



Report Date: March 21, 2025

VanRIMS No.: 08-3000-30

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TO: Park Board Chair and Commissioners
FROM: Director, Recreation Services
SUBJECT: Vancouver Aquatic Centre Renewal - Report Back - 50m Training Pool Option Analysis

RECOMMENDATIONS

- A. THAT the Vancouver Park Board direct staff to proceed with the February 24, 2025 recommended program, as presented in the report titled, [Vancouver Aquatic Centre Renewal – Recommended Program](#); and
- B. FURTHER THAT the Vancouver Park Board approve a Capital Plan reallocation of \$7,600,000 from the West End Waterfront Parks Phase 1 Implementation Project.

Should the Vancouver Park Board not approve the recommendation above, the following alternate direction may be considered.

THAT the Vancouver Park Board direct staff to place the Vancouver Aquatic Centre Renewal on hold, until additional funding can be secured to deliver a 50-metre training pool to ensure compliance with the BC and Federal Accessibility Act and the Rick Hansen Gold Standard, including a large hot pool, dive towers, and other aquatic and recreation amenities, with a leisure pool to be delivered in a future phase.

PURPOSE AND SUMMARY

This report responds to the February 25, 2025, Board decision to report back within one month on the related VAC program details for Board approval. The Project Team (Park Board and City of Vancouver Real Estate, Environment and Facilities Management (REFM) with lead consultants Acton Ostry Architects and MJMA Architecture and Design) extensively analyzed the feasibility of a 50-metre training pool. The analysis demonstrates it is not feasible to deliver a 50-metre training pool within the existing building footprint that meets minimum aquatic industry standards while providing the recommended renewal program including dive towers, hot pool and other aquatic and recreation amenities, as outlined in the Board decision.

Alternative Option Implications

Exploring a 50-metre training pool and extending beyond the existing building footprint would require additional funding and revisiting the land tenure strategy, which would expose the project to various risks, including unknown site conditions, funding, cost overruns and scheduling impacts. Staff reviewed the 2023-2026 Park Board Capital Plan and can confirm there are limited projects with available funding that could be deprioritized to reallocate the budget needed to advance this alternative option. As such, funding to progress this project would rely upon an

allocation in the 2027-2030 Capital Plan, placing the delivery of this project on hold until at least 2027.

BOARD AUTHORITY / PREVIOUS DECISIONS

As per the [Vancouver Charter](#), the Park Board has exclusive jurisdiction and control over all areas designated as permanent and temporary parks in the City of Vancouver, including any structures, programs and activities, fees, and improvements that occur within those parks. Other relevant policies, plans, and previous decisions include:

- [VanSplash Aquatics Strategy](#) (2019) includes a holistic approach to renewing indoor pool facilities reaching the end of their functional lifespan, including VAC, and balanced system-wide aquatic experiences. VanSplash identified VAC as a high priority for renewal in the 2023-2026 Capital Plan.
- [VanPlay – Parks and Recreation Services Plan](#) (2019) offers a thorough understanding of recreational needs across the entire city, including aquatic amenities, and points to VanSplash for specific recommendations.
- [2023-2026 Capital Plan](#) (2022) In May 2022, a precast wall panel failed, and concerns related to the facility's structural seismic performance expedited the VAC renewal. Council approved \$37 million for a phased VAC renewal. Phase 1 proposed renewal of the 50-meter competition pool and dive tank and Phase 2 proposed included a leisure aquatic facility, pending future funding.
- [Capital Plan Plebiscite](#) (2022) During the 2022 municipal election, a plebiscite vote secured \$103 million for the replacement, renewal or rehabilitation of the VAC.
- [Imagine West End Waterfront](#) (2024) is a comprehensive long-term vision and plan for the West End's waterfront parks, beaches, facilities, and the surrounding street network and includes the areas immediately surrounding the VAC.
- [Vancouver Aquatic Centre Renewal – Recommended Program](#) and [Decision](#) (2025) outlined the proposed VAC renewal program, resulting in Board direction to include a revised VAC program, including 50-metre training pool compliant with the BC and Federal Accessibility Act, Rick Hansen Gold Standards, large hot pool, dive towers, and other aquatic and recreation amenities, and for the leisure pool expansion to remain as part of Phase 2 of the renewal program.

