

# Successful Municipal Practices: Responding to New Challenges



## *Tools for Change*

### **BETTER MUNICIPAL BUSINESS PRACTICE: Automatic Water Meter Reading The R.M. of Macdonald**

The R.M. of Macdonald, located immediately south west of the City of Winnipeg, was experiencing several challenges with its water meter read system and was looking for a new way to accurately monitor the water used by their public utility system in order to improve staff efficiencies and customer service, maximize utility revenues and enhance the water management program. The R.M. encompasses a vast rural area that includes 7 residential communities and provides treated water to 1,100 urban and 650 rural customers through 290 miles of pipeline.

Prior to 2004, the R.M. relied on manual or remote read meters and customers were required to collect and call in their own readings to the municipal office each billing quarter. This call-in system was more practical than having a municipal employee travel and in most cases gain access to each of the customer's homes to read the meters, but created challenges of its own.

- Despite newspaper notices, reminders in water bills and direct staff contact with customers, of the 1,750 customers required to call in their readings, only about 60% responded, leaving 40% with estimated bills.
- It took at least 3 weeks of valuable staff time to collect and enter the readings into the computer, prepare and enter estimated readings and finally to print and mail the water bills.
- Approximately 15% of the water customers called the municipality with corrections to, or questions about, their reading or estimated reading. This process tied up another week of staff resource time and billing adjustments were often required as a result of these calls.

*The billing cycle took at least one month of valuable staff time each quarter and the accuracy of the meter reading program was less than satisfactory.*



*Tools for Change*

## **Successful Municipal Practices: Responding to New Challenges**

Lost revenue resulting from older, inaccurate meters and the inability to monitor unaccounted water (water produced compared to water delivered to the customers used) made it critical for the municipality to look for a better meter read system. Council considered updating each of the manual read meters with remote reads that could be accessed from outside the premises, but soon agreed that this would not be the best solution as staff would still have to call in at each water meter location to read the meters electronically.

To address these challenges, in the summer of 2004 Macdonald implemented the “Radio Frequency Water Meter” local improvement project. The project equipped the 1,750 water meters with radio frequency meter interface units that allowed automatic meter reading with a mobile automatic meter reading data collector. The new equipment enabled personnel to collect meter readings while driving past the water service locations with the mobile reader in the vehicle. The reader collects and stores the data that can then be downloaded directly into a computer.

The overall cost of the new system was \$380,000.00. The municipality financed \$100,000.00 from funds in the utility reserve and the balance by the issue and sale of a debenture. The cost to each utility customer was \$147.83 that could be paid up-front as a one-time payment or in equal instalments of \$40.38 / year for 5 years and collected on the property tax bill as a local improvement levy.

The first automatic meter reading was completed for the quarter ending December 2004 and the R.M. realized immediate benefits. The utility billing process that used to take at least one month of staff time can now be completed in about one week, freeing up staff time for other important municipal priorities. The municipality can now accurately compare the water delivered into the distribution system and the water metered to customers. This comparison helps the municipality identify leakage problems in the utility distribution system, locate meters that are not working properly and trace unmetered use of water, all important in enabling the municipality to maximize utility revenues and enhance the water management program.

The R.M. of Macdonald also expects to see an increase of approximately \$20,500.00 in water sales revenue this year as a result of the new, more accurate, meter read system. Continuous improvement in municipal management is important. Municipalities should never overlook the real and immediate benefits that can be realized by adopting better business practices.

For more information contact:

Tom Raine, CAO  
R.M. of Macdonald  
(204)736-2255  
E-mail: [info@rmofmacdonald.com](mailto:info@rmofmacdonald.com)

***The new meter read system has increased staff efficiencies and utility revenues, improved customer service and enhanced the water management program.***

***Municipalities should never overlook the real and immediate benefits that can be realized by adopting better business practices.***