

**REPORT TO REGIONAL PARKS COMMITTEE
MEETING OF WEDNESDAY, JULY 22, 2026**

SUBJECT Wetland Creation Project at Elk/Beaver Lake Regional Park

ISSUE SUMMARY

To update the Regional Parks Committee on the status of a constructed wetland project planned for Elk/Beaver Lake Regional Park.

BACKGROUND

Capital Regional District (CRD) staff have initiated a project to construct a wetland in Elk/Beaver Lake Regional Park to address water quality issues in Beaver Lake. Water quality issues have negatively impacted ecological, cultural and recreational values of the regional park since the 1980s. Elevated phosphorus levels in Elk and Beaver lakes have led to recurring blue-green algae blooms that threaten lake health, visitor safety, and overall recreational experience, with blooms in Beaver Lake persisting since October 2023.

About 30% of nutrients in the lakes originate from external sources within the surrounding watershed, while 70% are recycled internally from lake sediments. This issue is being addressed through two complementary strategies: operating the oxygenation system to reduce internal phosphorus sources in Elk Lake and implementing the Board-approved Elk/Beaver Lake Watershed Management Plan (2020) to reduce ongoing external inputs into both lakes. The implementation of the oxygenation system in Elk Lake is expected to have little to no impact on the health of Beaver Lake. Staff continue to assess water quality to inform the potential need for an in-lake remediation solution in Beaver Lake.

The Watershed Management Plan outlines a coordinated, multi-agency, long-term approach to improve water quality in Elk and Beaver lakes. Key priorities include:

- reducing phosphorus runoff from surrounding land to limit nutrient pollution,
- restoring streams and riparian habitats to enhance natural filtration, and
- engaging landowners and community stewards in adopting best management practices.

Haliburton Brook (the brook) is one of two tributaries that bring nutrients into Beaver Lake. The upper portion of the Haliburton Watershed has been modified for farming and urban development within the District of Saanich, while the lower watershed is largely within regional park lands (Appendix A). The brook collects water runoff from the watershed, including the Patricia Bay Highway, contributing elevated nutrient inputs (particularly phosphorus) to Beaver Lake. Ongoing water quality monitoring of Haliburton Brook, supported by Beaver Elk Environmental Stewards (BEES), indicates that phosphorus levels exceed BC Ministry of Environment and Climate Change Strategy Water Quality Guidelines for the protection of aquatic life in the brook.

DISCUSSION

CRD staff are in the early phase of planning and design for a constructed wetland in the Haliburton Watershed within Elk/Beaver Lake Regional Park. This project supports Action 2a of the Elk/Beaver Lake Watershed Management Plan to “restore and enhance stream and watershed function of Haliburton Brook.” Specifically, CRD’s role is to construct a wetland within the Haliburton Watershed to slow water movement and increase nutrient uptake before it reaches the lake. In addition to improving water quality in Beaver Lake, the wetland is intended to improve habitat for native species and provide an accessible opportunity for public interpretation. This project is located within the Haliburton Brook watershed, adjacent to the Governor General area of the park, east of Beaver Lake (Appendix B).

Constructed wetlands are engineered systems that mimic and optimize the biological, chemical, and physical processes of natural wetlands. They are highly effective at nutrient uptake, removing excess nitrogen and phosphorus from agricultural runoff and stormwater before it reaches downstream ecosystems. By slowing water flow and maintaining shallow depths, these systems allow sediments and nutrient-bound particles to settle and become retained in wetland soils. Constructed wetlands offer a sustainable, nature-based solution to filter runoff while simultaneously creating habitat for native wildlife.

Staff have initiated planning discussions with CRD Integrated Water Services (IWS), BC Wildlife Federation, local experts, and community stewardship groups to support the design and construction of the wetland. Known site constraints include existing underground water main infrastructure, archeological and cultural considerations, and Agricultural Land Reserve designations. Preliminary studies, design and permitting are planned for 2026 and 2027, with construction planned for 2028.

IMPLICATIONS

Alignment with Existing Plans & Strategies

This project supports a priority action identified in the Board-approved Elk/Beaver Lake Watershed Management Plan (2020) to reduce external nutrients entering Elk and Beaver lakes. As indicated in the plan, full review and update of performance indicators and assessment of objectives will be conducted in 2030.

This project also aligns with priorities identified in the Elk/Beaver Lake and Bear Hill Regional Parks Management Plan (amended 2010), which includes objectives to:

- preserve and enhance wildlife habitats and plant communities,
- improve opportunities for public education and interpretation of natural and cultural resources, and
- improve water quality of Elk and Beaver lakes.

Social and Intergovernmental Implications

The Watershed Management Plan emphasizes collaboration among municipal, provincial, federal, and First Nation governments, as well as community groups, landowners, and academic partners, to implement sustainable management practices and monitor progress. Staff will continue to engage with these partners to support meaningful collaboration for the project.

Environmental Implications

This project addresses a critical environmental gap in the capital region, where development and urbanization have eradicated many historical wetland ecosystems. Restored aquatic ecosystems directly improve local biodiversity, naturally filter runoff and provide critical habitats for endangered amphibians. This project is also expected to improve water quality in Beaver Lake by reducing nutrient inputs that contribute to ongoing blue-green algae blooms in the lake.

Consistent with the Watershed Management Plan, ongoing efforts to restore the Haliburton Watershed through invasive species removal and restoration of the natural function of the watershed have been supported by CRD staff and community groups such as BEES. These efforts complement the proposed wetland project and support broader water quality objectives for both lakes.

Service Delivery Implications

This project will be delivered within existing staff resources and capacity. Once constructed, the wetland will require minimal ongoing maintenance, supported by current staff and community volunteers. Staff do not anticipate impacts to service delivery. The implementation of this project is anticipated to improve visitor experience by providing a demonstration wetland to support public education and accessibility.

Financial Implications

The conceptual and detailed design phases have been approved in the 2026-2030 Capital Budget with funds for the construction and plantings to be proposed in the 2027-2031 budget cycle. Staff have identified several grant opportunities to support construction costs. Staff do not anticipate any additional costs to the operational budget once the project is complete.

Costs to implement the project are as follows:

Year	Activity	Amount	Funding source	Notes
2026	Conceptual design, permitting and preliminary studies	\$50,000	Capital Reserve	Confirmed
2027	Detailed Design, permitting and preliminary studies	\$30,000	Capital Reserve	Confirmed
2028	Construction and plantings	\$200,000	Grant application	Subject to approval
		\$100,000	Capital Reserve	Subject to approval

CONCLUSION

The proposed constructed wetland in the Haliburton watershed is a priority action under the Elk/Beaver Lake Watershed Management Plan (2020). The project is intended to reduce nutrient inputs to Beaver Lake while improving habitat and supporting public education and visitor experience. Staff are currently undertaking early planning work, with preliminary studies, design and permitting scheduled for 2026 and 2027, and construction anticipated in 2028. The project requires continued coordination with partners and careful consideration of site constraints, including water main infrastructure, archaeological and cultural interests, and Agricultural Land Reserve requirements. Overall, the project represents a strategic, nature-based investment that

supports long-term watershed health and aligns with existing regional park and watershed management objectives.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Mike MacIntyre, Senior Manager, Regional Parks
Concurrence:	Glenn Harris, Ph.D., R.P.Bio., Acting General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Haliburton Brook Watershed - Map

Appendix B: Wetland Creation Project at Haliburton Brook - Map