



Aquatics for All:

Equity and Decision-Making in the Planning of Municipal Swimming Pools

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Abstract

Public swimming pools are civic amenities that provide many benefits, including opportunities for fitness and recreation, a venue for socialization, and cooling during extreme heat events. However, certain Canadians have historically been excluded from swimming pools, and today there continues to exist many inequities to accessing swimming pools. For providers of aquatics infrastructure and groups that currently face barriers to accessing swimming pools, it is important to consider how improvements to our planning of municipal swimming pools can reduce or eliminate those inequities.

This report examines the extent to which equity is a consideration in planning decisions on municipal swimming pools. The focus is on five cases of pool decision-making across three municipalities in Greater Vancouver: Vancouver, Burnaby, and Richmond. Data was primarily derived from publicly available documents and interviews with key informants. The latter included municipal officials, planning consultants experienced with aquatics planning, and other interested parties.

Findings show that equity is typically not a high consideration when municipalities are planning for public pools. However, there are also many instances of various actors in the planning process acting with equity in mind, such as consultants proposing ways to be more inclusive of equity-deserving groups. For planners and municipalities interested in linking the planning of public swimming pools to equitable outcomes, this report recommends exploring one or more of the following: creating an aquatics plan or strategy that features equity as a goal or evaluation criterion, forming an aquatics advisory board if one does not already exist, and pursuing more opportunities for colocation and collaboration.

Résumé

Les piscines publiques sont des équipements collectifs qui offrent de nombreux bienfaits, y compris un lieu pour la santé physique et les loisirs, un espace de socialisation et un endroit pour se rafraîchir en cas de vague de chaleur. Toutefois, certains groupes de canadien(nes) ont été historiquement exclus de ces espaces et aujourd'hui il y existe encore de nombreux obstacles à l'accès. Pour ceux qui conçoivent l'infrastructure aquatique et ceux qui sont confrontés des barrières à l'accès aux piscines, il est important d'examiner comment l'amélioration de notre planification des piscines municipales pourrait réduire ou éliminer ces inégalités.

Cette enquête académique examine à quelle mesure l'équité est considérée lors de la prise de décisions de planification des piscines publiques. L'accent est mis sur cinq exemples à travers trois communes dans la région du Grand Vancouver: Vancouver, Burnaby et Richmond. Les données proviennent de documents publics et d'entretiens avec des acteurs principaux. Ces derniers comprennent des fonctionnaires municipaux, des consultants ayant de l'expérience en planification aquatique et d'autres parties intéressées.

Les résultats indiquent que l'équité est rarement une priorité lorsque les municipalités planifient la construction des piscines publiques. Cependant, il y a encore de nombreux cas où des acteurs dans le processus de planification agissent dans l'intérêt d'équité, par exemple quand les consultants proposent d'inclure davantage des groupes méritant l'équité. Pour les planificateurs et les municipalités qui souhaitent lier la planification des piscines publiques à des résultats équitables ce rapport conseille d'explorer une ou plusieurs des approches suivantes : créer un plan ou une stratégie dont l'équité est un objectif ou un critère d'évaluation dans la construction des piscines, former un conseil consultatif aquatique là où il n'y en a pas et poursuivre plus de possibilités pour la colocation et collaboration.

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Chapter 1: Introduction

Swimming pools are valuable pieces of infrastructure with many benefits. They provide a place to exercise, which has numerous public health benefits; they are especially important as a place to do low-impact exercise, which is critical for elderly populations and people with disabilities. Swimming pools are also community space where people can meet, interact, and socialize; they are one of the few community spaces where the use of phones is discouraged. These facilities also provide cooling and respite during extreme heat events, which are increasingly common as climate change worsens. Finally, swimming pools provide a safe venue for people to learn how to swim, an important life skill.

However, despite these benefits of swimming pools, not everybody has equal access to them. Canada has a long history of denying Black Canadians and Chinese Canadians access to their local swimming pools (Nzindukiyimana & O'Connor, 2019). In 1945, 21-year-old teacher Vivian Jung was denied entry to Crystal Pool in Vancouver due to her racial background — a controversial incident that eventually led the City of Vancouver to drop its racist ban on non-White swimmers (Vancouver School Board, 2021). While these race-based admission policies are now illegal, it remains unclear to what extent legislation has rectified disparities in access, whether for racialized Canadians or other equity-deserving groups. For instance, today there is evidence that racialized Canadians are disproportionately more likely to die by drowning compared to White Canadians (Gallinger et al., 2014).

In Canada, most public swimming pools are provided by municipal governments. Public pools are far outnumbered by the privately-owned pools that are located in hotels, resorts, private fitness centres, condo complexes, and suburban backyards. There are also some pools provided by institutions such as universities and non-governmental organizations such as the YMCA; these vary in how much they are open to the wider public. Although some countries, such as Japan or Iceland, intentionally try to coordinate the planning of schools and swimming pools, this is not common practice in Canada.

In fact, we have very few norms about how aquatic resources should be allocated or how the allocation of aquatic resources can be done in an equitable way. While many consulting firms with expertise in aquatics bring similar knowledge and practices to projects in different jurisdictions, there are no standardized guidelines for the planning of aquatics infrastructure: each municipality that provides aquatics infrastructure to its residents can decide for itself how, or if, they provide swimming pools. This means there are opportunities for different governance structures and different decision-making processes at the municipal level to influence different outcomes for aquatics infrastructure, including outcomes with equity implications.

At the same time, there is not much research on the planning process, the decision-making, or the actors when it comes to equity and aquatics infrastructure. Given the outsized role that Canadian municipalities play in planning for and providing swimming pools, the importance of swimming pools in delivering various benefits, and the lack of clarity over the extent to which equity is a consideration during the planning process, increased understanding of the decision-making has the potential to help reduce structural inequities in accessing swimming pools.

1.1 Purpose

The aim of this research is to investigate what urban planners do, or can do, to ensure (more) equitable access to swimming pools and their benefits, particularly for equity-deserving groups that would especially benefit from this type of infrastructure (e.g., children/youth, seniors, racialized Canadians, Indigenous people, immigrants, low-income households, and disabled people).

This report seeks to answer the question: *to what extent is equity a factor in the decision-making process when planning for public swimming pools?*

By investigating the decision-making process, this report will strive to illuminate *why* certain decisions are made over others. This is important because all planning decisions will necessarily have trade-offs. Understanding the trade-offs is important to identifying equity considerations (e.g., What are the equity considerations if one neighbourhood is

chosen over another for a new pool? Or if a school swimming pool is closed for financial reasons?), and that in turn is key to identifying best practices and/or key barriers for planners to consider.

Urban planners and other participants in the planning process may conceive of equity in various ways. However, one way to approach equity can be to consider both horizontal equity, which entails ensuring fair spatial distribution of resources, and vertical equity, which entails addressing disparities in need between different groups or areas (Tahmasbi et al., 2019).

According to Neutens et al. (2010), in the context of public service delivery “equity refers to a situation of no systematic differences in accessibility values between groups of people (whether defined on the basis of spatial location, gender, class, or another classification scheme)” (p. 1621).

Such research is highly relevant to several stakeholders. First and foremost, traditional providers of public aquatics infrastructure — municipal governments, parks and recreation boards, etc. — will benefit from having greater insight into how different actors operate or fail to operate in the planning and development of swimming pools. Additionally, given the equity focus of this research, Canadians that are racialized, elderly, etc., stand to benefit from research that aims to uncover and dismantle structural barriers to accessing aquatics infrastructure.

This research focuses on three municipalities in the Greater Vancouver region: Vancouver, Burnaby, and Richmond. This study area was chosen for two reasons. Firstly, Greater Vancouver never underwent the kind of municipal agglomeration seen in Toronto or Montreal, which means the region offers a unique opportunity to compare cities that share similar local characteristics, yet different political and governance contexts. Secondly, each city varies in its planning of aquatics — Vancouver has an aquatics plan, Richmond has a sports and recreation plan, and Burnaby has neither — and this provides an opportunity to compare the planning of swimming pools in different planning contexts, where different tools, time, resources, and responsible actors have been involved.

1.2 Overview of Aquatics Infrastructure

This research focuses specifically on public swimming pools, though it is important to acknowledge that swimming pools are merely one type of aquatics infrastructure, and that swimming pools can also come in many forms.

For example, the City of Vancouver considers beaches and splash pads to be aquatics infrastructure, and these spaces are planned in conjunction with traditional swimming pools (Vancouver Board of Parks and Recreation, 2019d). Furthermore, in the Canadian context, swimming pools evolved from public bathhouses, which can also be considered a type of aquatics infrastructure. Although these other types of aquatics infrastructure are not the focus of this report, they will be acknowledged insofar as they impact decision-making during the planning process for swimming pools.

Swimming pools themselves can also come in many forms: Olympic-sized pools sized for professional competitions, smaller pools for basic fitness and training, free-form pools designed for recreation and leisure, etc. Swimming pools can also range in depth, from shallow pools that are accessible for beginners learning to swim to deep pools that can safely accommodate diving. There are also different ways of constructing swimming pools, ranging from traditional chlorine-treated pools to natural water pools that make use of water from lakes, rivers, or the ocean.

This report does not focus on the architectural or design differences between different swimming pool configurations, except for when these considerations are a factor in the decision-making process (e.g., municipalities trying to decide if they want a larger, 50-metre pool sized for swim competitions or a smaller, less expensive option).

This report focuses on public swimming pools that are advertised as such by the City of Vancouver, City of Burnaby, and City of Richmond. Throughout this report, unless otherwise specified, “pool” or “swimming pool” can be understood in its most general sense as a reference to the pool facilities provided by those municipalities, while “aquatics infrastructure” refers to both swimming pools as well as other aquatic spaces and facilities. At the same time, it is important to note that these facilities can be very

diverse in their size, design, and configuration. Some are small and only have one simple pool, while others are large complexes with multiple pools, plus additional amenities such as hot tubs, steam rooms, etc.

1.3 Overview of Equity Aims in the Three Municipalities

This research focuses on considerations of equity during the planning of municipal swimming pools, though it is important to note that there are many different definitions of equity. The variety of definitions is important to note because, in a planning context, different definitions can lead to different outcomes (Brand, 2015).

Metro Vancouver, the regional government, has defined “social equity” as “the promotion of fairness, justice and the removal of structural barriers that may cause or aggravate disparities experienced by different groups of people. This can include the many dimensions of identity, such as socioeconomic status, ethnicity, race, sex, age, disability, gender, sexuality, religion, indigeneity, class, and other equity related issues.” (Metro Vancouver, 2022, p. 102).

The City of Vancouver, in its Equity Framework, says, “Equity as an outcome is the condition that would be achieved if one’s identity no longer predicted how one fares. Equity as a process is the replacement of policies, practices, attitudes and cultural messages that reinforce differential outcomes or fail to eliminate them.” (City of Vancouver, 2021, p. 6).

The Vancouver Parks Board, in its Parks and Recreation Services Master Plan (*VanPlay*), notes that different people may have different interpretations of equity, and says that “[s]triving for equity means addressing the fact that some parts of the city enjoy more privilege than others” (Vancouver Board of Parks and Recreation, 2019a, p. 12).

The City of Burnaby’s Equity Policy, first adopted in 1994, does not provide a definition of equity, but the policy was updated in 2020 to state that “the City of Burnaby reaffirms and is committed to ensuring that all community members are able to safely and

equitably access City spaces, programs, employment opportunities, and services.” (City of Burnaby, 2020b, p. 3).

The City of Richmond, in its 2013 social development plan (which is currently being updated), defined “social equity” as “[e]nsuring that all segments of the population have equal opportunity and that their needs are recognized and addressed in a fair manner.” (City of Richmond, 2013a, p. 89).

This research focuses on the extent to which equity was a consideration for decision-makers and relevant stakeholders during the planning process for swimming pools, as opposed to the equitableness of the planning process itself or of the outcomes produced.

Apart from different definitions of equity in planning documents, there may also be different understandings of equity by planning staff compared to other participants in the planning process. Planners “must be careful not to assume that all communities voicing a value of equity mean they support prioritizing resource allocations for those who have the fewest choices.” (Zapata & Bates, 2015, p. 246). In fact, equity can also be understood as “not a static concept but one that different social groups actively construct to make claims on the state and to support their own interests.” (Brand, 2015). In the context of planning for swimming pools, this means that different actors may use a call to equity to advance specific goals, but different actors may have different interpretations of what equity means.

1.4 Methodology

There were two main research methods used in this research. The first step involved collecting and analyzing publicly available documents about the planning process for public swimming pools. The second step was semi-structured interviews with key observers, including municipal officials and planning consultants experienced in aquatics infrastructure.

The analysis of public documents focused on planning documents, and also City Council meeting minutes, public engagement documents, staff reports, and media articles. In all three municipalities under study, parts of the planning process were contracted out to consulting firms, so where possible consultant reports were also analyzed.

The intent behind the key observer interviews was to supplement data gathered through the document review and fill in any gaps. This step was important because while analyzing plans, reports, and other documents can shed light on documented decisions and their publicly stated rationales, not all aspects of decision-making are necessarily documented. Perspectives from planners and other involved officials helps fill that gap.

I targeted municipal officials, planning consultants experienced in aquatics infrastructure, and other interested or relevant parties. Several individuals were interviewed over a period of three months, from March to May of 2023. Interviews were conducted in accordance with McGill University's research ethics guidelines. Interviewees were given the option of determining the level of anonymity of their contribution. Individuals who consented to being identified are named in this report. These include:

- Leila Todd, Planner II/Project Manager on *VanSplash*;
- Brian Johnston, founder of Professional Environmental Recreation Consultants Ltd. and partner at RC Strategies;
- Michael Roma, managing partner at RC Strategies; and
- Michael Henderson, principal at HCMA.

Other individuals requested full anonymity so no further details about them are provided. Since the individuals interviewed had diverse professional backgrounds and different perspectives to offer on the planning of swimming pools, a semi-structured interview process was used, focusing on three areas:

1. Confirming the role of the interviewee and/or their organization as it relates to public swimming pools;

2. Verifying the technical process of planning for swimming pools beyond what is described in publicly available documents; and
3. Identifying the main factors in the decision-making process of planning new swimming pools or planning investments in existing swimming pools.

Chapter 1 of this report explains the purpose and methodology of this research. Chapter 2 reviews existing literature, starting with an overview of the history of planning for aquatics infrastructure before diving more deeply into the benefits of swimming pools and inequities to accessing swimming pools, and then concluding with a look at urban governance and planning decision-making in Greater Vancouver. Chapter 3 presents the results of this research by municipality, including an overview of each municipality's network of swimming pools and one or two case studies per municipality. Chapter 4 analyzes key themes that cut across multiple case studies or multiple municipalities. Finally, Chapter 5 summarizes key findings of this research, outlines the limitations of this research, and provides recommendations for planning professionals.

