

Category

User Fees and
Regulatory Charges



Geography/ Location

AB, BC, MB, NB,
NS, ON, QC

Municipality Size

Large



Tier

Foundation



Constraints

Complexity



Administrative Capacity Required

Medium



Fiscal Tool Brief: Stormwater Fees

Stormwater fees charge property owners based on runoff impacts, creating dedicated funding for stormwater infrastructure while encouraging practices that reduce runoff.

Stormwater fees, more commonly referred to as stormwater charges, are mechanisms used by municipalities to generate dedicated funding for the management of stormwater runoff, from residential, multi-residential and non-residential properties. These charges are typically based on the amount of impervious surface, such as rooftops, driveways, and parking lots on a property, as these surfaces prevent water from soaking into the ground and contribute to runoff.¹ Rather than relying solely on property taxes, which may not reflect a property's actual impact on

the stormwater system, stormwater charges ensure a fairer system where property owners contribute in proportion to their runoff generation. The funds collected are used exclusively for the construction, maintenance, and upgrading of stormwater infrastructure, including sewers, ponds, and green infrastructure. This mechanism can align the fees with the extent of a property's contribution to runoff, and thus, municipalities can apply a "user-pay" principle that encourages property owners to adopt stormwater management practices on their own lots, while ensuring sustainable funding for system-wide resilience improvements.² By tying charges to impervious areas, municipalities not only secure a sustainable revenue stream but also incentivize property owners to adopt best practices that reduce water runoff and improve water quality.



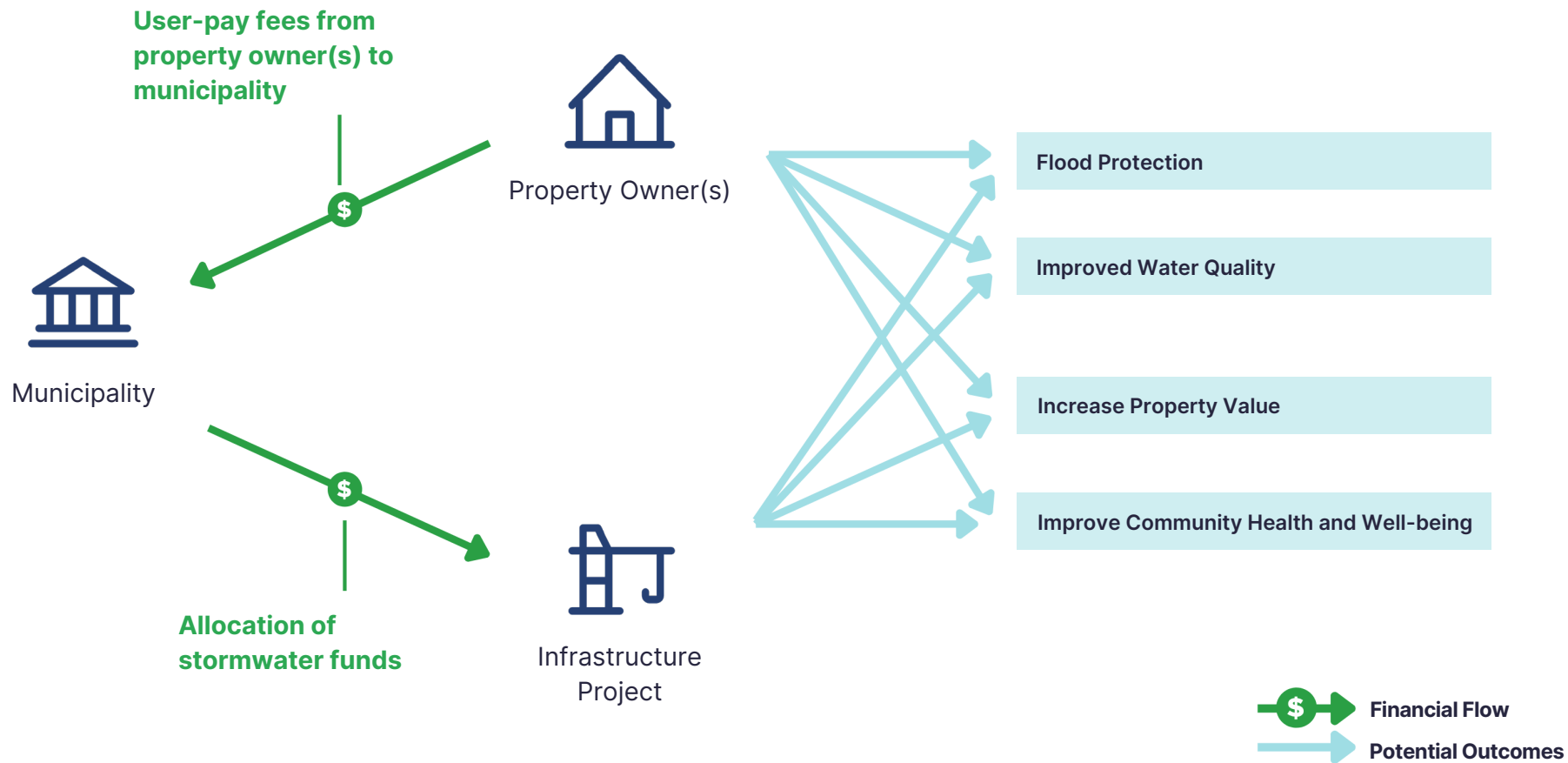


Figure 1. Visual representation of how Stormwater Fees work

Examples

Several Canadian municipalities have implemented stormwater charges to secure sustainable funding for stormwater infrastructure and promote equitable cost-sharing among property owners.

