Promising Practices of Successful Public Toilets in Small Municipalities in British Columbia

By

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The University of Victoria acknowledges and respects the Lək^{w}əŋən (Songhees and Esquimalt) Peoples on whose territory the university stands, and the Lək^{w}əŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

Much of this report was written on the unceded territories of the hən̓q̓əmin̓əm̓-speaking people, which includes Kwikwetlem, Kwantlen, Qayqayt, Musqueam, Squamish, and Tsleil-Waututh Nations. The researcher recognizes that colonialism has erased or obfuscated these Nations' histories of the land and commits to working toward learning and building relationships.

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-for Ross and Kale-

Executive Summary

Introduction

This master's project examines lessons learned by BC municipal planners who have worked on providing public toilets, with a focus on municipalities in BC with populations of 100,000 or fewer. The issue is complex, and no one-size-fits-all solution will work for all municipalities. Providing public toilets has benefits and disadvantages, but the challenges can be overcome through relevant, evidence-based practices. An increase in the number of safe, clean public toilets available in small BC municipalities will improve access to basic sanitation and increase livability across the province, especially for vulnerable people.

Methodology and Methods

This report is the culmination of a master's project incorporating several months of research. The research surveyed 64 chief administrative officers (or delegates) from BC municipalities and interviewed 11 municipal staff who have worked on public toilet installations in 12 cities with populations ranging from 425 to 662,000[1]. The research was supported by a literature review and document scan.

Key Findings

Policies to promote lively and vibrant communities cannot be successful without public toilets. Yet, no level of government is mandated to provide them, and they are remarkably absent from many communities. Political or social interest is the only trigger for undertaking the installation of a 24-hour public toilet which means that all manner of public toilet provision has been attempted, and the lack of consistency means that other municipalities may not be able to know what is happening elsewhere. "By making it possible for all individuals, regardless of their social location– including their gender, sexuality, level of income, and degree of able-bodiedness to access the city, public toilets create a livelier and more liveable city" (R. C. Solomon, 2013, p. 42).

It is not just large global cities that need public toilets; toilets are for all users in all communities. But duplicating the approach of a large city in a small settlement may not work. Public toilets are expensive to install and require ongoing maintenance and staff oversight. Small municipalities may have fewer staff experts who are stretched thin already. With smaller budgets comes more complex decision-making and prioritization. Many municipalities find it challenging to install or manage public toilets. However, the COVID-19 pandemic shone a light on the lack of access to toilets as businesses that had been carrying the load for many years restricted the use of

[1] The municipalities represented by the interviews were: Alert Bay, Chetwynd, Fort St. John, Nelson, New Westminster, Osoyoos, Peachland, Rossland, Surrey, Trail, Vancouver, and Victoria.

their facilities. As a result, providing public toilets is a relatively new area that municipalities are considering taking responsibility for.

Public toilets are difficult to get right, and misuse and setbacks are the norm. There is almost always another, more pressing project that needs the attention of municipal staff. Other jurisdictions worldwide also struggle to get it right. Access to sanitation is a human right, but for vulnerable people, this is challenging for government to provide. It was clear during the research that municipal staff desperately want to solve this complex problem but feel limited because of a lack of clear regulations, lack of funding, and, in many cases, an absence of staff expertise. Municipal staff openly acknowledged how challenging public toilets are to supply and how easily they can become de-prioritized. One participant said, “They are such a tough nut to crack, and I desperately want to do it better, but I feel really lost on how.”

Options to Consider and Recommendations

The research reveals six promising practices that can impact the elements of public toilet provision. These recommendations are aimed at municipal staff who are working on projects that include the provision of public toilets and who would find it beneficial to have this research in one place.

1. **Adopt a design thinking approach that centers those impacted.** The provision of public toilets is undeniably human-centered and needs a shift in thinking. Using a design-based approach may also support evaluating and adapting a public toilet installation after it has been launched.
2. **Develop a community-wide strategy for the provision of public toilets using a holisitic approach, including evaluation criteria.** Several research participants noted the importance of understanding the bigger picture for their communities and wished that the project to install a toilet had been part of a greater strategy.
3. **Develop mitigation strategies that acknowledge that misuse is likely and cultivate expertise from all staff roles that might contribute to a toilet project.** It is not just the installation and operations of the toilet that are elements municipal governments need to consider, it is a series of different subject matter experts required along the way. Vandalism and misuse are the reality and need mitigation strategies.
4. **Work together for the public good and consider partnerships with other community providers.** Community partnership shares the success and the burden and can open new opportunities to serve the community.
5. **Select carefully for equipment, location, and impact.** A municipality would do well to consider exactly what they are hoping to accomplish–and prevent– with their selections and consider climate concerns, accessibility, and specific user groups such as people who are unhoused, older adults, families, or pregnant people.
6. **Advocate for mandated provision so that all communities are equitably required to provide public toilets as a human rights-based response.** Advocating that the provision of public toilets is explicitly a responsbility of local government, like roads, fire services, or parks, ensures that providing public toilets is not a political decision, and it acknowledges that all community members benefit when 24-hour accessible public toilets are installed.

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Introduction

This Master's Project examines lessons learned by city planners working to provide public washrooms in small British Columbian municipalities and gathers promising practices that emerge. There is significant value in researching promising practices for public toilet provision in small municipalities in British Columbia as the issue of providing public toilets is complex and there is no one size fits all solution. "The word 'complex' applied to any situation can seem like a code word for inertia from our politicians and resignation from our citizens, but the revelations of complexity theory actually reveal the 'shock of the possible'" (Westley et al., 2007, p. 8). The goal is to illustrate the benefits and disadvantages of public toilets by providing relevant, evidence-based practices which support an increase in the number of safe, clean public toilets available in small municipalities to improve access to basic sanitation and increase livability, especially for vulnerable people. One valuable approach is knowing what has worked and what has not worked in other similar jurisdictions by gathering lessons learned from the staff assigned to work on these projects.

Positionality Statement

I am a white, middle-aged, comfortably housed, cisgender female parent in a heteronormative relationship and earn a stable income as an employee of a municipality with a population of 88,000. I sympathize with other municipal workers challenged by the problem of whether and how best to provide public toilets. I also live with ulcerative colitis with occasional unpredictable symptoms. I recognize that my identity and appearance may allow me to access certain toilets that people of a different race, gender, or social location are prohibited from using. As a result of positionality and life experience, I believe municipal tax dollars should be allocated to providing public toilets, which may bias me as I proceed through this topic. However, using a methodology that focuses on promising practices gleaned from other BC municipalities and collecting data from institutions and professional practitioners rather than individual community members who may be vulnerable will mitigate the risk to myself and others and ensure ethical research. I have devised my methodology to address the bias I carry.

Defining the Problem

"It is embarrassingly difficult to find a place to pee in this town."
-E. Jeffery (personal communication, March 3, 2024)

There is no shortage of anecdotes of being out and about in one's community and realizing a need to relieve oneself, and not being able to find somewhere to go. Eliminating waste is a biological part of being a human, and for most people, it means using a toilet. When at home, work, or at school, this is an easy task. But when in public, the need to go requires interaction within the public sphere–either with people or with infrastructure in the community–or requires some biological strain to wait until a toilet can be accessed. Toilets in the public realm may be provided by the local government or a private business. If a toilet is available, it might be straightforward or challenging to obtain the necessary permission based on how one presents. For some people, the time or distance between the biological trigger of needing to eliminate waste and locating a toilet can be too great, and human waste is eliminated in public. In rural settings this may not be impactful, but in municipalities where people come together, it can spell a public health problem.

Greed (2006) argues that public toilets reduce the transmission of disease (p.128) and asserts that "public toilet provision constitutes the vital, missing link that would enable the creation of sustainable, accessible, inclusive cities" (p.127). She further notes that "government policies to promote the evening economy, the 24-hour city, tourism, and public transport use have all increased the need for toilets, whilst, paradoxically, provision is being cut back" (p. 128). Nearly 15 years after Greed's comments, provision is no better, with the COVID-19 pandemic highlighting inadequacies (Lowe, 2020). Solomon (2013) agrees public toilets make cities more livable: "By making it possible for all individuals, regardless of their social location–including their gender, sexuality, level of income, and degree of able-bodiedness to access the city, public toilets create a livelier and more liveable city" (p.42). A study conducted by Ross et al. (2021) determined that public toilets and their related sanitation are considered attributes that demonstrate quality of life by users.

While public toilets are ubiquitous in international cities such as London, Paris, or Amsterdam, where users are frequently charged a modest per-use fee to recoup some maintenance costs, they are less common in North America and even rarer in small municipalities. Kading (2018) notes that public toilets are often incorrectly attributed as problems only big cities deal with. The existing discourse on public toilets in academia and media, as well as the participants of the primary research for this project, all affirm their value for cities of all sizes and those living in them, especially those with nowhere else to go. However, establishing support for public toilets can be challenging for several reasons, such as cost, site selection, and ongoing maintenance requirements. This research explores promising practices for small BC municipalities to fill a gap in the discussion of executable practices relevant to community size.

Small BC municipalities may share several characteristics, such as provincial or federal regulatory frameworks, limited budgets, lack of space, lack of maintenance resources, or few staff specialists with toilet expertise, which makes well-marketed, "one size fits all" solutions intriguing. For example, one well-known brand is the Portland Loo, first conceptualized in 2012 by the City of Portland. It is a single occupancy, standalone toilet, designed to be installed on the street, and explicitly designed to "deter criminal activity and meld into its surrounding environment" (Portland Loo, 2023, Section About). It is now manufactured for sale to other municipalities and has been lauded as a successful approach in North American cities (Metcalfe, 2012).

Duplicating the approach of a large city may not work. With smaller budgets come more complex decision-making and prioritization. Small municipalities in BC may face objections from taxpayers about allocating resources to public toilets. It is much more politically palatable to propose spending on a new playground, electrical substation, or fire truck than to suggest budgeting significant resources for something focused on human waste. Even elected council members question the high costs (City of New Westminster, 2022, Section 48:51) despite evidence demonstrating their value to the community's livability. Understanding promising practices through lessons learned by other places can fill a knowledge gap not currently reflected in the literature for small municipalities and make it easier for city planners to consider what factors their community may need for a successful installation.

Funding is the most apparent barrier to public toilet provision, and for good reason. The initial price tag of an installation is very high, and maintenance costs can also be prohibitive. Several media reports in British Columbia in recent years have noted the high cost of procuring public toilets, including $200,000 in Prince Rupert (Millar, 2021), $400,000 in Victoria (CTV News Vancouver Island, 2022), $650,000 in New Westminster (McManus, 2023), and $760,000 in Prince

George (CBC News, 2022). Some of these numbers may also be under-reported as many public documents or media publications often list the cost for the toilet units only and do not include other fees and expenses that may factor in a public toilet installation project, such as landscaping, building permit fees, wayfinding signage, staff time, and professional fees like engineers or surveyors. These costs are only likely to continue to increase. Specific to Canada, there have been increases in raw materials costs and supply chain challenges compounded by the pandemic. An analysis by Statistics Canada researchers Tam et al. (2022) shares some astonishing recent figures related to supply chain difficulties, noting pent-up, post-pandemic consumer demand has resulted in inflationary pressures. These types of challenges are connected and may have an impact on the available supply of prefabricated toilet units as most are made from metal for sturdiness.

Public toilets are expensive to install and require ongoing maintenance and staff oversight. Solomon (2013) also notes that "because there are a number of challenges to public toilet provision…it is crucial that city representatives are prepared to re-evaluate and modify the strategy over time" (p. 42). This commitment requires other resources small communities may lack, such as staff expertise and time. Factors such as location, unit features, maintenance plans, partnerships, and signage all contribute to whether a toilet can be considered a successful installation because these are the places where a toilet installation may fail through vandalism, misuse, and operational overspending, and whether community benefit is worth the cost to install and maintain the toilet. Complicating evaluations, each community is likely to measure success in its own way; what is considered successful in one municipality may differ from another, and decision-making for or against toilets may not be straightforward for communities to evaluate.

In recent years, some smaller municipalities have elected to install public toilets despite the challenges but have struggled to maintain the required operational plan, budget, or schedule to make the toilet useful to the community. The City of Vernon, for example, was forced to adjust the available hours due to misuse of the toilet overnight, rendering it available only during daytime hours and reducing its value to those who may need it overnight (Turcato, 2021). Other communities may try to curb the unwanted behaviour of some users while unintentionally making the toilet unwelcoming to other users. For example, a community may opt to install blue lights to deter intravenous drug users. However, a qualitative study concluded that "blue lights are unlikely to deter injection drug use in public washrooms, and may increase drug use-related harms" (Crabtree et al., 2013). The BC Centre for Disease Control recommends against them (2019).

Ultimately, this research hopes to address livability issues in communities where nearly half (45%) of BC's residents lived in 2022 (Ministry of Citizens' Services, 2023). The remaining 55% live in one of only 12 municipalities: Vancouver, Surrey, Burnaby, Richmond, Abbotsford, Coquitlam, Kelowna, Langley (District Municipality), Saanich, Delta, Nanaimo, or Kamloops. Implementing a strategy or examining alternatives for a smaller municipality is different for a community with a large population. Other factors such as low voter engagement, lack of space, an aversion to criticism from constituents, and possible expensive misuse make it challenging to provide public toilets when only one or possibly a few installations are being considered by municipal decision-makers, and failure means a lack of provision.

"Those who struggle to make a difference have to face two paradoxes. The first is that success is not a fixed address. The second is that failure can open the way to success" (Westley et al., 2007, p. 161). The high price of installing and maintaining public toilets, compounded by a grey area of responsibility of what level of government is required to provide public toilets to the public,

prompted Lezlie Lowe, author of *No Place to Go* (2018), to conclude that "governments today see bathrooms more as a burden than a duty" (p. 49).

Project Aims, Scope, and Research Questions

Project Aims

This study aims to examine variables that can contribute to the successful installation and management of public toilets in small municipalities in BC with populations of 100,000 or fewer, understanding what works or does not work elsewhere. While this study hopes to contribute positive outcomes for vulnerable people who are most in need of public toilets, such as homeless people, community elders, women, children, or those living with medical issues, it recognizes that all members of a community can benefit from the provision of public toilets. The research is focused on BC municipalities because they share legislative frameworks from Canada and the Government of British Columbia related to building codes, occupational health and safety guidelines, and public health regulations.

This research focuses on *promising* practices rather than *best,* as what is best in one community may not be best in another. The Canadian Homeless Research Network (2013) presents this definition of a promising practice: "An intervention is considered to be a promising practice when there is sufficient evidence to claim that the practice is proven effective at achieving a specific aim or outcome, consistent with the goals and objectives of the activity or program" (p. 7), whereas a best practice is considered "an intervention, method, or technique that has consistently been proven effective through the most rigorous scientific research (especially conducted by independent researchers) and which has been replicated across several cases or examples"(Canadian Homelessness Research Network, 2013, p. 7). Promising practices consider new ideas or approaches that lack rigorous scientific study but work well in real life and synthesizing promising practices through lessons learned by existing municipal staff may help find efficiencies, thus increasing the number of public toilets installed in BC.

Project Scope

While the researcher acknowledges the social inequities that may make people vulnerable are contributing factors to accessing toilets, this research does not seek to address or solve those factors. However, some discussion on relevant research is included to support the analysis. This project also does not recommend practices that specifically support access to toilets within civic facilities or portable, temporary toilets. However, several research participants noted practices from facility toilet management that may be adaptable to toilets on streets and sidewalks. This research does not seek to recommend practices for establishing or maintaining privately owned customer toilets in businesses, though the COVID-19 pandemic highlighted the burden private businesses have borne in terms of cost and maintenance for many years (James, 2021), and some discussion on this will be included. Instead, this project focuses on freestanding, permanently installed toilets in public spaces, also known as street toilets, sidewalk toilets, and standalone toilets. See Figure 1 for some examples.

Figure 1
Street and Sidewalk Toilet Illustrative Examples

Note. From left to right, Urbaloo toilet in Courtenay, BC (photo courtesy Jen Arbo), Portland Loo, location unknown (photo courtesy of Portland Loo), JC Decaux Automated Public Toilet (APT) in Vancouver, BC (photo courtesy of Jen Arbo), Portland Loo in Victoria, BC (screen capture courtesy of Google Maps).

Research Questions

The primary research question is:

1. What promising practices can small municipalities in British Columbia employ to increase perceived success for the provision of public toilets?

Secondary research questions are:

1. What is the current state of public toilets in British Columbia?
2. What are government jurisdictions responsible for related to the installation and sustainability of public toilets?
3. What lessons have other municipalities learned that can contribute to the body of knowledge held by small BC municipalities?
4. What are the main issues related to public toilets in other jurisdictions?

