

Notice of Lodging Attachment 1

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA
and COMMONWEALTH OF
PENNSYLVANIA,

Plaintiffs,

Civil Action No.

v.

BUCKS COUNTY WATER AND
SEWER AUTHORITY,

Defendant.

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America “United States” , by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the Administrator of the United States Environmental Protection Agency “EPA” , and co-Plaintiff, the Commonwealth of Pennsylvania, on behalf of the Department of Environmental Protection “Commonwealth,” or “PADEP”), acting at the request and on behalf of the Secretary of PADEP, have filed the complaint in this action seeking injunctive relief and civil penalties pursuant to Section 309 of the Clean Water Act, 33 U.S.C. § 1319 “Clean Water Act” or “CWA” and Sections 601 and 605 of the Pennsylvania Clean Streams Law, Act of June 22, 1937, P.S. 1987, *as amended*, 35 P.S. §§ 691.1-691.1001 “the Clean Streams Law” , 35 P.S. §§ 691.601 and 601.605, naming as Defendant the Bucks County Water and Sewer Authority hereinafter referred to as “Defendant” or “Bucks” or “BCWSA” for Defendant’s alleged violations of the federal Clean Water Act, 33 U.S.C. §§ 1251-1387, and the Clean Streams Law, *as amended*;

WHEREAS, Defendant owns portions of, and operates, wastewater treatment plants “WWTP” and a wastewater collection system that is a separate sanitary sewer system, which together serve the citizens of the following Pennsylvania communities: Richland Township; Richlandtown Borough; Upper Dublin Township; Bedminster Township; Buckingham Township; Doylestown Borough; Doylestown Township; New Britain Borough; Plumstead Township; New Hope Borough; Solebury Township; Bensalem Township; Bristol Township; Falls Township; Lower Makefield Township; Penndel Borough; Langhorne Borough; Langhorne Manor Borough; Hulmeville Borough; Newtown Township; Northampton Township; Middletown Township; and Lower Southampton Township.

WHEREAS, the United States alleges that Defendant has violated and continues to violate Section 301 of the CWA, 33 U.S.C. § 1311, and PADEP alleges that Defendant has violated and continues to violate Sections 201, 202, 401, and 402 of the Clean Streams Law, 35 P.S. §§ 691.201, 691.202, 691.401, and 691.402, by discharging untreated sewage from its sewage collection system to the tributaries of the Delaware River and several smaller water bodies and other waters of the United States resulting in unpermitted sanitary sewer overflows from January 1, 2014 to December 31, 2018, and pollution of waters of the Commonwealth. These overflows are catalogued and described in Appendix A.

WHEREAS, PADEP is the agency with the duty and authority to administer and enforce the Clean Streams Law and Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, *as amended*, 71 P.S. § 510.17 “Administrative Code” and the rules and regulations promulgated thereunder;

WHEREAS, BCWSA exists under the laws of the Commonwealth of Pennsylvania with its office located at 1275 Almshouse Road, Warrington, Bucks County, Pennsylvania, 18978. Created in 1962 by the Bucks County Commissioners, Defendant is a Pennsylvania Municipal Authority created under the Pennsylvania Municipality Authorities Act of 1945, Act of May 2,

1945, P.L. 382, *as amended*, 53 Pa.C.S. §§ 5601-5623 “Municipality Authorities Act” . It acts as a separate legal authority from the rest of the Bucks County government;

WHEREAS, BCWSA’s Collection Systems are separate Sanitary Systems, not designed to collect or convey substantial amounts of infiltration or inflow.

WHEREAS, the Parties have negotiated in good faith and have reached a settlement of the issues raised in the Complaint;

WHEREAS, in the best interests of the public, and to avoid the expense and delay of litigation, BCWSA wishes to work in a cooperative partnership with EPA and PADEP in an effort to continue to enhance water quality and to eliminate future overflows to the extent possible, through an agreed-upon program of improvements to its Collection Systems as discussed herein; and

WHEREAS, the Parties acknowledge that a high degree of cooperation shall be necessary to carry out the terms of this Consent Decree, and it is the Parties’ intent to engage in such cooperation and to act in good faith to fulfill the terms of this Consent Decree;

WHEREAS, the Parties agree, and the Court finds, that settlement of the claims alleged in the Complaint without further litigation or trial of any issues is fair, reasonable, and in the public interest and that the Lodging of this Consent Decree is the most appropriate way of resolving the claims alleged in the Complaint; and

WHEREAS, BCWSA does not admit any facts or liability to the United States, PADEP, or any third party arising out of Consent Decree or the transactions or occurrences alleged in the Complaint. NOW THEREFORE, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties to this action pursuant to Section 309(b) and 504(a) of the Clean Water Act, 33 U.S.C. § 1319(b), and 1364(a), 28 U.S.C. §§ 1331. The Complaint states claims upon which relief may be granted against the Defendant for injunctive relief and civil penalties under Section 309 of the Clean Water Act, 33 U.S.C. § 1319, and Sections 601 and 605 of the Clean Streams Law, 35 P.S. §§ 691.601 and 691.605. Venue is proper in this District pursuant to Section 309(b) of the Clean Water Act, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a). Defendant waives any and all objections or defenses that it might have to the Court's jurisdiction to enter and enforce this Consent Decree or to venue in this District.

II. BINDING EFFECT

2. The provisions of this Consent Decree shall apply to and be binding on the United States and PADEP, and on BCWSA, its officers, directors, employees, agents, servants, successors, and assigns.

3. Effective from the date of lodging until its termination, Defendant shall give written notice of and provide a copy of this Consent Decree to any person or entity to whom Defendant may transfer ownership or operation of any portion of any of its WWTPs and/or Collection System. Any transfer of ownership or operation of one or more WWTPs and/or the Collection System, in whole or in part, to another entity must be conditioned upon the transferee's agreement to undertake the obligations required by this Decree, as provided in a written agreement between BCWSA and the proposed transferee, enforceable by the United States and the State as third-party beneficiaries of such agreement. The Defendant shall notify EPA, PADEP, and the United States in writing of any successor in interest at least twenty-one (21) days prior to any such transfer. No transfer of ownership or operation of the

WWTPs or the Collection System or any portion of the Collection System, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve BCWSA of its obligation to ensure that the terms of the Decree are implemented, unless 1) the transferee agrees to undertake the obligations required by this Decree and to be substituted for BCWSA as a Party under the Decree and thus be bound by the terms thereof, and 2) the United States and PADEP consent to relieve BCWSA of its obligations. The United States and PADEP's decision to refuse to approve the substitution of the transferee for BCWSA shall not be subject to judicial review. At least 30 Days prior to such transfer, the Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to the United States and to PADEP. BCWSA shall require, as a condition of any sale or transfer, that the purchaser or transferee agrees in writing to be bound by this Consent Decree and submit to the jurisdiction of the Court for its enforcement. Any attempt to transfer ownership or operation of the WWTPs, the Collection System (or any portion of the Collection System) without complying with this Paragraph constitutes a violation of this Decree. In the event of any such transfer of ownership or other interest, BCWSA will not be released from the obligations or liabilities of this Consent Decree unless: i) the transferee has the financial and technical ability to assume these obligations and liabilities; ii) the United States and PADEP have agreed to release BCWSA from the obligations and liabilities; iii) the United States, PADEP, and the transferee have jointly moved to substitute the transferee as Defendant to this Consent Decree; and (iv) the Court has approved the substitution.

4. Defendant shall be solely responsible for ensuring that performance of the work contemplated under this Consent Decree is undertaken in accordance with the deadlines and requirements contained in this Consent Decree, and any exhibits hereto. Any action taken by any contractor or consultant retained to implement Defendant's duties under this Consent

Decree shall be considered an action of Defendant for purposes of determining compliance with this Consent Decree. In an action to enforce this Consent Decree, Defendant shall not assert as a defense against the United States, EPA, or PADEP any act or failure to act by any of its officers, council members, managers, commissioners, employees, agents, contractors, successors and assigns; however, this Consent Decree shall not limit Defendant's right to take all appropriate action against any person or entity that causes or contributes to Defendant's failure to perform.

III. PURPOSE

5. The Parties' express purpose entering into this Consent Decree is for Defendant to take all measures necessary to comply with the Clean Water Act and the regulations promulgated thereunder, and the Clean Streams Law and the regulations promulgated thereunder, and to ensure compliance with any applicable permits issued to Defendant concerning the proper operation and maintenance of the WWTPs and the Collection Systems.

IV. DEFINITIONS

6. Unless otherwise defined herein, the terms used in this Consent Decree will have the meaning given to those terms in the Clean Water Act, 33 U.S.C. §§ 1251-1387, and the regulations promulgated thereunder or, if not defined in the Clean Water Act or its regulations, then as defined in the Pennsylvania Clean Streams Law, 35 P.S. §§ 691.1-691.1001, and the regulations promulgated thereunder. Any other words shall be given their ordinary meaning. Nothing in these definitions or within this Consent Decree shall relieve BCWSA from any obligation it has under state or federal law or regulation including its obligations under 25 Pa. Code § 94.

The following terms used in this Consent Decree, its appendices, and studies and plans submitted by Defendant and approved by EPA, after consultation with PADEP, will be defined as follows:

- a. “1-year, 24-hour storm event” shall mean a 2.77-inch event with rainfall distributed according to the median NOAA Atlas 14 1st quartile distribution.
- b. “2-year, 24-hour storm event” shall mean a 3.34-inch event with rainfall distributed according to the median NOAA Atlas 14 1st quartile distribution.
- c. “5-year, 24-hour storm event” shall mean a 4.23 -inch event with rainfall distributed according to the median NOAA Atlas 14 1st quartile distribution.
- d. “10-year, 24-hour storm event” shall mean a 4.99-inch event with rainfall distributed according to the median NOAA Atlas 14 1st quartile distribution.
- e. “Act 537” shall mean the Pennsylvania Sewage Facilities Act, 35 P.S. §§ 750.1, *et seq.*, and “Act 537 Plan” shall mean a municipality’s Official Plan or Official Plan Revision as defined in Section 2 of the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, *as amended*, 35 P.S. §§ 750.1-750.20a “Sewage Facilities Act” , 35 P.S. § 750.2.
- f. “Building/Private Property Backup” shall mean any release of wastewater from the Collection System to buildings or private property when a wastewater backup occurs into a building or onto private property and is caused by blockages, flow conditions, or other conditions in the Collection System. A wastewater backup or release that is caused primarily by conditions in a Private Lateral is not a Building/Private Property Backup for purposes of this Consent Decree.
- g. “Cleaning” shall mean the removal of sediment, debris, and/or sewer grease accumulations within a sewer, using various industry-standard techniques and equipment, which may include rodding, jetting, bucket machine use, and flushing. Cleaning protocols should include the capture and proper disposal of removed

material, as well as documentation of the type and amount of material removed so as to facilitate the identification of appropriate cleaning frequencies for individual sewer segments.

h. “Collection System” shall mean a collection and transmission system including all pipes, force mains, sanitary sewer lines, lift stations, pumping stations, manholes, and appurtenances thereto that Defendant owns, maintains or operates, that is designed to convey sewage to the treatment plants, including portions of the system added after the Date of Lodging of the Consent Decree.

i. “Collection System Components” shall mean those components of the Collection Systems of the Service Areas, described below, and specifically including, but not limited to, all pipes, force mains, gravity lines, pump stations, sanitary sewer lines, lift stations, manholes and their respective related appurtenances, owned, operated or maintained by Defendant.

j. “Date of Lodging” shall mean the date on which the Consent Decree is lodged with the United States District Court for the Eastern District of Pennsylvania.

k. “Date of Entry” shall mean the date on which the Consent Decree is entered by the United States District Court for the Eastern District of Pennsylvania.

l. “Day” or “days” shall mean a calendar day or calendar days. When the day a report or other deliverable is due under this Consent Decree falls on a Saturday, Sunday or any Federal or Pennsylvania legal holiday, Defendant shall have until the next calendar day that is not one of the aforementioned days for submittal of such report or other deliverable, with the exception of overflow reports.

m. “Department of Justice” or “DOJ” shall mean the United States Department of Justice and any successor departments or agencies of the United States government.

n. “FOG hot spot” shall mean an area that has had more than one fat, oil, or grease “FOG” problem within a twelve-month period.

o. “Force Main” shall mean any pipe that receives and conveys wastewater from the discharge side of a pump. A force main is intended to convey wastewater under pressure.

p. “I/I” shall mean Infiltration and Inflow.

q. “Illegal Sewer Connection” shall mean connections from sump pumps, floor drains, and any others that convey stormwater, groundwater, roof runoff, subsurface drainage, foundation drainage or cooling water, into the municipal wastewater system.

r. “Infiltration” shall mean water, other than Sewage, that enters a sewer system through structural or mechanical defects in the system.

s. “Inflow” shall mean water, other than Sewage or Infiltration, that enters a sewer system from sources such as, but not limited to, roof leaders, cellar drains, yard drains, area drains, French drains, foundation drains, streams, springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, storm water, surface runoff, street wash waters or drainage.

t. “Information Management System” or “IMS” shall mean the system utilized, in accordance with Paragraph 15 of the Remedial Measures Section Section V of this Consent Decree to track Sanitary Sewer Overflows, to identify known existing and potential sources of Sanitary Sewer Overflows and to maintain and manage the information necessary to operate and maintain BCWSA’s Collection System to eliminate existing Sanitary Sewer Overflows and avoid future Sanitary Sewer Overflows. The Information Management System shall consist of a maintenance management system or systems and a Geographic Information System “GIS” or the functional equivalent.

u. “Inspection” shall in this Consent Decree mean the internal examination of a sewer using a closed-circuit television system “CCTV” or the visual or digital internal examination of a manhole. All inspections shall be consistent with a

nationally recognized standard protocol such as the National Association of Sewer Service Company's "NASSCO" Pipeline Assessment Certification Program ("PACP") for sewers and Manhole Assessment Certification Program ("MACP" for manholes.

v. "Milestone Dates" shall mean the scheduled dates which BCWSA shall provide for each construction project, a rehabilitation, or other remedial measure proposed under Section V.

w. "Parties" shall mean the United States of America, the Commonwealth of Pennsylvania, and Defendant.

x. "Peak Firm Capacity" shall mean the maximum pumping capacity of a pump or lift station, with the largest pump out of service. Peak Firm Capacity is an evaluation criterion that shall be used by BCWSA to identify and remediate unacceptable conditions in its Collection System in accordance with the requirements of this Consent Decree.

y. "Pennsylvania Department of Environmental Protection" or "PADEP" or the "Department" shall mean the Pennsylvania Department of Environmental Protection and any successor departments or agencies of the Commonwealth of Pennsylvania.

z. "Preventative Maintenance" shall mean any proactive inspection, condition assessment, equipment and/or facility servicing, cleaning, replacement of worn components, or other similar activity undertaken to help and/or maintain the components and/or the operation of the Collection System.

aa. "Privately-owned portion of a customer service connection lateral" shall mean that portion of the Collection System, not owned by Defendant, used to convey wastewater from a building or buildings to the Collection System owned by BCWSA.

bb. “Pump Station” shall mean facilities comprised of pumps that lift wastewater to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of that pump station.

cc. “Sanitary Sewer Overflow” or “SSO” shall mean any unpermitted release from the Collection System, including, but not limited to:

- i Capacity-related SSOs: These are caused by capacity-limitations in Collection System Components, and most often occur during wet weather as a result of increased infiltration and inflow.
- (ii) Maintenance-related SSOs. These result from conditions such as blockages, grease build-up, sediment build-up, root accumulations, pipe collapse, or other aspects of Collection System Component condition.
- iii Building/Private Property Backups

dd. “Service Area” shall mean the geographical area served by the Richland, Upper Dublin, Central Bucks, New Hope/Solebury, and Neshaminy Collection Systems, as defined as follows:

- i Richland Service Area includes the following municipalities: Richland Township and Richlandtown Borough.
- (ii) Upper Dublin Service Area includes the following municipalities: Upper Dublin Township, and Springfield Township.
- iii New Hope-Solebury Service Area includes the following municipalities: New Hope Borough, and Solebury Township.
- (iv) Central Bucks Service Area includes the following: Plumstead Township, Doylestown Township, Doylestown Borough, New Britain Borough, Warrington Township, and portions of Buckingham Township and Bedminster Township.

v Neshaminy Service Area includes the following municipalities:

Middletown Township, Bensalem Township, and Langhorne Borough.

ee. “Sewage” shall have the definition as set forth in Section 502 6) of the Clean Water Act and 40 C.F.R. § 122.2.

ff. “Surcharge” shall mean the condition in which the Hydraulic Grade Line “HGL” within a sewer pipe is at or above the crown of the pipe. HGL is the elevation of the water surface in a pipe or other conveyance structure. In a Surcharged pipe, the pipe is full and the HGL is the elevation the water surface would rise to if not prevented from doing so by the crown of the pipe. Surcharge is an evaluation criterion that shall be used by BCWSA to identify and remediate unacceptable conditions in its Collection System in accordance with the requirements of this Consent Decree.

gg. “United States” shall mean the United States of America, acting on behalf of EPA.

hh. “Waters of the Commonwealth” shall mean the “Waters of the Commonwealth” of Pennsylvania, as that term is defined in the Clean Streams Law.

