ARE OUR WATER SYSTEMS AT RISK?

Financial Sustainability Analysis, 2023 Update

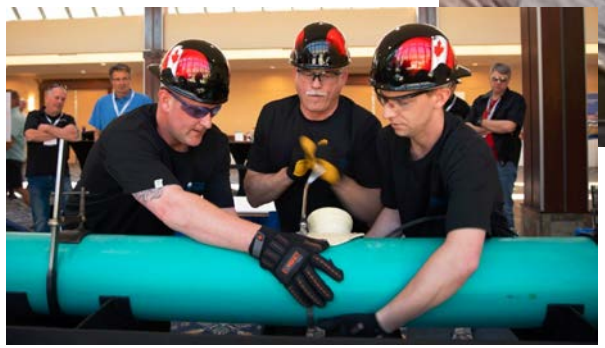
BCWWA
BC WATER & WASTE ASSOCIATION

Marian Hands, MBA
Chief Operating Officer
BC Water & Waste Association

THE BC WATER & WASTE ASSOCIATION (BCWWA)

Not-for-profit organization representing over 4000 professionals in the water industry in BC and the Yukon for well over 50 years.

- Industry Engagement
- Professional Development
  - Annual Conference (Whistler – April 2024)
  - Specialty Conferences
  - Technical Training Courses
- Cross Connection Control Certification
- Committees and Communities of Practice
- Career Centre



This report has been prepared by the BC Water and Waste Association (BCWWA), with consulting support from Urban Systems Ltd. and JW Infrastructure Planning Ltd.

This initiative is offered through the Municipal Asset Management Program, which is delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.

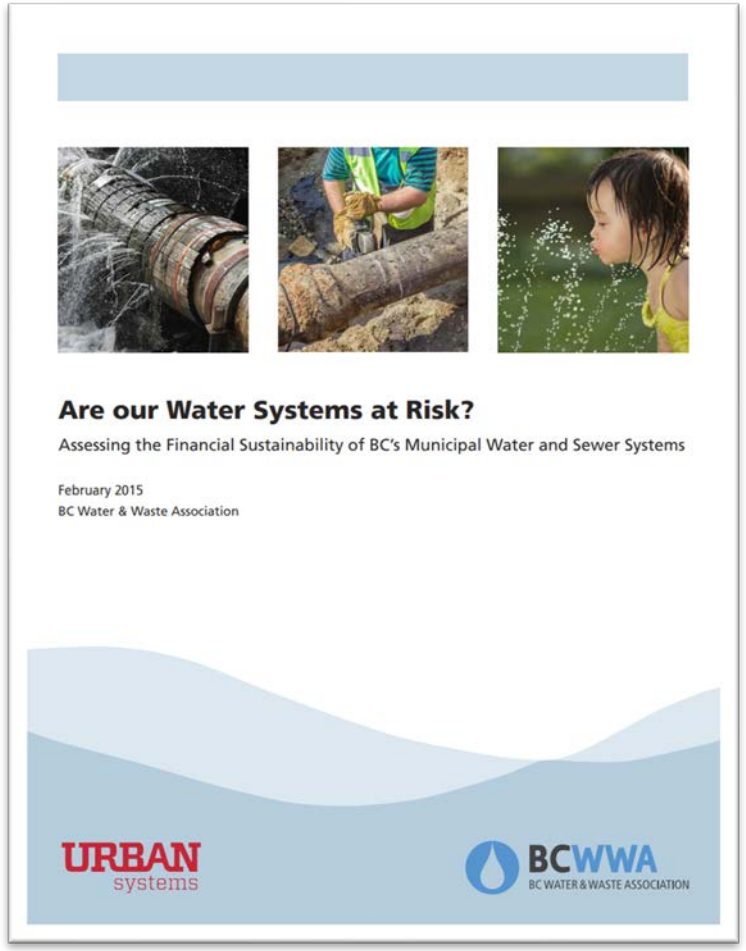
THE PROJECT

» Update to the 2015 “Are our Water Systems at Risk?” Report

» Assessing financial sustainability:

- Are fees covering the full cost of service delivery?
- How vulnerable are we to unexpected events?
- How much money do we need to replace existing infrastructure?
- What is our capacity to finance infrastructure renewal using debt?
- What are public opinions about water and wastewater systems?