Background

Some background information on terminology and regulatory frameworks is required to provide context for this research. For this master's project, this research opts to use the phrase "public toilet," which refers to an enclosed or shielded space or room that allows a member of the public to eliminate waste. Often, hand washing or hand sanitizing capabilities are included within. While a shower or changing room may also be a part of a public space with a toilet, it is not always necessary. For this reason, terms such as bathrooms, restrooms, washrooms, water closets, comfort stations, or conveniences are not necessarily the right fit. By focusing specifically on toilets, and even more targeted to toilets that serve the public, other components that make a convenient and clean experience, such as a place to hang a coat, wash hands, check appearance, utilize a menstrual product, take medication, change a diaper, or other things people do in a washroom do not factor into this research.

Further, it is important to fully understand that a toilet within a business is not a public toilet, despite its potential to be publicly accessible. While a business operator may have a toilet that they

are willing to let customers and sometimes members of the public use, a business operator can still exclude someone from using it or pressure someone into making a purchase to exchange the code or key access. A business is not obliged to supply public toilets. They are obliged to provide a toilet to workers through WorkSafe regulations, and if a business offers sit down dining with table service, the Food Premises Regulation of the *Public Health Act* states in Part 2, Section 5 that:

> If food premises provide seating for dining purposes and are not subject to building bylaws adopted under the *Local Government Act,* the operator must ensure that washroom facilities are provided for the use of the dining patrons in accordance with BC. Reg. 216/2006, the British Columbia Building Code Regulation" (Public Health Act, 2022).

Toilets in civic facilities such as recreation centres or libraries are often considered public toilets. However, facility toilets can often be located so only those using the facility can access the toilet. For example, a toilet in the changing room of the local community pool may be designed so that one can only enter the changeroom after paying admission or must ask for the key. Civic facility toilets are also at the mercy of the facility's operating hours and do not stand independently. A true public toilet is available freely to any member of the public, without having to ask for a code or key, and ideally, be available 24 hours a day.

Toilets in parks or recreational areas often go hand in hand with outdoor recreation spaces such as sports fields, as the public expects these to be supplied. Several of the research participants noted that their community installed portable toilets at sports fields for the summer sports season and removed them in the winter to prevent freezing. These could be considered public toilets, though, in areas that have experienced vandalism or that have a bylaw governing the use of parks that forbids the use after a specific time (e.g. 9 pm or "dusk"), these toilets are often locked by staff or using a magnetic timer device.

Toilets on the street or sidewalks are typically found in commercial areas and are designed to relieve the burden on private businesses to supply toilets. They are often initiated because of tourism, night life, business associations, and requests to the municipality. For example, a 24-hour toilet was located in Victoria to maximize proximity to several late-night hospitality venues (*Victoria Opens New $400K Public Washroom Ahead of Long Weekend*, 2023).

Several provisions exist for workers and customers at various levels. WorkSafe BC is an independent provincial agency responsible for enforcing Occupational Health and Safety Regulation BC Reg.296/97, which specify the mandatory provision of toilet facilities for workers. It even goes as far as to specify how they should be maintained. However, WorkSafe BC's mandate extends only to workers and does not regulate washrooms for customers or, more broadly, the public.

The British Columbia Building Code (2018) has several stipulations for a toilet's form or existence but only has two mentions of "public toilets," with one reference simply pointing to the other and the relevant passage focused on accessibility, and noting that public toilets in specific areas, such as rest areas, campgrounds, picnic groups, parks, and recreational vehicle parks need an accessible pathway provided from the roadway or street.

The *Public Toilet Act*, repealed in 2009, stipulated what public places or buildings meant, and clearly specified that toilets could not accept payment for use through the use of a coin activated locking mechanism (RSBC, 1996). The current version of the *Public Health Act* (SBC2008, C. 28) is more vague and notes in section 124, "regulations respecting public toilets" that it is the Lieutenant

Governor in Council who may make regulations respecting public toilets including defining them and deciding whether or not payment may be required to access them.

In short, the regulations control the manner or conditions in which toilets are provided rather than mandating the existence of toilets themselves. They are noticeably quiet and limited in what they stipulate, and ultimately, municipalities are not assigned the responsibility for public toilets, and their provision becomes voluntary. It is difficult to pinpoint what is required. "It's all so messy—code, depending upon the jurisdiction, can work at city, state, provincial, or federal levels. It's overlaid by voluntary standards and the sticky quirkiness of culture and custom" (Lowe, 2018, p. 80).

Organization of Report

This report is organized into several sections:

- *Executive Summary*: a standalone summary of the broader report, graphically designed and meant for a municipal worker to be able to draw from succinctly
- *Introduction:* defining the problem, project objectives and scope, background, research questions, and situating the reader to the report contents
- *Literature Review*: a review of the existing literature related to the topic, arranged thematically.
- *Methodology and Methods:* description of the methodology, methods, and conceptual framework
- *Findings:* a summary of the current state of public toilets in BC, results of the survey, semi-structured interviews, and document scan
- *Discussion and Analysis:* a discussion and analysis of the findings, and implications for small municipalities in BC
- *Recommendations:* options for consideration by small municipalities considering the installation of a public toilet in their community and implementation strategies that may be employed
- *Conclusion:* concluding thoughts because of the research

The *References* and *Appendices* sections are at the end of the report.

Literature Review

McGregor (2018, p. 192) defines a thematic literature review as one that presents the synthesized literature grouped using themes. This thematic literature review aims to synthesize the discourse on public toilets and provide a contextual academic background to situate the project and uncover knowledge gaps.

The literature search was conducted through the University of Victoria's Library and through Google Scholar, using resources such as JSTOR, Sage, and EBSCOhost and supported by books and grey literature. Initial investigations used "toilet" broadly and then narrowed using Boolean operators. Example search strings include: "public AND toilet," "public AND toilet AND best practices," "urban AND public toilet NOT developing," "public perception AND public toilet," "criticism public toilets cities," or other combinations. Each result was first noted by date of publication, then scanned using a "skim, dip, dive" method: a quick read of the abstract and then, if relevant, the introduction and conclusion, and then, if still relevant, a complete read. Many materials cited other studies that were searched for by author name and title and reviewed for relevancy. References were tracked using a reference tracking program, Zotero, and entries were reviewed and edited if necessary to ensure accuracy.

Overall, the literature supports public toilets, with disagreement mostly centred on specific aspects of delivery, such as all-gender washrooms or people's behaviours within them and how to manage the behaviours that are considered undesirable, such as drug use. Many researchers connect public toilets with clean, socially connected cities where vulnerable people are supported. Three important themes related to the research project emerged in the literature review: the contribution of toilets to quality of life in livable, inclusive communities, the resource intensity of providing toilets, and the responsibility and governance related to toilets in the public sphere. This review is arranged to first review literature outlining some of the known history of public toilet provision in the Province of BC, followed by the three emergent themes, and a discussion of the conceptual framework to conclude.

Chronology of Public Toilets in British Columbia

In the late 1800s, the settler port town of Vancouver, BC, was undergoing a significant reimagining, with the construction of infrastructure such as sewer, water works, lighting, etc., that paralleled that of more established and growing cities like San Francisco or New York. In Margaret W. Andrews' excellent essay, *Sanitary Conveniences and the Retreat of the Frontier: Vancouver, 1886-1926* (1990), she discusses the historical provision of what she referred to as "non-residential toilet facilities" in the early days of establishing Vancouver as a city, rather than a frontier town. Andrews notes that public urinals began appearing in London shortly after the Public Health Act of 1848 with the first in the Soho neighbourhood of London (Penner, 2013). Additional facilities for both men and women appeared shortly after, but Andrews could not find a "coherent historical presentation of the emergence of public toilets in any extensive part of the industrializing world"(1990, p. 5). This literature review was also unable to locate any chronology of public toilets in BC or Canada published since Andrews' essay.

Public toilets generally began to appear in larger cities due to industrialization and population growth and the subsequent complaints about smell or waste left behind. Business owners became frustrated with servicing the needs of the public, and the first complaint on record in Vancouver was from 1896, when a frustrated Cordova Street merchant wrote city officials to object to the practice of his storefront being used as a public urinal (Andrews, 1990, p. 6). As Vancouver's

population grew, so did the municipal regulations and policies related to public toilets, including a requirement for businesses to provide toilets and bylaws associated with exposing genitals in public (Andrews, 1990, p. 14).

In the later part of the nineteenth century, publicly accessible baths, toilets, and pools were built in major US cities, and their popularity grew across Canada. "As the twentieth century progressed, on-street bathrooms mushroomed in the UK, and their installation become common in the US and Canada in transit stations, shopping centres, airports, and other commercial and public buildings," though they mostly were built for men (Lowe, 2018, p. 41). "Vancouver women did not campaign for public toilet facilities for their sex before 1921" (Andrews, 1990, p. 11). Still, lavish public conveniences were designed and constructed in Vancouver for both men and women, many of which included attendants (Andrews, 1990, p. 22).

Across the Province of BC, public toilets were much slower to catch on as cities were less populated and did not even exist in some circumstances. However, rapid growth occurred in many parts of BC, where places known as villages shifted rapidly through a boom to become civic centres as white settlers moved across the Province in response to opportunity for prosperity through resource extraction (Davies, 2005), and that "the establishment of safe water supplies and adequate removal of human waste were seen as elemental building blocks of BC's new towns" (Davies, 2005, p. 6).

Nelson, for example, a mining community incorporated in 1897, had a booming population of about 7,000 in 1904. More than 100 years later, Nelson's population is only a few thousand more at 11,198 in 2021 (Statistics Canada Government of Canada, 2022) demonstrating booming growth in its early days. "Public health projects like sewerage and water systems were constructed, founded on the argument that good sanitation was essential to an economically viable urban community" (Davies, 2005, p. 34). As cities became more crowded, privies—a type of rough-dug pit toilet with no containment for the waste that is instead absorbed by the ground—became problematic as crops and livestock and other people's well water became contaminated by waste. Local public health officials spent much of their time educating the settlers on how to properly contain waste, odours, and contaminants related to sanitation, and businesses like garbage haulers and night soil collectors (who would remove human waste from now-contained outhouses) became commonplace until municipal sewage systems were funded and constructed (Davies, 2005, p. 21).

Although chamber pots and bedpans had long existed for more private use, portable toilets for use in the public sphere soon became more common. Like many innovations, the military led the way to create items required to service the needs of crew. On ships, planes, and in works yards portable chemical toilets became common by World War II, though they were typically made of wood or metal[2]. In the late 1960s, George W. Harding patented in the United States a "portable

[2] For an interesting account of how these portable chemical toilets worked including photos, visit this anecdote by Ted Church, a Canadian who served in World War II: https://tailendcharlietedchurch.wordpress.com/halifax-bomber/halifax-aircrew/caught-short-aloft/

toilet cabana"(United States Patent Office, 1969). Eventually, the "cabanas" were manufactured in Ontario, Canada, and Harding received his first Canadian patent in 1989 (Government of Canada, 2024).

In BC municipalities today, there appears to be several forms of toilet provision including providing facility toilets, deferring to private businesses to provide them, installing temporary toilets, or constructing public toilets in a variety of building types and structures. There is no cohesive provincial approach or directory of toilets, and while some municipalities list their toilets on their websites through open data or an information page, most do not, and they are often not discussed. All manner of controlling access is employed, from wide-open 24-hour availability, to limited hours, to using keys, codes, and timers. Users appear to find ways around a lack of a cohesive approach, even if that means consulting web applications to find them, posting on social media forums, phoning, or emailing for information, or at worse eliminating waste in public.

Theme # 1: The Contribution of Toilets to Quality of Life in Livable, Inclusive Communities

The United Nations affirms that access to sanitation is a human right (United Nations - General Assembly, n.d.-b). In his influential work, *The Bathroom* (1976), Kira concluded that people's personal hygiene is influenced by our waste's impact on others (p. 6); however, people frequently shy away from conversations about public toilets as having to share such personal space presents anxiety and squeamishness. Lowe (2018) contends that toilets remain a universal taboo (p. 39) as they are, as noted by Kafer (2016), "sites of bodily waste and its accompanying sounds and smells" (p.758).

Consideration must especially be given to public toilet users who have nowhere else to go, such as people experiencing homelessness, or those who cannot wait until they arrive at their destination, such as community elders, children, or people with chronic conditions such as Irritable Bowel Disease (IBD). Canada does not have legislation ensuring that those suffering from these debilitating diseases have guaranteed access to toilets (Picard, 2015), so Crohn's and Colitis Canada, a national charity funding research that supports people living with these impactful diseases, operates a mobile application, called GoHere[3], to help people with these serious bowel conditions locate public toilets. A challenge, however, is that the application does not currently allow users to filter by toilets that are open 24 hours a day, and a facility manager or business operator may still choose to exclude a user based on their appearance or past interaction. Not all the toilets listed on the GoHere application are true public toilets accessible to all, regardless of race, gender, age, or appearance.

[3] For more, see https://crohnsandcolitis.ca/Support-for-You/GoHere-Washroom-Access

The alternative for many people faced with a lack of public toilets is not to wait until later; it is to eliminate their body waste in public. Though public toilets will not resolve the issue entirely, Frye et al.(2019) demonstrated that access to toilets contributes to a reduction in open defecation by homeless people who have nowhere else to go. Amato et al. (2022) examined public toilet interventions in San Francisco from 2014-2020. They concluded that public toilets did reduce reports of human waste in public spaces.

Public toilets are essential in a city. The influential French philosopher and sociologist Henri Lefebvre, who pioneered the critique of everyday life in the 1930s, asks us to "reconceptualize [the city] as an unbounded assemblage of economic and social relationships" (Leary-Owhin & McCarthy, 2019, p. 1). Ergo, cities are not merely thoroughfares but also places to gather and be human, which includes needing to use the toilet. Several researchers (Legal Action Center for the Homeless, 1990, p. 26; Maroko et al., 2021; Molotch & Noren, 2010, p. 3; Moreira et al., 2021a) acknowledge people experiencing homelessness have nowhere else to go, resulting in open urination and defecation. Others discuss public toilets as they relate to inclusivity, such as Greed (2004), Kira (1976), and Molotch & Noren (2010); however, they often focus on specific individual user groups, such as women, the disability community, older people, or people experiencing homelessness, rather than taking a more broad view that treats all community members as deserving access to public toilets. Kafer (2016) explores the equity lens of public toilets in her essay *Other People's Shit (and Pee!),* where she reflects as a disabled, queer, feminist person on her use of public toilets and considers the use of toilets by transgender people.

The "public good" concept is also a critical context setter for understanding how toilets can contribute to livable and inclusive communities. Public good is an economics theory often used to justify the social contract of government expenditures on infrastructure such as libraries, parks, streetlights, pothole filling, emergency services, and others that fulfill a need the public may have in a community. Jakar and Rosentraub (2023) discuss public goods theory and note that it created "a viable perspective to help governments decide what should and should not be publicly provided through their power to tax residents, businesses, and visitors" (p. 906). They reference Samuelson, who first put forward the idea under the name of "collective consumption goods" (1954) and whose initial work on the topic shaped the modern understanding of a public good as something to which specific properties such as non-rivalry (no one else can use it at the same time as another) and non-excludability (someone can be prevented from using it) be used to define it. Jakar and Rosentraub rightly note that Samuelson's original definition was highly restrictive—it was essentially a mathematical formula to help rationalize expenditures—and focused on central government activities and failed to consider "local governments that provide many of the goods and services that residents rely upon for the daily lives" (Tiebout, 1956, in 2023, p. 906).

A colleague and friend of Samuelson, Richard Musgrave, extended Samuelson's idea into something much larger than a mathematical formula and may have inspired Samuelson's work in the first place (Desmarais-Tremblay, 2017, p. 70). Musgrave's work was much more conceptual and was based on his desire to "contribute to a better society by designing a normative model of the public economy that would help to elaborate rational public policies and facilitate public debate on the role of government in society" (Desmarais-Tremblay, 2017, p. 86).

With that history in mind, the concept of public goods, as it applies to public toilets, is worth consideration, as a toilet can be rivalrous *and* exclusive, contradicting Samuelson's definition. However, toilets form part of a broader public health field often referred to as WASH, or "WAter, Sanitation, and Hygiene," and it is the condition of living in sanitary conditions that could be considered the public good (Ross, 2017) rather than the toilet itself. WASH is a public health field that often focuses research on developing countries but applies globally and considers sanitation more broadly, such as sewers and water supply. An example of a WASH issue that may be more familiar in a global north country is the Canadian example of safe, clean drinking water in many Indigenous communities, where currently, 28 long-term drinking water advisories are still in effect in 26 Indigenous communities (Government of Canada; Indigenous and Northern Affairs Canada, 2024).