V. REMEDIAL MEASURES

7. Elimination of All Sanitary Sewer Overflows

a. General Requirements: BCWSA shall comply at all times with the Clean Water Act, the Clean Streams Law, and the regulations promulgated thereunder. BCWSA shall eliminate all SSOs from the Collection System located in each of the five Service Areas it owns or operates through development and implementation of the measures set forth herein.

b. Collection System Characterization Report: No later than ninety (90) days after the Date of Lodging of this Consent Decree, BCWSA shall submit to EPA and PADEP a Collection System Characterization Report that includes:

- i An updated GIS that depicts each Collection System (Richland, Upper Dublin, Central Bucks, New Hope/Solebury, and Neshaminy). The GIS shall depict the location, date, and volume of each SSO for at least the past 5 years, the Collection System associated with each SSO location; the direction of flow; all sanitary sewers; sewer sizes; Pumping Stations including capacities and number of pumps and appurtenances downstream of one or more SSO locations; and any other sewers, Pumping Stations, manholes and other structures, or appurtenances that BCWSA has reason to believe may have directly or indirectly caused or contributed to one or more SSOs.
- (ii) For the five (5) years preceding the Date of Lodging of the Consent Decree, an updated list that identifies where available the date, duration, and volume measured durations and volumes when available, or best estimates of each SSO on a per event basis, and the magnitude of rainfall events which have typically resulted in overflows for each SSO; and the facts, causes, or condition(s) that contributed to each SSO (if known).

8. Plumstead Collection System Evaluation

a. Overview: As set forth below, BCWSA shall comprehensively evaluate the Collection System located within Plumstead Township “Plumstead Collection System” and portions of other municipalities that are tributary to the Plumstead Collection System “Plumstead Collection System Evaluation”. BCWSA will use the Plumstead Collection System Evaluation as the basis to propose to EPA and PADEP plans for future rehabilitation and other corrective measures to eliminate SSOs in Plumstead Township the “Plumstead Remediation Plan”. As part of the Plumstead Collection System Evaluation, BCWSA shall inspect and evaluate the

Plumstead Collection System. BCWSA shall utilize the results of the investigations and analyses, described below, to identify cost-effective combinations of rehabilitation measures to reduce infiltration and inflow (“I/I”), enhance capacity, and/or take other appropriate measures to eliminate SSOs and the conditions that cause or contribute to SSOs in Plumstead Township.

b. Schedule for Submission of the Evaluation Plans. Consistent with requirements of this section, BCWSA shall submit to EPA for review and approval the Plumstead Evaluation Plan for the Plumstead Collection System Evaluation within 90 days from the date of lodging of the Consent Decree. The Plumstead Evaluation Plan, in accordance with the requirements of this section, shall describe in detail how BCWSA shall carry out the required investigations, evaluations, and analyses, and how the results of each evaluation shall be used to develop the Plumstead Remediation Plan for Plumstead Township. As part of the Plumstead Evaluation Plan, BCWSA shall submit to EPA for approval a plan that sets forth a project approach and detailed schedule of development of the Collection System Model the “Data Collection Model Development Plan” – see below . The Plumstead Evaluation Plan shall include a detailed schedule that will result in the completion of the study, and submission of the Plumstead Remediation Plan by the date set forth below. Within thirty days of receipt of EPA’s comments on the Plumstead Evaluation Plan, BCWSA shall modify the Plumstead Evaluation Plan accordingly and submit the revised Plumstead Evaluation Plan to EPA for review and approval. Upon receipt of EPA’s approval of the Plumstead Evaluation Plan, BCWSA shall implement the approved Plumstead Evaluation Plan in accordance with

the approved schedule therein. The Plumstead Evaluation Plan and approved schedule are enforceable under this Consent Decree.

c. Timeline for completion of the Plumstead Collection System Evaluation. BCWSA shall complete the Plumstead Collection System Evaluation within one year from the date of EPA's approval of the Plumstead Evaluation Plan and provide a report to EPA as part of its quarterly reporting requirements.

d. Rainfall and Flow Monitoring

i As part of the Plumstead Collection System Evaluation, and as a precondition to the developing and submitting the Plumstead Remediation Plan, BCWSA shall conduct rainfall and flow/hydraulic grade line "HGL" monitoring as specified below. The monitoring will be carried out to support the I/I characterization and identification and also to support the Collection System modeling.

(ii To generate rainfall data, BCWSA shall use a network of three rain gauge stations across i Plumstead Township, and ii the portions of other municipalities that are tributary to the Plumstead Collection System (see Section V, Paragraph 8.f). For Plumstead Township, this will include appropriate rain gauges to evaluate locations that have a history of SSOs including without limitation Durham Road, Lexington Drive, Stump Road, Meetinghouse Road, Township Line Road, Easton Road, Applebutter Road, Kellers Church Road, and Old Easton Road, and any other location necessary to allow the characterization of flow within Plumstead Township and the characterization of flows within

every portion of Plumstead Township with a history of wet weather-related or capacity-related SSOs. All rain gauges shall be automatic recording gauges with a sensitivity of 0.01 inches of rainfall, and all gauges shall be sited and maintained in accordance with current good industry practices and rain gauge manufacturer's requirements and recommendations.

- iii BCWSA shall collect flow/HGL data at locations throughout its Collection Systems as necessary to support i characterization of flows and HGLs throughout the Plumstead Collection Systems, and ii characterization of flows from the portions of other municipalities that are tributary to the Plumstead Collection System see Section V, Paragraph 8.f .
- (iv BCWSA shall carry out flow/HGL monitoring using state of the art area/velocity flow meters that have the capability of accurately measuring HGL under Surcharge conditions. BCWSA shall carry out all flow/HGL monitoring in accordance with current good industry practices and flow meter manufacturer's installation and maintenance requirements and recommendations. BCWSA shall inspect, maintain and, if necessary, calibrate all flow monitors at least once per week during the first 30 days each meter is in service and then at least monthly thereafter. For flow measurements performed using meters equipped with telemetry, the Parties may agree to alternative inspection and calibration criteria. BCWSA may move the location of

flow monitors in order to pinpoint areas with high I/I conditions; however, such flowmeter relocation shall be submitted to EPA for review and approved prior to being moved and shall not compromise the adequacy of the flow/HGL data to support Collection System Model development.

- v BCWSA shall conduct its flow and rainfall monitoring in accordance with sound engineering practice such as the Sanitary Sewer Evaluation Survey “SSES” Handbook, National Association of Sewer Service Company “NASSCO” Guidelines, the Water Research Centre’s “WRC’s”) “A Guide to Short Term Flow Surveys of Sewer Systems,”. BCWSA shall establish appropriate data quality objectives for rainfall, flow, and HGL measurements and shall specifically identify those objectives in the plan for the Plumstead Collection System Evaluation. BCWSA’s flow and rainfall monitoring network shall be designed, installed, operated, and maintained to provide representative, accurate, and precise data of sufficient quality for use in i the I/I evaluation described herein and ii the development, calibration, and verification of the Collection System Model. Monitoring site selection, equipment selection and installation, calibration, and maintenance, as well as data quality assurance checks shall all be carried out to optimize monitoring accuracy and shall all conform to the equipment manufacturers’ recommendations and current, good industry practice. Quality assurance activities shall

ensure that the measurements are representative of flow conditions and shall include regular field calibration of each meter and a comprehensive data quality evaluation that includes at least monthly evaluation of velocity, depth, and flow hydrographs, as well as of scattergraph plots of field data.

- (vi) Rainfall and flow/HGL monitoring shall be carried out for a minimum of 6 months so as to collect data from an adequate number and appropriate range of storm sizes, particularly larger events occurring under wet soil antecedent conditions.

e. I/I Evaluation

- i As part of the Plumstead Collection System Evaluation, and as a precondition to submitting the Plumstead Remediation Plan, BCWSA shall carry out a comprehensive evaluation of I/I conditions and sources throughout Plumstead Township, as well as an evaluation of I/I conditions in the portions of other municipalities that are tributary to the Plumstead Collection System. This evaluation shall:
 - a Apply current industry I/I evaluation methodologies, as described in one or more of the following industry guidelines:
 - a NASSCO's "Specification Guidelines; Wastewater Collection Systems Maintenance and Rehabilitation" hereinafter "NASSCO Guidelines" ,
 - b Prevention and Control of Sewer System Overflows; Water Environment Federation "WEF" 2011

- c Existing Sewer Evaluation and Rehabilitation; 3rd Ed.;
WEF 2009
 - d EPA's SSO Analysis and Planning "SSOAP" Toolbox
<http://nepis.epa.gov/A/dobe/PDF/P1008BBP.pdf>
 - b Include internal inspection of sewers and manholes, carried out in accordance with a widely recognized sewer evaluation methodology e.g. NASSCO's Pipeline Assessment Certification Program "PACP" or equivalent .
 - c In carrying out internal inspections, BCWSA shall identify all Illegal Sewer Connections to the Plumstead Collection System from any inlet, catch basin, yard drain, storm water sewer, ditch or other storm water structure. BCWSA shall include in the Plumstead Remediation Plan an expeditious schedule for the elimination of each such Illegal Sewer Connection in the Plumstead Collection System.
- (ii) BCWSA shall carry out these inspections to allow the identification of appropriate I/I reduction measures in each portion of the Plumstead Collection System determined to have excessive I/I, so that the cost of such measures can be adequately estimated, and the relative cost effectiveness of I/I reduction versus other SSO elimination measures considered.
- iii BCWSA shall note the degree to which private sewer laterals appear to contribute I/I in areas with excessive I/I and consider the implications

of those observations in identifying appropriate I/I reduction measures as described in Paragraph 11 and 12.

f. Collection System Modeling

- i As part of the Plumstead Collection System Evaluation, and as a precondition to submitting the Plumstead Remediation Plan, BCWSA shall develop, calibrate, utilize, and maintain a computerized hydrologic and hydraulic model for Plumstead Township “Plumstead Collection System Model” . The Plumstead Collection System Model shall be developed to support the analysis of the Plumstead Collection System’s capacity, the determination of the locations, extent and causes of Surge and SSOs, the ability of pump stations to convey peak flows, and the evaluation of remedial measures to address capacity issues and eliminate SSOs.
- (ii) BCWSA shall utilize state-of-the-art fully dynamic sewer modeling software that is widely accepted by the engineering community, such as the Bentley Sewer Gems model, which uses EPA’s Storm Water Management Model “SWMM” version 5.1.012.
- iii The Plumstead Collection System Model shall include the hydrologic response and dry weather flows from: i the entire Plumstead Collection System, and ii the entire portions of other municipalities that are tributary to the Plumstead Collection System. The Plumstead Collection System Model shall also reasonably represent downstream boundary conditions *i.e.*, HGL at each point where Plumstead

Township flows are conveyed to downstream portions of BCWSA's Collection System, under the range of rainfall and flow conditions to be considered pursuant to the Consent Decree's requirements.

- (iv) The Plumstead Collection System Model shall explicitly include the following hydraulic components of the Plumstead Collection System:
 - a Each sewer segment with a history of SSOs and all sewers downstream of such sewers;
 - b All sewers greater than 8 inches in diameter;
 - c All sewers required for model continuity or to achieve adequate Model calibration;
 - d All pump/lift stations except those serving two or fewer residences such as individual residence grinder pumps ;
 - e All force mains;
 - f) All points of connection from portions of other municipalities' Collection Systems that are tributary to the Plumstead Collection System; and
 - g Any other sewers, structures or other appurtenances necessary for the Plumstead Collection System Model to serve its intended purposes as described in this CD.
- v The Plumstead Collection System Model shall employ widely accepted methodologies for generating dry weather base flow, seasonally varying groundwater infiltration, and wet weather Rainfall Derived Infiltration/Inflow "RDII" .

- (vi) It shall also:
- a be developed, calibrated/validated and used in accordance with current industry standards such as the Wastewater Planning Users Group’s “Code of Practice for the Hydraulic Modelling of Sewer Systems,” Chartered Institution of Water and Environmental Management “CIWEM” , Amended December 2002;
 - b realistically simulate each pump station’s current pumping rates under varying flow conditions by accurately simulating actual pump station operating characteristics;
 - c accurately represent the response of each included catchment area to a suitably wide range of rainfall events, under varying soil moisture conditions, including in particular wet antecedent conditions;
 - d be configured based on representative, accurate and verified system attribute data *i.e.*, pipe sizes and invert elevations, manhole rim elevations, pump station actual performance, *etc.*);
 - e be calibrated using spatially and temporally representative rainfall data and flow data obtained under this Consent Decree; and
 - f) be verified using spatially and temporally representative rainfall data and flow data obtained under this Consent Decree.
- (vii) The Plumstead Collection System Model required by this Paragraph shall, at a minimum, be capable of, and be used for, predicting wastewater flow rates and volumes, HGLs, possible SSO locations,

flow rates and volumes in all sewers, structures, pump station wet wells, and other appurtenances included in the Plumstead Collection System Model, under both dry weather and wet weather conditions.

viii As part of the Plumstead Evaluation Plan, BCWSA shall submit to EPA for approval a plan that sets forth a project approach and detailed schedule of development of the Plumstead Collection System Model the “Data Collection Model Development Plan” . The Data Collection Model Development Plan shall include, at a minimum, the following information:

- a Modeling software to be employed;
- b Detailed discussion, identification and mapping of all catchment areas, sewers, manholes, and other components to be included in the Plumstead Collection System Model;
- c A detailed discussion of how system attribute data quality will be ensured;
- d A detailed discussion of how RDII will be simulated;
- e Detailed information on specific rain gauge and flow meter locations to be used to support Model development;
- f) A detailed description of calibration and validation procedures and criteria to be applied, using actual system data *e.g.*, precipitation and flow/HGL data collected as the Consent Decree requires . The calibration procedures shall include measures to ensure that

calibration parameters such as pipe friction factors, are kept within generally-accepted realistic ranges.

g A schedule for the development, calibration/validation of the Plumstead Collection System Model s , and provision of a Model Calibration Report.

(ix Within thirty 30 days of receipt of EPA's final comments on the Data Collection Model Development Plan, BCWSA shall modify the Plan, consistent with EPA's comments, and submit the revised Data Collection Model Development Plan to EPA for approval. BCWSA shall immediately begin to implement the Plan upon receipt of EPA's approval, and the approved Data Collection Model Development Plan shall be incorporated into, and become enforceable, under this Consent Decree.

x Upon the completion of the Plumstead Collection System Model development and calibration/validation, BCWSA shall submit to EPA for approval a Model Calibration Report. The Model Calibration Reports shall describe in detail:

a The extent to which BCWSA complied with each aspect of the Data Collection Model Development Plan;

b Any deviations from the Plan;

c Data quality issues encountered, measures taken to address any such issues, and discussion of any resultant Model limitations; and

d Tabular and graphic presentation of the degree of calibration and validation achieved, as regards the calibration criteria previously identified in the Data Collection Model Development Plan.

(xi BCWSA shall also certify to EPA and PADEP that:

a The Plumstead Collection System Model includes the required elements; and

b The Plumstead Collection System Model has been calibrated and verified in accordance with the Data Collection & Model Development Plan.

(xii Within sixty (60) days of receipt of EPA's comments on the Model Calibration Report, BCWSA shall modify the report, consistent with EPA's comments, and submit the revised Report to EPA for approval.

9. Plumstead Collection System Capacity Evaluation.

a. BCWSA shall use the data collected and the Plumstead Collection System Model developed pursuant to the paragraphs above to identify portions of the Collection System with hydraulic capacity limitations that, given current I/I conditions, make the portions of the Collection System with those limitations susceptible to SSOs. For the purposes of this Consent Decree, prediction by the Model of Surge, SSOs, or flow to a pump station greater than that station's Peak Firm Capacity, during one of the specified rainfall events will constitute a capacity limitation that must be eliminated by one or more remedial measures proposed in the Plumstead Remediation Plan for that rainfall event. At a minimum, BCWSA shall

evaluate hydraulic capacity in all portions of the Collection System required to explicitly be included in the Plumstead Collection System Model see Paragraph 8.f .

b. BCWSA shall determine predicted peak flows and HGLs and identify all Collection System Components that are predicted to experience Surcharge, SSOs, or pump station flows that exceed that station's Peak Firm Capacity under current and future flow conditions, and following implementation of the measures recommended in the Plumstead Remediation Plan for each of the following storm events:

- a The 1-year, 24-hour storm event;
- b The 2-year, 24-hour storm event;
- c The 5-year, 24-hour storm event; and
- d 10-year, 24-hour storm event.

c. All of the storm events considered shall be simulated having no spatial distribution and shall have temporal rainfall distributions appropriate to southeastern Pennsylvania. Baseline conditions shall be those in effect at the time flow metering is completed. Future conditions shall be based upon a minimum 20-year population projection from the Date of Entry of this Consent Decree and shall include sewer condition deterioration. BCWSA shall graphically identify on appropriate maps for those portions of the Collection System predicted to experience Surcharge or SSOs which shall be specifically identified for each storm event considered. The maps shall also highlight pump stations predicted to receive flows exceeding the Peak Firm Capacity.

d. For each rainfall event, for each sewer in which Surcharge, SSOs, or pump station flows that exceed that station's Peak Firm Capacity are identified, BCWSA

shall determine and identify the specific causes of the observed Surcharges, SSOs, or pump station flow that exceeds that station's Peak Firm Capacity. Examples of such causes include, but are not limited to, an undersized sewer or pump station downstream, excessive flow due to I/I, or a partially collapsed sewer downstream.

e. BCWSA shall identify any tributary collection system owned and operated by another jurisdiction that discharges into Plumstead Township. For each point of connection carrying flows from those tributary collection systems, BCWSA shall identify which communities are causing or contributing to Surcharges, SSOs, or pump station flows that exceed that station's Peak Firm Capacity in Plumstead Township by virtue of their excessive I/I.

