



Calgary's historical water demand

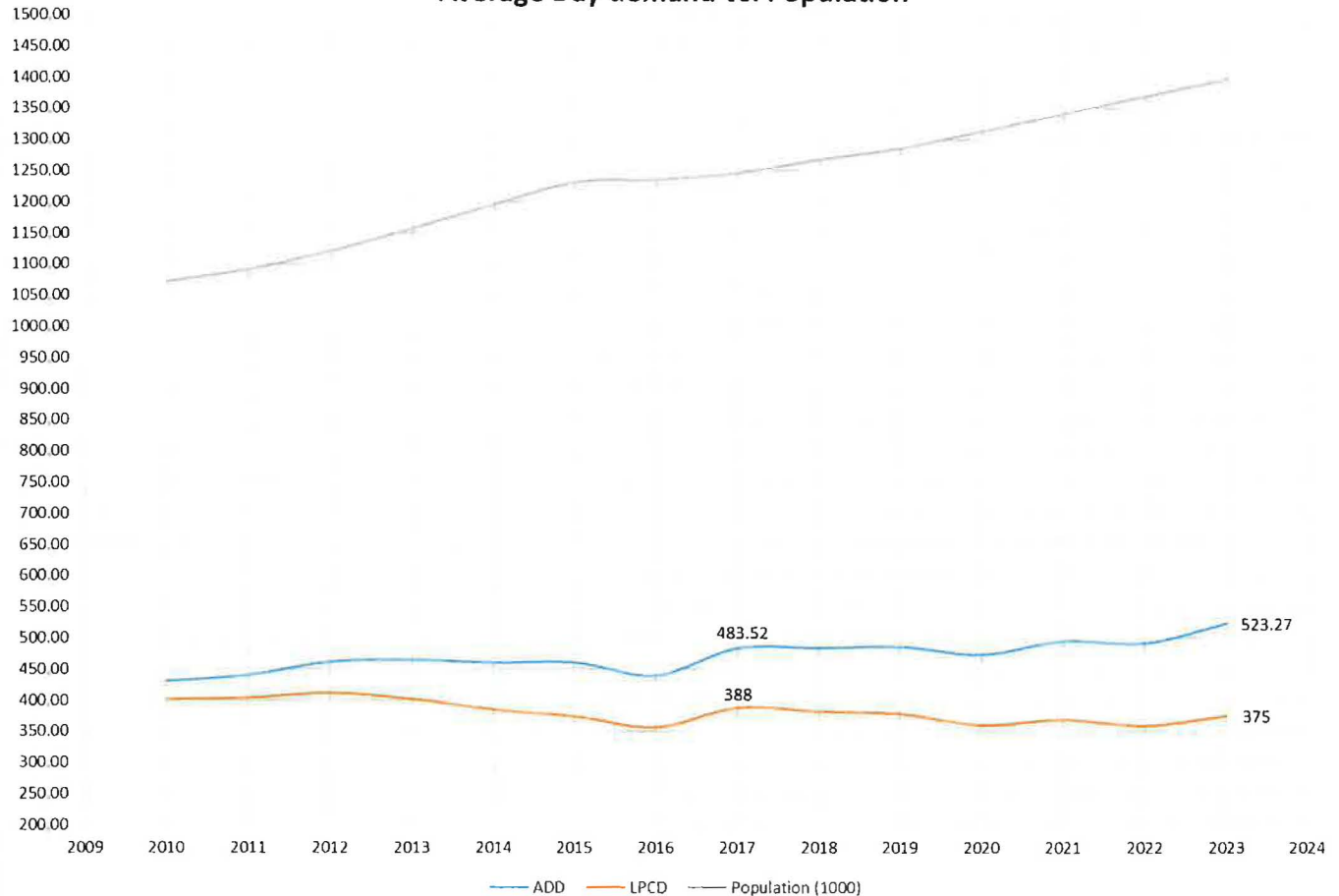
The average day demand in 2022 was 351 Lpcd.

This demand includes residential, industrial, commercial, and institutional customers, as well as authorized water use (firefighting, flushing) and water loss.

The residential metered consumption in 2022 was ~170 Lpcd.

Although significant water use reductions have been achieved in Calgary already, there is a need for continued reductions.

Average Day demand vs. Population





Planning Criteria: Calgary compared to EPCOR

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 IN COUNCIL CHAMBER
 JUN 12 2024
 ITEM: 7.3 1P2024-0573
 Distrib - presentation
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	Calgary	Edmonton (Epcor)
Combined ADD criteria	350 Lpcd	220 Lpcd
Combined MDD criteria	585 Lpcd	330 Lpcd
Residential demand criteria*	n/a	160 Lpcd (ADD) 240 Lpcd (MDD)

*to be used for area-level transmission sizing only

While there are differences in water demand criteria between Edmonton and Calgary, the methodology used in sizing and designing the water distribution, transmission and supply systems is similar and aligned with Alberta Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems.

For the purpose of overall system planning and major infrastructure sizing of plants and transmission infrastructure both Edmonton and Calgary are using a combined MDD demand criteria.

Edmonton's area-level transmission infrastructure is similar to the function of Calgary's 400 mm watermains used in development of new greenfield communities (developer sized).



Key differences and factors influencing water demand

Water Loss

- Edmonton's 2021 water loss was presented as 5.4%. Calgary's was 22% in 2022.

Geotechnical conditions

- Edmonton has primarily clay-based soils means leaks from services and mains surface quickly, leading to fast repair times.
- Calgary has primarily gravel-based soils means leaks from services and mains drain through the ground and do not come to surface.



Universal Metering

- Edmonton has had universal metering since 1903, Calgary has had universal metering since 2014

Water Rate Structure

- Edmonton has an inclining block rate – cost for water by volume increases with the more water consumed.
- Calgary has uniform rate structure – customers pay a rate based on meter size and account type. Utility rates do not increase as customers consume more water.

CITY OF CALGARY AVERAGE DAILY WATER CONSUMPTION