Globalization and increasing urbanization play a part in the importance of WASH services in sustainable development (United Nations' Children's Fund, 2019). Flint (2013) describes sustainable development as a values system or process, rather than a goal, that uses common sense, vision, and intuition and offers a sustainability model that attempts to weave together economic security, ecological integrity, and social equity. The United Nations' Sustainable Development Goals, or SDGs, are an articulated list of 17 goals for sustainable development globally. Adopted by the United Nations members in 2015, they set out a "shared blueprint for peace and prosperity for people and the planet, now and into the future" (United Nations - General Assembly, n.d.-a, Section History). Goal 6 focuses on WASH and aims to "ensure availability and sustainable management of water and sanitation for all."

Theme # 2: Resource Intensity of Toilet Provision

The "three C's" relevant to toilets are noted by Shove (2003) as comfort, cleanliness, and convenience. Despite the evident value established by Amato et al. (2022), the three C's come with costs. Media reports frequently focus on the high costs of delivering the three C's (Bruemmer, 2019; Cantor, 2022; CBC News, 2022; Sajan, 2021). However, the installation cost is not the only challenge–ongoing maintenance of toilets is resource-intensive (Maclean, 2021) and requires oversight and nuance to be successful based on the users, their behaviours, and the toilet itself.

Cities like London, Athens, Lisbon, and Paris boast pay-per-use toilets to offset the maintenance costs. North American tourists often arrive home from abroad and extol the virtues of such a model (House, 2018), but the practise of using a coin mechanism to allow access to a toilet was forbidden in BC through legislation for many years, and only repealed without fanfare in 2009 (RSBC, 1996), and it is still the belief that it is currently a prohibited mechanism to offset the costs of public toilet provision in BC both by the public and by city planners. However, a recent survey and subsequent report by the London Assembly Health Committee found that 94% of 3,504 Londoners surveyed reported it was "quite difficult or very difficult trying to find a public toilet in London in an area they are not familiar with" (2021, p. 4), so while tourists may find suitable facilities, it is clear that even abroad public toilets are not serving the needs of the people who live in the communities.

Several researchers, like Scoular (2019), have contemplated what is happening in large, often international cities because they present some of the more innovative funding schemes such as advertising-supported, public-private partnerships, and others. Unfortunately, what has worked in a large city where tourism is an essential economic sector will not necessarily translate to a

promising practice in a small community. For example, JC Decaux, a massive, international, publicly traded, well-established street furniture and advertising company, holds the exclusive supply arrangement of Vancouver's Automated Public Toilets, or APTs (Scoular, 2019, p. 44). It is difficult for a small community to attract the attention of an enormous company such as JC Decaux, especially if only a single public toilet is being contemplated. In Vancouver, there are 11 APTs, a number that provides economies of scale for maintenance and management.

An oft-cited example of a large-scale public toilet program in the literature is San Francisco's Pit Stop Program, which began in 2014. The program aimed to "provide safe and clean public restrooms, as well as used-needle and dog waste stations at locations throughout San Francisco"(Budget and Legislative Analyst's Office, 2021, p. 1). The Pit Stop program "is not merely a toilet, but a model of toilet provision" (Lowe, 2018, p. 58) that includes attendants. Over the years, the program has "expanded and contracted, and as of May 2021 operates 36 sites with 62 toilets, and included a mix of JC Decaux public toilet facilities and portable toilets" (Budget and Legislative Analyst's Office, 2021, p. 1). Analysis shows the scale of the program is robust, and the expenses significant.

Is launching a program of this scale a financially realistic solution for a small BC municipality? To contextualize this for the scope of this research, the estimated annual cost for the Pit Stop program is 14.1 million in US dollars. One writer remarked incredulously that the overnight toilets alone cost "$30 a flush" (Bendix, 2019). This program cost is an amount that could rival that of the entire budget of many of the small municipalities in BC. Port Moody, a small community in the Metro Vancouver region, has an operating budget of just under sixty million in Canadian dollars, which does not even include the capital budget. The Pit Stop program would be roughly one-third of Port Moody's operating budget, adjusting for currency exchange. Even adjusting for population, the math does not work: San Francisco's population is roughly 810,000 (US Census Bureau, 2022). Port Moody is a community with 33,535 (Government of Canada, 2022), or approximately 4% of San Francisco's population. Reducing the number of toilets to 4%, or just three toilets, is still 682,000 in US dollars, or approximately 921,000 in Canadian dollars, a figure that would represent 1.53% of Port Moody's annual operating budget, or about $45 per resident.

Theme # 3: Toilets - Responsibility and Governance

As noted, Ross (2017) concluded that public toilets do not easily slot into the "public good" category to be fulfilled by the government, meaning a municipality must *take* responsibility for them rather than *be assigned* responsibility. Unlike accepted areas of responsibility such as roads, parks, and police, public washrooms represent *a choice* local government decision-makers must make. Slater and Jones (2018) establish that public toilets are private spaces within the public realm that use public dollars to manage, to which some constituents object. The condition of human waste-free public spaces is the public good, according to Ross (2017), but ensuring a waste-free space without investing in a public toilet still comes at a significant cost as it can require the services of specialized hazardous material removal specialists. New Westminster, a mid-sized BC municipality with approximately 80,000 residents, allocated $1.627 million in December 2022 to address cleanliness and access to a 24-hour toilet (Spitale, 2022) for one year. This included specialized waste services and additional staffing, a portable, attended 24-hour toilet, and the allocation of $650,000 in a capital project to install a permanent street and sidewalk toilet. Staff administering the specialized waste contractor estimate that it costs upwards of $400

per day for proactive sweeps for human, drug, and dog waste (G. Beliveau, personal communication, August 2022).

While building regulations such as the BC Building Code specify technical details such as height from the floor, how many toilets are needed for building occupancy, or the ratio of toilets designated for use by men and women, few compulsory provisions exist, and the building regulations are generally a part of the development permitting process and not something easily enforced afterward. Greed (2004) argues that spatial and location standards should be mandated, whereas Slater and Jones (2018) make several recommendations worth considering. They suggest governments view toilets as an investment, plan toilets over an area rather than individual projects, diversify how and what types of toilets are provided, and improve existing toilets to reflect better modern use and users (2018, pp. 43–46). Moreira et al. conclude in their systematic review that "public toilets are essential infrastructure for cities to guarantee citizens' right to sanitation and their comfort to circulate in public spaces" (2021a, Section 5. Conclusion).

Municipalities in BC do not have the power to determine whether they can forego service delivery of items that the Province of British Columbia deems to be their responsbility. "Within the Canadian Constitution, local governments do not exist as a separate governmental entity" (Douglas, 2005, as cited in Ryser et al., 2023, p. 151), compounding the inability of local governments to bear the burden of providing public toilets because of their resource intensity. Without mandated provision, higher levels of government are not transferring funds to help cover the costs. This is nothing new. Nearly 25 years ago, Vengroff and Whelan wrote "Perhaps the key issue of finance is the mix of taxes and revenue sources available to local government. Invariably central government sources of revenue far exceed those available at the regional or municipal levels" (2001, p. 507).

Solomon (2013) compared policies guiding public toilet provision in seven large North American cities and concluded that they are difficult to provide effectively, often for reasons unrelated to the size of the community. For example, she notes, "Competing visions and values regarding the provision of public toilets—pragmatic and public health concerns on one hand and social anxieties on the other—has produced a chronic inadequacy of public toilets in cities across North America" (p.42). Solomon (2013)makes three primary recommendations to the City of Toronto, the beneficiary of her research, in her comparative policy analysis that is somewhat like Slater and Jones (2018) and is worth considering through the lens of small BC municipalities.

First, Solomon suggests that the municipality adopt a strategy "in collaboration with various individuals and agencies responsible for public health and welfare, as well as members of the public" (2013, p. 45). This would establish a goal of providing public toilets. Second, she recommends that a community assume responsibility to prompt greater control of the delivery and management of a public toilet rather than entering into a third-party scheme (2013, p. 44). Third, she recommends that a city examine alternatives such as a community toilet scheme or a purpose-built social enterprise to provide public toilets (2013, p. 44). These might appear straightforward solutions, but their scalability and implications of implementation for a smaller municipality could be challenging. In short, they are potentially applicable, but a municipality still needs to *choose* to provide a public toilet and produce the functional programming to support it.

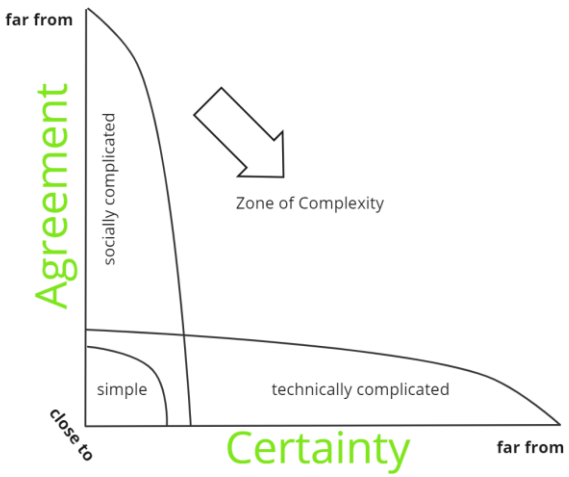
Conceptual Framework

Systems thinking is a valuable way of considering the literature on the topic of providing public toilets in BC, as it fundamentally provides a way to better understand the complexity of the issue and to identify ways where a system may be disrupted or changed and the impact that may have. The issue of providing public toilets in small municipalities is most certainly complex.

Frances Westley, in her work on systems thinking for the Waterloo Institute for Social Innovation and Resilience, describes problems in need of innovation as simple, complicated, or complex (Waterloo Institute of Social Innovation and Resiliency, 2015a). Westley draws from Brenda Zimmerman, her co-author in *Getting to Maybe* (2007), who details how to tell simple, complicated, and complex problems apart. A *simple* problem is duplicable by anyone, much like following a recipe to bake a cake. A *complicated* problem requires some expertise, and there are some unpredictable elements that may occur, but it is a formulation with a series of "if this, then that" decisions. She uses the example of sending a rocket to the moon. Zimmerman likens a *complex* problem to that of raising a child: there are no guarantees on the ability to duplicate results, the conditions are constantly evolving, and unique elements come and go that require constant testing, evaluation and adjustment (Westley et al., 2007, p. 9).

To assess problems, Westley outlines a "certainty/agreement matrix" (Waterloo Institute of Social Innovation and Resiliency, 2015b) to determine the level of complexity in which one can plot on two axes how much agreement and certainty exists. The closer the "agreement" and "certainty" are together, the simpler the problem may be. The further from certainty, the more technically complicated a problem is, and the further from agreement, the more socially complicated problem. The "zone of complexity" exists furthest away from certainly and furthest away from agreement. Using this certainty/agreement matrix, the topic of small BC municipalities providing public toilets falls in the zone of complexity as there is no certain answer, and there is no real agreement on how to solve the problem, except that it needs solving. See Figure 2.

Figure 2
Certainty/Agreement Matrix



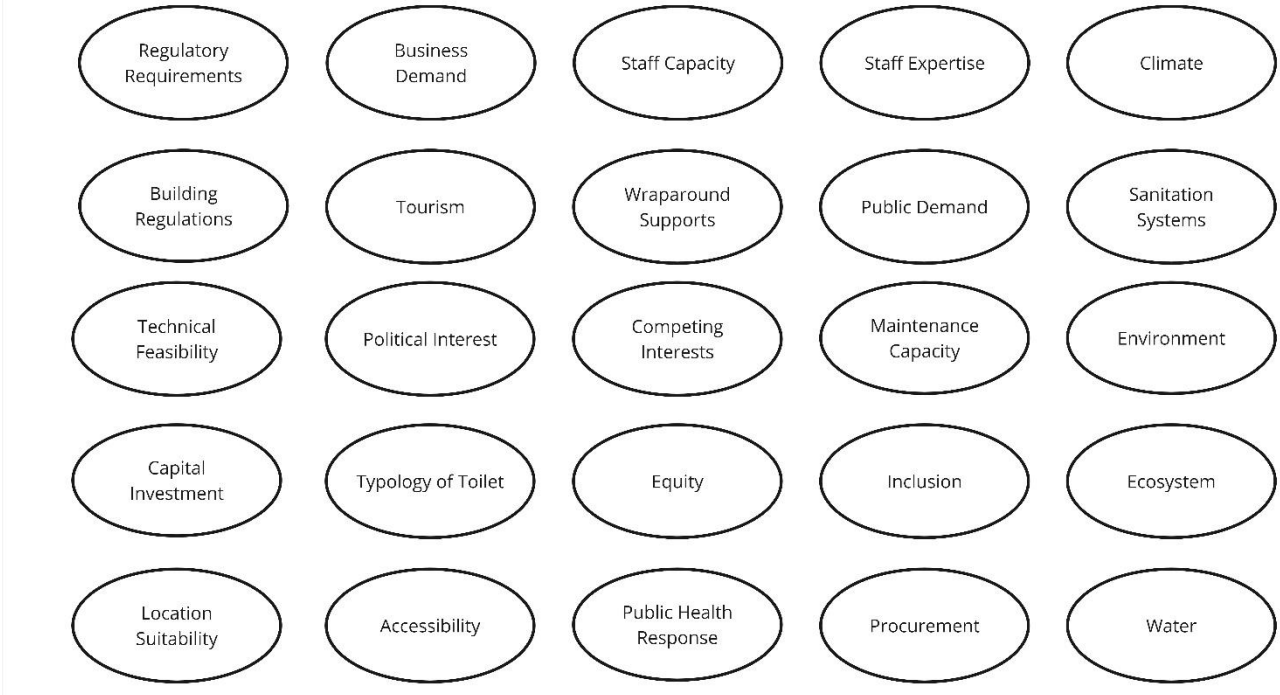
Note. Illustration recreated by Jen Arbo, based on model shown in Westley's video.

Westley further describes a system as “a whole of interrelating, interdependent parts” that one cannot “understand it as a function of any isolated component” (Waterloo Institute for Social Innovation and Resilience, 2015a). Her work builds on that of Meadows, a pioneer of modern systems thinking, who described systems as consisting of three things: elements, interconnectedness, and a function or purpose (Wright & Meadows, 2009, p. 11). Meadows identified leverage points that can help point the way to seeing the issue of public toilet provision as a system (1999a).

Purkis (2021) suggests that municipalities may be well served by choosing to use systems thinking rather than more traditional linear thinking. He notes that “systems thinking is a way of helping people view issues from a broad perspective that includes seeing overall structures, patterns, and cycles, rather than seeing only specific events” (p. 15).

Using the notions of systems thinking, this research project seeks to understand the interconnectedness of elements that can lead to the success or failure of a public toilet installation, by examining and collecting promising practices shared by city staff with lived expertise, and then reflecting on ways to disrupt the variables that may lead to failure. The approach to this research considers a non-exhaustive list of elements uncovered in the literature review and in the research and works through systems mapping. See Figure 3 for a non-exhaustive list of the elements that are at play in a system related to public toilet provision, based on what the research has revealed. These elements will be revisited in the Analysis section of this report to better understand their interconnectedness.

Figure 3
Elements in a Public Toilet Provision System



Conclusion

The literature review has revealed that while extensive research focuses on the importance and delivery method of public toilets in developing countries, the literature relevant to public toilet provision in small BC municipalities is limited because of the lack of consistent definitions and regulations and different approaches across approximately 160 different municipalities. The literature affirms the role of public toilets in livable and inclusive communities and details the general resource intensity of supplying toilets. Still, the ambiguity of the responsibility and governance of public toilets in BC shows several gaps in the understanding of best practices for funding the installation and ongoing maintenance costs, how best to operationalize and deliver toilets to set them up for success, and why the responsibility should rest with them in the first place. Overall, the literature supports the need to gather promising practices for small BC municipalities to adequately address what is challenging for communities to provide.

Methodology and Methods

Introduction

The design of this research supports the research questions and assumes that municipal staff already working on the challenge of supplying public toilets are experts in their lived experience. This research project required an ethics review by the University of Victoria Human Research Ethics Board, as the municipal employees surveyed and interviewed were asked to provide their personal perspectives and estimations of success factors. Initial approval was granted on October 11, 2023. The approved ethics protocol number is 23-0379.

