



EMERGENT CONDITION EVALUATION

PREPARED FOR

TOWN OF PHILLIPSBURG
120 Filmore Street
Phillipsburg, New Jersey 08865

PREPARED BY

REMINGTON & VERICK ENGINEERS
2059 Springdale Road
Cherry Hill, New Jersey 08003
(856) 795-9595

January 2025

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Background

In 2015, P.L. 2015, Chapter 18, cited as the Water Infrastructure Protection Act (WIPA) was enacted. The WIPA established legislature which declared that the maintenance and operation of water and wastewater treatment and conveyance systems is vital to ensure the protection of water quality and clean drinking water in the State of New Jersey.

In addition, the legislature declared that there are public water and wastewater systems in the State which present risks to the integrity of drinking water and the environment because of issues such as aging infrastructure systems and deterioration of the physical assets of the system.

As such, the law identified and defined conditions in a public utility system which may be classified as an “emergent condition”. An emergent condition for a utility system shall exist if the system meets one (1) of the following conditions as defined by the law:

1. **Emergent Condition #1:** The system is located in an area designated by the Department of Environmental Protection as an Area of Critical Water Supply I or II;
2. **Emergent Condition #2:** The owner of the system is a significant non-complier, as defined in P.L. 1977, c.7 and has been the subject of formal enforcement action initiated by the Department or is substantially out of compliance with an Administrative Consent Order, settlement agreement, or judicial consent order entered into with the department. The department is defined as the New Jersey Department of Environmental Protection (NJDEP);
3. **Emergent Condition #3:** There is a present deficiency or violation of maximum contaminant levels established pursuant to the “Safe Drinking Water Act” concerning the availability of potable water or concerning the provisions of water at adequate volume or pressure or distribution or treatment of wastewater;
4. **Emergent Condition #4:** There is a demonstrated lack of historical investment, repair or sustainable maintenance as determined by the department or material damage to the infrastructure of the system; or
5. **Emergent Condition #5:** The system owner lacks the financial, technical or managerial capacity to adequately address any of the foregoing on a sustainable basis or own and operate the system in a way that supports economic activity in the municipality on a sustainable basis.

Analysis of Emergent Conditions – The Town of Phillipsburg

Overview:

In 2023, the Town of Phillipsburg authorized Remington & Vernick Engineers (RVE) to perform a review of the existing sewer systems for the purpose of determining if the systems potentially meet the criteria of Emergent Conditions discussed above.

The Town has provided available copies of system mapping, evaluation reports, system inventories, etc. RVE has reviewed this information in conjunction with the New Jersey Water Supply Plan, Water Infrastructure Protection Act, Water Pollution Control Act, Safe Drinking Water Act Rules, Rules and Regulations Governing the Licensing of Water Supply and Wastewater Treatment System Operators, Water Supply Allocation Permits Rules, and the NJDEP NJPDES Rules.

Upon review of the Town's sewer utilities and the above discussed documents, it is our opinion that the Town of Phillipsburg's Sewer Utility meets the requirements of Emergent Conditions 2, 3, 4, & 5 as defined in the Water Infrastructure Protection Act (WIPA).

System Description:

The Town of Phillipsburg has a population of 15,249 persons and occupies some 3.19 square miles (as per 2020 US Census; www.census.gov). The system collects wastewater from the residents of Phillipsburg as well as four (4) contributing municipalities including Lopatcong, Pohatcong, Greenwich, and Alpha. In total, the system serves a population of approximately 35,000 persons. The system is comprised of approximately seventy (70) miles of collection lines, three (3) pumping stations, and a wastewater treatment plant.

The collection system was originally installed in the early to mid-1800s as a combined sewer system which was later separated. It is comprised of vitrified clay pipe (VCP), cast iron, ductile iron, transite, concrete, brick and polyvinyl chloride (PVC) piping ranging in size from 3" & 4" laterals to 24" diameter mains and trunk lines with 1,231 sanitary sewer manholes.

The Town operates three (3) pumping stations, Mercer Street, Market Street and Riverside Way with capacities of 72,000 gallons, 72,000 gallons and 2.5 MGD respectively. The Riverside Way pumping station dates approximately to the 1890s with upgrades conducted in the 1940s.

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The Town operates the Phillipsburg Wastewater Treatment Plant located at 900 S. Main Street, Phillipsburg, Warren County. The plant has a permitted capacity of 3.5 MGD

Analysis:

The following reviews each emergent condition discussed above, defines critical qualifying parameters and analyzes the system against these parameters to determine if the system meets the requirements of the five emergent conditions.

