



# Town of Fort Erie Water Distribution System

## 50+ Years with Neptune and Building on a Decade of R900® Technology

### SYSTEMATICALLY MOVING TO ACCURACY AND EFFICIENCY WITH R900 AMR

By the late 2000s, the water meters in the Town of Fort Erie, Ontario Water Distribution System had reached the end of their life cycle. Accuracy was a problem, and having to hire a third party to manually probe each meter added to the inefficiency. At one point, a single meter tech was tasked with addressing nearly 1,200 outstanding work orders. Even with a limited budget and resources, Grant Boutin, the Town's Manager of Water and Wastewater Services, knew he had to move his utility forward. And by choosing the Neptune® R900® System, it would be with confidence and at Fort Erie's own pace.

Since 2009, Boutin and his team have worked with Neptune Technology Group (Canada) to implement a radio frequency automatic meter reading (AMR) system. "We're doing a geographic sweep of the town," Boutin said, "contracting out 1,000 installations each year, with an additional 300 done inhouse for areas that fall outside a 'zone' that presents problems for meter readers." The project's scope of work included in-field installation of the meters, as well as professional call center services, public communication, data management, and quality assurance.

### DATA LOGGING MAKES AN INDISPUTABLE DIFFERENCE FOR CUSTOMER SERVICE

Five years into the changeout, the Town continues to contract the meter reading, but now for a discounted rate for those meters that have been converted to the R900 radio read. The readings are accomplished via walk-by RF handheld technology – but often from the utility vehicle, according to Boutin. Just as important as the speed and ease of the meter reading is the accuracy. "Our finance department is ecstatic to be getting real numbers," said



#### CUSTOMER

Town of Fort Erie Water Distribution System, Fort Erie, Ontario

#### SERVICE TERRITORY

Fort Erie is a town on the Niagara River in the Niagara Region, Ontario, Canada

#### SOLUTION BENEFITS

Mobile system that allows for more time to address other utility issues

98% reduction in errors

Monthly billing;  
improved cash flow

Use data logging to graph leaks and irrigation system usage



(L-R) Oleg Yavorsky, Project Manager, Neptune Technology Group; Edward Bertolo, President, Evans Supply Limited; Grant Boutin, Manager Water/Wastewater Services, Fort Erie; David Iacocca, Territory Manager, Neptune Technology Group.



Boutin. “We’ve experienced a 98 percent reduction in inaccurate or no reads. Prior to the changeout, we had no opportunity to validate the accuracy of our readings. Now it’s indisputable.”

Not only is the accuracy indisputable but also customer inquiries and complaints are addressed much sooner now – thanks to the data logging capability of the E-CODER®R900i™ combination absolute encoder/RF meter interface unit (MIU), which provides 96 days of hourly consumption history for an account. “We regularly download that data and can see patterns based on actual consumption,” Boutin said. “We get an inquiry about once a week that we can respond to very quickly. The downloaded data generates graphs of consumption patterns. Any leakage, irrigation system usage, or other unusual consumption can be accurately quantified in date and time stamping formats. The data is certainly defensible.”

In one case, a customer with a brand new home “fired up their sprinkler system on a frequent basis,” according to Boutin. “We were able to chart exactly when it was run,

each time equaling three cubic metres (about 792 gallons) of water or more. In a six-day period, that homeowner used 23.8 total cubic metres (almost 6,300 gallons), and 22 cubic metres (5,800 gallons) of that was just for irrigation.” By catching the excessive consumption, the Town was able to alert the customer, who quickly adjusted the frequency of irrigation system cycles to avoid another high bill the following month.

Likewise, when a landlord had a dispute with his tenant over a high water bill, data logging revealed that the tenant had left a tap on for 60 days, usage that was easily graphed and provided to the landlord.

On another occasion, the owner of a huge estate – complete with multiple residences, a swimming pool, and a four-hole golf course – received a water bill for more than \$10,000. The estate had its own pump house, with lines split to water five metered zones. Through data logging, Fort Erie uncovered serious irrigation leaks as well as a recycle line in the pool that had run continuously. The Town validated the usage, and the

customer was grateful for the information that identified the problems so that he could fix them.

We have extended the offer of this enhanced service delivery to the Niagara Parks Commission, which uses irrigation systems at several of their facilities on the parkway along the Niagara River. Through the E-CODER)R900i, Fort Erie can monitor consumption patterns and help the Commission conduct a cost-benefit analysis. “It’s a huge customer service initiative,” he said.

### A SMOOTH ROAD TO MOBILE – AND AN EXTRA HUNDRED GRAND

“We’re billing monthly now [instead of bi-monthly] and utilizing the 96-days of hourly data logging for faster customer service,” Boutin added. “That response time is key and will help the consumer adjust their consumption patterns to realize savings on their water billings.

Boutin is pleased with the quick response the Town can provide to its customers as well as with the quick response his own team regularly receives from Neptune and from Neptune Level 1 distributor ESL Utility and Municipal Products. “We’ve been extremely satisfied with the service from Neptune’s people,” he said. That team includes Oleg Yavorsky, Neptune Project Manager, and Dave Iacocca, Territory Manager. “[Owner and President] Ed Bertolo of ESL has also been great.”

Iacocca said that large-scale changeouts can be intimidating for medium-sized utilities, but Neptune showed that it wasn’t necessary to “do everything at once.” Boutin credits Neptune with making the move

to AMR easy, smooth, and affordable for Fort Erie. “They’ve enabled us to phase in our system over the long term,” he said.

Boutin looks forward to migrating to a fully mobile system using the MRX920™ mobile data collector in the next few years. It will collect data – including the 96 days of historical data – from the same endpoints, while still allowing for the use of handhelds as backup. And while Neptune is helping protect the Town’s existing assets, the move to a totally mobile system will empower Fort Erie to perform its own meter readings without the need for a third-party contractor. This alone will net a savings of \$100,000.

In the meantime, the Town is enjoying how the R900 System’s fast, accurate data has streamlined operations. Boutin said, “It’s a priority for us to be responsive to our customers in a timely fashion. Our finance and billing team is enjoying the improved degree of meter reading accuracy and its support of our revenue stream.”

Neptune Technology Group Canada Limited has been represented in Ontario by its level one distributor Evans Supply Limited (ESL) since 1992. ESL has played a significant role in many aspects and helped manage the relationship with Fort Erie during the course of the ongoing multi-year service project. ESL continues to support Fort Erie by maintaining product stocking levels and providing reading system software and hardware support.



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