

DATE OF MEETING MAY 21, 2025

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SUBJECT **NANAIMO AQUATIC CENTRE HVAC**

OVERVIEW

Purpose of Report

To seek the Committee's support for an increase to the project budget for the Nanaimo Aquatic Centre HVAC Equipment Upgrades.

Recommendation

That the Finance and Audit Committee recommend that Council increase the 2026 budget for the Nanaimo Aquatic Centre HVAC Equipment Upgrades project by \$6,740,951 funded by \$1,500,000 from the Facility Development Reserve Fund and \$5,240,951 from the General Asset Management Reserve Fund in the 2025 – 2029 Financial Plan.

BACKGROUND

Nanaimo Aquatic Centre (NAC) is one of Nanaimo's flagship facilities, serving an average of 1,500 patrons daily. People of all ages, from all over Nanaimo, the Regional District and beyond attend NAC to recreate, rehabilitate, exercise, socialize, and compete. To maintain a safe, healthy environment for this service, a complex, highly integrated mechanical system is installed in the building. This mechanical system provides heating, cooling, and dehumidification to the air throughout the pool area. It also provides hot water to temper the pools, provide bathing and other sanitation facilities. These systems, when combined with the other systems in the building create the necessary environment to operate a pool in accordance with health and safety regulations. These systems are also necessary for patron enjoyment and Staff safety. The facility is the largest single producer of greenhouse (GHG) emissions in the City's portfolio, accounting for approximately 32% of all corporately consumed natural gas and 12% of all corporately consumed electricity. Typically, mechanical systems have a useful service life of 20 – 25 years. NAC finished construction in 2001, placing these systems at the later end of their service life. As systems deteriorate, Staff responses increase to address those items as best as possible. These responses are becoming less effective and may start to have a greater impact on service delivery without renewal of these critical systems.

On 2022-MAY-16 Council directed Staff to apply to Clean BC's Clean Communities Fund for the Nanaimo Aquatic Centre HVAC Equipment Upgrades. The project is expected to reduce facility GHG emissions by approximately 800 fCO₂ per year which is about 70% for the facility and 13% of overall corporate emissions. The Fund provides federal and provincial funding for community infrastructure that reduces reliance on fossil fuels. The project budget of \$5.6 million was based on a feasibility report completed on 2022-May-20 and included a grant funding contribution of 73.3%, with the remainder, and additional costs the responsibility of the City. At the time, the

project proceeding was contingent on a successful grant application; however, while awaiting the outcome of the application, the boilers at NAC suffered a catastrophic failure and underwent emergency replacement. This emphasized the importance of the timing of the greater project. As the replacement of the boilers was part of the proposed scope of work in the grant application, the project budget was commensurately reduced to \$5.27 million to reflect exclusion of the cost of the boilers. The City was ultimately successful with this application and entered into a Shared Cost Agreement with the Province of BC on 2023-July-18. Staff proceeded with a public procurement for a consultant team following which, past design efforts were reviewed to ensure validity and continued applicability. Following the funding announcement by the Federal Government on 2024-Sep-06, Staff completed a procurement to select a Construction Manager. Chandos Construction (Chandos) was the highest ranked proponent, and a construction management contract was signed 2024-Nov-06.

A detailed review of the facility has been completed to consider the extensive logistics for construction of a project of this magnitude. On 2025-Mar-31 Chandos submitted a Conceptual Budget Cost Plan for Staff review. This report provides a detailed description of the project, the steps and schedule needed to execute the work, and a conceptual budget of \$9,128,318 including an allowance to amend the existing ducting for better air quality.

In accordance with the City's Project Management Framework, for the current stage of project development, both a 10% risk reserve and 20% contingency has been added to the conceptual budget. Additionally, soft costs relating to consulting fees and permitting costs have been added for a total recommended budget to complete the project of \$12 million. |

DISCUSSION

A project budget increase to just over \$12 million represents a significant increase over the revised budget following the boiler replacement. Three years have passed since initial grant application and budget setting. During this time, record inflation has been experienced in many sectors, including construction. While this would account for a portion of this increase, other factors have become apparent. In developing the original budget, equipment requirements were the primary consideration with some allowance for installation. As the project develops through schematic design, the complexities of replacing the large and complex equipment in the existing constrained spaces and connecting the upper mechanical mezzanine with the mechanical plant on the opposite side of the building have driven the costs higher.

Included in the recommended budget increase is an allowance for approximately \$260,000 to amend the existing ducting for better air exchanges and movement. This is in response to a significant code update that came into affect shortly after NAC was constructed. Previously, large fans were installed on the ceilings to displace the air on the surface of the pool to mimic the code revisions. While this has been serving the purpose, it has not addressed the root issue and appears to be exposing additional assets to the corrosive properties of the pool environment. Given the extent of the proposed project, including the duct revisions within the pool area is recommended to achieve the intent of the code update, and expected to improve patron experience and work environment for Staff, and prolong the expected service life of other assets.

During project development Staff have emphasized preference for minimal site disruption. In response to this preference, Chandos detailed an onsite construction duration of 14 months with minimal service disruption for most of that time. A closure of the pool for approximately 60

consecutive days in the later portion of this schedule is included in the 14-month duration and would be required for the final integration of the new systems. This elongated schedule is intended to address the surgical nature of the project, allowing time to consider routing, adjacencies, impacts, serviceability, etc., and collaboration on the appropriate path forward as each situation is encountered. The tentative plan is to complete the majority of the work during the 2026 pool shutdown, and although that is a long way off, there are major components of the project that have a very long lead time for delivery, potentially up to 40 weeks or more. Given that the programming for the NAC occurs well in advance, often more than 6 months, the complexities of the project and the long lead time for materials means that the details, schedule, and commitments for the project need to be determined a long time in advance.