Methodology

The provision of public toilets is filled with nuance because, as established, it is a complex issue that addresses a fundamental human need and relies on qualitative research to learn and understand. Sandelowski notes, "Qualitative research [is] intended to generate knowledge grounded in human experience" (2004, in Nowell et al., 2017, p. 1), and this research approaches the examination of promising practices of successful public toilets using a postpositivist approach. McGregor (2018, p. 81) notes that a post positivistic research paradigm acknowledges that there are many ways of knowing aside from a scientific method and that human knowledge is based on human conjecture. While a city planner may not be able to prove their public toilet is successful using a rigorous scientific method, they can certainly be confident in knowing whether it is successful based on their own evaluation metrics.

This methodology uses inductive reasoning to understand why something works the way it does and discover commonalities (McGregor, 2018, p. 84). A better understanding of what has worked or not worked in communities may increase support for allocating resources for public toilets. This methodology intended to understand and reveal promising practices by looking at recent installations of permanent freestanding toilets in BC municipalities and speaking with city staff to determine lessons learned from installation, funding, sustainability, or ongoing maintenance.

Methods and Tasks

The research sought to determine variables that can contribute to the success of a public toilet project in a community by hearing from municipalities who had installed a toilet, considered the installation of a toilet, or were working to install one currently. The methods were designed to collect high-level data from approximately 50 participants via a web-based survey and aimed to interview at least ten small municipalities that had established a permanent, freestanding toilet in the last five years. Although several media reports supported the development of a target list of cities, the decision was made to ask survey takers to recommend staff to speak to rather than target specific cities. This method allowed for the identification of communities who were more willing to speak on the topic. The survey and semi-structured interviews were supported by a document scan to corroborate and fill any gaps that human recollection could not provide.

Group 1 Participants - Survey

Group 1 Participants agreed to answer a brief survey to obtain cursory information about public toilets in their communities and the cost to install them. Survey participants were also asked to optionally provide contact information for the staff who may have direct experience with a public

toilet project, including technical expertise, identified in this research as Group 2 Participants. The Chief Administrative Officers (or delegates) of all but one of the 161 BC municipalities listed on the website www.civicinfo.bc.ca were emailed the invitation to participate regardless of size, as there is value in understanding what may work in a larger city to deduce whether it is something that may be scaled to a smaller locale. One community listed on the website was excluded to be sensitive to the fact that it had experienced a devasting fire that had physically destroyed the community. Sixty-one responses to the survey were gathered.

The survey, sent through Survey Monkey, asked Chief Administrative Officers or their delegates to indicate whether their community had installed one or more public toilets, was planning one, or had previously elected not to install one. Depending upon their answer to this question, the survey presented other questions about the approximate cost or reasons for not installing. At the end of the survey, the participant was asked to identify staff who could answer more technical questions in semi-structured interviews optionally. See Appendix A for the survey questions.

Group 2 Participants - Semi-structured Interviews

The Group 1 Participants identified 22 potential interview candidates, and in the end, 11 people provided information about 12 municipalities. The municipalities represented by the interviews were: Alert Bay, Chetwynd, Fort St. John, Nelson, New Westminster, Osoyoos, Peachland, Rossland, Surrey, Trail, Vancouver, and Victoria. Interviews were 30-45 minutes in length. Due to inconsistency in preference by interviewees on their preferred interview platform (telephone, Zoom, or Microsoft Teams), transcription was likely to be inconsistent, and instead, the same researcher took meeting notes during all interviews. The interview questions (see Appendix B) were sent to the interviewees in advance. However, conversations were informed based on the answers given, and the researcher asked follow-up questions during the interview for clarity based on the responses supplied by the interviewees. This research component conducted 30-45-minute-long semi-structured interviews to gather more technical data than the survey results yield, such as lessons learned, critical success factors, and what staff think worked and did not work. The interview questions asked if they had advice to share and were asked to share a summary of the toilet's challenges and successes.

Document Scan

Interviews were further supported with secondary data obtained through a document scan focused on local reporting by media outlets such as summaries of Council meetings or stories written by journalists in community newspapers or online newspapers in the same community as the interview subjects, and public, written Council reports for the municipalities identified were also reviewed. This document scan filled gaps that may have been present because of human recollection or staff turnover. Approximately 12 documents were purposefully retrieved, however numerous news stories were sent to the researcher while the research was underway by peers, making the count less specific.

The data and lessons learned from the survey, interviews, and document scan combined to identify the factors that small municipalities have utilized, such as site selection, financing schemes, project management, maintenance plans, or evaluation criteria, so that other small BC municipalities can decide whether they should take responsibility for providing a public toilet by using promising practices from lessons learned from other communities to ensure success.

Data Analysis

The data was analyzed through thematic analysis to group and categorize information collected through surveys, interviews, and document scanning. Aronson (1995) describes a thematic analysis as a qualitative methodology for gathering, identifying, and grouping patterns within the data. Drawing from and blending both relational and descriptive theories of research (McGregor, 2018, pp. 108–111), this project seeks to understand how the elements are connected, how they are influenced by one another, and to determine causal associations. However, this analysis does not seek to explain the data; to attempt to do so ignores the complexity of the problem and is not realistic. As McGregor notes, "In order to know if one *thing* caused another, researchers would need to know what would happen if *that* thing did not happen" (2018, p. 111).

This project more closely uses reflective analysis, as described by O'Leary (2021), drawing from the researcher's positionality, expertise, and expectations. The research stays focused on the research questions while maintaining consideration for the theory and methods as the data collection and analysis progresses. In both qualitative and quantitative research, the researcher typically has five steps: collect, sort, thematically analyze, interpret, and draw conclusions. However, in qualitative research, the sorting, analyzing, and interpreting tends to be more iterative. O'Leary (2021) suggests that qualitative data cannot be analyzed in ordered and distinct steps. She instead suggests that qualitative analysis "demands a more organic process that sees these three steps [sorting, analyzing, and interpreting] all influencing each other and working on overlapping cycles" (O'Leary, 2021, p. 345).

Strengths and Limitations

There are strengths and limitations to using surveys, interviews, and specific document scans from one community to predict the success factors for another community, due to the complexity of the problem.

Limitations

A study is only as rich as the available data. Recollections of staff and reports written by staff at municipalities may not be completely accurate if considerable time has passed. Council reports follow a specific form of prose writing in that they attempt to focus solely on facts; however, they are written to convince an audience (politicians or constituents) of something and may have implicit bias. Additionally, some of the information is considered "closed," meaning, not for the public, if it pertains to procurement, labour, or other elements. This limitation can be addressed by focusing on the success variables, taking a lessons-learned approach, and considering installations in several municipalities to see what promising practices emerge across several jurisdictions.

Strengths

A strength of this research is that it fills a gap in understanding promising practices small municipalities in BC can use to guide the successful provision of public toilets. On the surface, public toilets seem like a simple solution to reduce disease and improve livability in a municipality. However, their provision is surprisingly complex and requires nuanced approaches, and duplicating solutions from large cities may not work. Examining the success and challenges of

other installations to develop an understanding of small BC municipalities' tactics will provide evidence-based and relevant promising practices to increase public support for public toilets and improve livability in the community.

Findings

Introduction

The primary research took place from November 2023 until March 2024, including a survey, interviews, and a document scan. From the results of these methods, this research leads to several promising practices that small BC municipalities could adopt to improve access to public toilets for those who need them.

Current State of Toilets in BC

There is inconsistency across the province about how public toilets are installed, funded, and managed. This variance results from several factors that include the relative "wealth" of the community, Council direction, public demand, and professional interest. Unlike "rest areas," which are publicly accessible, 24-hour, provincial highway pull-offs that include a public toilet, garbage facilities, and picnic facilities with an apparent consistent design, wayfinding, and maintenance standard (Ministry of Transportation and Infrastructure, 2023), public toilets within municipalities have no consistent preferred form, location standards, availability, or maintenance standards, even differing within the same community: "If you have lots of them, and they share similar parts and the maintenance program is the same, they are not a novelty," said one interviewee.

One of the most significant challenges in supplying a quantitative summary of the number of toilets there are in small municipalities in BC is the lack of a consistent approach to providing public toilets, with a variety of typologies being seen as adequate, and political or social interest being the only trigger to undertake the installation of a 24-hour public toilet. Many people who supplied information for this research project mentioned facilities in outdoor parks or recreation areas as suitable and sufficient public washrooms, while others mentioned that a portable toilet or even a toilet in a business could be considered a "public toilet." As a result, this research project is unable to provide an accurate number. There is agreement that there is simply not enough, especially as the world emerges in a post-pandemic reality (Lowe, 2020).

Survey Results – Group 1 Participants

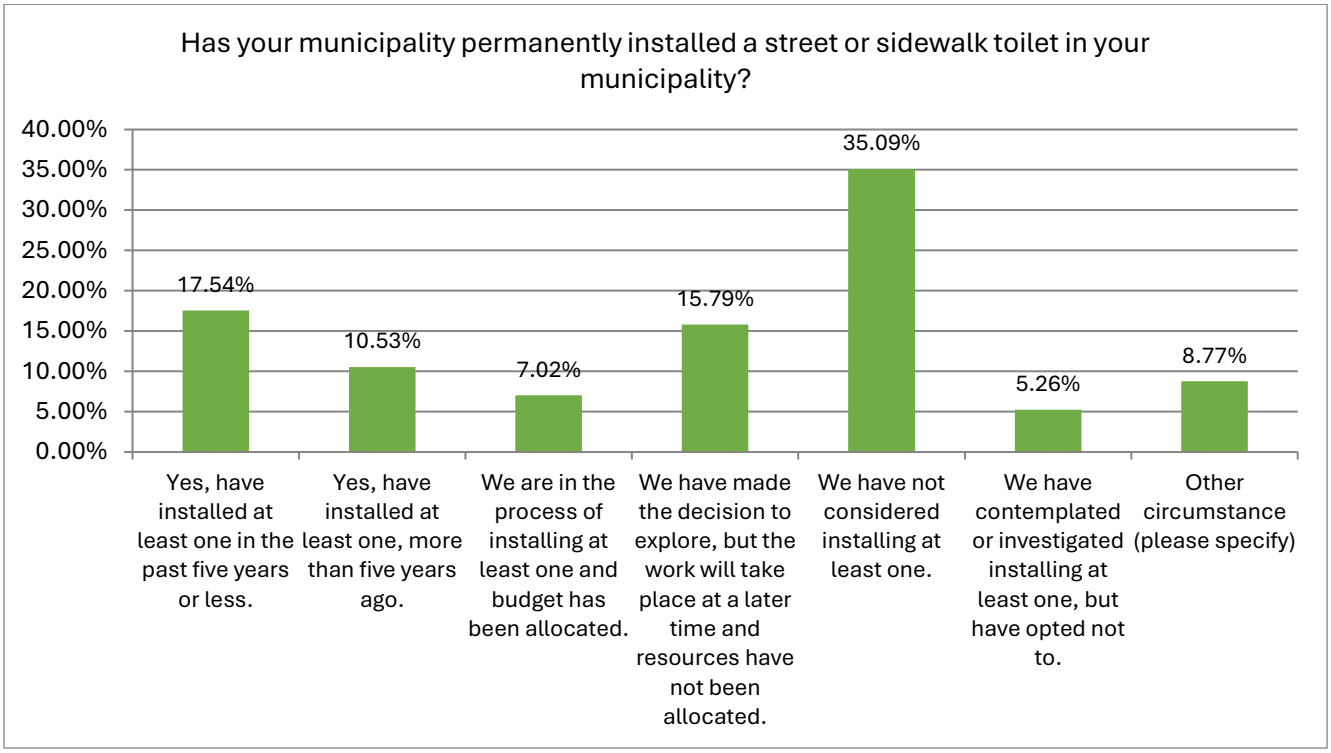
The survey to Group 1 participants, CAOs or delegates of BC municipalities, had 61 participants that consented to participate. What follows are the findings of the survey responses. Participants were required to consent to participate in the survey (Question # 1) before proceeding; all other questions were optional.

Question # 2

When asked if they had permanently installed a toilet in their municipality on a street or sidewalk, respondents were given several options to choose from, as well as the ability to write in their own response. Of the 57 participants who answered this question, 20 replied that they had not considered installing one. The second-most popular response was either "yes, have installed one in the past five years or less" (10 responses) or "yes, have installed at least one, more than five years ago" (6 responses) for a total of 16 out of 57 participants indicating their community had at least one street and sidewalk toilet installed. One notable write-in response indicated that the municipality they represented had "contemplated at length but cannot afford one." Other write-in answers noted that they had installed park washrooms or were contemplating installing a toilet in a park rather than one the street or a sidewalk. See Figure 4 for a breakdown of the answers.

Figure 4

Responses to Question # 2 of the CAO Survey

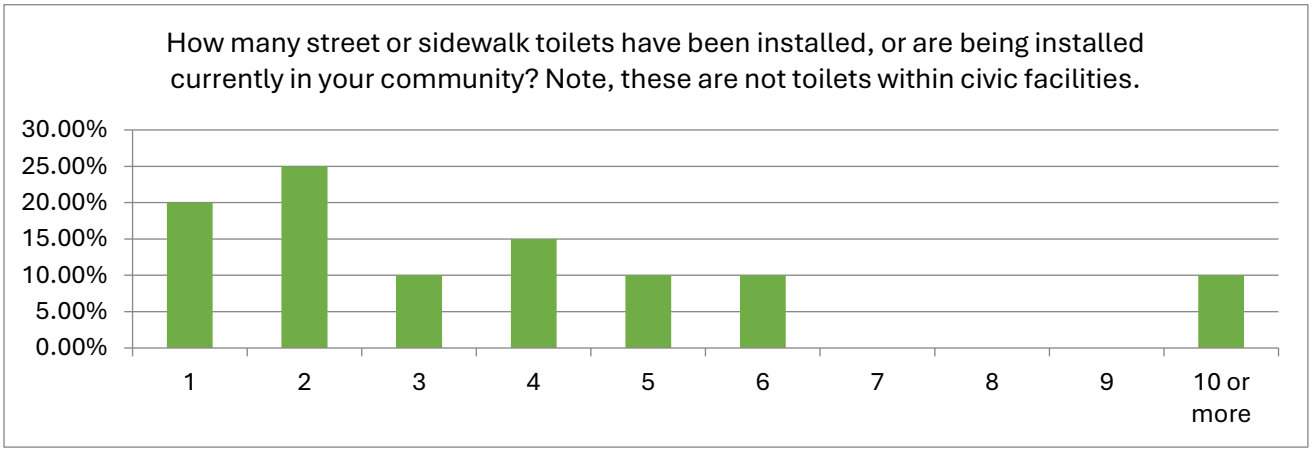


Question # 3

For survey respondents who selected "Yes, have installed at least one in the past give years or less," "Yes, have installed at least one more than five years ago," or "other," they were routed to a follow-up question asking how many street or sidewalk toilets they had successfully installed. 20 participants replied to this question. The most frequently selected answer was "2" (25%), with "1" (20%) as a the second most popular answer. Combined, "1" and "2" comprised nine out of 20 responses, or 45%. See Figure 5 for all the responses.

Figure 5

Responses to Question # 3 of the CAO Survey



Question # 4

Question # 4 focused on the cost of the installation of the toilet, including any permitting, landscaping, or servicing costs. The only participants who were shown this question had answered Question # 3. 20 participants answered this write-in question, including one who noted in their response they had not yet successfully procured the toilet and who answered "other" in Question # 2. Five of the remaining 19 could not provide an approximate cost and answered "unknown."

The participants who could approximate the cost of the toilet install listed figures ranging from $10,000 for a toilet building installed 20 years ago by municipal staff to a stated price of $1 million. One respondent noted that the toilets they had installed were provided by a street furniture contractor who supplied them in exchange for the use of the space for advertising purposes. Another respondent noted that the installation was $80,000, but the prefabricated toilet unit itself was funded through a grant. Of the remaining nine answers, the average cost was $378,000 per toilet, with the lowest amount being $50,000 and the largest number being $650,000. One survey taker noted, "The town has tried to put public washrooms in, but it is difficult to find contractors, and each time it goes to bid, the price goes up significantly."