Chapter 2: Literature Review

There is scant academic literature that looks at the intersection of equity, decision-making, and municipal aquatics infrastructure. This chapter starts by examining the history of aquatics infrastructure planning, with a focus on a Vancouver or Canadian context where possible. After this background and contextual information, the chapter describes the benefits of swimming pools and their relevance to urban planning. A third section focuses on inequities in access to swimming pools, including general context on spatial inequities in the provision of public infrastructure in Greater Vancouver. Finally, this chapter concludes with a look at governance and decision-making in Greater Vancouver, both generally and with respect to aquatics infrastructure.

2.1 History of Aquatics Infrastructure Planning

Aquatics infrastructure has a long history as an urban amenity in cities around the world. In Ancient Rome, public baths influenced by the gymnasia of Ancient Greece were widely built and served as places for people to bathe and socialize (Yegül, 2013). On the other side of the world, in medieval Japan, religious and therapeutic baths eventually developed into public bathhouses, which served — and in many communities today, continue to serve — as community hubs where people gathered and relaxed together (Butler, 2005).

The contemporary municipal swimming pool in Canada has similar roots: during the Victorian era, the British were inspired by bathhouses in India and Japan to start opening public baths (HCMA, 2016). Starting in 1846, as part of an attempt to improve hygiene among the urban poor, the British government began allowing municipalities to apply for funding to build public baths. Although some were washhouses with individual bathtubs, facilities with large communal pools, not unlike swimming pools today, proved more popular (Sheard, 2000). Similar facilities were also built elsewhere in Europe, as well as in North America (Kossuth, 2005).

Up until then, it was common for working-class men and boys in industrialized Western countries to bathe nude in whatever natural waters they could access. Indeed, *The Globe & Mail* and *Toronto Star* have documented how, up until around 1930, Toronto's

Don River was a popular public bathing spot for the working class, with some observers offended at the “infestation” of naked boys and adolescents swimming and splashing in the open and other observers concerned about safety and drownings (Barbour, 2018).

Many cities in Canada tried responding to this phenomenon by banning public nudity or public bathing. However, evidence from Canada and the U.S. show that the threat of fines or imprisonment did not deter people from bathing in public; working class people simply had nowhere else to go (Kossuth, 2005; Wiltse, 2007). In contrast to the U.K. and Europe, where public baths were publicly subsidized by the mid-19th century, in Canada communal baths were largely run by the private sector due to their high cost (Kossuth, 2005).

In the second half of the 19th century, public officials in the U.S. started to believe “that dirtiness caused the spread of diseases, moral degeneracy, and urban disorder,” and this was impetus to begin constructing public baths for the working class (Wiltse, 2007, p. 17). Similar reasons were also publicly cited by municipal officials in Canada (Stewart, 2015). However, this was not the only significant factor. In many Canadian municipalities, appeals to public health garnered sympathy but did not spur officials into action. Many cities only began building baths after receiving complaints from middle- and upper-class Canadians who were offended at the sight of working-class men and boys bathing naked in rivers, canals, and whatever other bodies of water they could find (Barbour, 2018; Kossuth, 2005). In other words, municipal public baths were often constructed purportedly for reasons of public health but were politically influenced by privileged Canadians’ conceptions of acceptable behaviour among the urban poor.

This top-down approach of infrastructure provision did not always work as municipal officials intended. In many American cities, public baths designed for hygiene were quickly taken over by young and adolescent boys, who carried on splashing and playing at the public bath as they would have done outdoors in lakes and rivers, much to the consternation of officials who wanted these facilities used primarily by adults for washing and cleaning (Wiltse, 2007). However, at the same time, the continued prevalence of boys and young men openly swimming naked in urban rivers and

waterways, as well as concerns of crime and vandalism, encouraged officials to continue funding public baths.

The boys, and sometimes girls, who repurposed public baths for their own desires hinted of changes to come. Beginning in the 1890s, showerhouses began to be regarded as cleaner than bathhouses. As a result, many municipal public baths were repurposed into swimming pools. Similar to public baths, these were often strictly gender-segregated, though gender integration became increasingly common starting in the 1920s (Wiltse, 2007). Additionally, starting in the mid-1890s, the playground movement led many Canadian officials to start thinking of how recreation — including opportunities for swimming — should be something that cities strive to provide for their residents (Kossuth, 2005).

In the early 20th century, as public baths evolved into swimming pools, they were typically very popular. However, there were often also the site of conflict. In the U.S., gender integration often happened simultaneously with racial segregation, as some people vocalized their opposition to letting Black men swim near White women (Wiltse, 2007). In Canada, racial discrimination was largely based on the discretion of staff and varied geographically. For example, in the early 20th century mixed-gender and mixed-race swimming was permitted at City of Vancouver beaches, but not at Vancouver's Crystal Pool (the city's only public indoor pool), which until 1945 admitted Chinese and Black users only on Tuesday mornings (BC Black History Awareness Society, n.d.; City of Vancouver, 2017; Nzindukiyimana & O'Connor, 2019).

This history of racial discrimination and segregation is notable because in the 1940s and 1950s civil society organizations successfully sued many American municipalities that had refused court orders to desegregate their public pools. Rather than leading to greater equity, many pools closed, either because the municipality chose to close the pool rather than desegregate, or because after desegregation the vast majority of their White visitors boycotted or abandoned their local pool to the point where the municipality could no longer afford to keep the pool open (Wiltse, 2007). Unlike in the U.S. in the post-World War II period, Vancouver did not experience disinvestment in public aquatic facilities as a result of racially motivated pool boycotts. However, rapid

advancements in pool construction technology meant private firms could meet popular demand for private pools in suburban backyards and country clubs, locales where White families could avoid mingling with Black swimmers.

In the 1980s and 1990s, conservative governments in the U.S., U.K., and Canada cut public spending and downloaded additional responsibilities onto cash-strapped lower levels of government, which led to a slowdown in public pool investments. In the U.S., disinvestment occurred not just with swimming pools, but nearly all forms of urban public space as middle-class households relocated en masse to the suburbs (Wiltse, 2007). In the U.K., most pool closures during this time were school pools (McLauchlan, 2017). In Greater Vancouver, many pools were built in the 1960s and 1970s with funding from senior levels of government. The pace of construction slowed as that funding dried up in the 1980s and 1990s, though many municipalities managed to keep their existing pools open (Vancouver Board of Parks and Recreation, 2018).

Overall, the history of aquatics infrastructure provision by local authorities reflects changing attitudes around the purpose of aquatics infrastructure. In the mid-19th century, public baths were seen as a municipal service much like any other, but these morphed into swimming pools as public officials began to see less of a need for public hygiene and more of a need for recreational space. In the U.K., pools were once co-located with schools as a way to ensure students could learn to swim, but this goal fell to the wayside as budget constraints became pressing. In the U.S., gender integration of swimming pools occurred simultaneously with racial segregation as public officials sought to prevent Black men from swimming near White women; racial desegregation after World War II led White households to flee municipal pools en masse. Canadian swimming pools experienced government disinvestment in the 1980s and 1990s, much like their U.K. and U.S. counterparts, and today face questions of where to go from here.

2.2 Benefits of Swimming Pools

Today, many Canadian municipalities continue to provide aquatics infrastructure to residents. This section will outline in greater detail why aquatics infrastructure, and in particular, swimming pools, continue to be relevant as a type of civic recreation facility.

Aquatic services, according to the consulting firm RC Strategies, provide the following benefits: learning water safety, aquatic sports, fitness, rehabilitation/therapy, social opportunities, family opportunities, social mixing, leadership training, volunteering opportunities, special events, and sport tourism (RC Strategies, 2020). Another relevant benefit is that they can provide cooling, which will be increasingly important as climate change worsens, particularly in regions that experience urban heat island effects or extreme heat. This section will examine three benefits that are likely to have strong links to questions of equity: swimming education, opportunities for fitness and recreation, and cooling during heat waves.

RC Strategies notes that, for many pool users, learning how to swim is a top desire (RC Strategies, 2020). The World Health Organization also says that learning how to swim is one of many tools that can help prevent drowning (WHO, 2021). While learning to swim does not necessarily prevent drownings (taking lessons does not guarantee a student will meet all learning objectives and even if met, it does not guarantee an ability to successfully apply that knowledge in a real-world incident (Howells & Jarman, 2016)), swim lessons can help improve water safety. So can other measures, such as providing safer swimming spaces. Furthermore, learning to swim enables people to make full use of aquatic facilities, as opposed to simply splashing around the shallow end of the pool.

Swimming education is intricately tied to another key benefit of swimming pools: fitness and recreation. Many aquatic-based sports and exercise (swimming, diving, etc.) require the ability to swim. While aquatic facilities are not required for exercise and recreation in the way that they are for swimming education — there are often other sports and sporting facilities available for people to do exercise — aquatic facilities are important for people who prefer an aquatic setting, and this is especially true for older adults and disabled people who need a low-impact setting to exercise. There are different types of fitness and recreation users that have different needs (for example, families with young children may have different needs than athletes training for swim competitions), but in terms of the benefits of exercise, there is significant overlap.

Similar to other forms of exercise, swimming has been linked to health benefits, such as reducing rates of chronic diseases, at an individual level (Chase et al., 2008). Swimming

can be very beneficial for disabled people (Mulligan & Polkinghorne, 2013). Physical health aside, swimming and aquatics have also been shown to help improve mental health (Howells & Jarman, 2016).

There are also benefits that go beyond the individual level. One study in Australia found that publicly-funded swimming pools in remote Indigenous communities helped reduce rates of chronic disease, improved school attendance, and decreased local crime rates (Lehmann et al., 2003). These individual and social benefits of swimming echoes many of the reasons why swimming pools have historically been built: improving individual health, improving public health, providing community space, providing recreation, giving at-risk youth something to do, etc. (Wiltse, 2007). In this sense, swimming pools have many similar benefits as other civic facilities that provide opportunities for sport and leisure.

Finally, access to aquatic facilities is also increasingly important as climate change drives more and more people to seek cooling spaces during heat waves. Before the advent of air conditioning, swimming pools and their natural counterparts (lakes, rivers, etc.) were often the main place people could cool down in the summer, and many municipalities have historically built swimming pools for the explicit purpose of providing a cooling space in hot urban environments (Wiltse, 2007). As extreme heat becomes increasingly common, there is an opportunity for swimming pools to take up this role again.

In Greater Vancouver, assuring access to cooling spaces is of growing importance. The region's historically mild climate means most homes in the area do not have air conditioning. The absence of respite from heat proved fatal for many during the region's 2021 heat wave, when hundreds died over the course of one week: mainly older, lower-income individuals who did not have air conditioning at home (Henderson et al., 2022). Additionally, only 54% of Vancouver residents live within a 15-minute walk of a cooling centre, compared to 58% in Toronto and 62% in Montreal (Quick et al., 2022). In other words, many people may still face barriers to accessing the cooling that they need during extreme heat events. As cities make plans to improve their climate resiliency, there is an opportunity to make sure swimming pools play a role in any given

city's network of cooling facilities, especially as swimming pools are one of the few types of cooling infrastructure that do not require air conditioning.

2.3 Inequities in Access to Swimming Pools

Despite the numerous benefits of swimming pools, there are inequities to access, many of which are historically rooted but that continue today. For example, as noted above, US swimming pools have been variably segregated by class, race, and/or gender since the mid-19th century (Wiltse, 2007). This is perhaps the most vivid illustration of how swimming pools have been and continue to be a site where public officials and pool managers attempt to perpetrate or rectify perceived inequities. Similar discrimination occurred in Canada as well, such as at Vancouver's Crystal Pool. However, at the same time, it is important to note that these instances of discrimination are not unique to swimming pools — rather, they are one manifestation of broader spatial inequities in the built environment.

When it comes to the geographic distribution of civic facilities, some people will always have easier access than others, simply because civic facilities will only exist in certain specific spots in a city while the population itself will be spread out across the whole city; in other words, some level of unequal access is unavoidable (Ashik et al., 2020). However, while fully equal distribution is not possible, planners can set and define goals and objectives related to equity, including equitable distribution of pools and/or improved access for equity-deserving groups, such as seen in the aforementioned equity aims and definitions from the City of Vancouver, City of Burnaby, and City of Richmond. At the same time, many planners may have to work in contexts where there are many pre-existing inequities in access to existing infrastructure.

As previously mentioned, there are many different definitions of equity, including among the different municipalities in the Greater Vancouver region. Existing planning research typically uses accessibility to quantitatively measure spatial equity, which can be helpful in analyzing the geographic distribution of civic facilities (Ashik et al., 2020). Spatial equity can be defined as “the degree to which services or amenities are distributed in an equal way over different areas as well as economic, ethnic and political

groups, with appropriate consideration given to the needs of special groups such as children and the elderly.” (Omer, 2006). In the context of providing urban public facilities, one common approach is to categorize equity as either horizontal equity or vertical equity (Ashik et al., 2020; Tahmasbi et al., 2019). Horizontal equity is when “public facilities are allocated evenly to groups regardless of their different characteristics” (Tahmasbi et al., 2019, p. 2), and vertical equity is “distributing resources between individuals of different abilities and needs ... based on social class or specific needs in order to make up for overall societal inequalities” (Delbosc & Currie, 2011, p. 1252). It is also important to note that equity research remains ongoing; planners’ understanding of equity has changed over time, and may continue to change (Brand, 2015). These different definitions show that there can be different dimensions to equity, which is important to keep in mind when analyzing inequities and cities’ efforts to achieve more equitable planning.

While there is very little academic literature on spatial inequities in aquatics infrastructure, there is significant research on wider spatial inequities in the City of Vancouver and across the metro region. Vancouver is often seen as a highly liveable city and Vancouver residents enjoy some of the highest life expectancies in the world. However, there are significant disparities within the Greater Vancouver region: between different census tracts within the region, there are average lifespan differences of up to 9.5 years that are linked to both chronic disease, such as heart disease and cancer, as well as acute health risks, including the opioids crisis and Covid-19 (Yu et al., 2021). Existing research points to a variety of factors that account for such disparities. Lower-income areas in the City of Vancouver have been shown to have less greenspace, higher air pollution, and lower walkability (Doiron et al., 2020). There is a possibility that factors such as inequitable access to healthcare, nutritious food, and opportunities for exercise may also be contributing factors (Yu et al., 2021). While some research pertains specifically to the City of Vancouver and not its neighbouring municipalities, these findings nevertheless show how spatial inequities in the built environment can have serious consequences for people, and in particular for equity-deserving groups such as lower-income households.

Many of these inequities were created by past planning decisions. For example, Vancouver has a long history of denying municipal services to Indigenous communities. In the early 20th century, for instance, the city government refused to build roads or provide postal addresses to the Musqueam First Nation, a decision which ironically prevented the city from mailing tax collection notices (Stanger-Ross, 2008). Today, many Indigenous communities exist on the fringes of the Greater Vancouver region, the result of their often violent expulsion from the urban core; these areas are often at higher risk of flooding and other hazards (Yumagulova, 2020). Similar negative ramifications from past municipal decisions have emerged for other equity-deserving groups.

