

FINANCIAL SUSTAINABILITY IN ACTION

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FULL COST RECOVERY

ABOUT THE AUTHOR

Nancy Goucher

Manager, Municipal Water Consortium
Canadian Water Network (CWN)

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The challenge: The need for a durable funding model

Municipal water utilities face pressures that accumulate over time, including aging infrastructure, rising capital requirements, stricter regulatory standards, climate-related risks, and increasingly variable water demand and thus, water revenue. Growth and new development can drive higher consumption and strain system capacity, while conservation and efficiency efforts reduce per-capita use and weaken volumetric revenues even as most system costs remain fixed. When revenues fall short of actual needs, utilities may defer maintenance, draw down reserves, and delay capital renewal, which ultimately increase long-term costs and erode service reliability. These conditions highlight the need for a durable funding model that aligns revenues with the full lifecycle cost of service.

Overview: Full cost recovery as a financial framework

Full cost recovery (FCR) is a financial approach in which utilities set rates that cover the complete cost of providing service, including operating expenses, asset renewal, capital upgrades, and debt servicing.^{1,2} The intent is to generate stable, utility-specific revenues without relying on unsustainable long-term funding sources such as reserves or external grants.^{3,4}

Implementing FCR requires:

- Asset management plans that identify inventories, condition, risk, and life-cycle costs.
- Financial plans that forecast revenues and expenditures across operating and capital accounts.
- Gap analysis and strategies to close the difference between forecast costs and reliable revenues.

*“...mismatch of
cost recovery is a
serious problem
that compounds
over time...”*
*Ann Hajnosz,
2017*

While FCR is not mandated in Canada, certain provinces such as Ontario, Alberta, Nova Scotia, and Saskatchewan have accounting practices that capture lifecycle costs. Internationally, Australia and New Zealand⁵ have strong frameworks, and in the European Union the Water Framework Directive incorporates recovery of financial, environmental, and resource costs.⁶

Why full cost recovery matters

Demand volatility, combined with the fixed cost nature of water systems, makes revenue stability essential. Demand fluctuations emerge in two distinct ways. On one hand, population growth, new development, and economic expansion can drive higher water consumption, pushing existing treatment, distribution, and storage systems toward capacity limits. Rising peak day demands may trigger the need for costly plant expansions, system upgrades, or new source development years earlier than anticipated.

On the other hand, declining per-capita demand, which can result from conservation programs, high-efficiency fixtures, industrial process changes, or shifting customer behaviour, can reduce volumetric water sales even as the utility's underlying costs remain largely fixed. Since most water system expenditures — such as labour, debt servicing, and asset renewal — do not fall proportionally with reductions in consumption, sustained drops in demand can undermine revenue stability, weaken the utility's ability to recover full costs, and widen funding gaps.

FCR provides a structured way for utilities to match revenues with actual needs, maintain appropriate reserves, and plan capital work without sudden rate spikes or emergency borrowing. It allows utilities to manage risk proactively, address long-term renewal needs, and avoid the financial instability that results from underpricing.

When utilities cannot fully recover the cost of service delivery, they may struggle to secure adequate funding through municipal budgets. In the case of non-municipal systems such as regional districts that cannot run a deficit and do not have access to general revenue, they may be forced to rapidly increase rates to ensure the following year's costs are fully covered. Such financial pressures heighten operational and long-term risks, including deferred maintenance, accelerated depletion of reserves, or delays in necessary capital projects. Together, these challenges underscore the need for resilient financial planning and demand-responsive management strategies across the municipal water sector.⁷

By contrast, FCR supports:

- Sustainable service delivery: Ensures predictable funding for renewal and maintenance, reducing long-term costs.⁸
- Reliable performance: Enables proactive asset management and minimizes failures that compromise water quality or service.⁹
- Transparency and accountability: Helps councils and customers understand how rates fund the system and builds trust.¹⁰
- Fairness and efficiency: Encourages conservation, limits deferred costs passed to future users and aligns pricing with system demands.¹¹

Affordability and full cost recovery

FCR can be difficult for smaller municipalities that have fewer ratepayers and higher per-household costs. Major upgrades can strain debt capacity and risk affordability. Many northern and rural communities report that legislated upgrades have consumed much of their borrowing room, making provincial or federal support necessary to bridge funding gaps.¹² Timmins, a smaller community in Northern Ontario, illustrates this tension well: even after several years of water rate increases exceeding four percent, the city is now financing a new water tower with debt. It has also added a one percent levy on top of a planned 4.5 percent rate increase in 2026 after auditors identified a significant shortfall (personal communication, November 27, 2025).