As the provider of the grant funding, Staff have contacted the Investing in Canada Infrastructure Program (ICIP) – Clean BC Communities Fund (CCF) to advise of the current budget for the project and investigate options. ICIP-CCF has confirmed no additional funding is available; however, they would consider an extension provided they agree with the rationale. ICIP-CCF will work with Nanaimo as much as possible if a reduction in scope is pursued; however, if there are significant changes to the emission reductions proposed in the grant application, grant funding may be jeopardized. Staff have not pursued a scope reduction as there are really only two scope components: emissions reduction and required asset renewals. The funding from the grant exceeds the value of the emission reduction work, thus providing a funding contribution for required asset renewals.

The Conceptual Budget Plan submitted by Chandos does not include for the ongoing trade tensions with the United States (USA). While the equipment budgeted is manufactured in Canada, the raw materials may be sourced from the USA and may be subject to tariffs. A risk contingency is included in the recommended project budget to mitigate this impact.

A construction contingency has also been included in the recommended project budget, appropriate for the project.

One option that will be pursued is an extended pool closure which will allow work to be completed more efficiently. This could reduce costs and result in faster completion. At the same time, this would be disruptive to facility programming and Staffing. Revenue and expenses would also be impacted. An advantage to this approach is that additional funding could be allocated to replace the play structure in the wave pool while the HVAC work proceeds. This way the public would see a result following a long closure. |

Financial Considerations

To the end of 2024 the project has incurred costs of \$14,131. The 2025-2029 Financial Plan currently includes a project budget of \$5,259,049 funded by \$843,017 from the Facility Development Reserve Fund, \$559,571 from the Climate Action Reserve Fund, and \$3,856,461 from ICIP-CCF. Increasing the total project budget to \$12,014,131 would require an additional \$6,740,951. The additional \$6,740,951 would be added to 2026 of the 2025 -2029 Financial Plan and funded by \$1,500,000 from the Facility Development Reserve Fund and \$5,240,951 from the General Asset Management Reserve Fund.

The Facility Development Reserve Fund currently has a minimum reserve balance requirement of \$814,000. The new revised 2026 projected closing balance of the reserve after the allocation of the additional funding is \$1,121,708. The General Asset Management Reserve Fund currently

has a minimum reserve balance requirement of \$6,117,500. The new revised 2026 projected closing balance of the reserve after the allocation of the additional funding is \$14,229,560. Both reserves have sufficient funding in the 2025 – 2029 Financial Plan to support the allocation.

Project planning for the 2026 – 2030 Draft Financial Plan is in progress and the potential impact, if any, on the prioritization of projects as a result of the additional funding request allocation is unknown at this time. It is likely to increase the infrastructure funding gap and result in a greater backlog of needed asset management renewals. |

OPTIONS

1. | That the Finance and Audit Committee recommend that Council increase the 2026 budget for the Nanaimo Aquatic Centre HVAC Equipment Upgrades project by \$6,740,951 funded by \$1,500,000 from the Facility Development Reserve Fund and \$5,240,951 from the General Asset Management Reserve Fund in the 2025 – 2029 Financial Plan.
 - The advantages of this option: Allocating additional funds allows this critical project to move forward, replacing necessary assets at the end of life while reducing emissions from the facility. The construction schedule as proposed will allow comprehensive planning and integration of systems while reducing the Staff and patrons impact to a closure of about 60 days and minor service interruptions.
 - The disadvantages of this option: Maintaining standard operations for 14-months and accommodating a 60-day pool closure can wear on Staff and patrons. While this is less impact than a longer closure of the pool, it may wear on user patience.
 - Financial Implications: Additional funding from the Facility Development Reserve Fund and the General Asset Management Reserve Fund would be required to fund this initiative, leaving less funds available for other projects. The 2025 – 2029 Financial Plan will be amended at a future date to include the change.
2. That the Finance and Audit Committee recommend that Council defer the Nanaimo Aquatic Centre HVAC Equipment Upgrades project budget adjustment to coincide with the 2026 – 2030 Financial Planning discussions.
 - The advantages of this option: Delaying the funding allocation would provide Council with the full context of other financial priorities. This option would also provide more time to determine if a cost reduction is possible with a prolonged shutdown period.
 - The disadvantage of this option: This would push the construction of the upgrades to 2027, which would leave little wiggle room with the grant timing. **If the grant does not allow an extension and there are unexpected project delays, it could jeopardize the funding.** This risk could be mitigated but may involve timing the shutdown during a time of year that has more adverse impact on programming. Construction costs may also increase over the time frame.
3. That the Finance and Audit Committee provide alternate direction.

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SUMMARY POINTS

- Nanaimo Aquatic Centre is a flagship facility for the community, welcoming an average of 1,500 people daily
- The City was successful with a grant application to Investing in Canada Infrastructure Program (ICIP) – Clean BC Communities Fund (CCF), however, are responsible for additional project costs beyond the grant amount
- The value of the grant is greater than the cost of the climate action initiatives, thus providing external funding for asset renewal
- The system to be replaced is required to ensure air quality and dehumidification within the pool area and is considered fundamental to the operation of the facility
- Staff will continue to explore opportunities to maximize value and minimize disruptions to the facility
- The project budget has increased from \$5.7 million to a projected cost of \$12 million over the past three years

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