Inequitable decisions produce disparities in socioeconomic indicators (such as average lifespan) and disparities in the built environment. For example, one study showed that areas of the city with a higher proportion of ethnic Chinese residents have less access to protected bike lanes (Firth et al., 2021). Another study found that lower-income households in the City of Vancouver have less access to public hospitals compared to higher-income households (Mayaud et al., 2019). These contemporary examples of spatial inequities in the distribution of public infrastructure show the impact of inequitable decisions. Although no academic studies specifically focus on swimming pools in the City of Vancouver or the wider region, spatial disparities in aquatics investment are not without precedent: For instance, around the same time that the City of Vancouver was resorting to human tax collectors to hand-deliver tax notices to residents of the above-mentioned Musqueam reserve (where the City continued to refuse build roads or designate postal addresses), the City was also constructing large, resort-style swimming pools in the majority White neighbourhoods on the opposite side of the city. With even basic postal services withheld from Indigenous communities, it is hard to imagine that the government was considering provision of recreational facilities such as swimming pools.

In recent years, Vancouver has spent considerable planning resources analyzing inequities in access to parks and recreation facilities (Vancouver Board of Parks and Recreation, 2019a). However, in the past, the city has not always taken action to rectify inequities. As one study documented, the Vancouver municipal government spent \$1.5 million on a public awareness campaign to promote physical activity and healthier

lifestyles leading up to the 2010 Winter Olympics; a similar program was launched by the BC provincial government. The stated policy objective of increasing physical activity was not achieved because, according to the study's authors, the campaign assumed that "existing opportunities for [physical activity] participation met the needs of the target population," an assumption predicated upon the idea that health is primarily a personal responsibility or choice that can be changed through increased awareness of healthier choices (Derom & Lee, 2014, p. 1560). In other words, the Vancouver government assumed that opportunities for physical activity were sufficient, and all that Vancouverites needed was encouragement to go out and exercise. This assumption led to large sums of money being spent on a public awareness campaign, rather than on interrogating whether swimming pools and other athletic facilities were even sufficient and accessible in the first place.

Data, at least indirectly, suggest that aquatics infrastructure across Canada is often insufficient and inaccessible, particularly for certain equity-deserving groups. For example, drowning statistics suggest that racialized and Indigenous groups face barriers to accessing safe and supervised swimming facilities, barriers to accessing swimming and water safety education, or both. Today, hundreds of Canadians die every year by drowning, with 76% happening in natural bodies of water (Clemens et al., 2016). Immigrants, Indigenous people, and children are disproportionately more likely to die by drowning (Canadian Drowning Prevention Coalition, 2017). Additionally, a lack of swim lessons during the pandemic has resulted in a swim instructor shortage — and as middle-class families across Canada compete to have their children put on lengthy waitlists, it is unclear what becomes of lower-income families with fewer resources to fight for spots (CBC News, 2022; Global News, 2022). In both of these examples, inequities to accessing aquatic facilities has led to negative impacts on different equity-deserving groups.

There is more direct evidence of spatial disparities in the provision of public swimming pools in the U.K. and U.S. One case study in Glasgow found that the walkability of public swimming pools declined over time as private pools became popular in the city centre, and that there was a significant decrease in the number of school swimming pools despite significant population growth (McLauchlan, 2017). In the U.S., there are

numerous examples of municipal officials choosing to place pools in majority-White neighbourhoods while neglecting majority-Black neighbourhoods, thus forcing Black residents to travel much greater distances to access swimming pools (Wiltse, 2007).

A few years after the 2010 Olympics, Vancouver launched an assessment of its aquatic facilities, and this included a public engagement component that included surveys and focus groups. While many people expressed satisfaction with the services and infrastructure available, there were also some comments expressing dissatisfaction, including over the planned closure of old pools, a perceived deficit of pools relative to the city's population, and specific architecture and design decisions. There were equity-focused complaints as well, including concerns over the financial cost of admission, specific neighbourhoods that were deficient in aquatics facilities, and inaccessibility for specific equity-deserving groups, such as children and older adults (Vancouver Board of Parks and Recreation, 2019c). While the public engagement did not quantify inequities to access, it did show evidence that inequities to access — whether real or perceived — were a concern to respondents.

2.4 Governance and Decision-Making

Given evidence of inequities in historical provision of municipal infrastructure in Vancouver, on-going concerns over inequities to accessing aquatics infrastructure, as well as wider spatial inequities in the built environment, a better understanding of how decisions are made in the first place can help shed light on why and how such inequities arise.

In Canada, most local-level administrative jurisdictions such as municipalities are created through provincial legislation, and the municipalities of Greater Vancouver are no different. However, Greater Vancouver does have two unique characteristics that set it apart from other Canadian urban centres: a lack of municipal amalgamation in the region and relatively centralized decision-making within each municipality.

The City of Vancouver was incorporated in 1886 and is relatively young compared to other major Canadian cities. Vancouver and surrounding municipalities in the region

have historically collaborated on many services that other Canadian cities may provide independently. For example, in 1925 the Greater Vancouver Water District was formed to provide drinking water to the entire region, and even today, TransLink is the transportation agency for the over 20 municipalities in the region. The region's historical success with intermunicipal collaboration may be a contributing factor to why Greater Vancouver was never amalgamated in the way that Montreal and Toronto were (Kadota, 2010).

Another unique characteristic of Greater Vancouver area municipalities is that local councillors are elected in an at-large system, where the entire municipality elects the municipal council. This practice contrasts with systems where a city is divided into different wards or districts. One study found that Toronto's ward system meant that city councillors were heavily involved in neighbourhood-level planning decisions and there were frequently conflicts between different actors as each councillor sought to prioritize benefits for their own ward or quell political backlash in their ward. In Vancouver, in contrast, planning staff are given relatively more discretion to make decisions, including unpopular ones, since city councillors know that, in the absence of a ward system, voters are unable to punish specific councillors for unpopular decisions in specific parts of the city (Moore, 2016).

The result of these two features in the governance structures of Vancouver-area municipalities is that the wider region is fragmented into many individual municipalities that pursue their own way of administering municipal services (apart from select files where a regional body is responsible), but within each municipality, decision-making is relatively centralized given the lack of electoral wards or districts. Aquatics infrastructure is not a file where a regional body helps coordinate service provision between the different municipalities, so it is up to individual municipalities to decide how or if aquatics infrastructure is provided to their residents.

This governance approach also means that individual municipalities decide if, or how, equity will be a consideration in their planning processes and in their planning for infrastructure, including municipal swimming pools. Metro Vancouver, the regional body that sets regional planning priorities for the Greater Vancouver area, highlights equity

considerations in some of their plans (Stanley, 2023). However, at the end of the day, it is largely up to individual municipalities to decide how they plan and construct municipal infrastructure within their own boundaries.

Apart from building regulations, there are no province-wide or nationwide standards when it comes to municipal swimming pools or aquatics infrastructure more generally. If they wanted to, municipalities could choose to not provide this service at all, and this is the case for some smaller municipalities in Greater Vancouver.

One example of how a city or region's governance structure can lead to different outcomes in swimming pool infrastructure is school swimming pools in Canada compared to some other countries. School pools are unique in that they are a co-location of two types of infrastructure: schools and swimming pools. There are a few public schools in Greater Vancouver with swimming pools, but most schools do not have pools. This is largely because, in Canada, education is a provincial responsibility while pools are a municipal responsibility. There are no formal mechanisms or policy objectives to promote co-location between schools and pools. The result is that some students have access to a swimming pool at school and some do not.

In contrast, a much more centralized governance structure in Japan has allowed that country to ensure that over 80% of elementary schools have their own swimming pool. After a ferry disaster in the 1950s, the central government set a policy goal of ensuring that all students across the country learn to swim at school, then directed planning officials construct pools at schools across the country (Matsui et al., 2012). In many European countries, school swimming lessons are widely provided, or even compulsory, and different countries have different strategies of ensuring adequate provision of swimming pools for these lessons to take place (Bjarnason, 2017; Olstad et al., 2021; Reich, 2009).

However, in Canada, planning for aquatics infrastructure happens at the lowest level of government, without any nationwide standards for swimming pool provision and without formal coordination with provincial plans to ensure adequate infrastructure for school swimming lessons. This lack of coordinated planning of swimming pool

infrastructure and educational programming is, potentially, a contributing factor to the ongoing lifeguard and swim instructor shortage that has impacted day-to-day operations at many pools across Canada, forcing families to compete for a limited number of lesson spots.

The example of school pools highlights the impact that different governance structures can have on infrastructure outcomes. As such, an analysis of equity and decision-making will have to take into consideration the planning governance structures that are in place. Finally, when it comes to the intersection of equity and governance, existing research is unclear as to what extent equity is a consideration during decision-making on recreational infrastructure. One study on factors that influence recreation facility planning in Calgary found that the top factors were the location of target users, facility service level or design, and project timing; equity was not a common consideration (McCarthy, 2017). Another study on health inequities in 17 municipalities across Greater Vancouver found that politicians and senior staff perceived parks and recreation facilities as the most relevant way for municipalities to address public health inequities, but also that there was widespread belief that the provincial and federal governments should be doing more (Collins & Hayes, 2013). There is no pre-existing research on equity and decision-making in the context of aquatics infrastructure in Greater Vancouver.

Chapter 3: Findings by City

This chapter features the findings of this research. Findings are organized by municipality: each starts off with an overview of local context, including a map of swimming pools, followed by one or two case studies of pool projects or aquatics plans. Each case study covers what occurred, major actors who were involved, and an assessment of the extent to which equity was considered during the decision-making process.

For each of the three maps, the base map features an inequity index score developed by Metro Vancouver that combines 49 equity indicators (demographics, housing, health, etc.), where areas with higher numbers of overlapping equity concerns are given a higher score and shaded red (Metro Vancouver, 2021, p.43). The maps provide basic contextual information on the spatial inequities in each municipality. The locations of individual swimming pools are overlaid on top of this base map to show correspondence, or not, with areas of identified need. Note that most planners and decision-makers working on pools in the region will not have had access to these recently compiled data as part of their pool planning processes.

3.1 Vancouver

The City of Vancouver is the first of the three municipalities that this report analyzes. In 1931, the City of Vancouver built Kitsilano Pool, a 137-metre outdoor pool by the ocean that drew in seawater during high tide (CBC News, 2017). Since then, Vancouver's inventory of public pools has grown to 14 (as of 2023), including nine indoor pools and five outdoor pools. The city also has an array of spray parks, wading pools, and guarded beaches.

In 2019, the Vancouver Board of Parks and Recreation approved a 25-year strategy for aquatics infrastructure in Vancouver, *VanSplash*. Among the plan's various recommendations is a proposed new indoor pool at Connaught Park sometime after 2030, which will represent the first time since 1979 that the City builds a new indoor pool that is not a replacement for an existing pool (Vancouver Board of Parks and Recreation,

2019d). *VanSplash* and the proposed pool at Connaught Park are two examples will be analyzed in further detail in this subchapter.

3.1.1 Vancouver: Overview



Figure 1. Map of swimming pools in the City of Vancouver against neighbourhood equity status.

Table 1. Vancouver's Network of Swimming Pools.

#	Name	Type	Year Built	Description
1	Lord Byng Pool	Indoor	1979	6-lane 25m pool
2	Connaught Park Pool	Indoor	To be confirmed	To be confirmed
3	Kitsilano Pool	Indoor	1931	137.5m pool
4	Maple Grove Pool	Outdoor	1995	Freeform leisure pool
5	Kerrisdale Pool	Indoor	1955	6-lane 30m pool

6	Second Beach Pool	Outdoor	1934	110m pool
7	Vancouver Aquatic Centre	Indoor	1974	8-lane 50m pool / leisure tank / diving tank
8	Marpole Pool	Outdoor	2025*	To be confirmed
9	Hillcrest Aquatic Centre	Both	2010	8-lane 50m pool / leisure tank / outdoor pool
10	Kensington Pool	Indoor	1979	4-lane 15m pool
11	Britannia Pool	Indoor	1975	6-lane 25m pool / leisure pool
12	Templeton Park Pool	Indoor	1974	6-lane 25m pool / leisure pool
13	Killarney Pool	Indoor	2006	6-lane 25m pool / 15m leisure pool
14	Renfrew Pool	Indoor	1963	6-lane 25m pool
15	New Brighton Pool	Outdoor	1936	55m pool

*Planned

Source (pool data): Vancouver Board of Parks and Recreation (2019b)

Source (base map): Metro Vancouver (2021, p. 43)

Vancouver has more pools than either Burnaby or Richmond, and they are generally spread out throughout the city, with the exception of Britannia Pool and Templeton Pool, which are located relatively close to one another. There are two notable service gaps in areas that score relatively high on the inequity index. The southern portion of the city has relatively few pools, though the planned Marpole Pool will help rectify that gap. Additionally, there is no public pool in the Downtown Eastside, Strathcona, and Chinatown area (between the Vancouver Aquatic Centre and Britannia Pool), despite this area scoring the highest on the inequity index in all of Vancouver.

The City of Vancouver’s 13 public pools (if the two at Hillcrest are counted as one) are complemented by a network of beaches along English Bay in the city’s northwest. While beaches are an entirely different type of infrastructure compared to swimming pools, they are still worth mentioning for three key reasons: first, they are funded by the same

parcs department, and there is overlap in some resources required, such as lifeguards; second, they fulfill some of the functions of swimming pools, such as providing a space for swimming, and it is therefore worth considering how that impacts the usage and planning of swimming pools; and third, Vancouver is unique in that it is the largest city in Canada with ocean beaches, as well as one of a handful of municipalities in the region with beaches.

Vancouver's 13 public pools are also complemented by 169 privately owned and operated pools, such as pools at hotels, private fitness centres, and private condo complexes (Vancouver Board of Parks and Recreation, 2019c). While these private pools are outside the scope of this study, it is still worth noting that they are part of the city's aquatics infrastructure landscape.

In terms of decision-making, Vancouver is unique among Metro Vancouver municipalities in that the Board of Parks and Recreation makes planning decisions, but Vancouver City Council makes funding decisions. The Parks Board and City Council are elected separately, which means that a plan or decision can be approved by the elected Park Board Commissioners, but then elected City Councillors can opt to not fund it.

3.1.2 Case Study 1: VanSplash

In 2019, the Vancouver Parks Board approved *VanSplash*, a 25-year vision for aquatics infrastructure in Vancouver. Among its many recommendations were calls for a new outdoor pool in southern Vancouver, a new indoor pool at Connaught Park, and renewals or renovations for many aging facilities.

VanSplash is notable in that it is the most comprehensive aquatics plan of any municipality in the Lower Mainland. In fact, most municipalities do not have an aquatics-specific plan at all. There is thus a unique opportunity to compare planning processes and outcomes between a city with a comprehensive plan and those without.

In terms of the extent to which equity was a factor in the process of creating *VanSplash*, an analysis of the plan itself and interviews with key observers reveals that equity, as a word or explicit priority, has a very limited presence, though equity-related topics do

feature prominently, in particular considerations for social inclusion and equitable geographic distribution of facilities.

The word “equity” only appears once in the entire document, under recommendations for indoor pools, where one recommendation is “continue to consider building partnerships ... for public use of non-park board aquatic facilities consistent with Park Board goals of accessibility and equity.” The word “equitable” appears four times, though only once outside of the glossary, and then only in the context of equitable geographic distribution of aquatics infrastructure.