These pressures are further compounded when costs for growth-related infrastructure are shifted onto the broader user base, which can exacerbate affordability challenges for existing residents and businesses — particularly in municipalities with limited fiscal flexibility.

These challenges are not limited to small systems. Larger utilities can also face strong public or political opposition to rate increases. In many Québec communities, resistance to user pay models has constrained cost recovery reforms even when infrastructure needs are urgent.

From broad cost recovery to sustainable cost recovery

In the European Union, policy discussions have shifted from broad cost recovery to sustainable cost recovery. Broad cost recovery seeks to recover not only the financial costs of water services (e.g., operations, maintenance, depreciation, and capital financing), but also environmental and resource costs associated with ecological damage and water scarcity. The Polluter Pays Principle is often applied to determine who should bear those additional costs.¹³ Sustainable cost recovery, by contrast, acknowledges that recovering every cost element through water rates alone is often unrealistic, particularly for major capital programs and institutional expenses. Instead, it promotes the use of a planned and balanced mix of rates, taxes, and transfers to finance services. This approach emphasizes the importance of predictable public subsidies to support long-term investment planning, while also enabling utilities to design affordable rate structures that maintain financial stability and protect low-income users.¹⁴

To avoid structural funding gaps, jurisdictions apply sustainable cost recovery by:

1. Conducting strategic financial planning to determine the right revenue mix over the asset life cycle and to leverage repayable finance.
2. Earmarking and stabilizing tax or grant contributions so capital subsidies are predictable for multi year programs.
3. Setting user rate policies that balance affordability with the need to fund service reliability and asset renewal.¹⁵



Full cost recovery offers a practical path to closing the funding gap

The following examples describe two municipalities' strategies to reach full cost recovery, one over a longer-term horizon and the over a short-term horizon.

The Regional Municipality of York, Ontario

In the early 2000s, York Region's drinking water and wastewater user rate finances were under strain. Debt was high and projected to rise. Its operating budget was in deficit and being backstopped by reserves. At the same time, asset rehabilitation and replacement needs were growing as systems aged.

By 2009, reserves were depleted and outstanding user rate debt stood at \$335 million. Correcting this problem required several large rate increases over a relatively short period of time.

About the Regional Municipality of York

The Regional Municipality of York, located north of Toronto in Ontario's Greater Toronto Area, serves a rapidly growing population of more than 1.2 million residents across a mix of suburban and urban communities.

York Region is an upper tier municipality that provides wholesale water and wastewater services to nine local cities and towns through a network of shared infrastructure.

Its system includes over 40 groundwater wells, connections to Lake Ontario and Lake Simcoe-based treatment systems, 720 kilometres of watermains and trunk sewers, and over 130 facilities including pumping facilities, storage reservoirs, and six wastewater resource recovery facilities.¹⁶



From 2009 to 2015, York Region implemented 10 percent annual rate increases for water and wastewater services to move closer to full cost recovery pricing. Despite progress, planning was complicated by incomplete asset inventories and condition data, as well as declining per capita consumption, which reduced actual volumes below forecast and created revenue shortfalls. A funding gap remained as long-term asset needs came into sharper focus.

In 2015, York Region released a Financial Sustainability Plan that set the rate trajectory to reach FCR over six years and documented the business case for doing so. The Region continued with nine percent annual increases from 2016 through 2019, deferring increases for two years in response to the COVID-19 pandemic. In 2021, York Region updated its plan through a cross-departmental effort led by Finance and Public Works. The plan draws on best practices, a refreshed user rate financial model, and input from the nine local cities and towns and residents through opinion research.

