



October 31, 2024

Ms. Stephanie De La Rosa  
Commission Clerk  
Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, Rhode Island 02888

Re: Infrastructure Program

Dear Ms. De La Rosa:

In accordance with Kent County Water Authority rate order Docket #5012, we are required to file an Infrastructure Report semi-annually. The attached reports on Infrastructure are through June 30, 2024.

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

Kent County Water Authority

Report on Progress of IFR Projects  
As of June 30, 2024

Description	Proj #	Estimate	Expended	Estimated Funds to Complete
IFR 2021 (2016ABC)	290	\$18,638,052	\$16,597,086	\$2,040,966
IFR 2022	291	\$9,155,498	\$4,787,840	\$4,367,657
IFR 2023	292	\$3,910	\$3,910	\$0
IFR2024	294	\$1,419,378	\$1,364,957	\$54,421
Mapledale & Albro	301	\$148,169	\$112,359	\$35,810
		\$29,365,007	\$22,866,152	\$6,498,854

# **IFR Report**

## **Infrastructure Replacement (IFR)**

This portion of the report contains information on the approved programs under the current Infrastructure Replacement Program (IFR) restricted funding approved by the PUC. The restricted IFR account is fully funded at \$6 million annually.

### **Current Infrastructure Projects**

#### **IFR 2021**

IFR 2021 includes several critical upgrades to KCWA, or the Authority, distribution system to increase resiliency and higher quality of service. The project scope is comprised of replacement and new installation of water main and supporting infrastructure in the Towns of Coventry, East Greenwich, West Warwick, Scituate, and the City of Warwick. IFR 2021 involved the installation of approximately six (6) miles of pipelines consisting of primarily 12-inch and 8-inch ductile iron pipe and three pressure reducing valve (PRV) stations. This work includes reservicing existing and new customers to higher pressures, looping dead end mains to increase water quality, and inactivation of old obsolete and degraded piping. As with all IFR pipeline replacement projects on existing roadways, pavement restoration is incorporated into this project resulting in higher quality road surfaces when the projects are completed. Also included are the installation of new service connections and hydrants, furnishing of telemetry equipment and programming to KCWA's supervisory control and data acquisition (SCADA) system, connections to existing mains, fittings, by-pass piping systems, and other related appurtenances. The IFR 2021 construction bid was awarded on February 18, 2021, to CB Utility Co. Inc. This project was extended to include the emergency replacement pipework and roadway restoration on Tollgate Road and Bald Hill Road for installation of a 12" water main to progress up Bald Hill Road to service 1276 Staples/Summit Plaza that can no longer be serviced by Warwick. Also included was emergency replacement of water mains and bypass piping on Greenbush Road in West Warwick from flooding and bridge collapse that occurred in January of 2024. This job is now complete with a final contract price of \$15,513,131. Please note that approximately 2 million dollars is being reimbursed back to the Authority IFR restricted fund from the private extension and from FEMA for the Greenbush emergency work. It should be noted that this extension can be added in the future to service all Warwick Water customers in this immediate area who may be faced with similar problems in the future.

#### **Centerville Road IFR.**

The work of this project involved the installation of a water main on Centerville Road (Route 117) in the City of Warwick, RI. This project required installing pipelines consisting of approximately 1,700 linear feet of 12-inch ductile iron pipe. Also included are installation of service connections, connections to existing mains, hydrants, fittings, and appurtenances. Full depth trench patch pavement restoration was also incorporated into this project. This project was shoehorned into a rapid IFR project due to two very large water main breaks that occurred in the area of Routes 117 and 95 that caused severe disruptions. The main reason it was fast tracked was to get the waterlines in the ground before RIDOT replaced the road curb-to-curb in late 2024. This project was awarded and completed by to Ferriera Construction in the Summer 2024 at a contract cost of \$1,168,537

## **IFR 2022**

IFR 2022 was designed to continue the aggressive replacement of critical infrastructure for several high priority locations within the Kent County Water Authority (KCWA) distribution system. The work in this project generally involves the installation of water mains in the Town of West Warwick, which will serve all KCWA customers. This project encompasses installing pipelines consisting of approximately 7,600 linear feet of 16-inch ductile iron pipe, 4,360 linear feet of 12-inch ductile iron pipe and 2,100 linear feet of 8-inch ductile iron pipe. Specifically, the project includes the replacement of 1887 vintage cast iron main along Cowesett Avenue. While in the roadway, KCWA is simultaneously installing a separate high service line to loop several dead-end mains and reservice localized areas of historic low pressures in and around Carlson Circle. A major component to this project is the replacement and relocation of the water main at the intersection of Cowesett Avenue and Bald Hill Road. Water main failure at this location had the potential of catastrophic collateral damage to surrounding infrastructure due to the recent installation of a natural gas high pressure underground station and infrastructure in close proximity to KCWA's existing water infrastructure. The IFR 2022 construction bid was awarded on October 27, 2022, to Boyle & Fogarty Construction Co., Inc., at a contract price of \$8,381,537

