

# AQUATIC SERVICES & FACILITIES STRATEGY

## STAGE 2 - EXPLORING OPTIONS

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## EXECUTIVE SUMMARY

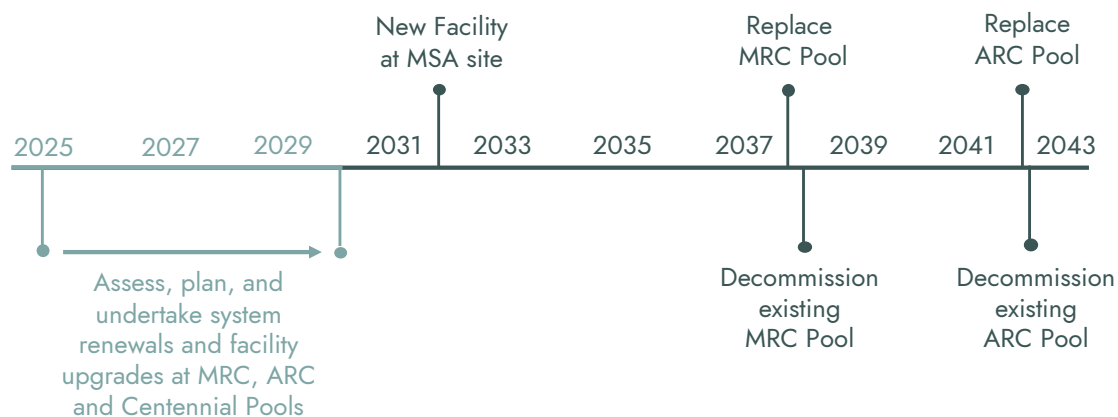
The City of Abbotsford’s Aquatic Services & Facilities Strategy is a long-range initiative aimed at shaping the future of aquatic services over the next two decades. This Stage 2 Exploring Options Report builds on the comprehensive research and community input gathered in Stage 1, offering a framework for how the City can respond to its current aging facilities, meet future demand, and develop a modern, inclusive aquatic system.

Abbotsford’s aquatic facilities are well used and deeply valued. From family swim lessons to competitive sport training, they serve as essential hubs of community activity. However, the infrastructure that supports these experiences is aging and increasingly strained, resulting in growing maintenance demands. ARC and MRC Pools, along with Centennial Outdoor Pool, are facing lifecycle issues that will necessitate significant upgrades to maintain these amenities while not necessarily increasing capacity. At the same time, population growth, demographic shifts, and rising demand for flexible, unstructured aquatic programs are intensifying pressure on these facilities.

This report confirms a critical service objective to maintain the current levels of service: current aquatic infrastructure can support approximately 555,000 annual visits, while projected demand by 2045 exceeds 710,000 visits. Simply maintaining the status quo will not address community desires. The City should develop a plan to address aging infrastructure, expand capacity and diversify programming to reflect how residents use and value aquatic space.

To address these challenges, the Strategy puts forward a decentralized, three-facility model that balances access, efficiency, and adaptability. The proposed strategy includes a new training 50-metre pool at the MSA site to accommodate training and local and regional sport hosting, a new community leisure pool at the MRC site, and a neighbourhood or community-scale pool at the ARC site, tailored to evolving community needs. Together, these facilities will enable Abbotsford to deliver an aquatic service level that not only keeps pace with growth but supports equity, health, and community connection. The following figure presents the proposed strategy actions and timeline.

Figure 1. Proposed Strategy actions and timeline



This vision is not without complexity. Operating multiple facilities comes with higher costs and logistical demands, and careful coordination will be needed as aging pools are phased out and new ones come online. However, the long-term benefits—geographic accessibility, service continuity, and the ability to respond to shifting demographics—position this model as a resilient and community-focused path forward.

As proposed, the strategy outlines a redevelopment plan for indoor aquatic facilities and recommends that the future of Centennial Outdoor Pool be determined after assessing the required system renewals and facility upgrades associated with the venue.

This report lays the groundwork for Stage 3, which will include the development of a Draft Strategy informed by continued community engagement and Council direction, leading ultimately to a comprehensive Implementation Plan.

# 1 INTRODUCTION

## 1.1 Report Context

This Aquatic Services & Facilities Strategy - Exploring Options Report represents the completion of the second stage of the Abbotsford Aquatic Services & Facilities Strategy. Included in this report is:

- i) a high-level overview of the purpose and objectives of the strategy;
- ii) a summary of Stage 1 which involved the analysis of the current state of aquatic services and facilities in Abbotsford, along with the development of future planning assumptions guiding the future demand projections;
- iii) a location assessment which identifies areas within the community that are considered appropriate for new aquatic infrastructure;
- iv) the infrastructure planning considerations that informed the development of the proposed community aquatic strategy option; and,
- v) details of the proposed community aquatic strategy option that is designed to meet the communities projected aquatic activity demand.

Stage 2 was initiated in December 2023 and completed in late spring 2025.

## 1.2 Purpose

The City of Abbotsford's Aquatic Services & Facilities Strategy aims to provide an in-depth and comprehensive review of the City's aquatic facilities to support effective planning and investment in current and future aquatic programs and infrastructure. The scope of this strategy includes the assessment of the following aquatic facilities/infrastructure:

- Abbotsford Recreation Centre Pool (ARC)
- Matsqui Recreation Centre Pool (MRC)
- Centennial Outdoor Pool
- Walmsley Lake at Albert Dyck Memorial Park<sup>1</sup>

The final strategy will provide a clear path for the provision of aquatic infrastructure in Abbotsford, projecting twenty years into the future (until 2045). It will consider the City's community needs, future population projections, trends in aquatics participation, and the current state of Abbotsford's aquatic infrastructure concerning lifecycle funding requirements, accessibility, and energy efficiency. It will inform Abbotsford's approach to delivering future aquatic and recreation facilities and services and form a basis for infrastructure and financial planning.

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<sup>1</sup> Walmsley Lake is not included in the analysis or projections presented as it does not contribute significantly to swim level targets or practical capacity.

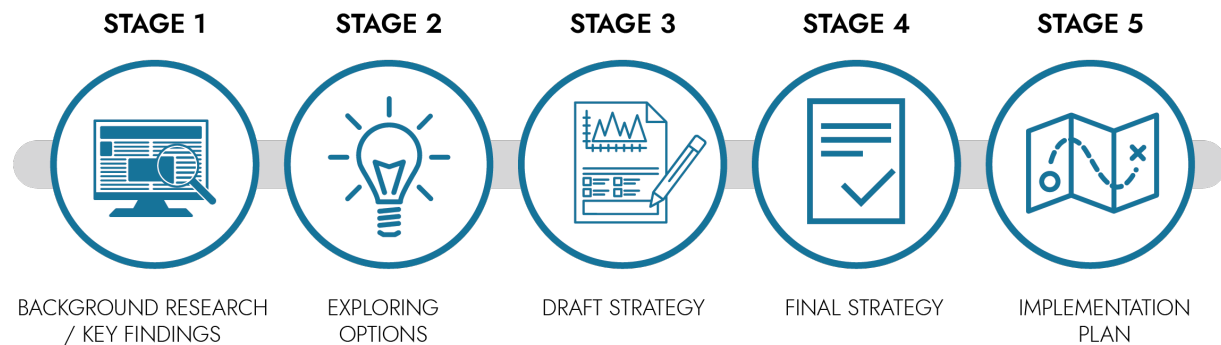
## 1.3 Scope of the Aquatic Services & Facilities Strategy

The Aquatic Services & Facilities Strategy is designed to inform future policy and planning to support Abbotsford’s aquatic needs: this work is not intended to make recommendations regarding procedures, allocation, scheduling practices, staffing, or rates and fees. The Aquatic Services & Facilities Strategy takes into consideration the aquatic activities taking place within municipally owned and operated aquatic facilities (ARC, MRC), as well as municipally owned, but privately operated facilities (Centennial). The influence of private aquatic facilities or facilities within other jurisdictions are not within the project’s scope.

## 1.4 Strategy Approach

This Strategy has been prepared following Abbotsford’s five-stage planning approach:

Figure 2. Aquatic Facility Strategy - Proposed Timeline



Stage 1 Background Research / Key Findings (under separate cover, completed): Stage 1 involved thorough background research, including historical document review, analysis of current aquatic facilities, benchmarking against other municipalities, examination of trends, and community consultation. It also encompassed a detailed analysis of pool use data, financial assessment, and a future demand assessment, identifying a projected gap between current aquatic infrastructure in Abbotsford and the anticipated demand over the next 20 years.

Stage 2 - Exploring Options (this report): Building on the background research and key findings from Stage 1, this report evaluates potential facility locations and outlines the key infrastructure planning considerations that inform the proposed community aquatic strategy.

Stage 3 - Draft Strategy (pending completion of Stage 2): This phase will commence following Council’s consideration of the options explored in Stage 2. The Draft Strategy will be presented in 2025 and additional feedback from external stakeholders and the community will be collected to inform the Final Strategy (Stage 4).

Stage 4 - Final Strategy (pending completion of Stage 3): The Strategy will be updated based on feedback from Stage 3 in 2025.

Stage 5 - Implementation Plan (pending completion of Stage 4): A detailed Implementation Plan will be developed following the adoption of the Final Strategy. This will outline where, what, when and how the actions identified in the Strategy will be implemented, and where actions can be combined or considered with the outcomes of the Arena Services and Facilities Strategy.

## 1.5 Space Planning Terminology

Several important terms are used throughout this document to describe space. For reference, their definitions are included below.

- A **Component** is a group of spaces with common purpose.
- *Internal Circulation* is the area assigned to move between the spaces/rooms within a component. For example, the hallways within a staff only zone.
- **External/Major Circulation** is the area assigned to the spaces between components. For example, the building stairway between floors is major circulation.
- **Component Gross Factor (CGF)** is a planning ratio used to convert the net area of a specific functional component (like a department or unit) into its gross area, including necessary internal support spaces and circulation within that component.
- **Component Gross Area** is the area of all programmable and support spaces including internal circulation and interior wall thicknesses within the component(s). Component Gross Area is calculated by applying a Component Gross Factor (CGF) to the net area of a component. It is measured in m<sup>2</sup> or ft<sup>2</sup> and represented by CGm<sup>2</sup> or CGft<sup>2</sup>.
- **Building Gross Factor (BGF)** refers to the ratio used to convert the net usable area into gross building area. It accounts for the non-usable space in a building, such as walls and circulation.
- **Building Gross Area** is the total area of all levels of a building as measured to the outside face of exterior walls. It includes all rooms/areas, internal and external circulation, building systems (mechanical, electrical, HVAC etc.), and interior and exterior walls. Building Gross area is calculated by applying a Building Gross Factor (BGF) to the total component gross area. It is measured in m<sup>2</sup> or ft<sup>2</sup> and represented by BGm<sup>2</sup> or BGft<sup>2</sup>.
- **Building Systems** space consists of space used for mechanical, electrical, HVAC, communications and janitorial services as well as the plan area occupied by building structure.