10. Plumstead Remediation Plan

a. Schedule for Submission for the Plumstead Remediation Plan. Within 60 days of BCWSA's completion of the Plumstead Collection System Evaluation, BCWSA shall submit to EPA for review and approval the Plumstead Remediation Plan.

b. BCWSA shall utilize the results of the evaluations and analyses described above to identify and propose a suite of remedial measures for Plumstead Township that will address inadequate capacity and eliminate SSOs. The Plumstead Remediation Plan shall summarize and present in detail the results of the rainfall and flow monitoring, I/I evaluation, and Collection System modeling. In addition, the Plumstead Remediation Plan shall include detailed descriptions of each of the rehabilitation projects, capacity enhancements, and/or other corrective actions BCWSA proposes to implement to eliminate SSOs. These may include identifying

areas of excess I/I, and/or necessary Collection System rehabilitation or other such measures to reduce I/I flow to acceptable levels, and also encouraging Plumstead Township to establish lateral inspection and sale ordinances upon resale. Because known capacity limitations exist downstream of Plumstead Township, it is expected that limited use of upsized sewers, relief sewers, and pump station capacity upgrades will be included in the Plumstead Remediation Plan. If BCWSA proposes any such capacity increases, BCWSA must demonstrate that such capacity increases will not cause or contribute to downstream capacity issues. The proposed remediation measures may be located within Plumstead Township, or in areas tributary to the Plumstead Collection System. BCWSA shall also describe how rainfall and flow monitoring will be conducted by BCWSA to determine progress toward meeting targets.

c. The Plumstead Remediation Plan shall include an expeditious schedule for completion of each proposed rehabilitation project or corrective action and Milestone Dates for each proposed rehabilitation project or corrective action. No schedule proposed by BCWSA in the Plumstead Remediation Plan shall extend beyond 5 years from the date of submittal of the Plumstead Remediation Plan.

d. BCWSA shall utilize its Plumstead Collection System Model to evaluate proposed remedial measures and to demonstrate the expected performance of each such measure in addressing inadequate capacity and preventing SSOs for each of the rainfall events considered.

e. BCWSA shall develop capital, operation and maintenance “O M” , and life cycle present value cost estimates for each remedial measure identified and considered.

f. Within thirty days of receipt of EPA’s comments on the Plumstead Remediation Plan, BCWSA shall modify the plan accordingly, and submit the revised plan to EPA for approval. Upon receipt of EPA’s approval of the plan, BCWSA shall implement the measures included in that approved plan in accordance with the approved schedule therein. The approved plan shall be incorporated into, and become separately enforceable, under this Consent Decree.

11. Illegal Sewer Connections

a. Within one hundred twenty days (120) of the Date of Lodging of this Consent Decree, BCWSA shall submit to EPA for approval a plan for Implementation and Enforcement with regard to all Illegal Sewer Connections on collection lines that BCWSA services, throughout all of its Service Areas. The plan shall include at a minimum a:

- i Proposed and approved annual budget;
- (ii Discussion of the method(s) of enforcement;
 - a Enforcement methods should include BCWSA bringing an enforcement action against the owner and/or operator of an Illegal Sewer Connection in instances where BCWSA has the authority to do so.
 - b In instances where enforcement authority as to Illegal Sewer Connections resides with another entity such as a municipality,

BCWSA shall, at a minimum, make a formal request to the entity with enforcement authority for enforcement, or to delegate such authority to BCWSA, if possible. BCWSA shall also make a formal written request to the person or entity that is responsible for the Illegal Sewer Connection and request that it be corrected immediately.

iii) A program to identify Illegal Sewer Connections and to achieve enforcement.

b. Within thirty 30) days of receipt of EPA's comments on the proposed plan of Implementation and Enforcement, BCWSA shall modify the proposed plan of Implementation and Enforcement accordingly and submit the plan of Implementation and Enforcement to EPA for approval. Upon receipt of EPA's approval of each plan of Implementation and Enforcement, BCWSA shall implement that plan, which shall be incorporated into, and become enforceable under this Consent Decree.

12. Privately-Owned Portion of a Customer Service Connection Lateral:

a. Where a privately-owned portion of a customer service connection is a source of I/I that causes or contributes, or is likely to cause or contribute, to an SSO from the BCWSA Collection System, BCWSA, within sixty 60) days of the date of the identification of such a lateral, shall notify the appropriate municipality of the customer service connection lateral that the lateral is a source of such I/I and, working as needed with the relevant municipal authority, shall require the owner(s) to take all

appropriate steps to repair, rehabilitate, or replace that customer service connection lateral.

b. In instances in which it is within its legal authority, BCWSA shall, within six months of identification of a customer service connection lateral that is a source of such I/I, either complete the repair, rehabilitation, or replacement of the customer service connection lateral or initiate enforcement action to cause the repair, rehabilitation, replacement, *etc.* of a customer service connection lateral where the owner of a privately-owned portion of the customer service connection lateral has failed, after reasonable notice, to take all appropriate steps to repair, rehabilitate, or replace a customer service connection lateral that is a source of such I/I. For purposes of this Paragraph of this Consent Decree, the term “enforcement action” shall mean the issuance of an order to the owner by BCWSA or appropriate municipal authority. The foregoing remedy shall not be exclusive of other judicial and administrative remedies provided by law or ordinance.

c. In instances where enforcement authority resides with another entity such as a municipality, BCWSA shall make a formal request to the entity with enforcement authority for enforcement.

13. SSO Reporting.

a. Upon discovery of each occurrence of an SSO, BCWSA shall immediately notify PADEP.

b. Within 5 days of discovery of each SSO, BCWSA shall submit a complete written report to PADEP and EPA.

14. Collection System Operation and Maintenance.

a. BCWSA shall implement, modify, and improve its operation and maintenance O&M program for all Service Areas and each respective Collection System, including its gravity sewer lines, force mains, Pumping Stations and other appurtenances *e.g.*, manholes, pressure sewers, inverted siphons, meter vaults , to provide for the proper operation and maintenance of equipment while minimizing failures, malfunctions, and line blockages due to the lack of adequate preventative care. Paragraph 14 sets forth the parameters of an acceptable O M program that BCWSA will be required to maintain. Such a program will provide:

- i an overview as to the schedule by which BCWSA will carry out certain O M duties, such as scheduling when it will CCTV each sewer segment;
- (ii a cleaning program detailing how to clean sewer segments and providing schedules of routine cleaning activities;
- iii a flow evaluation program detailing how BCWSA will utilize flow data to evaluate I/I conditions throughout the Collection System;
- (iv a root control program detailing how BCWSA will schedule root control activities throughout the Collection System; and
- v an O M data management system, for managing and documenting scheduling, system repair and rehabilitation activities, sewer cleaning and inspection activities, I/I investigation activities, citizen complaints, work orders, and so forth.

b. The O M program shall include:

- i Sewer and Manhole Inspection Program.

- a The Sewer and Manhole Inspection Program shall result in BCWSA performing inspections of all public sewers and manholes throughout its Collection Systems, so as to establish a comprehensive Baseline Inspection. BCWSA shall complete this initial Baseline Inspection within seven years of the date of lodging.
- b The Sewer and Manhole Inspection Program will initially prioritize Plumstead Township.
- c Inspections that BCWSA completed no later than 10 years prior to the date of lodging of this Consent Decree including those carried out by other entities, so long as BCWSA has possession of all inspection reports, video, and documentation and considers the inspection activities to have been consistent with industry standards shall be considered included in the Baseline Inspection.
- d CCTV work performed more than 10 years prior to the date of lodging of this Consent Decree shall be considered included in the Baseline Inspection only if a Professional Engineer certifies as follows: at the time of inspection, the pipe segment was either no more than ten years old or had been, within the ten years prior, rehabilitated such that the entire segment's service life was re-established. Rehabilitation would include cured-in-place pipe "CIPP" inversion lining, slip lining, fold-and-form lining, or another renewal approach that not only seals the pipe but also

completely reinstates the entire segment's original structural integrity.

- e) If BCWSA believes that any technological advances can replace the use of CCTV for purposes of this Consent Decree, BCWSA may petition EPA to utilize such technology or technologies in lieu of CCTV for purposes of this Consent Decree.
- f) Following the completion of the Baseline Inspection, BCWSA shall develop a condition and risk-based re-inspection schedule for its entire Collection System "Collection System Re-Inspection Schedule". Such a schedule will consider the structural condition and therefore likely remaining service life) of each sewer segment or manhole, the amount of I/I entering each sewer segment or manhole, and the risk posed by the failure of that segment or manhole. The schedule will have a maximum re-inspection time for any sewer segment of 15 years and an average level of sewer inspection activity equivalent to no less than ten percent of the Collection System. It will also provide for inspection activities in the various sewer segments of a Collection System in each 15-year period that covers the entire Collection System. The schedule will have a maximum manhole re-inspection frequency of 10 years.
- g) BCWSA shall summarize the Collection System Re-Inspection Schedule in a report and shall submit that Collection System Re-Inspection Schedule Report to EPA and PADEP for review and

EPA approval within three months of completion of the Baseline Inspection. Once approved, BCWSA shall implement the Collection System Re-Inspection Program in accordance with the approved schedule.

(ii) Flow Evaluation Program.

- a The Flow Evaluation Program shall result in a systematic evaluation of flow data for the entire Collection System so that portions of the Collection System displaying a peaking factor of 4 or greater, or which have a peaking factor less than 4 and have experienced a wet weather overflow that has not otherwise been addressed by a remedial project, can be identified and remediated so as to reduce the likelihood of future capacity-related overflows. Peaking factor is a numerical expression that applies to a specific site where flow is metered, and to a specific event. For the purpose of this Paragraph, peaking factor shall be defined as the ratio between metered *peak flow* the numerator and metered *average flow* the denominator , both determined at the same metering site. *Peak flow* shall be the highest 60-minute average flow recorded during any discreet period when there was increased flow in the sewer system. *Average flow* shall be a multi-year average flow, provided that multiple years of flow data are available. If the data are available, a five-year average flow should be used, including the most current years. Any peaking factor that

is determined by this method using a denominator that is based on less than two years of flow should be avoided, if possible.

- b The Flow Evaluation Program shall utilize data from existing permanent flow monitors located throughout the Collection System, pump station operating data, and temporary flow monitoring equipment to evaluate I/I conditions with each community in each Service Area. In general, flow monitoring will begin at the downstream terminus of the Collection System, within each Service Area, and then add detailed flow monitoring at upstream locations within portions of each Service Area displaying peak flows of 2.5 or greater, or which have a peaking factor less than 2.5 and have experienced a wet weather overflow that has not otherwise been addressed by a remedial project. BCWSA shall re-inspect those portions of the Collection System with CCTV these inspection activities also counting towards satisfaction of the Collection System Re-Inspection Plan, described above , and will be remediated to address the issue.
- iii Procedures and protocols for the timely completion of repairs, rehabilitation and/or replacement of Collection System defects identified by the Sewer and Manhole Inspection Program and Flow Evaluation Program.

- (iv) Routine preventative maintenance of Pumping Stations as described herein and submission and certification of the EPA that routine preventative maintenance was performed.
- v Within the time period prescribed below and every year thereafter, sealing and/or lining where appropriate of sewers and maintenance of manholes with the following exceptions:
 - a As to the New Hope Borough/Solebury Township, BCWSA has identified sewer and manhole defects and repaired them as set forth in Exhibit 1.
 - b As to Langhorne Borough, BCWSA has identified sewer and manhole defects and repaired them as set forth in Exhibit 2.
 - c As to Springfield Township (Montgomery County), BCWSA has conducted work to make lining improvements to rehabilitate the sewer pipes' condition and reduce infiltration. That work is detailed in Exhibit 3.
 - d As to Richland Township/Richlandtown Borough, BCWSA has completed sewer repairs and/or has had contractors complete manhole repairs and has also conducted certain sewer lining work, all of which is detailed in Exhibit 4.
- (vi) Identification and remediation of facilities that are in poor physical condition using NASSCO ratings, with BCWSA to provide to EPA within six months of the Date of Lodging and a plan of action within nine months of the Date of Lodging. Identification shall include all

known locations where BCWSA does not have ready physical or legal access to the Collection System.

(vii) In accordance with any applicable, PADEP-approved Act 537 plan and/or Commonwealth statues or regulations, including, but not limited to Chapter 71 and 94 regulations, procedures for ensuring that new sewers and connections are properly designed and constructed including testing of new sewer installations to prevent overflows and to ensure that new connections of inflow sources are prohibited.

a BCWSA shall only permit new connections where it has been determined that sewer facilities have sufficient available capacity. The total capacity of the existing sewer system, from the proposed point of connection downstream to the first pump station or to the WWTP shall be determined by industry standards using available information about the sewer size, slope, and material of construction. Existing instantaneous peak flow shall be determined using metered flow where meters are available, or an estimate of existing instantaneous peak flow where meters are not available. For all proposed new connections of 25 equivalent dwelling units “EDU” or greater to sewers for which existing flow data is not available in the past five years, temporary flow metering shall be carried out to characterize the existing peak flow. Projected flow shall be determined from existing flow by adding projected flow from proposed new sources. Characterizations and estimates of

existing and projected flow must include a characterization or estimate, respectively, of instantaneous peak flow in wet weather using a peaking factor that is reasonable in consideration of current knowledge about wet weather peaking in that part of the sewer system.

- b Where facilities are inadequate for the projected flow, upgrades to existing facilities shall be designed and constructed. New sewers and connections shall be designed and constructed in accordance with BCWSA's Standard Sewer Specifications including acceptable pipe and joint materials and lateral connections. BCWSA is required to obtain or ensure the existence of all necessary permits and approvals for activities related to sewer system extensions. BCWSA personnel or BCWSA's designated engineering representatives shall observe all sewer system installation activities. In addition, manholes and sewer pipes must satisfactorily pass leakage, pressure, and mandrel testing (PVC pipe only). Maintenance bonds shall remain in place for a period of two years, to ensure defects are corrected if identified.
- viii Procedures for ensuring that rehabilitation projects are properly designed and constructed including testing of rehabilitation installations to prevent overflows;
- (ix A root control program that addresses, at minimum, scheduling and performing corrective measures including both short-term mitigation

- of root intrusion *i.e.* routine maintenance and rehabilitation of the areas in which root intrusion has caused recurring blockages *i.e.*, sewer replacement or relining), and a proposal that includes scheduled inspection and treatment of known problem areas;
- x Description of method for documenting complaints, work orders, updates to equipment inventory, and changes to Collection System Components, as well as entry of such data into databases comprising the information management system required herein; and
 - (xi Corrective maintenance response and reporting procedures.
 - (xii Fats, Oil Grease “FOG” Management Program Improvement.
 - a BCWSA shall undertake a comprehensive evaluation of its current Fats, Oil, and Grease “FOG” Management Program, with the intent to significantly improve the effectiveness of that program in reducing grease-blockages and related SSOs.
 - b In evaluating its FOG Management Program, BCWSA shall consider the following aspects of its current FOG program:
 - a BCWSA’s legal authority to require and enforce appropriate FOG controls by commercial and industrial dischargers to its Collection System;
 - b FOG/Food Service Establishment “FSE” permits currently issued to FOG-generating dischargers;
 - c BCWSA’s and its Service Areas’ communities’ current standards for the design, installation and maintenance of FOG control

- equipment, and BCWSA's and its Service Areas' communities' construction inspection programs for FOG controls;
- d BCWSA's and its Service Areas' communities' FOG control inspection program;
 - e BCWSA's and its Service Areas' communities' Residential customer FOG educational programs;
 - f) BCWSA's and its Service Areas' communities' enforcement of FOG-related regulations and standards; and
 - g BCWSA's FOG hot spot cleaning program, that focuses cleaning efforts on portions of the Collection System that have experiences regular FOG-related blockages.
 - h In evaluating the adequacy of its FOG Management Program and determining whether it includes all necessary program components, and in identifying appropriate improvements to said program, BCWSA shall consider the following references:
 - i. Chapter 4 of Optimizing Operation, Maintenance, and Rehabilitation of Sanitary Sewer Collection Systems currently available at http://water.epa.gov/polwaste/npdes/sso/upload/sso_optimizing_ch4.pdf
 - ii. Fats Oil & Grease Compliance and Best Management Practices Workbook currently available at

<http://archive.epa.gov/osem/stategrants/web/pdf/2008nbc-fogworkbook.pdf> .

