.5	38.7
	0.8327	1.8	2.2	15.0		1.7617	1.8	2.2	31.7
	0.8567	1.8	2.2	15.4		1.3317	1.8	2.2	24.0
	0.9991	1.8	2.2	18.0		1.1611	1.8	2.2	20.9
	2.1178	1.8	2.2	38.2		2.2407	1.8	2.2	40.4
		1.9	2.3	20.8 Monthly Avg			1.9	2.3	28.7 Monthly Avg
Apr	1.6082	2.0	2.4	32.2	Oct	1.1827	1.9	2.3	22.5
	2.0544	1.8	2.2	37.0		1.4992	1.8	2.2	27.0
	1.185	1.8	2.2	21.3		1.3345	2.2	2.6	29.4
	2.9374	1.8	2.2	52.9		1.2064	1.8	2.2	21.7
	2.4002	1.9	2.3	45.6		1.2893	1.8	2.2	23.2
	1.526	1.8	2.2	27.5		1.0866	1.8	2.2	19.6
	1.0801	2.1	2.5	22.7		0.9686	1.8	2.2	17.4
	1.18	1.8	2.2	21.3		0.79	2.2	2.6	17.4
	0.8463	1.8	2.2	15.2		2.7199	1.9	2.3	51.7
		1.9	2.2	30.6 Monthly Avg		1.5293	1.8	2.2	27.5
							1.9	2.3	25.8 Monthly Avg
May	0.7909	1.8	2.2	14.2	Nov	1.6931	3.0	3.6	50.8
	0.9488	2.0	2.4	19.0		1.251	2.0	2.4	25.0
	0.8222	1.8	2.2	14.8		1.4353	2.4	2.9	34.5
	1.7105	1.9	2.3	32.5		1.292	2.4	2.9	31.0
	1.6422	1.8	2.2	29.6		2.0463	2.1	2.5	43.0
	1.1449	1.8	2.2	20.6		1.617	2.0	2.4	32.4
	1.122	1.8	2.2	20.2		2.2592	2.0	2.4	45.2
	0.8871	1.8	2.2	16.0		1.5506	2.0	2.4	31.0
	0.8499	1.9	2.3	16.2					
		1.8	2.2	20.4 Monthly Avg			2.2	2.7	36.6 Monthly Avg
Jun	1.2211	1.8	2.2	22.0	Dec	1.6889	1.8	2.2	30.4
	0.9131	1.8	2.2	16.4		1.2072	1.8	2.2	21.7
	0.9081	1.8	2.2	16.4		0.9899	2.2	2.6	21.8
	1.4367	1.8	2.2	25.9		0.9248	1.8	2.2	16.7
	1.0873	1.8	2.2	19.6		1.5348	1.8	2.2	27.6
	1.7616	2.1	2.5	37.0		1.163	2.0	2.4	23.3
	1.2153	1.8	2.2	21.9		1.338	1.9	2.3	25.4
	1.1768	1.8	2.2	21.2		1.0548	2.0	2.4	21.1
						2.1046	2.0	2.4	42.1
		1.8	2.2	22.6 Monthly Avg			1.9	2.3	25.6 Monthly Avg

Ebensburg Borough WWTP
2018 Annual Annual Hauled-In Waste Summary

Date	Source	Waste Type	Gallons	Disposal Location	%Solids	Dry tons
September 2018	High Ridge Water Authority	Water Treatment Plant filtrate	156,000	Drying Beds	NA	NA
Total			156,000			NA

2018 CSO Data

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

January								
Date	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	0.01	0.255840			0.224472			0.8660
2	0.02	0.248090			0.217315			0.7660
3		0.243135			0.204147			0.9285
4		0.233480			0.188683			0.9051
5	0.05	0.236613			0.176259			0.7961
6	0.05	0.256071			0.185275			0.8161
7		0.247099			0.226564			0.6865
8		0.239840			0.172936			0.5971
9	0.19	0.240063			0.274470			0.6670
10		0.246850			0.269020			0.6562
11		0.243355	0.070742	3	0.144673	0.047170	3	1.3693
12	0.42	0.253504	0.639630	24	0.272846	0.364217	24	2.8926
13	1.2	0.708938	0.295405	22	0.605547	0.228133	21	2.2008
14		1.051370			0.574953			1.5240
15		0.810971			0.440181			1.2085
16	0.03	0.277689			0.326825			1.0595
17	0.13	0.557658			0.264923			1.0235
18	0.01	0.971521			0.229937			0.8986
19		0.884791			0.210596			0.7922
20		0.660173			0.194205			0.7661
21	0.02	0.248065			0.188269			0.9611
22	0.05	0.270680			0.241192			1.1434
23	0.22	0.262214	0.005700	2	0.271716			1.3649
24	0.05	0.546511			0.347795			1.0865
25	0.07	0.523052			0.288567			0.9645
26		0.453360			0.254254			0.8653
27		1.152150			0.236549			0.9740
28	0.22	1.087260			0.235012			0.9746
29		0.266871			0.288387			1.0302
30	0.2	0.468059			0.246204			0.9415
31	0.02	0.409829			0.232349			0.8443
Total	2.96	14.555102	1.011477	51	8.234121	0.639520	48	32.5700
Min	0.01	0.233480	0.005700	2	0.144673	0.047170	3	0.5971
Avg	0.16	0.469519	0.252869	12.75	0.265617	0.213173	16	1.0506
Max	1.20	1.152150	0.639630	24	0.605547	0.364217	24	2.8926
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.233480			0.144673			0.5971
Avg		0.517957			0.261934			0.9464
Max		1.152150			0.574953			1.5240



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: January Year: 2018
NPDES Permit No.: PA0022292 Outfall: 002 griff
Renewal application due 180 days prior to expiration.
This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0.02	
2						0.00	
3						t	
4						0.05	
5						0.05	
6						t	
7						0.00	
8						0.19	
9						0.00	
10						0.00	
11	Inspection	0.070742	M	3	Hydraulic Overload	0.42	
12	Inspection	0.639631	M	24	Hydraulic Overload	1.20	
13	Inspection	0.295405	M	22	Hydraulic Overload	t	
14						0.00	
15						0.03	
16						0.13	
17						0.01	
18						0.00	
19						0.00	
20						0.02	
21						0.05	
22						0.22	
23	Inspection	0.0057	M	2	Hydraulic Overload	0.05	
24						0.07	
25						0.00	
26						0.00	
27						0.22	
28						0.00	
29						0.20	
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: Mark J Wirfel
Title: Plant Manager