BACKGROUND AND SITE CONTEXT

Built in 1974, the end-of-life VAC currently serves as a specialized training facility for swim clubs to participate in lap swimming and diving. The VAC renewal project launched in January 2024, with a backdrop of significant population growth expected for the downtown neighbourhoods, increasing unmet demand in the aquatic network to provide diverse programming and rising construction costs. The resultant feasibility study examined an extensive series of options while adapting to site constraints, and adhering to project costs and budget, with the overall goal of maintaining as much existing programming components as possible while maximizing aquatic service delivery for the local community.

The proposed project is seeking a budget increase of \$30 million above the approved \$140 million

to deliver a 25-metre pool, dive training and competition, a leisure pool, and associated amenities with the loss of the 50-metre pool being the most notable change.

The land on which the current VAC sits is split between City-owned lands and lands leased from the Provincial government. This mixed-tenure arrangement is non-conforming and must be resolved with the Province prior to redevelopment. Communication with Musqueam, Squamish, and Tsleil-Waututh Nations related to the proposal is ongoing.

Alternative Option Implications

Pursuing an alternative VAC program would require modifications to the current tenure arrangement with the Province and with Musqueam, Squamish, and Tsleil-Waututh Nations.

CURRENT VAC PROGRAMMING CONTEXT & MITIGATING SERVICE IMPACTS

Although the current 50-metre training pool provides a valuable and specialized service, its cold-water temperature, depth, and the configuration of the lap and dive tanks—combined with the facility’s age and condition—significantly limit opportunities for community programming. This includes shallow and warmer water activities such as swimming lessons, recreational use, and therapeutic programs. As a result, the VAC facility operates at only ~30% of its potential capacity, compared to Hillcrest, which operates at 113% capacity.

The Park Board plays a vital role in providing swim lessons for all ages, with a primary focus on children aged 18 months to 12 years, at subsidized rates unavailable through private operators. Demand for these programs far exceeds availability, with a current waitlist of over 8,000 requests for fall swim lessons across the system. The recommended VAC program would expand swim lesson capacity, introduce family and non-lap swimming options, and offer modernized therapeutic programs while preserving most existing programs and rentals.

Recognizing the recommended program impacts the provision of 50-metre training availability, staff have considered initial options to increase capacity through an aquatic system-wide reallocation – such as increasing 50-metre configurations at Hillcrest. Hillcrest currently provides 84 hours for club and public 50-metre access during current operating hours. Adjusting the Hillcrest pool layout to significantly increase the 50-metre format will increase the weekly 50-metre lane availability to 512 hours. Through space use management, the 50-metre lane configuration will be allocated through a club use, public use, and mixed-use models. This approach is expected to provide 80% of the current 50-metre swim availability, absorbing most of the impacted rental hours at VAC.

DISCUSSION

In response to the Board decision, the Project Team analyzed the following factors for a 50-metre training pool including:

- Long course training pool user group minimums;
- Industry standards and best practices;
- Test Fits - functional and operational requirements; and
- Project constraints (i.e. building footprint, funding, schedule).

USER GROUP MINIMUM REQUIREMENTS

On March 5 and 6, 2025, the Project Team met with the VAC user groups who previously participated in the January 2025 conversations to gain specific and detailed information about the requirements for a long course training pool. This included input that informed the minimum requirements associated with a 50-metre training pool. These groups included representatives from swim, water polo, artistic swim, and lifesaving clubs. As the Board motion specified maintaining other programming as initially proposed, dive clubs were not contacted.

The user groups outlined their minimum requirements for a 50-metre training, including:

- 8-lane, 50-metre basin;
- 1x 1-metre bulkhead (51-metre tank – not including deck requirements); and
- 2-metre depth with ability to achieve 3-metre depth (i.e. moveable floor) for water polo and artistic swim.

In addition to the minimum long course training pool needs, the Canadian Dolphin Swim Club and the Pacific Lifesaving Club requested the City and Park Board provide a temporary long course (10-lane, 50-metre basin) facility nearby to mitigate construction impacts. Any provision of a temporary facility is not funded, outside the project scope and requires Board direction.

A full list of the user groups' feedback can be found in Appendix A, including other components exceeding the stated minimum requirements.

INDUSTRY STANDARD REQUIREMENTS

The analysis demonstrates it is not feasible to deliver a long course training pool within the existing footprint, while meeting the minimum industry standards for functionality, circulation, maintenance and operations and deliver Rick Hansen Gold accessibility requirements and maintain all other previously recommended programming, with the exception of the leisure pool which was suggested to come in a second phase. As such, the proposed approach remains to proceed with the recommendation outlined on February 24, 2025. See Table 1 Long Course Test Fit Summary and Table 2 Long Course Training Pool Requirement Summary as outlined below and in the following sections.

