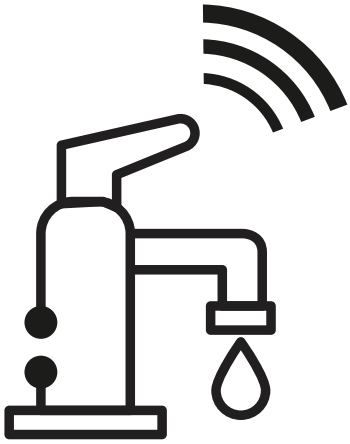

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Western Riverside County photo

Case Study: Western Municipal Water District

Western Municipal Water District Taps LoRaWAN for Advanced Metering Infrastructure-as-a-Service

WESTERN MUNICIPAL WATER DISTRICT

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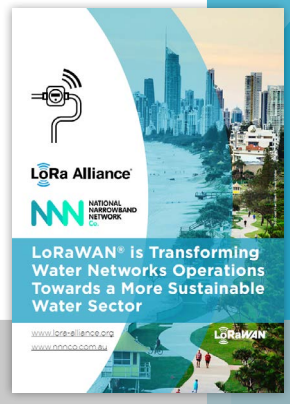

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With more than 24,000 retail customer accounts, the Western Municipal Water District (WMWD) in Riverside County, California was looking for a way to improve the reading of customer meters. These had long been read manually, which was a time-consuming, expensive process that was riddled with inaccuracies.

Recognising the potential value of an advanced metering infrastructure (AMI) to improve it process, WMWD undertook a pilot program to replace 100 existing meters with Neptune smart meters, connected to the authority via LoRaWAN technology.

Using Senet's network planning tools and cloud-based network management system, Neptune designed a network for ubiquitous coverage across the county's combination of rural routes and dense residential areas.

Having delivered a success rate of more than 99%, the AMI pilot was expanded into a county-wide rollout in which LoRaWAN-capable meters could be positioned anywhere – allowing the deployment team to progressively replace the oldest meters first.

Phase 1 saw 13,600 additional Neptune meters installed, with another 7,000 old meters due for replacement by the end of 2021. The company provided its offering on a network-as-a-service basis, managing infrastructure elements and storing all data in its cloud service so WMWD could focus on its customers.

> *"With fixed network data collections, we don't have to use a third party or send out staff as often anymore,"* said Kevin Mascaro, Director of Finance with WMWD.
> *"Reading turnaround time has been dramatically improved, and we've experienced a significant overall gain in efficiency."*

Previous water loss of 12% has been cut to around 3.5% – translating into saved revenues and better use of scarce water resources. This is particularly important considering that limited access to local groundwater sources means WMWD must purchase its water from nearby agencies or from northern California via the California Aqueduct.

IMPROVING CUSTOMER SERVICE

Remote meter reading has also proved invaluable during the COVID-19 pandemic, since it enables WMWD to maintain social distancing while serving customers remotely. Better access to operational data has also helped staff resolve customer issues faster than ever, with improvements in the morale of staff who previously had to verify large numbers of inaccurate readings.

> *"Our previous population of Neptune meters enabled us to go out to that meter and download consumption activity beyond what a monthly reading could give us," Mascaro said.*

> *"Now that we're replacing all meters with LoRaWAN-equipped Neptune meters, we have really detailed data coming in multiple times a day. Neptune has positioned us to help customers have greater control over their water bill by managing usage in real time."*

Customer service staff can also pull up detailed usage information to talk customers through bills that seem too high, explaining exactly when large quantities had been used. This and other information will progressively be rolled out across a customer portal that will allow customers to take better control of their water usage using real-time information.

LoRaWAN's open architecture has proved extremely important for WMWD's network, with new smart water Internet of Things applications and devices able to be added where and as needed over time. Mascaro says that the new AMI network "has given us more tools at our fingertips to assist customers more efficiently and truly win our day".

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Read the whitepaper