License No.: S7317
Date: 2/13/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: January Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.02	no over flows for month
2					0	
3					t	
4					0.05	
5					0.05	
6					t	
7					0	
8					0.19	
9					0	
10					0	
11	Inspection	0.04717	M 3	Hydraulic Overload	0.42	
12	Inspection	0.364217	M 24	Hydraulic Overload	1.2	
13	Inspection	0.228133	M 21	Hydraulic Overload	t	
14					0	
15					0.03	
16					0.13	
17					0.01	
18					0	
19					0	
20					0.02	
21					0.05	
22					0.22	
23					0.05	
24					0.07	
25					0	
26					0	
27					0.22	
28					0	
29					0.2	
30					0.02	
31					0.0	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 2/13/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

February								
Date	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	0.43	0.4279970			0.220951			1.1040
2	0.03	0.4054780			0.272998			1.1150
3	0.09	0.3371810			0.253702			1.0470
4	0.42	0.5143390			0.234604			0.7100
5	0.02	0.2779770			0.226624			0.8050
6	0.3	0.2839520			0.217882			0.7570
7	0.74	0.6875050			0.201015			0.8410
8	0.05	1.8771200			0.215636			0.9350
9		0.6367540			0.203966			0.7880
10	0.17	0.7753990			0.194578			0.9540
11	0.3	1.4460400	0.592961	16	0.256822	0.348349	16	2.6240
12		0.7276170	0.304384	16	0.547185	0.251224	24	2.1550
13		0.8913860	0.000973	3	0.569564	0.001262	3	1.7180
14	0.41	0.8094470	0.137379	9	0.498687	0.072936	9	2.0280
15	2.05	0.7687150	0.466112	24	0.490257	0.555568	24	3.4000
16	0.32	0.9021120	0.322434	24	0.488559	1.142400	24	4.0040
17	0.48	0.9957140	0.258133	24	0.505632	0.297590	24	2.1480
18		0.8688920	0.013248	18	0.585775	0.001303	3	1.6990
19	0.36	0.8105140	0.202255	12	0.526920	0.154120	12	2.2650
20		0.8350800	0.085394	23	0.425617	0.053016	21	1.9820
21	0.3	0.8270180			0.385793			1.6460
22	0.92	0.8237890	0.085394	23	0.466289	0.275636	18	3.0510
23	0.31	0.7894530	0.243953	24	0.161423	0.038088	24	2.2560
24	1.17	0.9298810	0.008597	24	0.230456	0.141588	24	2.3250
25	0.01	0.8595560	0.006528	2	0.275000	0.319149	24	2.7710
26		0.8911460	0.000306	2	0.357893	0.051357	15	1.8500
27		0.8489730			0.566748			1.4560
28		0.8607520			0.424327			1.2260
Total	8.88	22.1097870	2.728051	244	10.004903	3.703586	265	49.66
Min	0.01	0.277977	0.000306	2	0.161423	0.001262	3	0.7100
Avg	0.44	0.789635	0.181870	16.3	0.357318	0.24690573	17.666667	1.7736
Max	2.05	1.877120	0.592961	24	0.585775	1.1424	24	4.0040
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.636754			0.203966			0.7880
Avg		0.813101			0.442186			1.5964
Max		0.891386			0.569564			2.1550



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: February Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0.43	
2						0.03	
3						0.09	
4						0.42	
5						0.02	
6						0.30	
7						0.74	
8						0.05	
9						0.00	
10						0.17	
11	Inspection	0.592961	M	16	Hydraulic Overload	0.30	
12	Inspection	0.304384	M	16	Hydraulic Overload	0.00	
13	Inspection	0.000973	M	3	Hydraulic Overload	0.00	
14	Inspection	0.137379	M	9	Hydraulic Overload	0.41	
15	Inspection	0.466112	M	24	Hydraulic Overload	2.05	
16	Inspection	0.322434	M	24	Hydraulic Overload	0.32	
17	Inspection	0.258133	M	24	Hydraulic Overload	0.48	
18	Inspection	0.013248	M	18	Hydraulic Overload	0.00	
19	Inspection	0.202255	M	12	Hydraulic Overload	0.36	
20	Inspection	0.085394	M	23	Hydraulic Overload	0.00	
21						0.30	
22	Inspection	0.085394	M	23	Hydraulic Overload	0.92	
23	Inspection	0.243953	M	24	Hydraulic Overload	0.31	
24	Inspection	0.008597	M	24	Hydraulic Overload	1.17	
25	Inspection	0.006528	M	2	Hydraulic Overload	0.01	
26	Inspection	0.000306	M	2	Hydraulic Overload	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: _____
 Title: _____

License No.: _____
 Date: _____



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: February Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.43	
2					0.03	
3					0.09	
4					0.42	
5					0.02	
6					0.3	
7					0.74	
8					0.05	
9					0	
10					0.17	
11	Inspection	0.348349	M 16	Hydraulic Overload	0.3	
12	Inspection	0.251224	M 24	Hydraulic Overload	0	
13	Inspection	0.001262	M 3	Hydraulic Overload	0	
14	Inspection	0.072936	M 9	Hydraulic Overload	0.41	
15	Inspection	0.555568	M 24	Hydraulic Overload	2.05	
16	Inspection	1.1424	M 24	Hydraulic Overload	0.32	
17	Inspection	0.29759	M 24	Hydraulic Overload	0.48	
18	Inspection	0.001303	M 3	Hydraulic Overload	0	
19	Inspection	0.15412	M 12	Hydraulic Overload	0.36	
20	Inspection	0.053016	M 21	Hydraulic Overload	0	
21					0.3	
22	Inspection	0.275636	M 18	Hydraulic Overload	0.92	
23	Inspection	0.038088	M 24	Hydraulic Overload	0.31	
24	Inspection	0.141588	M 24	Hydraulic Overload	1.17	
25	Inspection	0.319149	M 24	Hydraulic Overload	0.01	
26	Inspection	0.051357	M 15	Hydraulic Overload	0	
27					0	
28					0	
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: _____
 Title: _____