## 2 KEY FINDINGS FROM STAGE 1

In November 2023, the Stage 1 Aquatic Services & Facilities Strategy was presented to and accepted by Council. This report developed a comprehensive analysis of the following:

- the current state of Abbotsford’s aquatic inventory and services provided by the City;
- current demand and utilization of the City’s pool inventory;
- the pool supply within the Lower Mainland region and a comparison of Abbotsford’s pool provision compared to other local communities;
- emerging aquatic activity and infrastructure trends;
- a community engagement summary that included the outcomes of a series of in-depth interviews with aquatic users, community groups and two surveys targeting the general public, and aquatic user groups & community groups.

The report also examined a variety of factors that will inform the future demand for aquatic activities including population and demographics, city development patterns, City strategic priorities, recreation activity trends, heat vulnerability, and level of service targets.

It is important to note that Walmsley Lake, which falls within the scope of this strategy, was ultimately not included in the analysis or projections presented in the Stage 1 Report, as it was found that Walmsley Lake could not contribute significantly to swim level targets or practical capacity. Therefore, it has also not been included among the options presented in this Stage 2 report.

Following the completion of Stage 1 research, consultation and analysis, five key findings emerged. These are presented below, as they will inform the preliminary directions for several options/directions to be considered by Council.

1. **Abbotsford’s existing aquatic pool infrastructure will require major updates, renovations, and possible replacement:** The assessment of existing aquatic facility infrastructure reveals that ARC Pool, MRC Pool and Centennial Outdoor Pool require significant targeted investments to address their planned system renewal and deferred maintenance costs to prevent further deterioration and maintain functionality. Average life-expectancy for an aquatic facility is 50 years; Centennial Outdoor Pool, built in 1958 with renovations in 1996, 2008, and 2022 has surpassed this target in 2008; ARC Pool (built in 1972 and renovated in the 1990s) surpassed this target in 2022; and MRC Pool (built in 1991) will reach 50 years by 2041. The building condition assessment report, prepared in 2020 by VFA noted that each of the aquatic assets are in poor or critical condition, requiring significant investment to remain functional.
2. **Abbotsford’s pools are well utilized and liked by the Community:** A pool utilization analysis was conducted in Stage 1 using data from 2018 to 2022. The analysis offers a valuable snapshot of how Abbotsford’s aquatic facilities were being used during that period. The analysis provides a historical baseline of usage patterns, offering insight into activity levels and how the various aquatics spaces were

used. Two methods to estimate pool utilization were used in the Stage 1 report:

- Using data from the year 2019, the first method identified the number of people who visited the pools annually.
- Using data for the years 2018-2022, the second method identified whether an activity was scheduled or booked during regular opening hours.

The first method revealed Abbotsford’s pools received ~561,000 visitors annually. As the practical annual capacity<sup>2</sup> for Abbotsford’s pools is calculated as 555,000 swims per year, this indicates a very well utilized system of aquatic infrastructure. A detailed breakdown is provided below.

Table 1. Aquatic facility utilization estimate, Method 1

	ARC	MRC	Centennial*	Combined Total
Total Annual Visitation	229,765	329,061	2,466	561,292
Practical Annual Visitation Capacity	200,000	325,000	30,000	555,000
Utilization	115%	101%	8%	101%

\*Centennial Pool’s total annual visitation is likely underreported due to the absence of standardized operational procedures for tracking and reporting.

<sup>2</sup> Practical capacity of an indoor pool considers water surface area and water depth and is calculated using the following metrics:

- For warm\* water shallower than 1.5m (5ft) feet, a multiplier of 65 annual swims per square foot of water surface is used to estimate practical capacity.
- For water 1.5m (5ft) feet or deeper a multiplier of 25 swims per square foot of water surface is used to estimate practical capacity.

\*shallower water (such as the tots pool) is typically warmer, ranging between 29-33° Celsius.

Practical capacity of an outdoor pool considers water surface area and water depth and is calculated using the following metrics:

- For water shallower than 1.5m (5ft) feet, a multiplier of 20 annual swims per square foot of water surface is used to estimate capacity.
- For water 1.5m (5ft) feet or deeper, the multiplier is 7 swims per square foot per year.

It should be noted that this is not “legal capacity” which is specified in the Swim Pool Regulations under BC’s Health Act, which results in higher capacity than the formula above. In fact, while legal capacity divides pools into water less than and more than 1.5m deep, it focuses on instantaneous capacity rather than annual capacity. The above definition of capacity relates to a typical public pool which must deliver a variety of categories of aquatic service in a typical 5,000 hours per year municipal operating format. Square foot of water surface area is a standard unit of measurement for measuring capacity.

The second method considered whether an activity was scheduled or booked in the pool during regular opening hours. This assessment found the following utilization rates for the 5-year period between 2018 and 2022:

Table 2. Aquatic facility utilization estimate, Method 2

	2018	2019	2020	2021	2022
ARC	87.6%	97.8%	31.6%	39.1%	78.7%
MRC	76.6%	89.9%	50.3%	67.8%	78.4%

Prior to the COVID-19 pandemic, the facility utilization rate ranged between 77% and 98%, indicating that the facilities were well-utilized and running at or near full capacity. This suggests an active and robust operational environment. However, during the pandemic, there was a sharp decline in facility utilization due to widespread facility closures, social distancing measures, and capacity restrictions. As a result, facilities and institutions faced unprecedented challenges, leading to a significant reduction in use. However, as operating hours, capacity levels, and staffing return to pre-pandemic levels, utilization rates have been increasing steadily and are expected to reach pre-pandemic levels.

The utilization analysis—based on data from 2018 to 2022 and using the two methods outlined above—found that Abbotsford’s indoor pools were at or exceeded their maximum utilization. Feedback collected during the community engagement process also echoed these findings, with participants consistently identifying challenges registering for programming due to limited supply and user groups unable to book activities during peak times.

**3. There is an increasing demand for aquatic programming that supports leisure, health, and fitness programming.** National recreation activity trends indicate that leisure activities are gaining popularity, and unstructured, informal activities attract a broader range of participants than organized sports. This is consistent with the feedback collected during community engagement. Survey respondents indicated they wanted to spend more time on recreation and leisure activities and less on structured traditional aquatic sports. This reflects growing demand for unstructured pool programming, such as drop-in swimming, casual fitness classes, and special interest swims (e.g., teen or women-only sessions). It also indicates a shift in demand for competitive sports infrastructure toward more specialized facilities designed to support events and serve as regional assets.

Additionally, a clear priority that emerged from stakeholder engagement is the enhanced provision of in-pool recreation amenities for children and youth, which mirrors the changing community relationship to aquatic facilities. Pools have become spaces for gathering, socializing, and even respite from the weather (cooling in the summer, heat during the winter). Facilities that incorporate a diverse range of pool types featuring varying water temperatures and specialized amenities, complemented by areas for socializing, are valuable community assets with minimal barriers to participation.

**4. Abbotsford should consider additional pool facilities and outdoor aquatic amenities to support projected population and demand:** The 2023 Stage 1 analysis projected that based on current population

projections, to maintain the current service levels through to 2043, Abbotsford would be providing 793,000 annual pool visits to maintain a service level of 3.5 swims per capita—an increase of nearly 243,000 visits beyond current facility capacity (555,000). Strong community demand for improved aquatic services and programming was also highlighted through stakeholder feedback.

Stage 2 re-evaluated population projections using updated 2025 BC P.E.O.P.L.E. data, which indicates slower growth than previously expected. The revised 2043 population estimate is 202,367, down from 223,190 in the 2023 analysis. This reduces the projected swim demand to about 708,000 annually—still above current capacity, though the shortfall is smaller (153,000 additional swims needed). Despite the revised projections, capacity in Abbotsford's aquatic facilities system would need to increase in order to maintain the existing level of service for a growing population. Even the lower-growth scenario requires capacity for at least 710,000 annual swims.

The City's 2016 Official Community Plan (OCP) forecasted a 2040 population of 200,000, based on a 1.5% annual growth rate. However, Abbotsford's population grew by 11.3% between 2016 and 2021 (about 2.17% annually), suggesting faster growth and an earlier arrival at that milestone. This strategy uses the most recent BC Stats data (February 2025) and incorporates flexibility to adapt to varying growth rates and service expectations.

#### **5. Aquatic infrastructure requires high capital investments and there is limited cost recovery potential.**

Aquatic services are funded through a mix of user fees and tax support. To find the right balance between these, it's important to understand the cost of providing the service and establish a clear rationale for setting fees and subsidy levels. In 2003 the City of Abbotsford adopted the Benefits Continuum<sup>3</sup>, as an underlying philosophy for setting fees and charges. This approach is based on the principle that those who benefit from a service should pay according to the benefit they receive. If an activity benefits only the user, the user should cover the cost. If it also benefits the community, there is justification for tax support. This structured process for fee-setting includes calculating unit costs, assigning subsidies, determining preliminary fees, applying strategies, adjusting for practicality, and ensuring affordability. These fees are adjusted annually based on the Municipal Price Index, and unit costs are monitored and updated every four years. Capital and operational costs for aquatic facilities are very high compared to most other recreational amenities, and the vast majority of use is heavily subsidized community use.

**All major projects should be considered in context with Council's priorities, limited resources, and available budget.**

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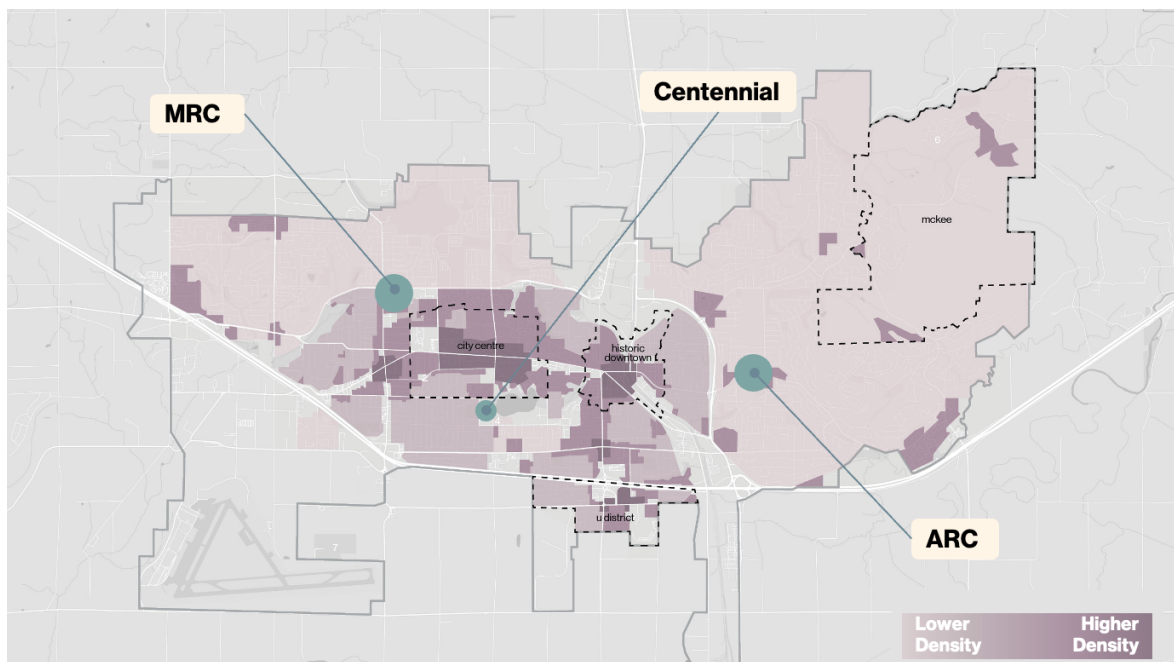
<sup>3</sup> Fees and Charges Bylaw and Policy Framework, City of Abbotsford, Parks, Recreation & Culture; RC Strategies, 2021.

