



Windermere Creek Facilitation Project

Lake Windermere Ambassadors
March 2021

Project Overview

The Lake Windermere Ambassadors is a community-led, charitable non-profit society formed in 2010 with the mandate of protecting Lake Windermere in perpetuity. The Ambassadors have overseen a Community-Based Water Monitoring program on Lake Windermere since their inception, using the assistance of volunteers, and substantial baseline data collected by Wildsight's Lake Windermere Project. Since 2010, the Ambassadors have added to the monitoring program based on needs and available resources, including tributary monitoring, invasive species monitoring, and wildlife surveys.



Apart from the Columbia River, the main tributary entering Lake Windermere is Windermere Creek; a fourth-order mountain stream that drains an area of approximately 90 km². Water sampling by the Lake Windermere Ambassadors on Windermere Creek began in 2013 with the Columbia Basin Water Quality Monitoring Program. During the sampling season, the Ambassadors conduct weekly water quality and quantity measurements, monthly lab analysis and eDNA sampling, and annual CABIN protocol. During the summer of 2020, the Ambassadors received many inquiries about Windermere Creek and heard from multiple parties interested in the Creek's restoration. As a major tributary to Windermere Lake, the Ambassadors would like to help ensure that Windermere Creek supports biodiversity and contributes to a healthy Lake Windermere.



The Ambassadors have distributed a survey to collect information on current monitoring activities and interests related to surface and groundwater resources in the Windermere Creek Watershed and potential Creek restoration. Survey respondents include a diverse group of stewardship organizations, property owners, local government, First Nations, environmental consultants, and other stakeholders. It is the Ambassadors objective that the information gleaned from this survey will further support remedial action and collaboration. Our intent is to share information with other interested parties, including the BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (Research Division) and Living Lakes Canada, both of whom supported this initial information gathering to facilitate possible future collaboration and ensure inclusion of local interests in any potential future work.



For more information contact:

Shannon McGinty- Program Coordinator of LWA at info@lakeambassadors.ca



Interested Parties

As of February 2021, all known parties interested in the status of Windermere Creek have been listed below with associated contact information:

Party	Contact	Description
Akisqnuq First Nation	Chief Ryan Nicholas rnicholas@akisqnuq.org	The Akisqnuq First Nation is a vibrant, growing community nearly 300 members strong situated in the Columbia Valley, southeast British Columbia, Canada. Akisqnuq neighbours the communities of Windermere to the north and Fairmont Hot Springs to the south. Akisqnuq's western border reaches along the shores of Lake Windermere for 14 km. The band's eastern border lies at the base of the Rocky Mountains. Adjacent to Windermere Creek.
Certainteed Gypsum Mine	Steve Rasilainen steve.rasilainen@saint-gobain.com	Offering a broad range of gypsum and finishing products for interior and exterior needs, CertainTeed Gypsum has served the North American building industry for more than 80 years and is a subsidiary of Saint-Gobain, the world's leading producer of gypsum products. One facility adjacent to Windermere Creek.
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	Jon Bisset jon@bissetco.com	In order to enhance habitat for at-risk fish species, the Columbia Headwaters Aquatic Restoration Secwépemc Strategy is prioritizing 20 streams with restoration work planned for five to 10, some having been damaged by extreme sedimentation events and creek blowouts.
Columbia Wetlands Stewardship Partners	Suzanne Bayley sbayley@ualberta.ca	The mandate of the Columbia Wetlands Stewardship Partners is to steward the wetlands in accordance with our vision as a single system irrespective of ownership or jurisdiction and to take a proactive stance in dealing with issues as they arise. We intend to take a positive, community and science based approach to issues related to

