



Regional District of Central Kootenay
COMMUNITY SUSTAINABLE LIVING ADVISORY COMMITTEE
Open Meeting Agenda

Date: Tuesday, February 14, 2023
Time: 1:00 pm
Location: RDCK Board Room, 202 Lakeside Dr., Nelson, BC

Directors will have the opportunity to participate in the meeting electronically. Proceedings are open to the public.

Pages

1. WEBEX REMOTE MEETING INFO

To promote openness, transparency and provide accessibility to the public we provide the ability to attend all RDCK meetings in-person or remote (hybrid model).

Join by Video:

<https://nelsonho.webex.com/nelsonho/j.php?MTID=mc4ddf571f5cc1cb21e17e5da071c61e7>

Join by Phone:

1-844-426-4405 Canada Toll Free
+1-604-449-3026 Canada Toll (Vancouver)

Meeting Number (access code): 2771 236 9830

Meeting Password: pgJyvNmP732

In-Person Location: RDCK Boardroom, 202 Lakeside Drive, Nelson, BC

2. CALL TO ORDER

Chair Popoff called the meeting to order at ____ p.m.

3. TRADITIONAL LANDS ACKNOWLEDGEMENT STATEMENT

We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

4. ADOPTION OF AGENDA

RECOMMENDATION:

The Agenda for the February 14, 2023 Community Sustainable Living Advisory Committee meeting be adopted as circulated.

5. **RECEIPT OF MINUTES** 4 - 9
The November 29, 2022 Community Sustainable Living Advisory Committee minutes, have been received.
6. **STAFF REPORTS**
- 6.1 **STAFF REPORT** 10 - 22
The Staff Report dated February 14, 2023 from Paris Marshall Smith, Sustainability Planner, has been received.
7. **OLD BUSINESS**
- 7.1 **FOR INFORMATION: CSLAC 2023 ACTIONS AND WORKPLAN** 23 - 34
The CSLAC 2023 Actions and Work Plan presentation from Paris Marshall Smith, Sustainability Planner, has been received.
- 7.1.1 **DELEGATE** 35 - 49
Dan Gatto, from South Kootenay Lake Community Services Society will present Kootenay Lake Geothermal Project - Phase Two, to the Committee.
- 7.2 **FOR DISCUSSION: 2023 CSLAC DRAFT BUDGET** 50 - 55
The CSLAC 2023 Draft Budget presentation from Chris Johnson, Manager of Community Sustainability, has been received.
- 7.2.1 **FOR INFORMATION: LIVING LAKES GROUND WATER MONITORING** 56 - 86
The Committee Report dated November 10, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.
Original Item 12.3 from November 29, 2022 CSLAC Agenda
- 7.2.2 **FOR INFORMATION: KOOTENAY LAKE WATERSHED MONITORING PROGRAM** 87 - 110
The Committee Report dated November 10, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.
Original Item 12.4 from November 29, 2022 CSLAC Agenda

RECOMMENDATION:

That the Board direct staff to defer the Friends of Kootenay Lake CABIN Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

8. PUBLIC TIME

The Chair will call for questions from the public and members of the media at _____ p.m.

9. NEXT MEETING

The next Community Sustainable Living Advisory Committee meeting is scheduled for April 18, 2023 at 1:00 p.m.

10. ADJOURNMENT

RECOMMENDATION:

The Community Sustainable Living Advisory Committee meeting be adjourned at _____ p.m.



Regional District of Central Kootenay COMMUNITY SUSTAINABLE LIVING ADVISORY COMMITTEE

Open Meeting Minutes

Tuesday, November 29, 2022 at 9:00 a.m.

RDCK Hybrid Meeting

COMMISSION MEMBERS PRESENT

Director W. Popoff	Electoral Area H	In-person
Director G. Jackman	Electoral Area A	In-Person
Director R. Tierney	Electoral Area B	
Director K. Vandenberghe	Electoral Area C	
Director A. Watson	Electoral Area D	
Director C. Graham	Electoral Area E	
Director H. Cunningham	Electoral Area G	
Director A. Davidoff	Electoral Area I	
Director H. Hanegraaf	Electoral Area J	
Director T. Weatherhead	Electoral Area K	
Director S. Hewat	Village of Kaslo	
Director C. Ferguson	Village of Silverton	
Director D. Lockwood	Village of Salmo	