This low emphasis on equity as a concept was corroborated by Leila Todd, one of the *VanSplash* project managers, who confirmed that, “when *VanSplash* was being put together, equity was not really a point of conversation. Equity became our Bold Move for *VanPlay* ... but aquatics mainly focused on geographical distribution across the city.” Todd also said that “pools are also very connected to community centres, and our *Community Centre Strategy* looked at equity significantly, so as we move forward implementing *VanSplash* — because it’s going to be joint with community centre strategy efforts — equity will be considered.”

VanPlay, the first of the two other plans mentioned by Todd, is the Vancouver Parks Board’s master plan for parks and recreation. In 2019, as part of *VanPlay*, the Parks Board Commissioners approved three strategic “Bold Moves,” the first of which was equity in parks and recreation. The Equity Bold Move included the usage of spatial data to map Initiative Zones, which “highlights historically underserved areas, so that projects, programs and resources can be focused geographically” (Vancouver Board of Parks and Recreation, 2019a, p. 27).

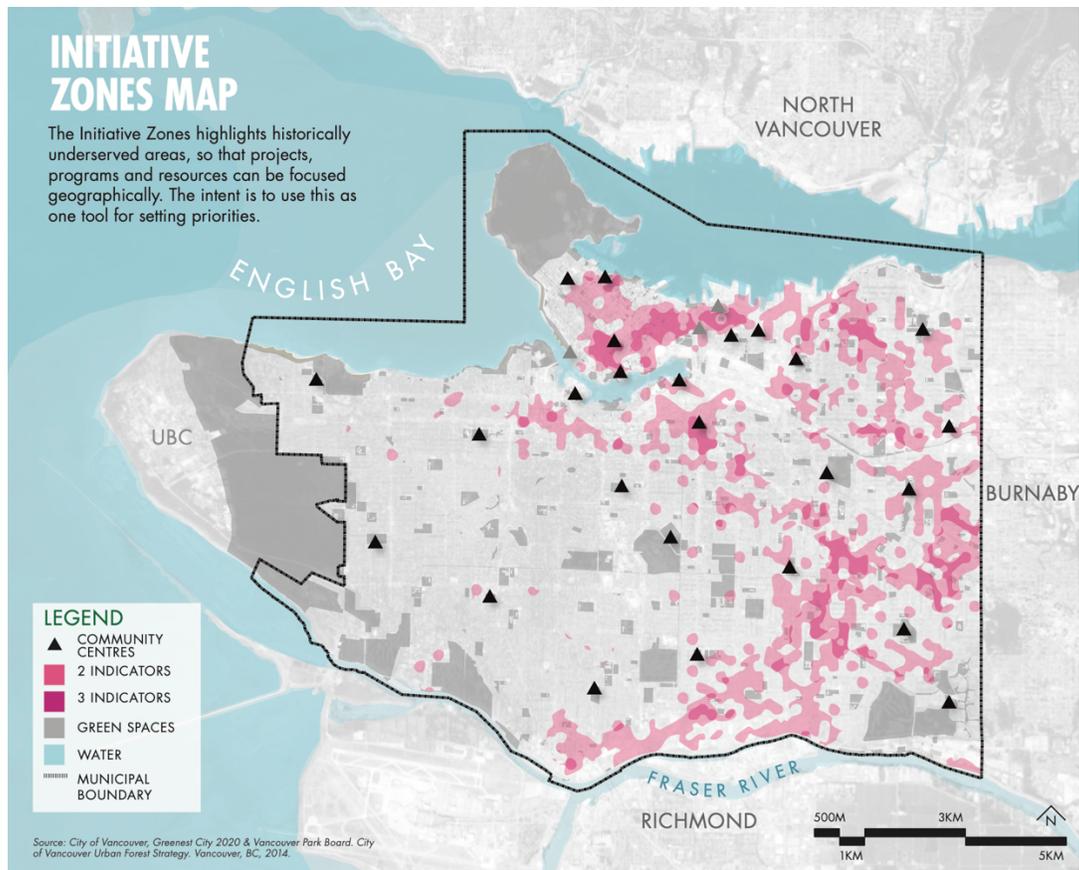


Figure 2. Initiative Zones Map.

Source: (Vancouver Board of Parks and Recreation, 2019a, p. 27).

In 2022, the Parks Board approved the *Community Centre Strategy*, which addresses the issue of figuring out which community centres to prioritize for renewal funding. This calculation is done by generating a weighted score for each facility, and specific equity-related criteria are assigned specific weights.

While equity-related spatial data and weights are used to help determine where future investments should go under *VanPlay* and the *Community Centre Strategy*, no equity-related criteria were used to determine which pools should be prioritized for reinvestment. In fact, the most common response to aging aquatics infrastructure in Vancouver has been to simply decommission the old pools, as can be seen in decisions on the Hastings, Sunset, Mount Pleasant, and Marpole outdoor pools; an attempt to recommend a similar outcome for the Lord Byng and Templeton indoor pools was met with public protest, and those plans were later paused.

However, opinions differ as to the importance of equity consideration in *VanSplash*. Michael Roma, who was not directly involved in the drafting of the plan, described *VanSplash* as “a good example” of “communities using an equity-based approach to aquatics provision.” His view is noticeably different from Todd’s assessment that “equity was not really a point of conversation.”

On the one hand, these divergent assessments suggest differing viewpoints as to what constitutes “equity.” For Parks Board planners, the amount of consideration for equity in *VanSplash* is noticeably less prominent compared to other Parks Board plans such as *VanPlay*, which features equity as the first of three “Bold Moves” that guide the plan. On the other hand, the points of view of external planning consultants who are more experienced with other jurisdictions may be seen as reasonable observations that *VanSplash* pays significantly more attention to equity compared to aquatics plans at other municipalities.

Despite the relative absence of the words “equity” and “equitable” in *VanSplash*, the plan does pay attention to equity. Of the four guiding principles, half touch on equity considerations: one focuses on “social inclusion,” and another on “community and personal well-being” (Vancouver Board of Parks and Recreation, 2019d, p. 54). The plan (p. 16) also states that the planning team intentionally aimed to look beyond quantitative data regarding facility capacity, usage, and finances to also capture social aspects:

Given the increasing understanding of the value and importance of the social aspects of aquatics, when looking at the current facilities and aquatic service in the last section of the Current State Report, the team showed quantitative data related to usage numbers but tried to capture more difficult-to-measure targets such as social inclusion, community building, wellness, and sustainability for each facility.

Overall, *VanSplash* broaches topics that historically have been overlooked in aquatics facility planning, such as the role that pools play as places of social gathering. For example, *VanSplash* recognizes that outdoor pools “are distinctive amenities that ...

play a key role in the broader social targets for the renewed aquatic strategy.” (p. 61). Recommendations include revitalizing existing outdoor pools while also building new ones, a stance that strongly contrasts with how the City has been decommissioning most of its outdoor pools over the years. However, *VanSplash* does not place as much emphasis on equity as other Parks Board plans, which feature quantitative and measurable ways of incorporating equity. The tensions around soft versions of equity are apparent in the application of *VanSplash* to a new indoor pool.

3.1.3 Case Study 2: Proposed Connaught Park Pool

One of the recommendations in *VanSplash* is the provision of “a large scale pool at Connaught Park as part of a future arena and/or community centre renewal” (Vancouver Board of Parks and Recreation, 2019d, p. 57). It is the plan’s only recommendation for a new indoor pool that is not a replacement of an existing pool (other proposed indoor pools are replacements for existing facilities). As the first expansion of the geographical coverage of Vancouver’s indoor pool network since the 1970s, the pool at Connaught Park is an interesting case to study.

Close analysis of the recommendation for a new pool at Connaught Park suggests that very little consideration was given to equity. *VanSplash* (p. 58) states that:

Connaught Park was selected ... as a candidate site for a future pool based on its location within an area of anticipated population growth, proximity to transit corridor, proximity to VAC for joint need assessment and continuous service model.

Todd added that, “the reason Connaught Park was selected was because staff thought renewing Vancouver Aquatic Centre here was still not enough to provide the services needed for the population increase, so they considered ... a second pool to be added, and the closest park we have that can provide this space needed with [an] existing community centre is Connaught Park.”

The proposed site is about a 10-minute walk from the currently under-construction Arbutus SkyTrain Station. In this regard, Todd said that “from a sport competition perspective it is really important to have access to SkyTrain in case there are meets that people want [to] fly here to.”

Overall, neither *VanSplash* nor Todd specifically cited any equity-related considerations behind the choice of Connaught Park as a potential site. The Connaught location, should the project go ahead, will likely contribute to inequality in public investment in recreation. The proposed site is in Kitsilano, which is one of Vancouver’s wealthiest neighbourhoods. The new Connaught Park pool will be within walking distance to Kitsilano Pool, the city’s largest outdoor pool as well as Vancouver’s very first pool – a testament to the public investment that this neighbourhood has historically received. Nearby beaches provide places to swim and contribute to the high real estate values in the area. Unsurprisingly, the Connaught Park site is not highlighted in the Initiative Zones Map from *VanPlay*, which shows Vancouver’s historically underserved areas as predominately located in the city’s Eastside and the downtown peninsula.

The desktop analysis that Parks Board staff performed in their selection of Connaught was not detailed in any publicly available planning documents and, as such, this report does not assess whether the selection of Connaught Park is well justified or if alternative sites might have strengths. Todd highlighted constraints that the planning team faced: the new site had to have sufficient land, had to be co-located with a community centre, and had to be within proximity to the VAC. Neither *VanSplash* nor Todd mentioned any equity-related criteria. Given these constraints, it is unsurprising that the recommended site is in a neighbourhood that has historically received public investment, whether in the form of parkland, community centres, or other aquatics facilities.

3.1.4 Equity and Decision-Making in Vancouver

Overall, the Vancouver Parks Board has tried to make progress on equity-related planning concerns, particularly in *VanPlay* and their *Community Centre Strategy*, both of which have different ways of quantifying and measuring equity. However, in *VanSplash*, equity plays a less prominent role. It is still present — equity-related concerns are raised in the plan itself, especially as it pertains to social inclusion, and social goals were

prominently highlighted in the recommendations for outdoor pools — but not in the quantifiable and measurable way seen in other Parks Board plans. A close analysis of one specific proposed pool, the Connaught Park pool, suggests that equity was not a prominent consideration in the development of that recommendation, as the main stated considerations were anticipated population growth, proximity to transit, proximity to the Vancouver Aquatic Centre, facility co-location with a community centre, and availability of land.

According to public engagement done for *VanSplash*, some residents said they desired greater emphasis on equity-related initiatives, such as on swimming education for children. The most popular feedback was about improving and increasing pools: 54% of survey respondents wanted improvements to their nearest indoor pool, and in the general comments section, the most common point of feedback was to build new pools.

Key informants pointed out that building new pools everywhere was not feasible. According to Todd, “a lot [of] ... people say everyone should be able to walk to their pool, and I disagree, and I’m like, no they don’t. They should be able to walk to a park, absolutely — every person should be able to walk to a park. But walking to a pool is not possible. There’s no land, and there’s never enough money for every resident to be able to walk to a pool.” One informed observer noted that swimming pools were the most expensive of all the different types of facilities that municipalities provide. Such comments suggest that cost is a very significant factor in the decision-making process, with potential cost reductions likely to outweigh considerations of equity or community desire. The proposed Connaught Park pool, for instance, is to be built on parkland owned by the Parks Board.

Lack of land and money was a consistent theme in Vancouver, with the Mount Pleasant Pool a telling example. In 2005, the Parks Board Commissioners unanimously passed a motion directing staff to consult with community members on external fundraising to keep the Mount Pleasant Pool operational (Vancouver Board of Parks and Recreation, 2005). That effort failed and the pool was decommissioned in 2010. *VanSplash*

recommends a new pool on the site. However, it is unclear when, or if, Vancouver City Council will allocate funding for a pool there.

There have been periods in Vancouver's history where funding from senior levels of government was available for pools — three were built in the 1930s and five in the 1970s — but since the 1980s, there has only been about one per decade. In contrast, Vancouver's 169 private pools situated in hotels, gyms, and condo complexes suggest that the private sector has provided far more pools than the City. Residents with sufficient wealth can still enjoy a community pool within walking distance of home, similar to the small-scale pools Vancouver built in the 1950s, 60s, and 70s. However, these pools are, obviously, only accessible to those who have paid to join a particular private fitness facility or live in a particular condo complex. In this kind of fiscal environment, assuring that public pools are within walking distance is an unachievable goal.

3.2 Burnaby

The City of Burnaby is located directly east of the City of Vancouver and is located in the geographical centre of the Greater Vancouver metropolitan region. In the 1960s, this suburb built four outdoor pools across the city, and this was followed by a series of indoor pools built over the following five decades: C.G. Brown Pool in 1963, Bonsor Pool in 1973, Eileen Dailly Pool in 1993, and Edmonds pool in 2013.

The City of Burnaby is currently in the process of constructing two new pools: Burnaby Lake Aquatic and Arena Facility, which will be on the site of the former C.G. Brown Pool (which permanently closed in 2022), and a new pool at the Cameron Community Centre. Burnaby is also commencing an outdoor pool study in 2023 in order to determine the future of its four 1960s-era outdoor pools.

3.2.1 Burnaby: Overview

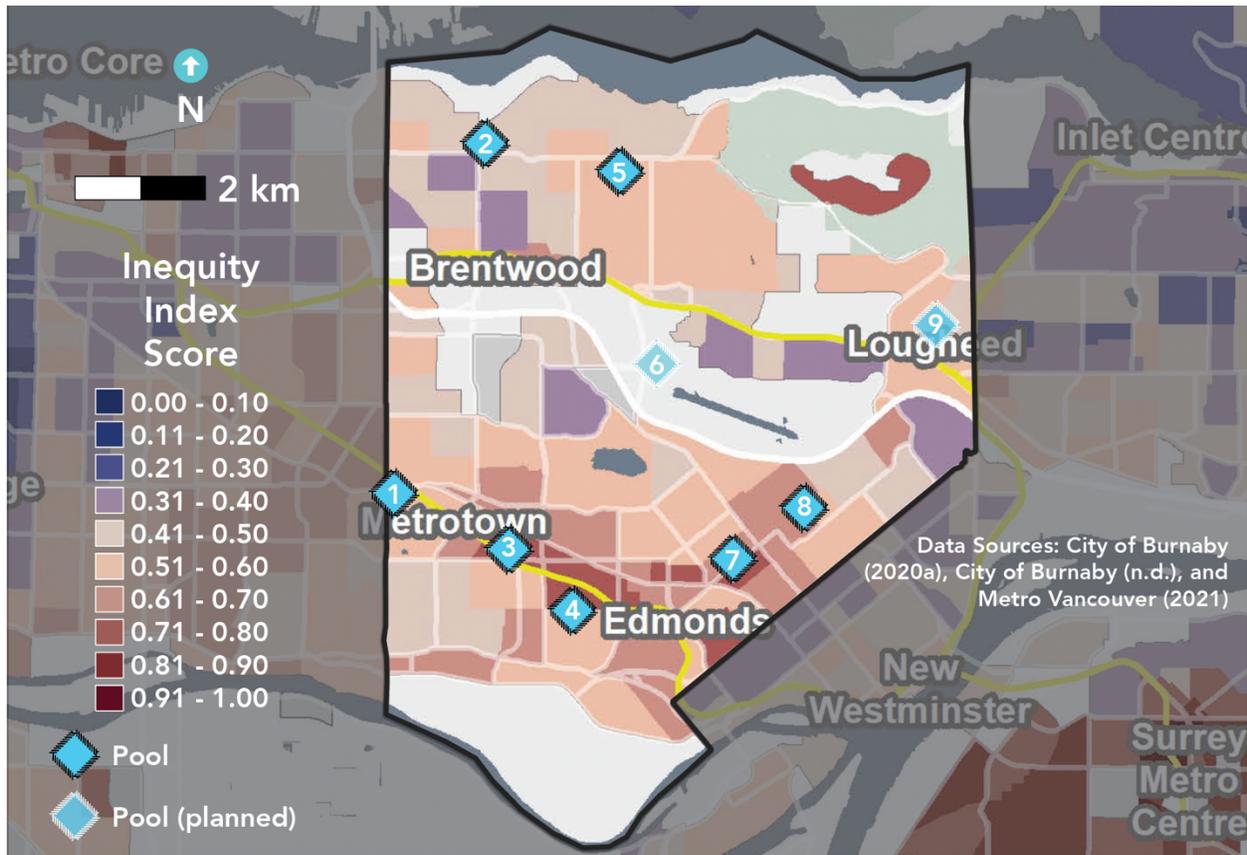


Figure 3. Map of swimming pools in the City of Burnaby against neighbourhood equity status.