[Kitchener \(ON\)](#) was one of the first in Canada to adopt an impervious area-based stormwater utility in 2011, linking charges to the amount of runoff a property generates. [Victoria \(BC\)](#) transitioned to a stormwater utility model in 2016, incorporating both fixed and variable rate components, and offers a Rainwater Rewards program to encourage green infrastructure adoption, such as rain gardens and permeable driveways, with rebates ranging from \$35 to \$1,500 to assist with the upfront costs.³ [Halifax \(NS\)](#) charges residential properties based on the impervious area on the property using a tiered approach where properties with more impervious area (i.e., roofs, asphalt, concrete, and packed gravel) would pay more than those with less impervious area, while non-residential properties are assessed based on their size, characteristics, and property use. [Edmonton \(AB\)](#) also uses impervious area assessments under its Stormwater Intensity Adjustment Program (SIAP), offering credits for properties that reduce runoff through stormwater best practices. These examples illustrate how municipalities are tailoring their stormwater fees to local needs, infrastructure demands, and community engagement goals.

Relevance to Advancing Adaptation

Stormwater charges are becoming more relevant as municipalities face increasing pressures from climate change, particularly more frequent and intense rainfall events, urban flooding, and aging infrastructure. Mississauga (ON) introduced its stormwater charge in 2016 as the response to two major storm and flooding events in 2009 and 2013.^{4,5} The stormwater charge is calculated based on

the amount of hard surface on the property and the funds collected from this charge contributes directly to the City's stormwater budget, which is used exclusively to deliver stormwater services and programs in the City, and to meet the increasing demand and investment necessary for stormwater management (planning, operations, infrastructure construction, repairs, and improvements). These types of investments on stormwater management, enabled by the stormwater charge, help the municipality avoid more costly emergency responses, reduce property damage, and build long-term resilience to climate impacts. Similar to [Kitchener's](#), Victoria's Rainwater Rewards program illustrates the incentive dimension: property owners who install green infrastructure (rain gardens, permeable driveways, or rainwater harvesting systems) receive rebates of \$35 to \$1,500, creating a direct financial signal for private adaptation investment.⁶ These credit and incentive systems, by reducing both municipal infrastructure burden and private runoff contribution, collectively build resilience against increasingly intense storm events.

Accessibility

Stormwater fees are universally accessible: every Canadian province's general municipal fee and utility powers provide adequate statutory authority, and no legislative amendment is required to implement them. This places stormwater fees among the most administratively accessible tools in this catalogue.

The authority flows from general fee or utility provisions rather than stormwater-specific legislation. In Ontario, s. 391(1) of the Municipal Act authorizes fees for services provided by the municipality, and the "public utilities" sphere of jurisdiction at s. 11(3) supports stormwater utility design. Notably, Ontario's drainage sphere explicitly excludes storm sewers, so stormwater is reached

through the utility pathway rather than the drainage one.⁷ Ontario municipalities (like Mississauga) use this authority to support stormwater utility charges based on impervious surface area. In British Columbia, s. 194 of the Community Charter authorizes fees for municipal services, and s. 397 of the Local Government Act provides equivalent authority for regional districts; the latter enabling cross-boundary stormwater service areas where watershed management requires them.^{8,9} In Alberta, s. 382(1)(b) of the Municipal Government Act includes a “sewer tax” among enumerated special tax categories, and general user-fee authority offers a more flexible alternative.¹⁰ Manitoba’s Part 10, Division 4 (Local Improvements and Special Services) of The Municipal Act.¹¹ Nova Scotia’s Municipal Government Act,¹² and New Brunswick’s Local Governance Act¹³ each provide analogous general utility fee authority. As for Quebec municipalities, they can apply stormwater charges using their general power to levy regulatory charges.¹⁴

Since the statutory basis is uncontested, implementation barriers are practical rather than legal: designing an equitable rate structure based on impervious surface area requires parcel-level impervious-area data (typically derived from aerial imagery or GIS-based land-cover modelling), billing system capacity to handle non-assessment-based charges, and governance capacity for appeals and boundary decisions. Ottawa’s 2025 rate structure review adopted impervious surface area as its preferred metric because it directly correlates with runoff volume and infrastructure demand, a framing increasingly standard across Canadian stormwater utility designs.¹⁵ Smaller and rural municipalities face higher per-unit setup costs relative to revenue generated, creating an economies-of-scale constraint independent of the legal framework.

