



# Kent County Water Authority

## THE NEPTUNE® C&I MACH 10® MEASURES EVERY DROP IN KENT COUNTY, RHODE ISLAND

Located in the smallest state in the nation, Kent County, Rhode Island has played an important role in history, from shipbuilding and fishing centers to post-industrial revolution manufacturing and textile operations. State-of-the-art healthcare services, outstanding schools, excellent transportation facilities, and numerous recreational amenities continue to attract new residents, businesses, and annual visitors.

Dedicated to maintaining uninterrupted high-quality water in sufficient quantities to its 27,000 customers and 90,000 people within eight communities, Kent County Water Authority needed to solve the problem of lost revenue. The county's large meters account for between 20-25% of its revenue, but the utility recognized that it was missing out on capturing the low flows on those large accounts. In addition to improving accuracy standards, the utility also wanted to take advantage of a smaller, lighter weight solution, to handle challenging meter vault installation environments.

### DELIVERING ACCURACY AND RELIABILITY

A Neptune® customer for many decades, installing Neptune MACH 10® ultrasonic water meters was an easy decision for Kent County. "The MACH 10 was just a perfect solution because it delivered an accurate technical solution to metrology by increasing low flow collections while simultaneously providing an extended battery life," said David Simmons, Executive Director and Chief Engineer with the Kent County Water Authority.

The lighter weight and ease of installation of the MACH 10 allowed the Kent County Water Authority to avoid incurring additional expenses in some of the locations where extensive plumbing requirements would have otherwise been an issue. "The ability to retrofit the MACH 10 really drove the decision for us. It made the most sense both in terms of cost and ease of installation. The 'plug and play' aspect of the MACH 10 allowed us to just take out the old meter, flange to flange, and put in the new one," remarked Simmons.



### CUSTOMER

Kent County Water Authority

### SERVICE TERRITORY

The Kent County Water Authority manages approximately 27,000 connections for 90,000 residential and commercial customers.

### SOLUTION BENEFITS

Increase low flow collections while providing extended battery life

Make "plug and play" installations easy and cost-effective

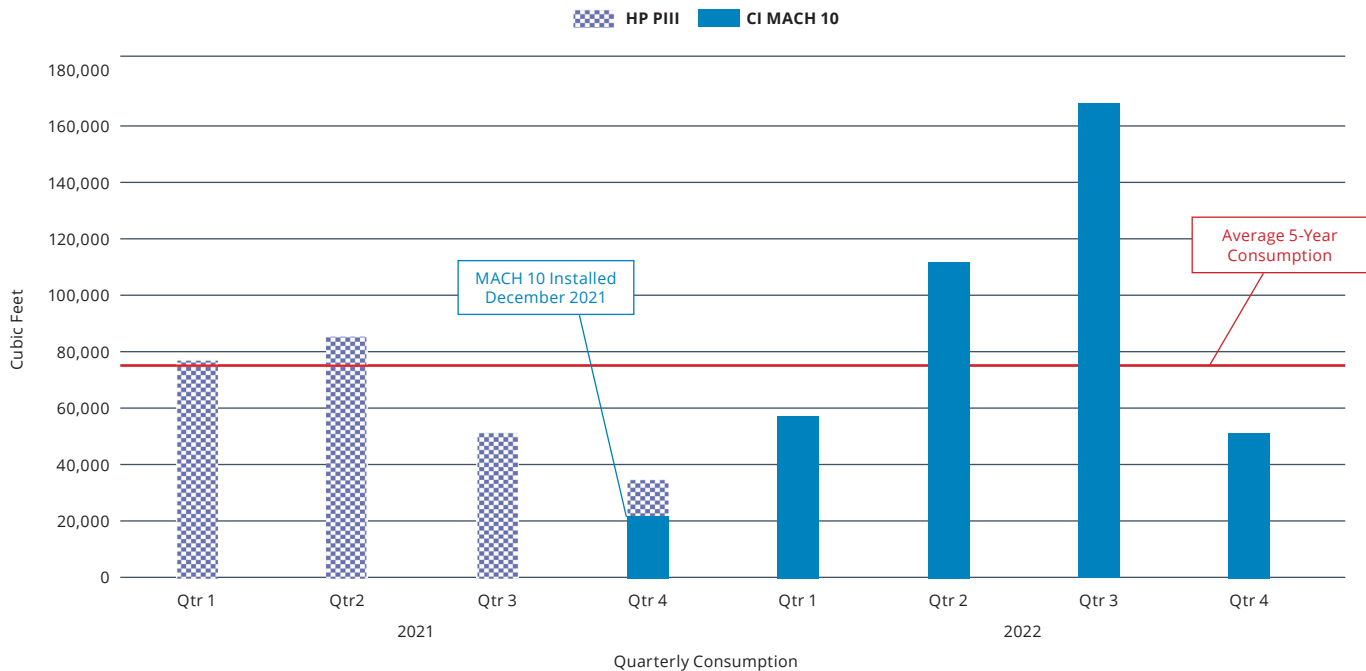
Replace turbine to serve as master meter, measure full flow of smaller meters

Provide solution for potable and fire protection services

52% year-over-year consumption increase in a single large meter

Significantly reduce Non-Revenue Water as well as maintenance costs

## 6" Fire Service Meter Conversion HP PROTECTUS® III v. C&I MACH 10®



### OUT-OF-THE-GATE RESULTS

The MACH 10's low flow capability proved itself early on when Kent County replaced a turbine meter located upstream of a metered housing development. The MACH 10 as a master meter eliminated major consumption discrepancies between the aggregate total of the downstream meters and the previous turbine meter. When the MACH 10 went in, it realized the full flow of what was going into all of those smaller meters and captured any differentials such as the occurrence of a leak.

### GETTING THE BEST OF BOTH WORLDS

Carrying both UL and FM ratings, the MACH 10 is an excellent metering option for both potable and fire protection services. Historically, Kent County has installed the Neptune HP PROTECTUS® III Fire Service meters which are capable of tracking both potable water as well as any fire protection usage. After the release of the

C&I MACH 10, the utility jumped at the opportunity to convert its old fire service meters to eliminate future maintenance costs associated with these accounts.

One such account was a nursing home where an HP PROTECTUS III fire service meter had been in place for many years but required both routine maintenance and testing. In late 2021, it was replaced with a new MACH 10 and is seeing an average consumption increase of 52% year-over-year. This represents a significant reduction of Non-Revenue Water as well as future maintenance costs associated with this account.

### A COMPREHENSIVE, VERSATILE SOLUTION

Installing MACH 10 meters afforded Kent County the solutions it was looking for by capturing Non-Revenue Water, improving low flow capability, and reducing expensive maintenance costs. "Based on what we've seen already, we feel like the MACH 10 is going to continue to be beneficial in reducing our unaccounted-for water with our large meter customers," said Simmons.



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