### 3 LOCATION ASSESSMENT

The Stage 1 Report identified a need for expanded aquatic facilities in the City of Abbotsford, which could involve the establishment of a new aquatic facility. To identify areas within the community that would be appropriate for new aquatic infrastructure, a location analysis has been conducted. This analysis has considered several factors including current population density, areas of anticipated growth, the urban areas as defined by the 2016 OCP and major roads and land use designation.

**Population density** in the City of Abbotsford, as detailed in the figure below, is concentrated in the City Centre, the Historic Downtown, McKee, and the U-District areas.

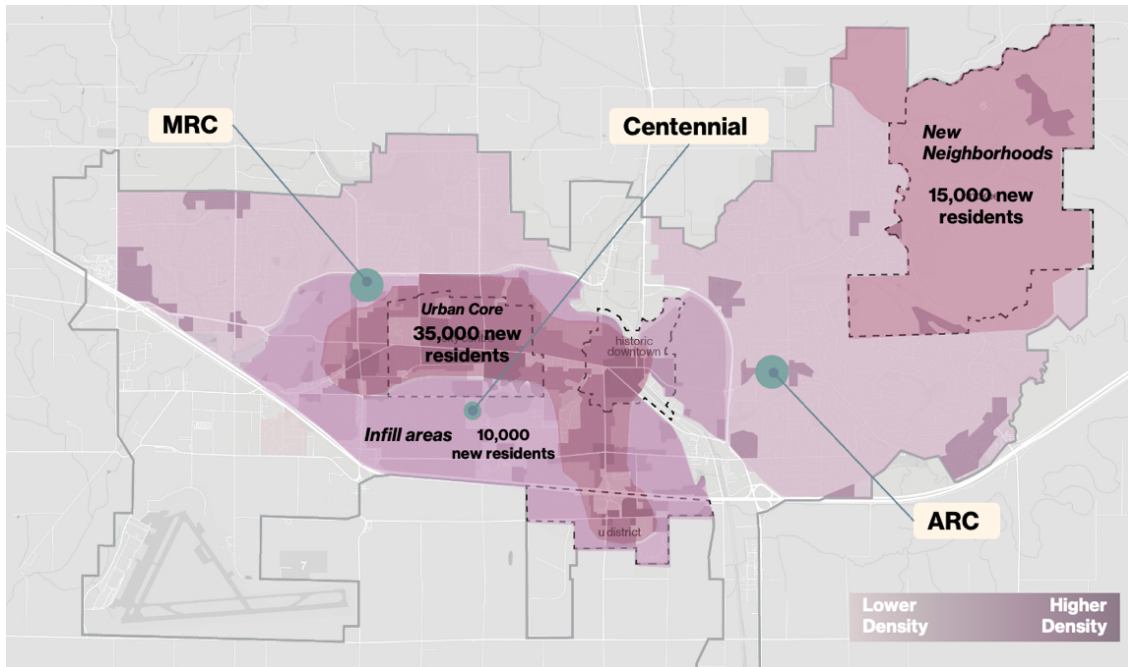
Figure 3. Current population density



According to the 2016 OCP Growth Plan, around 60% of the new residents (~35,000) will live in the Urban Core, 25% (~15,000) will reside in "New Neighborhoods," and the remaining 15% (~10,000) will live in infill areas, existing neighborhoods, and around neighborhood centres outside of the Urban Core. Between 2016 and 2021, census data showed significant growth in these areas: the City Centre grew by 13% (from 12,740 to 14,330); the Historic Downtown by 13% (from 7,555 to 8,555); McKee by 26% (from 2,890 to 3,640); and UDistrict by 12% (from 3,530 to 3,950).

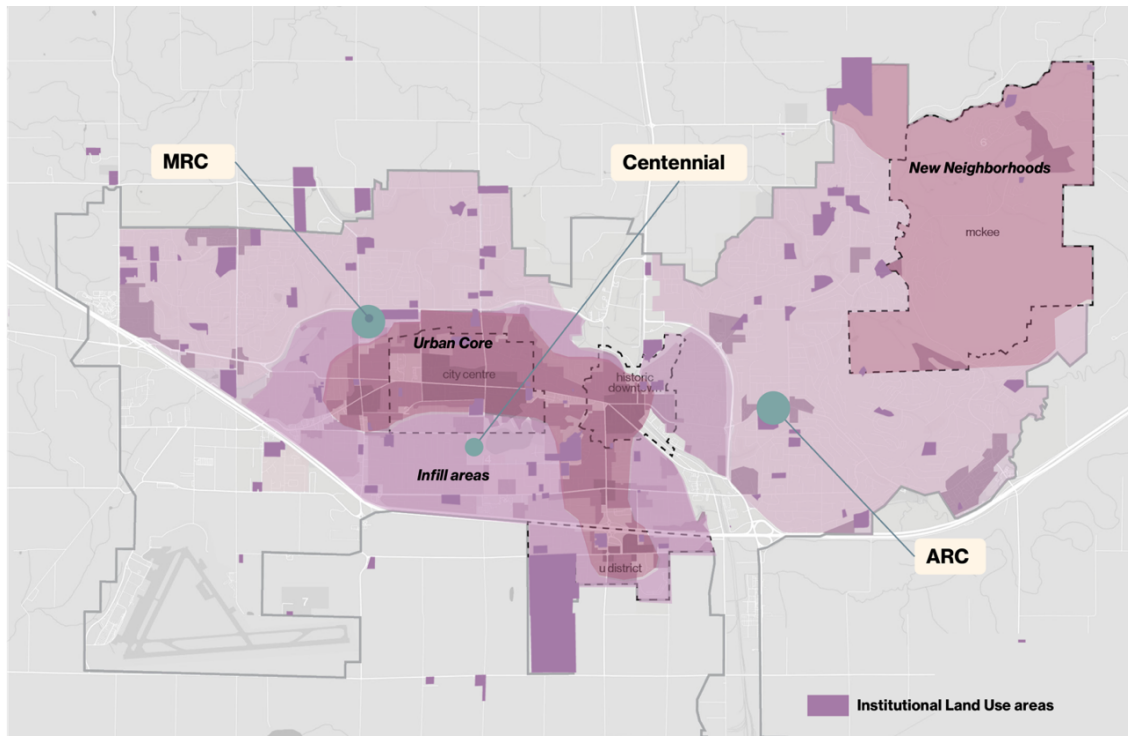
The **urban structure** of Abbotsford is one that includes an urban core surrounded by neighbourhoods and employment lands. Over the next 20-years, the urban core is projected to receive ~35,000 new residents, new neighbourhoods are projected to increase by ~15,000 new residents, and the existing neighbourhoods that grow by ~10,000 residents. The following figure presents the projected population density throughout the City.

Figure 4. Projected population density



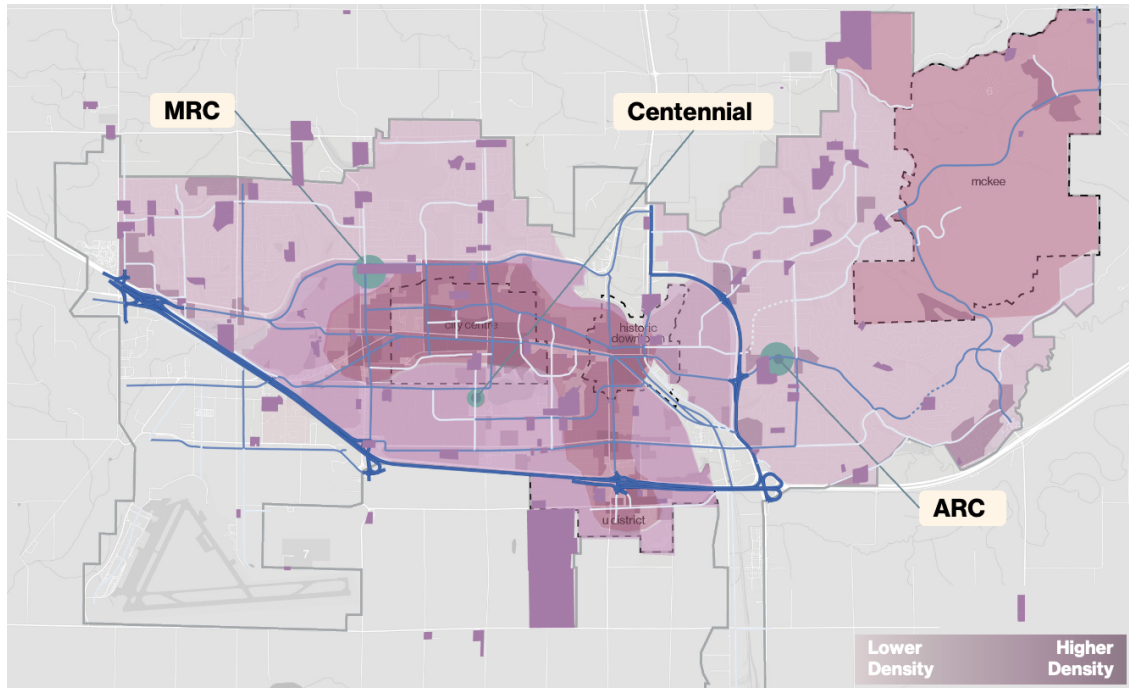
The Institutional land use designation has been evaluated in the context of areas with increased density. Identifying the location of city-owned land is key to prioritizing the use of existing resources, reducing the need to acquire additional land. This approach is illustrated in the following figure.