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		the wetlands, and resolve issues neighbour to neighbour. The formation of this group is, in effect, local people taking responsibility for a natural landscape that they care deeply about.
Friends of Windermere Creek	Tracy Litchfield tlitchfield@shaw.ca	The Friends of Windermere Creek formed a committee to work on remediating the Windermere Creek Watershed so that damage from extreme events, similar to the flooding seen in Spring 2020, and previously, do not become the norm.
Lake Windermere Ambassadors	Shannon McGinty info@lakeambassadors.ca	The Lake Windermere Ambassadors are a society of community volunteers and cross-sector stakeholders representing local business, recreation, tourism, commercial marinas, water stewardship, ecological conservation, second homeowners, year-round residents, First Nations, two local governments, and youth. Our mandate is the protection of Lake Windermere in perpetuity.
Living Lakes Canada	Carol Lutmer carol@livinglakescanada.ca	Living Lakes Canada works to enhance the protection, the restoration, the rehabilitation, and the health of watersheds in B.C. and across Canada. We build capacity through community-based water monitoring to help address climate impacts. We promote and facilitate cross-sector collaboration and research to increase water literacy, and support progressive decision-making for improved water stewardship.
Regional District of East Kootenay	Susan Clovechok director.clovechok@rdek.bc.ca Brian Funke bfunke@rdek.bc.ca	Established in the mid-1960's, regional districts were created to meet service needs for the rural areas and to partner with municipalities within their boundaries on the provision of services that are more regional in nature. We are a partnership of municipalities and electoral areas who work together through the Regional District of

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		East Kootenay to provide and coordinate services.
Shadybrook Resort	Mike DuBois mike@shadybrookresort.com	Shadybrook Resort is a premier seasonal RV destination in the Columbia Valley. Located on the shores of Lake Windermere, and adjacent to Windermere Creek. Property owners have been monitoring the status of Windermere Creek for many years.
Shuswap Indian Band	Mark Thomas mthomas@shuswapband.ca	Shuswap Band members are proud, healthy and striving to create is a respectful, prosperous and self-sufficient community. Shuswap Band members honour our culture, language and traditions in ways that promote economic prosperity, as well as opportunities for education and employment.
Windermere Creek B&B Cabins	Scott MacDonald windcreek@shaw.ca	The Windermere Creek Bed and Breakfast Cabins offers an environment of relaxation where you can enjoy the abundant sights and sounds of nature in the Canadian forests. Property is adjacent to Windermere Creek. Property owners have been monitoring the status of Windermere Creek and the upland wetlands for many years.

Survey Responses

Survey requests were sent out to interested parties in February 2021. These parties were chosen based on known works or interests currently taking place on Windermere Creek. The purpose of this survey is to collect information on current monitoring activities and interests related to surface and groundwater resources in the Windermere Creek Watershed and potential Creek restoration. It is our objective that the information gleaned will further support collaboration.

*Multiple interested parties were unable to respond to survey requests by the end of this project. This document will act as a working document and remaining survey responses will be included, once received.

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Is your organization collecting data on Windermere Creek?

Respondent	Response
Akispnuq First Nation	No
Certainteed Gypsum Mine	Yes <ul style="list-style-type: none"> - 26 sampling sessions per year for water quality at various points of the creek, freshwater release (effluent) - Surface water quality sampling
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	Yes <ul style="list-style-type: none"> - Drone footage - Electrofishing - Geomorphic analysis
Friends of Windermere Creek	No
Lake Windermere Ambassadors	Yes <ul style="list-style-type: none"> - Water quality - Water quantity - CABiN protocol - eDNA sampling - Nutrient sampling
Living Lakes Canada	Yes <ul style="list-style-type: none"> - Groundwater level data
Regional District of East Kootenay	No
Shadybrook Resort	No
Shuswap Indian Band	Yes <ul style="list-style-type: none"> - Fish habitat
Windermere Creek B&B Cabins	No

Is your organization analyzing data collected on Windermere Creek?

Respondent	Response
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Akisqnuq First Nation	No
Certainteed Gypsum Mine	Yes
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	Yes
Friends of Windermere Creek	No
Lake Windermere Ambassadors	Yes
Living Lakes Canada	Yes
Regional District of East Kootenay	No
Shadybrook Resort	No
Shuswap Indian Band	Yes
Windermere Creek B&B Cabins	No

Are you a landowner adjacent to Windermere Creek?

