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Canadian Water Network
Igniting interest.
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P3 financial models

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The challenge: Growing need for investment in municipal infrastructure

Across Canada, municipalities are working to upgrade water and wastewater systems to meet stricter environmental and public health standards while keeping rates affordable and debt manageable.

Recent federal data highlight the scale of the challenge. As of 2022, an estimated $294.4 billion was required to rehabilitate or replace existing assets to keep public infrastructure in good condition. The share of assets rated to be in good or very good condition slipped from 59 percent in 2020 to 55 percent in 2022.[1]

Municipalities bear much of this pressure because they own about 60 percent of Canada's public infrastructure, while receiving between eight and 10 percent of every tax dollar.[2] These realities have led many communities to explore delivery models that align capital, operations, and maintenance over a project's full life cycle. One of the tools available is the public-private partnership, often called a P3.[3]

This case study examines how P3s can support municipal water infrastructure delivery in Canada. It explains how infrastructure is commonly procured, outlines what a P3 model is and how it works, and then presents the City of Wetaskiwin's wastewater treatment project as a success story.

Overview: How municipal infrastructure gets built

Traditionally, municipalities plan, design, tender, build, and then operate infrastructure using the design-bid-build sequence. Cities may use in-house staff or hire consultants to prepare designs, procure a builder through competitive tender, and supervise construction. Once complete, the asset is handed to the municipality for long-term operation and maintenance. Financing can come from reserves, user fee revenues, intergovernmental transfers, or long-term debt. In these cases, the public sector bears the lifecycle responsibility once the asset is commissioned.[4]

Under this conventional model, the private sector already plays a significant role in design and construction. The municipality retains the responsibility to operate, maintain, and renew the asset through its useful life, as well as to manage cost and performance risks if the facility underperforms or requires early rehabilitation. Those realities underpin interest in alternative delivery when the objectives include whole-of-life optimization and clear risk assignment.[4]

What is a P3 and how it works in the water sector

In a P3, a public owner retains ownership of the infrastructure while a private consortium takes responsibility for multiple phases of the project, such as design, construction, financing, operation, or maintenance. This happens over a long-term contract and often for a significant portion of the asset's useful life. Bundling these phases under one accountable entity encourages design and delivery decisions that optimize long-term performance and lifecycle costs, with the public sector defining the service standards the private partner must meet.[4]

In the water sector, P3 structures vary along a spectrum. At one end, a municipality might retain operations but contract out maintenance or specific services. At the other end is a Design Build Finance Operate Maintain (DBFOM) model where a private partner is responsible for delivering the entire lifecycle of the project under a long-term performance contract. Between these poles lie many combinations that tailor responsibilities and risks to the local context.[4] Canadian guidance emphasizes careful definition of scope, measurable performance standards, and transparent risk allocation to align incentives.[5]

Beyond assigning responsibilities, P3s also differ in how the private partner is paid. Most deals use one of two revenue models. In user pay arrangements, the private partner charges end users and carries demand risk (i.e., revenues can be lower or higher than expected if actual costs differ from forecasts). Fees are typically set and adjusted under regulated price constraints, or mechanisms that manage costs such as structured payments, performance-based penalties, or price-capped user fees. In the second model, availability payment arrangements, the municipality retains rate-setting authority and makes fixed, performance-linked payments so long as the asset meets defined service standards, with demand risk remaining on the public side. Each approach has fiscal and governance implications that should be assessed through value-for-money and affordability analyses, including consideration of contingent liabilities and long-term budget impacts.[6]

Where P3s can add value, and what to monitor

Potential benefits: When designed and procured well, a P3 can align design choices with long-term operations and reduce lifecycle costs through integrated responsibility. A P3 can also assign construction, performance, and maintenance risks to the party best positioned to manage them. For water assets, long-term maintenance obligations in the contract can mitigate the risk of deferred upkeep that sometimes occurs when budgets are tight. Clear output specifications and performance monitoring sharpen accountability over decades.[4]