Figure 5. Institutional Land Use designation (as per the 2016 OCP)



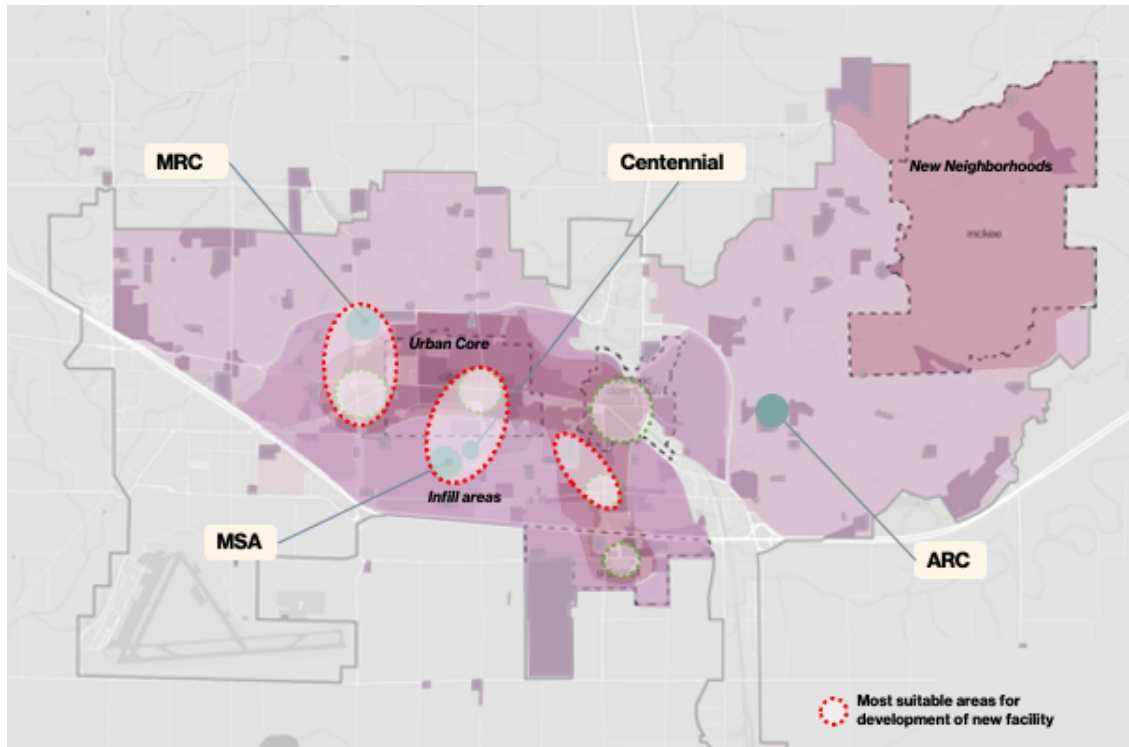
The last criteria that have been assessed includes the city's major road network, key intersections, and density nodes. This assessment provides insights into the areas where population density intersects with major transportation networks, facilitating the identification of strategic locations for essential amenities and civic infrastructure that will be accessible to the greatest number of community members. The following figure presents the future population densities with an overlay of major road networks.

Figure 6. Major road network over density areas



The analysis identifies three priority zones for new recreation infrastructure, selected based on population density, projected growth, the major road network, and the distribution of Institutional land use designations. As illustrated in Figure 8, these locations provide optimal opportunities for integrating aquatic facilities, aligning with Abbotsford's urban context, anticipated growth, and available institutional lands.

Figure 7. Most suitable areas for new facility



The three areas that are best suited for future aquatic facilities are located close to major urban centre, including the U-District, City Centre, and Historic Downtown. These areas are expected to provide easy access for a large number of residents and visitors. These areas were also highlighted in the Heat Vulnerability mapping exercise that was completed in Stage 1. The Heat Vulnerability mapping exercise identified Historic Downtown, Abbotsford Centre, Marshall-McCallum, and Clearbrook neighbourhoods as the most susceptible to extreme heat and suggested that these areas be prioritized for future civic facilities

The analysis also suggests that when considering Abbotsford's existing aquatic facilities, if the City chooses to pursue a system with one or two facility locations, that MRC should be given priority over ARC for future longevity as it is located within a more advantageous location. Although ARC increases accessibility for those living in Abbotsford's eastern neighborhoods, MRC will ultimately serve a greater number of community members. Further, the analysis identified MSA Arena Park (MSA), another recreation facility in the City of Abbotsford, as ideally located in the centre of the three identified priority areas, suggesting that this site could provide easy access to a significant number of residents. Therefore, co-locating aquatic facility services at the MSA site could provide a more comprehensive and convenient experience for community members seeking recreational activities.

## 4 STRATEGY PLANNING CONSIDERATIONS

The objective of Stage 2 in the development of the Aquatic Services & Facilities Strategy is to provide decision-makers with a preferred option to meet the projected future community demand. There are several planning considerations / factors that influence how the City of Abbotsford meets the community demand. This section identifies and explores the considerations / factors.

### 4.1 Level of Service

Level of Service refers to a set of criteria that define the quality and extent of services provided by a municipality or organization to its community. Specific to aquatics, the level of service criteria includes facilities, service delivery, programming, and governance. Each criterion is evaluated and assigned a ranking, either BASIC, ENHANCED, or ELITE, to signify the level of service provided. As noted in the Stage 1 Report, Abbotsford is delivering between BASIC and ENHANCED level of service to the community today.

The Level of Service can further be used to estimate the scale of aquatic facilities required to support the community. This is done through the planning metric of annual swims per capita. Swims per capita is a ratio that assesses the number of annual pool visits per the total population size. The following table translates Level of Service and expected swim per capita rates.

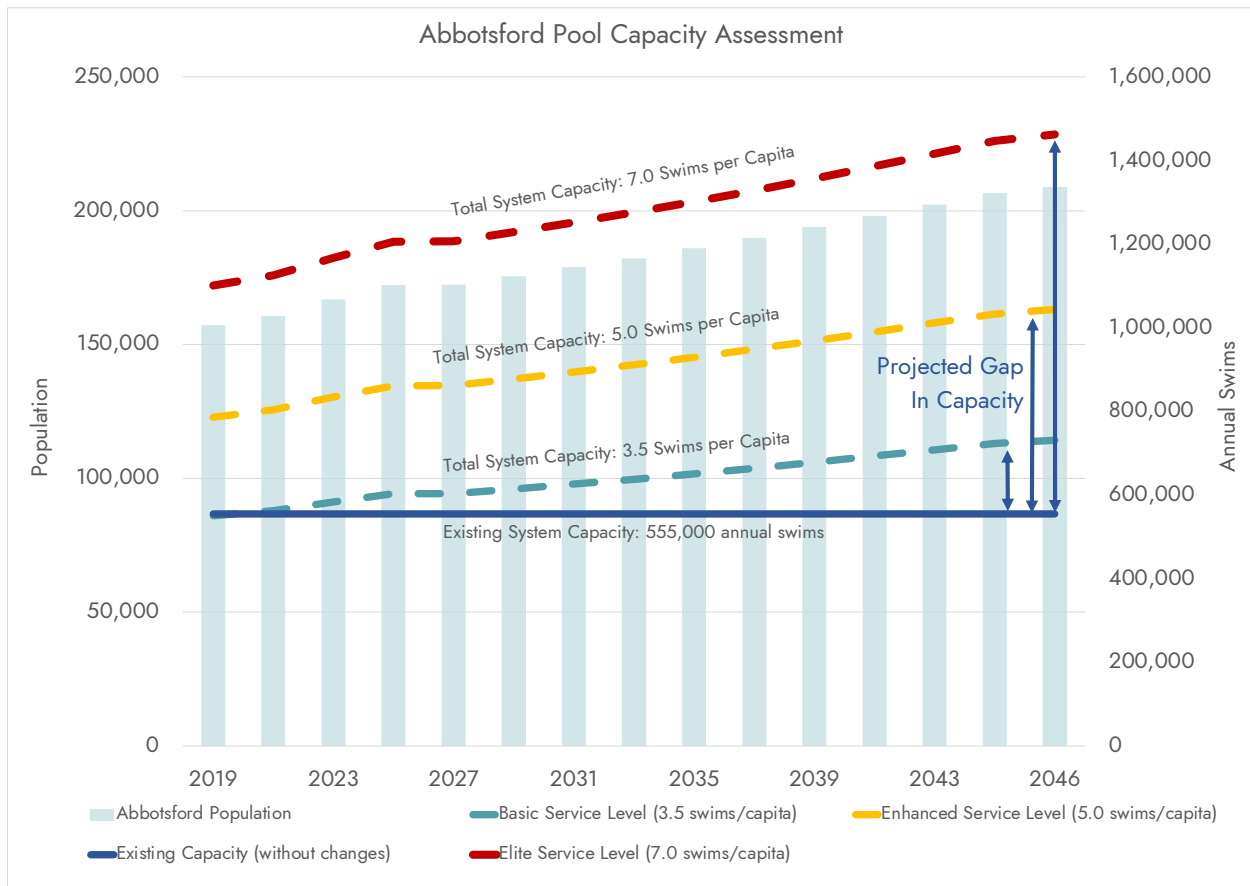
*Table 3. Level of Service by Expected Annual Swims per Capita*

Level of Service	Expected Annual Swims / Capita
Basic	3.5 swims/capita
Enhanced	5.0 swims/capita
Elite	7.0 swims/capita

Using historic visitation and population numbers, the Stage 1 report noted that Abbotsford had a rate of ~3.5 annual swims/capita. This means that each person in Abbotsford visited the pool ~3.5 times per year, indicating a BASIC level of service.

To guide the infrastructure requirement option assessment, it is assumed that the City will continue to provide the community with a BASIC to ENHANCED level of aquatic service. The following figure presents the projected requirements to maintain a BASIC, ENHANCED or ELITE level of service.

Figure 8. Abbotsford pool capacity assessment



As shown, by year 2045 the City will require enough aquatic infrastructure which can support at least ~710,000 annual swims to maintain a service target of 3.5 swims per capita. This represents a ~28% increase over current infrastructure capabilities, which can support ~555,000 annual swims.

## 4.2 Infrastructure Age and Condition

The aquatic facilities within Abbotsford are reaching the end of their designed service life, making age of infrastructure a key consideration in identifying future community needs. In addition to their age, the condition of some facility components is deteriorating, leading to increased maintenance needs and reduced operational reliability. To manage these challenges, the proposed strategy needs to identify when each facility should be replaced, based on both age and condition of the facilities as well as factoring in an appropriate amount of time for design and construction activities. The following table presents the approximate timeline in which each existing facility should be replaced, unless additional investments are made in renewals which would extend the lifespan.

Table 4 – Facility/Infrastructure renewal timeline

Facility / Asset	Year of Construction (and major renovations)	Facility / Asset Condition*	Approx. Year of Renewal/Replacement
Abbotsford Recreation Centre Pool	1972, renovation in mid 1990's	Fair to Poor	2042
Matsqui Recreation Centre Pool	1991	Poor to Critical	2037
Centennial Outdoor Pool	1958, renovations in 1996, 2008, & 2022	Poor to Critical	2032

\*Assessed by VFA, Building Condition Assessments, 2020

Given the proposed timeline for the renewal or replacement of existing facilities and assets, it is important that the City continues to invest in ongoing maintenance and targeted building system upgrades to ensure each asset remains safe, functional, and operational until its planned end of service.

Given the age of Centennial Outdoor Pool, this strategy recommends a detailed assessment to determine the scope of work required for its renewal and upgrade. Although Centennial Outdoor Pool remains part of the City's aquatic services, its practical capacity is limited to ~30,000 swims per year—representing ~5% of the overall system capacity. As a result, it is not included in the system capacity figures presented in Section 4.1 (Level of Service). Once the condition assessment is complete and the costs of continuing service through 2043 are understood, appropriate decision points should be established to ensure resources are effectively allocated to support the City's desired level and form of aquatic service.

