

Bowker Creek Initiative

2018 Annual Update



Introduction

The Bowker Creek Initiative (BCI), supported by the Capital Regional District (CRD), is a collaboration of community groups, local governments and institutions working together to manage and improve the health of the Bowker Creek watershed. The District of Saanich, City of Victoria, District of Oak Bay, the CRD and community groups established the BCI in 2004, following the adoption of the Bowker Creek Watershed Management Plan. A part-time coordinator, funded by the municipal partners, initiates and manages projects, seeks funding and provides administrative support.

In recent years BCI partners have implemented several key actions and multi-year projects from the *Bowker Creek Blueprint: A 100-Year Action Plan to Restore the Bowker Creek Watershed*. In 2017/18, the BCI completed the restoration of Bowker Creek through Oak Bay High School, initiated planning for a daylighting feasibility study for the creek corridor, participated in Saanich Parks' stakeholder working group for Cedar Hill Park Master Plan development and started a project to replace the BCI interpretive signs throughout the watershed.

Pictured above: Volunteers attended community events with the BCI display and watershed model to promote the goals of the initiative, the Bowker Creek Blueprint and general creek and watershed awareness.

Vision

The varied human uses and natural areas in the Bowker Creek watershed are managed to minimize runoff and pollution, making Bowker Creek a healthy stream that supports habitat for native vegetation and wildlife, and provides a community greenway to connect neighbourhoods.

Goals

- Individuals, community and special interest groups, institutions, governments and businesses take responsibility for actions that affect the watershed.
- Manage flows effectively.
- Improve and expand public areas, natural areas, and biodiversity in the watershed.
- Achieve and maintain acceptable water quality in the watershed.

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Highlights

The consensus-based BCI steering committee, chaired by the CRD, leads the implementation of the watershed plan and the *Bowker Creek Blueprint*. Now in its ninth year of implementation, the CRD, municipalities, institutions and community volunteers are successfully undertaking Blueprint projects and making public policy decisions that promote creek and watershed restoration.

In 2017/18, the BCI:

- members and their community partners removed invasive species throughout the watershed, and replaced them with site-appropriate native vegetation.
- promoted installation of green stormwater infrastructure features, such as raingardens and bioswales, and increased public awareness of their benefits through mobile “Raingardens at Work” signage.
- identified opportunities for creek restoration, rainwater infiltration and greenway development as part of the Shelbourne Valley Action Planning process.
- successfully applied for funding to undertake a daylighting feasibility study.
- supported volunteers at the Bowker Creek Riparian Garden at Monteith Rd restoration site.
- hosted watershed tours and attended community events to raise awareness and celebrate the Bowker Creek watershed.
- updated the BCI brochure, with fold out map showing achievements of the Blueprint over the past 10 years.
- developed new interpretive signage for four existing and two new sites in the watershed.
- gained official endorsement of the Blueprint from School District 61.

Blueprint Implementation Highlights

A 100-Year Action Plan to Restore the Bowker Creek Watershed

The Bowker Creek Blueprint is a first-of-its-kind, opportunistic plan that lays out many principles of Integrated Watershed Management and includes specific reach-by-reach actions that municipalities, businesses, community groups and residents can undertake to improve the watershed over

time. The Blueprint is precedent-setting and has become provincially significant.

The Blueprint sets out achievable actions focused on mimicking the natural water cycle to slow and infiltrate stormwater and rainwater entering the creek. Actions include restoration, habitat enhancement, creek daylighting and the use of rain gardens, bioswales and permeable pavement to manage rainwater. It also provides recommendations for a greenway corridor and pockets of nature within the watershed.

City of Victoria

The City of Victoria developed an incentive program (Rainwater Rewards) to encourage residents to manage rainwater sustainably on their property. Rebates and credits to reduce municipal stormwater utility bills are available for installing rain gardens, bioswales, green roofs, permeable paving and similar green infrastructure. These rainwater management methods slow and filter rainwater and help it diffuse into the water table rather than rushing into local creek systems like Bowker Creek.

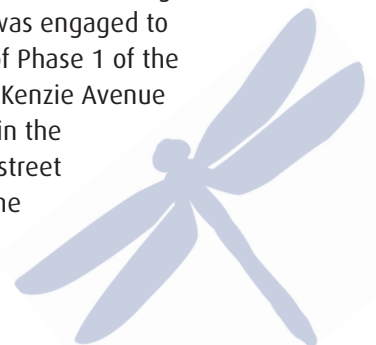
For more information visit the Stormwater Utility webpage at victoria.ca/stormwater.