Costs and trade-offs: Risk transfer is not free. Private partners price risks into bids, which can raise the nominal delivery price relative to traditional procurement. Governments should assess whether any premium is outweighed by lower exposure to cost overruns, delays, or performance failures, and do so with transparent assumptions. In Ontario, the Auditor General's 2014 review of 74 P3 projects found that the province paid significantly more than it would have under public delivery. The audit also concluded there was no empirical evidence to support key risk transfer assumptions that drove value-for-money claims, with risk transfer often modelled at roughly 50 percent of capital cost and in some cases inappropriately included.[7] Availability payment P3s, in particular, create multiyear payment streams and long-term liabilities that require rigorous fiscal planning and disclosure



of future obligations. A robust business case should compare options on a like-for-like basis, including financing costs, empirically supported retained risk estimates, and the public owner's contract management capacity.[4,7]

Governance and public interest: Since P3s rely on long contracts, public owners need strong oversight to enforce service standards, adjust for change, and protect transparency. Municipalities should maintain expertise to manage the relationship and to interpret performance data. The Canadian Council for Public-Private Partnerships recommends engaging the public early, publishing contract summaries, and setting clear conditions for hand back at the end of term. Sector associations and independent analysts stress that P3s are tools, not ends in themselves, and should be selected only when they deliver demonstrable value over alternatives.[5,9]

Case study: Wetaskiwin, Alberta

About Wetaskiwin

The City of Wetaskiwin has created a Municipally Controlled Corporation (MCC) named Peace Hills Utilities Inc. to provide drinking water and wastewater services to a community of roughly 13,000 residents.

Drinking water is supplied through a water treatment plant located 13 kilometres east of the city, where raw water is drawn from Coal Lake before conveyed to municipal reservoirs for distribution. Wastewater services are delivered through the city's new advanced wastewater treatment plant, which opened in 2025.[12]

The compliance imperative and funding gap

The City of Wetaskiwin's wastewater system was built as a lagoon in 1979. In 2019, the Government of Alberta renewed the operating approval. The provincial government provided the approval with more stringent effluent limits and a 2023 deadline, reflecting the federal Wastewater Systems Effluent Regulations (WSER) that require at least secondary treatment. The City signalled progress by funding detailed design and began seeking external support to bridge a project cost in the range of $40 to 50 million. Although a $12.9 million provincial grant was secured, federal funding did not materialize at that time and this left a sizable gap.[10]

Choosing a partnership structure

After evaluating delivery options, Wetaskiwin selected a partnership approach in 2020, bringing in Graham Capital and Aquatera Utilities to provide construction, financing, and long-term operations and maintenance through a municipally controlled corporation (MCC) called Peace Hills Utilities Inc. This structure functions as a DBFOM-style model while retaining municipal ownership and governance authority through an MCC. The City framed the structure as a way to meet regulatory deadlines, secure competitive financing, and retain governance control through a local board. The partnership used early contractor involvement to align design, constructability, cost control, and schedule.[10,11]

How the financing worked

The project reached financial close in spring 2022 under Graham's Municipal Asset Partnership (MAP) framework, which the proponent describes as a model that preserves municipal control and rate revenues while enabling access to private financing. The provincial grant was combined with private debt and Green Bond financing to support a capital program valued at approximately $53 to 55 million. Construction began in 2022, with commissioning targeted for 2023–2024 and project completion celebrated in 2025.

As part of its financing structure, the project received a Green Bond designation, reflecting its compliance with stringent evaluation criteria, robust reporting requirements, and the demonstration of measurable environmental objectives.[13]

In 2022, Wetaskiwin established an MCC structure to operate its water and wastewater services. It did this to retain asset ownership and governance authority, while allocating project liabilities to the MCC entity. Under this approach, the investment is accounted for at the MCC level and not on the City's balance sheet. The City remains the sole shareholder of the MCC, and City Council maintains rate-setting authority.[10]

Roles and governance

Under the arrangement, Peace Hills Utilities Inc. manages the utility while Aquatera operates water and wastewater services under contract. The board composition includes City councillors and community representatives, which the City characterizes as retaining local control over service levels and rates while accessing private sector expertise. This approach differs from a sale of assets. Instead, it is a long term service partnership where the municipality remains at the center of decision making.[11]