License No.: _____
 Date: _____

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

March								
Date	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	1.14	0.216068			0.335708	0.064127	5	1.8573
2		0.201514			0.389250	0.006623	2	1.8688
3		0.824262			0.504345			1.4193
4		0.895141			0.423474			1.3618
5		0.491959			0.366717			1.3460
6	0.12	0.493791			0.323553			1.1179
7	0.32	0.406794			0.289545			1.0085
8	0.12	1.137660			0.276007			1.0970
9	0.02	0.522424			0.265759			0.9557
10		0.662065			0.241155			0.8484
11		1.521250			0.235217			0.8793
12	0.02	1.373520			0.227571			0.8846
13	0.01	0.856988			0.223195			0.8559
14	0.13	0.737241			0.215057			0.8169
15	0.1	1.024980			0.213374			0.8051
16		0.683592			0.214480			0.7945
17		1.255360			0.202114			0.7343
18		1.618150			0.201415			0.7603
19		1.385440			0.205722			0.8327
20	0.41	0.871123			0.225458			0.8302
21	0.48	0.625864			0.226757			0.8567
22		1.383530			0.229815			0.9242
23		1.055990			0.242768			0.8518
24		0.267079			0.245140			0.9024
25		0.254527			0.268134			0.9461
26		0.231616			0.261969			0.9991
27	0.58	0.231616	0.002642	3	0.279027			1.3823
28	0.2	0.231616	0.294177	24	0.355154	0.015652	18	2.1178
29	0.42	0.486544	0.388381	24	0.576804	0.073667	24	2.6615
30	0.02	1.624940	0.363624	24	0.581960	0.066442	22	1.6529
31	0.03	0.839299	0.018072	9	0.606266			1.6082
Total	4.12	24.411943	1.066896	84	9.45291	0.226511	71	35.9775
Min	0.01	0.201514	0.0026	3.0	0.201415	0.006623	2	0.7343
Avg	0.26	0.787482	0.2134	16.8	0.304933	0.0453022	14.2	1.1606
Max	1.14	1.624940	0.3884	24.0	0.606266	0.073667	24	2.6615
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.201514			0.201415			0.7343
Avg		0.848765			0.282114			1.0313
Max		1.618150			0.504345			1.8688



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: March Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					1.14	
2					0	
3					0	
4					0	
5					0	
6					0.12	
7					0.32	
8					0.12	
9					0.02	
10					0	
11					0	
12					0.02	
13					0.01	
14					0.13	
15					0.1	
16					0	
17					0	
18					0	
19					0	
20					0.41	
21					0.48	
22					0	
23					0	
24					0	
25					0	
26					0	
27	Inspection	0.002642	M	3	Hydraulic Overload	0.58
28	Inspection	0.294177	M	24	Hydraulic Overload	0.2
29	Inspection	0.388381	M	24	Hydraulic Overload	0.42
30	Inspection	0.363624	M	24	Hydraulic Overload	0.02
31	Inspection	0.018072	M	9.0	Hydraulic Overload	0.03

* 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: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 4/10/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: March Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1	Inspection	0.064127	5	Hydraulic Overload	1.14	
2	Inspection	0.006623	2	Hydraulic Overload	0	
3					0	
4					0	
5					0	
6					0.12	
7					0.32	
8					0.12	
9					0.02	
10					0	
11					0	
12					0.02	
13					0.01	
14					0.13	
15					0.1	
16					0	
17					0	
18					0	
19					0	
20					0	
21					0.41	
22					0.48	
23					0	
24					0	
25					0	
26					0	
27					0.58	
28	Inspection	0.015652	M 18	Hydraulic Overload	0.2	
29	Inspection	0.073667	M 24	Hydraulic Overload	0.42	
30	Inspection	0.066442	M 22	Hydraulic Overload	0.02	
31					0.03	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 4/10/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

April								
Date	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	0.62	0.816529			0.504303			1.2976
2	0.02	0.360729	0.077427	13	0.392841			1.6082
3	0.6	0.367199	0.334062	16	0.459693	0.058839	13	2.1751
4	0.06	0.615217	0.299785	24	0.548717	0.033113	21	2.0544
5		0.688976	0.004272	7	0.591434			1.5831
6	0.46	0.838481	0.012077	2	0.490531			1.4119
7		0.332636	0.014844	7	0.411298			1.5333
8		0.354948			0.402557			1.2659
9	0.12	0.237138			0.367183			1.1850
10		0.240223			0.325721			1.0488
11		0.777650			0.297256			0.9374
12		0.784721			0.257792			0.9776
13		0.384575			0.233876			0.8478
14		0.195929			0.214692			0.8237
15	1.07	0.087156			0.203269			1.0607
16	0.47	0.026294	0.356282	21	0.213498	0.062101	13	2.4002
17	0.16	0.141928			0.574811			1.5938
18	0.17	0.657825			0.492689			1.5260
19	0.09	0.283129			0.413016			1.5049
20		0.210342			0.420010			1.2213
21		0.372369			0.350320			1.0708
22		1.315260			0.307997			1.0351
23	0.02	0.750035			0.279629			1.0801
24	0.51	0.420960	0.00223	2	0.254495			1.2711
25	0.02	0.153880			0.327528			1.1800
26		0.018010			0.303925			1.0064
27	0.05	0.004445			0.268212			0.9711
28	0.01	0.000000			0.251696			0.8665
29		0.002405			0.237084			0.8750
30		0.102564			0.224252			0.8463
Total	4.45	11.541553	1.100979	92	10.620325	0.154053	47	38.2591
Min	0.01	0.0000000	0.0022	2.0	0.203269	0.0331	13.0	0.8237
Avg	0.28	0.3847184	0.1376	11.5	0.354011	0.0514	15.7	1.2753
Max	1.07	1.3152600	0.3563	24.0	0.591434	0.0621	21.0	2.4002
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.002405			0.214692			0.823700
Avg		0.412901			0.327015			1.076607
Max		1.315260			0.591434			1.583100



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

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

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0.62	
2	Inspection	0.077427	M	13	Hydraulic Overload	0.02	
3	Inspection	0.334062	M	16	Hydraulic Overload	0.6	
4	Inspection	0.299785	M	24	Hydraulic Overload	0.06	
5	Inspection	0.004272	M	7	Hydraulic Overload	0	
6	Inspection	0.012077	M	2	Hydraulic Overload	0.46	
7	Inspection	0.014844	M	7	Hydraulic Overload	0	
8						0	
9						0.12	
10						0	
11						0	
12						0	
13						0	
14						0	
15						1.07	
16	Inspection	0.356282	M	21	Hydraulic Overload	0.47	
17						0.16	
18						0.17	
19						0.09	
20						0	
21						0	
22						0	
23						0.02	
24	Inspection	0.00223	M	2	Hydraulic Overload	0.51	
25						0.02	
26						0	
27						0.05	
28						0.01	
29						0	
30						0	
31						0	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 5/14/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

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

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0.62	
2						0.02	
3	Inspection	0.058839	M	13	Hydraulic Overload	0.6	
4	Inspection	0.033113	M	21	Hydraulic Overload	0.06	
5						0	
6						0.46	
7						0	
8						0	
9						0.12	
10						0	
11						0	
12						0	
13						0	
14						0	
15						1.07	
16	Inspection	0.062101	M	13	Hydraulic Overload	0.47	
17						0.16	
18						0.17	
19						0.09	
20						0	
21						0	
22						0	
23						0.02	
24						0.51	
25						0.02	
26						0	
27						0.05	
28						0.01	
29						0	
30						0	
31						0	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 5/14/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

