

## Category

Reserve Funds



## Geography/ Location

AB, BC, NS, ON

## Municipality Size

All



## Tier

Foundation



## Constraints

None

## Administrative Capacity Required

Low



# Fiscal Tool Brief: Water, Wastewater & Stormwater Reserve Funds

**Water, wastewater, and stormwater reserve funds help municipalities maintain, repair, and upgrade essential utility infrastructure while avoiding sudden rate increases.**

Water, wastewater, and stormwater reserve funds are dedicated accounts that municipalities use to manage the financial needs of their utility systems. These reserves are typically supported by user-fees, utility rates, and development-related charges rather than property taxes. Their main role is to ensure that essential water infrastructure, treatment plants, distribution networks, sewer systems, and stormwater assets can be maintained and upgraded without creating sudden rate increases for residents and businesses. Municipalities contribute to these reserves through planned annual allocations, operating surpluses, or one-time revenues such as provincial<sup>1</sup> and federal<sup>2,3</sup> grants.



The funds are then drawn on to cover unexpected repairs, address cost spikes during severe weather, or support capital projects identified through asset management plans. Since water and wastewater services must follow full cost recovery principles in many provinces,<sup>4</sup> these reserves help maintain financial stability and regulatory compliance.





Figure 1. Visual representation of how Water, Wastewater, and Stormwater Reserve Funds work

## Examples

Several municipalities have implemented this fiscal tool to support long-term infrastructure planning. For example, [Middlesex Centre \(ON\)](#) maintains separate water, wastewater, and stormwater reserve funds through its reserve and reserve fund policy. In the policy, deficits are funded through reserve drawdowns with repayment requirements if balances are insufficient. The municipality incorporates dedicated charges directly into monthly water, wastewater, and stormwater rates, for example, in 2025 a 5/8" residential meter includes monthly contributions of \$18.54 (water), \$19.88 (wastewater), and \$17.05 (stormwater) to support long-term asset renewal.<sup>5</sup> These reserves are directly tied to the municipality's asset management plan and are reviewed annually to ensure adequate funding levels for future capital needs. [East Hants \(NS\)](#) operates a dedicated water utility reserve under its 2024 Special Reserves Policy.<sup>6</sup> The municipality funds the reserve through annual contributions equal to the water utility's depreciation expense, aligning reserve growth with the actual lifecycle cost of water system assets. Funds support capital renewal, regulatory compliance upgrades, and rate stabilization. Since depreciation is embedded in the approved utility rate model, reserve contributions increase automatically as the asset base grows or as capital upgrades occur, creating a consistent and predictable method for building reserve capacity. [Courtenay \(BC\)](#) maintains multiple utility reserves, including a water utility reserve, sewer utility reserve, and storm drainage reserve, guided by its five-year financial plan.<sup>7</sup> Each reserve is funded through utility user fees, and contributions tied to asset management targets. Courtenay's storm drainage reserve is used to support both traditional capital renewal and green stormwater infrastructure, reflecting recent shifts in provincial asset management guidance.<sup>8</sup> Annual reserve transfers are

determined through the City's 20-year utility financial model, allowing the municipality to track whether reserves keep pace with projected infrastructure renewal needs. Other municipalities have established water, wastewater or stormwater reserve funds include [Oakville \(ON\)](#), [Thunder Bay \(ON\)](#), [Camrose \(AB\)](#), and [St. Albert \(AB\)](#).

## Relevance to Advancing Adaptation

These funds help municipalities prepare for climate impacts that place increasing strain on underground infrastructure, treatment systems, and stormwater networks. Since these reserves accumulate over time through utility rates or one-time funding, they give municipalities the ability to act before systems fail, rather than relying on emergency allocations after damage occurs. Consider a small municipality facing more frequent rainfall events, where updated historical Intensity-Duration-Frequency (IDF)<sup>9</sup> curves show 25% higher peak flows by 2050. With a stormwater reserve holding \$4 million, the municipality can accelerate a package of adaptation upgrades such as replacing an undersized trunk sewer in a flood prone neighbourhood, rehabilitating 3 km of clay sewer pipe vulnerable to inflow and infiltration, and constructing two new bioswales to reduce surface runoff near a school and hospital. Without a dedicated reserve, these works would likely be deferred or financed through more expensive short-term borrowing. Similarly, water reserves help utilities manage climate-related supply and revenue volatility. During drought years, a community may impose outdoor watering restrictions that reduce consumption by 10–20%, creating shortfalls in rate supported revenue.<sup>10</sup>

A well-planned water reserve allows the municipality to maintain operations and continue funding adaptation measures, such as adding backup wells, rehabilitating aging reservoirs, or installing

monitoring systems to track source water stress, without abrupt rate increases. Lastly, these reserves align with evolving provincial asset-management requirements that emphasize climate risk, lifecycle costing, and renewal planning.<sup>11,12</sup> By connecting reserve funds to asset management plans and multi-year utility models, municipalities ensure that adaptation is built directly into the financial structure of essential water and stormwater services.