#	Name	Type	Year Built	Description
1	Central Park Pool	Outdoor	1962	8-lane 50m pool
2	Eileen Dailly Leisure Pool	Indoor	1993	5-lane 25m pool and a large leisure pool
3	Bonsor Pool	Indoor	1973	6-lane 25m pool and a leisure pool
4	MacPherson Pool	Outdoor	1960s	6-lane 25m pool
5	Kensington Park Pool	Outdoor	1960s	6-lane 25m pool
6	Burnaby Lake Aquatic and Arena Facility	Indoor	2026*	10-lane 50m pool, 6-lane 25m pool, and a large leisure pool

7	Fred Randall Pool (Edmonds)	Indoor	2013	6-lane 25m pool and a large leisure pool
8	Robert Burnaby Pool	Outdoor	1960s	6-lane 25m pool
9	Cameron Pool	Indoor	2028*	To be determined

*Planned or under construction

Sources (pool data): City of Burnaby (2020a) and City of Burnaby (n.d.)

Source (base map): Metro Vancouver (2021, p. 43)

Burnaby’s pools, both current and planned, are located throughout the city. Most of the pools are in or around the Metrotown and Edmonds areas, which are among the city’s most inequitable, according to the inequity index developed by Metro Vancouver. The northeastern corner of Burnaby also scores relatively high on the inequity index, yet has no municipal pool (though that is the main campus of Simon Fraser University and the university has its own pool for staff and students). There are pockets of the city that score relatively low on the inequity index, but there is no visually noticeable pattern between these areas and the distribution of pools.

The oldest pool still in operation is the Central Park Outdoor Pool, which opened in 1962 (Burnaby Now, 2023b). The other three outdoor pools are architecturally identical, and they also opened in the 1960s. However, according to City of Burnaby archives, a pool has existed at McPherson Park as early as 1934 (Heritage Burnaby, 1934).



Figure 4. MacPherson Pool.

Source: (U.S. Geological Survey, n.d.)



Figure 5. Kensington Park Pool.

Source: (U.S. Geological Survey, n.d.)



Figure 6. Robert Burnaby Pool.

Source: (U.S. Geological Survey, n.d.)

Burnaby's first indoor pool was C.G. Brown Pool, which opened in 1963 and permanently closed in 2022. The new Burnaby Lake Aquatic and Arena Facility is being built on the site of the old C.G. Brown Pool, and as of 2023 this new aquatic facility is on track to open in 2026. Burnaby's other indoor pools are all still operational, though Bonsor Pool is nearing the end of its lifespan.

Unlike Vancouver, Burnaby does not have a separately elected parks board. Aquatics falls under parks and recreation, which is a regular city department. In other words, Burnaby City Council makes the final decisions on plans and budgets, rather than having those responsibilities split between two different elected bodies.

3.2.2 Case Study 1: Cameron Pool

Whereas most of Vancouver's indoor pools were built within the span of a single decade, since 1973 Burnaby has been incrementally expanding its indoor pool network with one new indoor pool every two decades. This decade there will be two new indoor facilities opening, including a new indoor pool at the renewed Cameron Community Centre in the city's northeast quadrant.

According to a Community Needs Space Assessment performed by RC Strategies in 2020, Burnaby recorded 1.2 million swim visits in 2018 and had a capacity for 1.3 million visits, which translates to a 92% utilization rate. However, according to RC Strategies, this utilization rate is quite high, and they also estimate that there was also a deficit of 100,000 swim visits that was being unmet in 2018, with unmet demand primarily in swim training, swim lessons, and special events. To rectify that deficit as well as account for population growth, the report recommended adding capacity for an additional 550,000 swim visits in the next 10 years or 850,000 in the next 20 years. According to the report, the planned Burnaby Lake Aquatic and Arena Facility (which replaces C.G. Brown) would add an extra 800,000 swim visits per year to the system and "it will generally meet all of the aquatics capacity needs in Burnaby for at least the next ten years and likely well beyond." (RC Strategies, 2020, p. 47).

Despite RC Strategies' conclusion that an additional pool at the Cameron Community Centre is not needed to meet demand, the City of Burnaby is proceeding with the

project anyway. RC Strategies did note strong community demand for a new pool during their public engagement. One informed observer stated that Burnaby's other pools are already meeting aquatics needs, and that "Cameron has more to do with community growth and development: it's [been] an underserved area in Burnaby for many, many years, and had a smaller rec centre that had a library and other things, [but] never had an [aquatics] facility." When asked if facility co-location or land availability were factors, they insisted that "it was always just community development ... having a pool in that area has always kind of been on the agenda."

The emphasis on that area of Burnaby being "underserved" suggests that ensuring equitable geographic distribution of aquatic facilities was a key consideration.

This would not be the first time that the City of Burnaby has prioritized rectifying geographical disparities. In 2003, a consultant report created by PREC recommended that Burnaby replace the C.G. Brown Pool (Burnaby Parks, Recreation and Cultural Services Department, 2003). However, in 2004 staff recommended to council that they should proceed with a new pool in southeast Burnaby prior to replacing C.G. Brown. The concern was that temporarily losing a pool would worsen the existing deficit of aquatics infrastructure (City of Burnaby, 2004). Staff had identified that area of Burnaby as underserved by aquatics infrastructure and noted its projected 44% population increase. The new pool in southeast Burnaby would later be the Fred Randall Pool that opened in the renewed Edmonds Community Centre in 2013.

What is particularly unique about the planned Cameron pool, and that contrasts greatly with the Connaught example, is that it was identified as a desired facility through public engagement with the local community.

Another significant difference between Burnaby and Vancouver is that while "there's never enough money" in Vancouver (according to Todd), two different informed observers commented on how Burnaby is "in full expansion" with "a lot of new projects in the city," and that "Burnaby has money, which is really different from other cities ... lots of money ... and so now this Council is kind of going ahead with so many projects."

Overall, the example of the Cameron pool shows how municipalities, when money is available, can build infrastructure to pursue goals that go beyond providing a minimum level of service. In this specific case, the planned Cameron pool responds to (a) public engagement that revealed that people really wanted a pool in their neighbourhood and (b) an identified inequitable disparity in the geographical distribution of pools within Burnaby.

3.2.3 Case Study 2: Burnaby Lake Aquatic and Arena Facility

The City of Burnaby faced considerable public controversy over its planning process for the Burnaby Lake Aquatic and Arena Facility. It is slated to be one of the largest aquatics facilities Metro Vancouver, with an Olympic-sized 50-metre pool, an additional 25-metre lap pool, a hot pool, and a leisure pool. However, the interruption in aquatics service between the closure of C.G. Brown Pool in 2022 and the scheduled opening of the new facility in 2026 has resulted in criticism in the press from a local swim club and the Mayor of Burnaby. Many factors influenced the decision to build the facility in its planned design and timeline; equity does not seem to have been among them.

The City of Burnaby made outdoor pool space available to accommodate swim groups that had used C.G. Brown prior to its closure. Nonetheless, members of the Caprice Artistic Swim Club complained to the local media about the conditions. Among the complaints was that it was too cold (temperatures were reportedly as low as 3 degrees), there was no shelter to keep dry clothes and bags out of the rain, and many athletes have dropped out (Burnaby Now, 2023c). Parents also noted that the club is one of the few adapted for kids with disabilities; one parent said it would be “heartbreaking” if the outdoor conditions caused the program to lose too many members to continue functioning.

Official responses to the criticisms were mixed. Burnaby’s general manager of parks and recreation, Mary Morrison-Clark, described the situation as “not just a Burnaby planning issue; it’s regional.” She cited renovations at the SFU pool, an unexpected pool closure in New Westminster, and a lack of new aquatics infrastructure in neighbouring Vancouver as factors that created challenges in meeting regional demand for aquatics services. Separately, Burnaby Mayor Mike Hurley said that a temporary cover at

Kensington Outdoor Pool intended to generate additional capacity to meet demand from swim groups was “a complete embarrassment”; he said that “there should have been some kind of replacement ready for when C.G. Brown came down.” (Burnaby Now, 2023a).

City of Burnaby planning documents show that there was no intention of having a replacement facility ready prior to the decommissioning of C.G. Brown Pool, at least not near C.G. Brown. In fact, multiple reports from planning staff indicate that the ideal location of a new pool would be on the same site, which would necessarily have produced a service interruption between the old pool being demolished and the new one being built. A report from 2018, for example, says that “[i]deally, the new facilities would be accommodated on the same site,” and multiple reports from 2019 say the new aquatics facility is “proposed to be developed on the existing site at 3676 Kensington Avenue.” (City of Burnaby, 2018, p. 3). A 2020 staff report similarly specifies that “[t]he site at 3676 Kensington Avenue has been identified as the preferred location for the new aquatics and arena facility, given its central location within the Burnaby Lake Sports Complex, its proximal siting in relation to major transportation routes, and the potential for integration with Bill Copeland Sports Centre.” (City of Burnaby, 2020a, p. 3). One interviewee said that another key reason for selecting that site was the underlying geology: the site is located on rock, whereas the surrounding area is bog. They said that “being in Central Valley was the most important [consideration], but in terms of looking around Central Valley, the replacement of the pool on top of where the C.G. Brown [Pool] was the best piece of land to build a 50-metre pool plus all the additional stuff.”

In contrast to Mayor Hurley’s assertion that a replacement facility “should have been ready,” some respondents contended that Edmonds was built for that purpose. One interviewee observed, for instance, that “Edmonds was built to offset the capacity of C.G. Brown, [which] wasn’t a high-capacity pool, so the actual patronage of C.G. Brown could easily be absorbed into the other facilities.” While the City extended operating hours at other pools and constructed the temporary cover over Kensington Outdoor Pool, numbers suggest that the patronage of C.G. Brown could not have been absorbed fully into other facilities. The 2020 RC Strategies report, based on the 2018

facility usage numbers during a period when C.G. Brown was operational, identified an estimated 100,000 swim visits per year that could not be accommodated by existing facilities. With 195,000 swim visits per year at C.G. Brown displaced upon the pool's closure, the capacity deficit likely would have grown.

Overall, the decision to proceed with the demolishing of the C.G. Brown pool prior to starting construction on the Burnaby Lake Aquatic and Arena Facility on the same site — and thus create a multiyear interruption in service at the location — was influenced by many factors, including facility usage numbers, the geology of the area, the site's proximity to transportation routes, and opportunities for facility co-location.

One factor that was absent, however, was equity. A search through public documents yielded no evidence that equity was a significant consideration. When asked to what extent equity was a factor in the recommendation to locate the Burnaby Lake Aquatic and Arena Facility on the site of the C.G. Brown Pool, one interviewee said that the new facility is designed primarily for sport but noted that the women's only swim at C.G. Brown was preserved by moving it to Bonsor. They also said that transit access was a consideration, but a limited one, because:

Nobody from Mission is bringing a hockey bag on the SkyTrain for their hockey game. It's definitely [that] they are driving there to go to a hockey game, right? Similarly, swimmers and swim clubs, they have massive amounts of equipment that they bring with them. Transit [works] for local residents, but for sport users, [it's] not really an option.

The Caprice Artistic Swim Club did try to bring up equity concerns in the local media after C.G. Brown had already closed by asserting that swimming outdoors in the winter would discourage young girls from the sport, that their drop in membership meant the club was at risk of losing too many members to continue to operate, and that this would be especially disadvantageous for some athletes because this club is one of the few adapted for people with disabilities. One interviewee touched on this and said that "the groups most impacted [by the closure of C.G. Brown] were the competitive groups, and

so the competitive groups were moved outside for the summer or for the winter ... and while the synchronized swimming team didn't love it as much, and they hit the paper quite well, the other groups actually handled swimming outdoors all year round without an issue."

3.2.4 Equity and Decision-Making in Burnaby

Overall, with the facilities that Burnaby is currently constructing or planning, the city is on track to have aquatics supply exceed demonstrated demand. This is especially true with the Cameron pool, which Burnaby approved despite evidence that it would not be necessary to meet overall aquatics demand in Burnaby. Equity appears to have been a consideration in that decision since the City is trying to rectify disparities in access for residents in different areas of the city. One interviewee attributed this success to the City's financial position, where density bonuses have given Burnaby a considerable amount of money that "previous Councils didn't spend."

At the same time, the City's first foray with replacing an aging indoor pool has generated negative media attention. Most of this negative attention has been directed towards the temporary cover at Kensington Outdoor Pool, rather than the plans for the Burnaby Lake Aquatic and Arena Facility, though people — including the city's mayor — have blamed planning staff for the service interruption. It is worth noting that many people do not seem to have been aware that a service interruption was coming, or if they were, they did not seem to have been concerned enough to speak to the media until C.G. Brown pool was already demolished and there was no going back. This suggests that Burnaby planners, politicians, and members of the public may not be very experienced with the replacement of aging aquatics facilities. In any case, equity was not a documented concern for any of those parties until a swim club spoke to the media about how specific equity-seeking groups were being disadvantaged by the service interruption.

Finally, in terms of equity, one interviewee said that "it's through programming rather than through facility build." They gave the example of how the Burnaby School Board has a program to help pay for free after-school swim lessons for kids at Robert Burnaby Outdoor Pool, which is in a lower-income neighbourhood. Evaluating the effectiveness

of that specific program is beyond the scope of this report, though it is worth noting that such programs are only possible if the requisite infrastructure and facility capacity are available in the first place.