COMMISSION MEMBERS ABSENT

Director T. Newell	Electoral Area F
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GUESTS

Director A. McLaren-Caux	Village of Nakusp
Director K. Page	City of Nelson

STAFF PRESENT

S. Sudan	General Manager of Development and Community Sustainability Services
C. Johnson	Manager of Community Sustainability
P. Marshall-Smith	Sustainability Planner
S. Kindred	Administrative Assistant, Development & Community Sustainability Services

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Join by Phone:

1-844-426-4405 Canada Toll Free

+1-604-449-3026 Canada Toll (Vancouver)

Meeting Number (access code): 2460 367 4612

Meeting Password: EVdYHK6mu38

In-Person Location:

202 Lakeside Drive, Nelson, BC RDCK Boardroom

2. CALL TO ORDER

RDCK General Manager of Development and Community Sustainability Services, Sangita Sudan assumes the chair at 9:00 a.m.

3. ELECTION OF THE CSLAC CHAIR

3.1 CALL FOR NOMINATION (3 times)

General Manager Sudan announced the nominations submitted for Director Hewat and Director Popoff.

General Manager Sudan called for nominations the first time.

General Manager Sudan called for further nominations the second and third time.

There being none, General Manager Sudan declared an election.

3.2 OPPORTUNITY FOR CANDIDATES TO ADDRESS THE COMMITTEE

General Manager Sudan gave two minutes to each Director to speak.

Directors Hewat and Popoff each gave a two-minute address.

3.3 VOTE BY SECRET BALLOT

Electronic Voting RDCK Procedure Bylaw No. 2576, 2019)

General Manager Sudan provided the Committee with the instructions to conduct an electronic vote and distributed the secret ballots to the two Committee Members

present. After collecting the electronic votes, General Manager Sudan and Sustainability Planner Paris Marshall Smith exited the room and counted votes.

3.4 DECLARATION OF ELECTED OR ACCLAIMED CHAIR

General Manager Sudan declared Director Popoff the Community Sustainable Living Advisory Committee Chair.

Moved and seconded,
And Resolved:

That the ballots used in the election of the Community Sustainable Living Advisory Committee Chair be destroyed.

Carried

4. CHAIR'S ADDRESS

Chair Popoff thanked the Committee for their support.

5. COMMENCEMENT OF REGULAR MEETING

Chair Popoff assumed the Chair.

6. TRADITIONAL LANDS ACKNOWLEDGEMENT STATEMENT

We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

7. ADOPTION OF AGENDA

Moved and seconded,
And Resolved:

The Agenda for the November 29, 2022 Community Sustainable Living Advisory Committee meeting be adopted as circulated.

Carried

8. RECEIPT OF MINUTES

The October 11, 2022 Community Sustainable Living Advisory Committee minutes, have been received.

Director K. Page and Director A. McLaren-Caux have freedom of the floor.

Carried

9. DELEGATES

9.1 Living lakes Canada

Kayla Harris from Living Lakes Canada gave a presentation to the Committee regarding the Columbia Basin Groundwater Monitoring Program to the Committee.

Ms. Harris answered the Committee's questions and Chair Popoff thanked Ms. Harris for her presentation.

9.2 Friends of Kootenay Lake

Kayla Tillapaugh from Friends of Kootenay Lake gave a presentation to the Committee regarding the Kootenay Lake Watershed Monitoring Program to the Committee.

Ms. Tillapaugh answered the Committee's questions and Chair Popoff thanked Ms. Tillapaugh for her presentation.

10. STAFF REPORTS

10.1 STAFF REPORT

The Staff Report dated November 29, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.

11. OLD BUSINESS

11.1 FOR DISCUSSION: WATERSHED GOVERNANCE INITIATIVE UPDATE

The Committee Report dated November 7, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.

Moved and seconded,

And resolved that it be recommended to the Board:

That the RDCK Board include funding up to \$45,000 in the 2023 draft Financial Plan, from Local Government Climate Action Program (LGCAP) Reserve Fund held in General Administration Service S100, for the 2023 Watershed Governance Initiative GIS Assistant.

Carried

12. NEW BUSINESS

12.1 CSLAC 2023 WORK PLAN AND BUDGET

The CSLAC Budget and Work Plan presentation from Chris Johnson, Manager of Community Sustainability and Paris Marshall Smith, Sustainability Planner, has been received.