- i Within 180 days of the Date of Lodging of the Consent Decree, BCWSA shall submit to EPA and PADEP for review and for EPA's approval a description of the FOG Management Program. That description shall include, without limitation, details about BCWSA's completion of the assessment activities described above, specific enhancements and improvements that BCWSA shall implement to improve the effectiveness of its FOG Management Program, and a detailed schedule for the implementations of said improvements. Upon approval, BCWSA shall implement the approved FOG Management Program, including the implementation of identified improvements.
- xiii) Pumping Station Inspection, Rehabilitation, and Repair.
 - a BCWSA shall continue to conduct inspection, rehabilitation, and repair of its Pumping Stations; conduct remote monitoring of its Pumping Stations; and continue to make complete implementation of the Pumping Station Preventative Maintenance Program as described in its Standard Operating Procedures subject to the government's direction and edits contained in its March 2018 correspondence. The new Standard Operating Procedures shall be submitted to EPA for its review and approval within 120 days after the Lodging of the Consent

Decree as part of its submission of the written O & M Plan describing in detail the O & M program required under this paragraph.

c. Within one hundred and twenty (120) days of the Date of Lodging of this Consent Decree, BCWSA shall provide to EPA and PADEP a written O&M Plan describing in detail the O & M program required under this Paragraph. BCWSA shall submit with the written O & M Plan copies of relevant forms, and product literature for all software, to be used as part of the maintenance program. Within thirty (30) days of receipt of EPA's comments on the O & M Plan, BCWSA shall modify the O & M Plan accordingly, if needed, and submit the revised O & M Plan to EPA for approval. Upon receipt of EPA's approval of the O&M Plan, BCWSA shall implement the O & M program described in the O & M Plan, which shall be incorporated into, and become enforceable under this Consent Decree.

15. Information Management System Program

a. BCWSA shall implement an information management system program to establish, update, and coordinate data systems used to collect information regarding the operation, maintenance and performance of the Collection Systems, including Collection Systems component inventory information, complaints, work orders, geographic data, and the status of work to be implemented and completed under the Consent Decree. BCWSA shall design the information management system to assist BCWSA in analyzing data necessary to prepare the progress reports the Consent Decree requires, and in mapping areas to be exempted from further inspections required herein.

b. As part of its information management system program, BCWSA shall use a computerized Geographic Information System GIS to map the Collection System. The GIS shall be able to:

- i display all Collection System components;
- (ii use embedded objects or other alternative, equivalent methods to link to schematic diagrams and attribute data including inventory information) for Collection System components;
- iii display by color coding the portions of the Collection System that have been inspected and rehabilitated; and
- (iv display the locations at which samples from flow meters and rain gauges have been collected for development of the model required herein.

c. The GIS that BCWSA has implemented and has regularly updated prior to the execution of this Consent Decree shall satisfy this paragraph.

d. BCWSA shall maintain all hardware and software necessary for the GIS and ensure that the system is fully operational and capable of displaying the required information.

VI. REPORTING REQUIREMENTS

16. Quarterly Reports. For the Plumstead Collection System, BCWSA shall provide quarterly reports to EPA and PADEP within thirty (30) days after the end of the quarter. To the extent that information required in this report must be derived from tributary municipalities, BCWSA shall use its best efforts to obtain this information. The quarterly report shall be in narrative format with supporting tables, graphs, and maps and shall, at minimum, include the following information;

- a. Work/Repairs/Investigations Completed
- b. Flow Analysis and Meter Data, including:
 - i Graphs of the flow data in both monthly average and peak hourly form for meters installed within the system; and
 - (ii SSO data;
- c. Any other information that BCWSA believes to be relevant to the I/I abatement program; and
- d. Work Planned for Next Quarter

17. Annual Reports. Beginning six months after the Date of Lodging of this Consent Decree and continuing each year until termination of this Consent Decree, Defendant shall submit to EPA and PADEP an Annual Report of all subjects required to be in the Annual Report as set forth below and pursuant to Chapter 94 regulations. The Annual Report shall cover the previous calendar year and shall be submitted each year by March 31st. The Annual Report shall include:

- a. As to Paragraphs 7, 8, 9, and 10:
 - i the status of implementation of the Plumstead Collection System Evaluation, the Plumstead Collection System Capacity Evaluation, and the Plumstead Remediation Plan;
 - (ii progress reports on the implementation of the requirements described in these paragraphs;
 - iii a description of any problems anticipated with respect to meeting the requirements of these paragraphs;

(iv) The status of the corrective actions conducted or completed in the past calendar year and work anticipated to be completed in the current calendar year;

b. As to Paragraph 11 Illegal Sewer Connections :

i An updated list of known or suspected Illegal Sewer Connections;

(ii) The specific location of each known or suspected Illegal Sewer Connection;

iii) The current status of each known or suspected Illegal Sewer Connection *i.e.*, those newly identified, those still connected, those disconnected, and those newly permitted) and a summary of each enforcement action taken, including the date of each action;

(iv) A statement as to where the Illegal Sewer Connection discharges;

v) Identity of person or entity responsible for the known Illegal Sewer Connection; and

(vi) If the date can be established, the date each known or suspected Illegal Sewer Connection was identified. For purposes of the initial list of Illegal Sewer Connections provided by BCWSA under this Paragraph, reporting requirements may be satisfied when BCWSA cannot establish the date it first knew of such Illegal Sewer Connection by stating “unknown.”

(vii) Annually, BCWSA shall certify and report to EPA and PADEP the progress BCWSA has made toward complying with the provisions of this paragraph.

- c. As to Paragraph 12 Privately-Owned Portion of a Customer Service Connection Lateral :
 - i An update regarding measures taken under Paragraph 12.
- d. As to Paragraph 13 SSO Reporting):
 - i A table listing all SSOs that occurred in the system in the preceding year, providing date, location, manhole number if available and/or by nearest street address or intersection, cause s , weather, estimated volume, duration including start time and end time , actions taken to mitigate the SSO, and actions taken to prevent future SSOs at that location.
- e. As to Paragraph 14 Collection System O M :
 - i A list of tests performed of new sewer installations and rehabilitations location, date, description of new installation and/or rehabilitation);
 - (ii An evaluation of the efficacy of the grease control program summary of grease-related blockages identified, corrective action taken, preventative action taken, monthly rate of grease-related blockages and if available comparison of current and previous year performance, list of referrals to pretreatment staff, identification of remaining persistent and chronic blockage areas ;
 - iii An evaluation of the efficacy of the root control program summary of root-related blockages identified, corrective action taken, preventative action taken, monthly rate of root-related blockages and if available comparison of current and previous year performance, identification of remaining persistent and chronic blockage areas ; and

- iv) An updated list of known locations where BCWSA does not have ready physical and/or legal access to the Collection System and the strategies BCWSA is employing to improve and secure such access to the Collection System.
- v) An annually updated map identifying the prior year's SSOs, tabulated by service area and highlighting chronic areas that need to be addressed.
- vi) An update about the progress of BCWSA's Pump Station inspection and repair program including:
 - a) A list of all pump stations owned and operated by BCWSA;
 - b) The frequency of periodic inspections for each pump station;
 - c) A checklist of items inspected, or activities routinely performed, during each periodic inspection of a pump station;
 - d) A description of repairs or other improvements undertaken to individual pump stations, if any;
 - e) A statement as to whether a Pumping Station has caused or contributed to an overflow condition during the preceding year; and
 - f) The results of any failure analyses identifying where SSO would occur if each subject pump station were to totally fail.
- f. As to Paragraph 15 Information Management System Program :
 - i A detailed description of updates made to the GIS system as well as any update backlog or lack thereof.
- g. Annual Reports shall also contain the following:

- i Detailed information about any new sewer connections made during the year and a chart of all projected connections anticipated to occur in the following twelve-month period; and
- ii Any such additional matters as BCWSA believes should be brought to the attention of PADEP and EPA.

h. In addition, the Annual Report s shall contain all information required by 25 Pa. Code § 94.12; and

i. The Annual Report s shall be certified, consistent with the requirements of 40 C.F.R. § 122.22(a) 3 , by the person responsible for compliance or by a person responsible for overseeing implementation of this Consent Decree, who shall state: “I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my directions and my inquiry of the person(s) who manage s the system, or the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.”

18. No later than 10 Days from the Date of Entry, Defendant shall submit to EPA and DEP for review a list of deadlines included in this Consent Decree. For any deliverable required by the Consent Decree, the list shall indicate whether EPA and/or DEP approval is required. The list shall be submitted in an electronic format e.g., unlocked spreadsheet or similar format agreed to by the Parties . Within 10 Days of modification of any deadline under this Consent Decree, Defendant shall provide an updated list reflecting changes to the

future schedule. In the event of conflict between the list generated pursuant to this Paragraph and the Consent Decree, the Consent Decree shall control. Upon approval, this schedule shall be incorporated into, and become enforceable under, this Consent Decree, and BCWSA shall implement the activities required by this Consent Decree in accordance with this schedule. This schedule may be modified by written agreement signed by EPA and DEP and the Defendant in accordance with the process for Consent Decree modifications.

VII. RIGHT OF ACCESS

19. EPA and PADEP, and their authorized representatives and contractors, shall each have authority upon twenty-four hours' notice and at all reasonable times, and upon the presentation of credentials, to enter BCWSA's property and other properties for which BCWSA has the legal authority to grant access to:

- a. Monitor the progress of activities required by this Consent Decree;
- b. Verify any data or information submitted to the United States and Commonwealth of Pennsylvania;
- c. Obtain Samples;
- d. Observe Performance Tests;
- e. Inspect and evaluate any portion of the Collection System; and
- f. Review and copy any record required to be kept under the terms and Conditions of this Consent Decree.

20. Upon request, Defendant shall provide EPA or PADEP or their authorized representative s splits of any samples collected by Defendant or its consultants and contractors. Upon request, EPA or PADEP shall provide Defendant splits of any samples collected by EPA or PADEP.

21. These inspection rights, described herein, are in addition to, and in no way limit or otherwise affect whatever other authorities, EPA's and PADEP's authorities may have to conduct inspections, to require monitoring and to obtain information from Defendant as authorized by law.

VIII. REVIEW AND APPROVAL PROCEDURES

22. After receipt and review of any plan, program, or other document which is required to be submitted for approval pursuant to this Consent Decree, EPA, after consultation with PADEP, may 1) approve, in whole or in part, the submission; 2) approve the complete submission or portions of the submission upon specified conditions; 3) disapprove the submission, in whole or in part, and direct that Defendant modify the submission; or 4) any combination of the above.

23. In the event of approval of the complete submission, Defendant shall proceed to take any actions required by the plan, program or other approved document, as approved by EPA.

24. In the event of approval of portions of the submission or approval upon specified conditions, Defendant shall proceed to take the actions identified in the non-deficient portion of the plan, program, other document, or portion thereof, in accordance with any applicable conditions specified by EPA, subject only to Defendant's right to invoke the Dispute Resolution procedures set forth in Section XII with respect to the conditions imposed. Implementation of any non-deficient portion of the submission shall not preclude BCWSA's liability for any stipulated penalties otherwise applicable under Section X of this Consent Decree.

25. Upon receipt of a notice of disapproval of all or part of a submission from EPA,

Defendant shall, within sixty (60) days of receipt of such notice or such greater time frame as specified by EPA in writing, correct the deficiencies as directed by EPA's written comments and resubmit the plan, program, or other document for approval.

26. In the event that a resubmitted plan, program, or other document, or portion thereof, is disapproved by EPA, EPA may again require the Defendant to correct the deficiencies in accordance with this Section. Unless Defendant invokes the Dispute Resolution Procedures set forth in Section XII and EPA's disapproval of the Defendant's resubmission is overturned pursuant to that Section, Defendant shall be deemed to have failed to submit such program, plan or other document timely and adequately and stipulated penalties shall accrue for such violation from the date on which the initial submission was originally due.

27. All programs, plans or other documents required to be submitted pursuant to this Consent Decree shall become incorporated into and enforceable under this Consent Decree, upon receiving the required approval. In the event EPA approves a portion of any program, plan, or other document pursuant to this Section, then the approved portion shall become incorporated into and enforceable under this Consent Decree.

IX. CIVIL PENALTY

28. Defendant shall pay a total civil penalty in the amount of \$450,000 to the United States and the Commonwealth for violations as alleged by the United States and the Commonwealth in the Complaint. Defendant shall pay fifty percent (50%) of the total civil penalty to the United States within thirty (30) days of the Date of Entry of this Consent Decree in accordance with the procedures described below. Defendant shall pay fifty percent (50%) of the total civil penalty to the Commonwealth within thirty (30) days of the Date of

Entry in accordance with the procedures described below.

29. The United States and the Commonwealth shall be deemed judgment creditors for purposes of collection of this penalty.

30. Payment of the civil penalty to the United States shall be made by Electronic Funds Transfer “EFT” to the U.S. Department of Justice “DOJ” in accordance with instructions provided by the United States to Defendant following execution of this Consent Decree. Notice of the EFT shall simultaneously be mailed to the following:

Regional Hearing Clerk (3RC00)
U.S. EPA - Region III
R3_Hearing_Clerk@epa.gov

Pamela J. Lazos (3RC20)
U.S. EPA - Region III
Lazos.Pamela@epa.gov

Gregory B. David
Assistant U.S. Attorney
Chief, Civil Division Eastern District of Pennsylvania
615 Chestnut Street, Suite 1250
Philadelphia, PA 19106-4476
Gregory.David@usdoj.gov

The transmittal letter forwarding such notice shall include the caption, civil action number and judicial district of this action. Defendant shall send notice of payment to:

- a EPA Cincinnati Finance Office via email to
CINWD_AcctsReceivable@epa.gov;
- b EPA via email to the U.S. EPA Regional Hearing Clerk at
R3_Hearing_Clerk@epa.gov;
- c the United States via email or regular mail in accordance with Section XVIII(Form of Notice ; and
- d PADEP in accordance with Section XVIII Form of Notice .

Such notice shall state the Defendant's name, street/P.O. Box address, email address and telephone number; the name of the case; the docket number or civil action number of the case; the Consolidated Debt Collection System "CDCS" Number and DOJ case number; the amount of the payment; and the method of the payment.

31. Payments to the Commonwealth of Pennsylvania shall be made by tendering to the Pennsylvania Department of Environmental Protection checks made payable to:

"Commonwealth of Pennsylvania – Clean Water Fund"

and sent to:

Pennsylvania Department of Environmental Protection
Clean Water Program Manager
2 East Main Street
Norristown, PA 19401

32. If Defendant fails to tender all or any portion of the civil penalty payment owed to the United States within thirty (30) days of the Date of Entry of this Consent Decree interest on the unpaid amount shall accrue in accordance with the provisions of 28 U.S.C. § 1961 from the date of the original payment until all amounts owed are paid. If Defendant fails to tender all or any portion of the civil penalty payment owed to the Commonwealth of Pennsylvania within thirty (30) days of the Date of Entry of this Consent Decree interest on the unpaid amount shall accrue in accordance with the provisions of 41 Pa. C.S. § 202 from the date of the original payment until all amounts owed are paid.

33. Defendants shall not deduct any penalties paid under this Decree pursuant to this Section or Section X Stipulated Penalties in calculating its federal or state or local income tax pursuant to Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii).

X. STIPULATED PENALTIES

34. Defendant shall pay stipulated penalties for each failure to comply with the terms of this Consent Decree, including the terms of any plans or schedules developed pursuant to and incorporated into this Consent Decree. The stipulated penalties shall be assessed as follows and paid 50% to the United States and 50% to the Commonwealth as set forth in Section IX of this Decree. Payment of stipulated penalties shall be made in accordance with Section IX with the notification referencing “stipulated penalty”.

35. Stipulated Penalties for Failure to Comply with Various Provisions of this Consent Decree. Defendant shall pay stipulated penalties in the amount set forth below for each day it fails to meet any of the project milestones required under this Consent Decree, and for each late submission:

<u>Period of Non-Compliance</u>	<u>Penalty per Milestone Date per day of Violation</u>
1 st to 30 th Day	\$500
31 st to 45 th Day	\$1,000
46 th to 60 th Day	\$2,000
After 60 Days	\$4,000

36. Compliance Reporting. Defendant shall pay stipulated penalties in the amount set forth below for each day it fails to submit any progress report required by the Consent Decree or information required to be included within a progress report required to be submitted pursuant to this Consent Decree.