Respondent	Response
Akisqnuq First Nation	Yes
Certainteed Gypsum Mine	Yes
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	No
Friends of Windermere Creek	Yes (Members of this organization own property adjacent to Windermere Creek)
Lake Windermere Ambassadors	No
Living Lakes Canada	No
Regional District of East Kootenay	No
Shadybrook Resort	Yes
Shuswap Indian Band	No

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Windermere Creek B&B Cabins	Yes
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Please describe your concerns for Windermere Creek:

Respondent	Response
Akisqnuq First Nation	We have land claims up to Windermere Creek, upper field on Windermere Loop road has been returned to Akisqnuq First Nation. Ancestors had Teepee camps along Windermere Creek we have pictorial evidence to back that up.
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	Existing Westslope Cutthroat Trout (Species At Risk) population makes windermere creek high priority. The level of disturbance sustained below Windermere Loop Rd and the impacts this damage has on fisheries is a concern. The Columbia Headwaters Aquatic Restoration Secwépemc Strategy is currently in the process of creating a ranking system to help prioritize creeks and streams in need of restoration and enhancement.
Friends of Windermere Creek	As we continue to see these flooding events, without some form of remediation or restoration activities, we are concerned with the continuation of major erosion, sediment deposition, riparian damage, habitat degradation, increases to the delta in Lake Windermere and associated damage and economic impacts this delta will cause. An additional concern is the cost and energy spent on flooding emergencies as they occur, taxpayers are paying significant funds through the BC Emergency Program to manage the aftermath of creek flows.
Lake Windermere Ambassadors	The Lake Windermere Ambassadors are concerned with the level of disturbance experienced by Windermere Creek. As the largest tributary of Lake Windermere, after the Columbia River, the health of the creek directly reflects the health of the lake. The significance of 2020's

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	flooding events prevented the Ambassadors from collecting multiple weeks of water quality and quantity data. Additionally, the Ambassadors are concerned for the biodiversity that depends on Windermere Creek as an important habitat.
Living Lakes Canada	Living Lakes Canada supports the protection, restoration, rehabilitation, and health of watersheds in British Columbia and across Canada by working on projects to engage communities and conduct community based monitoring. Living Lakes Canada would like to see Windermere Creek support biodiversity and a healthy watershed. Living Lakes Canada is interested in understanding surface-groundwater flow interactions.
Regional District of East Kootenay	Sediment erosion, transportation, and deposition at the mouth of Windermere Creek causing the creek to rise and flood adjacent properties.
Shadybrook Resort	My concern is the lake. It is being filled with sediment which degrades habitat and fisheries values, recreation values, and poses a risk to public safety.
Shuswap Indian Band	Agricultural, commercial, and residential impacts to fisheries and water quality.
Windermere Creek B&B Cabins	We're very concerned with the periodic flooding events, coinciding with heavy freshet years since the creek was diverted.

Please describe your project on Windermere Creek (if applicable):

Respondent	Response
Akispuk First Nation	N/A at this time
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	The Columbia Headwaters Aquatic Restoration Secwépemc Strategy in the process of finalizing a memo for Windermere Creek (to be completed early April). This memo will highlight historical

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	<p>impacts to Windermere Creek, past efforts and research completed, and the steps needed for a long term restoration strategy. This information will inform decision-makers, and ideally help restore flow and connectivity in the upstream wetlands</p>
<p>Friends of Windermere Creek</p>	<p>The Friends of Windermere Creek have partnered with the Rod and Gun Club and have been successful in fundraising \$5,000.00 from the Columbia Valley Local Conservation Fund through the Kootenay Conservation Program. We have proposed to hire a consultant to study the current situation, review previous studies, and develop an effective strategy to remediate Windermere Creek. Jon Bisset Co has won this bid and will be the project consultant. While we are aware that the erosion and sedimentation from previous flood events have had real financial costs to many stakeholders, the proposal is designed to address natural systems with a focus on conservation. We believe that conservation issues and the commercial issues are not mutually exclusive and that by addressing the conservation of the habitat, the whole creek ecosystem, and groundwater monitoring that we will be addressing other interests as well.</p>
<p>Lake Windermere Ambassadors</p>	<p>From 2007 to 2018, the Columbia Basin Water Quality Monitoring Program (CBWQM) ran on Windermere Creek. This project oversaw scientific data collection in streams of the East and West Kootenays, through fieldwork that was undertaken by local volunteers and non-profit organizations. The Ambassadors have continued monitoring of Windermere Creek, on a weekly basis from May to October. The Ambassadors also perform monthly environmental DNA samples as part of the STREAM Project and annual CABiN Collection. Additionally, the Ambassadors provide an educational resource to the public, keen on facilitating information and supporting the conservation of Windermere Creek.</p>