## Accessibility

Water, wastewater, and stormwater reserve funds are widely accessible since municipalities can create them through a local bylaw and fund them through existing utility rates. No provincial or federal approvals are required, and the approach aligns with full cost recovery principles used in most Canadian water systems.<sup>13,14</sup> This makes reserve funds one of the easiest fiscal tools for municipalities to adopt, regardless of size. Accessibility depends mainly on the strength of the local rate base. Larger municipalities can build reserves quickly, while small or rural communities with limited growth may only generate modest annual contributions. To address this, many municipalities phase in contributions gradually or adjust rate structures to balance household affordability with long-term infrastructure needs.

## Feasibility

One of the main feasibility challenges is the municipality's ability to generate steady and predictable utility revenues. Communities with a small rate base, aging pipeline, or limited growth often struggle to accumulate enough reserve funding to support major climate-related upgrades. Feasibility improves when municipalities link reserve contributions to multi-year financial plans, asset-management requirements, and external grants. Provinces

increasingly require utilities to plan for lifecycle costs and climate risks, for example, Ontario's O. Reg. 588/17 mandates long-term asset-management planning for core infrastructure.<sup>15</sup> One-time transfers from programs such as the [Canada Housing Infrastructure Fund](#) can also be directed into dedicated reserves, giving municipalities additional capacity to fund adaptation focused upgrades.

## Risk

A key risk with water, wastewater, and stormwater reserve funds is that contributions may not keep pace with increasing infrastructure pressures driven by climate change. Increased rainfall intensity, drought-related supply stress, and heat impacting pipeline degradation can accelerate deterioration, leaving utilities with renewal costs that exceed planned reserve levels. Secondly, financial and revenue stability risks also emerge when rate-supported utilities experience consumption volatility. During drought conditions, water use can decline by 10–20%, reducing operating revenues and limiting the ability to maintain scheduled reserve contributions.<sup>16</sup> Furthermore, governance and policy risks arise if reserve fund bylaws lack clarity or allow borrowing for non-utility purposes. Without strict restrictions and repayment rules, reserves may be drawn down to address budgetary pressures, reducing funds available for critical adaptation investments. Lastly, reputational and political risks may also occur if reserve balances appear insufficient to support climate readiness commitments. When major failures occur, such as repeated sewer backups or water main breaks during extreme events, the public may question whether the municipality managed its reserves effectively. Transparent policies, annual reporting, and alignment with asset management plans are key to maintaining confidence within this fiscal tool.

## Scalability

In general, these reserve funds can scale effectively because municipalities can adjust contributions as their rate base grows or as new capital needs emerge. Scalability improves when reserve strategies are linked to long-term asset plans and supported by outside funding, such as provincial programs that encourage lifecycle planning and climate readiness. For example, British Columbia's [Asset Management for Sustainable Service Delivery](#) framework, which promotes steady funding for infrastructure renewal. Scalability is also strengthened when utilities improve forecasting and cost tracking, allowing reserve contributions to adjust as climate pressures increase. A few case studies show that utilities with detailed renewal forecasting, such as those participating in the [National Water and Wastewater Benchmarking Initiative](#), are better able to scale reserve funding to match future capital needs.

## Evaluation Matrix

Scoring: High = +1 | Medium = 0 | Low = -1

| Criterion                   | Rating | Score | Key Evidence                                    | Assessment                                                                                                    |
|-----------------------------|--------|-------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Effectiveness & Performance | Medium | +1    | Direct funding through dedicated reserves       | Provides stable, predictable funding for adaptation-related infrastructure through asset management planning. |
| Economic Efficiency         | High   | +1    | Low complexity through existing utility systems | Uses an efficient cost-recovery model with low incremental administrative burden and stable revenues.         |
| Equity & Fairness           | High   | 0     | User-pay model with affordability concerns      | Aligns costs with service users, but affordability concerns can arise without mitigation measures.            |
| Political Acceptability     | High   | +1    | Clear linkage between fees and services         | Strong benefit-principle alignment supports transparency and public acceptability.                            |
| Feasibility (Admin/Legal)   | High   | +1    | Municipal by-law authority; standard practice   | Widely implementable through existing municipal authority and utility finance systems.                        |
| Coherence (Portfolio Fit)   | High   | +1    | Integrated with asset management plans          | Fits strongly with lifecycle planning, regulatory requirements, and broader municipal finance systems.        |

Best Use Context

Most effective in municipalities with established utility systems and asset management planning. It is particularly well suited to embedding adaptation into routine capital planning rather than financing large, one-time projects.

| Context Factor                   | Relevance | Notes                                                                               |
|----------------------------------|-----------|-------------------------------------------------------------------------------------|
| Municipal Size                   | Medium    | Larger municipalities build reserves faster; smaller ones face slower accumulation. |
| Administrative Capacity Required | Low       | Can be managed within existing utility finance systems.                             |
| Development Pressure             | Low       | Not dependent on growth; funded through ongoing user fees.                          |
| Climate Risk Targeting           | Medium    | Supports adaptation broadly but not highly targeted to specific risks.              |
| Fiscal Flexibility Required      | Medium    | Requires stable rate-setting capacity and long-term planning discipline.            |

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