» What actions can we take to address findings?



THE PROJECT

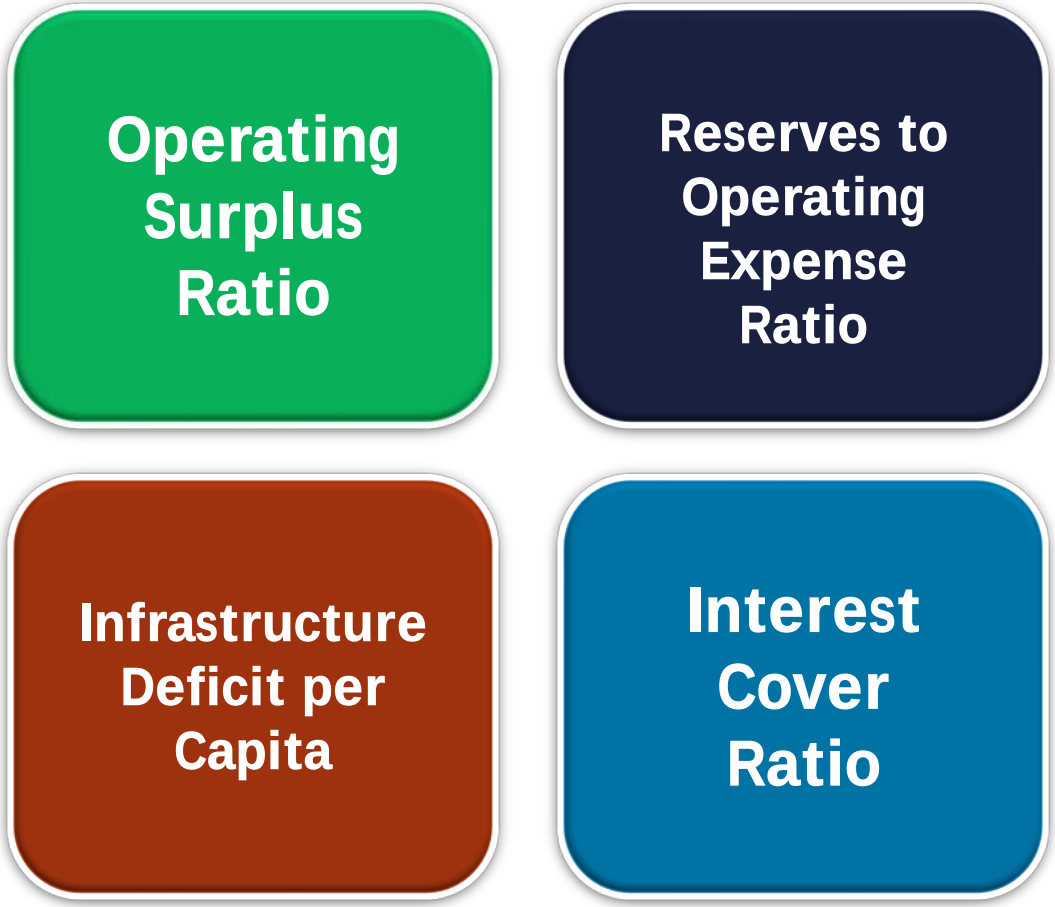
- Financial Analysis
- Case Study Interviews
- IPSOS Survey

SCOPE AND LIMITATIONS

- Due to data availability, analysis was only conducted for municipal systems.
- Slight differences in analysis methodology to reflect lessons learned in 2015 and changes in data availability.