The user rate model combines full lifecycle costs with projected consumption to calculate rates that maintain solvency and service levels. With average household income above \$112,000, current and proposed rates meet standard affordability tests; the average bill is about 0.9 percent of median household income. However, approximately 23 percent of households in York Region fall below the poverty line threshold. The Region manages two housing support programs to support low-income residents, including those who need support with paying their utility bills.

Based on the 2021 plan, York Regional Council approved annual increases of 3.3 percent for 2022 to 2027. These annual increases are expected to achieve and maintain full cost recovery over that period. Each plan reflects the best available information at the time, and future updates may adjust the outlook as conditions change.

Regional District of North Okanagan, British Columbia

Facing chronic underinvestment, outdated infrastructure (a high number of breaks, 30+ year old meters, failing hydrants, etc.) and a contamination event in the early 2010s, the Regional District of North Okanagan (RDNO) implemented bold measures in 2013 to improve its financial position after completing a master water plan.

To rebuild reserves and restore balance, RDNO implemented significant rate increases. It then established three reserves: rate stabilization, operations with a goal of \$9 million with excesses transferred to the capital reserve, and a capital reserve with an annual goal of \$2 million transferred to the reserve. Long term asset management and financial planning identified the need for steady, predictable rate changes. Rates stabilized in 2017 after two substantial rate increases. Annual adjustments have followed a formula of CPI +1.5 percent, which keeps the utility on track without sudden spikes.

Importantly, RDNO's tiered rate structure also provides a built-in measure of affordability: customers who use less water pay less. Also, most low-income households live in apartments with little or no outdoor water use; this means they naturally benefit from the lower tiers. The rate stabilization reserve is capped at \$1.5 million and is used to offset shortfalls in years when revenues fall below budget, smoothing bills and protecting planned work. RDNO's rates are now broadly aligned with neighbouring municipalities that are also addressing renewal and growth needs (see Figure 1 on next page).

Shifting sentiment from resistance to recognition required consistent public engagement. RDNO invested in education and outreach, including summer student teams at markets and festivals, school workshops delivered by a local environmental group, plant tours, and presentations on request.

About the Regional District of North Okanagan (RDNO)

The Regional District of North Okanagan (RDNO) in British Columbia supplies, treats, and distributes drinking water to approximately 54,000 residents and 2,833 hectares of agricultural land in Greater Vernon and also operates the smaller utilities at Silver Star, Mabel Lake, Grindrod, Whitevale. The utility department also manages one small wastewater service in Mabel Lake.

Greater Vernon Water (GVW) is the largest of RDNO's water utilities. Under this model, RDNO owns and manages the water utility and directly operates the water supply infrastructure and completes all capital works while the City of Vernon and the District of Coldstream is contracted to operation and maintain the distribution system. GVW oversees a substantial infrastructure network, including 670 kilometres of water mains, 22,000 water connections, two treatment plants, 39 pumping stations, 22 enclosed storage facilities and six open supply reservoirs.

Serving both urban centres and rural communities, the RDNO system supports a significant agricultural sector with high seasonal demand. These characteristics contribute to notable operational complexity. Summer water use can reach 220 megalitres per day—compared with roughly 35 megalitres per day in winter—creating substantial pressure on operations, infrastructure capacity, and financial planning.¹⁷