<u>Period of Non-Compliance</u>	<u>Penalty per Element per Day of Violation</u>
1 st to 15	\$150

16 th to 30 th Day	\$300
31 st to 60 th Day	\$500
After 60 days	\$1,000

37. Stipulated Penalties for SSOs that Reach Waters of the United States. Defendant shall pay stipulated penalties in following amounts for each SSO that occurs in any Sanitary Sewer Collection System and reaches waters of the United States after the Date of Entry as follows:

<u>If SSO occurs</u>	<u>Penalties Per Violation Per Day</u>
Within 0 to 2 years of Date of Lodging	\$500
Between 2 and 5 years from Date of Lodging	\$1,500
After 5 years until termination of the Consent Decree	\$3,000

38. Stipulated Penalties for SSOs that Do Not Reach Waters of the United States. BCWSA shall pay the following stipulated penalties for each SSO that occurs after the Date of Entry and does not reach waters of the United States:

<u>If SSO occurs</u>	<u>Penalties Per Violation Per Day</u>
Within 0 to 2 year of Date of Lodging	\$250
Between 2 and 5 years from Date of Lodging	\$500
After 5 years until termination of the Consent Decree	\$1,000

39. Stipulated civil penalties shall automatically begin to accrue on the first day Defendant fails to satisfy any obligation or requirement of this Consent Decree and shall continue to accrue until the violation or deficiency is corrected.

40. Defendants shall pay stipulated penalties to the United States and PADEP within 30 Days of receiving a written demand by either Plaintiff. BCWSA shall pay 50 percent of

the total stipulated penalty amount due to the United States and 50 percent to PADEP. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff.

41. Either Plaintiff may in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

42. If Defendant invokes the dispute resolution provisions in Section XII of this Consent Decree, it shall deposit any disputed penalty in an interest-bearing escrow account within ten (10) days of invoking dispute resolution. The stipulated penalties that are the subject of the dispute, as well as interest earned thereon, shall be released in a manner consistent with the terms of the resolution of the dispute within sixty (60) days after the dispute is resolved. Stipulated penalties for any continuing violation shall accrue during the resolution of any dispute.

43. The stipulated civil penalties as set forth above shall be in addition to any other rights or remedies which may be available to the United States and the Commonwealth or their agencies by reason of Defendant's failure to comply with the requirements of this Consent Decree, and all applicable federal, Commonwealth or local laws, regulations, or permits.

44. In the event that a stipulated civil penalty is not paid when due, the stipulated civil penalty owed to the United States and or PADEP shall be payable with interest from the original due date to the date of payment at the statutory judgment rate set forth at 28 U.S.C. § 1961(a) with respect to the federal government and 41 Pa. C.S. § 202 with respect to the Commonwealth.

45. The United States may, in the unreviewable exercise of its discretion, reduce or

waive stipulated penalties otherwise due to the United States under this Consent Decree. Any such reduction or waiver shall be without prejudice to any other penalty that is already, or later becomes, due. Defendant shall not rely on any such waiver or reduction being repeated with respect to any future penalty.

XI. FORCE MAJEURE

46. “Force Majeure” for the purpose of this Consent Decree is defined as an event arising from causes beyond the control of Defendant or the control of any entity Defendant controls, including its agents, consultants and contractors, which delays or prevents the performance of any obligation under this Consent Decree despite Defendant’s best efforts to fulfill the obligation. The requirement that Defendant exercise “best efforts to fulfill the obligation” includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event a) as it is occurring, and b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. Unanticipated or increased costs or expenses associated with implementation of this Consent Decree and changed financial circumstances shall not, in any event, be considered “force majeure” events. In addition, failure to apply for a required permit or approval or to provide in a timely manner all information required to obtain a permit or approval that is necessary to meet the requirements of this Consent Decree, or failure of Defendant to approve contracts, shall not, in any event, be considered “force majeure” events. Defendant shall adopt all reasonable measures to avoid or minimize such delay.

47. Defendant shall notify EPA and PADEP by email, within twenty (20) business days after Defendant first knew, or in the exercise of reasonable diligence under the circumstances, should have known of an event that might delay completion of any

requirement of this Consent Decree, whether or not the event is a “force majeure” event. The notice shall provide a description of the event and an explanation of the reasons for the delay, the anticipated duration of the delay, all actions taken or to be taken to prevent or mitigate the delay or the effect of the delay, the timetable by which those measures will be implemented, whether Defendant claims that the delay should be excused as a “force majeure” event, and its rationale for attributing such delay to a “force majeure” event if it asserts such a claim. Defendant shall include all available documentation supporting its claim that the delay was attributable to a “force majeure” event. Further, where a contractor or subcontractor has not completed a construction project on time, Defendant shall state what steps it is taking to ensure performance by the contractor or subcontractor in question and shall supply any documentation available to show the steps it has taken.

48. Failure to provide the required written notice to EPA and PADEP shall render this Section void and of no effect as to the event in question and shall be a waiver of Defendant’s right to obtain an extension of time for its obligations based on such event. Defendant shall be deemed to have notice of any circumstance of which its contractors, or subcontractors had or should have had notice.

49. If EPA, after consultation with PADEP, finds that a delay in performance is, or was, caused by a “force majeure” event, the time for performance of the specific obligation(s) under this Consent Decree that are caused by the “force majeure” event shall be extended for a period to compensate for the delay resulting from such event, and stipulated penalties shall not be due for such period. EPA will notify Defendant in writing of the length of the extension for performance of the obligation(s) caused by the “force majeure” event. An extension of time for performance of the obligation(s) caused by the “force majeure”

event shall not, of itself, extend the time for performance of any other obligation. Defendant shall make an individual showing of proof regarding the cause of each delayed incremental step or other requirement for which an extension is sought.

50. In the event of a dispute regarding application of these provisions to a delay in performance, the dispute resolution provisions of Section XII (Dispute Resolution) shall apply, and Defendant shall have the burden of proving that the delay is, or was, caused by a “force majeure” event, and that the amount of additional time requested is necessary to compensate for that event. Defendant shall not be liable for stipulated penalties for any period of delay that was excused by the Court or EPA pursuant to this “Force Majeure” Section. However, pending resolution of a “force majeure” dispute, stipulated penalties will continue to accrue, and shall be due and payable if the Court determines that the event in question was not a “force majeure” event, that the Defendant did not undertake reasonable measures to limit the effect of the event, or that the “force majeure” event occurred for a shorter period of time than that alleged by Defendant.

XII. DISPUTE RESOLUTION

51. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes between Defendant and/or EPA or PADEP arising under or with respect to this Consent Decree. However, the procedures set forth in this Section shall not apply to actions by the United States and the Commonwealth of Pennsylvania to enforce Defendant’s obligations that have not been disputed in accordance with this Section.

52. Informal Dispute Resolution. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between

Defendant, EPA, and PADEP. The period for informal negotiations shall not exceed forty-five (45) days from the time Defendant sends EPA and PADEP a written Notice of Dispute, unless that period is modified by written agreement of Defendant or EPA. The Notice of Dispute shall clearly describe the matter in dispute. In the event the parties cannot resolve their dispute within the informal negotiation period, then the position advanced by EPA shall be considered binding unless, within 30 days of the conclusion of the informal negotiation period, Defendant invokes the formal dispute resolution procedures as set forth below.

53. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on EPA and PADEP a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation it relied upon.

54. EPA, after consultation with PADEP, shall serve its Statement of Position within 60 Days of receipt of Defendant's Statement of Position. EPA's Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation it relied upon. EPA's Statement of Position shall be binding on Defendant unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

55. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section XVIII of this Consent Decree Form of Notice, a motion requesting judicial resolution of the dispute. The motion must be filed within 30 Days of receipt of the EPA's Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position

on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

56. EPA, after consultation with PADEP, shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

57. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Section XII pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree, the adequacy of the performance of work undertaken pursuant to this Consent Decree, and all other disputes that are accorded review on the administrative record, Defendant shall have the burden of demonstrating to this Court, based on the administrative record, that the position of EPA is arbitrary and capricious or otherwise not in accordance with law.

b. When Defendant raises a dispute under this Section, EPA shall compile an administrative record containing, at EPA's discretion, such things as Statements of Position, including supporting documentation, submitted pursuant to this Paragraph. Where appropriate, EPA may allow submission of supplemental statements of position by the parties to the dispute.

c. The EPA Region III Director of the Environmental Compliance and Assurance Division or his or her designee shall issue a final administrative decision

based on the administrative record maintained by EPA as set forth above. The decision shall be binding on Defendant, subject to Defendant's right to seek judicial review with this Court pursuant to the provisions of this Section.

d. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Section XII, Defendant shall bear the burden of demonstrating by a preponderance of the evidence that its position complies with the requirements of this Consent Decree and fulfills its objectives and goals.

e. Disputes Concerning Modification. In disputes concerning whether or not there should be a modification of this Consent Decree, Defendant shall have the burden set forth in Section XIX Modification .

58. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided herein. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X Stipulated Penalties .

XIII. EFFECT OF SETTLEMENT

59. Compliance with this Consent Decree, including the payment of all civil and stipulated penalties and interest accrued thereon, and the completion of all injunctive relief, shall resolve the United States' and the Commonwealth of Pennsylvania's civil claims for violations of the Clean Water Act and the Clean Streams Law as alleged in the Complaint filed in this matter.

XIV. NON-WAIVER PROVISIONS

60. The Parties agree that Defendant is responsible for achieving and maintaining complete compliance with all applicable federal and Commonwealth laws, regulations, and permits, and that compliance with this Consent Decree shall be no defense to any actions commenced pursuant to said laws, regulations, or permits, except as otherwise expressly specified in the Consent Decree.

61. The United States and Commonwealth of Pennsylvania, do not, by their consent to the Lodging of this Consent Decree, warrant or aver in any manner that Defendant's complete compliance with this Consent Decree will result in compliance with the provisions of the Clean Water Act, 33 U.S.C. §§ 1251 et seq. or with Pennsylvania's water pollution control laws. Notwithstanding EPA's and PADEP's review or acceptance of any plans, reports, policies, or procedures formulated pursuant to this Consent Decree, Defendant shall remain solely responsible for any non-compliance with the terms of this Consent Decree, the Clean Water Act and regulations promulgated under that Act, and Pennsylvania's Environment Article and implementing regulations.

62. The Parties reserve any and all legal and equitable remedies available to enforce the provisions of this Consent Decree.

63. This Consent Decree shall not limit any authority of EPA and PADEP under the Clean Water Act, the Clean Streams Law, or any other applicable statute, including the authority to seek information from Defendant or to seek access to the property of Defendant.

64. Performance of the terms of this Consent Decree by Defendant is not conditioned on the receipt of any federal, Commonwealth or local funds. Application for construction grants, Commonwealth revolving loan funds, or any other grants or loans, or delays caused

by inadequate facility planning or plans and specifications on the part of Defendant shall not be cause for extension of any required compliance date in this Consent Decree.

65. The United States and the Commonwealth of Pennsylvania reserve all remedies available to them for violations of the Clean Water Act and the Clean Streams Law by Defendant which are not addressed in this Consent Decree.

66. This Consent Decree does not resolve criminal liability, if any, that any person might have for violations of the Clean Water Act or the Clean Streams Law.

67. Nothing in this Consent Decree shall be construed to limit the authority of the United States or the Commonwealth of Pennsylvania to undertake any action against any person, including Defendant, in response to conditions that may present an imminent and substantial endangerment to the environment or to the public health or welfare.

XV. NOT A PERMIT/COMPLIANCE WITH OTHER STATUTES/REGULATIONS

68. This Consent Decree is not and shall not be construed as a permit issued pursuant to Section 402 of the Clean Water Act, 33 U.S.C. § 1342, nor as a modification of any existing permit so issued, nor shall it in any way relieve Defendant of its obligations to comply with permits, if any, otherwise required for any portion of its Collection System or related sanitary sewage treatment facilities, and with any other applicable federal or Commonwealth law or regulation. Defendant must comply with any new permit, or modification of existing permits, in accordance with applicable federal and Commonwealth laws and regulations.

69. Nothing herein shall be construed as relieving Defendant of the duty to comply with the Clean Water Act and the Pennsylvania Clean Streams Law, the regulations promulgated under those acts, and all applicable permits issued under those acts and

regulations.

XVI. COSTS OF SUIT

70. All parties shall bear their own costs and attorney's fees with respect to matters resolved by this Consent Decree.

XVII. RECORD KEEPING

71. Defendant shall maintain copies of any reports, plans, permits and documents, submitted to EPA and PADEP pursuant to this Consent Decree, including any underlying research and data, for a period of five (5) years from date of submission. Defendant shall provide notice to any independent contractor operating any portion of the Defendant's Collection System or implementing any portion of this Consent Decree to retain such materials for a period of five (5) years from date of submission. Defendant shall submit such supporting documents to EPA and PADEP upon request.

72. In addition to the reports and documentation required to be provided by Defendant under the terms of this Consent Decree, Defendant shall also provide, upon demand, any analytical data or any other documents requested by the United States and PADEP to review work done, or to be done, by Defendant or to determine Defendant's compliance with the terms of this Consent Decree.

73. Defendant shall notify EPA and PADEP thirty (30) days prior to the disposal or destruction of such records at the end of this five-year period and shall, upon EPA's and PADEP's request, make such records available to EPA and PADEP prior to such disposal or destruction.

XVIII. FORM OF NOTICE

74. Unless otherwise specified, all reports, notices, or any other written communications required to be submitted under this Consent Decree shall be submitted electronically, unless EPA and/or PADEP requests hard copies of said communications, and shall be sent to the respective Parties at the following addresses:

As to the United States:

Gregory B. David
Chief, Civil Division Eastern District of Pennsylvania
615 Chestnut Street, Suite 1250
Philadelphia, PA 19106-4476
Gregory.David@usdoj.gov

Brad Levine
Senior Attorney
United States Department of Justice
Environmental and Natural Resources Division
Ben Franklin Station
P.O. Box 7611
Washington, DC 20044-7611
Bradley.Levine@usdoj.gov

As to the Environmental Protection Agency:

Pamela Lazos (3RC20)
Senior Assistant Regional Counsel
United States Environmental Protection Agency Region
III
Lazos.Pamela@epa.gov

Stacie Pratt, NPDES Section Chief (3ED32)
Enforcement and Compliance Assurance Division United
States Environmental Protection Agency Region III
Pratt.Stacie@epa.gov

As to Commonwealth of Pennsylvania:

Thomas Magge
Environmental Program Manager
Clean Water Program
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

tmagge@pa.gov

William Gelles
Supervisory Counsel
Southeast Regional Office of Chief Counsel
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401
wgelles@pa.gov

As to Defendant:

Benjamin Jones, CEO
Bucks County Water Sewer Authority
1275 Almshouse Road
Warrington, PA 18976

Steve Hann, Esquire
Hamburg, Rubin, Mullin, Maxwell Lupin, PC
375 Morris Road, Post Office Box 1479
Lansdale, PA 19446-0773
shann@hrmml.com

Notifications to or communications with EPA, DOJ, and PADEP, shall be deemed submitted on the date they are received.

XIX. MODIFICATION

75. This Consent Decree contains the entire agreement of the Parties and shall not be modified by any prior written agreement, representation, or understanding. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XII of this Decree (Dispute Resolution), provided, however, that instead of the burden of proof provided by Section XII, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with the Fed. R. Civ. P. 60 b . The Consent Decree may be modified by written Order of this Court. With the exception of modifications pertaining to matters deemed minor, any modification of this Consent Decree shall be agreed to by the Parties in writing and approved by the Court before it will be

deemed effective. Minor modifications shall be agreed to by the Parties in writing and filed with the Court.

XX. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

76. This Consent Decree shall be lodged with the Court for a period of thirty (30) days for public notice and comment, pursuant to the requirements of 28 C.F.R. § 50.7. The United States and the Commonwealth reserve the right to withdraw or withhold their consent if the comments regarding the Consent Decree disclose facts or considerations that indicate that this Consent Decree is inappropriate, improper, or inadequate. Defendant consents to the Lodging of this Consent Decree without further notice.

77. If for any reason this Court should decline to approve this Consent Decree in the form presented, this agreement is voidable at the sole discretion of any party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXI. RETENTION OF JURISDICTION

78. This Court shall retain jurisdiction of this matter for the purposes of implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all disputes among the Parties that may arise under the provisions of this Consent Decree, to the extent that this Consent Decree provides for resolution of disputes by the Court. Such jurisdiction shall not terminate until all requirements of this Consent Decree have been fulfilled and all disputes arising under this Consent Decree have been resolved.

XXII. TERMINATION

79. After Defendant has completed all obligations under Section V Remedial Measures of this Consent Decree and has complied with all other requirements of this Consent Decree, and has paid the civil penalties and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

80. Following the United States' receipt of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

81. If the United States does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section XII of this Decree. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination until 120 Days after service of its Request for Termination. This Consent Decree shall remain in effect pending resolution of the dispute by the Parties or the Court in accordance with the provisions of Section XII (Dispute Resolution).

XXIII. SIGNATORIES/SERVICE

82. The Acting Assistant Attorney General and her/his designee on behalf of the United States and the undersigned representatives of Defendant and the Commonwealth of Pennsylvania certify that they are fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such party to this document.

83. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIV. INTEGRATION/APPENDICES

84. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether

oral or written. Other than the Appendices, which are attached to and incorporated into this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

Dated and entered this _____ day of _____, 2022.

UNITED STATES DISTRICT COURT

U.S. District Court Judge

WE HEREBY CONSENT to the entry of the Consent Decree in the matter of United States v. Bucks County Water Sewer Authority, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

JENNIFER ARBITTIER WILLIAMS
UNITED STATES ATTORNEY
GREGORY
DAVID

Digitally signed by
GREGORY DAVID
Date: 2021.12.22
10:10:48 -05'00'

GREGORY DAVID
Assistant U.S. Attorney
Chief, Civil Division, Eastern District of Pennsylvania
615 Chestnut Street, Suite 1250
Philadelphia, PA 19106-4476

Dated:

WE HEREBY CONSENT to the entry of the Consent Decree in United States v. Bucks County Water and Sewer Authority, subject to the public notice and comment requirements of 28 C.F.R.

§ 50.7.

FOR THE UNITED STATES OF AMERICA:

TODD KIM
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice



BRADLEY L. LEVINE
Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044

Dated: November 28, 2021

WE HEREBY CONSENT to the entry of the Consent Decree in United States v. Bucks County Water and Sewer Authority, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

WE HEREBY CONSENT to the entry of the Consent Decree in United States v. Bucks County Water and Sewer Authority, subject to the public notice and comment requirements of 28 C.F.R. § 50.7.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

LOURDES BUFILL Digitally signed by LOURDES BUFILL
Date: 2021.06.10 13:12:39 -04'00'

Lourdes Bufill
Attorney Advisor
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
Mail Code: 2243-A
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dated: 6/10/2021

Nathan Mark Pollins Digitally signed by Nathan
Mark Pollins
Date: 2021.06.17 11:32:27
-04'00'

MARK POLLINS
Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
Mail Code: 2243-A
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dated: _____

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

DIANA ESHER Digitally signed by DIANA ESHER
Date: 2021.06.04 18:26:57 -04'00'

DIANA ESHER, Acting Regional Administrator
United States Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

Dated: 6/4/21

CECIL RODRIGUES Digitally signed by CECIL
RODRIGUES
Date: 2021.06.02 09:04:22 -04'00'

CECIL RODRIGUES
Regional Counsel
United States Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103

Dated: 6/2/21

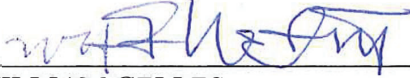
Lazos, Pamela Digitally signed by Lazos, Pamela
Date: 2021.06.02 15:25:58 -04'00'

PAMELA J. LAZOS
Sr. Assistant Regional Counsel
United States Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103


Dated: 6/2/21

WE HEREBY CONSENT to the entry of the Consent Decree in United States v. Bucks County Water and Sewer Authority.

FOR THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION:



WILLIAM GELLES
Supervisory Counsel
Southeast Regional Office of Chief Counsel
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, PA 19401



THOMAS MAGGE
Environmental Program Manager
Southeast Regional Office of Chief Counsel
Pennsylvania Department of Environmental Protection
East Main Street
Norristown, PA 9401

Dated: MAY 19, 2021

FOR THE DEFENDANT:



DENNIS COWLEY

Chairman

Bucks County Water and Sewer Authority

1275 Almshouse Road

Warrington, PA 18976

Dated: 5-11-21



STEVEN A. HANN, ESQUIRE

Attorney for Defendant,

Bucks County Water and Sewer Authority

Hamburg, Rubin, Mullin, Maxwell & Lupin, PC

375 Morris Road, Post Office Box 1479

Lansdale, PA 19446-0773

Dated: 5-17-21

Consent Decree

Appendix A

Date of Overflow	Address of Overflow	Hours of Overflow	Estimated Rate (gallons per minute or "gpm")
1/6/2014	5325 Old Easton Road, Plumstead	1/06/14, 7:15 am to 1/07/14, 9:30 am	15 gpm
1/6/2014	5940 Kellers Church Road, Plumstead	1/06/14, 9:45 am to 10:00 pm	10 gpm
1/6/2014	4992 Township Line Road, Plumstead	1/06/14, 9:45 am to 10:00 pm	15 gpm
1/6/2014	401 California Road, Richland	1/06/14, 12:30 pm to 6:00 pm	15 gpm
1/8/2014	Intersection of Lowell Ave & Blackburn Ave, Bensalem	1/08/14, 5:00 pm to 7:00 pm	<1 gpm
1/11/2014	5325 Old Easton Road, Plumstead	1/11/14, 12:45 pm to 1/13/14, 3:00 am	10 gpm
1/11/2014	5946 Kellers Church Road, Plumstead	1/11/14, 4:25 pm to 1/12/14, 2:30 am	10 gpm
1/11/2014	4992 Township Line Road, Plumstead	1/11/14, 3:40 pm to 1/12/14, 6:00 am	5 gpm
1/13/2014	5 Spruce Street, Doylestown	1/13/14, 6:40 pm to 8:15 pm	1-2 gpm
1/14/2014	5325 Old Easton Road, Plumstead	1/14/14, 3:15 pm to 1/15/14, 5:00 am	5 gpm
1/15/2014	Avenue E, Langhorne	1/15/14, 3:15 pm to 3:30 pm	2 gpm
1/28/2014	4992 Township Line Road, Plumstead	1/28/14, 10:15 am to 11:30 am	15 gpm

2/5/2014	5325 Old Easton Road, Plumstead	2/05/14, 10:15 am to 2/07/14, 3:00 am	15 gpm
2/5/2014	5940 Kellers Church Road, Plumstead	2/05/14, 3:00 pm to 2/06/14, 12:00 am	5 gpm
2/5/2014	4992 Township Line Road, Plumstead	2/05/14, 11:05 am to 2/06/14, 10:00 am	10 gpm
2/5/2014	Commerce Drive and Pennsylvania Avenue, Upper Dublin	2/05/14, 9:45 am to 10:00 am	2 gpm
2/18/2014	Martin Lane and Cardinal Drive, Upper Dublin	2/18/14, 12:00 pm to 3:00 pm	10 gpm
2/20/2014	5325 Old Easton Road, Plumstead	2/20/14, 10:50 pm to 2/25/14, 7:00 pm	10 gpm
2/21/2014	1124 Easton Road, Plumstead	N/A	N/A
2/21/2014	1127 Easton Road, Plumstead	2/21/14, 8:50 pm to 2/26/14, 8:00 am	20 gpm
2/21/2014	5946 Kellers Church Road, Plumstead	2/21/14, 2:45 pm to 2/24/14, 6:00 pm	10 gpm
2/21/2014	4992 Township Line Road, Plumstead	2/21/14, 10:00 am to 2/24/14, 6:00 pm	10 gpm
2/21/2014	Lacey Avenue Apartments, Doylestown	N/A	N/A
3/9/2014	5325 Old Easton Road, Plumstead	3/09/14, 6:55 pm to 3/10/14, 3:00 am	10 gpm

3/11/2014	5325 Old Easton Road, Plumstead	3/11/14, 4:30 pm to 3/13/14, 4:00 pm	10 gpm
3/12/2014	1127 Easton Road, Plumstead	3/12/14, 11:30 pm to 3/13/14, 5:00 am	1 gpm
3/12/2014	5946 Kellers Church Road, Plumstead	3/12/14, 10:35 pm to 3/13/14, 5:00 am	10 gpm
3/12/2014	4992 Township Line Road, Plumstead	3/12/14, 10:35 pm to 3/13/14, 5:00 am	10 gpm
3/15/2014	100 Sesame Road and North Bucktown Road, Middletown Township	3/15/14, 8:30 pm to 10:00 pm	2 gpm
3/18/2014	5101 Lighthouse Lane, Bensalem Township	3/18/14, 4:00 pm to 5:30 pm	10 gpm
3/20/2014	5325 Old Easton Road, Plumstead	3/20/14, 3:45 am to 11:00 am	10 gpm
3/29/2014	5946 Kellers Church Road, Plumstead	3/29/14, 10:50 pm to 3/31/14, 11:00 am	10 gpm
3/29/2014	4992 Township Line Road, Plumstead	3/29/14, 9:30 pm to 3/31/14, 5:00 pm	10 gpm
3/30/2014	1124 Easton Road, Plumstead	3/30/14, 12:50 pm to 4/01/14, 12:00 pm	5 gpm
3/30/2014	1127 Easton Road, Plumstead	3/30/14, 10:15 am to 4/01/14, 12:00 pm	30 gpm
4/3/2014	1249 W. Maple Ave, Middletown	4/3/2014, 1 pm to 2:30 pm	10 gpm
4/15/2014	1124 Easton Road, Plumstead	4/15/14, 5 pm to 4/16/14, 11 pm	5 gpm
4/15/2014	1127 Easton Road, Plumstead	4/15/14, 5 pm to 4/17/14, 4 am	40 gpm

4/15/2014	5946 Kellers Church Road, Plumstead	4/15/14, 5 pm to 4/16/14, 11:00 am	10 gpm
4/15/2014	4992 Township Line Road, Plumstead	4/15/14, 3:20 pm to 4/16/14, 11:00 am	10 gpm
4/15/2014	4906 Ann Drive, Plumstead	4/15/14, 5:00 pm to 4/16/14, 3:00 am	5 gpm
4/30/2014	1124 Easton Road, Plumstead	4/30/14, 3 pm to 5/2/14, 5:30 pm	20 gpm
4/30/2014	1127 Easton Road, Plumstead	4/30/14, 2:40 pm to 5/2/14, 5:30 pm	40 gpm
4/30/2014	5280 Old Easton Road, Plumstead	4/30/2014, 5:00 pm to 5/1/14, 6:15 am	15 gpm
4/30/2014	575 Durham Road, Middletown	4/30/2014, 10:45pm to 5/1/14, 4:15pm	10 gpm
4/30/2014	5946 Kellers Church Road, Plumstead	4/30/14, 7:30 am to 5/1/14, 10:30 pm	15 gpm
4/30/2014	666 Erie Road, Richland	4/30/2014, 4 pm to 5/1/14 4:30 pm	10 gpm
4/30/2014	4992 Township Line Road, Plumstead	4/30/14, 7:00 am to 5/1/14, 8:00 pm	15 gpm
4/30/2014	5713 Lexington Drive, Plumstead	4/30/14, 7:40 pm to 5/1/14, 2:00 am	10 gpm
4/30/2014	5747 Durham Road, Plumstead	4/30/2014, 6:00 pm to 5/1/14, 4:30pm	10 gpm

4/30/2014	5841 Meetinghouse Road, Plumstead	4/30/2014, 5:45 pm to 5/1/14, 2:00 am	5 gpm
4/30/2014	5906 Ann Drive, Plumstead	4/30/2014, 5:30 pm to 5/1/14, 11 am	5 gpm
4/30/2014	308 Mechanic St, New Hope Boro	4/30/2014, 6:00 pm to 5/1/14, 4:45pm	5 gpm
4/30/2014	5684 Stump Road, Plumstead	4/30/2014, 6:30 pm to 5/1/14, 5:50 am	10 gpm
4/30/2014	141 Kelly Road, Quakertown Boro	4/30/2014, 11:30pm to 5/1/14, 11:00pm	10 gpm
4/30/2014	5900 Applebutter Road, Plumstead	4/30/14, 8:00 pm to 5/1/14, 1:30 am	5 gpm
4/30/2014	6464 York Road, Solebury	4/30/2014, 6pm to 9:30 pm	5 gpm
5/16/2014	5946 Kellers Church Road, Plumstead	5/16/2014, 4:45pm to 5/17/14 5am	10 gpm

5/16/2014	1637 Old Bethlehem Pike, Richland	5/16/2014, 9:30pm to 5/17/14, 5:00am	2.5 gpm
5/16/2014	4992 Township Line Road, Plumstead	5/16/14, 4:45 pm to 4/17/14, 5:00 am	10 gpm
5/17/2014	1124 Easton Road, Plumstead	5/17/14, 5:30 am to 6:00 pm	5 gpm
5/17/2014	1127 Easton Road, Plumstead	5/17/14, 5:30 am to 6:00 pm	2 gpm
5/17/2014	1127 Easton Road, Plumstead	5/17/14, 5:30 am to 6:00 pm	10 gpm
5/17/2014	5280 Old Easton Road, Plumstead	5/17/14, 5:30 am to 6:00 pm	10 gpm
5/22/2014	1124 Easton Road, Plumstead	5/22/14, 6:30 pm to 5/24/14, 12:00 pm	12 gpm
5/22/2014	5946 Kellers Church Road, Plumstead	5/22/2014, 6:30 pm to 5/23/14 5 am	10 gpm
5/22/2014	5946 Kellers Church Road, Plumstead	5/22/2014, 8:30 am to 1:00 pm	5 gpm
5/22/2014	4992 Township Line Road, Plumstead	5/22/14, 8:30 am to 5/23/14, 1:00 pm	10 gpm
6/13/2014	5946 Kellers Church Road, Plumstead	6/13/2014, 9:00 am to 1:00 pm	5 gpm
6/13/2014	4992 Township Line Road, Plumstead	6/13/14, 9:00 am to 2:30 pm	10 gpm

8/31/2014	Mechanicsville & Dunks Ferry Rd, Bensalem	8/31/2014, 12:45 pm to 2:30 pm	< 5 gpm
9/22/2014	1198 Hansell Drive & Shneider Elementary School, Bensalem	9/22/2014, 8:45 pm to 9:15 pm	10 gpm
10/5/2014	5024 Judson Drive, Bensalem	10/5/2014, 4:05 pm to 4:45 pm	10 gpm
10/6/2014	5024 Judson Drive, Bensalem	10/6/2014, 12:45 pm to 2:00 pm	10 gpm
10/13/2014	Windsor Drive, Bensalem	10/13/2014, 8:45 am to 9:00 am	5 gpm
10/28/2014	100 Girard Ave, Upper Dublin	10/28/2014, 12:30p to 1:15pm	2 gpm
11/9/2014	Stockton Ave Train Station, New Hope	11/9/2014, 9:30am to 10:30am	5 gpm
11/12/2014	Old Lincoln Hwy & Horizon Blvd, Bensalem	11/12/2014, 3:45 pm to 4:15 pm	N/A
11/26/2014	Off of PA Ave near Rech Ave, Upper Dublin	11/26/2014, 2:00pm to 3:15pm	5 gpm
12/6/2014	5946 Kellers Church Road, Plumstead	12/6/2014, 10:10 pm to 12/7/14 6:00 am	5-10 gpm
12/6/2014	4992 Township Line Road, Plumstead	12/6/2014, 10:10 pm to 12/7/14, 6:00 am	10 gpm
12/7/2014	1124 Easton Road, Plumstead	12/7/14, 7:00 am to 12/8/14, 3:00 am	10-15 gpm

12/9/2014	5946 Kellers Church Road, Plumstead	12/9/2014, 10:30 am to 3:00 pm	1 gpm
12/9/2014	4992 Township Line Road, Plumstead	12/9/2014, 10:30 am to 3:00 pm	5 gpm
12/9/2014	1161 Cedar Ave, Bensalem	12/28/2014, 3:00 pm to 3:30 pm	<1-2 gpm
1/18/2015	5957 Kellers Church Road, Plumstead	1/18/15, 8:15 pm to 10:15 pm	5-10 gpm
1/19/2015	5544 Jefferson Court, Bensalem Township	1/19/15, 9:30 pm to 10:50 pm	less than 5 gpm
3/4/2015	Big Oak Road and Flint Road, Langhorne	3/04/15, 8:30 pm to 3/05/15, 5:00 am	10 gpm
3/10/2015	5957 Kellers Church Road, Plumstead	3/10/15, 10:40 pm to 3/12/15, 9:00 am	5-10 gpm
3/10/2015	Behind 403 Middletown Road, Langhorne	3/10/15, 4:25 pm to 7:30 pm	5 gpm
3/11/2015	1124 Easton Road, Plumstead	3/11/15, 8:15 pm to 3/12/15, 11:00 am	15 gpm
3/11/2015	4500 Durham Road, Plumstead	3/11/15, 8:00 pm to 3/13/15, 3:00 am	10 gpm
3/11/2015	5190 Old Easton Road, Plumstead	3/11/15, 10:00 pm to 3/12/15, 11:00 am	15 gpm