Emergent Condition #1

Emergent Condition #1 provides for systems geographically located within either of the two Areas of Critical Water Supply Concern (ACWSC) established by the DEP. Critical Area I include portions of Middlesex, Monmouth, and Ocean counties. Critical Area II includes portions of Camden, Gloucester, Salem, Cumberland, Atlantic, Burlington, Monmouth and Ocean counties.

This condition is met if the system, or a portion thereof, contains any assets within the geographic delineation of the ACWSC. Allowable assets include water source locations (intakes, wells), treatment facilities, water storage, and/or distribution infrastructure. As the Town of Phillipsburg including all of it's Sewer assets, are entirety located within Warren County and as no portion of Warren County is located within either Critical Area, the system does not meet the requirements of Emergent Condition #1.

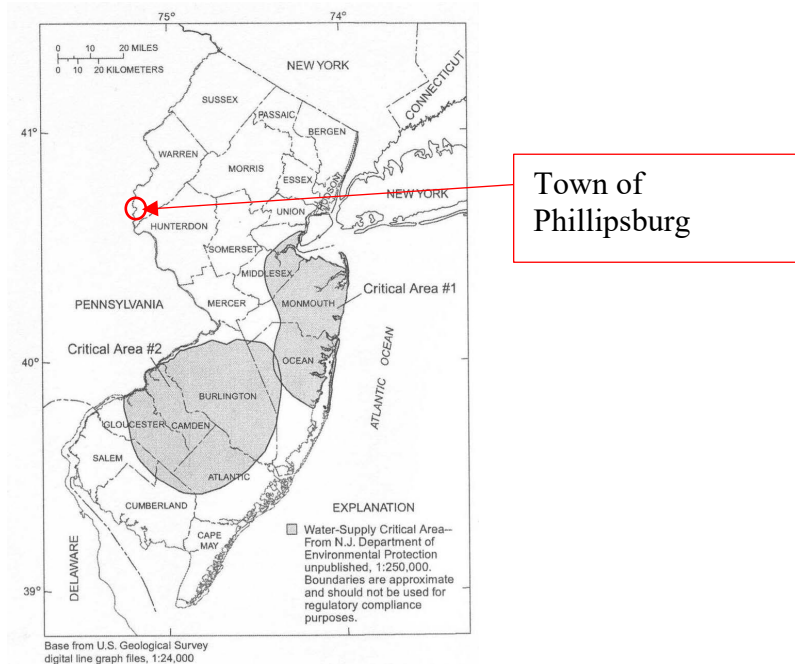


Figure 1: Locations of New Jersey Water-Supply Critical Areas

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Emergent Condition #2

Emergent Condition #2 allows for a system whose owner is either (1) a significant noncomplier of their NJDPES permit; and/or (2) has an outstanding formal administrative enforcement action initiated by DEP; and/or (3) is substantially out of compliance with a negotiated enforcement action.

The Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq, defines “Significant noncomplier” as follows:

“Significant noncomplier” means any person who commits a serious violation for the same hazardous pollutant or the same nonhazardous pollutant, at the same discharge point source, in any two months of any six-month period, or who exceeds the monthly average or, in a case of pollution for which no monthly average has been established, the monthly average of the daily maximums for an effluent limitation for the same pollutant at the same discharge point source by any amount in any four months of any six-month period, or who fails to submit a complete discharge monitoring report in any two months of any six-month period. A local agency shall not be deemed a “significant noncomplier” due to an exceedance of an effluent limitation established in a permit for flow.

The Town is in receipt of EPA Administrative Compliance Order (ACO) CWA-02-2022-3002. This ACO was issued for violations of CWA Sections 301 and 402, 33 U.S.C. 1311 and 1342 and for failing to comply with the conditions and limitations of its New Jersey Pollutant Discharge Elimination System Permit, No. NJ0024716 as described in their Compliance Evaluation Inspection Report dated August 31, 2021.

The Town is currently working to satisfy all outstanding items identified in the ACO. While the Town has completed several of the items, including required submissions, many of the required actions remain outstanding. As such, the ACO remains outstanding and qualifies the system under Emergent Condition #2.

Emergent Condition #3

Emergent Condition #3 addresses systems which have outstanding deficiencies or violations for collection, conveyance or treatment of wastewater related to their ability to function in conformance with applicable wastewater standards/regulations including but not limited to the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., treatment works approvals, NJPDES permits, etc.

The Town is currently operating with outstanding deficiencies/violations discussed in the ACO referenced under Emergent Condition #2. These deficiencies include the following:

1. The Riverside Way Pump Station is susceptible to flooding with minimal access during a storm event. Relocation of the pump station is currently being designed and permitted.