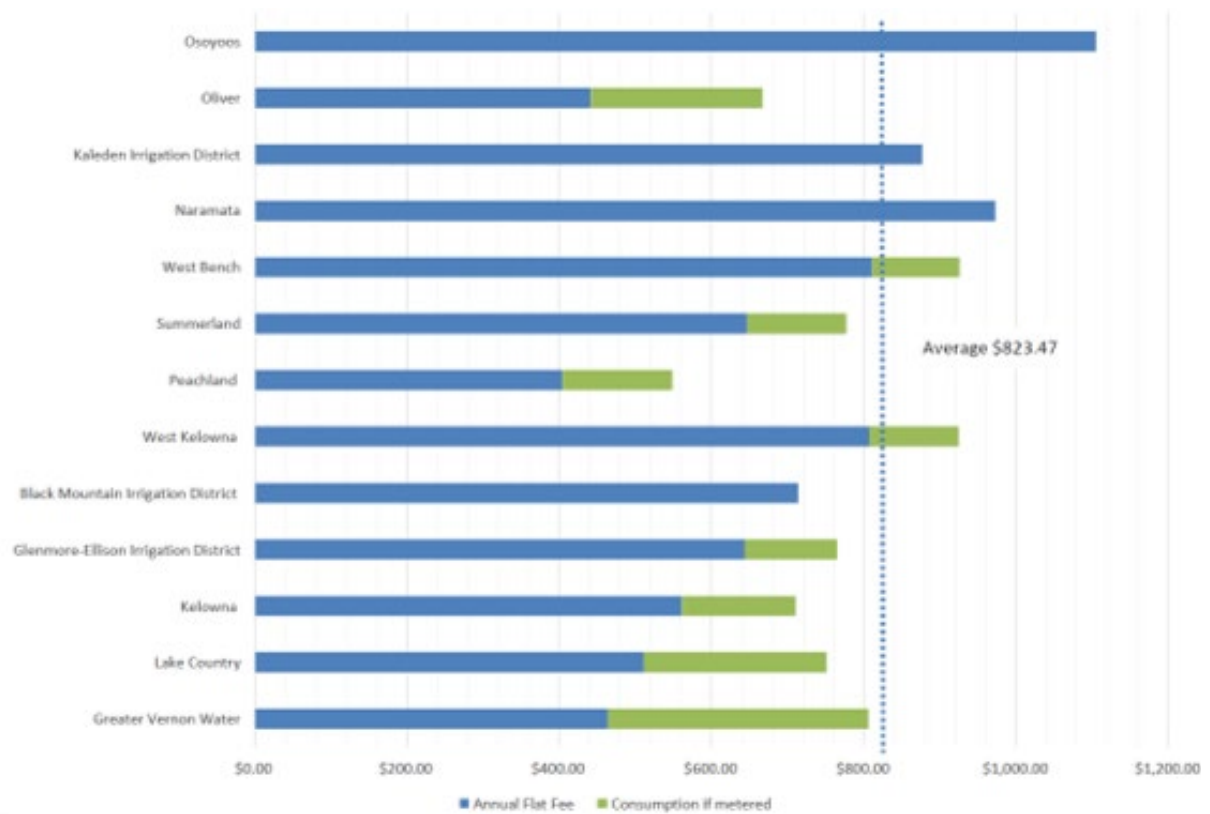


Figure 1: Comparison of 2024 annual water bills for single-family homes in the Okanagan. Source: Z. Marcolin, personal communication, March 14, 2026.

Key takeaways

- Establish asset management plans are foundational. Develop comprehensive inventories, assess asset condition, evaluate risk, and apply life-cycle costing to provide the basis for setting rates that reflect true costs.
- Implement full cost recovery to strengthen resilience. Set rates that cover operating, renewal, and replacement needs. Avoid underpricing, which leads to deferred maintenance and higher long-term costs.
- Address affordability proactively. Identify communities that face financial constraints and provide targeted supports or external funding to balance equity with long-term sustainability.
- Adopt multi-year rate planning. Create predictable rate pathways that minimize volatility, support stable service delivery, and give customers and councils time to prepare for future changes.
- Use data-driven models to guide decisions. Integrate demand forecasts, risk assessments, and asset condition data to strengthen financial strategies and capital planning.
- Link performance metrics to rate plans. Track measurable outcomes like break frequency, compliance levels, renewal rates, and reserve health to ensure transparency and accountability.
- Engage council and the community consistently. Provide plain-language briefings, publish annual progress updates, connect investments to visible service improvements, and equip councillors with clear messages and frequently asked questions (FAQs) to help them communicate the rationale to residents.

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Further reading

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