### 4.3 Facility Size/Scale

There are several possible methods to meet community aquatic needs via the size/scale of infrastructure. The size/scale of aquatic facilities is most commonly categorized into the following pool types:

**Neighbourhood Pool:** Pools commonly with a 25m six-lane tank providing basic aquatic services for a local area, with capacity for ~200,000 swims per year.

*Example: Britannia Pool, City of Vancouver*

*Figure 9. City of Vancouver Britannia Pool (Vancouver, BC). Source: Vancouver Board of Parks and Recreation*



**Community Pool:** A multi-tank pool with more specialized aquatic amenities and services, serving one-quarter to one-half of the City, with capacity for ~400,000 swims per year.

*Example: Poirier Sport & Leisure Complex*

Figure 10. Poirier Sport & Leisure Complex (Coquitlam, BC). Source: HCMA Architecture



**Destination Pool:** Comprehensive multi-tank pools commonly with significant leisure focused amenities serving a large portion of a Municipality, centrally located and easily accessible from all parts of the catchment area, with a capacity of ~750,000 swims per year.

*Example: Minoru Centre for Active Living*

*Figure 11. Minoru Centre for Active Living (Richmond, BC). Source: HCMA Architecture*



**Training Pool:** Pools typically with a 50m tank which specifically target endurance and competitive training, athlete development and sport hosting events, with a capacity of ~275,000 swims per year.

*Example: Walnut Grove Aquatic Facility (Langley, BC)*

Figure 12. Walnut Grove Aquatic Facility (Langley, BC) - indoor pool with outdoor elements. Source: HCMA Architecture



Specific to the possible inclusion of a 50m pool within the City's aquatic infrastructure system, there are some notable benefits and challenges.

**Benefits:**

- A training 50m pool would enable the City to host local and regional swim competitions, positioning Abbotsford as a regional hub for aquatic sport. It would also support athlete development and endurance training by providing a dedicated space for fitness and competitive swimming.
- By relocating club and fitness activities to a training 50m pool, the City could free up valuable time at ARC and MRC, allowing more space for swim lessons, recreational swimming, and community programming. The inclusion of moveable bulkheads would further enhance flexibility, allowing the pool to be divided for different uses or creating warm-up and competition spaces during events.
- There is also potential for healthcare partnerships, as the pool could be used for rehabilitation and therapeutic programming due to the benefits of water-based exercise.
- A training 50m pool would increase opportunities to host short-course (25m) competitions, which make up approximately 60 to 70% of sanctioned meets each year. This would meet regional demand for swim meets and enhance sport development.

### Considerations:

- High demand for prime-time access by fitness and competitive swimmers may limit availability for other users. The pool's minimum depth (1.25m) would restrict its suitability for beginner swim lessons, reducing instructional flexibility. Its lower water temperature, ideal for training and competition, may not meet the preferences of leisure swimmers seeking warmer water.
- Current community demand for activities that could take place within a training 50m pool accounts for ~78,200 swims per year. This demand falls well below the planned capacity of ~275,000 swims, suggesting it may take time to fully utilize the facility.
- Rental costs may be higher compared to current 25m pools.
- Although the pool could host regional competitions, higher-level meets (e.g., provincial or national) typically require additional features such as a warm-up tank and considerable spectator seating (~750–1,000 seats) which would significantly increase capital costs.
- A training 50m training pool would also lack diving amenities, limiting the range of aquatic programming.
- Moving swim club activities exclusively to the 50m pool under a decentralized model introduces operational challenges and may miss out on cost savings that centralized facilities typically achieve.
- As a training- and competition-focused facility, it will offer very limited leisure use and lack the playful amenities that are increasingly sought after by community members looking for casual recreation opportunities.

The inclusion of a 50m pool offers significant opportunities to enhance competitive sport, athlete development, and regional hosting capacity, while also supporting broader community access by relieving pressure on other facilities. However, it also brings notable challenges related to cost, operational complexity, programming limitations, and the time required to build community demand. Careful consideration of these trade-offs will be essential to ensure the long-term sustainability and success of the aquatic system.

## 4.4 Number of Facilities

Understanding that the City is seeking a system of aquatic infrastructure which can support at least 710,000 annual swims to maintain their current level of service, this could be realized via one destination pool, or a combination of neighbourhood and/or community and/or training pools. The choice for one configuration or another should be guided by the following factors:

**Community Access** The number of aquatic facilities within a community will directly impact the accessibility of the community. A community with more facility locations has the ability to provide more convenient access for the public to access aquatics, assuming the size/scale and physical locations are appropriately selected.

**Types of Water** The types of pool tanks within an aquatic facility will inform how the facility is used and who uses the facility. On opposite ends of the spectrum, types of water can be described as:

- Warm, shallow pool tanks: Primarily support leisure and general community programming. This type of pool tank will accommodate ~3x more visitors/m<sup>2</sup> of water when compared to cold, deeper pool tanks.
- Cold, deeper pool tanks: Primarily support endurance and competitive training, athlete development and sport hosting events. This type of pool tank will accommodate ~3x less visitors/m<sup>2</sup> of water when compared to warm, shallow pool tanks.

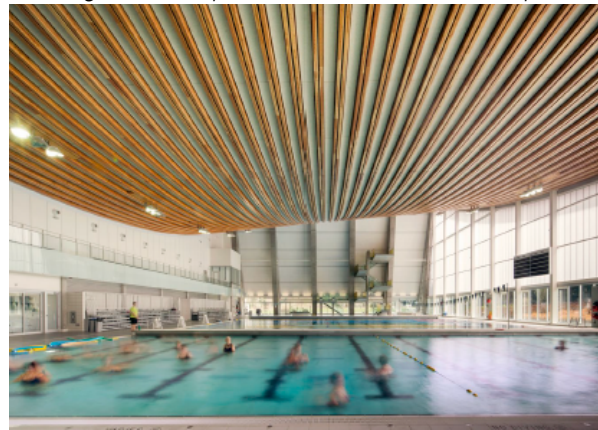
Stage 1 reporting indicated that the City of Abbotsford has strong existing and future demand for leisure, fitness and training aquatic use. The system of aquatic infrastructure will need to balance the needs for both warm, shallow and cold, deep pool tanks.

â

*Leisure Focused Pool Example*



*Training and Competition Focused Pool Example*



### Pool Amenities

The number and variety of pool amenities will vary dependant on the size and scale and desired use patterns of an aquatic facility. Destination scale pools typically offer more amenities. They may include hot pools, saunas, steam rooms, slides, climbing features, diving features, wave pools, lazy rivers etc. Smaller scale facilities more commonly include single pool tanks and few basic amenities. Community demand for the provision of aquatic amenities above and beyond base pool tanks was clearly articulated through the Stage 1 public engagement process and therefore the system of aquatic infrastructure should consider enhanced pool amenities.

â

### Operational Costs

A system with fewer facilities will typically be less expensive to operate in terms of operational costs (labour, utilities, supplies, etc.). In the extreme example, it is well documented that a large facility will have substantially lower operational costs when compared to a system which includes multiple smaller facilities which still provide the same overall level of service (annual swims/capita).

â

Additionally, indoor pools that have a shallow water depth are typically more cost-effective compared to those that have deeper water as the cost of building an

indoor pool depends more on its volume, rather than its floor area, unlike most other buildings. This is because deeper water requires a larger volume of air above the water, which can be costly to maintain.

â

**Capital**

**Development Costs**

A system with fewer, larger facilities will be more cost effective in terms of overall capital development costs due to the design and construction efficiencies that can be realized within large developments. The downside to larger developments is the increased need for capital. â

â

Developing an indoor pool with deep water and high ceilings requires large mechanical systems such as water treatment systems, which vary with the volume of water, and HVAC systems that can handle highly humid, chemical-laden air. Two pools with the same floor area can have significantly different construction costs if one has more deep water and higher ceilings than the other.

â

Lastly, the procurement of land suitable to support an aquatic facility is considerable when factoring in the amount of space required for the facility and parking. This strategy will prioritize utilizing existing City owned parcels of land over procuring additional land. â

## 4.5 Summary

The City of Abbotsford has several options for aquatic infrastructure amenities that maintain or exceed the current level of service over time. Understanding that the existing assets can support ~555,000 annual swims (if maintained and remain functional) and the 20-year projections require at least ~710,000 annual swims to maintain the current service level, there is a need to build system capacity. Given the age and condition of the existing assets, the City must consider the renewal/replacement as well as how to accommodate the increased capacity. The following section explores the accommodation options which have been considered.

## 5 PROPOSED AQUATIC FACILITY STRATEGY

This section of the report will:

- Identify the aquatic facility options which have been assessed
- Introduce and describe the preferred/proposed aquatic facility strategy
- Present site test fits for each aquatic infrastructure development project
- Identify a phased timeline for infrastructure upgrades and new development
- Identify the strengths and challenges of the strategy

### 5.1 Options Assessed

Utilizing the planning considerations and assumptions identified within Section 4, the following aquatic infrastructure accommodation options were identified and assessed.

NOTE: The options presented consider the needs of aquatic activities within the community only. Aquatic infrastructure is most commonly provided alongside other amenities including arenas, fitness, multipurpose space etc. due to the considerable capital and operational cost efficiencies associated with co-location.

Table 5. Accommodation options explored

Accommodation Option Explored	Annual Swim Capacity (Approximate)	Total System Capacity
1 x Destination Pool	750,000	750,000
1 x Community Pool 1 x Neighbourhood Pool	500,000 250,000	750,000
1 x Training 50m Pool 1 x Community Pool 1 x Neighbourhood Pool	275,000 350,000 200,000	825,000
1 x Training 50m Pool 2 x Community Pools	275,000 350,000 (2)	975,000

Each of the explored accommodation options satisfy the system requirements and meet the 20-year demand projections. Through analysis, it was determined that the preferred system must:

- Prioritize community access → multiple facilities, strategically located is preferred over a single, central facility.
- Prioritize the inclusion of a training 50m pool within the system of aquatic infrastructure.
- Prioritize the renewal/replacement of ARC and MRC, in their current locations.
- Prioritize the development of the MSA site to build system capacity.
- Prioritize a strategy which is delivers increased capacity to meet the expected growth in population.

Utilizing these priorities, the preferred accommodation option for the City of Abbotsford includes the development of three new/renewed aquatic facilities:

- 1 x training 50m pool with a focus on endurance and competitive training, athlete development and local and regional sport hosting events.
- 1 x Community pool with a focus on leisure activities.
- 1 x Community or Neighbourhood pool with a focus on leisure activities.

Specific details on the proposed aquatic facility strategy is presented in the following section.