OUR APPROACH

- Analysis based on four different financial indicators
- Financial indicator results reported by:
  - Size of municipality
  - Quartile, to avoid impact of outliers
- Findings compared to 2015 results
- Refined ratio calculation methodology between 2015 to 2023



1. ARE FEES COVERING THE FULL COST OF SERVICE DELIVERY?

Operating Surplus Ratio

$$\text{Operating Surplus Ratio} = \frac{(\text{Revenue} - \text{Operating Expenses})}{\text{Revenue}}$$

Operating Surplus Ratio

Revenue = Revenue – Developer Contributions
Operating Expenses = Operating Expenses + Amortization Expenses (gross up factor)

- Operating surplus ratio of **zero or greater** = rates are covering full cost of service, including **infrastructure renewal**
- Operating surplus ratio of **less than zero** = full costs of service provision are not covered through rates charged

1. ARE FEES COVERING THE FULL COST OF SERVICE DELIVERY?

Operating Surplus Ratio - Results

» More communities are covering the full cost of service through fees (approx. 1/3 of communities).

» Although the trend is going in the right direction, most municipalities do not cover the full cost of service delivery with fees.

» The gap between revenues and expenses remains highest with **smaller municipalities.**

2. HOW VULNERABLE ARE WE TO UNEXPECTED EVENTS?

Reserves to Operating Expense Ratio

Reserves to Operating Expense Ratio

$$\text{Reserves to Operating Expense Ratio} = \frac{\text{Reserves}}{\text{Cash Operating Expenses}}$$

Reserves = Statutory Reserve + Accumulated Surplus
Cash Operating Expenses = Operating Expenses - Amortization Expenses

Reserves equivalent to one year of cash operating expenses = a ratio of **100%**

2. HOW VULNERABLE ARE WE TO UNEXPECTED EVENTS?

Reserves to Operating Expense Ratio - Results

- Most communities had a ratio of >100%. No clear relationship between size of municipality and size of reserve.
- Reserves in lower quartile across all sizes of municipality were less than annual operating expense.
- Reserves can buffer impacts of unexpected operational costs or revenues in the short term – but **are not sufficient to fund major infrastructure** renewal

3. WHAT IS OUR INFRASTRUCTURE DEFICIT?

Infrastructure deficit per capita

Infrastructure Deficit per Capita

$$\text{Infrastructure Deficit Per Capita} = \frac{\text{(Replacement Cost Accumulated Depreciation – Reserves)}}{\text{Population}}$$

Replacement Cost Accumulated = Accumulated Amortization (w gross up factor)
Population = 2021 Census data

- Current reserves exceed the expected cost of replacement = infrastructure **surplus**
- Expected cost of replacement is greater than current reserves = infrastructure **deficit**
- Not necessarily an indicator of poor financial management

3. WHAT IS OUR INFRASTRUCTURE DEFICIT?

Infrastructure deficit per capita - Results

» Deficit per capita decreased for 2/3 of the municipalities and increased for 1/3.

» Infrastructure deficit per capita are highest for the smallest communities (<1000 pop) and these generally increased since 2015.

4. WHAT IS OUR CAPACITY TO FINANCE RENEWAL USING DEBT?

Interest Cover Ratio

Interest Cover Ratio

$$\text{Interest Cover Ratio} = \frac{\text{Interest Expense}}{\text{Revenues}}$$

Interest Expense = Interest Expense
Revenue = Revenue – Developer Contributions

- More debt is being used to finance the cost of assets = **higher** interest cover ratio
- Less debt is being used to finance the cost of assets = **lower** interest cover ratio

4. WHAT IS OUR CAPACITY TO FINANCE RENEWAL USING DEBT?

Interest Cover Ratio - Results

- Potential debt capacity across municipalities of all sizes.
- There are municipalities of all sizes with no interest expense for water and sewer.
- Overall decrease in total number of municipalities with water/sewer interest expense.

WHAT ELSE HAS CHANGED? OUR EVOLVING CONTEXT

- As an industry, we are more aware of the impacts of climate change on our water systems.
- Significant investments in advancing asset management practices.
- More attention on the role of natural assets and nature-based solutions.
- Inflationary market, higher costs, increased pressure on affordability and emphasis on increasing housing supply.
- Changes to work force and technologies.

WHAT DID WE LEARN ABOUT PUBLIC OPINION?

- High confidence in water and wastewater systems in BC.
- A large proportion of people didn't know how much they were paying – but had limited willingness to pay more
- Most people think climate change will impact water and sewer services - but are not willing to pay much to adapt to these impacts.
- Most people prefer their water provider save regularly to pay for renewals rather than borrow.