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2. A preventative maintenance program for collection systems is not currently being conducted. A comprehensive preventative maintenance program is in place but not fully implemented due to lack of resources (labor and equipment).

While the Town has dedicated resources and funding to address the above items, as of the date of this report the Town remain under invested. As such, the system meets the requirements of Emergent Condition #3.

Emergent Condition #4

Emergent Condition #4 provides for systems which have either (1) a demonstrated lack of historical investment, repair or sustainable maintenance; and/or (2) material damage to the infrastructure of the system.

As per the NJDEP's *Guidance Document – Municipal Certification of Emergent Conditions*, it is understood that the DEP considers these criteria to mean the following:

- 1) "Lack of historical investment, repair or sustainable maintenance": failure to operate and maintain the system in conformity with the following:
 - a. N.J.A.C. 7:10 - Safe Drinking Water Act Rules, Sections:
 - i. Section 2.7 - Managerial and Technical Compliance of Water Systems;
 - ii. Section 13 - Standards for Technical, Managerial and Financial Capacity of Public Community and Noncommunity Water Systems; and
 - iii. Section 11.5(c)6 - Permit requirement: application contents, map of system.
 - b. N.J.A.C. 7:10A - Rules and Regulations Governing the Licensing of Water Supply and Wastewater Treatment System Operators:
 - i. Section 1.12,
 - c. N.J.A.C. 7:19 - Water Supply Allocation Permit Rules:
 - i. Section 6.6 – Rehabilitation.
 - d. N.J.A.C. 7:14A - NJPDES Rules:
 - i. Section 6.12 – Operation, Maintenance and Emergency Conditions,
 - ii. Section 22.5 – Treatment Works Approval, and
 - iii. Section 23.5(b)6 - Reports.
- 2) "Material damage to the assets of the system": includes physical damage or avoidable deterioration of assets such as wells, intakes, treatment units, transmission lines, storage units, and any other appurtenant components of the system or personnel assets that prevent a system from complying with all drinking water or wastewater standards/requirements.

RVE's review of these criteria reveals the potential for the system to qualify under any of the following:

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Lack of Historical Investment, Repair or Sustainable Maintenance:

System Records:

The existing sanitary sewer system (SSS) mapping dates to 1906 with updates conducted in 1986. In 2020, the Town has initiated and completed partial computerization of the sewer maps. While the location and approximate lengths of piping are generally known, records of the age, depth, size and composition of the various system components are generally not available. Additionally, detailed records of prior repairs and of the separation of the prior combined sewer system into separate sanitary and storm systems currently in use are also generally not available. Further it is believed that numerous cross connections exist with the storm sewer. Most sewer cleaning and repairs are responses to emergencies or sewer system overflows (SSO). As such, the extent, composition, and condition of the SSS are not fully understood.

Maintenance of system records is required by N.J.A.C. 7:10A subsection 1.12-(a)-5. This subsection states:

1.12-(a)-5: “System records, current permits, written O&M procedures, logbooks, computer databases or files or other equivalent records, pertinent documents and correspondence shall be made available upon request by the Department or other Controlling agency and shall be kept in a safe and secure area for a period of five years.”

As the Town has not maintained full system records, it would not be able to provide them to the DEP if requested and therefore could not comply with the requirements of N.J.A.C. 7:10A. This situation qualifies the wastewater system under Emergent Condition #4.

Maintenance and Improvements:

The Town has conducted an extensive conditions assessment of its Sewer Region #3 including CCTV inspections of 150 select sewer pipelines and manholes, application of NASSCO PACP gradings to defects observed and the findings analyzed to create a priority list of repairs.

Focusing solely on segments containing defects graded at Category 4 or 5 and grouping repairs by street, a three (3) phased repair plan has been developed to Cure-In-Place-Pipe (CIPP) line 80 pipeline segments between 8” and 12” diameters at an estimated cost exceeding \$2 million dollars.

The observed condition of Sewer Region #3 can be considered representative of the system as a whole. The other six (6) sewer regions vary in geographic size, number and diameter of pipelines, etc. however it can be anticipated that approximately \$10-12 million dollars of additional lining projects likely are

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necessary to repair the remaining regions of the SSS necessary to address category 4 and 5 defects. A Category 5 defect is defined as a pipe which has already failed and Category 4 is likely to fail within 5-years.

Category 3 defects, defined as likely to fail within 10-years, are found in most inspected pipe segments. Resources are not available to address Category 3 defects. Expansion of the rehabilitation program to include Category 3 defects would require an estimated \$3 million to \$5 million dollars annually.

Until 2021, little to no sewer main infrastructure repairs were completed within the past 50+ years. As a result, the sewer system has significant inflow and infiltration issues.

