

## CITY OF MOOSE JAW Water Meter History/Relevant Information

The reading of water meters has changed significantly with the introduction of technology. The following table summarizes the major changes in meter reading methods and how municipalities around the province currently collect meter reads.

### Introduction of Water Meter Reading Technology

Year	Mechanism	City
pre-1950	Manual Read of Meters (enter home to perform read)	Moose Jaw
1950	Visual/Dial Read Meter (register on exterior of home – prone to inaccuracy)	Moose Jaw
1970	Scan/Touchpad Read Remotes (wired pad on exterior of home)	Moose Jaw, North Battleford
1980	Radio Frequency Mobile Reading (no requirement to enter homeowner's property – first version of Smart Metering)	Regina, Swift Current
2000	Two -Way Communication (Advanced Metering Infrastructure (AMI) – evolution of Smart Metering)	Saskatoon, Weyburn, Prince Albert, North Battleford

Moose Jaw currently uses three different methods to collect meter reads:

- 1) Manual Read of Meters – 4,246 customers
- 2) Dial Read Remote – 982 customers
- 3) Touchpad Read Remotes – 7,188 customers

Water meters vary in size from 5/8-inch to 8-inch. The current standard for a residential meter is 3/4-inch. A size breakdown of the water meters in service are shown in the following table:

Meter Size	5/8"	¾"	1"	1.5"	2"	3"	4"	6"	8"	Unknown
Quantity in Service	9,307	2,481	241	47	225	21	13	5	4	72

The inventory of water meters in use also vary in age, as illustrated in the following table:

Meter Age	1 year	2–5 years	6–10 years	11–15 years	+15 years	Unknown
Quantity in Service	326	1,389	2,038	2,399	5,674	590

### Meter Design

Water meter design has historically consisted of a positive displacement meter with an internal rotating disc (mechanical meter). Mechanical meters are not effective at reading low flow rates and this can result in a significant amount of water consumption lost the larger the water meter gets. Mechanical meters begin losing accuracy once

installed. This loss of accuracy accelerates as the meter ages, more sharply as the meter passes ten years in service. Mechanical meters typically lose 3% – 8% accuracy, under reading water consumption, when they are ten to twenty years in age. Over 50% of the City of Moose Jaw's in-service water meters are over fifteen years old, 70% over ten years old. Current resources in the Meter Department put the City on a replacement cycle of water meters at thirty-six (36) years.