**DIRECTOR
ABSENT**

Director Tierney left the meeting at 10:26 a.m.

12.2 FOR DISCUSSION: NAKUSP FOOD SYSTEM ENHANCEMENT PLAN

The Committee Report dated November 10, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.

Moved and seconded,
And Resolved:

That the following recommendation **BE REFERRED** to the February 14, 2023 CSLAC Meeting.

That the Board direct staff to complete Step 2 Community Sustainable Living Advisory Committee Project Evaluation for the Nakusp Food System Enhancement project.

Carried

12.3 FOR DISCUSSION: LIVING LAKES GROUND WATER MONITORING

The Committee Report dated November 10, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.

Moved and seconded,
And Resolved:

That the following recommendation **BE REFERRED** to the February 14, 2023 CSLAC Meeting.

That the Board direct staff to defer the Living Lakes Canada 2023 Columbia Basin Groundwater Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

Carried

12.4 FOR DISCUSSION: CABIN MONITORING

The Committee Report dated November 10, 2022 from Paris Marshall Smith, Sustainability Planner, has been received.

Moved and seconded,
And Resolved:

That the following recommendation **BE REFERRED** to the February 14, 2023 CSLAC Meeting.

That the Board direct staff to defer the Friends of Kootenay Lake CABIN Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

Carried

12.5 FOR DISCUSSION: CONFIRM 2023 CSLAC MEETING DATES

The Committee confirmed the following dates for 2023:

- February 14, 2023
- April 18, 2023
- June 13, 2023
- August 15, 2023
- October 17, 2023
- December 12, 2023

13. PUBLIC TIME

The Chair will call for questions from the public and members of the media at 11:07 a.m.

14. NEXT MEETING

The next Community Sustainable Living Advisory Committee meeting is scheduled for February 14, 2023 at 1:00 p.m.

15. ADJOURNMENT

Moved and seconded,
And Resolved:

The Community Sustainable Living Advisory Committee meeting be adjourned at 11:09 a.m.

Carried

Walter Popoff, Chair

Shelly Kindred, Secretary



REGIONAL DISTRICT OF CENTRAL KOOTENAY

CSLAC Staff Update

Date: 2023/02/14

To: Community Sustainable Living Advisory Committee

From: Paris Marshall Smith, Sustainability Planner

Subject: UPDATE ON SUSTAINABILITY SERVICE PROJECTS & AREAS OF ACTIVITY

File: 01-0515-20-CSLAC

The purpose of this memo is to provide an update to the Community Sustainability Living Advisory Committee (CSLAC) of the current activity of the Sustainability Planner within S105. Updates on S100 initiatives such as RDCK Climate Actions, Regional Energy Efficiency Program (REEP) and 100% Renewable Energy by 2050 will go directly to the Board.

- Year 1 (2017) focus – responding to projects underway and initiating new activity to support Board priorities on Coordinated Delivery; Water – protection & advocacy; Housing; and Food & Agriculture. Energy & Climate Change are also Board priorities as per the climate action charter;
- Year 2 (2018) focus – integrating initiatives internally and externally through coordinated communication, marketing, policy development and by-law review.
- Year 3 (2019) focus – Watershed Governance Initiative, Senior Energy Specialist, Regional Energy Efficiency Program (REEP),
- Year 4 (2020) focus – Watershed Governance Initiative, Timber Deadstock Bioenergy, Regional Energy Efficiency Program (REEP) and Climate Action Strategy
- Year 5 (2021) focus – Watershed Governance Initiative, Climate Action Strategy and Regional Bioenergy Opportunities
- Year 6 (2022) focus - Watershed Governance Initiative, Climate Action Strategy & project management of Slocan Lake and River Collaborative (SLRP), Invasive Species Plan Implementation & Geothermal GIS projects
- Year 7 (2023) focus: Watershed Governance Initiative (Duck Creek Cumulative Impact Study), Slocan Lake and River Collaborative (SLRP) and Grid Resilience Investigation.