May								
Date	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		0.134494			0.209394			0.7504
2		0.089047			0.194842			0.7909
3		0.144410			0.188714			0.7712
4	0.38	0.130855			0.181646			0.8698
5	0.37	0.125869			0.198985			0.8554
6	0.32	0.135895			0.183479			1.1627
7		0.122756			0.293180			0.9488
8	0.02	0.114234			0.213120			0.8309
9	0.22	0.159362			0.203903			0.8222
10	0.27	0.133510	0.006740	15 min	0.190992	0.000843	15 min	1.1152
11	0.26	0.125783			0.234642			0.9233
12	0.59	0.115533	0.068827	4	0.197628	0.015685	3	1.3615
13	0.53	0.127649	0.178625	10	0.328635	0.034733	4	2.1537
14	0.1	0.106985	0.045755	3	0.464779	0.012562	1	1.7105
15	0.31	0.078075			0.457011			1.7573
16	0.29	0.049257	0.000313	15 min	0.419752			1.6422
17		0.086742			0.400480			1.5404
18	0.32	0.105071			0.386993			1.2380
19	0.19	0.143630			0.316521			1.3890
20	0.26	0.124571	0.003361	15 min	0.341194			1.4143
21	0.06	0.101425			0.343532			1.1449
22	0.21	0.179840			0.286498			1.2432
23		0.110792			0.291621			1.1220
24		0.175879			0.252322			0.9144
25	0.24	0.239039			0.226847			0.9102
26	0.16	0.090369	0.000835	10 min	0.209813			0.9307
27	0.25	0.023864	0.027101	2	0.219190	0.003704	1	1.1662
28		0.113770			0.273706			0.8871
29		0.138019	0.000784	10 min	0.223190			0.8654
30		0.086579			0.203777			0.8499
31	0.4	0.037470			0.189959			0.8516
Total	5.75	3.65077369	0.332341	19	8.326345	0.067527	9	34.9333
Min	0.02	0.023864	0.0003	2.0	0.181646	0.000843	1	0.7504
Avg	0.27	0.117767	0.0369	4.8	0.268592	0.013505	2.3	1.1269
Max	0.59	0.239039	0.1786	10.0	0.464779	0.034733	4.0	2.1537
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.086579			0.188714			0.7504
Avg		0.120249			0.253123			0.9441
Max		0.175879			0.400480			1.5404



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: May Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0	
2					0	
3					0	
4					0.38	
5					0.37	
6					0.32	
7					0	
8					0.02	
9					0.22	
10	Inspection	0.00674	M	15 min	Hydraulic Overload	0.27
11					0.26	
12	Inspection	0.068827	M	4	Hydraulic Overload	0.59
13	Inspection	0.178625	M	10	Hydraulic Overload	0.53
14	Inspection	0.045755	M	3	Hydraulic Overload	0.1
15					0.31	
16	Inspection	0.000313	M	15 min	Hydraulic Overload	0.29
17					0	
18					0.32	
19					0.19	
20	Inspection	0.003361	M	15 min	Hydraulic Overload	0.26
21					0.06	
22					0.21	
23					0	
24					0	
25					0.24	
26	Inspection	0.000835	M	10 min	Hydraulic Overload	0.16
27	Inspection	0.027101	M	2	Hydraulic Overload	0.25
28					0	
29	Inspection	0.000784	M	10 min	Hydraulic Overload	0
30					0	
31					0.4	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 6/13/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: May Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0	
2						0	
3						0	
4						0.38	
5						0.37	
6						0.32	
7						0	
8						0.02	
9						0.22	
10	Inspection	0.000843	M	15 min	Hydraulic Overload	0.27	
11						0.26	
12	Inspection	0.015685	M	3	Hydraulic Overload	0.59	
13	Inspection	0.034733	M	4	Hydraulic Overload	0.53	
14	Inspection	0.012562	M	1	Hydraulic Overload	0.1	
15						0.31	
16						0.29	
17						0	
18						0.32	
19						0.19	
20						0.26	
21						0.06	
22						0.21	
23						0	
24						0	
25						0.24	
26						0.16	
27	Inspection	0.003704	M	1	Hydraulic Overload	0.25	
28						0	
29						0	
30						0	
31						0.4	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 6/13/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

June								
Date	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	0.05	0.024273			0.198278			0.7947
2	0.12	0.014891			0.171469			0.7057
3	0.7	0.011786	0.068443	7	0.164408	0.007385	5	1.6363
4	0.03	0.057202			0.038505			1.2211
5	0.28	0.091186			0.039500			1.1089
6		0.086625			0.090461			0.9131
7		0.113195			0.085902			0.8860
8		0.101424			0.062567			0.7723
9	0.02	0.132477			0.181365			0.7374
10	0.72	0.079624	0.022526	3	0.172637	0.000556	1	1.0438
11		0.117172			0.231307			0.9081
12	0.6	0.183248			0.214095			0.8023
13	0.1	0.099652	0.03260	3.0	0.184378	0.00110	1.0	1.4367
14		0.109556			0.298762			0.9704
15		0.142803			0.251299			0.9187
16		0.117235			0.223076			0.7594
17		0.097547			0.205902			0.7336
18	1.07	0.075243			0.190012			1.0873
19	0.26	0.087095	0.341218	13.0	0.178699	0.06748	6.0	2.0483
20	0.63	0.681696			0.457204			1.7616
21	0.09	0.721528			0.391529			1.6120
22	0.72	0.666735	0.14383	8.0	0.368262	0.02927	4.0	2.0728
23	0.08	0.642189			0.357234			1.6301
24		0.672131			0.275666			1.3537
25		0.563840			0.063302			1.2153
26		0.443317			0.278854			0.9423
27	0.32	0.396132	0.02000	3.0	0.237690	0.00717	1.0	1.1768
28	0.07	0.447953			0.259592			1.0222
29		0.414650			0.241222			0.8513
30		0.275068			0.208786			0.7100
Total	5.86	7.6674714	0.628611	37	6.3219623	0.112953	18	33.8322
Min	0.02	0.011786	0.02000	3	0.038505	0.00056	1.0	0.7057
Avg	0.34	0.255582	0.10477	6.2	0.210732	0.01883	3.0	1.1277
Max	1.07	0.721528	0.34122	13	0.457204	0.06748	6.0	2.0728
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.086625			0.062567			0.7100
Avg		0.250351			0.193623			0.9180
Max		0.672131			0.298762			1.3537