District of Saanich

In 2017, Saanich Parks began a Visioning and Management Planning process for Cedar Hill Park. Consulting engineers were engaged in 2018 to undertake a hydraulic review of the tributary of Bowker Creek that flows through the golf course in this park. As part of the planning process, they will examine rehabilitation alternatives including wetland storage and detention, as recommended in the Bowker Creek Blueprint.

Saanich Council adopted the Shelbourne Valley Action Plan (SVAP) in April 2017. The SVAP provides a comprehensive vision and action plan to guide land use and transportation changes over the next 30 years. Implementation of the SVAP Short-Term Mobility Priorities is moving forward.

In 2018, a design consultant was engaged to develop the detailed design of Phase 1 of the project, the segment from McKenzie Avenue to Torquay Drive. As outlined in the SVAP, the final design for the street improvements will consider the Bowker Creek Watershed principles and actions



and incorporate them where feasible, such as including stormwater best management practices to improve Bowker Creek water quality and flows.

District of Oak Bay

The Oak Bay Parks Service supported the ongoing restoration efforts at the Oak Bay High School site by providing tree protection cages to prevent deer damage, delivering many loads of leaf mulch and mowing the Garry Oak meadow. Oak Bay staff also supported the BCI volunteer efforts at the Monteith St. native plant garden.

Consultants completed a condition assessment of the culverts in Oak Bay, as part of an ongoing program to improve and upgrade the underground sanitary and storm sewer infrastructure. This will reduce contaminants entering the Bowker Creek system from aging urban infrastructure.

In 2017, Oak Bay completed its first Urban Forest Management Strategy, a proactive plan to guide the future of the community's urban forest resource. This strategy emphasizes the benefits provided by the urban forest, including enhancing the natural environment, mitigating climate change and improving overall Bowker Creek watershed health.

Bowker Creek Restoration at Oak Bay High School

The construction of the new Oak Bay High School in 2015 provided an ideal opportunity to achieve one of the key short term actions in the Blueprint. The BCI, District of Oak Bay, School District 61 and Oak Bay High School staff and students worked together to design and create a beautiful and functional meandering creek reach adjacent to the school. A well-used outdoor classroom, community greenway and gently sloped vegetated creek bank are all part of this restoration. Previously, Bowker Creek flowed through a straight blackberry-choked concrete channel that contributed to downstream flooding during heavy rain events.

Water Quality

CRD staff conduct water quality sampling twice per year at the site where Bowker Creek discharges into the ocean. More intensive sampling throughout the creek (5 times in 30 days in dry and first rain seasons) is conducted every five years. This sampling was last conducted in 2014 and will be repeated in summer and fall of 2019. Limited monitoring



BCI volunteers and students removed weeds, spread mulch and planted native vegetation at the Bowker Creek restoration site beside Oak Bay High School.

data since 2014 indicate that creek health is remaining stable without any obvious improvement or degradation. In general, the parameters of concern are similar to those in other urban creeks and include bacteria, phosphorus, turbidity, metals (copper and zinc), and low levels of dissolved oxygen (upstream near headwaters).

Benthic invertebrate data indicate that those communities are stressed compared to a reference population. CRD staff conducted upstream investigations that narrowed the source of sewage to two creek reaches, however, identification of the point sources remains a challenge.

The CRD creek water quality program will continue to assist the BCI in monitoring the health of the watershed over time, as prescribed in the Blueprint.

Outreach Highlights

Volunteers hosted the BCI display and watershed model at the Bowker Creek BrushUp and Garry Oak Celebration at Uplands Park, and at various community events and celebrations throughout the year.

A new brochure was created to highlight the watershed improvements by BCI partners over the past 10 years. It includes a map showing all the projects completed or underway throughout the watershed that help improve water quality and increase infiltration of stormwater before it enters Bowker Creek.



Bowker Creek Initiative

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BCI Partners

- District of Saanich
- City of Victoria
- District of Oak Bay
- Capital Regional District
- University of Victoria
- Friends of Bowker Creek Society
- Camosun Community Association
- Community Association of Oak Bay
- North Jubilee Neighbourhood Association
- Quadra Cedar Hill Community Association



What's Next?

In 2019, BCI will focus on:

- Completing the Daylighting Feasibility Study for the creek corridor
- Developing a planning tool kit for municipal planners
- Celebrating completion of Bowker Creek Restoration at Oak Bay High School Project
- Installation of interpretive signs throughout the watershed
- Participation in Cedar Hill Park Management Plan stakeholder working group
- Attending community events with BCI display and watershed model to promote education and awareness of the Blueprint and watershed-friendly activities by the general public

Pictured above: Volunteers pulled invasive Golden Willow and many other invasive plants from several sites along Bowker Creek.

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