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Living Lakes Canada	<p>Living Lakes is monitoring water levels in two private domestic wells along Windermere Loop Road. Monitoring began in October 2018 and is ongoing. Data are available to the public online on the BC Real time water data application. Monitoring was initiated because of concern about some of the wells in the area going dry. Living Lakes has been working on a 3-D conceptual model to characterize the groundwater flow in the vicinity of Windermere Creek and has gathered and summarized existing available to support characterization of the groundwater system . Target completion date for the 3-D model and report is March 30 2021. A summary report on water level monitoring will also be complete March 30th.</p>
Regional District of East Kootenay	<p>Update the 2013 Windermere Creek Hydrotechnical Assessment with new information and modernize the cost estimate for mitigation measures and operation/maintenance costs.</p> <p>By supporting the Lake Windermere Ambassadors through a Fee for Service Agreement, the Regional District of East Kootenay is involved with the monitoring of Lake Windermere and has allocated a budget to build upon the existing hydrotechnical assessment of Windermere Creek.</p>
Shadybrook Resort	N/A
Shuswap Indian Band	Instream restoration prescriptions are currently being developed by Shuswap Indian Band.
Windermere Creek B&B Cabins	N/A

Please describe your ideal outcome for Windermere Creek:

Respondent	Response
Akisqnuq First Nation	We know the creek has changed over the years with the high waters happening almost every

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	<p>year. We are looking into our water right on reserve creeks and Windermere creek is one of them.</p>
<p>Columbia Headwaters Aquatic Restoration Secwépemc Strategy</p>	<ol style="list-style-type: none"> 1) Long term strategy in place 2) Re-establishing a water Survey of Canada station on Windermere Creek 3) Recognizing the importance of Windermere Creek, and the ways interested parties can continue to monitor and assess the creek
<p>Friends of Windermere Creek</p>	<p>Regain original state of Windermere Creek prior to creek movement. Restore the creek and save some tax dollars. All interested parties would find a way to control the emergency expenditure by remediating the creek. Creek water users would stop seeing damage to inlet structures and the creek would stabilize and we wouldn't see erosion to the banks and riparian habitats.</p>
<p>Lake Windermere Ambassadors</p>	<p>A healthy and functioning creek, providing habitat to biodiversity and allowing the Ambassadors to continue data collection.</p>
<p>Living Lakes Canada</p>	<p>A healthy creek, meeting the needs of people and nature.</p>
<p>Regional District of East Kootenay</p>	<p>Create a Service Area to fund mitigation, operation and maintenance with assistance from potential senior government grants.</p>
<p>Shadybrook Resort</p>	<ol style="list-style-type: none"> 1. The source of the sediment is cut off to stop/reduce future sediment flows. 2. A sediment trap is constructed to allow for the safe, orderly removal of sediment before it goes into the lake. 3. The delta is removed back to pre-2010 levels.
<p>Shuswap Indian Band</p>	<p>An ecologically functioning creek, with increased awareness by the local land users on their impact to the creek and a noticeable change to their operations. A formal commitment would be nice.</p>

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Windermere Creek B&B Cabins	We would love to see the creek put back through the wetlands on our property that always mitigated heavy freshets.
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Do you have any additional feedback?

Respondent	Response
Akisqnuq First Nation	Akisqnuq First Nation has the Rights and Title in the Columbia Valley and are willing to work with positive moves in the future.
Columbia Headwaters Aquatic Restoration Secwépemc Strategy	From a Columbia Headwaters Aquatic Restoration Secwépemc Strategy perspective, immense collaboration needs to take place in order for a successful, long term restoration strategy to be put into place.
Friends of Windermere Creek	No
Lake Windermere Ambassadors	The Lake Windermere Ambassadors hope to see this project result in collaborative efforts from interested parties and we intend to continue acting as a facilitator of this information to better inform the public and decision-makers on the importance of healthy freshwater systems.
Living Lakes Canada	No
Regional District of East Kootenay	No
Shadybrook Resort	No
Shuswap Indian Band	The educational component of our work is in need of supplementation to address the need. would be nice to touch base to see where we could compliment one another.
Windermere Creek B&B Cabins	No