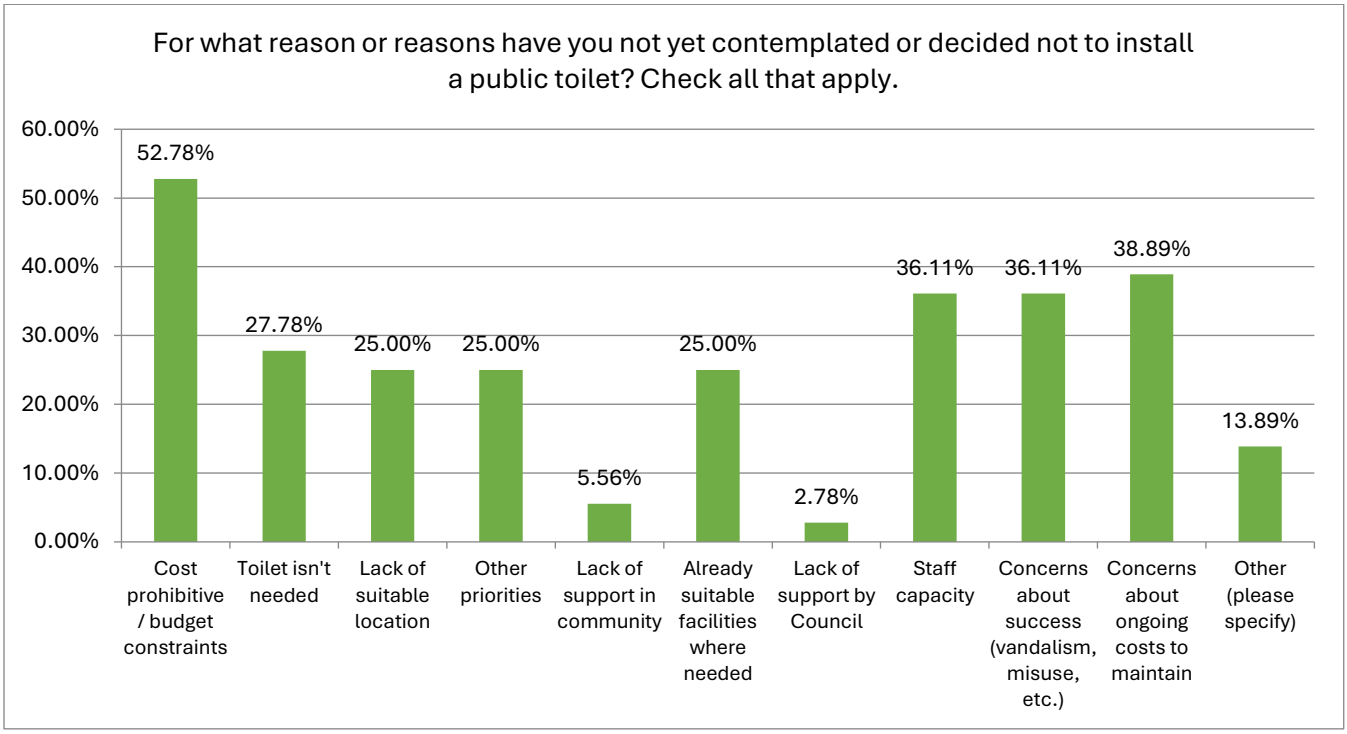
Question # 5

For respondents whose answers to Question # 2 included: "We are in the process of installing at least one, and budget has been allocated," "We have made the decision to explore, but the work will take place at a later time, and resources have not been allocated," "we have not considered installing at least one," "we have contemplated or investigated installing at least one but have opted not to" or "other," Question # 5 sought to understand why they had not successfully installed at least one street or sidewalk toilet. Participants could select as many answers as applicable and were allowed to write in an answer specific to their circumstances.

Write-in responses included "septic and environmental concerns," "relatively small community, no sidewalks," "there are public washrooms located in different areas of the community," "no sidewalks in the Village, not needed," "we have installed many public washrooms over the years, our downtown area is quite small, and we have a public washroom building located in a park plaza in the downtown core area," and "[it's a]small town and we have two larger public washrooms in two different locations that can be accessed during the day if needed."

The cost was the most frequently selected answer, with 19 participants selecting "cost prohibitive/budget constraints" and 14 selecting "concerns about ongoing costs to maintain" as reasons why their community had not yet contemplated or installed a street or sidewalk toilet. Lack of support by the community or Council were the two options most seldom selected by participants, with only three survey takers including these answers in their responses. "Staff capacity" and "concerns about success (vandalism, misuse, etc.) were also frequently cited, with both options being selected by 13 survey participants. See Figure 6 for a breakdown of all responses.

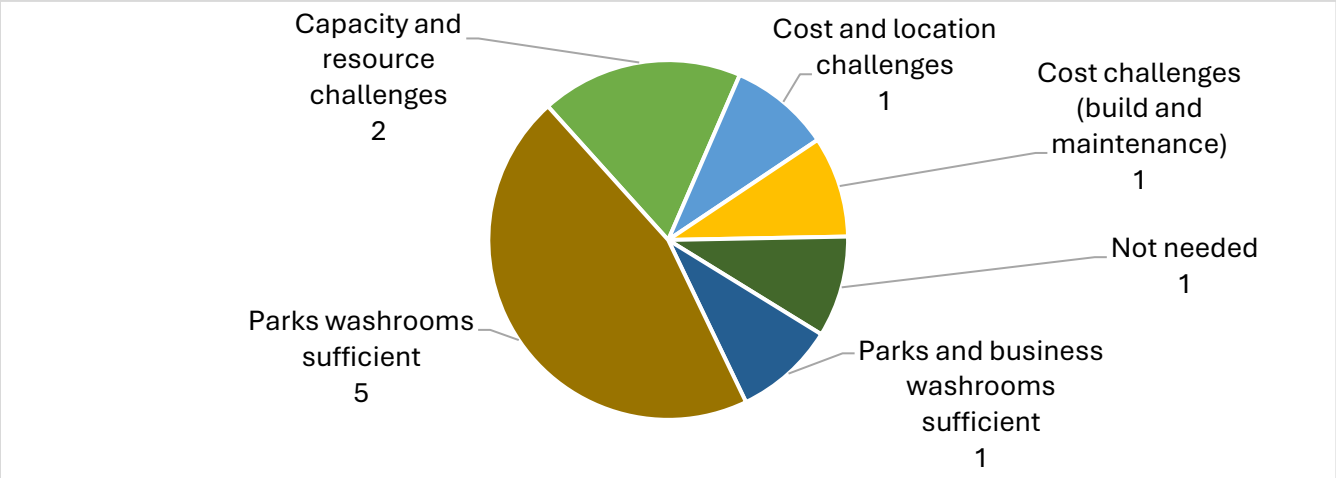
Figure 6
Responses to Question # 5 of the CAO Survey



Question # 6

The final question allowed participants to provide any comments they felt required elaboration. All participants were presented with this question, regardless of their answer to Question # 2. 11 participants opted to add a comment. In Figure 7, the comments have been grouped according to the sentiment or topic of the comments. Only one noted that they felt public washrooms were unnecessary, and five noted that the washrooms in their parks were sufficient.

Figure 7
Responses to Question # 6 of the CAO Survey



Remaining Survey Questions

The remaining survey questions asked participants to optionally provide contact information for the staff they identified as being able to answer more technical questions in a follow-up interview. 20-two participants provided contact information, which formed the list of invitees for Group 2 Participants.

Interview Findings – Group 2 Participants

11 interviews covering 12 municipalities were conducted. One interviewee provided insights for two municipalities as they had recently worked at another municipality doing similar work and were able to share information for both. All but one participant completed an online form indicating their informed consent to participate, with the remaining participant verbally consenting during the phone call.

The city staff that participated in the interviews represented a diverse group of municipalities with populations ranging from 449 to 662,248 (2021 Census). Two of them were from municipalities greater than 100,000, but interviewed were conducted as they had extensive insight to share. The average of these diverse communities was 121,608. See Figure 8 to see the sizes of the communities that were represented.

Figure 8
Size of Municipality Represented in Interviews

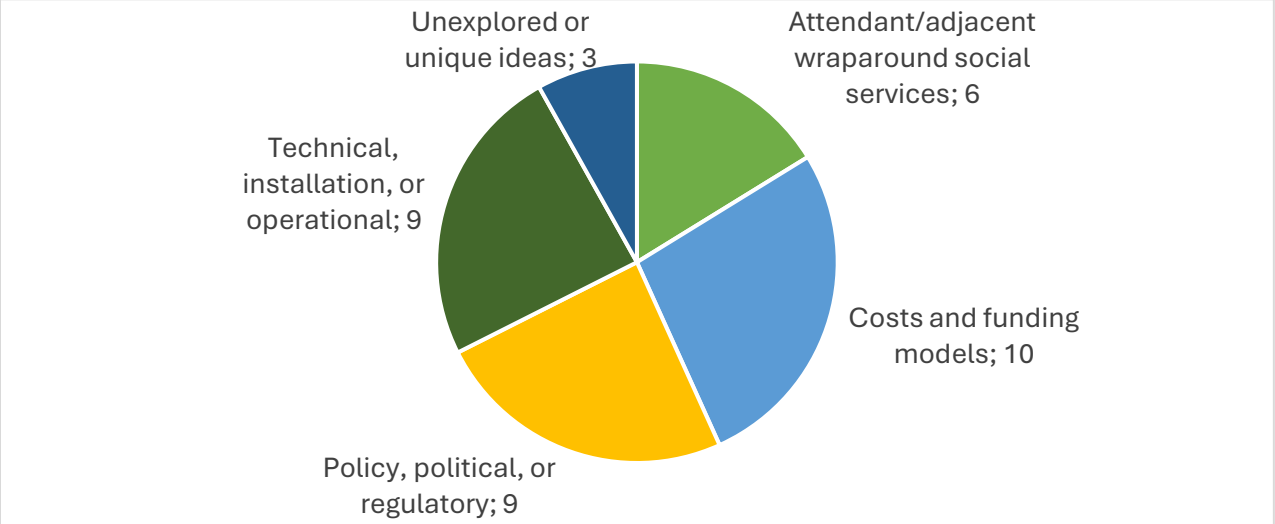
1	449
2	2,302
3	4,140
4	5,006
5	5,556
6	7,920
7	11,106
8	21,465
9	78,916
10	91,867
11	568,322
12	662,248

The comments that the interviewees provided in response to the questions generally fell into five categories:

- Attendants/adjacent wraparound social services
- Costs and funding models
- Policy, political, or regulatory
- Technical, installation, or operational
- Unexplored or unique ideas such as partnerships or public toilets as public art

Figure 9 shows the number of municipalities whose comments fell into the topic categories.

Figure 9
Comments from Group 2 Participants, Topically



The most frequently discussed topics focused on costs, funding models, and grants. Five participants noted that the public toilet they had installed had its costs covered wholly or partly by a grant and stated their support for more grant availability from higher levels of government. One interviewee cautioned: "When grants come up, it is easy to go after a grant with ideas and good intent, but they need to talk to public works [staff] first before they apply. It needs to be project-ready before they apply." This sentiment was echoed by another interviewee, a project manager, who, if tasked with another toilet project would rethink the governance structure to acknowledge the number of stakeholders and the complexity, so that there was a different decision-making framework other than standard project management. "The key objectives were not validated early on, and the project was handed to me for delivery when it was nowhere near ready."

One participant, who represented Vancouver, noted that their city's funding scheme included the use of a street furniture contractor to fund and manage their APTs. One other participant cited Vancouver's model as aspirational but acknowledged that it was not likely to be possible to attract a company to provide toilets without a significant tourism draw. One interviewee who hailed from a tiny community with less than 1,000 permanent residents with a growing eco-tourism sector noted that a public toilet would help increase tourism in their community; they speculated that a "tourism grant would be easier to obtain than an infrastructure grant." This interviewee also wondered if it might work if they approached the local Indigenous host Nation to partner to apply public art to a toilet building, potentially resulting in less misuse out of reverence for the artwork.

Political or policy-based comments were the next most common category. Nine Group 2 Participants noted their belief that public toilets support vulnerable residents. "The [toilet project] was a result of increased human waste during the pandemic and response from city staff for support solutions," said one interviewee. Another noted a "political and stakeholder mandate to get it installed with a specific direction, so the city had some social licence at the outset."

Several interviewees provided remarks that indicated support for regulated provision. Two noted that a public toilet strategy would be a necessary planning document to provide a framework for delivering public toilets. "I would like to see regulations from the Province or Feds that make it a requirement and that force municipalities to take responsibility and level the playing field," noted

one interviewee. Several interviewees said their municipality did not use a building permit process and instead installed the toilets through internal staff or a contractor. However, one noted that a building permit process "provided rigour that was very valuable in checking the work and making sure it was done right."

Other policy or political comments included remarks about how difficult it was to find the right policy approach and how Council direction was required to reallocate funds from reserves or other budget areas to cover the resource intensity of public toilets. However, that appears complex and subject to personal political agendas. "There is some interest from Council," said one interviewee, "but they're nervous about it." One interviewee noted that staff had brought forward an idea for a toilet install but that it took a "political shift" with a new makeup of people on Council to get the project to move forward. One interviewee noted that several competing interests in their capital budget, such as sewers, development, and road maintenance, often take priority as those are required.

Another interviewee expressed surprise at some of the community pushback they heard and was disappointed at "how unsympathetic to the plight of vulnerable folks" some residents and business operators were when they complained about the budget. Human rights seem to be a new learning for several communities: "the lessons learned were that the public needs them, especially children, and we have to figure out a way around it," said one interviewee. Another, representing a municipality with approximately 63% of the population aged 65 or older, noted that the senior-aged residents in their area ask for toilets around recreational facilities like walking paths, but that the real need is the area where social services are grouped, which presents a real challenge in "addressing the need versus the want."

One interesting scenario is one where the lack of specificity in regulations caused the failure of a toilet installation very quickly after it was installed. In Peachland, a toilet had been mandated by a public health official at a new park project to serve families and children. Staff conducted the work to procure a prefabricated unit, including getting the Council's approval for the expense and form of the toilet, and accepted delivery of a unit to fulfill the requirement. However, after it was installed, the form of the toilet was deemed unacceptable by the public and Council, who then advocated to the public health authority to waive the requirement, who eventually agreed (Grundy, 2022). The toilet was sold to another municipality to service the needs of a tiny home project to support vulnerable populations (BC Housing, 2024).

Group 2 Participants had several ideas focused on operational components, such as location selection, siting, ideas for locking the toilets using timers or gates, the use of exterior surveillance to reduce drug consumption and vandalism, challenges related to what departments should be responsible for the maintenance of public toilets, sequencing of installation, different models of prefabricated toilets, wayfinding, and lighting. All participants seemed resigned to the amount of vandalism, misuse, and damage they were experiencing or predicted to undergo; this remained one of the evident frustrations of all Group 2 Participants, with three noting their surprise at the sheer anger that toilet users seemed to have toward the facilities with the damage experienced. One said that cities would have to "accept that there will be challenges," and another commented that toilets "will always cost more than you think and be more problematic than you think."

Several interviewees noted a need for wraparound support: "You must have an outreach support component, or it will fail," stated one interviewee. "It is a complex issue," said one CAO. "Installation isn't the issue; it is the wraparound support for users who are most likely to misuse it."

Group 2 Participants had some unique and unexplored ideas they put forward. One participant suggested that the municipality could approach the local First Nation to work together to install a toilet and hire local Indigenous people to support the installation through a commissioned mural, suggesting that this may result in less vandalism out of reverence for the artwork. Another unexplored and unique idea was to use alternative energy sources to reduce the servicing challenges and make installation easier. One participant suggested that viewing public toilets as a consumable provision and resigning themselves to the fact that they would need to be replaced regularly is a cheaper and easier option than a complex installation of a permanent, freestanding public toilet. Finally, one participant suggested that "there may be a city policy that could influence the opening up of toilets owned by businesses to the public." For instance, staff from Vancouver were able to describe an installation where a developer permitted the installation of a small interior space with a toilet and access provided by a door that opened to the street, so this idea has a precedent.

Conclusion

The information received from both Group 1 and Group 2 Participants seems to be clear that public toilets are a complex issue with no clear instruction manual for how and why a city should provide them for the community. Several of the research participants commented on a desire to get it right for the benefit of the community and all interviewees requested that this research be shared with them once complete so that they might learn from their counterparts in other communities. Westley et al. note in their book *Getting to Maybe* that "it is easy to become an information hoarder rather than a knowledge sharer. In the successful ant colony, each ant adds to the dirt pile"(2007, p. 158), and it is this vision of the collective that the participants seemed to have approached the sharing of their experiences with providing public toilets.

Discussion and Analysis

Introduction

The purpose of this chapter is to relate the findings to the existing literature but to do so with the research questions in mind. This section draws from concepts such as the adaptive cycle, understanding change, and recognizing the human-centered element of public toilet provision to answer the research questions. It then attempts to map the system and summarize recommendations.

Answering the Primary Research Question

What promising practices can small municipalities in British Columbia employ to increase perceived success for the provision of public toilets?

To answer the primary question, some discussion is required to properly identify the areas revealed by the research that are challenging to overcome.

