



Kent County Water Authority

October 26, 2020

Mrs. Luly Massaro
Commission Clerk
Public Utilities Commission
89 Jefferson Boulevard
Warwick, Rhode Island 02888

Re: Capital Improvement Program

Dear Mrs. Massaro:

In accordance with Kent County Water Authority rate order Docket #4611, we are required to file a Capital Improvement Report semi-annually. The attached reports on Capital Improvements are through June 30, 2020.

Also, in accordance with the report and order, are five copies to be provided as a filing to the Commission. A separate copy will be mailed to Ms. Christy Hetherington, Assistant Attorney General on this matter.

If you have any questions or members of your staff would like further information, please feel free to call at any time.

Very truly yours,
Kent County Water Authority

A handwritten signature in blue ink, appearing to read "D. Simmons", is written over the typed name of David L. Simmons.

David L. Simmons, P.E.
Executive Director/Chief Engineer

cc: Board Members
Christy Hetherington

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KENT COUNTY WATER AUTHORITY

Report of Progress of CIP Projects

As of June 30, 2020

<u>Description</u>	<u>Estimated</u>	<u>Expended</u>	<u>Estimated Funds to Complete</u>
Design North/South High Svc Connect (295)	\$10,438,928	\$4,714,065	\$5,724,864
New Office Facility (298)	\$153,558	\$82,226	\$71,332
East Greenwich Well (299)	\$337,628	\$96,745	\$240,883
TOTAL	\$10,930,114	\$4,893,036	\$6,037,079

CIP Report

This report will contain information on the approved programs under the current CIP bond issue and restricted funding approved by the PUC. Kent County Water Authority (KCWA) received new CIP funding available through the most recent full rate case, Docket #4611, as cash-based pay as you go. The current CIP 2012 Series A bond will be defeased the beginning of 2021 as approved under KCWA's most recent abbreviated rate filing Docket #5012. The restricted CIP account will be fully funded at \$3.6 million annually with the debt service rolling off upon defeasance of the bond.

North/South High Service Connection:

This project is connecting the north high service gradient with the south high service gradient to provide essential resiliency in the system and enhance water quality. Construction bid opening occurred on 2/18/2019. D'Ambra Construction was awarded the bid for \$9,153,473.60. Commencement of construction for the North/South interconnection began in Mid-April 2019 between the high service gradients using accumulated capital generated under our Capital Improvement Program. This project is currently on schedule as designed, fully funded, and slated to be completed in late 2020 except for final paving in 2021. There may be a slight delay in construction due to damages that occurred to KCWA's transmission pipe bridge on Sandy Bottom Road in Coventry during an adjacent RIDOT bridge project. Once activated, this much needed project will allow for storage tank redundancy and provides enhanced access to the northern reaches of the system from our treatment facilities in the south.

New Office and Maintenance Facility Study and Land Acquisition:

The Authority currently operates out of its office and maintenance facilities located at 1072 Main Street, West Warwick, Rhode Island. These facilities were originally built at the turn of the century with modifications and new garages in the 1970's. Several additional renovations have been accomplished to support increased operations, and accommodate capital equipment acquisitions, spare parts warehousing and workforce needs. These existing facilities have no usable area for additional expansion and the Authority believes they can no longer support the Authority's daily operations.

In 1999, Camp Dresser & McKee conducted a feasibility study for a new KCWA Facility. In 2016, C&E Engineering Partners prepared a Water Supply System Five-Year Capital Improvement Program Update 2017- 2022 for KCWA and the Public Utilities Commission (PUC). The updated Capital Improvement Project (CIP) plan recommended a new facility supporting the 1999 findings, deeming the project as essential to provide the expected level of service goals required by State Regulatory Requirements and the Authority's Strategic Plan.

Because the original study was over 20 years old, a new updated study (2020 Study) was necessary to support and supplement future Capital Plan implementation, Commission rate filings, and bond issues. As a result, the Authority requested proposals from qualified professional architects and engineers to conduct the update to the facilities analysis and evaluation study. The Authority publicly engaged the professional services of Vision 3 Architects (V3A) partnered with Pare Engineering to complete the study.