What Wetaskiwin's experience illustrates

Matching structure to objectives

Wetaskiwin's framework linked financing, construction, and operations to meet a compliance deadline under the WSER, while preserving local governance through an MCC. The city cited benefits in preserving borrowing headroom for other priorities, assigning life cycle obligations to an experienced operator, and meeting deadlines with early contractor involvement. For communities facing similar regulatory timelines, a P3 can align incentives across design, build, and operate phases to reduce schedule and performance risk.[11]



Managing affordability and rate impacts

Any delivery model influences rate paths. In Wetaskiwin's case, rate discussions were ongoing as grants and construction costs evolved. Local reports in 2024 indicated that additional provincial funding helped reduce previously anticipated increases. This illustrates how combining external contributions with structured private financing can help stabilize utility bills. Long term, the value proposition rests on meeting performance standards reliably and avoiding costly deferred maintenance.[14]

Clarity on risk and transparency

Risk transfer must be explicit, priced, and monitored when using P3 models. The municipality should be clear about which risks remain in-house, which are transferred to the private partner, and how performance deductions or remedies are applied if standards are missed. Wetaskiwin's public documents and partner releases emphasize explicit roles for construction, operations, and maintenance, and board-level oversight on the municipal side. This clarity is consistent with good practice.[4,11]

Beyond one city: Using P3s prudently

Situations where P3s are often considered

Municipalities often look at P3s when facing significant capital upgrades with hard regulatory deadlines, when integrated design to operations optimization could lower lifecycle cost, or when long-term maintenance obligations need to be contractually enforceable. Availability payment models can be useful for assets without a direct user pay revenue stream, while user fee or revenue risk models may suit utilities with stable demand and rate frameworks. The choice depends on local policy, affordability, and risk tolerance.[4]

Lessons from guidance and critiques

The Canadian Council for Public-Private Partnerships stresses that P3s should be chosen only after robust options analysis, transparent value-for-money assessments, and careful contract

design. At the same time, researchers and advocates caution that availability payment concessions create long multiyear obligations that must be disclosed and planned for. They also caution that poorly designed deals can reduce flexibility or cost more than public procurement. Municipal owners should build contract management capacity, retain independent advisors, and ensure public reporting throughout the term.[5]

The role of public ownership and control

Canadian practice generally keeps water infrastructure in public ownership, even under long-term DBFOM contracts. Ownership retention supports public oversight, while performance-based contracts can create strong incentives for consistent service. The key is to calibrate responsibilities and remedies so that the private partner can innovate and manage risks, while the municipality preserves its duty to protect public health, affordability, and environmental outcomes.[5]

Key takeaways

- **Use public-private partnerships to integrate full project delivery under one accountable party.** Structure P3s so design, construction, financing, operations, and maintenance are bundled together, with payments tied to user fees or availability-based performance. This creates a single line of accountability while the municipality retains ownership of the asset.
- **Apply life-cycle thinking as the threshold test for P3 suitability.** Select a P3 only when bundling design–build–finance–operate–maintain services produces clear whole-of-life value over traditional delivery. Rely on contractual performance standards and maintenance requirements to reduce deferred upkeep risk and minimize total cost of ownership.
- **Evaluate risk transfer carefully, recognizing it comes at a price.** Understand that private partners will price construction, performance, and maintenance risks into their bids. Determine whether the value of reduced exposure to overruns, delays, or performance failures outweighs the premium relative to design-bid-build.
- **Retain public ownership and governance authority.** Use structures such as municipally controlled corporations to keep ownership, rate-setting authority, and policy oversight with the municipality while contracting private expertise for delivery. Define board composition, reporting expectations, and decision rights clearly to preserve public control.
- **Follow rigorous evaluation and contract management practices.** Conduct thorough option screening, value-for-money analysis, and detailed performance specifications before selecting a P3. Ensure strong municipal contract management capacity so the partnership delivers promised outcomes. Choose P3s only when they demonstrably outperform traditional procurement in the local context.
- **Prioritize governance and transparency in partnership design.** Adopt models that maintain council influence over rate setting, clarify operational roles, and ensure public accountability while leveraging private-sector skills for operations and maintenance.