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: June Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.05	
2					0.12	
3	Inspection	0.068443	M 7	Hydraulic Overload	0.7	
4					0.03	
5					0.28	
6					0	
7					0	
8					0	
9					0.02	
10	Inspection	0.022526	M 3	Hydraulic Overload	0.72	
11					0	
12					0.6	
13	Inspection	0.032602	M 3	Hydraulic Overload	0.1	
14					0	
15					0	
16					0	
17					0	
18					1.07	
19	Inspection	0.341218	M 13	Hydraulic Overload	0.26	
20					0.63	
21					0.09	
22	Inspection	0.143827	M 8	Hydraulic Overload	0.72	
23					0.08	
24					0	
25					0	
26					0	
27	Inspection	0.019995	M 3	Hydraulic Overload	0.32	
28					0.07	
29					0	
30					0	
31					0	

* 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: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 7/9/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: June Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.05	
2					0.12	
3	Inspection	0.007385	M 5	Hydraulic Overload	0.7	
4					0.03	
5					0.28	
6					0	
7					0	
8					0	
9					0.02	
10	Inspection	0.000556	M 1	Hydraulic Overload	0.72	
11					0	
12					0.6	
13	Inspection	0.001098	M 1	Hydraulic Overload	0.1	
14					0	
15					0	
16					0	
17					0	
18					1.07	
19	Inspection	0.067478	M 6	Hydraulic Overload	0.26	
20					0.63	
21					0.09	
22	Inspection	0.029268	M 4	Hydraulic Overload	0.72	
23					0.08	
24					0	
25					0	
26					0	
27	Inspection	0.007168	M 1	Hydraulic Overload	0.32	
28					0.07	
29					0	
30					0	
31					0	

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 7/9/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

July								
Date	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		0.226370			0.187357			0.7797
2	0.37	0.204820			0.171611			0.8139
3	0.34	0.251615			0.178054			0.7508
4	0.2	0.195868	0.002627	0.5	0.162390	0.003936	2.0	0.7945
5	0.65	0.244683			0.173996			0.7334
6	0.02	0.214462	0.076591	2.8	0.151086	0.044635	5.0	1.1896
7		0.526137			0.219934			0.7225
8		0.388039			0.177107			0.7007
9		0.306497			0.171828			0.7463
10	0.09	0.285676			0.162227			0.6982
11		0.269466			0.148321			0.6340
12		0.245532			0.139867			0.6555
13		0.228098			0.130338			0.5989
14	0.25	0.245749			0.124564			0.5907
15		0.262554	0.0015	0.3	0.117725	0.002342	1	0.6450
16	0.88	0.332647			0.126418	0.003466	1	0.6531
17	1.48	0.325185	0.127227	7.0	0.121802	0.111014	10	1.5137
18		0.581624			0.214738			0.8775
19		0.431165			0.174981			0.7625
20		0.359289			0.158639			0.6742
21	0.38	0.331965			0.145404			0.6890
22		0.337804			0.135860			0.7230
23	0.27	0.438419			0.151099			0.8054
24	0.73	0.446083	0.004293	0.5	0.131463	0.03899	8	1.0117
25	0.57	0.513422	0.008032	1	0.133515	0.010063	6	1.3819
26	0.21	0.664159			0.136728			0.9930
27	0.31	0.553711	0.17832	6	0.132660	0.173586	8	1.3457
28		0.681259			0.151447			1.0664
29	0.22	0.879695			0.143746			0.8519
30	1.11	0.746746	0.561812	12	0.138801		11	2.0969
31	0.32	0.760582	0.04475	8	0.159922		8	1.6837
Total	8.4	12.479321	1.005152	38	4.773628	0.388032	60	28.1833
Min	0.02	0.195868	0.0015	0.3	0.117725	0.002342	1.0	0.5907
Avg	0.47	0.402559	0.1117	4.2	0.153988	0.048504	6.0	0.9091
Max	1.48	0.879695	0.5618	12.0	0.219934	0.173586	11.0	2.0969
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.226370			0.117725			0.5989
Avg		0.372603			0.163703			0.7374
Max		0.681259			0.219934			1.0664



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: July Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0	
2						0.37	
3						0.34	
4	Inspection	0.002627	M	0.5	Hydraulic Overload	0.2	
5						0.65	
6	Inspection	0.076591	M	2.75	Hydraulic Overload	0.02	
7						0	
8						0	
9						0	
10						0.09	
11						0	
12						0	
13						0	
14						0.25	
15	Inspection	0.0015	M	0.25	Hydraulic Overload	0	
16						0.88	
17	Inspection	0.127227	M	7	Hydraulic Overload	1.48	
18						0	
19						0	
20						0	
21						0.38	
22						0	
23						0.27	
24	Inspection	0.004293	M	0.5	Hydraulic Overload	0.73	
25	Inspection	0.008032	M	1	Hydraulic Overload	0.57	
26						0.21	
27	Inspection	0.17832	M	6	Hydraulic Overload	0.31	
28						0	
29						0.22	
30	Inspection	0.561812	M	12	Hydraulic Overload	1.11	
31	Inspection	0.04475	M	8.0	Hydraulic Overload	0.32	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 8/14/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: July Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0	
2						0.37	
3						0.34	
4	Inspection	0.003936	M	2	Hydraulic Overload	0.2	
5						0.65	
6	Inspection	0.044635	M	5	Hydraulic Overload	0.02	
7						0	
8						0	
9						0	
10						0.09	
11						0	
12						0	
13						0	
14						0.25	
15	Inspection	0.002342	M	1	Hydraulic Overload	0	
16	Inspection	0.003466	M	1	Hydraulic Overload	0.88	
17	Inspection	0.111014	M	10	Hydraulic Overload	1.48	
18						0	
19						0	
20						0	
21						0.38	
22						0	
23						0.27	
24	Inspection	0.003899	M	8	Hydraulic Overload	0.73	
25	Inspection	0.010063	M	6	Hydraulic Overload	0.57	
26						0.21	
27	Inspection	0.173586	M	8	Hydraulic Overload	0.31	
28						0	
29						0.22	
30	Inspection	0.458459	M	11	Hydraulic Overload	1.11	
31	Inspection	0.029	M	8.0	Hydraulic Overload	0.32	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 8/14/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