### ***IFR 2022 Construction Details:***

On April 17th, 2023, Boyle & Fogarty Construction Co., Inc. began installing new water mains, hydrants, and water services to the curb stop in the Town of West Warwick. Construction continued throughout 2023 in the following areas: Main Street from the intersection of Tiogue Avenue and New London Turnpike to the Intersection of Main Street, Cowesett Avenue and East Greenwich Avenue. Cowesett Avenue from the intersection of Main St and Cowesett Avenue to the intersection of Cowesett Avenue and Coit Avenue. The job was originally planned to extend to the intersection of Cowesett Avenue and Bald Hill in 2023. However, delays due to the amount of ledge encountered by the contractor and multiple weather events and drainage issues caused the underground piping components of the job to be extended into the Spring of 2024. It is anticipated that this project will be completed in November of 2024, with the exception of final curb-to-curb paving from Coit Ave to Route 2. All other final paving will be complete.

### **Future IFR Lead and Galvanized Service Replacement**

With the passage of the Bipartisan Infrastructure Law (BIL), the Drinking Water State Revolving Fund (DWSRF) will be receiving approximately \$292 million of additional funding for projects, including \$179 million for lead service line (LSL) and galvanized service line replacements. Currently, 49% of the funding is allocated toward principal forgiveness/grants on full private and public side replacement. KCWA is working to put together a project to obtain grant funding to remove any remaining lead and galvanized service lines in the system. KCWA completed the lead service line (LSL) inventory for both the public and private side of the distribution system to provide public mapping in conformance with the EPA and RIDOH/ RIGL Lead Poisoning Prevention Act. KCWA is also partnering with the EPA and RIDOH under the voluntary Get the Lead Out (GLO) initiative for technical assistance relating to bid development for LSL replacement and construction, inventory refinement, funding, and community engagement.

### **Meter Replacement Program**

The original meter program funding under Docket 4611 did not include the replacement of large and medium meters sized 3-inches and above. There are approximately 300 accounts out of 27,500 that fall into this category but contribute 20% of the revenues to the Authority. The Authority strongly felt that the large meter customers needed the most current and correctly sized metrology in place to accurately monitor the use from these customers in real time with the latest technology.

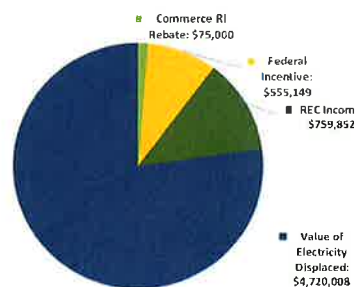
Docket 5012 expanded the meter program to include a right-sizing survey for larger meters sized three inches and above to best determine if size and type of each large meter is correctly matched to the downstream use. The survey outlined the recommendations on replacement of unitized measuring elements (UME) and update/replace old turbine meters to new ultrasonic meters. The goal of the program is to apply uniform metering technology to deliver improved service and billing that is in line with current utility standards. The Authority is also providing certified large meter testing for every meter checked, updated, and/or installed under the program to ensure baseline accuracy. All meters are being outfitted with the same latest generation automatic meter reading (AMR) technology and metrology as what was installed on all meters sized 2-inches or less. We are also outfitting every large meter with additional updated microchips installed in the register heads that have the ability to broadcast a Long-Range Wide Area Network (LoRaWAN) signal. When activated, the Authority and the customers will have the ability to monitor these accounts in real time similar to expensive fixed network systems without additional infrastructure costs. This project is now complete.

### **Renewable Energy**



The Kent County Water Authority is working toward being powered by 100% renewable sources within the next year from our own solar facility

on the new central operating facility in combination with a remote net metering agreement.



Solar Revenue by Source

<b>Solar Array Details:</b>	636.5 kW DC
System Size:	1,675 Solar Panels
Panel Rating:	380 W
Average Monthly Production:	61,224 kWh/month
Average Annual Production:	734,682 kWh/year
<b>Investment Information:</b>	
Purchase Price:	\$1,850,498
Commerce RI Rebate:	\$75,000
Year 1 Net System Income:	\$155,936
Total Year 1 Income:	\$230,936
Net Cost After One Year:	(\$1,064,412)
<b>Solar Income</b>	
1 Year	\$786,086
5 Years	\$1,453,785
20 Years	\$4,712,174
25 Years	\$6,110,010
40 Years	\$11,451,598
Internal Rate of Return (25 yrs)	17.1%
Years to Recoup Investment:	7.18
Effective Cost per kWh	\$0.03

25-Year Revenue: \$ 6,110,010

### **Rooftop Solar:**

In February of 2023, KCWA solicited a request for proposals from qualified firms to provide competitive bids to furnish and install rooftop solar panels to be installed on the new building. The project was awarded to Nadeau Corp working with US Solar for \$1,850,498. The panel and equipment are all installed, and we are awaiting final permitting and the meter that reads both directions in November of 2024.