Reframing Approaches to Public Toilet Provision

The provision of public toilets is undeniably human-centered and needs a shift in thinking. This sentiment was echoed by research participants that felt a sense of obligation to provide for marginalized and vulnerable people and were frustrated and resigned to the fact that public toilets were often misused. From the literature and the research participants, it was clear that public toilet provision is viewed as being an element of a welfare state, where "government provided or funded programs aimed at securing the wellbeing of the population through the provision of health services, housing, education, income security, and the like" (Ife, 2016, p. 19).

A common complaint that many research participants heard was that a person in need of a toilet should "just hold it until they get home," and that it was not the responsibility of the municipality to provide toilets. In the CAO survey, one respondent noted that "we have several public washrooms and businesses with public washrooms available throughout town." This was a surprising comment; the comment implied that the survey taker felt it was partly the responsibility of businesses to provide public toilets. A new approach is necessary.

Wasting Time Trying

What was heard in the research was that the provision of toilets was challenging and there was precious time wasted in "trying on" numerous approaches. Further, for municipalities that had been able to install more than one public toilet, each project required significant planning and analysis before being implemented. Several interview participants noted a desire to have had a strategy to follow and guide their project implementation.

Several research participants noted the importance of understanding the bigger picture for their communities and wished that the project to install a toilet had been part of a greater strategy. One noted that a strategy would have helped them consider ways they could be more efficient, design common signage or built form, respond to community need better, or make purchasing decisions if the project were part of a larger strategy rather than a single one-off project. One interview participant pondered the fact that their community had no real expertise in providing a public toilet, and they dove into the installation without fully considering all the implications. Another interviewee suggested that they would like to see their community adopt a public hygiene strategy

that included other services related to WASH such as laundry and showers as well as public toilets. Systems thinking and a strategy to contain the portfolio of work would be useful in this circumstance. Municipalities where there was a strategy in place reinforced this benefit and commented that it had helped shape their work and made the roadmap to provision much easier.

Public Toilets Fail Frequently, and Staff Do Not Know What to Do

One research participant noted "we simply don't have the staff to do this" and another commented that "it is difficult to find contractors." Staff from Vancouver, the oft-cited local example of providing multiple toilets, mentioned the importance of partnering with an experienced company to provide maintenance, and better yet, a partner to support marginalized people most likely to need a toilet.

Vandalism and misuse were echoed by most research participants as either the reality or the worry, and for good reason. Staff representing a large city shared in their interview their experience of having installed two toilets in vastly different locations. One was installed on a city-owned lot, using a provincial grant, where several homeless people were already gathering daily. The other was installed attached to a public health facility with a support outreach worker, overdose prevention and safe consumption measures, and security nearby if required. Both have had significant problems with vandalism, though the unit closer to services experience less misuse. Examples of misuse the interviewee cited were plumbing components being removed for scrap metal, toilet lids stolen, fires lit, and more. "It is the cost of doing business," they noted.

Divide and Conquer?

Partnerships was cited by several communities as a way public toilets could be better provided, through the reduction of misuse, the reduction of operational costs, or the reduction of installation costs. One interviewee from a small community in northeastern BC suggested the idea that "any spaces the city owns that has a non-profit leasing it should have it written into the agreement that they must provide a public washroom" to shift the responsibility to the non-profit from the municipality. Vancouver staff reported that two of the APTs have a contracted attendant from a social service provider. Their contract states that the attendant have duties that are over and above that of mere cleaning and maintenance. They are also responsible for offering wraparound supports to washroom users and responding to overdose or other emergencies. City staff in five of the communities interviewed all mentioned partnership with a social service agency, and staff in two municipalities mentioned partnering with the local tourism office. One suggested that there could be incentives for businesses to open their washrooms or build their washrooms in such a way that they functioned as public washrooms, similar to what Solomon described as a Community Toilet Scheme happening in the UK (2013, p. 40).

One unique arrangement noted in the interviews was the installation of a public toilet in the corner into a new mixed-use development near downtown Vancouver. It replaced where a street and sidewalk toilet had already been, integrating the toilet into the building itself, improving the streetscape, and reducing sidewalk clutter, while also improving the toilet facilities itself. See Figure 10 for an image of the location's evolution.

Figure 10
Evolution of Public Toilet near 755 Nelson Street, Vancouver, 2009-present

Note. This composite image was created using screenshots from Google's Streetview by Jen Arbo.

Choosing the Correct Options

Quotes for a single toilet unit range in price from $150,000 in US dollars to $250,000 in Canadian dollars depending upon selection of features and finishings. Lead time from the time an order is placed to the delivery of the unit is approximately six to eight months. (K. Campbell, personal communications, March 2024). Some communities have built their own toilets using simple plans and straightforward non-combustible materials such as cinder blocks with common porcelain or metal plumbing parts. There were stated drawbacks and advantages to both approaches.

Location is also a key factor that contributes to the success of a toilet. Too close, and it becomes an unwelcome intrusion into the public space, and too far or too isolated and it becomes a target for misuse or neglect. Municipal staff in New Westminster reported they scouted more than ten locations while the project for a single toilet installation was in the initiation phase, within a few blocks' radius. The interviewee noted that the idea of their toilet came from a Downtown Livability working group struck in 2021 to respond quickly to the emergent issues in their commercial district exacerbated by the pandemic such as homelessness, cleanliness, mental health, substance use, and businesses continuing to struggle during and after the pandemic. More than two years later, the toilet has not yet been installed and what was meant to be a quick installation using a prefabricated toilet unit is still waiting on technical feasibility study because the location has been such a challenging element.

Old cities have old sanitation systems as upgrades are invasive and expensive. Staff from several cities noted in interviews that the tie-in to the sewer was technically difficult. Cities that are a part of a region have the additional complication of the regional government managing the sanitation and water systems present in the region with competing space underground.

Climate is a consideration for many of the communities who provided input into this research. BC is often noted for milder temperatures in the southern coastal area during winter, however in the northern communities in the province, winters are long and cold. Preventing freezing pipes is a challenge for many communities. In one community in the central part of the province, staff have tried to winterize their community's existing park toilets and are conducting feasibility to winterize the public toilet at the community walkway park, to respond to the requests from community members who use the trail for recreation purposes. In that community in particular, the interviewee noted that the community experiences extreme cold and extreme heat and providing washrooms

year-round is challenging at both ends of the spectrum as the toilets are not air-conditioned buildings, either.

Unintended consequences of toilet installations were mentioned by several interviewees. In Surrey, staff reported that they located their public toilet in an area that was already an informal gathering place for homeless folks. There had been a problem with public urination previously, and the toilet was meant to relieve those issues. In preparing for the installation, they conducted community engagement with the local businesses and residents who expressed worry that the toilet would function as a draw from even more people experiencing homelessness, which might make customers nervous. The toilet was perceived as a magnet, not a solution.

Responsibility to Provide

Several research participants lamented the fact that there are no clear instructions from upper levels of government that a municipality is meant to assume responsbility for the provision of public toilets. Surprisingly, this specific challenge came up in three interviews and participants noticed that this gap was often filled with political machinations.

Answering the Secondary Research Questions

Secondary research questions were also posed, and these questions were answered to varying degrees.

What is the current state of public toilets in British Columbia?

It has proven unrealistic to provide a statistical or quantitative summary of the public toilets in BC due to inconsistent provision and definition of what constitutes a public toilet across the province. Several municipalities are willing to produce a scheme to address the issue of human waste in the public realm, but proactive street and sidewalk toilet provision is not the only way to ensure this public good is met. Many communities instead rely on private businesses, facility, or park toilets, portable or temporary toilets, and even specialized human waste pick-up services. Further, toilet installations are at the mercy of the current Council to make decisions to move forward with purchasing, installing, and maintaining public toilets, and some communities simply elect not to prioritize the issue. In short, the current state of public toilets in British Columbia is inconsistent and not possible to quantify for the purposes and scope of this research.

What are government jurisdictions responsible for related to the installation and sustainability of public toilets?

While the BC Building Code has specifications for toilets in terms of their form and structure, and provision for workers is mandated by occupational health and safety rules, and certain public facilities require toilets, there is little regulatory requirements for public toilets. Indeed, municipal staff interviewed even disagreed whether a street or sidewalk toilet required building permits. Three municipal representatives noted that they appreciated the rigour following a building permit process provided and considered the public toilet to be “a little building,” whereas at least two noted that they had simply installed the toilet much like a water fountain or other functional piece of equipment. As a result, there is an obvious gap in the regulatory frameworks at play in BC. This is an area that should be considered by the provincial or federal government through building codes, occupational health and safety regulations, public health regulations, and other regulations to address the right to access a toilet on a broader level.

What lessons have other municipalities learned that can contribute to the body of knowledge held by small BC municipalities?

This question is like the primary research question, but seeks to answer a broader query, which is "what have small municipalities learned that can contribute to the body of knowledge?" One key component to answer this question is that the body of knowledge is unknown where municipal staff have had to take it upon themselves to ask their peers in other communities for advice or lessons learned, and these lessons were not found compiled anywhere. Most of the research participants who had installed a toilet in their community noted that they had asked other municipal staff for advice at the outset of their projects, and some of that advice was useful and some was not based on their unique circumstance, however as their project progressed, they did not check back in with the other municipalities to compare notes. Some overarching advice was offered in this research:

- Keep it simple. This is useful for the cost and for the operations.
- Using attendants is valuable for protecting the investment.
- Apply for grants only when the proposed installation is project-ready with a location selected.
- Ensure Council knows what is happening to ensure that community pushback does not alter the toilet after the fact.
- Expect it to take longer and cost more than estimated.
- Connect with community partners for advice and operational considerations.

What are the main issues related to public toilets in other jurisdictions?

Like BC, other jurisdictions struggle to provide public toilets adequately without significant investment. Challenges with misuse, funding, and ongoing maintenance plague public toilet provision across national and global jurisdictions. In the United States, calls for more public toilets are frequent in the media (Lazo, 2023; vanden Heuvel, 2023) with only eight public toilets per 1,000 Americans (A. Solomon, 2022). In other countries, public toilet provision is a challenge and there is a dearth of information and reports online detailing the challenge of public toilet provision. In communities where homelessness is an issue, it appears that public toilets are more challenged by misuse than in communities where toilets have been installed as a response to tourism, however it is important to remember that public toilets do not serve one user type only regardless of the impetus for installation. An interesting case study from Moreira et al.(2021b) looked at the perspective of public toilet users in Brazil, and it found that "the main issues were related to provision, hygiene, and accessibility" and that the study "showed how hearing and understanding users' demands may improve urban planning when considering sanitation in public places"(p. 52).

Some jurisdictions have opted to turn toilets into public art, as in the case in Tokyo where the public toilets are seen as a "symbol of Japan's world-renowned hospitality culture"(*The Tokyo Toilet*, 2023) and 16 toilets in the Shibuya ward were re-imagined in preparation for the 2020-2021 Olympics and Paralympics with incredible artistry, architecture, and imagination through funding from the Nippon Foundation (Harvard Graduate School of Design, 2022).

Unexpected Findings

Public toilets are still an area with intense discomfort; spaces where humans do private things but situated within the public realm. One unexpected finding that appeared during this research was that Victorian-era-tinged puritanical squeamishness still impacts the ability of a municipal

government to provide what is a basic human right. During the interviews with municipal staff, several of them expressed a level of discomfort or awkwardness in talking about providing toilets publicly and suggested that it was difficult to convince decision-makers to allocate resources to this provision in the avenues for discussion that they have at their disposal: reports to Council and worse, in-person meetings that are usually broadcast to the public. Recognizing that access to toilets and sanitation is a human right, cultivating common language and understanding of the regulatory frameworks of toilets, and understanding that many municipalities struggle with the issue of providing public toilets will all contribute to easing the discomfort of discussing them.

There were some unique ideas that came to the forefront that included principles of Truth and Reconciliation. One interview participant saw the installation of a public toilet as an opportunity to hire an Indigenous artist to design a unique toilet installation, to highlight and speak to issues that Indigenous people are facing, such as compromised access to clean drinking water. One interview participant noted that the local homeless population who they felt the public toilet was most likely to serve included an overrepresentation of urban Indigenous people, a datapoint validated by the provincial homeless count which found that 39% of enumerated homeless people identified as Indigenous, but only 6% of BC's total population is Indigenous (The Homelessness Services Association of BC, 2021, p. 8). The interview participant wondered if providing public toilets could support Indigenous populations in their community.

Another unexpected finding in this research was the open manner with which most of the research participants approached the topic when speaking city staffer to city staffer. It was clear that municipal staff desperately want to solve this complex problem, but feel limited because of a lack of clear regulations, lack of funding, and in many cases, an absence of staff expertise. Municipal staff openly acknowledged how challenging public toilets are to supply and how easily they can become de-prioritized. As one participant said, "they are such a tough nut to crack, and I desperately want to do it better, but I feel really lost on how." Municipal staff also expressed a desire to see the outcomes of this research, believing it would help and support their work to know what other municipalities are doing.

Limitations of Analysis and Areas for Further Research

There exist some limitations to the analysis. For instance, the survey that was sent to the CAOs or delegates did not ask many questions. To respect the time of busy professionals, the survey was designed to limit the questions to only what was considered the most important, and instead hoped to speak to more city staff in the follow-up interviews. While the number of interviews that were conducted exceeded the number desired, there were several municipalities that were larger than the target population, or where the CAO provided staff contact information for municipalities that had installed street or sidewalk toilets specifically, rather than public toilets more broadly. Their input would have been valued. However, follow-up requests for interviews were not answered and the approved methodology did not allow for repeated follow up.

At the outset of this research, conducting interviews with public toilet users was not contemplated. However, as the research progressed, it became clear that public toilet provision does need to include users' voice to help shape and define what provision looks like. In each community this could be quite different, as the unique composition of demographics in a municipality may result in different needs. This is a limitation in the analysis as the interviewees and survey takers would have bias themselves. The promising practices have been developed not just through the primary research, but rather have been supported through the literature review and document scan as well, which contributes to a more robust view.

Another limitation of the analysis was because of the inconsistency in what the literature and research participants consider to be a "public toilet." Despite using illustrative photographs, research participants still confused publicly accessible toilets with the type of public toilets that were the focus of this research. As a result, some of the interviews were discussions related to facility toilets, or toilets in the community that the municipality did not install or maintain. Because street and sidewalk toilets are a fairly new way to provide public toilets, it became apparent that their form is not as understood as believed at the outset of the research project.

One area for further research is the psychology of public toilets and public toilet users. As noted in the introduction, this research did not set out to solve social challenges that result in people having nowhere else to go. However, it has become apparent that there is a great deal of emotion that exists with how people approach toilets, both from a user perspective and a city staffer perspective. Why do some users experience such intense anger that they destroy toilets? Why do some users vandalize or graffiti toilets? Why do some members of the public destroy a public toilet to the point where it is rendered unusable and closed for use?

It is interesting to consider the concept of "novelty" as it relates to public toilets, and this is an area worth further research. Two interview participants commented that the idea of installing a toilet on the street or sidewalk seemed "too innovative" for their community's needs. It was "too much." Remember the Council who said they were "interested, but nervous"? It should not be such a novel concept to provide a public toilet for community members so that they may conduct what is a biological component of humanness. But pop culture has also enshrined an apparent fascination with flush toilets when they were invented. Is novelty partly the reason toilets get vandalized?

It is clear there is a broader implication when one considers the affordability and housing crisis that BC is experiencing, with unprecedented levels of people living on streets or in shelters near to social services providers and forced to exist in such a public way under the scrutiny of those who have other places to use the toilet. An area to research further is whether a Housing First model impact the need for public toilets? Housing First is a "recovery-oriented approach to homelessness that involves moving people who experience homelessness into independent and permanent housing as quickly as possible, with no preconditions, and then providing them with additional services and supports as needed" (Gaetz et al., 2013, p. 2). By getting people who have nowhere else to go into housing, would the demand for and abuse of public toilets decrease enough so that the success rate would increase?

