

2018 Water Demand Analysis

Planning and Community Development Committee

December 13, 2018



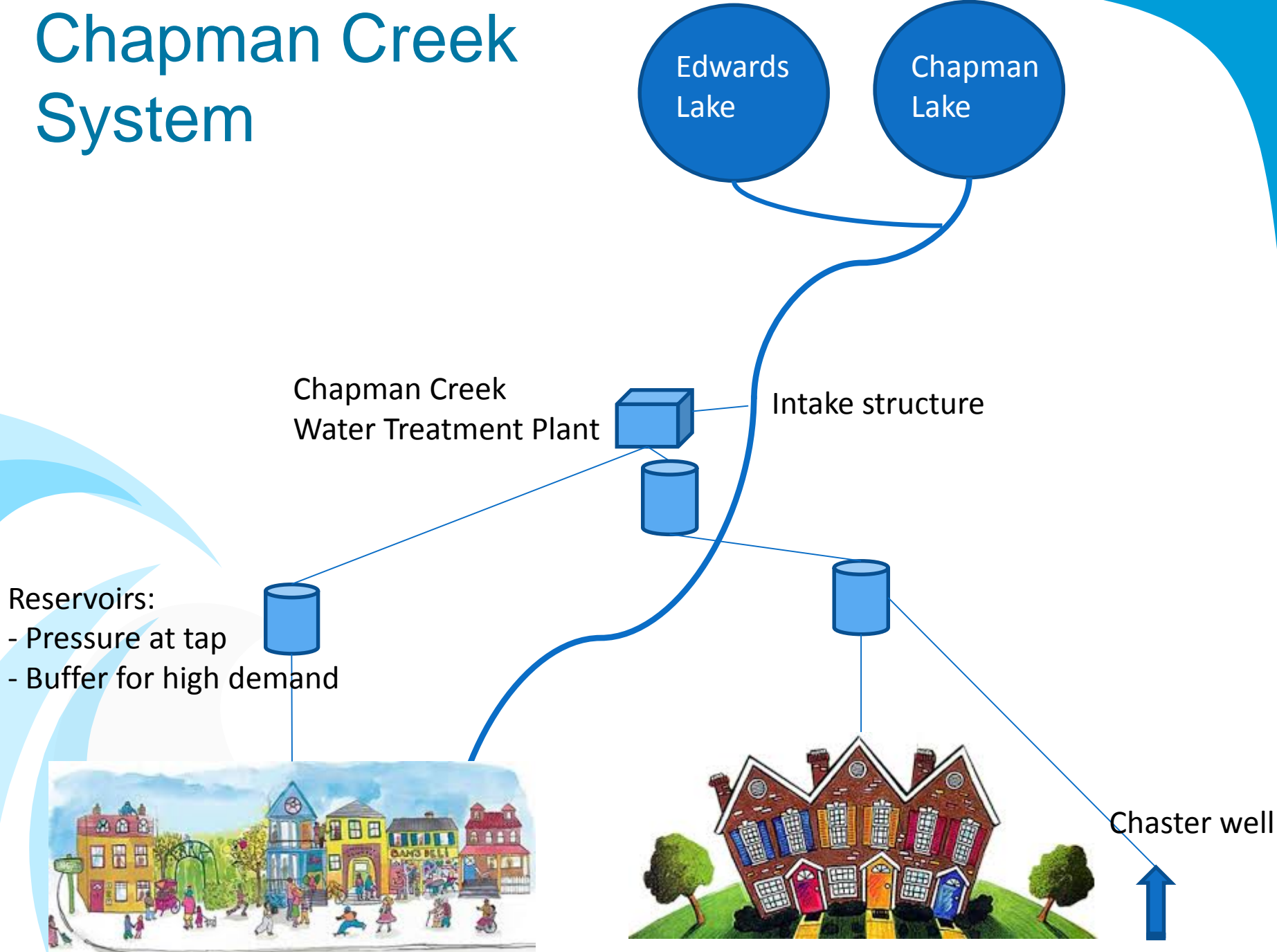
2018 Water Demand Analysis

- Insight into water supply deficit by comparing supply to demand
- To support strategic decision making
- Compared to Comprehensive Regional Water Plan (2013) (CRWP):
 - More accurate supply and demand data
 - Increased insight in climate change impacts
 - Updated water supply policy objective (Water Sourcing Policy-Framework):

Water supply sufficient to support not exceeding Stage 2 watering restrictions (Bylaw No. 422)
 - Environmental Flow Need requirement



Chapman Creek System



Water Demand

- Average Daily Demand of the community at Stage 2 watering restrictions (WSP policy objective)
(20,000 m³ per day)
- Environmental Flow Need Requirement
(17,280 m³ per day)
- Drought period May 1 – Oct 31
(combined drought pattern 2015 and 2017)
- Annual population growth of 2%
(same as CRWP, actual since 2011 is 1.38%)
- Target years: 2025, 2035 and 2050



Water Conservation

Comprehensive Regional Water Plan (2013):

In 2020, a 20% reduction in water consumption compared to 2010 by:

- Installation of water meters
- Leak detection and repair
- Update water rates structure when universal metering is in place
- Update watering restrictions (Bylaw No. 422)
- New incentive programs (e.g. rainwater harvesting)
- Education and public outreach programs

2018: 13% reduction achieved - leak detection through water meters, watering restrictions and education and outreach



Water Supply Deficit (m³ per year)

Effectiveness of water conservation initiatives (per capita compared to 2010)	2025	2035	2050
Service Area Population	26,000	32,000	43,000
10% reduction	2,010,000	2,830,000	4,350,000
20% reduction	1,650,000	2,390,000	3,760,000
33% reduction	1,220,000	1,820,000	2,980,000

CRWP (2013):

430,000 m³ for 2036 with 20% effectiveness water conservation