August								
Date	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	0.24	0.643989	0.016526	2	0.138465			1.5050
2	0.23	0.591128			0.139629			1.2422
3	0.19	0.405431	0.0046	1	0.128074			1.3005
4		0.386609			0.134587			1.0948
5		0.347078			0.207728			0.9855
6		0.279421			0.248663			0.9403
7	0.15	0.232444			0.224925			0.9303
8	0.12	0.214620			0.201561			0.8896
9	0.02	0.227703			0.195105			0.8506
10	0.14	0.268980			0.205236			0.7723
11	0.01	0.235447			0.189500			0.7105
12		0.214881			0.174038			0.6794
13	0.06	0.204351			0.166554			0.7078
14	0.4	0.205265	0.004490	1	0.159948			0.8722
15	0.02	0.221320			0.203098			0.7437
16	0.42	0.168863	0.017897	1	0.150409	0.000001	0.5	0.8705
17	0.18	0.174520			0.179315			0.9006
18	0.01	0.181174			0.181168			0.7994
19		0.145420			0.167149	Trace		0.7247
20		0.124543			0.154686			0.7378
21	0.69	0.128734	0.089645	4	0.146105	0.000002	2	1.3335
22	0.03	0.239430			0.213334			0.9605
23		0.218027			0.200513			0.8396
24		0.161890			0.185797			0.7554
25		0.147673			0.171833			0.6584
26		0.146560			0.157368			0.7578
27		0.192994			0.154767			0.7113
28		0.186672			0.147815			0.7456
29	0.43	0.179451	0.008009	1	0.136284			0.8678
30	0.03	0.178714			0.155713			0.8070
31	0.16	0.165333			0.137879			0.7348
Total	3.53	7.418665	0.141210	10	5.357246	0.000003	2.5	27.4294
Min	0.01	0.124543	0.004490	1	0.128074	0.000001	0.5	0.6584
Avg	0.19	0.239312	0.023535	1.67	0.172814	0.000001	1.25	0.8848
Max	0.69	0.643989	0.089645	4.0	0.248663	0.000002	2	1.5050
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.124543			0.134587			0.6584
Avg		0.212647			0.175412			0.8026
Max		0.386609			0.248663			1.0948



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: August Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1	Inspection	0.016526	M	2	Hydraulic Overload	0.24
2						0.23
3	Inspection	0.004643	M	1	Hydraulic Overload	0.19
4						0
5						0
6						0
7						0.15
8						0.12
9						0.02
10						0.14
11						0.01
12						0
13						0.06
14	Inspection	0.00449	M	1	Hydraulic Overload	0.4
15						0.02
16	Inspection	0.017897	M	1	Hydraulic Overload	0.42
17						0.18
18						0.01
19						0
20						0
21	Inspection	0.089645	M	4	Hydraulic Overload	0.69
22						0.03
23						0
24						0
25						0
26						0
27						0
28						0
29	Inspection	0.008009	M	1	Hydraulic Overload	0.43
30						0.03
31						0.16

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 9/12/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: August Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.24	
2					0.23	
3					0.19	
4					0	
5					0	
6					0	
7					0.15	
8					0.12	
9					0.02	
10					0.14	
11					0.01	
12					0	
13					0.06	
14					0.4	
15					0.02	
16	Inspection	0.00164	M	0.5	Hydraulic Overload	0.42
17					0.18	
18					0.01	
19					0	
20					0	
21	Inspection	0.008438	M	2	Hydraulic Overload	0.69
22					0.03	
23					0	
24					0	
25					0	
26					0	
27					0	
28					0	
29					0.43	
30					0.03	
31					0.16	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 9/12/2018

Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary

September								
Date	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	0.16	0.147527			0.124996			0.7267
2		0.136881			0.133000			0.6691
3		0.091434			0.118633			0.6770
4	0.06	0.083728			0.121874			0.6705
5	0.03	0.084534			0.107808			0.6307
6	0.05	0.137015			0.089906			0.6990
7	0.1	0.151061			0.096827			0.6251
8	1.9	0.136195			0.086691			1.4088
9	2.92	0.196866	1.394450	24	0.164220	0.494070	23	4.6146
10	0.83	0.530519	2.097720	24	0.122052	0.955878	24	4.3965
11		0.864942	0.404769	23	0.377922	0.200489	24	2.4577
12	0.03	0.718070			0.741665	0.001384	4	1.8413
13	0.07	0.679077			0.598176			1.5183
14	0.01	0.656856			0.424562			1.2103
15	0.01	0.585424			0.336405			1.0212
16		0.502900			0.290697			0.9429
17	1.13	0.590993	0.060115	4	0.273743			1.7617
18	0.02	0.826585	0.130119	7	0.392618	0.022746	5	1.8314
19		0.902042			0.520392			1.3317
20		0.885656			0.401562			1.1684
21	0.65	0.802330	0.051393	3	0.341272			1.2854
22	0.02	0.768449			0.339653			1.0955
23		0.824860			0.362811			0.9996
24	0.8	0.714070			0.307757			1.1611
25	0.68	0.731077	0.273295	16	0.315542	0.048299	13	2.5889
26	0.36	0.874653	0.070956	6	0.611768	0.016400	6	2.2407
27	0.5	0.832206	0.017782	2	0.631670	0.003623	2	1.9343
28	0.01	0.823120	0.014939	6	0.576712	0.061538	7	1.9219
29		0.822881			0.599852			1.4302
30		0.834104			0.471259			1.2390
Total	10.34	16.936055	4.515538	115	10.0820452	1.804427	108	46.0995
Min	0.01	0.083728	0.0149	2	0.086691	0.001384	2	0.6251
Avg	0.49	0.564535	0.4516	11.5	0.336068	0.2005	12.0	1.5367
Max	2.92	0.902042	2.0977	24	0.741665	0.9559	24.0	4.6146
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.091434			0.118633			0.6691
Avg		0.651744			0.364014			1.2128
Max		0.902042			0.599852			2.4577