3.3 Richmond

The City of Richmond is located on an island directly south of the City of Vancouver. The city's first pool, Centennial Outdoor Pool, opened 1958 in Minoru Park, and it was reportedly "so popular when it opened that kids had to swim in shifts" (Richmond News, 2015). After a 1968 study found a need for more aquatics facilities, the City opened three new facilities in the 1970s: Steveston Pool in 1970, South Arm Pool in 1972, and Minoru Aquatic Centre in 1977 (City of Richmond, n.d.; Richmond News, 2015). In 1984, Centennial Pool and Minoru Aquatic Centre — which were adjacent to each other — were merged into a single indoor facility.

Richmond completed two new aquatics projects relatively recently. In 1997, Watermania was the City's first new aquatics facility in two decades. After another two decades, the Minoru Centre for Active Living replaced the Minoru Aquatic Centre in 2020. The old facility was demolished when the new one became ready. As of 2023, Richmond is not currently considering any new aquatics facilities.

The densely populated city centre is served by the Minoru Centre for Active Living, which is the largest of the city's four facilities, while Watermania, the other indoor pool, is in a relatively remote part of the city and is surrounded by farmland. The two outdoor pools are in lower-density residential areas of the city.

3.3.1 Richmond: Overview

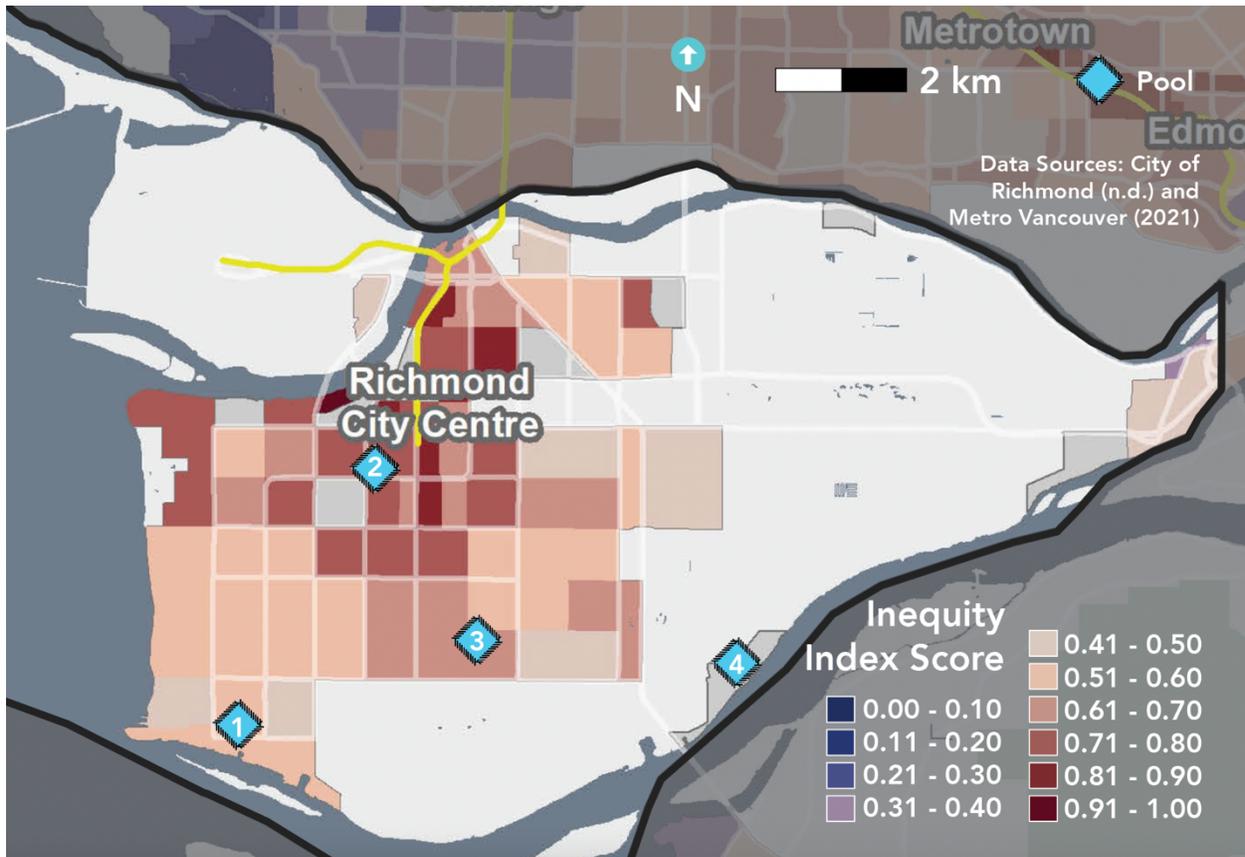


Figure 7. Map of swimming pools in the City of Richmond against neighbourhood equity status.

Table 3. Richmond's Network of Swimming Pools.

#	Name	Type	Year Built	Description
1	Steveston Pool	Outdoor	1970	6-lane 25m pool
2	South Arm Pool	Outdoor	1972	Freeform leisure pool
3	Minoru Centre for Active Living	Indoor	2020	Two 7-lane 25m pools, leisure pool, and hot pool
4	Watermania	Indoor	1997	6-lane 57m pool

Sources (pool data): City of Richmond (n.d., 2013b) and Richmond News (2015)

Source (base map): Metro Vancouver (2021, p. 43)

Richmond's swimming pool distribution follows a centralized approach (i.e., a small number of larger facilities, as opposed to a large number of small facilities). In this case, the city's largest facility is the Minoru Centre for Active Living, which is also the only facility in the city centre. The city centre area is also identified on the map as relatively more inequitable compared to the rest of the city. One potential service gap is the north end of the city, whose residents will have to drive or take transit to Minoru or another pool. The same could be said for residents in Richmond's eastern end, which is mostly low-density agricultural land. However, given Richmond's decision to centralize aquatics services in only a handful of facilities, it is inevitable that many users will have to drive or take transit to reach a public pool.

As in Burnaby, Richmond's pools are managed by the parks and recreation department. However, buildings and facilities are managed by a different department. Nevertheless, Richmond's governance structure is more similar that of Burnaby than it is to Vancouver's.

Richmond is the only city studied that is not currently planning for upgrades or expansions to its network of aquatics infrastructure. One informed observer noted that what Richmond currently has "more than meets the need of the current population" and that "it would take significant population growth for [Richmond] to be planning a new or additional [aquatics] facility."

3.3.2 Case Study: Minoru Centre for Active Living

The Minoru Centre for Active Living is one of the larger and newer aquatic facilities in Greater Vancouver; it was cited by nearly all interview participants as a facility to study. Two aspects of this case are particularly relevant: the site selection and facility design.

According to publicly available planning documents, city staff originally recommended that the old facility be demolished and the new pool be built on the same site. During construction, displaced swimmers would be accommodated at Steveston Outdoor Pool, which would have a temporary cover placed over it to enable the pool to continue to operate regardless of weather conditions; staff also suggested renting time at private pools (City of Richmond, 2013b). However, members of the city's Aquatic Services

Advisory Board expressed concern to city councillors that this would represent significant loss of aquatic services during construction, and Council responded by directing staff to investigate alternative site options (City of Richmond, 2013c).

In 2013, staff identified 12 potential sites and systematically eliminated those that would not be suitable (City of Richmond, 2013c). Five were then looked at through the lens of seven criteria:

- (i) integrated Older Adults and Aquatic Centre on the same site
- (ii) synergy with other services
- (iii) aquatic services not disrupted
- (iv) non-disruption of services or the provision of viable solutions should services be impacted
- (v) location having access to transit and available on-site parking
- (vi) minimize the impact to green space
- (vii) address latent, current, and future aquatic demands for the long-term

None of the evaluation criteria explicitly referenced equity. This lack of explicit mentions accords with observations from Johnston, a consultant involved in the Minoru project but not in the site selection, who said that equity is a much more prominent consideration today than it was even just a decade ago.

Eventually, staff presented four options to Council across three sites: the site of the old Minoru Aquatic Centre, a field elsewhere in the same park complex as the Minoru Aquatic Centre, and another site by the Olympic Oval in a different part of the city. They recommended locating the new pool in a new facility elsewhere in the same park complex, which would allow the old facility to continue operating until the new one was ready. Ultimately, this was the recommendation that Council chose.

In a December 2013 op-ed in *The Richmond News*, then-city councillor Derek Dang explained his reasoning for voting for that site, saying that the park “has been the recreational and cultural hub of Richmond for decades,” and therefore has “convenient public access.” Notably, he said “for council, the biggest concern was how to continue

service to current users of both facilities during construction of the new buildings.” (Dang, 2013).

Like the staff reports, equity was not an explicit consideration. However, it is notable that Dang characterizes the “biggest concern” as ensuring continuity of service, which was only one of seven site selection criteria used by staff. This potentially reflects concerns expressed by the Aquatic Services Advisory Board directly to city councillors regarding service disruptions if Richmond had proceeded with the original plan to demolish the old facility before constructing the new one. This shows how advisory boards (and the residents they represent) can play a role in influencing planning decisions.

Equity was a bigger consideration during the design of the facility as opposed to the site selection. Michael Henderson, who worked directly on the Minoru project, said equity was a “very high” consideration and that Minoru tries “to bring in a broad group of people and make it accessible ... it tries very hard to be equitable in that regard.” He specifically referenced signage, wayfinding, and gender neutral changerooms as key design elements intended to ensure a more equitable experience for facility users.

One informed observer who was not involved on the Minoru project was asked if there is anything they would have changed about it had they been involved, and their main comment was that the cold plunge pool “probably could have been built double or triple the size” given how popular it is. They did not identify any equity-related factors that could be done better.

3.3.3 Equity and Decision-Making in Richmond

Overall, Richmond’s aquatics planning has generated less political controversy compared to both Vancouver and Burnaby. This is despite Richmond having the fewest number of pools out of the three cities. While there was negative news coverage regarding delays and legal action over the construction of the Minoru Centre for Active Living, there has not been much negative news coverage about the planning-related aspects of the facility.

One aspect of Richmond’s planning structure that may have helped is the Aquatic Services Advisory Board, whose concerns about a staff report led Council to direct staff to find alternative sites for the proposed facility. Had the Board not spoken out, or had it not even existed in the first place, then Council may have very well demolished the old Minoru Aquatic Centre before the new pool was ready. Since most city residents do not attend Council meetings or analyze planning documents, advisory boards can play a key role in ensuring ongoing resident input on planning issues, to the extent that impactful decisions are made, as was seen in this case. In contrast, Burnaby has no aquatics advisory board, and has faced significantly more public criticism over aquatics planning decisions.



Figure 8. Minoru Centre for Active Living.
Source: William Li (2023)

Another interesting observation from the Minoru case study is that external consultants who worked on the project were much more vocal regarding equity compared to

municipal planning staff. This is not necessarily a criticism of municipal planning staff — after all, the whole point in bringing on external consultants is to acquire expertise and/or capacity that the municipality cannot produce on its own — but it does suggest that external consultants can play a key role when it comes to planning for more equitable aquatic facilities, whether, as in this case, largely limited to facility design or more broadly if engaged in other parts of the planning process.

Chapter 4: Discussion

Overall, each of the three cities has case studies of aquatics plans or facilities that were analyzed to gauge the extent to which equity was a factor in the decision-making process. This following section focuses on key themes that emerged across all three cities with regards to equity and how decisions are made and by whom.

4.1 Getting the Pool: Geographic Distribution and Horizontal Equity

One key theme that emerged across all cities was the issue of geographic distribution, which can be a question of horizontal equity (though none of the municipalities use this term). In both Vancouver and Burnaby, there was a conscious effort to consider breadth of geographical coverage of aquatics infrastructure. In both Vancouver and Richmond, there was desire for a more centralized distribution of aquatic facilities (as opposed to having facilities spread throughout the city), though this model was mainly only achieved in Richmond.

Johnston says that centralization versus decentralization of facilities is a higher-level strategy consideration. It is not necessarily a binary — a municipality could pursue a hybrid approach — but it is something that needs to be decided at a strategic level. Roma says that when it comes to equity, one good way of incorporating equity is to include it in the overall strategic approach and let that filter through to individual projects.

VanSplash attempts to define Vancouver's answer to the question of centralization versus decentralization of facilities with a hybrid approach. It also attempts to filter equity-related considerations (chiefly social inclusion) through a higher-level strategy. In contrast, Richmond and Burnaby do not have aquatics-specific plans. (Richmond has a sports and recreation plan but sports equity is not a goal in that plan.) Because *VanSplash* is so new, it is still unclear whether and the extent to which an aquatics-specific plan like *VanSplash* will create a meaningful difference as compared to municipalities without a plan at all.

Geographic distribution is also intricately tied with transportation equity, since ultimately distribution deals with how easy it is for people to get to the pool. In *VanSplash*, there is acknowledgement that people may choose to travel by walking, cycling, transit, or driving. An aquatic facility's service area is defined by the size of the facility rather than mode of transport. In Burnaby, the city's largest aquatics facility is being built in a valley sandwiched between two highways; it is transit-accessible, but one observer noted that people will "drive" to the facility. In the case of Minoru in Richmond, transit and parking were two explicit considerations when staff evaluated potential sites; cycling and walkability were not considerations. In all three cities, there is an assumption that many people will drive or take transit to access aquatics facilities, and relatively less emphasis is placed on walking, cycling, or other methods of access.

However, there is not necessarily agreement amongst planning professionals as to how people should be getting to the pool. For instance, two observers disagreed on whether sports users take the SkyTrain or not — one said the sports users have a large amount of equipment and that they will drive, whereas another said that proximity to SkyTrain is an important consideration for sports teams. Although they were commenting on two different pools in two different municipalities, the lack of a hard and fast rule suggests that there is no generally accepted best practice, and that the best solution may depend on local context instead.

Of course, this means that some people will have easier access to aquatics facilities than others. Some will be able to walk to their local pool, while others will have to drive. Those who cannot do either will likely have to take transit. While many people consulted during the *VanSplash* public engagement expressed a desire to walk to their local pool — already a reality for households wealthy enough to afford a pool in their backyard or condo complex — almost all interviewees agreed that pools are expensive and that being able to build a pool at all should be considered an achievement. Multiple interviewees noted that land is incredibly expensive, and that aquatic facilities are the most expensive type of civic facility that municipalities typically provide.

Identifying areas where equity-deserving groups may not enjoy easy access to aquatics facilities did not appear in any but the non-aquatics recreational plans for the City of

Vancouver. Roma said that with machine learning and GIS spatial analysis, “we could say that the best place to put this pool is over here because the people that live around it ... would benefit the most from having close proximity to a facility, but there might not be an available site there.” At present, none of the cities studied have undertaken that type of spatial analysis as part of their pool planning.

4.2 Once You’re at the Pool: Equity in Facility Design and Programming

Although most interviewees said, one way or another, that equity typically is not a major consideration during the site selection process, it has become a significant factor during the facility design process.