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Conclusion

As per the survey results, four individual organizations are collecting and analyzing data from Windermere Creek. Living Lakes Canada, Lake Windermere Ambassadors, Shuswap Indian Band, and the Columbia Headwaters Aquatic Restoration Secwépemc Strategy are performing data collection to improve hydrometric and biodiversity knowledge of Windermere Creek. Three respondents are adjacent property owners to the creek and have personally experienced the impacts of flooding events through this disturbed watershed. Concerns for Windermere Creek amongst respondents are relatively shared. This creek provides habitat to multiple fish species including, Burbot, Rainbow Trout, Brook Trout, and Westslope Cutthroat Trout, an important Species At Risk. The health of these species are a top priority and concern for four of the survey respondents. Additionally, an increase in flooding and emergency events over the years has caused unease amongst interested parties, especially adjacent land owners. One of many impacts from these flooding events is the cost to taxpayers to fund remedial action following an emergency.

There are multiple current projects taking place on Windermere Creek, all of which hold the potential for collaboration amongst interested parties. The Ambassadors believe that the next steps to highlight this potential is to organize a meeting of organizations and property owners and formulate a long term strategy for the conservation of the Windermere Creek watershed. The Lake Windermere Ambassadors are intent on gathering as much information on the creek as possible. We will accept any and all resources that can assist with a recovery strategy. If you have further additions you would like to make to this document, please contact Shannon McGinty at info@lakeambassadors.ca.

Resources

[Windermere Creek Hydrotechnical Assessment](#)
2013

[Preliminary DNA Data- STREAM Report](#)
2020

[Windermere Hydrogeological Characterization](#)
2021

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Potential Funding List

Funder	Description
<u>Canfor Community Enhancements</u>	Throughout our history, Canfor and our employees have contributed to charitable community groups and activities that will have a long-term and significant benefit to communities where we operate.
<u>Columbia Basin Trust</u>	Large Environmental Grant and Ecosystem Enhancement Grant.
<u>Columbia Valley Local Conservation Fund (RDEK)</u>	In partnership with Kootenay Conservation Partners, the Regional District of East Kootenay provides funding for projects in the Columbia Valley region that benefit conservation through the Columbia Valley Local Conservation Fund.
<u>EcoAction Community Funding Program</u>	The EcoAction Community Funding Program provides financial support to non-profit and non-government organizations for local action-based projects that produce measurable, positive effects on the environment.
<u>Environmental Damages Fund</u>	The purpose of any contribution to the EDF is to restore the environment and conserve wildlife and habitats in a scientifically sound, cost-effective, and technically feasible way.
<u>Federation of Canadian Municipalities</u>	Projects and programs that generate environmental, economic and other benefits for the broader community.
<u>Fish and Wildlife Compensation Program</u>	We're a partnership between BC Hydro, the Province of B.C., Fisheries and Oceans Canada, First Nations and Public Stakeholders to conserve and enhance fish and wildlife in watersheds impacted by BC Hydro dams.

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<u>Habitat Conservation Trust Foundation</u>	Enhancement and Restoration Grants.
<u>Patagonia Corporate Grant Program</u>	We support innovative work that addresses the root causes of the environmental crisis and seeks to protect both the environment and affected communities.
<u>Royal Bank of Canada Foundation</u>	The <u>RBC Foundation</u> is a Canadian Registered Charity and focuses on preparing youth for the future of work, protecting the environment, and helping emerging artists thrive.
<u>Shell</u>	Environmental grants support projects involving biodiversity/conservation efforts, improving local environments, water programs or initiatives
<u>Taynton Bay Spirits (Local Distillery)</u>	As a local business, benefiting greatly from freshwater and the local tourism Lake Windermere attracts, Taynton Bay may be a potential funder to help protect local watersheds, such as Windermere Creek.
<u>World Wildlife Fund-Canada's Restoration Fund</u>	The WWF-Canada Restoration Fund was created in 2018 to help us achieve our goal of having all freshwater in Canada in good health. As a part of Coca-Cola's commitment to be globally water-neutral through watershed conservation projects, the fund supports community-based restoration initiatives.

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