

Smart metering: How small water departments are using AMI to do more with less

Town of North Reading, Massachusetts

By Tom Garrity, Director of Sales, Ti-SALES

July 2020 | When the Town of North Reading was due to replace its water meters in 2017, the utility was using a combination of probe and mobile meter reading for all 4,800 of their accounts. The Water Division was eager for a solution that would mean less time spent reading meters and better data to help homeowners understand their water bills. After evaluating five different systems – including visiting three of them in the field – they decided on Neptune’s R900 AMI system and the WaterSmart user platform.

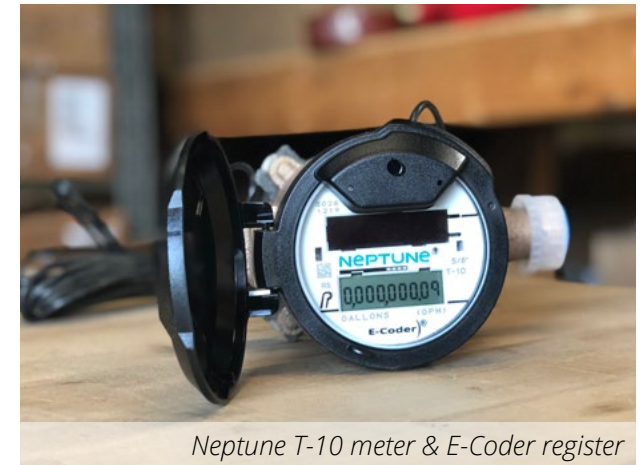
“At first, we assumed the best solution for the town was a drive-by solution, which would let us capture all our readings in a few hours every quarter for billing,” said Mark Clark, North Reading’s Water Superintendent. “Once we saw the value of an AMI system, though, we were able

to successfully make the case for it, and I’ve been very impressed by what it’s done for our small water utility.”

Future compatibility results in a smooth rollout

North Reading was already using Neptune’s T-10 meters, which were designed to be compatible with future reading systems (a Neptune core design philosophy). Additionally, of the accounts using R900 MIU’s for AMR meter reading, many existing radios were able to be incorporated into the new system for additional savings.

In April of 2018 the town ran a pilot program, replacing the meters of 30 town employees in order to fine-tune their processes before rolling it out to all of their accounts. The town was able to replace



Neptune T-10 meter & E-Coder register

the majority of the town’s meters by January 2019, and completed the entire replacement project in July 2019.

Today, the town has 99% coverage from their strategically located gateway collectors, with the last few geographic outliers

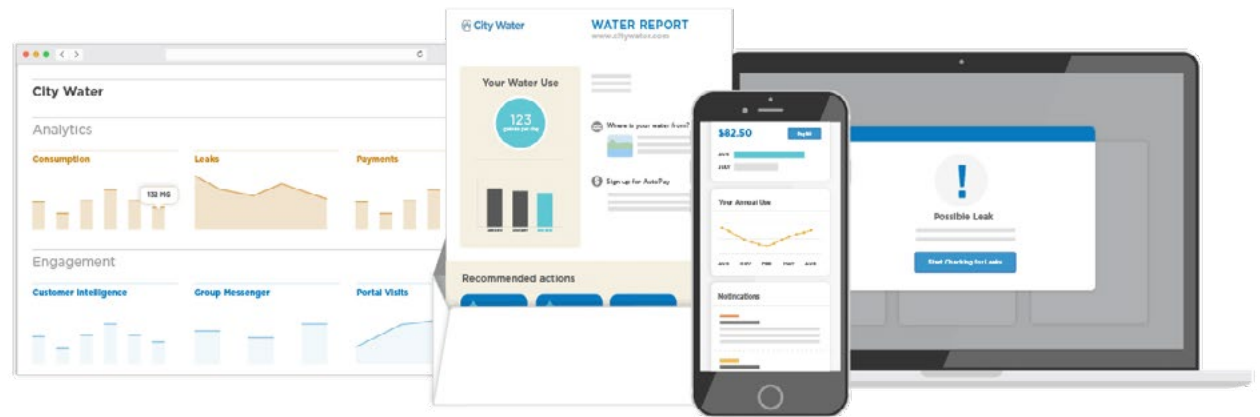
Smart metering: How small water departments are using AMI to do more with less, *cont.*

covered by quarterly drive-by readings. “The time it takes us to read our meters has dramatically dropped, which has been a big help during times when we’re short-handed,” Clark noted. “Our department is always busy, but now we can do a lot more with our resources.”

WaterSmart platform helps residents understand their water usage

In November of 2018, North Reading rolled out WaterSmart’s platform, giving residents access to all of their water usage through a customer portal. Under the previous system, meter data was only captured once every three months – meaning if a resident had a complaint about a high water bill, the town had no way to tell the frustrated resident when or how the water had been used.

Now, the data paints a very clear picture. When a couple came in recently to dispute their bill, Clark was able to pull up their data and identify that the spike in water usage was happening between 2-5AM, five days a week – a common schedule for a sprinkler system. The chagrined couple was able to understand that the bill was accurate and could then



WaterSmart's provider and customer platform; image courtesy of www.watersmart.com

adjust their sprinkler system to a better schedule.

This summer, the COVID-19 pandemic has forced many North Reading residents out of their places of work and back into their homes – and many of them have started to pay more attention to the condition of their lawns. The town typically implements water restrictions during summer drought times, allowing for irrigation no more than two days a week. By using Neptune’s R900 AMI system data, the department was able to flag close to 500 accounts exceeding that allowance and sent out alerts to those homes with a forecast of their quarterly water bill at their current consumption rate. The alerts

have been “incredibly effective” at enforcing the restrictions, Clark reports.

The right AMI solution, the best service

“We’ve had a great experience with Neptune’s meters,” Clark stated. “Any large-scale rollout has challenges; in our case, we had some unexpected scheduling glitches during our installation phase. Ti-SALES stepped right up with providing meters from their inventory when shipments were delayed, helping us cover those gaps and stay on target. Ti-SALES’s exceptional level of service was definitely a part of why we decided to stay with Neptune.”