The minimum industry standard spatial requirements for a 50-metre training pool are 52-metres (60-metres by 28-metres inclusive of deck space) and for a best practice 50-metre training pool, 53- or 54-metre (65-metres by 29-metres inclusive of deck space). This is due to various components, including basin length, bulkhead, flush gutters, starting blocks, clear deck space, programming opportunities, and maintenance clearance. Table 2 summarizes the minimum basin length and deck clearance requirements for Industry Standard and Best Practice long course training pool design.

While user groups indicated a minimum 2-metre depth and 1-metre bulkhead for a 51-metre tank, the Park Board requires two bulkheads to optimize and efficiently deliver aquatic programming. The two bulkheads and a 52-metre basin (Industry Standard), can support the addition of a moveable floor, enabling various pool configurations to simultaneously support swim lessons, aquafit, or any non-length swimming uses.

Table 1: Long Course Test Fit Summary

	Program	Existing Footprint	Industry Standard
Recommended Design	25-metre Lap Basin**		
	Teach/Leisure Basin	✓	✓
	Dive Basin**		
	Community Hot Pool		
	Large Fitness		
Existing VAC	50-metre Primary Basin*		
	Dive Basin*	*	✗
	Small Hot Pool		
	Small Fitness		
Long Course Test-Fit	52-metre Primary Basin**		
	Dive Basin**	✗	✗
	Community Hot Pool		
	Large Fitness		

* *Non-compliant*

** *WAQ – World Aquatic Compliant*

*** *All test fit summaries meet Rick Hansen Gold requirements*

Table 2: Long Course Training Pool Requirement Summary

Element	Industry Standard	Best Practice
Basin Length	52-metre	53- or 54-metre
Bulkhead	2x 1-metre	2x 1.5/2-metre
Flush Gutter (2x 0.45m)	Yes	Yes
Starting Blocks	Both ends	Both ends
Clear Deck Space*	3.5-metre	6.1-metre
Total Length Requirement	60-metre	65-metre

**Beyond flush gutters, behind starting blocks*

Basin Length

Over the last 50 years, several long course pools have been constructed in the Lower Mainland (Appendix B). Since 1994, all long course pool basins (nine) exceed 50-metres and have at least two bulkheads. This is primarily due to modernized aquatic standards for training, competition, and the ability to provide flexible programming in public facilities.

Bulkheads

Bulkheads are required to maximize training potential for a variety of aquatic rental groups (including swim, water polo, and artistic swim clubs) and for the provision of Park Board publicly delivered services such as all-ages swim lessons, aquafit classes, and other leisure activities. Industry Standard is to include two 1-metre bulkheads in a long course pool, requiring a minimum 52-metre basin length. As shown in Table 2, best practice is to provide two 1.5-metre or 2-metre bulkheads to support a larger variety of programming, which requires a 53- or 54-metre basin length.

Flush Gutters

The current VAC has an out-of-date fully-recessed gutter system that is no longer permitted by Vancouver Coastal Health. Current industry standards include flush gutters which offer multiple benefits such as improved basin accessibility, wave quelling (reduction), and improved air quality through the ability to use the gutters to remove airborne chemicals. Flush gutters require 0.45-metre clearance around the basin perimeter which results in an additional 0.9-metre to the overall deck clearance.

Starting Blocks

Starting blocks enable users to train for both long and short course competition starts. Standard and best practices include the provision of starting blocks at both ends of a long course pool. Starting blocks can be removeable and mounted to bulkheads, however clear deck space should be measured from behind the starting blocks to ensure appropriate clearance.

Clear Deck Space

To provide safe circulation around the pool tank throughout the natatorium, a minimum 3.5-metres of unimpeded deck space is required to meet industry standard for safety, accessibility, swim training, competitions, and judging. Best practice is to provide 6.1-metre (20') or more behind the starting blocks to better support access to other program areas, coaching space, team equipment, swimmer queuing, and short course competitions.

Maintenance Clearance

A minimum 3.5-metres of clear deck space is required around the entire pool basin perimeter for maintenance equipment access. This allows for cost-effective, long-term maintenance of the single span structure. Planning for maintenance equipment access in the new facility will reduce maintenance cost and service impacts in the future, resulting in additional annual operating hours due to reduced facility maintenance closures.