References

1. Statistics Canada. (2025, June 24). The Daily: Canada's core public infrastructure survey: Required renewal budgets, 2022. https://www150.statcan.gc.ca/n1/daily-quotidien/250624/dq250624b-eng.htm
2. Federation of Canadian Municipalities. (2024, June 6). FCM releases roadmap to improve quality of life for Canadians by strengthening municipal finances. https://fcm.ca/en/news-media/news-release/fcm-releases-roadmap-improve-quality-life-canadians-strengthening-municipal-finances
3. Canadian Union of Public Employees. (2020). A guide to public-private partnerships (P3s). https://cupe.ca/sites/cupe/files/p3_guide_en.pdf
4. U.S. Environmental Protection Agency. (2017). EPA's public-private partnership (P3) perspective. https://www.epa.gov/sites/default/files/2017-03/documents/epa_p3_perspective_final_2.24.17.pdf
5. Canadian Council for Public-Private Partnerships. (2024). P3s: A guide for municipalities. https://www.pppcouncil.ca/getattachment/2830f36c-a96c-4fbb-9f52-dc3d0bb0455b/CCPPP-P3s_A-Guide-for-Municipalities-FINAL_Oct-30_2024.pdf
6. World Bank. (n.d.). Structuring PPP contracts. https://ppp.worldbank.org/structuring-ppp-contract
7. Office of the Auditor General of Ontario. (2014). 2014 annual report. https://www.auditor.on.ca/en/content/annualreports/arreports/en14/2014AR_en_web.pdf
8. In the Public Interest. (2018). Research brief: Availability payments in public-private partnerships: Issues and implications. https://www.inthepublicinterest.org/wp-content/uploads/ITPI_AvailabilityPayments_May2018FINAL.pdf
9. In the Public Interest. (2017). Infrastructure public-private partnerships: A guide for local communities. https://nrcne.org/wp-content/uploads/2019/12/ITPI_InfrastructureP3sGuide_Jan2017.pdf
10. City of Wetaskiwin. (n.d.). Wastewater treatment facility project information. https://www.whatifwetaskiwin.ca/wastewater-treatment-facility
11. City of Wetaskiwin. (n.d.). Peace Hills Utilities Inc. https://www.wetaskiwin.ca/life-in-wetaskiwin/utilities/peace-hills-utilities-inc/
12. Peace Hills Utilities Inc. (2025, September 10). Community invited to Wetaskiwin Wastewater Treatment Plant grand opening. https://www.wetaskiwin.ca/media/by0dlqem/phui-wastewater-treatment-plant-grand-opening.pdf
13. Graham Construction. (2022). Press release: Municipal Asset Partnership (MAP). https://www.grahambuilds.com/wp-content/uploads/2022/07/map_press_release_graham-apr26v4.pdf
14. Environmental Science & Engineering Magazine. (2024, May 27). Alberta's Wetaskiwin WWTP upgrades set for summer completion. Environmental Science & Engineering Magazine. https://esemag.com/news/albertas-wetaskiwin-wwtp-upgrades-set-for-summer-completion/

Further reading

1. U.S. Environmental Protection Agency, Water Infrastructure and Resiliency Finance Center. (2017, February). Perspective: The financial impact of alternative water project delivery models in the water sector. https://www.epa.gov/sites/production/files/2017-03/documents/epa_p3_perspective_final_2.24.17.pdf

2. Canadian Council for Public-Private Partnerships. (2024, October 30). Public-private partnerships: A guide for municipalities. https://www.pppcouncil.ca/getattachment/2830f36c-a96c-4fbb-9f52-dc3d0bb0455b/CCPPP-P3s_A-Guide-for-Municipalities-FINAL_Oct-30_2024.pdf

3. Canadian Union of Public Employees. (2020). Asking the right questions: A guide for municipalities considering P3s (2nd ed.). https://cupe.ca/sites/cupe/files/p3_guide_en.pdf

4. Federation of Canadian Municipalities. (2024, June 6). FCM releases roadmap to improve quality of life for Canadians by strengthening municipal finances. https://fcm.ca/en/news-media/news-release/fcm-releases-roadmap-improve-quality-life-canadians-strengthening-municipal-finances

5. In the Public Interest. (2017, January). A guide to understanding and evaluating infrastructure public-private partnerships. https://nrcne.org/wp-content/uploads/2019/12/ITPI_InfrastructureP3sGuide_Jan2017.pdf