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: September Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0.16	
2						0	
3						0	
4						0.06	
5						0.03	
6						0.05	
7						0.1	
8						1.9	
9	Inspection	1.39445	M	24	Hydraulic Overload	2.92	
10	Inspection	2.09772	M	24	Hydraulic Overload	0.83	
11	Inspection	0.404769	M	23	Hydraulic Overload	0	
12						0.03	
13						0.07	
14						0.01	
15						0.01	
16						0	
17	Inspection	0.060115	M	4	Hydraulic Overload	1.13	
18	Inspection	0.130119	M	7	Hydraulic Overload	0.02	
19						0	
20						0	
21	Inspection	0.051393	M	3	Hydraulic Overload	0.65	
22						0.02	
23						0	
24						0.8	
25	Inspection	0.273295	M	16	Hydraulic Overload	0.68	
26	Inspection	0.070956	M	6	Hydraulic Overload	0.36	
27	Inspection	0.017782	M	2	Hydraulic Overload	0.5	
28	Inspection	0.014939	M	6	Hydraulic Overload	0.01	
29						0	
30						0	
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: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 10/12/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: September Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.16	
2					0	
3					0	
4					0.06	
5					0.03	
6					0.05	
7					0.1	
8					1.9	
9	Inspection	0.49407	M	23	Hydraulic Overload	2.92
10	Inspection	0.955878	M	24	Hydraulic Overload	0.83
11	Inspection	0.200489	M	24	Hydraulic Overload	0
12	Inspection	0.001384	M	4	Hydraulic Overload	0.03
13					0.07	
14					0.01	
15					0.01	
16					0	
17					1.13	
18	Inspection	0.022746	M	5	Hydraulic Overload	0.02
19					0	
20					0	
21					0.65	
22					0.02	
23					0	
24					0.8	
25	Inspection	0.048299	M	13	Hydraulic Overload	0.68
26	Inspection	0.00164	M	6	Hydraulic Overload	0.36
27	Inspection	0.003623	M	2	Hydraulic Overload	0.5
28	Inspection	0.061538	M	7	Hydraulic Overload	0.01
29					0	
30					0	
31					0	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 10/12/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

October								
Date	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		0.839246			0.374242			1.1827
2	0.77	0.827249	0.11021	3	0.323966	0.031815	3	1.6489
3		0.778435	0.017981	2	0.356509	0.000874	1	1.4992
4	0.52	0.891997	0.057246	5	0.468205	0.009369	1	1.8015
5	0.02	0.872736			0.464427			1.4529
6	0.27	0.894725	0.127586	9	0.424209	0.017705	4	1.7767
7		0.864619			0.504890			1.5786
8		0.903392			0.509798			1.3345
9		0.878010			0.413357			1.1561
10	0.54	0.785280			0.351662			1.2064
11	0.43	0.764570	0.101629	10	0.310049	0.012082	5	2.0310
12	0.35	0.829577			0.541537			1.3372
13	0.03	0.666193			0.416068			1.4341
14	0.04	0.675936			0.438931			1.1595
15	0.32	0.588306	0.003588	2	0.363053			1.2893
16		0.631566			0.374167			1.1749
17		0.596676			0.349649			1.0866
18		0.541934			0.317004			0.9300
19	0.23	0.59983			0.183866			0.8602
20	0.3	0.62239	0.014165	1.5	0.114107			1.0707
21	0.04	0.67968			0.146699			1.1133
22		0.61986			0.136276			0.9686
23		0.50939			0.099004			0.8470
24		0.47721			0.092935			0.7900
25		0.57900			0.092392			0.7894
26	0.41	0.579402			0.085820			0.9472
27	0.54	0.543570	0.025116	3	0.098645			1.4608
28	0.9	0.767849	0.011729	2.0	0.203688			2.0347
29	0.2	0.759646	0.348035	22	0.220281			2.7199
30		0.807028			0.387100			1.6997
31	0.19	0.760328			0.182477			1.5293
Total	6.1	22.135636	0.817285	59.5	9.3450124	0.071845	14	41.9109
Min	0.02	0.477212	0.003588	1.5	0.085820	0.000874	1.0	0.7894
Avg	0.34	0.714053	0.081729	6.0	0.301452	0.014369	2.8	1.3520
Max	0.9	0.903392	0.348035	22.0	0.541537	0.031815	5.0	2.7199
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.477212			0.092392			0.7894
Avg		0.694336			0.308256			1.1567
Max		0.903392			0.509798			1.6997



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: October Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0	
2	Inspection	0.11021	M	3	Hydraulic Overload	0.77
3	Inspection	0.017981	M	2	Hydraulic Overload	0
4	Inspection	0.057246	M	5	Hydraulic Overload	0.52
5					0.02	
6	Inspection	0.127586	M	9	Hydraulic Overload	0.27
7					0	
8					0	
9					0	
10					0.54	
11	Inspection	0.101629	M	10	Hydraulic Overload	0.43
12					0.35	
13					0.03	
14					0.04	
15	Inspection	0.003588	M	2	Hydraulic Overload	0.32
16					0	
17					0	
18					0	
19					0.23	
20	Inspection	0.014165	M	1.5	Hydraulic Overload	0.3
21					0.04	
22					0	
23					0	
24					0	
25					0	
26					0.41	
27	Inspection	0.025116	M	3	Hydraulic Overload	0.54
28	Inspection	0.011729	M	2	Hydraulic Overload	0.9
29	Inspection	0.348035	M	22	Hydraulic Overload	0.2
30					0	
31					0.19	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 11/6/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: October Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0	
2	Inspection	0.031815	M 3	Hydraulic Overload	0.77	
3	Inspection	0.000874	M 1	Hydraulic Overload	0	
4	Inspection	0.009369	M 1	Hydraulic Overload	0.52	
5					0.02	
6	Inspection	0.017705	M 4	Hydraulic Overload	0.27	
7					0	
8					0	
9					0	
10					0.54	
11	Inspection	0.012082	M 5	Hydraulic Overload	0.43	
12					0.35	
13					0.03	
14					0.04	
15					0.32	
16					0	
17					0	
18					0	
19					0.23	
20					0.3	
21					0.04	
22					0	
23					0	
24					0	
25					0	
26					0.41	
27					0.54	
28					0.9	
29					0.2	
30					0	
31					0.19	

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 11/6/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

November								
Date	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	0.16	0.599012			0.137369			1.3072
2	0.15	0.594700			0.128525			1.2112
3	0.11	0.607056			0.130513			1.1549
4	0.52	0.567676			0.115388			0.9951
5	0.2	0.535505	0.047953	6	0.098743			1.6931
6	0.05	0.787062			0.198766			1.4513
7	0.02	0.824078			0.151617			1.2510
8	0.03	0.791231			0.115819			1.1020
9	1.0	0.769479	0.226434	13	0.100616			2.2522
10		0.850238			0.264491			1.6775
11		0.816496			0.195609			1.3842
12	0.48	0.667178			0.135904			1.4353
13	0.03	0.482037	0.021127	4	0.114277			1.5991
14		0.366989			0.193745			1.2920
15	1.13	0.292526			0.125068			1.2250
16	0.03	0.298606			0.113550			1.0756
17		0.327154			0.107519			1.0750
18	0.02	0.360652			0.111178			1.3167
19	0.25	0.422965	0.072846	9	0.138306			2.0463
20	0.06	0.447210	0.015392	4	0.211552			2.0120
21		0.442616			0.248530			1.6170
22		0.403996			0.172591			1.3871
23		0.389046			0.137791			1.1317
24	0.55	0.392209	0.072292	6	0.117973			1.7453
25	0.05	0.424001	0.005485	4	0.188117			1.9343
26	0.45	0.435385	0.143120	14	0.222283			2.2592
27	0.14	0.433109			0.280234			1.7629
28	0.03	0.407520			0.198553			1.5506
29	0.02	0.388994			0.151011			1.3098
30	0.01	0.370785			0.130205			1.1856
Total	5.49	15.495511	0.604649	60	4.7358427	0	0	44.4402
Min	0.01	0.292526	0.005485	4	0.0987427			0.9951
Avg	0.24	0.516517	0.07558113	7.5	0.157861			1.4813
Max	1.13	0.850238	0.226434	14	0.280234			2.2592
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.327154			0.107519			1.0750
Avg		0.513791			0.188611			1.3664
Max		0.850238			0.264491			1.6775