Every new aquatics facility is being outfitted with accessibility features and gender neutral or universal changerooms. These are often presented as solutions to equity issues, though multiple interviewees also said that these were generally considered easy responses and that more complex work would need to be done to address equity more deeply.

One area that has emerged as an issue where planners may need to devote more time to is the issue of gender neutral or universal changerooms, which received some pushback in at least one case study. According to Henderson, during the consultation process for the Minoru project, “there’s certainly groups of people that prefer their men’s and women’s change rooms and now that they’re getting so pinched in terms of area, that’s [where] we got some pushback.” A public consultation done by RC Strategies in Burnaby found that “privacy” was the top changeroom-related consideration, having been identified by 76% of respondents, while “space/size” came in second at 66% and “universal/family change room” third with 56% (City of Burnaby, 2020). Overall, gender neutral or universal change rooms are the only equity-related design feature to have received any public pushback, but even here, the Burnaby example suggests that there is still significant support for it, even if “privacy” and “space/size” are ranked higher.

Another key theme that emerged across all three municipalities is a shift away from outdoor pools. Almost all new investments have been for indoor pools (or adapting outdoor pools to mimic indoor pools, such as by building a cover over them). One significant factor here is likely financial: outdoor pools, although cheaper to build, generate less revenue because they are closed most of the year — and even during summer, variable weather conditions can force the pool to close as well.

However, historically many municipalities have built outdoor pools to serve lower-income or other otherwise marginalized communities because they are cheaper to build (Wiltse, 2007). Three out of Burnaby's four outdoor pools are architecturally identical, a cost-saving design measure that illustrates how simple outdoor pools can be a tool to ensure greater geographical coverage of aquatic services. As Burnaby commences its outdoor pool strategy, other municipalities that operate outdoor pools will undoubtedly be looking for recommendations on how to manage this type of infrastructure moving forward.

Finally, programming was an aspect that observers noted as important for improving equity at aquatic facilities. Examples of programming mentioned include adapted exercise programs at Minoru and free swim lessons at Robert Burnaby Pool. Johnston described a past pool project in Saskatchewan where they piloted free admission and quickly saw a dramatic increase in Indigenous visitors to the pool, which may indicate that the previous user fee was too high for many of them to afford. Interviewees raised these examples of programming to illustrate ways that aquatic facilities can be made more equitable.

Pool programming can vary on a pool-by-pool basis, depending on what each pool's management team is able to implement. When it comes to programming, there is often relatively little that planners can do while planning and designing pool facilities other than keeping in mind the diverse range of potential programming that pool administrators and users may want to implement after a facility is opened. However, that does not mean that planners cannot investigate potential ways to play a greater role in promoting equity through programming.

4.3 Whose Voices Matter?

Another important equity consideration is whose voices are heard by decision-makers, and whose voices are not.

The most prominent place to hear ‘what people want to say’ are processes purposefully designed for this: public and stakeholder engagement exchanges, events, and forums. There is evidence that planners and decision-makers try to listen, but their ability to achieve what people ask for is often constrained, as was seen in many of the case studies. For instance, in Vancouver, public concerns led *VanSplash* to recommend keeping Lord Byng and Templeton — two aging, financially suboptimal pools — open for longer than planners had originally anticipated. In contrast, despite repeated demands by community members and desires expressed by the elected Parks Board, a proposed pool at Mount Pleasant Park appears to remain stalled due to lack of funding.

One dynamic is the strength of some organized aquatics stakeholders in pool planning as compared to the wider public. Johnston noted, as an example, that competitive swim clubs “can be overrepresented if allowed to do so” as they “are some of the most effectively organized ... and highly influential of all community groups.” He continued that they “have been much more successful at adjusting public decisions that maybe other kinds of user groups—and they even have some very sophisticated lobbying systems and manuals.” He noted that, on average, these swimmers compose 2% of all swimmers yet take up on average 15% of swims.

There may be equity implications arising out of such unevenness in inputs to decision-making. Johnston points to one important equity dimension: organized swim clubs, by definition, are organized, and thus have an easier time getting their voices heard, but this means there will inevitably be groups whose voices are not being heard. In Johnston’s view, this is a place where planners can play an important role in ensuring that other aquatic services (besides those geared towards competitive swimmers) are provided even if demand is not necessarily as prominent during public engagement.

However, this also generates a dynamic where swim groups and their supporters advocate for more or for bigger aquatic facilities than what, according to Johnston, is typically justified through a technical analysis of projected future demand and financial costs. It is financially efficient to run pools at close to full capacity; most operational costs, such as utilities and lifeguards, are fixed, so a higher number of users means a greater ability to recoup operational costs. In other words, building large facilities with excess underused capacity is less financially efficient than building a facility that is fully used. Of course, depending on the amount of political pressure that they face, city officials do not necessarily always listen to the consultants that they hire.

In the case of Burnaby's Caprice Artistic Swim Club, equity is used to push and justify the group's views: the group emphasized to local media that their members include people with disabilities who have very few alternatives for recreation. The extent to which this specific detail made an impression on Burnaby city councillors is unclear, but, nevertheless, it shows how an equity issue is regarded as important by some. Finding ways of framing swim clubs' concerns as concerns that involve other user groups could also be pursued. Of perhaps equal importance, to promote equity, planners, officials, advisory boards, and citizen groups need to find ways to assist the wider public and specific equity-deserving groups in identifying and articulating their priorities for aquatics infrastructure, design, and programming.

Chapter 5: Conclusion

This research sought to determine the extent to which equity is a consideration during decision-making in the planning of municipal swimming pools for three cities in B.C.: Vancouver, Burnaby, and Richmond. In each of these three municipalities, planners and decision-makers considered equity to varying extents and in different ways.

Planners in Vancouver have spent considerable effort explicitly putting equity-related goals and considerations in their plans (some, such as *VanPlay*, feature equity more prominently than others, such as *VanSplash*), but the extent to which equity as outlined in planning documents can generate equitable outcomes is unclear. In the case of the proposed pool at Connaught Park, the location of the new facility is likely to exacerbate existing spatial inequities, since it will be located in a relatively wealthy neighbourhood that has historically benefited from significant public investment in aquatics infrastructure. However, the ability of planners to pursue more equitable choices is constrained by limited land, limited funding, and other considerations that were given more attention during the site selection process compared to equity.

Burnaby has made efforts to address spatial inequities but has faced some equity-related criticism from members of the public. Burnaby is funding the planned Cameron Pool to rectify a perceived spatial inequity even though their data suggests that their existing inventory of swimming pools will have more than enough capacity to meet projected future demand. In a separate case study, planners in Burnaby have faced criticism (including from the mayor) over the interruption of service between the closure of the C.G. Brown Pool and the opening of the Burnaby Lake Aquatics and Arena Facility — a situation that has impacted some user groups more than others.

In Richmond, the new Minoru Centre for Active Living was cited by over half of the interviewees as an example of a successful aquatics facility. Prior to the facility being constructed, Richmond's Aquatics Advisory Board played a pivotal role in preventing a service interruption by pushing Council away from an early proposal to construct the new facility on the same site as the old Minoru Aquatics Centre. This event shows how advisory boards can play an important role in advancing more equitable outcomes.

Additionally, the facility itself is designed with high consideration for ensuring equitable access for different segments of the population.

Generally, new investments in aquatics infrastructure occur infrequently due to insufficient funding and efforts to maximize investment dollars. As a result, it is difficult to compare one municipality's process with that of another. Because there often is no prescribed "process", the path that a pool project can take at a municipality can be different with each, infrequent, pool project. Only when municipalities hire planning consultants specialized in aquatics is there an exception; in such cases, consultants often bring practices that they know worked well from pool projects elsewhere in the region or even elsewhere in Canada.

Besides consultants, other important actors who influence aquatics planning decisions include elected decision-makers, planning staff who make recommendations, advisory boards, organized swim groups, and ordinary residents. Typically, the decisions of elected decision-makers are laid out in public documents, while consultants' decisions, and the thinking behind them, are usually not made public.

5.1 Limitations

Overall, this research benefited from access a wide array of public documents and variety of informed observers, including aquatics planning consultants with considerable experience across many projects.

Two limitations of this research were a lack of comparable data and a limited number of interviewees. Since there are no common standards for planning public swimming pools, each municipality is free to decide for itself how it plans its swimming pools. The result is that each municipality's landscape of aquatics infrastructure is very different and, as such, difficult to directly compare. For example, there was no easy way to calculate the capacity of each city's aquatics infrastructure and compare it to their population, since that would depend not only on a city's number of pools, but also the size of their pools. The municipalities themselves typically hire consulting firms to do

these calculations for them, and the consulting firms do not divulge the formulas that they use.

Whether a pool project is successful or not can be measured by metrics such as usage rates, financial performance, or visitor satisfaction. However, very little data of this sort were publicly available. The limited available data typically were not comparable across municipalities. The lack of usable quantitative data meant that most analysis in this report is qualitative in nature.

A larger constraint on the findings was that interviews were limited to informed observers on the planning of aquatics facilities. Interviews with elected decision-makers, advisory board members, and swim group representatives were not undertaken. Such people could have shed light on additional reasons certain decisions were made and how decision-makers were, or were not, influenced by arguments from different stakeholders. However, this research did not seek to recruit study participants from these groups or to obtain first-hand impressions, opinions on, or experiences with deliberations on the pool projects studied. All personal opinions presented in this report are quoted from publicly available sources such as media articles.

With more time and resources, further research that interviews a wider array of people, takes a closer look at specific decisions, and asks for people's opinions on why they supported or opposed certain decisions could shed significant light on the extent to which equity is considered by decision-makers and the stakeholders who try to influence them.

5.2 Recommendations

As multiple interviewees pointed out, swimming pools are incredibly expensive compared to other forms of civic infrastructure, and as such it is very important that municipalities make careful and informed decisions. Failure to plan carefully can result in adverse outcomes such as overcrowded facilities, public criticism of planning decisions, and political controversy. Failure to plan carefully can also result in marginalized groups being unable to access aquatics facility as easily as they should, and thus perpetuate

inequities against populations that have historically been prevented from accessing swimming and aquatics infrastructure.

Based on the findings from each municipality, insights from experienced consultants, and synthesis of data, this report proposes three recommendations for planners and municipalities interested in more equitable aquatics planning:

1. Develop an aquatics plan that features equity as a goal or evaluation criteria.

An aquatics plan or strategy is one important way to strive for more equitable outcomes. Equitable outcomes should, in one form or another, be identified as a goal, and if possible, equity should be a criterion in any ranking or evaluation process (e.g., site evaluation). The Equity Initiative Zones in Vancouver is an example of a tool that planners can employ to identify where need for more equitable outcomes is greatest.

2. Form an aquatics advisory board if one does not already exist.

In Richmond, the aquatics advisory board played a crucial role in changing the planned site of the Minoru Aquatic Centre replacement pool. These bodies can be a way to provide resident input that complements staff recommendations, and a way to ensure ongoing consultation even outside of formal engagement events and programs.

3. Explore more opportunities for colocation and collaboration.

Working with others can be a way for municipalities to reduce the financial cost of swimming pools while also finding new opportunities to pursue more equitable outcomes for pool users. For example, more formal collaboration with municipal school boards could help bring back the co-location of schools and pools, which can potentially save on costs while opening new opportunities to bring aquatics to populations that may otherwise face barriers to accessing opportunities to swim.

Ultimately, a more equitable vision for swimming pools would be an aquatics facility network that serves all residents of a municipality, rather than only those who can afford to visit a swimming pool. Although this may seem aspirational given the realities of

limited land and budget constraints, it is worth remembering that the history of public swimming pools is full of different actors trying to find creative ways to bring aquatics to more people, and especially to low-income and/or racialized communities. After all, that is what fundamentally sets public pools apart from their counterparts in private resorts and condo complexes. Public pools, by definition, are meant to be a civic amenity that anyone can access, and thus they exist to provide aquatics for all.

References

- Ashik, F. R., Mim, S. A., & Neema, M. N. (2020). Towards vertical spatial equity of urban facilities: An integration of spatial and aspatial accessibility. *Journal of Urban Management, 9*(1), 77–92. <https://doi.org/10.1016/j.jum.2019.11.004>
- Barbour, D. (2018). The Romance of Boys Bathing in Toronto’s Don River, 1890–1930. *Urban History Review, 47*(1), 11–26.
- BC Black History Awareness Society. (n.d.). *April 1941 – November 1945: Non-whites can only swim on Tuesday morning at the Crystal Pool (Vancouver) – BC Black History Awareness Society*. <https://bcblackhistory.ca/timeline/april-1941-november-1945-non-whites-can-only-swim-on-tuesday-morning-at-the-crystal-pool-vancouver/>
- Bjarnason, E. (2017). Pool-landia. *Hakai Magazine*.
<https://hakaimagazine.com/features/pool-landia/>
- Brand, A. L. (2015). The Politics of Defining and Building Equity in the Twenty-First Century. *Journal of Planning Education and Research, 35*(3), 249–264.
<https://doi.org/10.1177/0739456X15585001>
- Burnaby Now. (2023a, January 18). Temporary cover at Burnaby pool “a complete embarrassment”: Mayor. *Burnaby Now*. <https://www.burnabynow.com/local->

news/temporary-cover-at-burnaby-pool-a-complete-embarrassment-mayor-6387226

Burnaby Now. (2023b, February 23). This outdoor pool in Burnaby will be getting a permanent roof by next winter. *Burnaby Now*.

<https://www.burnabynow.com/local-news/this-outdoor-pool-in-burnaby-will-be-getting-a-permanent-roof-by-next-winter-6596555>

Burnaby Now. (2023c, March 11). "A perfect storm": Synchronized swimmers are out in the cold in Burnaby (Photos). *Burnaby Now*. <https://www.burnabynow.com/local-news/a-perfect-storm-synchronized-swimmers-are-out-in-the-cold-in-burnaby-photos-6680699>

Burnaby Parks, Recreation and Cultural Services Department. (2003). *Burnaby Aquatic Facilities and Services Review*. City of Burnaby.

https://search.heritageburnaby.ca/viewer?file=%2Fmedia%2Fhpo%2F_Data%2F_CouncilMinutesAndReports%2FUnrestricted%2F2004%2F13-Sep-2004%2F65526.pdf#page=1&search=facilities%20services%20review&phrase=false

Butler, L. (2005). "Washing off the Dust": Baths and Bathing in Late Medieval Japan. *Monumenta Nipponica*, 60(1), 1–41.

Canadian Drowning Prevention Coalition. (2017). *Canadian Drowning Prevention Plan*.

<https://www.lifesaving.org/public/download/documents/53943>

CBC News. (2017, May 20). *Swimming with sharks and octopuses: Vancouver's outdoor*

pools, then and now. CBC. [https://www.cbc.ca/news/canada/british-](https://www.cbc.ca/news/canada/british-columbia/every-once-in-awhile-you-would-get-a-mud-shark-in-the-pool-vancouver-s-outdoor-pools-then-and-now-1.4122232)

[columbia/every-once-in-awhile-you-would-get-a-mud-shark-in-the-pool-](https://www.cbc.ca/news/canada/british-columbia/every-once-in-awhile-you-would-get-a-mud-shark-in-the-pool-vancouver-s-outdoor-pools-then-and-now-1.4122232)

[vancouver-s-outdoor-pools-then-and-now-1.4122232](https://www.cbc.ca/news/canada/british-columbia/every-once-in-awhile-you-would-get-a-mud-shark-in-the-pool-vancouver-s-outdoor-pools-then-and-now-1.4122232)

CBC News. (2022, April 26). *With swim lessons scarce in Quebec, worries rise about*

summer drowning risks | CBC News. CBC.