TEST FITS & SITE CONSTRAINTS

The Project Team conducted several Industry Standard and Best Practice test fits ranging from 51- to 54-metre basins in multiple configurations, within the existing building footprint. The test-fits included orienting the long-course basin in both the east-west and north-south direction.

The test-fit analysis demonstrates that, within the existing footprint, it is not feasible to deliver a long course training pool that meets the minimum industry standards for functionality, circulation, maintenance, accessibility, and operations, while providing the full recommended aquatic and recreation renewal program.

Alternative Option Implications

As outlined in the February 24, 2025 report, the site is physically constrained due to the Burrard Street Bridge (engineering setbacks), Beach Avenue (road alignment), the seawall and shoreline (sea-level rise), and the limited ability to expand west into Sunset Beach Park.

Due to the mixed-land tenure, pursuing an alternative option and expanding into Sunset Beach Park would require resolution with the Province and the host First Nations. Additional assessments would be required, including archeology, geology, soil stability, sea-level rise, among others. Such considerations are applicable to phasing the leisure pool as outlined in the Board decision. A phased leisure pool is also expected to result in pool and building system

redundancies and inefficient service and support space provision (i.e. lobby, circulation and change facilities) that cannot be readily expanded. Additionally, a phased delivery may result in prolonged service disruptions to the adjacent park and beach areas.

PROJECT CONSTRAINTS

To date, the project has spent \$2.9 million of the previously-approved \$140 million total project budget. Two independent Class C cost estimates recently obtained have concluded that the construction costs alone is \$140 million to deliver the recommended program. To advance the project, including completing detailed design, securing the appropriate permits and preparing for construction award, an additional \$30 million is required. The Financial Considerations section outlines the funding source and breakdown.

The proposed \$170 million project budget considers a 5% annual cost escalation for 2025 and 2026. Additional project delays will result in construction cost escalation of approximately \$500k to \$1 million a month or \$10 to 20 million increase each year construction is delayed.

Any additional project delays or scope changes will impact the critical path and ability to deliver a renewed VAC. The \$103 million approved 2022 plebiscite requires the project construction contract award and construction commence by end of 2026. Failure to meet this requirement requires a new plebiscite vote and new funding from the 2027-2030 Capital Plan.

Alternative Option Implications

An updated costing report for a long course training facility is currently not available as developing a Class D (30% accurate) cost estimate requires two months after completed concept designs. To develop a new concept design, the existing design team contract would require amendment to include additional fees.

FINANCIAL CONSIDERATIONS

As indicated in the February 25, 2025 report, the estimated recommended program cost is \$170 million (Class C (~15-20% accurate) cost estimate), which is \$30 million over the current capital plan allocation of \$140 million project budget. Based on the recommended program, the appropriate proportion of growth and renewal funding is being proposed for reallocation to VAC. Any change in the programming will require a review of funding eligibility based on scope.

Staff are seeking Board approval to reallocate \$7.6 million of the \$8.4 million from the West End Waterfront Parks Phase 1 Implementation. The remaining \$0.8 million will allow Park Board staff to rescope West End Waterfront Plan phase one implementation per Board direction, and complete schematic through detailed design, to be ready for implementation pending future capital plan funding.

If the Board approves this reallocation, City staff will seek Council approval for the remaining \$22.4 million.

Alternative Option Implications

The Mayor's Budget Task Force identified a \$500 million annual gap in infrastructure funding. Pursuing an alternative option means the current project will fail to meet the plebiscite requirement and compete for future funding in the 2027 – 2030 Capital Plan. Early assessment of major capital projects identified for the next plan which would compete for similar funding include Kitsilano Pool, Ray-Cam Community Centre Renewal, Hastings Community Centre Renewal, park washrooms

and fieldhouses in addition to other city priorities (e.g. firehalls, libraries, and bridges). Without a significant increase in funding in the next plan, it is unlikely all of these projects will be accommodated in the approved plan.

CONCLUSION AND NEXT STEPS

The analysis demonstrates that it is not feasible to deliver a 50-metre training pool compliant with the BC and Federal Accessibility Act and Rick Hansen Gold Standards while meeting minimum aquatic industry standards and incorporating other existing components such as dive towers, hot pool and other aquatic and recreation amenities, as per the February 24, 2025 Park Board decision. Pursuing an alternative option is not recommended due to the mixed-land tenure, unknown site considerations, city-wide infrastructure deficit, operational inefficiencies, and prolonged service disruptions to the facility and park. As per VanSplash recommendations, staff will continue to seek opportunities to deliver a 50m competition facility with future new/renewed aquatic facility projects in the system.