## 5.2 Strategy Introduction

The proposed aquatic facility strategy provides a level of service which is similar to current state through a decentralized three-pool system, consisting of a new facility at MSA and the replacement of both ARC and MRC aquatic facilities, over a 20-year time frame. This strategy supports a mix of aquatic facility types—supporting endurance and competitive training, athlete development and sport hosting events as well as leisure activities. The strategy includes the following 6 key actions:

### Action 1: Existing aquatic system upgrades

The City's aquatic infrastructure requires capital maintenance to ensure these facilities remain safe and functional until they are ready for replacement. As the critical first step in this strategy, the City will assess the necessary level of intervention for each facility—MRC, ARC, and Centennial—and address any components that have reached the end of their useful life or require replacement to maintain uninterrupted operations. â

### Action 2: Development of a new pool at MSA Site

The MSA site will support a new training pool consisting of a training 50m tank and some support space (changerooms, washrooms, and administration space). This pool is likely to feature moveable bulkheads, starting blocks, limited spectator seating and pool support spaces. â

â

This pool will support endurance and competitive training, athlete development and local and regional sport event hosting. With this new development, there are potential opportunities to incorporate outdoor-style elements such a retractable roof, garage-style retractable doors leading to an outdoor area, large windows or skylights, natural materials and indoor landscaping, interesting water features and outdoor furniture styles.â

â

### Action 3: Development of a new Community Pool at MRC.

The redevelopment of the aquatic facility at the MRC site would involve replacing the existing community pool with a modernized facility of similar scale. The pool would likely feature a combination of the following:â

- A tank that supports personal fitness and leisure activitiesâ
- a minimum of one warmer, shallower pool with gradual entry;â

- and additional leisure amenities such as a hot tub, sauna, steam room, lazy river, slides and other interactive aquatic features. â

This type of facility supports a range of activities, including leisure swimming, personal fitness, swim lessons, and community programming. â

**Action 4:  
Decommissioning of  
existing MRC Pool**

The existing MRC pool would be decommissioned once the new community pool is operational, allowing for a seamless transition of services and programs.â

**Action 5: Development  
of a new  
Neighbourhood (or  
Community) Pool at  
ARC**

The redevelopment of the aquatic facility at ARC would involve replacing the existing aquatic facility with a neighbourhood (or community) scale pool which is likely to include multiple tanks with more specialized aquatic amenities and services. The pool would likely feature a combination of the following:â

- A tank that supports personal fitness and leisure activities â
- a minimum of one warmer, shallower pool with gradual entry;â
- and additional leisure amenities such as a hot tub, sauna, steam room, lazy river, slides and other interactive aquatic features. â

This type of facility supports a range of activities, including leisure swimming, personal fitness, swim lessons, and community programming. â

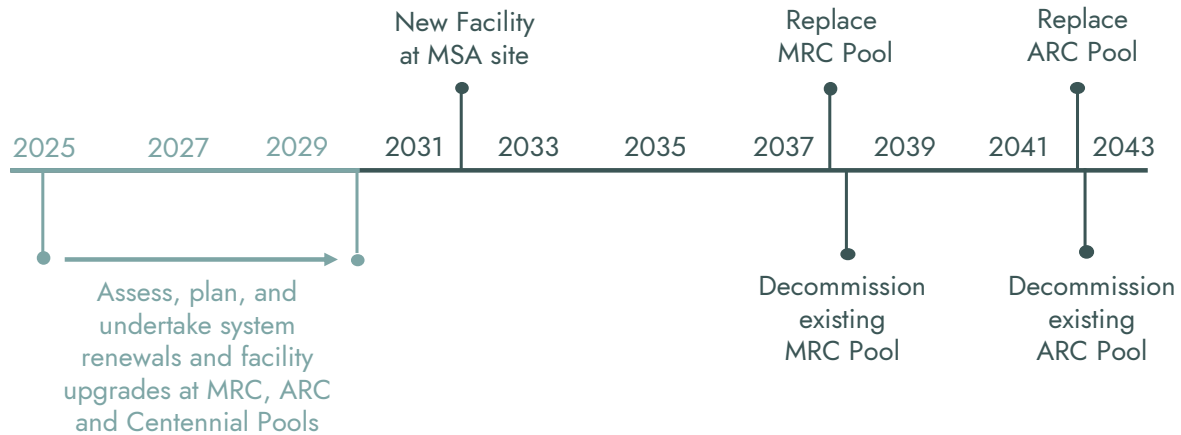
The determination to develop a neighbourhood scale or community scale pool should be assessed closer to development date. Should the population grow faster than BC Statistic estimates, the City would require additional system capacity and therefore be better served by a larger, more capable aquatic facility. â

**Action 6:  
Decommissioning of  
the existing ARC Pool.**

The existing ARC pool would be decommissioned once the new facility is complete, ensuring continuity of services and minimizing disruption to users. The decommissioned space could be utilized to support other community social and recreation demands. â

These actions and their associated project timing can be visualized on the following timeline. A phased implementation approach is proposed to guide the decommissioning, demolition, and construction of new facilities, ensuring continuous service delivery throughout the transition.

Figure 13. Aquatic Facility Strategy - Proposed Timeline



The following figure illustrates the proposed strategy over time and in relation to the system’s capacity and City population.

Figure 14. Proposed Strategy - Pool Capacity Assessment with Neighbourhood Pool at ARC

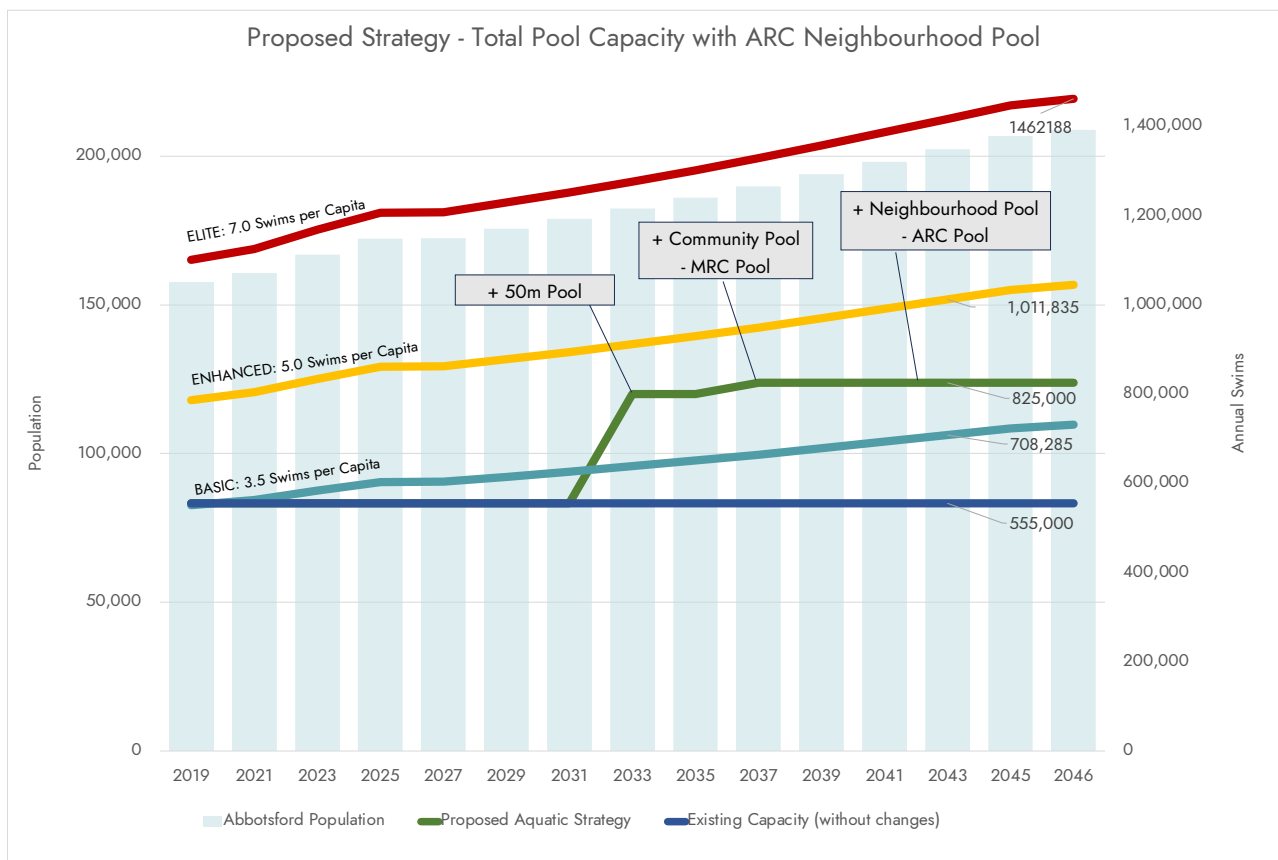
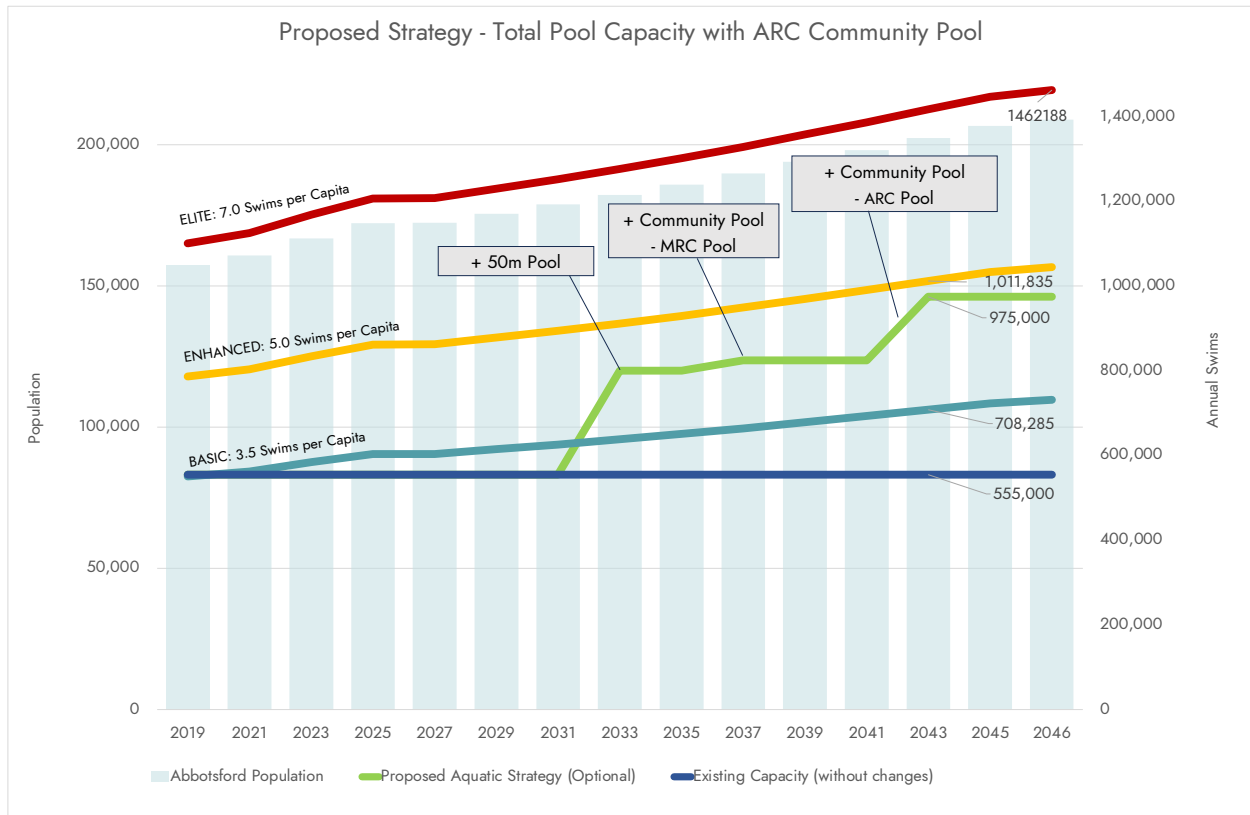