[https://www.cbc.ca/news/canada/montreal/swim-lessons-quebec-montreal-](https://www.cbc.ca/news/canada/montreal/swim-lessons-quebec-montreal-1.6430583)

[1.6430583](https://www.cbc.ca/news/canada/montreal/swim-lessons-quebec-montreal-1.6430583)

Chase, N., Sui, X., & Blair, S. (2008). Comparison of the Health Aspects of Swimming

With Other Types of Physical Activity and Sedentary Lifestyle Habits. *International*

Journal of Aquatic Research and Education, 2(2).

<https://doi.org/10.25035/ijare.02.02.07>

City of Burnaby. (2004). *Evaluation of Aquatic Services and Facilities Review [Staff*

Report].

[https://search.heritageburnaby.ca/viewer?file=%2Fmedia%2Fhpo%2F_Data%2F_](https://search.heritageburnaby.ca/viewer?file=%2Fmedia%2Fhpo%2F_Data%2F_CouncilMinutesAndReports%2FUnrestricted%2F2004%2F13-Sep-)

[CouncilMinutesAndReports%2FUnrestricted%2F2004%2F13-Sep-](https://search.heritageburnaby.ca/viewer?file=%2Fmedia%2Fhpo%2F_Data%2F_CouncilMinutesAndReports%2FUnrestricted%2F2004%2F13-Sep-)

2004%2F65526.pdf#page=1&search=facilities%20services%20review&phrase=fal
se

City of Burnaby. (2018). *Proposed Priority Community Amenity Projects [Committee Report]*. <https://pub-burnaby.escribemeetings.com/filestream.ashx?DocumentId=41887>

City of Burnaby. (2020a). *Burnaby Lake Aquatic and Arena Facility Report—Phase Two Funding Request [Committee Report]*.

City of Burnaby. (2020b). *Update of City of Burnaby Equity Policy [Council Report]*. <https://pub-burnaby.escribemeetings.com/filestream.ashx?DocumentId=46738>

City of Burnaby. (n.d.). *City of Burnaby [Interactive Map of Facilities]*. <https://gis.burnaby.ca/storymaps/communitycentres/index.html>

City of Richmond. (n.d.). *History | Minoru Centre*. Retrieved June 26, 2023, from <https://minorucentre.ca/volunteer-3/history/>

City of Richmond. (2013a). *Building Our Social Future: A Social Development Strategy for Richmond*. https://www.richmond.ca/__shared/assets/socialdevstrategy34917.pdf

City of Richmond. (2013b). *Major Capital Facilities Program Phase 1 [Staff Report]*.

City of Richmond. (2013c). *Minoru Older Adults and Aquatic Centre Site Selection [Staff Report]*. https://citycouncil.richmond.ca/agendafiles/Open_GP_11-4-2013.pdf

City of Vancouver. (2017). *Historical Discrimination Against Chinese People in Vancouver [Staff Report]*. <https://council.vancouver.ca/20171031/documents/rr1.pdf>

City of Vancouver. (2021). *Getting our house in order: The City of Vancouver's Equity Framework*.

Clemens, T., Tamim, H., Rotondi, M., & Macpherson, A. K. (2016). A population based study of drowning in Canada. *BMC Public Health*, *16*(1), 559.
<https://doi.org/10.1186/s12889-016-3221-8>

Collins, P. A., & Hayes, M. V. (2013). Examining the Capacities of Municipal Governments to Reduce Health Inequities: A Survey of Municipal Actors' Perceptions in Metro Vancouver. *Canadian Journal of Public Health*, *104*(4), e304–e310.
<https://doi.org/10.17269/cjph.104.3873>

Dang, D. (2013, December 6). Minoru Precinct renovations needed. *Richmond News*.
<https://www.richmond-news.com/opinion/minoru-precinct-renovations-needed-2965269>

Delbosc, A., & Currie, G. (2011). Using Lorenz curves to assess public transport equity. *Journal of Transport Geography*, *19*(6), 1252–1259.
<https://doi.org/10.1016/j.jtrangeo.2011.02.008>

- Derom, I., & Lee, D. (2014). Vancouver and the 2010 Olympic Games: Physical Activity for All? *Journal of Physical Activity and Health*, 11(8), 1556–1564.
<https://doi.org/10.1123/jpah.2012-0469>
- Doiron, D., Setton, E. M., Shairsingh, K., Brauer, M., Hystad, P., Ross, N. A., & Brook, J. R. (2020). Healthy built environment: Spatial patterns and relationships of multiple exposures and deprivation in Toronto, Montreal and Vancouver. *Environment International*, 143, 106003. <https://doi.org/10.1016/j.envint.2020.106003>
- Firth, C. L., Hosford, K., & Winters, M. (2021). Who were these bike lanes built for? Social-spatial inequities in Vancouver’s bikeways, 2001–2016. *Journal of Transport Geography*, 94, 103122. <https://doi.org/10.1016/j.jtrangeo.2021.103122>
- Gallinger, Z., Fralick, M., & Hwang, S. (2014). Ethnic Differences in Drowning Rates in Ontario, Canada. *Journal of Immigrant and Minority Health / Center for Minority Public Health*, 17. <https://doi.org/10.1007/s10903-014-0095-7>
- Global News. (2022). *After deadly weekend in Quebec, some wonder if swimming lessons should be mandatory—Montreal | Globalnews.ca.*
<https://globalnews.ca/news/9017056/quebec-drownings-mandatory-swimming-lessons-call/>
- HCMA. (2016). *Natural Swimming Pools.* https://hcma.ca/wp-content/uploads/2016/04/Natural-Swimming-Pools-Report_HCMA.pdf

Henderson, S. B., McLean, K. E., Lee, M. J., & Kosatsky, T. (2022). Analysis of community deaths during the catastrophic 2021 heat dome. *Environmental Epidemiology*, 6(1), e189. <https://doi.org/10.1097/EE9.0000000000000189>

Heritage Burnaby. (1934). *Outdoor Pool at Mcpherson Park*.

<https://search.heritageburnaby.ca/link/archivephoto34579>

Howells, K., & Jarman, D. (2016). Benefits of swimming for young children. *Physical Education Matters*, 11(3), Article 3.

Kadota, P. (2010). *Evolution of Regional Governance in British Columbia*. The Local Government Institute, University of Victoria.

https://dspace.library.uvic.ca/bitstream/handle/1828/2722/kadota_paul.pdf?sequence=1

Kossuth, R. S. (2005). Dangerous Waters: Victorian Decorum, Swimmer Safety, and the Establishment of Public Bathing Facilities in London (Canada). *The International Journal of the History of Sport*, 22(5), 796–815.

<https://doi.org/10.1080/09523360500143422>

Lehmann, D., Tennant, M. T., Silva, D. T., McAullay, D., Lannigan, F., Coates, H., &

Stanley, F. J. (2003). Benefits of swimming pools in two remote Aboriginal communities in Western Australia: Intervention study. *BMJ*, 327(7412), 415–419.

<https://doi.org/10.1136/bmj.327.7412.415>

Matsui, A., Goya, T., & Satake, H. (2012). *The History and Problem of Swimming Education in Japan*. 7.

Mayaud, J. R., Tran, M., & Nuttall, R. (2019). An urban data framework for assessing equity in cities: Comparing accessibility to healthcare facilities in Cascadia. *Computers, Environment and Urban Systems*, 78, 101401.
<https://doi.org/10.1016/j.compenvurbsys.2019.101401>

McCarthy, G. (2017). *Spoiled for Choice: A Thematic Analysis of the City of Calgary's Civic Facility Development Process* [McGill University].
<https://escholarship.mcgill.ca/concern/papers/8049g536r?locale=en>

McLauchlan, A. (2017). Geographies of Swimming Pool Provision: Lessons from Glasgow 1804–2014. *Scottish Geographical Journal*, 133(2), 83–100.
<https://doi.org/10.1080/14702541.2017.1285042>

Metro Vancouver. (2021). *Social Equity & Regional Growth Study: Considerations for integrating social equity into regional planning and Metro 2050*.

Metro Vancouver. (2022). *Metro 2050: Regional Growth Strategy*.
<https://metrovanancouver.org/services/regional-planning/Documents/metro-2050.pdf>

- Moore, A. A. (2016). Decentralized decision-making and urban planning: A case study of density for benefit agreements in Toronto and Vancouver. *Canadian Public Administration*, 59(3), 425–447. <https://doi.org/10.1111/capa.12179>
- Mulligan, H., & Polkinghorne, A. (2013). Community use of a hospital pool by people with disabilities. *Disability and Health Journal*, 6(4), 385–390. <https://doi.org/10.1016/j.dhjo.2013.04.004>
- Neutens, T., Schwanen, T., Witlox, F., & De Maeyer, P. (2010). Equity of Urban Service Delivery: A Comparison of Different Accessibility Measures. *Environment and Planning A: Economy and Space*, 42(7), 1613–1635. <https://doi.org/10.1068/a4230>
- Nzindukiyimana, O., & O'Connor, E. (2019). Let's (not) meet at the pool: A Black Canadian social history of swimming (1900s–1960s). *Loisir et Société / Society and Leisure*, 42(1), 137–164. <https://doi.org/10.1080/07053436.2019.1582920>
- Olstad, B. H., Berg, P. R., & Kjendlie, P.-L. (2021). Outsourcing Swimming Education—Experiences and Challenges. *International Journal of Environmental Research and Public Health*, 18(1), Article 1. <https://doi.org/10.3390/ijerph18010006>
- Omer, I. (2006). Evaluating accessibility using house-level data: A spatial equity perspective. *Computers, Environment and Urban Systems*, 30(3), 254–274. <https://doi.org/10.1016/j.compenvurbsys.2005.06.004>

- Quick, M., Christidis, T., Olaniyan, T., Newstead, N., & Pinault, L. (2022). Exploring the associations between cooling centre accessibility and marginalization in Montreal, Toronto, and Vancouver, Canada. *Canadian Geographies / Géographies Canadiennes*, n/a(n/a). <https://doi.org/10.1111/cag.12805>
- RC Strategies. (2020). *Burnaby Northeast Quadrant Community Space Needs Assessment*. <https://www.rcstrategies.ca/wp-content/uploads/2021/04/Burnaby-NQ-Community-Space-NA.pdf>
- Reich, J. (2009). Switzerland: Freedom of creed and conscience, immigration, and public schools in the postsecular state—compulsory coeducational swimming instruction revisited. *International Journal of Constitutional Law*, 7(4), 754–767. <https://doi.org/10.1093/icon/mop029>
- Richmond News. (2015, September 28). Fifty years of floating Centennial fun. *Richmond News*. <https://www.richmond-news.com/in-the-community/fifty-years-of-floating-centennial-fun-3018966>
- Sheard, S. (2000). Profit is a Dirty Word: The Development of Public Baths and Wash-houses in Britain 1847–1915. *Social History of Medicine*, 13(1), 63–86. <https://doi.org/10.1093/shm/13.1.63>

- Stanger-Ross, J. (2008). Municipal Colonialism in Vancouver: City Planning and the Conflict over Indian Reserves, 1928–1950s. *Canadian Historical Review*, 89(4), 541–580. <https://doi.org/10.3138/chr.89.4.541>
- Stanley, J. (2023). Opportunity equity in strategic urban land use transport planning: Directions in London and Vancouver. *Transport Policy*, 136(C), 137–146.
- Stewart, M. (2015). *The Public Baths of Ottawa: A Heritage Reconsidered*. 1.
- Tahmasbi, B., Mansourianfar, M. H., Haghshenas, H., & Kim, I. (2019). Multimodal accessibility-based equity assessment of urban public facilities distribution. *Sustainable Cities and Society*, 49, 101633. <https://doi.org/10.1016/j.scs.2019.101633>
- U.S. Geological Survey. (n.d.). *EarthExplorer*. <https://earthexplorer.usgs.gov/>
- Vancouver Board of Parks and Recreation. (2005). *Minutes of Meeting of the Board of Parks and Recreation Held at the Park Board Office on Monday, October 31, 2005*. https://parkboardmeetings.vancouver.ca/2005/051205/mom_oct31_05.pdf
- Vancouver Board of Parks and Recreation. (2018). *VanPlay: Inventory and Analysis*. <https://vancouver.ca/files/cov/vanplay-report-1-chapter-4-facilities.pdf>
- Vancouver Board of Parks and Recreation. (2019a). *VanPlay: Strategic Bold Moves*. <https://vancouver.ca/files/cov/vanplay-strategic-bold-moves-report.pdf>

Vancouver Board of Parks and Recreation. (2019b). *VanSplash: Current State Report*.

<https://vancouver.ca/files/cov/vansplash-current-state-report.pdf>

Vancouver Board of Parks and Recreation. (2019c). *VanSplash: Public Engagement*

Report. <https://vancouver.ca/files/cov/vansplash-public-engagement-report.pdf>

Vancouver Board of Parks and Recreation. (2019d). *VanSplash: Vancouver Aquatics*

Strategy (p. 84).

Vancouver School Board. (2021). *Vivian Jung – The first teacher of Chinese Descent to*

work for the Vancouver School Board.

<https://blogs.vsb.bc.ca/heritage/2021/05/09/vivian-jung-the-first-teacher-of-chinese-descent-to-work-for-the-vancouver-school-board/>

WHO. (2021). *Drowning*. <https://www.who.int/news-room/fact-sheets/detail/drowning>

Wiltse, J. (2007). *Contested Waters: A Social History of Swimming Pools in America*.

University of North Carolina Press.

Yegül, F. K. (2013). Development of Baths and Public Bathing during the Roman

Republic. In *A Companion to the Archaeology of the Roman Republic* (pp. 13–

32). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781118557129.ch1>

Yu, J., Dwyer-Lindgren, L., Bennett, J., Ezzati, M., Gustafson, P., Tran, M., & Brauer, M.

(2021). A spatiotemporal analysis of inequalities in life expectancy and 20 causes of mortality in sub-neighbourhoods of Metro Vancouver, British Columbia,

Canada, 1990–2016. *Health & Place*, 72, 102692.

<https://doi.org/10.1016/j.healthplace.2021.102692>

Yumagulova, L. (2020). Disrupting the riskscales of inequities: A case study of planning for resilience in Canada's Metro Vancouver region. *Cambridge Journal of Regions, Economy and Society*, 13(2), 293–318.

<https://doi.org/10.1093/cjres/rsaa029>

Zapata, M. A., & Bates, L. K. (2015). Equity Planning Revisited. *Journal of Planning Education and Research*, 35(3), 245–248.

<https://doi.org/10.1177/0739456X15589967>