This situation represents a lack of historical repair and sustainable maintenance of the system and as such, qualifies the system under Emergent Condition #4.

Emergent Condition #5

Emergent Condition #5 addresses the inability of the owner of a water or wastewater system to provide suitable technical, managerial or financial capacity to adequately address any of the four preceding Emergent Conditions or own and operate the system in a way that supports economic activity in the municipality on a substantial basis.

As per the NJDEP's *Guidance Document – Municipal Certification of Emergent Conditions*, it is understood that the DEP considers the following criteria to mean:

- 1) "System Capacity" is the ability to plan for, achieve and maintain compliance with applicable drinking or wastewater standards, permits and/or regulatory requirements and has three components: technical, managerial, and financial. Adequate capacity in all three areas is necessary for a water or wastewater system to have "system capacity".
- 2) "Technical capacity" is the physical and operational ability of a water or wastewater system. Technical capacity refers to the physical infrastructure of the water or wastewater system, including the adequacy of treatment, and appurtenant infrastructure and the adequacy of the source water (for drinking water systems). It also refers to the ability of system personnel to adequately operate and maintain the system and to otherwise implement requisite technical knowledge.
- 3) "Managerial Capacity" is the ability of a water or wastewater system to conduct its affairs. Managerial capacity refers to the system's institutional and administrative capacities. Managerial capacity includes ownership accountability, appropriate staffing and organization, and effective external linkages.
- 4) "Financial Capacity" is a water or wastewater system's ability to acquire and manage sufficient financial resources. Financial capacity includes revenue sufficiency, credit worthiness, and financial management and controls.

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Analysis:

- 1) **Technical Capacity:** As discussed under the analysis for Emergent Conditions #2 & 3 above, the Town is currently operating with deficiencies/violations related to its collection system. The collection system is very old with portions dating to the 1800s. The Town has experienced sanitary sewer overflows (SSOs) from the SSS which have discharged to various waterbodies. These SSOs can be directly attributed to the age of the system and inadequate resources for maintenance. The SSOs are the result of pipe breaks, collapse and other age-related failures. This situation indicates a lack of technical capacity of the system.
- 2) **Managerial Capacity:** The WWTP, pump station and SSS are operated by a third-party operator under contract to the Town. The SSS is maintained by the Town. The third-party operator includes technical, managerial, and other staffing as necessary to competently operate the wastewater treatment plant and pump station. The Town Public Works Department maintains the sewer collection system.
- 3) **Financial Capacity:**
The Town's budget for 2023, adopted on November 1, 2022, breaks down the Sewer Utility revenues as follows:

Operating Surplus Anticipated	\$ 777,584
Rents	\$4,700,000
Miscellaneous	\$ 295,000
Total Sewer Utility Revenues	\$5,772,584

The budget further breaks down the following appropriations:

Operating:	
Salaries & Wages	\$ 425,000
Other Expenses	\$4,300,000
Capital Improvements:	
Capital Improvement Fund	\$ 100,000
Debt Service:	
Payment on Bond Principal	\$ 50,000
Interest on Bonds	\$ 112,000
State of NJ Wastewater Treatment/NJEIT Loans: Loan Payments for Principal and Interest	\$ 700,000
Statutory Expenditures:	
Contribution To: Employee Retirement System	
Contribution To: Social Security System	\$ 47,584
Unemployment Compensation Insurance	\$ 32,000
Defined Contribution Retirement Program	\$ 3,000
	\$ 3,000
Total Sewer Utility Appropriations	\$5,772,584

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The current 6-Year Capital Program includes \$200,000 for infrastructure improvements funded in \$100,000 increments in 2024 and in 2026. As discussed in the discussion of Emergent Condition #4 above, there are approximately \$2 million in necessary repairs to the SSS in Region 3 with an projected \$10-12 million additional for the remainder of the system. This represents 10 times and 60 times respectively the infrastructure improvements currently budgeted in the 6-year capital program.

In the past 15-years the Town has implemented one 91) 2% sewer rate increase for the sending districts. This increase prompted legal filings to dispute the rates being charged to the sending districts.

A rate study is currently pending however the Town would likely be reliant on loans and grants to fund necessary sewer system improvements. The Town has one of the ten lowest income levels in the State. It is therefore not clear if the Town has the ability to take on this level of additional debt. As such, the system is potentially lacking in Financial Capacity.

- 4) System Capacity: As defined above, system capacity is the combination of the Township's technical, managerial, and financial capacity.

The system is currently lacking in technical and potentially lacking in financial capacity and therefore System Capacity. This qualifies the system under Emergent Condition #5.