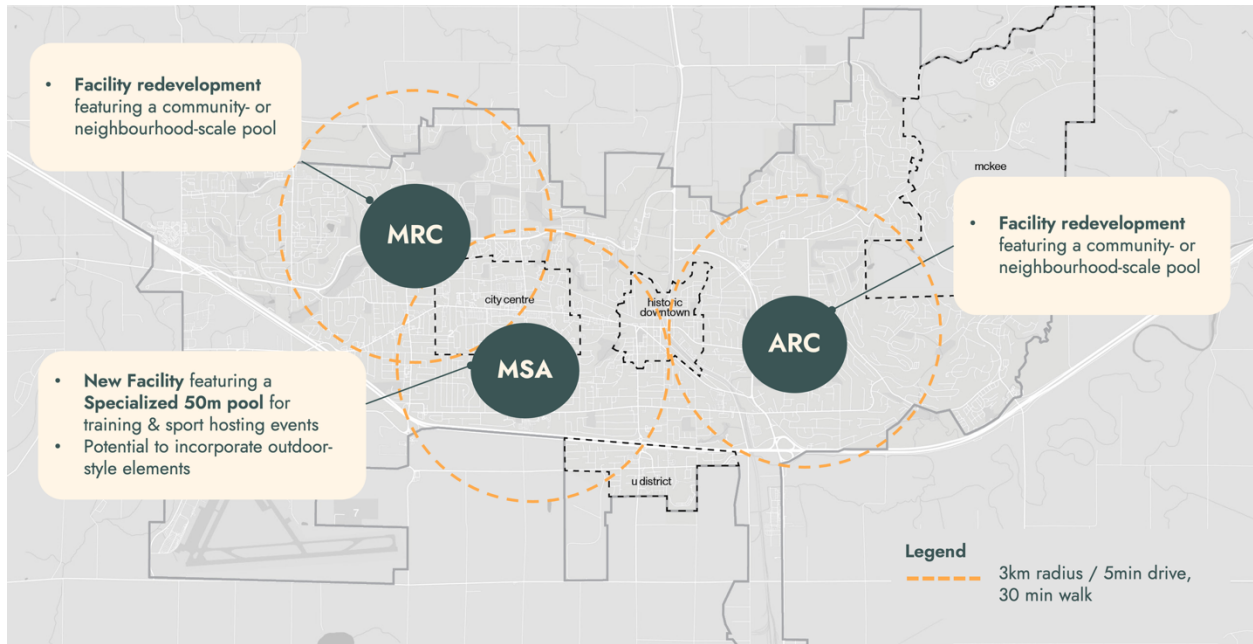
Figure 15. Proposed Strategy – Pool Capacity Assessment with Community Pool at ARC



As shown, the level of service slowly decreases until 2032, until the first major development, the training pool (50m tank) at MSA is completed. Past 2032, the City maintains the intended level of service over the remainder of the planning horizon. By 2045, the community of Abbotsford has access to three aquatic facilities year-round with capabilities of supporting ~825,000 annual swims. Should the city's population grow faster than what is projected by BC Statistics (as they have historically done), the third major project, the development of a new pool at ARC could be transitioned to a Community Pool instead of a Neighbourhood Pool. Under this scenario the system of aquatic facilities in 2045 could support ~975,000 annual swims.

The City has the option to pursue the development of ARC before MRC depending on the City's priorities. Due to the closer proximity of MSA and MRC compared to ARC, advancing the development of ARC before MRC could increase equity in access across Abbotsford. A three-pool system allows for quick access from all of the projected development growth areas of the community. The following figure presents the geographical location of each proposed aquatic facility as well as an approx. 3km radius.

Figure 16. Proposed Aquatic Facility Strategy - Facility Locations



### 5.3 Site Test Fits

A series of site test fits were completed for the proposed aquatic strategy to confirm that aquatic facilities and surface parking could be accommodated on the MSA, MRC, and ARC sites. These test fits illustrate preliminary site configurations for the aquatic facilities and support spaces and should only be utilized to understand the scale of the proposed developments. The integration of additional recreational or community amenities, as well as potential co-location with other uses or development opportunities, will be explored in subsequent phases of the planning process.

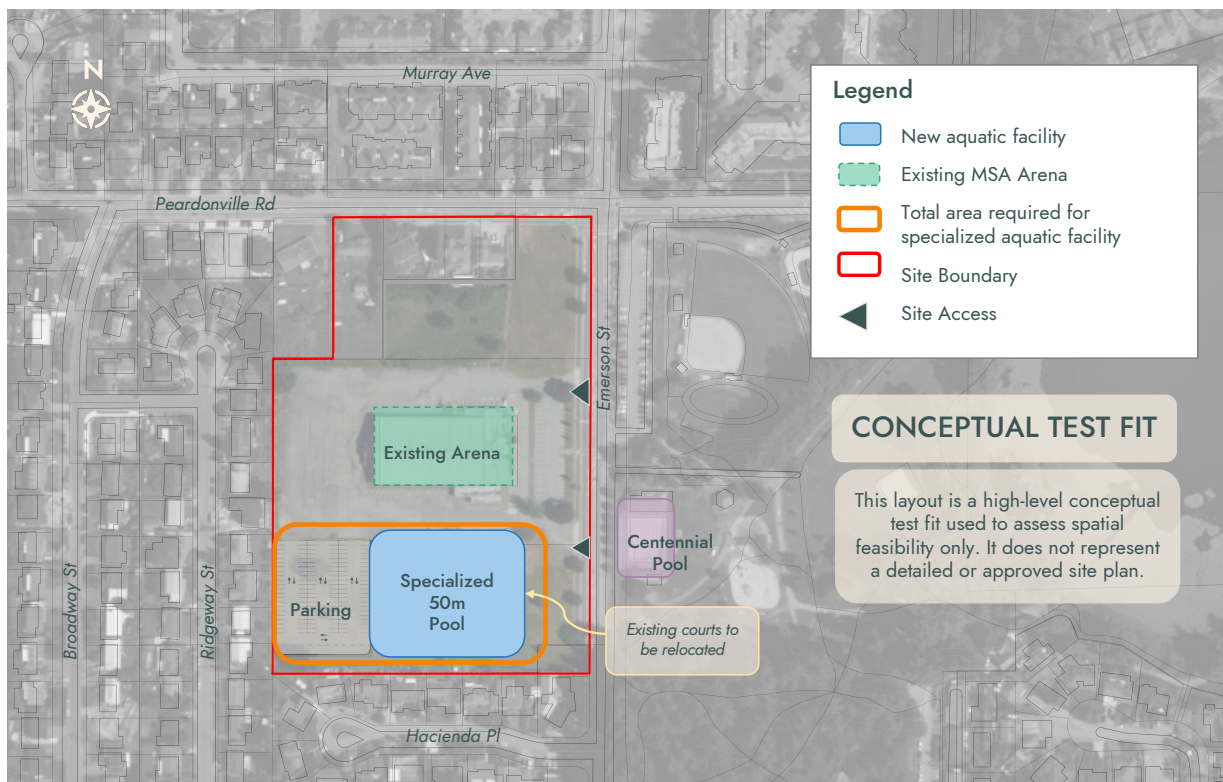
#### MSA Site – Training 50m Pool Development

The MSA site is adequately sized to accommodate the development of a training 50m pool facility and the necessary surface parking. The facility could be developed on the southern portion of the site, the current location of the outdoor tennis courts. It is assumed that the tennis courts would be relocated to a nearby location. The following key metrics were utilized to inform the site test fit.

- Aquatic facility building gross area: ~4,500 BGm<sup>2</sup>
- Visitor and staff parking requirements, excluding overflow: 100 stalls, ~3,500 m<sup>2</sup>
- Site circulation and landscaping allowance: ~1,200 m<sup>2</sup>
- Total site area requirements: 9,200 m<sup>2</sup> (2.27 acres)

The following figure provides one example of how the new aquatic facility could be situated on the MSA site.

Figure 17. MSA Site – New Aquatic Facility Test Fit



The test fit was calculated without including fitness or other community centre spaces. The site provides ample room to incorporate additional community recreational amenities; however, this would involve additional costs.

### **MRC Site – Community Pool Development**

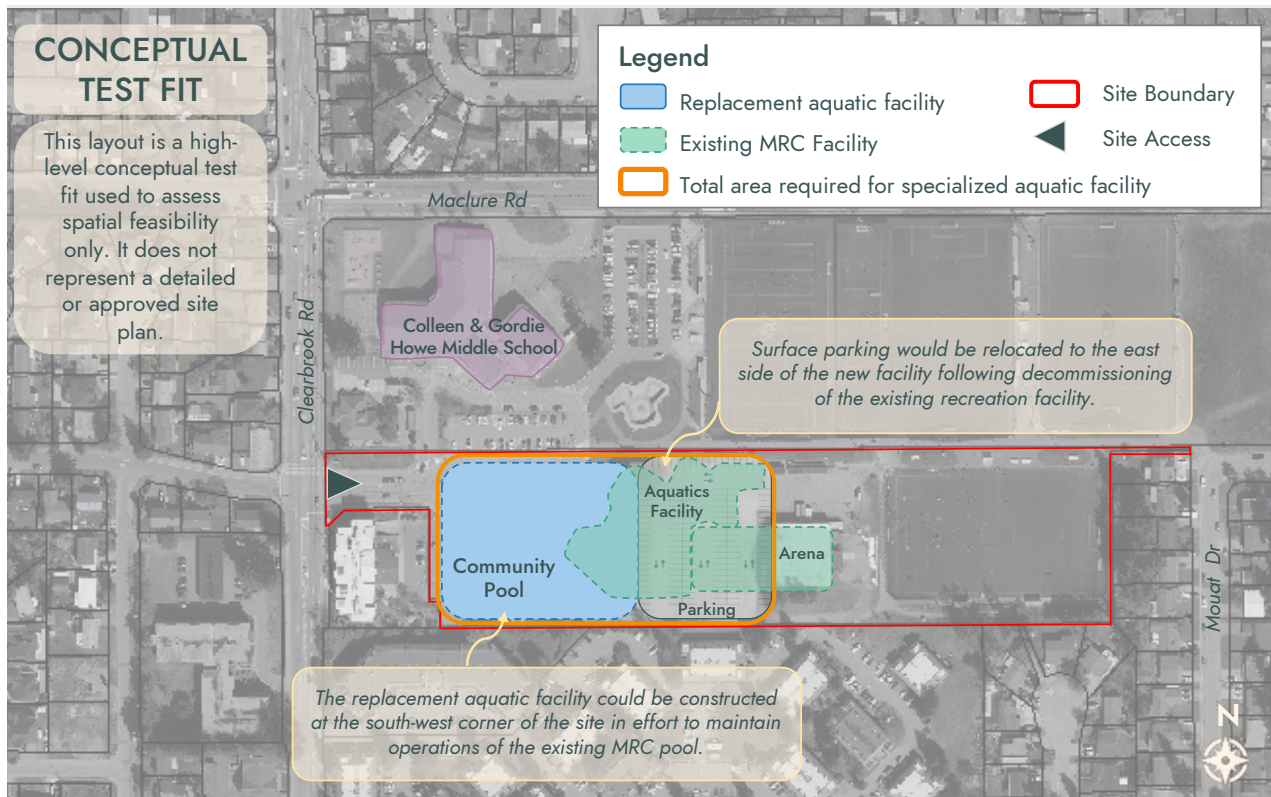
The MRC site features the existing community centre (aquatics, arena, and multi-use recreation), surface parking and a community field. The community field has seen recent investment and therefore it is not justifiable to utilize that portion of the site for a new aquatic facility or surface parking. The remainder of the site is highly constrained, requiring the new pool to be located within the same location as the current surface parking lot (or recreation facility). Should there be an opportunity to develop a new community pool at the location of the current arena, this would allow for a more seamless transition.