3/11/2015	4992 Township Line Road, Plumstead	3/11/15, 3:30 pm to 3/12/15, 9:00 am	5 gpm
3/11/2015	5676 The Lane, Plumstead	3/11/15, 7:30 pm to 3/12/15, 11:00 am	15 gpm
3/11/2015	5747 Old Durham Road, Plumstead	3/11/15, 5:35 pm to 3/13/15, 3:30 am	5 gpm
3/11/2015	Behind 4777 North River Drive, Bensalem	3/11/15, 9:00 pm to 3/12/15, 12:00 am	5 gpm
3/14/2015	1124 Easton Road, Plumstead	3/14/15, 2:45 pm to 3/15/15, 3:30am	15 gpm
3/14/2015	5957 Kellers Church Road, Plumstead	3/14/15, 10:00 am to 3/15/15, 3:30 am	5-10 gpm
3/14/2015	4992 Township Line Road, Plumstead	3/14/15, 11:45 am to 3/15/15, 3:30 am	5 gpm
3/14/2015	5747 Old Durham Road, Plumstead	3/14/15, 11:55 am to 3/15/15, 3:30 am	5 gpm
3/27/2015	1124 Easton Road, Plumstead	3/27/15, 8:00 am to 7:00 pm	15 gpm
3/27/2015	4500 Durham Road, Plumstead	3/27/15, 2:45 pm to 6:00 pm	10 gpm
3/27/2015	5957 Kellers Church Road, Plumstead	3/27/15, 6:20 am to 9:00 pm	5-10 gpm
3/27/2015	Ann Drive and Stump Road, Plumstead	3/27/15, 8:20 am to 11:00 am	5-10 gpm
3/27/2015	4992 Township Line Road, Plumstead	3/27/15, 6:20 am to 6:00 pm	5 gpm
3/27/2015	4992 Township Line Road, Plumstead	4/20/15, 1:45 pm to 4:30 pm	5 gpm

4/20/2015	Gate House Apt, State Road & Grant Avenue, Bensalem	4/20/15, 11:25 am to 12:30 pm	5 gpm
7/23/2015	525 E. Court Street, Doylestown	07/23/15, 1:10 pm to 1:30 pm	5-10 gpm
8/2/2015	One mile west of Route 413, b/w old RR and Creek, Langhorne	08/02/15, 10:00 am to 8/02/15, 1:00 pm	25 gpm
8/2/2015	Lowell Ave & Blackburn Ave, Bensalem	11/27/15, 5:20 pm to 9:00 pm	10 gpm
12/16/2015	4992 Township Line Road, Plumstead	12/29/15, 12:10 pm to 5:00 pm	5 gpm
12/16/2015	300 Harvey Avenue, Doylestown	12/16/15, 2:00 am to 8:00 am	N/A
12/29/2015	5957 Keller's Church Road, Plumstead	12/29/15, 10:35 am to 6:00 pm	5 gpm
1/10/2016	5946 Kellers Church Road, Plumstead	1/10/16, 9:30 am to 1/11/16, 12:30am	10 gpm
1/10/2016	1124 Easton Road, Plumstead	2/03/16, 8:30 pm to 2/04/16, 4:00 am	3.5 gpm
1/10/2016	4992 Township Line Road, Plumstead	1/10/16, 9:30 am to 10:00 pm	5 gpm
2/3/2016	4500 block of Durham Road, Plumstead	2/03/16, 8:45 pm to 2/05/16, 11:59 pm	5 gpm
2/3/2016	4992 Township Line Road, Plumstead	2/03/16, 2:10 pm to 2/05/16, 7:00 am	5 gpm
2/3/2016	5000 Applebutter Road, Plumstead	2/03/16, 7:30 pm to 9:15 pm	2 gpm
2/3/2016	5370 Old Easton Road, Plumstead	2/03/16, 8:30 pm to 2/04/16, 2:00 pm	5 gpm
2/3/2016	5906 Ann Drive, Plumstead	2/03/16, 4:30 pm to 2/04/16, 11:00 am	2 gpm

2/3/2016	5946 Kellers Church Road, Plumstead	2/03/16, 2:10 pm to 2/05/16, 7:00 am	5 gpm
2/4/2016	5747 Old Durham Road, Plumstead	2/04/16, 8:30 am to 2/05/16, 10:00 am	3.5 gpm
2/14/2016	Big Oak Road and Flint Road, Langhorne	2/14/16, 4:45 pm to 5:00 pm	Overflow rate not estimated as overflow appears to have ceased prior to BCWSA arrival.
2/16/2016	Big Oak Road and Flint Road, Langhorne	2/16/16, 2:50 pm to 5:00 pm	10 gpm
2/16/2016	4992 Township Line Road, Plumstead	2/16/16, 3:00 pm to 2/17/16, 12:30 am	5 gpm
2/16/2016	5946 Kellers Church Road, Plumstead	2/16/16, 5:00 pm to 2/17/16, 12:30 am	5 gpm
2/24/2016	4500 block of Durham Road, Plumstead	2/24/16, 11:30 pm intermittently to 2/26/16, 3:59 pm	5 gpm, intermittent
2/24/2016	4992 Township Line Road, Plumstead	2/24/16, 5:00 pm to 2/25/16, 3:30 pm	5 gpm
2/24/2016	5906 Ann Drive, Plumstead	2/24/16, 11:00 pm to 2/25/16, 7:00 am	2 gpm
2/24/2016	5946 Kellers Church Road, Plumstead	2/24/16, 10:00 pm to 2/25/16, 3:30 pm	5 gpm
2/27/2016	5940 Kellers Church Road, Plumstead	3/15/16, 9:20 pm to 10:20 pm	<1 gpm
2/27/2016	Washington Lane and Point Drive, Bensalem	2/27/16, 7:00 am to 9:15 am	5–10 gpm
3/15/2016	Across street from 3240 Tilman Drive, Bensalem	3/23/16, 3:30 pm to 3:45 pm	<5 gpm

3/23/2016	5101 Lighthouse Lane, Bensalem	4/04/16, 5:45 pm(call time) to 7:30 pm	5-10 gpm
4/11/2016	Almhouse Road, between Nicklaus Drive and Palmer Drive, Doylestown Township	4/11/16, 11:10 am to 12:00 pm	2 gpm
4/17/2016	1114 Spring Meadow Road, Richland	4/17/16, 12:00 pm to 12:30 pm	< 5 gpm
4/19/2016	330 Wenner Way, Upper Dublin Township	4/19/16, 3:30 pm to 4:00 pm	2 gpm
4/24/2016	In woods to right of 2722 Dunksferry Road, Bensalem	4/24/16, 6:15 pm to 8:30 pm	5-10 gpm
4/24/2016	Manhole at end of Langstroth Lane, Bensalem	4/25/16, 7:10 pm to 9:30 pm	< 5 gpm
5/3/2016	2495 Street Road (Club House Diner), Bensalem	5/03/16, 9:55 am to 11:30 pm	3 gpm
5/3/2016	5370 Old Easton Road, Plumstead	5/03/16, 2:15 pm to 5:30 pm	2 gpm
5/4/2016	Knights Road at Green Lane, Bensalem	5/04/16, 11:00 am to 11:20 am	3 gpm
5/9/2016	2384 Tennis Avenue, Bensalem	5/09/16, 1:55 pm to 3:05 pm	3 gpm
5/27/2016	4591 Durham Road, Plumstead	5/27/16, 12:15 am to 12:50 am	5-10 gpm
6/13/2016	Intersection of Ryan Road and Durham Road, Plumstead	6/13/16, 4:25 pm to 5:00 pm	1-2 gpm
6/18/2016	Manhole behind Kings Plaza WWTP, Doylestown Township	Date/time: 6/18/15, 3:00 pm to 4:15 pm	15 gpm
7/8/2016	701 Twining Road, Upper Dublin	7/8/2016, 4:30 pm to 7 pm	50 gpm for 1-2 min every 20 min, when pump ran
7/19/2016	1203 Kings Ave, Bensalem	7/19/2016, 6:00 pm to 6:30 pm	1-2 gpm
7/28/2016	56 Bennett Drive, Doylestown Boro	7/28/2016, 9:00 am to 10:00 am	2 gpm
9/3/2016	1204 Malinda Road, Springfield	9/3/2016. 3:30 pm to 4:05 pm	<50 gallons

9/12/2016	6 Wilshire Drive, Doylestown	9/12/2016. 7:50 pm to 8:50 pm	10 gpm
9/20/2016	Behind 905 Williams Dr. Bensalem	9/20/2016. 2:35 pm to 2:45 pm	<50 gallons
10/1/2016	1 Eastview Drive, Upper Dublin	10/1/2016. 1:30 pm to 2:08 pm	<75 gal
10/16/2016	2613 Galloway Road, Bensalem	10/17/2016. 5 pm to 6 pm	5 gpm
10/17/2016	Kings Plaza WWTP, Doylestown	10/18/2016. 10:30am to 10:35am	1500 gallons
10/18/2016	Kings Plaza WWTP, Doylestown	10/18/2016. 10:30am to 10:35am	1500 gallons
10/21/2016	3233 Lisa Turn, Bensalem	10/21/2016, 6:30 pm to 7:30 pm	<1 gpm
10/21/2016	Bethlehem Pike and Rose Lane, Springfield	10/21/2016 10:35 pm to 11:03 pm	<75 gal
11/2/2016	418 Suffolk Road, Springfield	11/2/16 5:15pm to 8 pm	1-2 gpm
11/5/2016	1886 Bethlehem Pike, Springfield	11/5/16 4:30pm to 7:15pm	<5 gpm
11/10/2016	Mainstreet and Zimmerman Lane, Middletown	11/10/2016 8:45am to 10am	5-10 gpm
11/22/2016	Big Oak Road and Flint Road, Middletown	11/22/2016 1:39 pm to 1:49 pm	<75 gallons
12/2/2016	Dressertown Road and Oriele Lane, Upper Dublin	12/2/16 10:50am to 11:15am	<100 gal
12/9/2016	325 West Bridge St. New Hope Boro	12/9/2016, 6:00 pm to 8:00 pm	< 5 gpm
1/13/2017	West Mill & Bethlehem Pike (Ft Washington St Park), Springfield	1/13/2017, 2:45pm to 2:51pm	25 gallons
1/16/2017	1251 Lowell Ave, Bensalem	1/16/2017, 12:32pm to 2:52pm	100- 200 gallons
1/23/2017	5946 Kellers Church Road, Plumstead	1/23/17, 10:00pm to 1/24/17, 10:00pm	15 gpm

1/23/2017	4992 Township Line Road, Plumstead	1/23/17, 10:00pm to 1/24/17, 4:00pm	15 gpm
1/24/2017	1124 Easton Road, Plumstead,	1/24/17, 5:30 am to 4:00pm	15 gpm
1/24/2017	Fanny Chapman Park, Doylestown Boro	1/24/2017 8:30am to 8:45am	100- 200 gallons
1/30/2017	4992 Township Line Road, Plumstead	10/30/17, 12:00am to 6:00 am	10 gpm
2/3/2017	2102 State Road, Bensalem	2/3/2017, 6:00pm to 7:45 pm	1-2 gpm
2/8/2017	1369 Argyle Way, Bensalem	2/8/2017, 9pm to 9:45pm	1-2 gpm
2/28/2017	1249 W Maple Ave, Middletown	2/28/2017, 12:45pm to 1:45pm	15 gpm
3/5/2017	Bridge Road and Rt 413, Middletown	3/5/2017, 3:30pm to 4:45pm	10 gpm
3/6/2017	97 Styer's Lane, Middletown	3/6/2017, 9:15am to 1:15pm	80 gpm
3/21/2017	5940 Kellers Church Road, Plumstead	3/21/17, 8:00pm to 3/22/17, 2:00am	5 gpm
3/31/2017	5290 Anne Drive, Plumstead	3/31/17, 6:20pm to 3/31/17, 9:00pm	5 gpm
3/31/2017	1127 Easton Road, Plumstead	3/31/17, 5:40 pm to 4/01/17, 2:00 pm	3.5 gpm
3/31/2017	4992 Township Line Road, Plumstead	3/31/17, 1:00 pm to 4/1/17, 1:00 pm	5 gpm
3/31/2017	5747 Old Durham Road, Plumstead	3/31/17, 10:10 pm to 4/1/17, 8:00 pm	3.5 gpm
3/31/2017	5946 Kellers Church Road, Plumstead	3/31/17, 1:00pm to 4/1/17, 1:00pm	5 gpm

4/6/2017	5940 Kellers Church Road, Plumstead	4/6/17, 5:00pm to 4/7/17, 1:30am	5 gpm
4/19/2017	2004 Paper Mill Road, Springfield	4/19/2017, 4:45pm to 5:30pm	5 gpm
4/24/2017	Near Almshouse Road, Doylestown	4/24/2017 6:45pm to 7:30pm	10 gpm
4/26/2017	1203 Bergan Road, Springfield	4/26/2017, 10:30am to 11:45am	5-10 gpm
5/11/2017	1033 South Bellevue Ave, Middletown	5/11/2017, 3:30pm to 4:30pm	10 gpm
5/13/2017	4992 Township Line Road, Plumstead	5/13/17, 4:30pm to 11:00pm	10-20 gpm
5/13/2017	5940 Kellers Church Road, Plumstead	5/13/17, 4:30pm to 5/14/17, 12:00am	10-20 gpm
6/5/2017	1356 Adams Rd, Bensalem	6/5/2017 1pm to 2pm	10-20 gpm
6/8/2017	1361 Almshouse Road, Doylestown	6/8/2017, 9:00am to 10:00am	2 gpm
6/24/2017	4992 Township Line Road, Plumstead	6/24/17, 8:00am to 9:30am	5 gpm
6/24/2017	5940 Kellers Church Road, Plumstead	6/24/17, 8:00am to 3:00pm	5 gpm
6/30/2017	Behind 383 W Butler Ave and 222 Pueblo Road, New Britain	6/30/2017 11:30am to 2pm	50 gpm
7/24/2017	5940 Kellers Church Road, Plumstead	7/24/17, 9:15pm to 7/25/17, 2:00am	5 gpm
7/27/2017	1221 Ford Road, Bensalem	7/27/2017 12:30pm to 1pm	5 gpm
8/31/2017	1513 Temple Drive, Upper Dublin	8/31/2017 6:15pm to 8:30pm	N/A

10/14/2017	31 W Ferry Street, New Hope Boro	10/14/2017, 8:30am to 11:30am	5 gpm
10/28/2017	2517 Dunks Ferry Road, Bensalem	10/28/2017, 5:30am to 6:15am	5-10 gpm
10/29/2017	5940 Kellers Church Road, Plumstead	10/29/17, 11:30pm to 10/30/17, 12:00pm	10-15 gpm
11/4/2017	6401 Hulmeville Road, Bensalem	11/4/2017 1:45pm to N/A	<1 gpm
11/17/2017	350 Werner Way, Upper Dublin	11/17/2017, 9:00am to 9:45am	15 gpm
12/1/2017	Pinetown Rd, Ft Washington	12/1/2017, 10:15am to 10:50am	15 gpm
12/22/2017	8621 Patton Road, Springfield	12/22/2017 11pm to 11:20pm	1-2 gpm
1/12/2018	4992 Township Line Road, Plumstead	1/12/17, 1:55pm to 9:30pm	5 gpm
1/12/2018	5940 Kellers Church Road, Plumstead	1/12/18, 4:50 pm to 1/13/18, 2:00 am	2 gpm
1/13/2018	5747 Old Durham Road, Plumstead	1/13/18 9:30am to 9:30pm	3.5 gpm
1/14/2018	8322 MacArthur Road, Springfield	1/15/2018 3:20pm to 6:20pm	2 gpm
1/24/2018	1124 Easton Road, Plumstead	1/24/18, 10:45am to 10:50am	5 gpm
1/31/2018	29 Miller Avenue, Doylestown Boro	1/31/2018, 11:00pm to 11:30pm	1 gpm
2/8/2018	1124 Easton Road, Plumstead	2/8/18, 6:00 am to 5:00 pm	20 gpm
2/11/2018	1124 Easton Road, Plumstead	2/11/18, 7:00 am to 2/13/18, 2:00 pm	20-30 gpm

2/11/2018	5932 Kellers Church Road, Plumstead	2/11/18, 7:00 am to 2/12/18, 5:00 am	15 gpm
2/11/2018	5747 Old Durham Road, Plumstead	2/11/18 7:00 pm to 2/12/18, 5:00 am	10-15 gpm
2/25/2018	1124 Easton Road, Plumstead	2/25/18, 8:30 am to 2/27/18, 3:00 pm	10-20 gpm
2/25/2018	5932 Kellers Church Road, Plumstead	2/25/18, 8:30 am to 11:00 pm	10 gpm
2/25/2018	4992 Township Line Road, Plumstead	2/25/18, 8:30 am to 11:00 pm	10-15 gpm
2/28/2018	1300 Pennsylvania Ave., Springfield	2/28/2018, 10:30am to 11:30am	5 gpm
3/2/2018	5932 Kellers Church Road, Plumstead	3/2/18, 6:30 am to 11:30 pm	10 gpm
3/2/2018	4992 Township Line Road, Plumstead	3/2/18, 6:30 am to 3/3/18, 11:00 pm	10-15 gpm
3/2/2018	28 Exeter Ct. Middletown	3/3/2018, 2:00pm to 2:30pm	5-10 gpm
3/3/2018	4500 Block of Durham Road, Plumstead	3/3/18, 8:30 am to 5:00 pm	10 gpm
3/25/2018	1124 Easton Road, Plumstead	3/25/18, 6:30 am to 3/25/18, 10:30 am	10-15 gpm
4/16/2018	4500 Block of Durham Road, Plumstead	4/16/18, 3:30 pm to 5:25 pm	5 gpm (intermittent)
4/16/2018	4992 Township Line Road, Plumstead	4/16/18, 8:50 am to 4/17/18, 1:00 am	10 gpm
4/16/2018	5290 Anne Drive, Plumstead	4/16/18, 8:50 am to 5:10 pm	5 gpm
4/16/2018	5747 Old Durham Road, Plumstead	4/16/18, 1:45 pm to 9:20 pm	10-15 gpm
4/16/2018	6464 York Road, New Hope Boro	4/16/2018 1:45pm to 8:15pm	5 gpm
4/16/2018	5940 Kellers Church Road, Plumstead	4/16/18, 8:20 am to 4/17/18, 1:00 am	10 gpm