As such, the recommended approach is to proceed with the project as presented on February 24, 2025. A decision is required for the project to remain on schedule and utilize the approved \$103 million 2022 plebiscite funding or seek additional funding to pursue the alternative option. Pending approval of the recommendation including the \$7.6 million reallocation from the West End Waterfront Phase 1 Implementation the VAC renewal budget will increase to \$170 million. The Project Team will seek Council approval to secure the remaining \$22.4 million.

APPENDIX A: User Group 50m Needs Discussion Summary

The project team met with the following user groups on March 4 and 5, 2025:

- Canadian Dolphin Swim Club (CDSC)
- English Bay Swim Club (EBSC)
- Pacific Lifesaving Club (PLC)
- Vipers Water Polo Club (Vipers)
- Pacific Wave Artistic Swim Club (PWAS)

The Pacific Storm Water Polo Club (PSWP) was not able to make the available meeting times but provided their needs and wants via email.

The project team followed up with user groups after these meetings to confirm the project team accurately heard the user groups needs shared during the meetings. Subsequently, all clubs confirmed the email by March 14, 2025.

Club Needs + Wants	Lanes		Length				Width			Depth	
	8	10	70m	50m	30m	25m	15m	20m	2.5m Lanes	2m	3m
CDSC	N	W		N, W					N	N	
EBSC	N	W		N, W					N	N	
PLC	N	W	W	N					N	N	
Vipers + PSWP				W	N			N		N	
PWAS				W		N		N			N

Club Needs + Wants	Bulkhead (#)		Bulkhead (size)			Starting Blocks		Temp Facility		
	1	2	1m	1.5m	2m	1 end	both	10x50m	8x25m	8x50m
CDSC	N, W		N			N	W	N		
EBSC	N, W		N			N	W		W	W
PLC	W		N		W	N	W	N		
Vipers + PSWP	W	W			W					
PWAS	N	W	N		W				W	

Club Needs + Wants	Competition*		Warm Up Tank	Storage
	25m	50m	50m	
	CDSC		W	W
EBSC	W	W		W
PLC		W	W	N
Vipers + PSWP				W
PWAS				

*Includes associated components such as timing pads, timing clock, judges' areas, etc.
N = Need, W = Want

Additional comments collected from attendees are in the table below:

Club	Comment	Project Team Response
CDSC + PLC	Want an international competition standard venue	<p>An international competition venue requires significant space considerations including, but not limited to, spectator seating for thousands of guests, parking allocation, at least two 50-meter tanks with international competition standard deck space, and other additional amenity spaces.</p> <p>An international standard facility is not feasible within the scope of this project.</p>
PLC	Ozone/chlorine-alternative/reduced chlorine treatment	This will be pursued within the existing project budget and scope regardless of program.
PLC	Non-slip tiles	Further exploration is necessary to see how this impacts all users. To be explored in detailed design.
PLC	Equal treatment of clubs (ability to hang banners, etc.)	Full assessment of club presence to align with existing Park Board standards confirmed during detailed design.
CDSC + PLC	Emphasis on need for temporary facility as a minimum requirement	A temporary facility is not part of the scope of this project. Additional direction and funding are required for further study consideration.

**APPENDIX B:
List of Regional Long Course Pools**

Long Course Pools: Built in the Lower Mainland since 1994

Pool	Year Built	Basin Length	Bulkheads	Notes
təməsewtx ^w New Westminster	2024	53m	2 x 1.5m	
UBC Aquatic Centre	2016	54m	1 x 1m	Basin length includes 2x raised head walls Can accommodate provincial competition with 25m warm-up tank
Grandview	2016	52m	2 x 1m	
Guildford	2015	52m	2 x 1m	
Hillcrest	2010	53m	2 x 1.5m	
Walnut Grove	1998	53m	2 x 1.5m	
South Surrey	1998	52m	2 x 1m	
Watermania	1996	57m	2 x 1m	
City Centre Coquitlam	1994	52m	2 x 1m	
Vancouver Aquatic Centre	1974	50m	n/a	25m competition only when dive tank is closed