### **Virtual Net Metering:**

In March of 2023, KCWA solicited a request for proposals from qualified firms to provide competitive market-based virtual net metering credits from qualified renewable energy resources. Both new projects and active renewable systems with available credits were eligible for consideration. KCWA is anticipating an average annual usage and remote net metering need (offset amount) of 3,606,641 kWh to be served under the agreement. Taking into consideration the evaluation factors set forth in the RFP, Green Development, LLC was the most responsible offeror, whose proposal was the most advantageous and provided the greatest long-term fiscal

savings and value to KCWA. The savings are estimated to be \$12,000,000 over the next 25 years once the contract goes live and we begin off taking power. The contract is slated to start by the end of the year.

### **Payment Processing**

In July 2023, KCWA began using Invoice Cloud to accept electronic payments. Invoice Cloud allows KCWA to provide online payment processing in a securely hosted, real-time environment.

Invoice Cloud can send notifications to customers reminding them of their bill due dates which have proven useful in preventing non-payment shutoffs. Customer service representatives can notify customers of a pending non-payment shutoff, allowing the customer sufficient time to make a payment prior to their non-payment shutoff date. Invoice Cloud also allows customers to view and print bills, make payments using credit cards, debit cards and electronic checks all through the existing KCWA online customer portal and automated phone service with no transaction fees. Invoice Cloud also allows customers to store multiple payment methods in the online customer portal.



After the first year of implementation, 43.1% of invoices have been paid through autopay totaling approximately \$3.6 million, 51% of registered customers have enrolled in paperless billing, and 70% of online payments came from autopay and the customer portal. In addition to Invoice Cloud, KCWA also installed a new payment kiosk that is linked to Invoice Cloud at our new office and maintenance facility where the customers can easily pay their bills 24/7 using all methods of payment, including cash.

### **Hydraulic Model / GIS/Utility Cloud**

*Hydraulic Model:* The Authority updated its hydraulic model and integrated the model with our GIS system using WaterGEMS. Integration with the GIS system and the tools in WaterGEMS now allows for hydraulic and pipeline evaluations inclusive of age, material, diameter, break history, water quality, static and residual pressure analysis, and scenario development more efficiently for optimization and the creation of IFR and CIP projects. The Authority is now performing full in-house hydraulic modeling for customers/developers requesting these services.

*Utility Cloud:* The Authority has launched the integration of Utility Cloud to manage its assets and project programming. Specifically, storing all critical operation and maintenance data, as-builts for development of a systematic preventative maintenance program for our pump stations, tanks, treatment plants, and pressure reducing stations. Small system assets and programs are also tracked. These include, but are not limited to, hydrants, blowoffs, and private construction inspection. Utility Cloud will also rest on our CIS system for the office staff and managers to create work orders that are available on the operator phones or tablets in the field.

### **Quonset Development Corporation (QDC) Wholesale Interconnection**

QDC and KCWA both use groundwater wells located within the Hunt River Aquifer. KCWA has two wholesale interconnections from Providence Water Supply Board (PWSB) that are conveyed to the south to backstop the existing supply in that region. Analysis performed by the

RI Department of Environmental Management suggested that the intermittent surface flow conditions may be influenced by high water withdrawals from the Hunt aquifer. The water supply being conveyed through KCWA to QDC will purportedly relieve the stress on the aquifer and provide an alternative water source thus enhancing the reliability of the available water to allow them to maximize growth within the business park. QDC wanted to present to all new businesses that are interested in coming to RI and producing new jobs that there are zero utility constraints regarding available water. Based on these findings, QDC determined that it was in the best interest of the park to enter into a permanent wholesale agreement with KCWA. It should be noted that with the aforementioned legislation in place and water quality studies completed, a similar agreement could be extended to provide wholesale water to the Town of North Kingstown to alleviate the same PFAS issues that face that community. KCWA has more than sufficient capacity to satisfy the needs of both QDC and the Town of North Kingstown.

An interconnection agreement between QDC and KCWA was executed on March 19, 2021. The PUC approved the wholesale rate to feed QDC in the most recent rate filing PUC Docket 5012. QDC completed the construction of the infrastructure necessary to start conveying water to the business park in the Spring of 2022. The Rhode Island Department of Health required a corrosion control study prior to the activation of service. This study was completed in August of 2022 and the service was activated on August 22, 2022 at a rate of approximately 200 GPM. The current feed design will accommodate the full build out of the park at 1.7 million gallons per day. KCWA has sufficient capacity to meet these demands.