

TO: CHIEF ADMINISTRATIVE OFFICER **DATE:** 2023 March 21

FROM: DEPUTY GENERAL MANAGER **FILE:** 02410-20
PARKS, RECREATION & CULTURE

SUBJECT: CENTRAL PARK POND REDEVELOPMENT STUDY

PURPOSE: To seek Council approval for the renewal strategy for Central Park and the Pond Redevelopment Program.

RECOMMENDATIONS:

1. **THAT** Council direct staff to develop a Central Park Master Plan; and
2. **THAT** a copy of this report be forwarded to the Parks, Recreation & Culture Commission and the Environment Committee for information.

REPORT**1.0 EXECUTIVE SUMMARY**

The Central Park pond system was created 60 years ago as a visual attraction in Burnaby's largest and oldest urban park. In 2009, a comprehensive review of the park called the Central Park Management Plan was brought forward and approved by Council.

The pond systems were described in the management plan as a passive man-made landscape feature that attracts bird wildlife, and provides a pastoral setting for recreation trails. The construction methods used to create the ponds, typical of the 1960's era, included dug out basins with sandbag edges and a clay bottom.

In the 60 years since their construction, the ponds have degraded past the point of general repair and although scenic to look at, they have unsafe banks and edges that are collapsing, and stagnant water causing ongoing algae blooms. In short, the ponds are time-worn and polluted with excess nutrients that continue to cause algal blooms and fish deaths. They are in need of a complete overhaul to achieve a biodiverse and compelling park amenity.

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With Council's adoption of the Central Park Management Plan in 2009, a number of priorities were identified. A detailed study of the pond conditions and opportunities for reconstruction was identified as a lower priority and work began in early 2023.

The findings of the initial investigations are being advanced as an early indicator of the extent of reconstruction required to re-establish a man-made water feature in the park.

Since 2009, population densification in the area has changed the use and interest in various park attractions. Prior to committing to redevelopment of the park ponds, a review of public support for the ponds features through a comprehensive park masterplan review is advisable.

The options for the Central Park Pond Redevelopment Program are:

- proceed from concept refinement to construction in a phased development program; or
- revisit the pond features in the Park, and examine the land-use possibilities for the area within the Park through the development of a Master Plan.

2.0 BACKGROUND

Following the adoption of the Management Plan by Council 2009, staff were directed to focus initial work on the restoration and resiliency planning and replanting work on the heart of the park, Douglas Fir forest. Work included the consolidation of forest trail systems in the forest into the Trail of Hope and the establishment of the 4 km rubberized walking trail around the perimeter of the park from 2017 to 2020. As work on the Perimeter trail was completed, the focus was turned to the Central Park ponds and the evaluation of the condition that would determine the reinvestment required to re-establish them as feature within the Park. The evaluation included a review of the quantity of water usage; the option for a new water source; and development a new pond edge configuration to improve biological function.

The Central Park pond and stream system (Appendix A), consists of the two artificial open water ponds and the artificially created streams that link them. The water supply for the ponds is a municipal water source that enters the upper (northern) pond in the system and flows downstream into the lower pond. The drainage of the ponds is connected to Kaymar Creek through a stream and series of culverts around the Ocean View Burial Park to the south. The water conveyance system is operational and runoff into Kaymar Creek is minimal due to ground water seepage.

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Today, the banks of the ponds are easily accessed by the public. They are degraded and eroded and in some locations fostering invasive plant growth. The lawns that once extended to the pond edges have been trampled by both geese and humans along the entire shoreline. On the lower pond, there is one formal access point into the water that model boating community uses.

The water quality is poor; water fowls such as Canada geese dirty the water, and high summer temperatures exacerbate these problems. Lack of riparian zones, habitat complexity, and disturbance from dogs and people limit wildlife value in and around the ponds.

There is a co-dependent relationship between the condition of the ponds and the recreation activities around them that have contributed negatively to the edge conditions. A redevelopment strategy for the Ponds has been explored, however staff recognize that nearly 15 years have passed since the original Management Plan was adopted. The City has also initiated a number of other plans related to amenities in the park including a study of Swangard Stadium, an Outdoor Pool Strategy, installing a temporary cover over the existing Central Park Outdoor Pool, and development of a destination Playground. Given the above, staff believe it is necessary to consider a holistic plan for the entire park, including the ponds.

3.0 DISCUSSION

Pond Redevelopment Strategy

To improve the aquatic sustainability of the ponds, a detailed review of the water feed, water consumptions and water losses and gains was undertaken. The findings show that at present the ponds are dependent on treated municipal water and consume 100,915 m³ per year. To understand the quantity of water, this amount could fill the Central Park Pool 69 times a year, or, once every five days.