Revisiting the Conceptual Framework

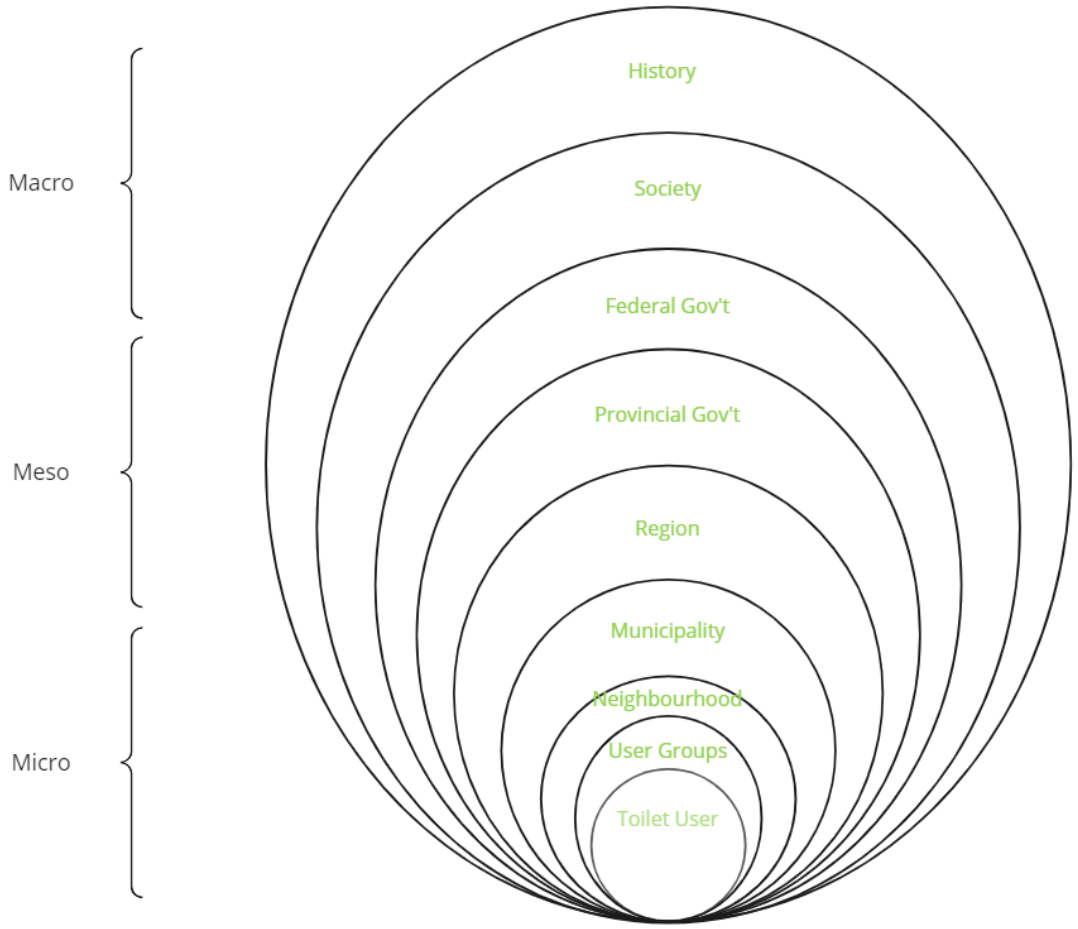
Dan McCarthy, the Director of the Waterloo Institute of Social Innovation and Resilience (WISIR) describes systems thinking as a lens: "It doesn't necessarily reflect reality…it is a way of thinking about the world or a way of approaching problems" (Waterloo Institute for Social Innovation and Resilience, 2015c, Section 01:47). As noted in Figure 3 in the literature review, there are several elements that comprise or influence the provision of public toilets. Without a doubt, these elements are interconnected and mapping the elements as a structure will provide a better understanding the mingling and overlap that they demonstrate.

Using the method described by WISIR, this research undertook a system map, drawing connecting lines between the elements to illustrate the ways in which the elements were interconnected. The intention was to identify leverage points as described by Meadows (1999b). However, the map became disorganized, messy, and unusable very quickly. This is common in systems mapping as an exercise to address complex problems. McCarthy notes that importance of

boundaries in the system (Waterloo Institute for Social Innovation and Resilience, 2015c, Section 2:01), and so taking a step back, the issue of scale was addressed.

Another important theory when considering complex social problems is the theory of emergence. “Emergence is patterns that occur at small scales from individual interactions, creating patterns at the next level” (Waterloo Institute for Social Innovation and Resilience, 2015b). Drawing from both Giddens’ numerous works on structuration theory as well as Bronfenbrenner’s ecological systems theory (Guy-Evans, 2020), nested systems exist along the macro, meso, and micro scales. Figure 11 is an illustration of the scales at play in the public toilet system. The ones that are listed are not an exhaustive list; several systems could exist in this illustration that are not noted, but they do provide an illustration of how to view the system’s scale.

Figure 11
Nested Systems and Their Scales



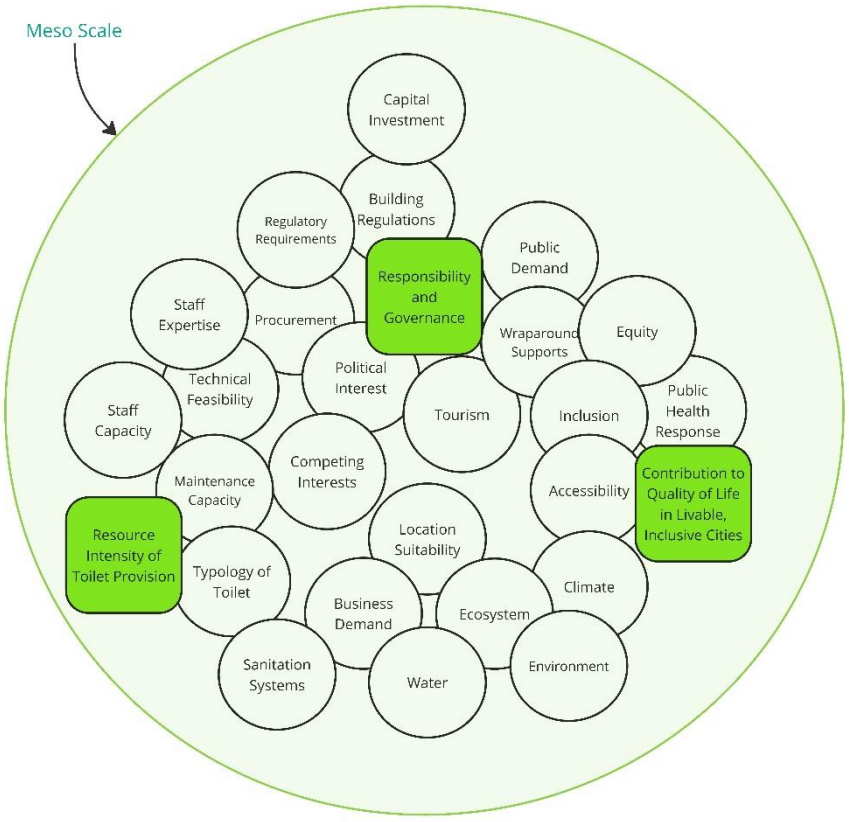
Interconnectedness Map

Returning to the mapping exercise, it is more straightforward to apply a system boundary, which is an imagined boundary to separate the elements within the system to only those to identify and map. Using the elements, boundaries, themes uncovered in the literature review, a map illustrating the interconnectedness emerged. See Figure 12. The map shows the elements grouped by their theme, bounded by the meso scale.

To situate the reader to the illustration, the bubbles are the elements that play a part in the system that were uncovered through the primary research and the literature review. These are components that can influence the success of a public toilet installation and are variables at play in different ways at different municipalities. For example, a village like Alert Bay may be interested in a toilet especially for tourism purposes, whereas a city like New Westminster may view a public toilet as a public health response. The bubbles have been grouped according to the three themes that emerged in the literature review, with the relationship to one another demonstrating their interconnectedness. The three themes of responsibility and governance, resource intensity, and contribution to quality of life in livable and inclusive cities help to contain the many elements that the primary research revealed.

Viewing the impact the various elements and themes within the context of appropriate scale can help visualize this research in a way that makes it easier to conceptualize the complexity of both the problem and potential solutions.

Figure 12
Interconnectedness Map



Recommendations

Introduction: The Six Promising Practices

Through the research and analysis six promising practices emerged. Each community should contextualize these practices for their own community's unique circumstances, but by following them, many problems can be proactively addressed. Recall that this research seeks to find promising practices rather than best. These practices are a good starting point and come from the experiences of municipal staff working to successfully install and provide public toilets in their communities.

Practice # 1: Adopt a design thinking approach that centers those impacted.

The rise of neoliberalism, which "emphasized the important of individual responsibility rather than state provision" (Ife, 2016, p. 20) has contributed to public toilet provision being viewed as a burden rather than contributing to the public good of an excrement-free community, and being the responsibility of the government. This neoliberalist view does little to contribute to the community or acknowledge the person in need of a toilet. Ife (2016) notes that:

> "Given the likely failure of the welfare state to continue to meet human needs, the ecological unsustainability of large, centralised welfare state structures, and the limitations of private sector market-based models, it is important to consider how human services would look from a community-based approach" (p. 112).

The community-based approach Ife suggests is possible. New ways to approach problems acknowledges that many of the systems in place operate top-down, rather than ground-up, and an opportunity exists to employ design thinking, which centers the people impacted to develop solutions and move away from the idea that providing a public toilet is not the responsibility of government. In their work on design justice, Costanza-Chock notes that it is "entirely possible to create formal community accountability and control mechanisms in design processes, and that these can, in part, be institutionalized" (2020, p. 94). Additionally, using a design-based approach may also support evaluating and adapting a public toilet installation after it has been launched. "In the absence of a predetermined method for evaluation, these approaches can be used to actually design the evaluation method" (Maclusky, 2018, p. 3), as design thinking involves "structured processes that encourage creativity in problem solving" (Purkis, 2021, p. 16).

In Jean Roe's excellent discussion of design thinking and its application in a municipal setting, she outlines five essential components to using design thinking: empathize, define, ideate, prototype, and test (2020, p. 7). She also encourages municipal staff to design for equity: "design thinking runs the risk of privileging the designer more than the end user, which can reproduce inequitable systems… designers must build social and emotional awareness and continuously reflect on the impact of one's emotions, actions and insights" (Roe, 2020, p. ii). Instead of approaching public toilet provision with empathy and care for community members (step one of design thinking), several Group 1 Participants answered the question about why they had not yet installed a toilet in very linear, project-based ways. For example, for several it was a simple cost equation, and for others it was location challenges. Some participants rationalized their choice not to provide by asserting that "a public toilet is not needed" despite the reality that people are not always able to control when and where nature calls. None of the participants who answered this question noted whether there had been requests for toilets that they had balanced against the challenges.

Practice # 2: Develop a community-wide strategy for the provision of public toilets using a holisitic approach, including evaluation criteria.

To understand how a strategy would be of use to a municipality contemplating the provision of a public toilet, some context related to systems, how they adapt, change, sustain, and become trapped is valuable.

Holling (2001) developed the adaptive cycle to understand complex ecosystems, their regeneration and hierarchies, and to better understand the meaning of sustainable development. However, his work can also be applied to human-related systems. Westley applies the adaptive cycle Holling described to complex social problems. She illustrates resilience, which "allows a system to adapt and re-organize after a disturbance of some kind" (Waterloo Institute of Social Innovation and Resiliency, 2015c, Section 2.2) through a cycle of four phases that operate in a continual and simultaneous loop. The phases are *release*, where an idea is born, *exploration*, where the idea is developed, *exploitation* or *production*, where the idea is launched, and *conservation*, where the idea becomes an established innovation. However, something disrupts the innovation, and the cycle begins anew.

A strategy for public toilet provision would help guide this work by providing a framework for evaluation and project management for the "system" of public toilet provision and would help communities gather input from community members. Purkis notes that "municipal governments are using systems thinking in various ways" and suggests that this approach could be applied to "complex problems such as homelessness and housing affordability" (2021, p. 15), so there is a precedent for local governments to apply this approach to the provision of public toilets.

Biggs et al. (2015) describe seven general principles for enhancing the capacity of a system to sustain even when faced with disturbance, and suggest that the principles—though interdependent and equally important—may not always apply. From their set of seven principles, three are particularly aligned with the complex system of public toilet provision: encouraging learning and experimentation, broadening participation, and fostering complex adaptive systems thinking. These principles could benefit the development of a public toilet strategy and public toilet provision.

Further, adaptive cycles may be threatened by collapse because of outside forces, both of which are relevant to challenges municipal governments face. Holling describes two "traps" that adaptive cycles may find themselves constrained by–the rigidity trap and the poverty trap.

"If an adaptive cycle collapses because the potential and diversity have been eradicated due to misuse or an external force, an impoverished state can result, with low connectedness, low potential, and low resilience, thus creating a poverty trap. A system with high potential, connectedness, and resilience is represented by the rigidity trap" (Holling, 2001, p. 400).

In other words, a municipal government could relegate the provision of public toilets to the community as a low priority item to fund, one that is easy to knock off the list of "must-haves." Or they could consider the provision of a toilet as a must-have, but not have the ability to implement it because it has never been done before. What is needed is change. Holling describes three kinds of change: abrupt learning, incremental or adaptive learning, and change brought about through transformational learning, which is "generally characterized by relatively sudden breakthroughs

when multiple systems or scales align in a cascade of novelty" (Westley et al., 2007, p. 205). The two latter kinds of change are likely.

Adaptive or incremental learning would be present in a community where more than one toilet is contemplated, as in the scenario in New Westminster, where the project manager noted how many elements of the installation they would have approached differently when and if they were to work on a project like this again. Further, the transformational learning, or "stars align" notion, is relevant in the provision of public toilets. Several of the research participants made it clear that it was not one or two things that happened in a specific order, but rather it was the confluence of several elements that made a difference to "unstick" the issue to allow them to move forward with the project, such as a new Council or a grant stream that was launched, or the redesign of park.

Practice # 3: Develop mitigation strategies that acknowledge that misuse is likely and cultivate expertise from all staff roles that might contribute to a toilet project.

Greed (2006) notes that "those responsible for public toilet provision generally hail from an engineering rather than a medical or social policy background" (p. 42). It is not just the installation and operations of the toilet that are elements municipal governments need to consider. Westley et al. (2007), in their book Getting to Maybe, note "connections or relationships define how complex systems work; an organization is its relationships not its flow chart" (p. 7). From the tiny seed of an idea brought forward by a member of the public, a social service agency, a Council member, or a staff member, the provision of a public toilet is a series of touchpoints with different subject matter expertise required along the way: business case and funding model development, grant writing, location selection, procurement, sanitation connections, operations management, community engagement, and communications just to name a few.

Practice # 4: Work together for the public good and consider partnerships with other community providers.

Partnership is an essential element in many municipal government endeavours and for several years has been the way municipal governments are able to deliver on the expectations of residents and on the provisions mandated by the provincial government. Some examples might be a youth soccer organization that delivers recreational sport programming on municipal soccer fields, a local much-loved festival organization delivers community belonging and connecting through a municipal grant, or a social service agency supports elders in the community with housing. Partnership with non-profit agencies seems the most likely course, as this strategy has experienced success in many BC communities in addressing homelessness (Newton, 2009), however consideration for public-private partnerships is a reality many municipalities must consider. "In BC, several waves of economic and political restructuring over the past few decades have displaced former state investment policies in favour of neoliberal public policies that support market-based approaches to deliver goods and services in order to emphasize entrepreneurial freedom while reducing government expenditures" (Harvey, 2005, as cited in Ryser et al., 2023, p. 151).

Practice # 5: Select carefully for equipment, location, and impact.

As noted, there are several companies selling prefabricated public toilet units. They position themselves as "plug and play" units with optional components that may be available for additional fees such as sharps containers, baby change tables, winterized components, and specialized, non-slip flooring. Location concerns, climate implications, impact to the surrounding community, and other factors can all set a public toilet up for success or failure. A municipality would do well to

consider exactly what they are hoping to accomplish–and prevent–with their selections for equipment, location, and impact. The development of a functional program is an important element to prevent unintended consequences and the research has revealed a recommendation to also ensure decision logs are utilized to record how, what, and why various elements were selected.

Practice # 6: Advocate for mandated provision so that all communities are equitably required to provide public toilets as a human rights-based response.

Perhaps most importantly, is the idea that municipalities should advocate to higher levels of government to mandate provision to de-politicize the provision of public toilets and even the field for accessing funding. It may seem counterintuitive to advocate for a forced requirement to invest extensively in a resource-intense item, especially given the financial challenges that neoliberal thinking has presented in how higher levels of government dole out funding. Ryser et al. (2023) note "Small municipalities struggle with outdated financial and governance structures and a provincial public policy agenda that asks them to become more creative, innovative, and 'entrepreneurial' in their approach and responsibilities" (p. 150). However, advocating that the provision of public toilets is explicitly a responsibility of local government, like roads, fire services, or parks, ensures that providing public toilets is not a political decision, and it acknowledges that all community members benefit when 24-hour accessible public toilets are installed. It could prove fruitful for efficient procurement practices where the provincial government could purchase at much larger quantities and experience economies of scale and could support, much like highway rest stops, a more consistent approach to public toilet provision with recognizable features.

