



EMERGENT CONDITIONS ANALYSIS

PREPARED FOR

CITY OF SALEM
17 New Market Street
Salem, New Jersey 08079

PREPARED BY

REMINGTON & VERICK ENGINEERS
232 Kings Highway
Haddonfield, New Jersey 08033
(856) 795-9595

October 2020

I. 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:

- A. The system is located in an area designated by the Department of Environmental Protection as an Area of Critical Water Supply I or II;
- B. 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);
- C. 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;
- D. 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
- E. 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.

II. Emergent Conditions – Salem City

In Spring 2020, Salem City authorized Remington & Vernick Engineers to tour their existing water and sewer facilities, review past and current utility records, and interview utility personnel to develop a complete understanding of the existing systems and the City's current operations.

The analysis of the City water and sanitary utility system indicated that while the City has invested in the utility and has completed improvements in the most recent years, the level of improvements was not adequate to provide long term sustainability to the system. In fact, at the time of the facility tours, much of the infrastructure at the WWTP was not operating (i.e. dual trains were operating on a single train) and the surface WTP was not operational. Accordingly, a 20-Year Capital Improvement Plan was developed to outline the necessary improvements. It should be noted that based upon our experience with systems of similar size, the 20-Year Capital Improvement Plan (CIP) outlined for the City is *not* aggressive. Instead, it was our concern that the amount of infrastructure owned and operated by the City in comparison to the number of users is disproportionate. Therefore, the improvements outlined for inclusion in the 20-Year CIP are the minimal improvements necessary to sustain both the above ground and below ground infrastructure. Accordingly, the City is encouraged to consider additional improvements and/or expedited completion of the CIP as funds may become available.

The system evaluation has shown that the Utility Department has planned improvements of some elements of the system but lacks sufficient funds for the routine maintenance and necessary upgrades of the City's critical above grade infrastructure (i.e. WWTP, WTP, Potable Water Storage Tanks, etc.) and below grade infrastructure (water distribution and sanitary conveyance pipe). Much of the City's core still relies on the original system which dates back to the early 1900's. The advanced age of much of the City's water and sewer systems plus portions of the system which were inoperable at the time of the site visits demonstrates a lack of sustainable maintenance and qualifies the city to fall under Emergent Condition #4. It should be noted that while the City has attempted to make the necessary improvements to the system in the recent years, the City is faced with a similar situation which plagues many utilities across the nation. Specifically, the amount of infrastructure which must be maintained and operated by the City is beyond the utility fees which can be collected by the smaller population and limited users of the system.

As noted previously, a 20-Year Capital Improvement Plan (CIP) was prepared to not only establish the current condition of the assets but to develop the expenditures which the City Utility would need to make to maintain and sustain the utility systems. The Capital Improvement Plan (CIP) estimates an average annual expenditure of \$944,665.00 over the next 20 years for the water and sewer utility improvements. It should be noted that this plan relies on optimistic replacement costs that reflect ideal bidding conditions. Bid results may increase the annual projected expenditures if/when the CIP is implemented. In addition, the proposed improvements are minimal and are only detailed to address the immediate deficiencies of the system, maintain the system and begin a modest pipe replacement program.

The proposed CIP aims to replace the oldest and undersized segments of the water and sewer piping system. The replacement program for the piping is *not* aggressive. In fact, much of the existing piping will reach the end of its 100-year useful lifespan by the end of the analysis period. This replacement schedule was selected so that a financial burden would not be placed on the limited utility customers of the City.

The 20-Year CIP was incorporated into a Rate Study which also included the actual and projected revenues, expenses, debt service and rate increases over the next 20 years. Six (6) different scenarios were presented to provide funding options to the City so that they could implement the necessary improvements. However, despite the several scenarios examined to finance the improvements necessary for the sustainability of the utility system, the City will still be facing a debt service of approximately \$50 million plus will the City will need to increase the rates such that the annual user fee for both water and sanitary will increase by about 40%. In addition, the require debt service may exceed the City bonding capacity given that the utility taxable value is approximately \$44 million.

Based upon the analysis, the city does not have the financial means to address current or future problems with the system or replace the pipe sections, valves, manholes, etc. that are currently beyond their useful life. This qualifies the city to also fall under Emergent Condition #5, which is characterized by a system owner who lacks the financial, technical, or managerial capacity to adequately address issues on a sustainable basis or own and operate the system in a way that supports economic activity on a sustainable basis.

In order to complete the required improvements, the city has several options. Each of these options is deemed to be unfeasible due to the financial hardship placed on the utility ratepayers and support the presence of Emergent Conditions #4 and #5. All options either result in the city accumulating an exorbitant amount of debt or transferring the cost to the consumer through extremely high utility rate increases. Both results are overly burdensome since the city is already shouldered with over \$16 million in utility debt. The options to complete the CIP are detailed in the attached Rate Study Analysis.