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: November Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1						0.16	
2						0.15	
3						0.11	
4						0.52	
5	Inspection	0.047953	M	6	Hydraulic Overload	0.2	
6						0.05	
7						0.02	
8						0.03	
9	Inspection	0.226434	M	13	Hydraulic Overload	1	
10						0	
11						0	
12						0.48	
13	Inspection	0.021127	M	4	Hydraulic Overload	0.03	
14						0	
15						1.13	
16						0.03	
17						0	
18						0.02	
19	Inspection	0.072846	M	9	Hydraulic Overload	0.25	
20	Inspection	0.015392	M	4	Hydraulic Overload	0.06	
21						0	
22						0	
23						0	
24	Inspection	0.072292	M	6	Hydraulic Overload	0.55	
25	Inspection	0.005485	M	4	Hydraulic Overload	0.05	
26	Inspection	0.014312	M	14	Hydraulic Overload	0.45	
27						0.14	
28						0.03	
29						0.02	
30						0.01	
31							

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 12/5/2018



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: November Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.16	
2					0.15	no overflows
3					0.11	
4					0.52	
5					0.2	
6					0.05	
7					0.02	
8					0.03	
9					1	
10					0	
11					0	
12					0.48	
13					0.03	
14					0	
15					1.13	
16					0.03	
17					0	
18					0.02	
19					0.25	
20					0.06	
21					0	
22					0	
23					0	
24					0.55	
25					0.05	
26					0.45	
27					0.14	
28					0.03	
29					0.02	
30					0.01	
31						

* See Instructions for explanation.

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Prepared By: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 12/5/2018

**Ebensburg Wastewater System
2018 CSO Flows and WWTP Flow Summary**

December								
Date	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	0.63	0.368662	0.116710	9	0.126937			1.9421
2		0.403414	0.161211	15	0.215867			2.0348
3	0.1	0.424599			0.287449			1.6889
4		0.400693			0.180750			1.4173
5	0.16	0.379915			0.146429			1.2072
6	0.07	1.300500			0.126401			1.1854
7		1.117320			0.116295			1.0511
8		1.126770			0.109293			0.9563
9		1.289720			0.102935			0.9302
10		1.288960			0.099772			0.9899
11		1.275750			0.102581			0.8664
12		1.333880			0.093636			0.9248
13		1.296540			0.090054			0.8298
14	0.62	1.370000			0.092611			1.0932
15	0.6	1.348390	0.149469	12	0.105882			2.3845
16	0.02	1.332360	0.026574	4	0.317153			1.8717
17		0.765957			0.244724			1.5348
18		0.199503			0.150391			1.2793
19		0.383181			0.118863			1.1630
20	0.44	0.633003			0.102439			1.2578
21	0.61	0.634720	0.110587	7.5	0.111587			2.1522
22	0.02	0.175704			0.243548			1.6399
23	0.07	0.169105			0.199448			1.3840
24		1.335110			0.144212			1.3380
25		1.098060			0.124613			1.0938
26		1.278480			0.105137			1.0548
27	0.59	1.128510			0.099542			1.3352
28	0.04	1.293160	0.095454	4	0.097909			1.6429
29	0.01	0.269577			0.214590			1.2951
30		0.433501			0.129894			1.1709
31	0.69	1.020430	0.200431	8	0.110320	0.001712	1	2.1046
Total	4.67	26.875474	0.860436	59.5	4.5112611	0.001712	1	42.8199
Min	0.01	0.169105	0.026574	4	0.090054	0.001712	1	0.8298
Avg	0.31	0.866951	0.122919	8.5	0.145525	0.001712	1	1.3813
Max	0.69	1.370000	0.200431	15	0.317153	0.001712	1	2.3845
Flow during days when no precip was recorded(based on WWTP gauge)								
Min		0.199503			0.090054			0.8298
Avg		0.939177			0.133064			1.1647
Max		1.335110			0.244724			2.0348



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: December Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 002 griff
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*		Duration (hrs)	Cause*	Precipitation (in)	Comments
1	Inspection	0.11671	M	9	Hydraulic Overload	0.63	
2	Inspection	0.161211	M	15	Hydraulic Overload	0	
3						0.1	
4						0	
5						0.16	
6						0.07	
7						0	
8						0	
9						0	
10						0	
11						0	
12						0	
13						0	
14						0.62	
15	Inspection	0.149469	M	12	Hydraulic Overload	0.6	
16	Inspection	0.026574	M	4	Hydraulic Overload	0.02	
17						0	
18						0	
19						0	
20						0.44	
21	Inspection	0.110587	M	7.5	Hydraulic Overload	0.61	
22						0.02	
23						0.07	
24						0	
25						0	
26						0	
27						0.59	
28	Inspection	0.095454	M	4	Hydraulic Overload	0.04	
29						0.01	
30						0	
31	Inspection	0.200431	M	8.0	Hydraulic Overload	0.69	

* 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: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 1/8/2019



CSO SUPPLEMENTAL REPORT DETAILED OUTFALL REPORT

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

Month: December Year: 2018
 NPDES Permit No.: PA0022292 Outfall: 003 lake
 Renewal application due 180 days prior to expiration.
 This permit will expire on: April 30, 2018

Day	Identification*	Discharge Volume*	Duration (hrs)	Cause*	Precipitation (in)	Comments
1					0.63	
2					0	
3					0.1	
4					0	
5					0.16	
6					0.07	
7					0	
8					0	
9					0	
10					0	
11					0	
12					0	
13					0	
14					0.62	
15					0.6	
16					0.02	
17					0	
18					0	
19					0	
20					0.44	
21					0.61	
22					0.02	
23					0.07	
24					0	
25					0	
26					0	
27					0.59	
28					0.04	
29					0.01	
30					0	
31	Inspection	0.002	M	1.0	Hydraulic Overload	0.69

* 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: Mark J Wirfel
 Title: Plant Manager

License No.: S7317
 Date: 1/8/2019