

**REPORT TO REGIONAL PARKS COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 16, 2015**

SUBJECT **Elk/Beaver Lake Watershed Management Plan – Dual Regional Parks and Environmental Services Committee Initiative**

ISSUE

Stakeholders have expressed concerns about water quality in Elk/Beaver Lake to the Chair of the Regional Parks Committee and the Chair of the Environmental Services Committee. The Chairs have directed staff to prepare a response to these concerns.

BACKGROUND

In order to address water quality concerns in Elk/Beaver Lake, which impact on social (i.e., fishing, swimming and boating), environmental (i.e., wildlife and fish habitat) and economic (i.e., rowing regattas, sport fishing and triathlon events) values, the various agencies and stakeholders require coordination to develop and implement a watershed management plan. Water quality monitoring is ongoing and the Province of British Columbia (the Province) is set to release an options paper to address potential actions to improve and maintain water quality. Volunteer community groups, Rowing Canada, and senior levels of government are supportive of a coordinated effort to manage this regional asset.

The lake system is subject to several stressors and overall water quality is deteriorating. The most significant stressors are historic nutrients in lake sediments and external nutrient input. Recent studies indicate that several key water quality parameters have declined since the original water quality objectives and monitoring were initiated in the 1980s.

A watershed management plan to address deteriorating water quality should include: reduction of nutrient inputs, management of nutrient cycling within the lake, weed harvesting, and monitoring to assess changes in water quality. The objectives are to reduce algal blooms, manage weed (plant) growth, improve fish habitat and ensure continued recreational use.

Several levels of government are involved with the lake system. The Province owns the lake bottom, sediments and water column; Transport Canada, on behalf of the federal government, manages activities on the lake surface; the Capital Regional District (CRD) is responsible for the surrounding park lands; and the watershed is contained predominately within the District of Saanich, discharging through the Colquitz River into the Gorge Waterway. As well, Island Health monitors the beaches for recreational health purposes and would be included in all information-sharing.

A designated coordinator would bring these stakeholders together to develop and implement a watershed management plan for the lake system. The coordinator could also facilitate ongoing research initiatives with the University of Victoria and other academic institutions. Direct benefits include the ability to apply for grants, coordinate actions to improve water quality and communicate with all stakeholders. The CRD plays this role in other multi-use multi-stakeholder watersheds and, because the lakes are within an existing regional park, is ideally suited to assume the leadership role for Elk/Beaver Lake.

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Staff are recommending a new half-time coordinator to oversee the development and implementation of a watershed management plan. The position would be funded through the Regional Parks budget and the service would be delivered by Environmental Protection staff.

Staff recommend a 4-year term position to initiate the process and allow the committee to revisit the position in the next 4-year budget cycle.

This proposal is well-supported by community groups and stakeholders. It is consistent with the Board's strategic priority of Biodiversity and Ecosystem Health through management and stewardship of an environmentally and economically important ecosystem within the boundaries of lands owned by the CRD for Regional Parks purposes. Active management will ensure improvement of the environmental health of the lakes, enhance the economic benefits of the lakes and maintain the social benefits to all citizens and visitors who use the regional park and the lakes.

ALTERNATIVES

Alternative 1

That the Regional Parks Committee:

1. refer this staff report to the Environmental Services Committee for information; and
2. recommend to the Capital Regional District Board that staff be directed to include the Elk/Beaver Lake Watershed Management Plan development and support in the 2016-2019 Regional Parks Service and financial plan.

Alternative 2

That the Regional Parks Committee direct staff to continue to participate in discussions with the other stakeholders within core budget resources.

ENVIRONMENTAL IMPLICATIONS

The coordinator would assume a leadership role among the stakeholders to develop and implement a watershed management plan that improves and maintains this important ecosystem in the region. The plan would lead to improved environmental quality (e.g., better water quality and clarity, reduced weeds, and higher dissolved oxygen concentrations), and enhanced benefits to the environment (e.g., better habitat and increased biodiversity). An important outcome and performance measure will be the reduction in the frequency and severity of algal blooms in the lake system. The plan could also explore management options for other contributing stressors to the lake system, including the impact of any resident geese population on nutrient loads, as well as regional climate change predictions.

The lack of a coordinator leaves the stakeholder group without resources or defined leadership to address concerns being raised for the lake system.

SOCIAL AND ECONOMIC DEVELOPMENT IMPLICATIONS

Elk/Beaver Lake Regional Park is the most heavily-used park in the region and a focal point for multiple-use outdoor recreation. There were an estimated 1.48 million visits in 2014 and an estimated 14,000 angler-days per year. The lakes are home to Rowing Canada, the national rowing team and the national triathlon team. As well, the lake is a venue for the Subaru Canada Half-Ironman competition, which brings approximately 1,600 competitors to the region in July of each year, generating an estimated \$5 million in economic value to the region. The park also hosts many day camps and nature programs that educate and benefit citizens year-round.

In the past 8 years, CRD Regional Parks has invested approximately \$740,000 relating to 2 key infrastructure initiatives: replacement of the Beaver Lake outflow dam, and planning for the replacement of the Filter Beds and Beaver Beach washroom infrastructure. In the next 4 years, upgrades and replacement initiatives being planned will total approximately \$1.55 million.

In order to reduce nutrient loads from aquatic weeds and to enhance water-based recreational experiences for park users, Regional Parks staff have submitted a 2016 supplemental budget request of \$200,000 for the purchase of an aquatic weed harvester to replace the harvester that was taken out of service in 2013. The reduction of lake weeds through harvesting is expected to be beneficial to the water quality in the lake.

FINANCIAL IMPLICATIONS

A half-time coordinator would be funded by a 4-year (2016-2019) supplemental request to the Regional Parks budget. In 2016, the position will focus on planning tasks. Operating resources in subsequent years will be used for implementation tasks. The following table summarizes costs associated with the new initiative:

Year	New position labour (0.5 FTE)	Support and operating/project funds	Total
2016	\$77,310	\$44,690	\$122,000
2017	\$78,856	\$43,144	\$122,000
2018	\$80,433	\$41,567	\$122,000
2019	\$82,042	\$39,958	\$122,000

CONCLUSIONS

Elk/Beaver Lake Regional Park is enjoyed by many user groups and citizens from across the region. High recreational, economic, cultural and environmental values are associated with the lakes. The lake system is subject to several stressors, most notably nutrient loading, and overall water quality is deteriorating. Recent studies indicate that several key water quality parameters have declined since the original water quality objectives and monitoring were initiated in the 1980s. Without action to address the factors affecting water quality, algae blooms will continue to occur and likely increase in frequency, fish habitat will deteriorate further and recreational enjoyment of the lakes will be affected.

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There is community and agency support for a coordinator to oversee the development and implementation of a watershed management plan for the lake system. Direct benefits include the ability to apply for grants, coordinate actions to improve water quality and communicate with all stakeholders. The CRD plays this role in other multi-use, multi-stakeholder watersheds and, because the lakes are within an existing regional park, is ideally suited to assume a leadership role.

RECOMMENDATIONS

That the Regional Parks Committee:

1. refer this staff report to the Environmental Services Committee for information; and
2. recommend to the Capital Regional District Board that staff be directed to include the Elk/Beaver Lake Watershed Management Plan development and support in the 2016-2019 Regional Parks Service and financial plan.

Submitted by:	Glenn Harris, Senior Manager, Environmental Protection
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