The following key metrics were utilized to inform the site test fit.

- Aquatic facility building gross area: ~7,500 BGm<sup>2</sup>
- Visitor and staff parking requirements, excluding overflow: ~170 stalls, ~5,950 m<sup>2</sup>
- Site circulation and landscaping allowance: ~2,000 m<sup>2</sup>
- Total site area requirements: 15,500 m<sup>2</sup> (3.83 acres)

The figure below provides one example of how a replacement community-scale aquatic facility could be configured on the existing MRC site. In this scenario, the new facility would be constructed in the southwest corner of the site, currently occupied by a surface parking lot. While this approach would create significant challenges related to parking and site access, it would allow the existing aquatic facility and arena to remain operational during construction. However, completing the new facility would ultimately require the decommissioning and demolition of the existing aquatic facility to fully accommodate the new footprint.

Figure 18. MRC Site – New Aquatic Facility Test Fit



### ARC Site – Neighbourhood (or Community) Pool Development

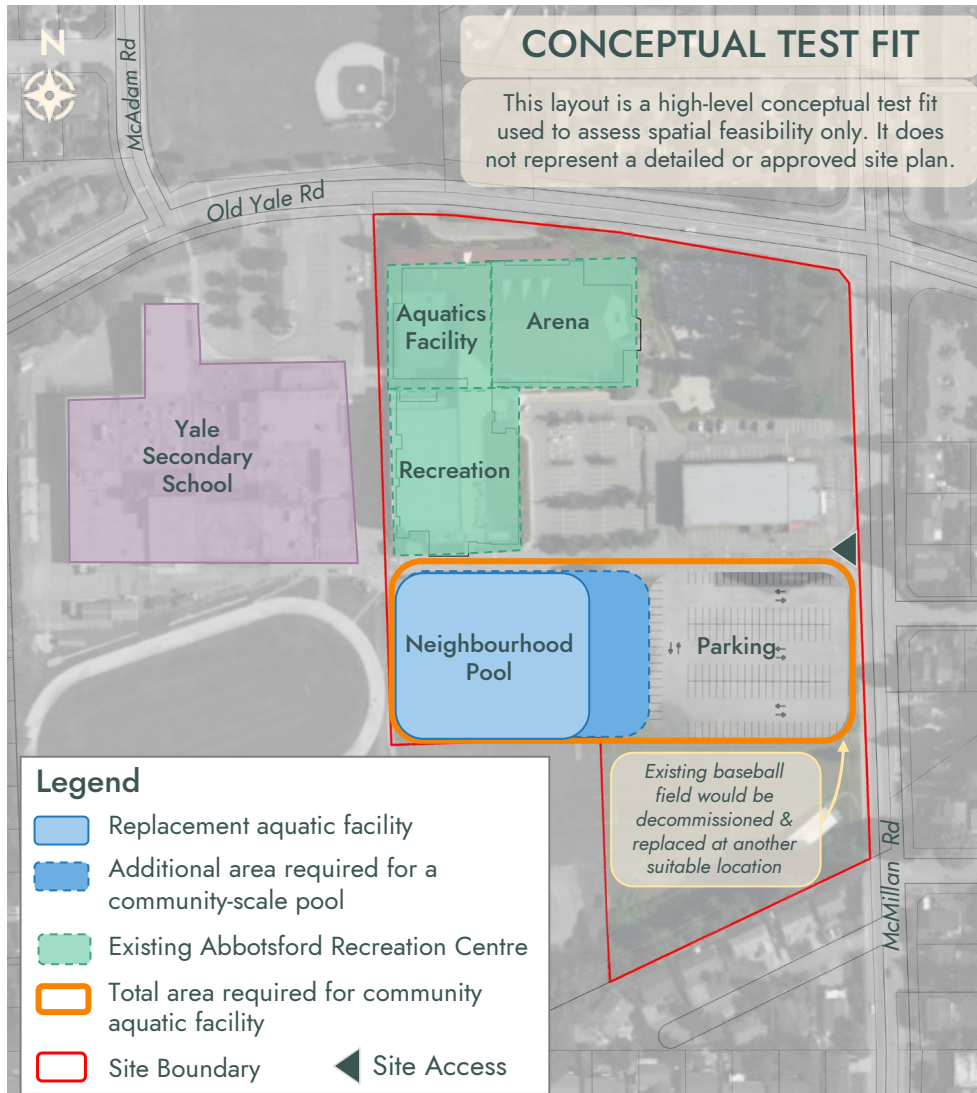
Figure 16 provides one example of how a replacement neighbourhood (and community) scale aquatic facility could be configured on the existing ARC site. Note, the new facility is shown to be situated where there is an existing baseball field which would need to be decommissioned and relocated to accommodate the new aquatic facility. The following key metrics were utilized to inform the site test fit.

- Aquatic facility building gross area: Neighbourhood Pool ~6,000 BGm<sup>2</sup>, Community Pool ~7,500 BGm<sup>2</sup>
- Visitor and staff parking requirements, excluding overflow: Neighbourhood Pool ~130 stalls (~4,725 m<sup>2</sup>), Community Pool ~170 stalls (~5,950 m<sup>2</sup>)
- Site circulation and landscaping allowance: Neighbourhood Pool ~1,600 m<sup>2</sup>, Community Pool ~2,000 m<sup>2</sup>
- Total site area requirements: Neighbourhood Pool ~12,350 m<sup>2</sup> (3.05 acres), Community Pool ~15,500 m<sup>2</sup> (3.83 acres)

As shown in the figure below, the facility would be located on the site of the existing baseball field, requiring its decommissioning and relocation at another suitable location in the parks system, to accommodate the new aquatic facility and associated parking. This scenario would also necessitate a reconfiguration of site access, as it would impact the through-road connecting McMillan Road to Yale Secondary School.

Additionally, following the decommissioning of the pool, there may be an opportunity to repurpose that space to provide additional programming areas for the community.

Figure 19. ARC Site - Replacement Aquatic Facility Test Fit



## 5.4 Strategy Strengths & Considerations

The proposed aquatic strategy represents a comprehensive approach to meeting the community’s current and future aquatic needs. By prioritizing access, flexibility, and sustainability, the strategy seeks to enhance service delivery across multiple sites while aligning with population growth, facility demands, and financial considerations. This approach offers several key strengths—including equitable geographic access, adaptability to evolving community needs, and the integration of a training 50m pool as a regional asset—while also acknowledging the operational and financial challenges associated with a decentralized, multi-site

model and aging infrastructure. The following outlines the primary strengths and challenges of the proposed strategy.

**Strengths of the proposed strategy include:**

- The decentralized model ensures that all areas of Abbotsford have convenient access to aquatic services and facilities.
- This strategy meets or exceeds the service level target of 3.5 swims per capita over the planning horizon of 20 years or until 2045.
- Incorporating a training 50m pool alleviates pressure on other facilities by accommodating the majority of fitness activities, competitive training and swim club use, freeing up space at MRC and ARC for additional lessons and leisure programming in the short and long term.
- A training 50m pool facility can support aquatic local and regional sport training and competition events, serving both the local community and acting as a regional asset.
- Given the significant investment associated with capital projects such as aquatic facilities, this option has considered the relative cost differences between facility types—such as community, neighbourhood, and training 50m pools.
- The two pool scale scenarios for the ARC replacement facility allows for flexibility and can adapt to changing needs related to population growth and community demand.
- Retaining the existing sites as recreation amenities supports continuity in service delivery and community familiarity.

**Key considerations associated with the proposed strategy include:**

- A three-pool system does not benefit from the economies of scale achieved by operating a single (or double), centralized facility. Centralized operations typically lower per-unit costs for services, utilities, and maintenance. Savings are realized through bulk purchasing, shared amenities, and coordinated scheduling, all of which contribute to greater overall operational efficiency.
- There is considerable cost and service risks associated with expanding the lifespan of the existing infrastructure. Complexities and constraints with existing infrastructure may pose barriers to adequately upgrading existing systems. For example, it is known that the heating infrastructure of ARC Pool is encased in concrete beneath the pool – upgrading/maintaining this infrastructure is costly and impactful to service.

## 6 CONCLUSION

This report, representing Stage 2 of the five-stage planning process, has built on the comprehensive background research and analysis from Stage 1 to present a well-founded and forward-looking strategy for meeting the community's aquatic needs through 2045.

Through a detailed assessment of existing facility conditions, service utilization, demographic and growth trends, evolving community preferences, and infrastructure planning considerations, the report confirms the urgent need to invest in the renewal and expansion of Abbotsford's aquatic infrastructure. The current system is operating at or beyond capacity and is reliant on aging facilities that will soon reach the end of their useful life. In response, the proposed strategy presents a three-facility solution that includes:

- a new training 50m aquatic facility at the MSA site,
- a new community-scale pool at MRC, and
- a neighbourhood or community-scale replacement pool at ARC.

This approach is designed to ensure equitable geographic access, maintain or exceed the current service level target of 3.5 swims per capita, and introduce flexible infrastructure that can be adapted over time in response to changing population projections and community preferences. While recognizing the operational and financial challenges of a decentralized model, the strategy emphasizes long-term service continuity, and the creation of a regional aquatic asset capable of supporting both community and competitive programming.

As the City moves into Stage 3 — the development of the Draft Strategy — the insights, findings, and preferred approach outlined in this report will form the foundation for further community engagement and refinement.