The largest loss of water in the system is due to seepage through the pond floor into the ground. This accounts for a loss of 88,000 m³ per year. Additional minor losses are attributed to the lack of controls on the water feed and evapo-transpiration. While a significant amount of water is being lost through seepage, the residual water is being directed to the Kaymar Creek, which has in fact been supporting the health of stream by adding water when flows are low. The redevelopment of the ponds and the installation of a new water recirculation system with a controlled water input source and lined pond basins, could reduce water losses by 88,982 m³ per year, or 88%. However, the ponds will still require potable water as no groundwater source is available to feed the ponds.

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The retention and reconstruction of the pond system in Central Park is consistent with the goals of the Climate Action Plan adopted by Council in 2019 and the Central Park Management Plan approved by Council in 2009. The Central Park Management Plan public consultation results conducted in 2008-2009 demonstrated that 92% of respondents supported the restoration of ecological systems in the park (Appendix B). While these results likely remain valid, they are nearly 15 years old and the community has changed significantly in that time.

To transform the existing pond system into a long term, sustainable ecosystem, the redevelopment strategy would need to address both recreation use patterns and the terrestrial and aquatic interface zones and aquatic system functions. Each of these areas were explored in the concept plan for the project and are summarized in Appendix C. Through a redevelopment program new habitat areas could be created to support an extensive variety of wildlife and aquatic life listed in Appendix D.

It is clear that substantial work would be required to redevelop the ponds. Many structural elements including the water body edges, aquatic system and water circulation system need to be replaced or redeveloped. In addition, recreational amenities including new fixed decks, floating dock, fencing and planting are also required. Based on the concept plan that has been developed, the total cost of redeveloping the ponds and surrounding recreation amenities is estimated at \$14-16 million. It is a significant investment to make at Central Park in the absence of a holistic Master Plan that fully captures the needs and interests of the community and what amenities are needed in the park.

Master Plan Development

The development of a Central Park Master Plan would provide a vision and principles to guide development of the park over the next 5-10 years. Similar to the development of the Management Plan, it would include a large degree of public consultation to seek input from residents regarding their current use and future desires for the park, as well as a study of trends, best practices and consideration of current and future demographic changes that will influence use of the park. An extensive City wide Playground Development Strategy was approved by Council in 2022. This study identified Central Park Triangle as the first location for a destination playground. Work on this initiative would continue while a Master Plan review of the remainder of the park is undertaken. While staff recognize there is some urgency to repairing the ponds and that the ponds are popular amenities, staff also recognize the small environmental value they currently hold and the significant investment that would be required to create a more sustainable asset. There is also an opportunity for Council and the community to consider other amenities that could potentially supplement or replace the ponds and provide a desired amenity that meets the needs of residents. This could include active recreation attractions, cultural art and entertainment zones, forest interpretive and restoration, environmental learning, and demonstration centres, as examples.

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If Council supports staff’s recommendation, funding for the development of a Master Plan would be identified in the 2024-2028 Financial Plan. The process would likely take approximately 12-18 months with the support of a consultant. The implementation of the Master Plan could be phased with the ponds identified as an early deliverable to address the water leakage issues previously identified.

Given the degree of investment required and the other planning projects ongoing that may impact amenities at Central Park, staff recommend completing a Master Plan prior to making significant investment in the current ponds.

4.0 FINANCIAL IMPLICATIONS

The pond reconstruction program (earthworks, soft landscapes, hydrological systems) has an estimated cost of \$4–6 million for the pond systems. The addition of structures to support recreational activities such as docks, boardwalks, and shade structures, trails, other recreational facilities would be in the range of \$10 million.

The development of a Central Park Master Plan will be brought forward in the 2024 - 2028 Financial Plan.

5.0 POLICY SECTION

This plan is in alignment with City efforts to support climate change initiatives improving the community and are aligned with the following Council-adopted policies and plans/strategies: Climate Action Framework (2019), Corporate Strategic Plan (2017), Environmental Sustainability Strategy (2016), Social Sustainability Strategy (2011) and the Healthy Community Policy (1991).

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6.0 RECOMMENDATION

The pond reconstruction project identified in the 2009 Central Park Management Plan has been investigated and has revealed the extent of reconstruction required to create a viable aquatic ecosystem in the park. Prior to investing in this initiative, a comprehensive park masterplan is recommended to explore alternate land use options in the area. It is recommended that Council instruct staff to pursue a masterplan review of the park.



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HE:CG:tc

Attachments: Appendix A
Appendix B
Appendix C
Appendix D