As a part of due diligence, the 2020 study re-evaluated the potential modification and retrofitting the existing facility and concluded that the buildings have far exceeded their useful lives, and are no longer adequate to support the future increase in capital equipment acquisitions, warehousing and administrative responsibilities of the KCWA. The study also calculated that a minimum net five acres would be required to meet the needs of the Authority. The Authority's current complex occupies in its entirety approximately one acre on 1072 Main Street. Exploring the viability of remaining at its current location by means of renovating the existing facility and /or constructing additional buildings would involve acquiring multiple separate sites, either adjacent to or in very close proximity to 1072 Main Street. Thus, it was reaffirmed that KCWA's current location was not an option. The efforts were then focused on spatial programming needs, potential site locations, and schematics.

The 2020 study submitted to the Authority detailed a comprehensive spatial programming analysis, conceptual building schematic options, and eleven available site locations. Based on spatial and programming needs, the study further recommended three sites that could best fit the Authority's facilities' requirements. Included in the study were pricing valuations, construction/site cost estimates, and energy efficient design components such as, rooftop solar and electric vehicle charging stations.

In addition to the 2020 study, the Board decided to perform additional due diligence in searching for potential other property locations by issuing a public RFP, which was added to the study. The RFP resulted in three property submissions satisfying the RFP requirements. Of the three properties, two new properties were added for consideration because the third property was already identified in the original updated study from Vision 3/Pare Engineering. After reviewing the thirteen properties in detail, the Board settled on one location that seemed the best fit for the next phase. A subcommittee was formed to order a formal appraisal and negotiate and provide detailed information regarding the site and its ability to satisfy the Authority's future facility needs to the full Board. This project is ongoing.

Updated East Greenwich /Warwick Well Treatment Facility Design

The second project is the design and cost estimate for the construction of a new treatment plant at the existing East Greenwich/Warwick Well site. The East Greenwich well is a critical facility designed to maximize water quality and allow sufficient hydraulic capacity to meet the needs of the KCWA system now and into the future. This source in combination with KCWA's Mishnock treatment facility provide sufficient capacity to continue provide essential service to its critical customers, and emergency interconnections, in the event something goes wrong with water supplied from Providence Water and/or major disruption to the associated transmission systems.

The East Greenwich/Warwick Well has a full production yield capability of approximately 2000 gallons per minute. The East Greenwich/Warwick Well is located at 5870 Post Road, in the general vicinity of the intersection of Post Road and Franklin Street, along the East Greenwich and Warwick city line within the Hunt River Aquifer. The existing facilities consist of one submersible pump well, emergency power, SCADA control and monitoring disinfection and pH adjustment. The Authority requested proposals from qualified Professional Engineering firms to conduct an inspection, evaluation and review of the newly constructed well facilities and prepare final design and contract documents for construction of a new water treatment facility at the existing site under its Capital Improvement initiatives. Pare Engineering was chosen and awarded the contract to design the updated facility in December of 2019. A preliminary design report is currently being reviewed by the Rhode Island Department of Health.

The updated design will include an addition to the updated well facilities constructed in 2018 under the KCWA Infrastructure Replacement initiative. The facility is being designed to provide an average daily output capacity of 1.44 MGD (1,000 gpm) to the system with one treatment unit offline and to provide for a maximum daily output capacity of 3 MGD (approx. 2,000 gpm) with both treatment units online. The output capacity is being designed at a maximum of 3 MGD to ensure resiliency and redundancy of individual unit processes, treatment trains, and discharge pumping. The design will also allow the ability treat additional well(s) if acquired in the future. The proposed well pump that will feed the station will only pump to a maximum of 2.5 MGD. This design and subsequent responsible operation will not adversely affect the Hunt River, today or in the future, as it reflects significantly less volumes than historic withdrawals from this basin.

The 2018 updates to the facility also did not encompass treatment/removal of the elevated manganese levels in the water supply system. The goal of the new treatment facility design is to reduce the secondary contaminant levels to below the applicable standards and provide disinfection treatment and radon removal to facilitate improving water quality in the use of the supply capacity of this source. The proposed treatment facility and major unit processes at the facility were evaluated based on achieving the primary objective of protecting public health by providing a reliable source of potable water that meets or exceeds current and foreseeable future proposed drinking water regulations.

Per- and polyfluoroalkyl substances (PFAS) are an emerging contaminant of concern in groundwater throughout the United States. An evaluation of per- and polyfluoroalkyl substances (PFAS) in raw water was performed and found below 10 parts per trillion (10 ppt) which is below the current EPA health advisories of 70 ppt. However, there is legislation being discussed to set a maximum contaminant level to 20 ppt, or potentially even less in Rhode Island. Although no treatment for PFAS is proposed in this design, accommodations have been made for building expansion should PFAS treatment be required in the future.