SUMMARY OF KEY FINDINGS

- Overall, the financial analysis tells a story of incremental improvements for most municipalities.
- Progress is promising, but significant work remains to avoid service level declines or disruptions – particularly considering impacts of climate change.
- The financial sustainability of small systems continues to be a significant challenge.
- There is an opportunity to build awareness among the public.

WHAT CAN WE DO?

1. Take stock of your situation
2. Communicate with key stakeholders
3. Set targets for financial sustainability
4. Select and implement strategies to achieve your targets for financial sustainability
5. Monitor and communicate progress and challenges

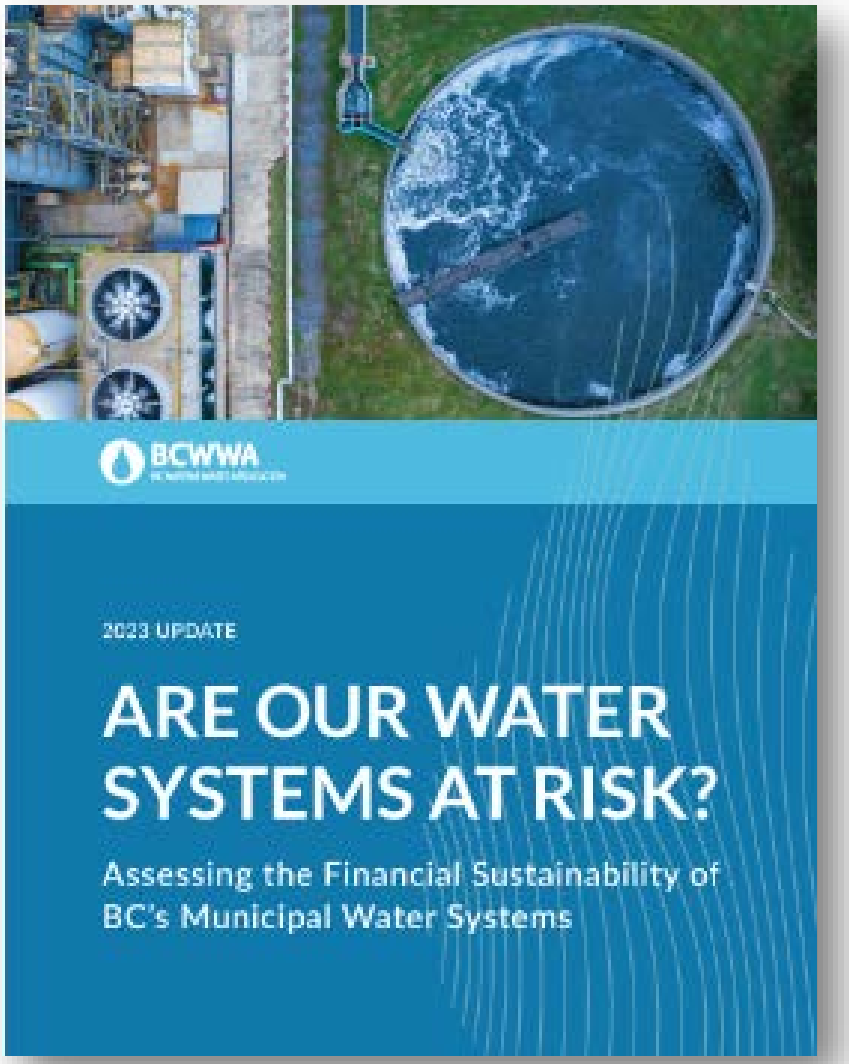
THANK YOU! QUESTIONS?

Marian Hands, BCWWA

mhands@bcwwa.org

www.bcwwa.org/resources/issues/infrastructure-report

- Infrastructure Report
- Financial Indicator Tool



BCWWA BC WATER & WASTE ASSOCIATION

FCM FEDERATION OF CANADIAN MUNICIPALITIES | FÉDÉRATION CANADIENNE DES MUNICIPALITÉS