This advocacy would also need to come with a request for a new funding stream to support small, already-cash-strapped municipalities, and would need a strategy to roll out effectively. Finally, it would require the provincial government to adjust regulations such as those that govern public health and make it explicit as to what must be provided and by whom. However, this practice would better support the people who live in BC.

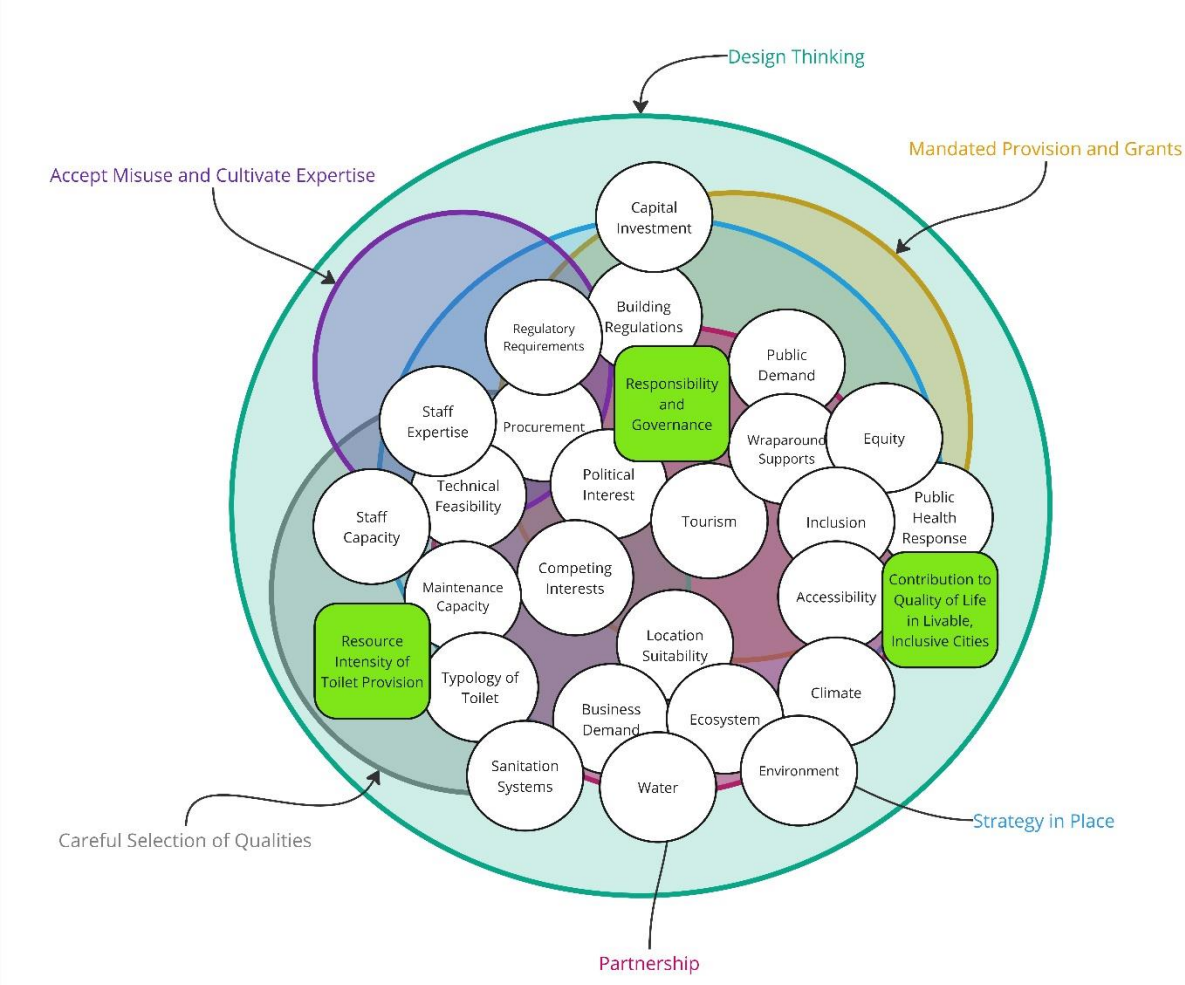
Implementation Strategies

It bears noting that the promising practices are a menu of options. However, the research conducted for this project supports the idea that all six practices combined would work well as an approach to the complex problem of providing public toilets. Municipal staff should consider carefully how to incorporate at least some version of each practice as an approach for their community. The practices follow a sensible order of operations where municipal staff could work through them sequentially to best deliver a successful public toilet. Ergo, adopting a design thinking approach will support the practices that follow, each one building on the solution to the complex problem of public toilets. The practices may have their own unique timelines, as well. In each municipality, different resources will be required to put the practices in place. Therefore, not all practices can be adopted immediately, and they should be considered an iterative approach.

Realistically, not all practices will apply to all municipalities. It is the exercise of consideration that will determine the value of the practices to a specific municipality. For example, not all communities will have a suitable partner to consider working with. Therefore, the partnership practice is not relevant. However, just by considering whether it is relevant, and by adopting a design thinking approach, having a strategy in place, accepting misuse, and cultivating expertise, a municipality may revisit the idea of partnership in the future.

Returning once more to the Interconnectedness Map introduced earlier in Figure 12, the elements and themes have the six promising practices overlaid to illustrate the impacts of implementing the six promising practices. See Figure 13. These are represented by different coloured transparent circles that vary in size and placement to indicate what elements and themes they are most likely to impact. The practice of "design thinking," for example, has the greatest impact on all parts of the map, with its size and placement influencing every element and theme. The practice related to the development of a strategy in advance is situated to illustrate that it has the greatest impact on responsibility and governance themed elements, but also touches on quality-of-life themed elements and is adjacent to the theme of resource intensity. Conversely, one can see that the practice related to carefully selecting qualities has the greatest impact on the theme of resource intensity, but insignificant impact on the quality-of-life theme. Each practice has a different impact on the system and seeing these illustrated can help an individual municipality assess their community's needs and plan implementation.

Figure 13
Impact Map



Conclusion

Jim Diers, a noted speaker on neighbourhoods and the idea of community, talks of a distinction that "agencies provide services, and communities create care (City of New Westminster, 2023)." This research set out to gather the promising practices that could support a municipality in the demonstration of care in its community through the provision of public toilets for its residents, especially the most vulnerable and marginalized with nowhere else to go to use the toilet.

As identified in the research, municipalities in British Columbia are facing labour shortages and the municipal staff interviewed expressed their worries related to strict budgets, difficult timelines, and elevated expectations from senior managers, elected officials, and community members. This research intended to reduce the burden staff face and aimed to increase awareness and the number of public toilets provided in BC municipalities by developing a sensible approach comprised of six promising practices gleaned from and in use in peer communities around the province. The practices are:

1. Adopt a design thinking approach that centers those impacted.
2. Develop a community-wide strategy for the provision of public toilets using a holisitic approach, including evaluation criteria.
3. Develop mitigation strategies that acknowledge that misuse is likely and cultivate expertise from all staff roles that might contribute to a toilet project.
4. Work together for the public good and consider partnerships with other community providers.
5. Select carefully for equipment, location, and impact.
6. Advocate for mandated provision so that all communities are equitably required to provide public toilets as a human rights-based response.

This research has fulfilled a gap in the literature that is specific to small municipalities in British Columbia. It has brought together some of the consistent challenges faced by communities in the province and provided a suggested roadmap for city staff to use to explore the relevance and impact for their own community.

There remain areas to consider in the future. The emotional and psychological implications of public toilets and people's interaction with them remains an area for study. This research revealed that there is a great deal of emotion wrapped up in the topic of public toilets in cities, related to anger, perception, and redirection. It is also worth considering the concept of "novelty" as it relates to public toilets and to the promising practices. Finally, another area for further study is whether a Housing First model as described by Gaetz (2013) would impact the need for public toilets. By providing housing to people who have nowhere else to relieve themselves, would the success rate increase?

This research brings to light a topic that is, at times, awkward to discuss and difficult to prioritize, and provides evidence-based recommendations for municipal staff to consider. The promising practices are intended to increase access to public toilets and raise awareness of the importance of what should be considered a responsibility of local governments for the benefit of communities across the province.

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Appendix A Group 1 Survey Questions

Promising Practices of Successful Public Toilets in Small Municipalities in British Columbia

Page # 1

Question # 1

Introduction and Informed Consent

You are invited to participate in a study entitled Promising Practices of Successful Public Toilets in Small Municipalities in British Columbia that is being conducted by Jen Arbo.

Jen Arbo is a graduate student at the School of Public Administration at the University of Victoria, and you may contact me if you have further questions by email at jarbo@uvic.ca.

As a graduate student, I am required to conduct research as part of the requirements for a degree in the Master of Arts in Community Development program. It is being conducted under the supervision of Dr. Lynne Siemens. You may contact my supervisor at 250-721-8069.

Purpose and Objectives

The purpose of this research project is to examine variables that contribute to the successful installation and management of public toilets in small municipalities in BC with populations of 100,000 or fewer, understanding what works or does not work elsewhere. While this study hopes to contribute positive outcomes for vulnerable people who are most in need of public toilets, such as homeless people, community elders, women, children, or those living with medical issues, it recognizes that all members of a community can benefit from the provision of public toilets. The research is focused on BC municipalities because they share legislative frameworks from Canada and the Government of British Columbia related to building codes and public health regulations.

Importance of this Research

Research of this type is important to illustrate the benefits and disadvantages of public toilets by providing relevant, evidence-based practices. This will support an increase in the number of safe, clean public toilets available in small municipalities to improve access to basic sanitation and increase livability, especially for vulnerable people who live there. One valuable approach is understanding what has worked and not worked in other similar jurisdictions by detailing lessons learned by the staff assigned to work on these projects.

Participant Selection

You are being asked to participate in this study because you are the chief administrative officer of a BC municipality.

What is Involved

If you consent to voluntarily participate in this research, your participation will include answering survey questions about the provision of public toilets in your municipality via an online survey and,

optionally, identifying municipal staff who may be able to provide more technical comments and feedback to the researcher in a follow-up interview. The online survey is expected to take you no more than 10 minutes.

Your responses will be used to develop a database of lessons learned and promising practices for BC municipalities and will be analyzed alongside other responses. Your municipality may be identified in the report, but your personal identity will not.

Be advised that information about you that is gathered for this research study, including identifiable information such as the municipality you are affiliated with an online program located in the US or a program that can be accessed from the US (SurveyMonkey). As such, there is a possibility that information about you may be accessed without your knowledge or consent by the US government in compliance with the US Freedom Act.

Inconvenience
Participation in this study may cause some inconvenience to you, including the allocation of time to answer the questions.

Risks
There are no known or anticipated risks to you by participating in this research.

Benefits
The potential benefits of your participation in this research include the potential for learning from other municipalities, increasing general knowledge of promising practices for the provision of public toilets in British Columbian municipalities, and contributing to increased access to public toilets by residents of British Columbia.

Voluntary Participation
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study before your results are incorporated into the research, your data will not be used and will be destroyed.

Anonymity
In terms of protecting your anonymity, your municipality may be identified, however, your name will not. It is possible for your name to be cross-referenced from another source for someone to identify you since there is typically only one chief administrative officer for each municipality.

Confidentiality
Your confidentiality and the confidentiality of the data will be protected. Only the Principal Investigator (Dr. Kimberly Speers) and the Principal Applicant (Jen Arbo) will have access to your data. The raw data will be stored in SurveyMonkey, and during analysis will be stored through the University of Victoria's Sharepoint system.

Dissemination of Results
It is anticipated that the results of this study will be shared with others in the following ways:

master's project presentation, graphically-designed guidebook available to the public that lists promising practices, and presentations or talks at scholarly meetings or local government conferences.

Disposal of Data
Data from this study will be disposed of after the publication and presentation of the final master's project. All paper copies of your information will be shredded. All electronic data that contains your information will be erased.

Contacts
Individuals that may be contacted regarding this study include:

- Jen Arbo, researcher, 6047658881 jarbo@uvic.ca
- Dr. Lynne Siemens, Supervisor, 2507218069, siemensl@uvic.ca

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

By proceeding and completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Do you consent to participate in this study?

○ Yes ○ No

Page # 2 - Installation

Question # 2

Installation

This survey is about public toilets that are permanently installed in municipalities on streets, sidewalks, rights of way, and in some parks. It is not about toilets that are located within civic facilities, temporary or portable toilets, or large facilities that include changerooms at parks or sports fields. When answering these questions, please keep this in mind.

At the end of this survey, you will be invited to connect the researcher with staff that work in the same municipality as you, so that more technical information about toilet installations can be shared.

Examples of prefabricated street and sidewalk toilets

2. Has your municipality permanently installed a street or sidewalk toilet in your municipality?

- Yes, have installed at least one in the past five years or less.
- Yes, have installed at least one, more than five years ago.
- We are in the process of installing at least one and budget has been allocated.
- We have made the decision to explore, but the work will take place at a later time and resources have not been allocated.
- We have not considered installing at least one.
- We have contemplated or investigated installing at least one, but have opted not to.
- Other circumstance (please specify)

If participants select one of the first three answers, they are routed to Page # 3. If they select one of the last four, they are routed to Page # 4.

Page # 3 Toilet Number and Budget

Question # 3 – participants are skipped to this page if they selected one of the first three answers for Question # 2

3. How many street or sidewalk toilets have been installed, or are being installed currently in your community? Note, these are not toilets within civic facilities.

- 1
- 2
- 3
- 4
- 5
- 6

- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10 or more

Question # 4

4. What was the total approximate cost of the installation? This should include the toilet unit, any landscaping, permits or fees, professional services, etc. If unknown, please indicate. If you have installed multiple units, indicate the approximate cost for each one, if known.

After completing these questions, participants are routed to Page # 5.

Page # 4 – why not? Participants are routed to this page if they selected one of the last three options on Question # 2.

Question # 5

5. For what reason or reasons have you not yet contemplated or decided not to install a public toilet? Check all that apply.

- [ ] Cost prohibitive / budget constraints
- [ ] Toilet isn't needed
- [ ] Lack of suitable location
- [ ] Other priorities
- [ ] Lack of support in community
- [ ] Already suitable facilities where needed
- [ ] Lack of support by Council
- [ ] Staff capacity
- [ ] Concerns about success (vandalism, misuse, etc.)
- [ ] Concerns about ongoing costs to maintain
- [ ] Other (please specify)

Question # 6

6. Please feel welcome to elaborate.

After completing these questions, participants are routed to Page # 7.

Page # 5 – Invitation to Connect – participants are routed to this page from Page # 3.

Question # 7 Thank you for completing the questions.

The next step in my research is to connect with staff who may have technical or functional expertise in the installation of street and sidewalk toilets to conduct interviews to gather lessons learned and promising practices so that other municipalities in British Columbia can benefit.

I'd like to hear from staff in municipalities who have completed the installation of a toilet, are working on it currently, or who have participated in a decision-making process that resulted in a decision not to move forward with the allocation of budget for a street and sidewalk toilet.

Are you able to connect me with staff in your municipality that meet the above criteria?

- ○ Yes
- ○ No

If participants answer yes, they are routed to Page 6. If they answer no, they are routed to Page 7.

Page # 6 – Identified Staff

Question # 8 – Identified Staff

8. Identified staff

Title

First name

Last name

Question # 9 – How to contact?

9. Should I contact the staff member by phone or by email to set up the interview?

- ○ Phone
- ○ Email
- ○ No preference

Neither, I will have them contact you at jarbo@uvic.ca or 604-765-8881.

Question # 10 – Email address

10. Email Address
Email address

Question # 11

11. Phone
Phone number

Page # 7 – End of Survey / Thank you

Thank you for taking the time to answer my questions. Your help is appreciated and valued. You may reach me at any time to discuss the project at jarbo@uvic.ca or 604-765-8881, or you may direct your questions to my supervisor Dr. Lynne Siemens, Supervisor, 250-721-8069, siemensl@uvic.ca. In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca). Please hit submit to complete this survey.

Appendix B Group 2 Interview Questions

1. What led to the toilet project moving forward?
2. Can you describe the process that took place to get a toilet installed?
3. Where did you access information that supported your project?
4. What would you consider to be overall successes for the project?
5. What were the barriers or challenges to completing the project?
6. Have there been any challenges that have come up post-installation?
7. Did anything surprise you along the way?
8. If you were doing this project again, what would you do differently?
9. What advice would you give to another municipality?
10. What would you say is the most important lesson you learned?
11. Do you have any other thoughts not covered by other questions?