5/17/2018	5940 Kellers Church Road, Plumstead	5/17/18, 9:45 am to 5/18/18, 1:00 pm	10 gpm
5/17/2018	4992 Township Line Road, Plumstead	5/17/18, 9:45 am to 1:00 pm	10 gpm
5/19/2018	5932 Kellers Church Road, Plumstead	5/19/18, 4:00 pm to 10:30 pm	10-15 gpm
5/23/2018	Bruce Road, Springfield	5/23/2018 2:40pa to4:30pm	2 gpm
5/27/2018	6510 Lower York Road, New Hope Boro	5/27/2018 8:15am to 10am	5 gpm
5/27/2018	1124 Easton Road, Plumstead	5/27/18, 4:30 pm to 8:00 pm	5 gpm
6/11/2018	Pennsylvania Ave and Mill Road, Upper Dublin	6/11/2018 12pm to 12:20pm	5 gpm
6/11/2018	407 N. Pine Street, Middletown	6/18/2018, 8:45am to 4:30pm	10-15 gpm
8/4/2018	4992 Township Line Road, Plumstead	8/4/18, 8:30 am to 1:00 pm	10 gpm
8/4/2018	5940 Kellers Church Road, Plumstead	8/4/18, 8:30 am to 3:00 pm	10 gpm
8/11/2018	4992 Township Line Road, Plumstead	8/11/18, 11:00 am to 5:00 pm	< 5 gpm
8/11/2018	5940 Kellers Church Road, Plumstead	8/11/18, 10:45 am to 5:00 pm	5 gpm
9/12/2018	5940 Kellers Church Road, Plumstead	9/12/18, 10:15 pm to 9/13/18, 10:30 am	5-10 gpm
9/28/2018	5946 Kellers Church Road, Plumstead	9/28/18, 5:15 am to 9:00 pm	10 gpm
9/28/2018	4591 Durham Road, Plumstead	9/28/18, 6:30 am to 9:00 am	15 gpm
9/28/2018	4992 Township Line Road, Plumstead	9/28/18, 5:15 am to 3:00 pm	10 gpm
9/28/2018	Ann Drive and Stump Road, Plumstead	9/28/18, 5:15 am to 9:00 am	10 gpm

9/29/2018	Outside Kings Plaza STP	9/29/18, 5:00 pm to 10:00 pm	10-15 gpm
10/16/2018	3200 Bensalem Blvd, Bensalem	10/16/2018, 6:15 pm to 6:50 pm	5 gpm
11/3/2018	5370 Old Easton Road, Plumstead	11/03/18, 4:00 am to 7:00 am	10 gpm
11/3/2018	5940 Kellers Church Road, Plumstead	11/03/18, 4:00 am to 5:00 pm	10 gpm
11/3/2018	4992 Townshipline Road, Plumstead	11/03/18, 4:00 am to 7:45 am	10 gpm
11/13/2018	5940 Kellers Church Road, Plumstead	11/13/18, 11:40 am to 5:00 pm	10 gpm
11/13/2018	4992 Townshipline Road, Plumstead	11/13/18, 11:40 am to 5:00 pm	10 gpm
11/24/2018	4990 Applebutter Road, Plumstead	11/24/18, 11:30 pm to 11/25/18, 4:20 am	10 gpm
11/24/2018	5940 Kellers Church Road, Plumstead	11/24/18, 11:30 pm to 11/25/18, 9:30 pm	10 gpm
11/24/2018	4992 Townshipline Road, Plumstead	11/24/18, 11:30 pm to 11/25/18, 10:00 am	10 gpm
11/24/2018	5290 Anne Drive, Plumstead	11/24/18, 11:30 pm to 11/25/18, 6:50 am	5 gpm
11/25/2018	1127 Easton Road, Plumstead	11/25/18, 4:20 am to 10:00 am	5 gpm
11/25/2018	In woods behind Duane Road, Doylestown	11/25/18, 10:00 am	N/A
11/26/2018	5940 Kellers Church Road, Plumstead	11/26/18, 6:00 pm to 11/27/18, 4:00 am	10 gpm
11/26/2018	4992 Townshipline Road, Plumstead	11/26/18, 6:00 pm to 11/27/18, 4:00 am	10 gpm
12/3/2018	376 West Butler Avenue, New Britain	12/03/18, 4:30 pm to 5:30 pm	< 2 gpm
12/10/2018	Kit Road and Easton Road, Plumstead	12/10/18, 12:00 pm to 3:30 pm	~5 gpm "only when pump station ran"

12/21/2018	5940 Kellers Church Road, Plumstead	12/21/18, 5:40 am to 9:30 pm	10 gpm
12/21/2018	4992 Townshipline Road, Plumstead	12/21/18, 6:15 am to 5:15 pm	10 gpm
12/21/2018	5290 Anne Drive, Plumstead	12/21/18, 6:15 am to 12:45 pm	5 gpm
12/21/2018	In woods behind Duane Road, Doylestown	12/21/18, 3:00 pm to 12/22/18, 8:00 pm	N/A
12/28/2018	138 State Street, Bensalem	12/28/18, 10:35 am to 2:20 pm	10 gpm
12/28/2018	5940 Kellers Church Road, Plumstead	12/28/18, 9:50 am to 12/29/18, 12:40 am	10 gpm
12/28/2018	4992 Townshipline Road, Plumstead	12/28/18, 11:25 am to 9:30 pm	10 gpm
12/28/2018	5290 Anne Drive, Plumstead	12/28/18, 11:30am am to 2:30 pm	5 gpm
12/29/2018	In woods behind Duane Road, Doylestown	12/29/18, 5:00 pm to 6:00 pm	N/A

Consent Decree
EXHIBIT 1

Bucks County Water & Sewer Authority

Sewer Investigations & Repairs in the New Hope Borough and Solebury Township Service Area

Sewer Televising and CIPP Lining				
Entire Service Area Televised in 2014 & 2015				
Linear feet of 6" Sewer Televised				174
Linear feet of 8" Sewer Televised				96,186
Linear feet of 10" Sewer Televised				1,378
Linear feet of 12" Sewer Televised				765
Linear feet of 24" Sewer Televised				388
Sewer Lined Under the 2017 CIPP Contract				
Upstream MH	Downstream MH	Diameter	Pipe Material	Lined
NHS-PS-4-016	NHS-PS-4-015	8	VCP	268
NHS-PS-4-004	NHS-PS-4-003	8	VCP	223
NHS-PS-4-042	NHS-PS-4-041	8	ACP	142
NHS-PS-6-014	NHS-PS-6-013	8	VCP	258
NHS-PS-9-021	NHS-PS-9-020	8	VCP	122
NHS-PS-11-048	NHS-PS-11-047	8	ACP	112
NHS-PS-4-018	NHS-PS-4-001	8	VCP	173
NHS-PS-4-020	NHS-PS-4-019	8	VCP	73
NHS-PS-4-036	NHS-PS-4-035	8	ACP	126
NHS-PS-5-032	NHS-PS-5-031	8	ACP	148
NHS-PS-6-069	NHS-PS-6-034	8	VCP	247
NHS-PS-6-105	NHS-PS-6-104	8	PVC	100
NHS-PS-7-016	NHS-PS-7-015	8	VCP	188
NHS-PS-7-015	NHS-PS-7-014	8	VCP	200
NHS-PS-7-066	NHS-PS-7-016	8	VCP	246
NHS-PS-7-097	NHS-PS-7-096	8	DIP	143
NHS-PS-7-126A	NHS-PS-7-125	8	ACP	369
NHS-PS-9-023	NHS-PS-9-022	8	VCP	142
NHS-PS-9-046	NHS-PS-9-043	8	VCP	411
NHS-PS-9-050	NHS-PS-9-027	8	PVC	299
NHS-PS-11-019	NHS-PS-11-018	10	VCP	66
NHS-PS-11-066	NHS-PS-11-063	8	DIP	205
NHS-PS-11-073	NHS-PS-11-075	8	PVC	333
NHS-PS-11-076	NHS-PS-11-075	8	PVC	294
NHS-PS-11-021	NHS-PS-11-020	8	VCP	185
Manhole Investigations and Repairs				
Summary of Manhole Inspections from 2014 to 2016				
Manholes Inspected				125
Manholes with defects noted				25
Repairs Completed Under the 2016 Manhole Repair Contracts (Work completed in 2016 and 2017)				
Grouting and lining of manholes				7
Replace standard casting				9
Replace watertight casting				1
Locate and raise casting				2
Refurbish casting (remove paving materials, replace gaskets/bolts)				7
Repair offset castings				1
Install chimney seal.				1
Install inflow prevention insert.				5
Replace exterior grout.				0
Replace manhole casting lid.				0

Notes:

- (1) Could not be lined due to possible PVC point repair in line.
- (2) Could not be lined due to massively offset joint.

Consent Decree

EXHIBIT 2

Bucks County Water & Sewer Authority

Sewer Investigations & Repairs in the Langhorne Borough Service Area

Sewer Televising and CIPP Lining					
Entire Service Area Televised in 2014 & 2015					
Linear feet of 8" Sewer Televised					20,467
Linear feet of 10" Sewer Televised					9,361
Sewer Lined Under the 2017 CIPP Contract					
Upstream MH	Downstream MH	Diameter	Pipe Material	Length (ft)	Lined
A17	A16	10	VCP	308	9/27/2018
B05	B04	10	ACP	295	7/27/2018
B09	B08	10	ACP	139	(1)
A05	A04	10	VCP	255	4/5/2019
A08	A07	10	VCP	293	(1)
A23	A22	8	VCP	247	4/12/2018
A25	A24	8	VCP	211	9/12/2018
A28	A27	8	VCP	399	9/20/2018
A41	A17	8	VCP	353	9/26/2018
A42	A41	8	VCP	336	9/27/2018
B17	B16	10	VCP	275	9/11/2018
B19	B18	10	VCP	386	4/11/2018
B20	B19	10	VCP	358	9/28/2018
B24	B23	8	VCP	236	4/11/2018
B43	B42	8	VCP	152	9/19/2018
B08	B07	10	ACP	130.4	7/26/2018
B07	B06	10	ACP	235.9	7/26/2018
B06	B05	10	ACP	193.2	7/25/2018
B04	B03	10	ACP	89.3	7/27/2018
B03	B02	10	ACP	114.7	7/27/2018
Manhole Investigations and Repairs					
Summary of Manhole Inspections from 2014 to 2016					
Manholes inspected					125
Manholes with defects noted					25
Repairs Completed Under the 2016 Manhole Repair Contracts (Work completed in 2016 and 2017)					
Grouting and lining of manholes					7
Replace standard casting					9
Replace watertight casting					1
Locate and raise casting					2
Refurbish casting (remove paving materials, replace gaskets/bolts)					7
Repair offset castings					1
Install chimney seal.					1
Install inflow prevention insert.					5
Replace exterior grout.					0
Replace manhole casting lid.					0

Notes:

(1) Could not line these runs due to too much infiltration in the lines.

Consent Decree
EXHIBIT 3

Bucks County Water & Sewer Authority

Sewer Repairs in the Springfield Township Service Area

Sewer Lined Under the 2017 CIPP Contract						
Upstream MH	Downstream MH	Diameter	Pipe Material	Length (ft)	Lined	
Wissahickon Interceptor						
81-3	81-4	21	VCP	221		3/20/2018
81-4	81-5	21	VCP	55		3/20/2018
81-6A	81-7	21	VCP	121		4/6/2018
81-7	81-8	21	VCP	200		4/6/2018
81-8	81-9	21	VCP	315		4/6/2018
81-9	81-10	21	VCP	240		4/6/2018
81-10	73-1	21	VCP	255		4/6/2018
73-1	73-2	21	VCP	251		4/6/2018
73-2	73-3	30	CP	390		4/14/2018
73-3	82-1	30	CP	390		4/15/2018
82-1	82-2	30	CP	342		4/15/2018
82-2	82-3	30	CP	335		4/15/2018
82-3	83-1	30	CP	483		5/2/2018
83-1	83-2	30	CP	420		5/2/2018
83-2	83-3	30	CP	361		5/2/2018
83-3	75-1	30	CP	315		5/2/2018
Enfield Run Trunk Sewer						
2	3	10	VCP	193		8/27/2018
3	4	10	VCP	200		8/27/2018
4	5	10	VCP	192		8/27/2018
5	6	10	VCP	360		8/27/2018
6	7	10	VCP	51		8/27/2018
7	8	12	VCP	93		8/29/2018
8	9	12	VCP	234		8/28/2018
9	10	12	VCP	222		8/28/2018

Consent Decree
EXHIBIT 4

Bucks County Water & Sewer Authority

Sewer Investigations & Repairs in the Richland Township and Richlandtown Borough Service Area

Sewer Lined Under the 2017 CIPP Contract		From MH	To MH	Diameter	Pipe Material	Length (ft)	Lined
Sewer Lined Under the 2015 CIPP Contract (Completed in 2015 - 2016)							
Linear feet of 8" Sewer Televised							36,320
Linear feet of 10" Sewer Televised							4,715
Linear feet of 12" Sewer Televised							51
Linear feet of 15" Sewer Televised							1,757
Locations							
Doylestown Road	1-27	1-26	8	ACP	298	10/14/2019	
Doylestown Road	1-6	1-5	8	ACP	400	10/14/2019	
East Paletown Road	1-12	1-11	8	ACP	352	7/30/2019	
Erie Road	3-5	3-4	8	ACP	403	4/6/2018	
Doylestown Road	1-29	1-28B	8	ACP	399	7/25/2019	
East Paletown Road	1-11	1-10	8	ACP	401	8/1/2019	
Doylestown Road	1-8	1-7	8	ACP	400	7/25/2019	
Doylestown Road	1-26	1-25A	8	ACP	251	10/14/2019	
Mary Court	84467	84465	8	PVC	73	4/5/2018	
Doylestown Road	1-9A	1-9	8	ACP	399	7/24/2019	
Elm Street	29653	29705	8	ACP	214	8/6/2019	
N. Linda Court	84471	29109	8	PVC	69	4/4/2018	
Maple Street	29244	29242	8	VCP	212	4/3/2018	
Rocky Ridge	1-22D	1-22C	8	ACP	329	8/1/2019	
Heller Road	29445	29500	8	ACP	400	4/9/2018	
Heller Road	29674	29585	8	ACP	405	7/29/2018	
Heller Road	29517	29503	8	ACP	67	4/9/2018	
East Paletown Road	1-18	1-17	8	ACP	401	7/24/2019	
First Avenue	29170	29179	8	ACP	401	4/4/2018	
Maple Street	29253	29270	8	ACP	402	8/6/2019	
N. Linda Court	29112	29110	8	PVC	59	4/3/2018	
Windsor Court	84470	84469	8	PVC	84	4/5/2018	
Mary Court	84466	84464	8	PVC	103	4/5/2018	
Heller Road	29774	29723	8	ACP	147	10/15/2019	
Heller Road	29723	29674	8	ACP	230	10/15/2019	
N Pentrose St. (Esmt.)	29621	29604	8	ACP	383	10/17/2019	
Farm House Lane	29459	29442	8	ACP	138	10/16/2019	
Depot Lane	29236	29244	8	ACP	230	10/16/2019	
N. Main Street	29211	29216	8	VCP	229	(1)	
N. Main Street	29183	29184	8	VCP	249	(1)	
N. Main Street	29141	29153	8	VCP	237	(1)	
N. Main Street	29194	29203	8	VCP	340	(1)	
Manhole Investigations and Repairs							
Summary of Manhole Inspections from 2014 to 2016							
Manholes inspected							108
Manholes with defects noted							104
Repairs Completed Under the 2016 Manhole Repair Contracts (Work completed in 2016 and 2017)							
Grouting and lining of manholes							13
Replace standard casting							1
Replace watertight casting							4
Locate and raise casting							6
Refurbish casting (remove paving materials, replace gaskets/bolts)							52
Repair offset castings							0
Install chimney seal.							29
Install inflow prevention insert.							42
Replace exterior grout.							1
Replace manhole casting lid.							6

Notes:

(1) Previously lined sewer with infiltration at laterals. Attempted to install lateral seals but there were problems with how the liner openings were cut, preventing their installation.