Feasibility

Stormwater charges are generally considered a highly feasible fiscal tool for municipalities in Canada, especially in urban or rapidly developing areas with growing stormwater infrastructure needs. Politically, they tend to gain traction where there is strong support for environmental cost recovery and infrastructure sustainability. For example, cities like Kitchener and Mississauga successfully implemented stormwater fees following extensive public engagement and council approval, using messaging that emphasized fairness (polluter-pays principle) and dedicated reinvestment in local flood protection infrastructure.^{16,17,18}

Economically, stormwater fees are relatively low per household, typically between \$100–\$160 annually. However, feasibility is often lower in smaller or rural municipalities due to limited administrative capacity, data availability (e.g., impervious surface mapping, GIS data), and public resistance to new fees. Socially, the success of a stormwater fee depends on public understanding of stormwater as a utility-like service rather than a general tax, which requires targeted outreach and clear communication. Overall, while initial implementation may require political will and technical groundwork, stormwater fees are viewed as a politically and economically viable tool for municipalities seeking to build climate resilience and maintain aging infrastructure.

Risk

One common concern with stormwater charges is its administrative complexity. For example, accurately assessing impervious surface areas require GIS data, technical staff, and billing system integration, resources that may be limited in smaller municipalities. Errors or

inconsistencies in assessments can lead to public complaints or legal challenges. There is also the risk of inequity if credit programs are not accessible, allowing major runoff contributors such as commercial or institutional properties to pay disproportionately less than smaller residential users.¹⁹ Flat-rate fee structures, in particular, can raise equity concerns by placing a relatively higher burden on lower-income homeowners compared to larger commercial or industrial properties. For instance, a modest single-family home on a small lot may pay the same flat stormwater fee as a large commercial plaza with extensive paved parking, despite contributing far less runoff.²⁰ Another sensitive risk is the perception of unfairness when properties that are already chronically affected by flooding are charged based on runoff generation. This approach may be met with strong resistance from owners who are already incurring substantial losses from frequent flood events (e.g., 100-year storms that now occur more regularly). In such cases, the fee may be seen as an added penalty rather than an incentive. This risk could be addressed at least partially through design by reinvesting a designated part of the revenue into these high-risk neighbourhoods and by exempting properties with documented flood damage until remediation is complete. Another risk lies in underutilized revenue: if funds are not visibly reinvested in infrastructure improvements or adaptation efforts, public trust may decline. Additionally, transitioning stormwater funding from property taxes to user fees can generate political friction. In Ontario, for example, some municipalities exploring stormwater charges have encountered

resistance from council and the public, particularly where the shift was viewed as a hidden tax or not explained clearly.^{21,22,23}

Scalability

Stormwater charges offer municipalities a scalable funding model that can grow in line with infrastructure demands, development, and climate risks. Since the fee is based on measurable property characteristics such as impervious surface area, it can expand automatically as urban areas grow or densify. Stormwater user fees can be adjusted over time to reflect inflation, service levels, or new regulatory requirements, providing flexibility without relying on annual property tax reallocations.²⁴ Fee structures such as tiered rates enable municipalities to scale revenues predictably while maintaining fairness.²⁵ Additionally, by linking charges to dedicated capital and operating budgets, municipalities can plan multi-year upgrades and adapt programs as needs evolve, ensuring the fiscal tool remains effective under future climate conditions. These same distinct revenues also are supportive to the conditions of potential private capital involvement; they can be utilized to service leverage provided by upfront capital financing when annual budgets or municipal reserves are insufficient to fund large projects. Addressing the equity concerns mentioned above requires careful communication, transparent reinvestment of revenues in flood-prone areas, and recognition of historical planning decisions that have contributed to current vulnerabilities.

Evaluation Matrix

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

Criterion	Rating	Score	Key Evidence	Assessment
Effectiveness & Performance	High	+1	Dedicated revenue for stormwater infrastructure	Provides a reliable, targeted funding stream for flood mitigation and runoff management.
Economic Efficiency	Medium	0	GIS mapping and billing system requirements	Efficient cost recovery, but requires moderate technical and administrative setup.
Equity & Fairness	Medium	0	Impervious-area pricing with design limitations	Aligns costs with runoff contribution, though affordability concerns remain if poorly designed.
Political Acceptability	Medium	0	Perceived as new tax; requires communication	Generally acceptable but politically sensitive without strong public engagement.
Feasibility (Admin/Legal)	High	+1	Broad municipal authority; utility billing integration	Widely implementable using existing municipal powers and systems.
Coherence (Portfolio Fit)	High	+1	Utility-like model aligned with service delivery	Integrates well with municipal finance systems and long-term asset management.

Best Use Context

Stormwater fees are most effective in municipalities with significant flood risk and extensive impervious surfaces, where dedicated funding for drainage infrastructure is needed. They work best where technical capacity exists to administer the system and where municipalities can support implementation with clear public communication.

Context Factor	Relevance	Notes
Municipal Size	High	Most effective in urban municipalities with significant infrastructure needs
Administrative Capacity Required	Medium	Requires GIS, billing systems, and technical expertise
Development Pressure	Medium	Revenue scales with impervious surface growth
Climate Risk Targeting	High	Highly effective for flood and stormwater risks
Fiscal Flexibility Required	Low	Generates stable, dedicated revenue outside property tax base

Recommended Citation

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