GMDS – General Manager of Development & Community Sustainability Services, CSM – Manager of Community Sustainability Services & SP – Sustainability Planner

SUMMARY OF SUSTAINABILITY PLANNER *CURRENT* WORK TIME DISTRIBUTION

AREA OF WORK	CURRENT %	COMMITMENT
Community Sustainability Service (105) initiatives		
Central Kootenay Food Policy Council	1%	Participation in strategic review process, update to come in spring 2023
Watershed Governance Initiative	35%	Phase 3: GIS work underway, investigation of Duck Creek watershed cumulative impact study and communication with Province regarding Water Sustainability Plans and Objectives, Service Case Analysis will begin in June.
Slocan Lake and River Partnership	2%	Steering Committee has met, next step development of Terms of Reference for Partnership.
Kootenay Lake Partnership	0%	KLP active and underway. Report included in February meeting package.
Community geothermal GIS project	1%	Project complete final report and presentation to CSLAC in February.
Rural Grid Resilience Investigation	5%	Application to CBT for funding to implement pilots complete, will hear results in March or April.
Admin	8%	The admin rhythm revolves around the bi-monthly CSLAC meeting and includes project evaluations & funding applications
General admin (S100) initiatives		
Climate Action Strategy	40%	RDCK Climate Actions draft ready for Board review, also includes implementation plan and proposal for Climate Action Ambassadors
Regional Invasive Species Plan	2%	Subject to budget approval in March, work will begin in 2023
Admin	6%	Reporting as needed to the Board
TOTAL	100%	

Color legend for areas of work
Food & agriculture
Water advocacy & protection
Energy
Climate Action

CURRENT CSLAC COMMITMENTS FOR YEAR 7 (2023)

CSLAC AREA OF FOCUS	PROJECT	STATUS	TIMELINE	CSLAC STAFF TIME
Food and Agriculture	Central Kootenay Food Policy Council	Active and confirmed	On-going	0.1
Water	Kootenay Lake Partnership	Active and confirmed	On-going	0.4
	Watershed Governance Initiative – Phase 3	Active and Confirmed	Spring 2023-2024	
	Slocan Lake and River Collaborative	Active and Confirmed	Spring - Fall 2022	
Energy	Rural Grid Resilience Investigation	Active and confirmed	Fall 2023	0.1
Climate Action	Climate Action Strategy	Active and confirmed	On-going	0.3 FTE
	Implementation of Regional Invasive Species Strategy	Active and to be confirmed	Spring 2023	
CSLAC	Administration	Active and confirmed	On-going	0.1 FTE

2022 staff time commitment 1.0 FTE

Available CSLAC funding for 2023 \$6,500 remaining from Annual Project Fund

DASHBOARD OF CSLAC ACTIVITIES – Board resolutions follow

Program	Responsible	Update of Activity	Staff time & funding	Current allocation of resources by SP	Activity to next meeting	Activity for 2023
CENTRAL KOOTENAY FOOD POLICY COUNCIL	Executive Director Marya Skrypiczajko with support from SP	Currently supporting the development of the CKFCP strategic plan	\$15,000 from S100 + staff time	Normally minimal: 1-2 hours per month to attend meetings and follow email conversations. SP has joined Policy and Anti-Racism Working group and is supporting the development of a Policy project plan and Anti-racism strategy.	To be determined	On-going Council + working groups participation

Project	Responsible	Update of Activity	Staff time & funding	Current allocation of resources by SP	Activity to next meeting	Activity for 2023
WATERSHED GOVERNANCE PROJECT PLANNING	SP & Water Service Liaison	WGI has moved into Phase 3 and focused on the Story Mapping, Water Sustainability Plans and building relationships – Duck Creek Cumulative Impact Study	Expenses from CARIP + staff time + \$25,000 for Duck Creek	SP (0.3 FTE), GMDS (0.05 FTE), CSM (0.1 FTE) and Water Services Liaison (0.1 FTE) to support the project	Updating the existing story maps, building new and learning about WSPs	Duck Creek, story mapping, Service Case Analysis
SLOCAN LAKE AND RIVER PARTNERSHIP	SP & GMDS	Initial development of Partnership underway	\$5,000 from CSLAC project fund		Meeting with the Steering Committee	Develop structure for SLRP

Project	Responsible	Update of Activity	Staff time & funding	Current allocation of resources by SP	Activity to next meeting	Activity for 2023
CLIMATE ACTION STRATEGY	SP	RDCK Climate Actions with Board for receipt, staff request adoption in April 2023 – engagement will happen between February & April	Funding from S100 LGCAP and other grants & staff time	30-40 % of staff time for 2023	Currently working on engagement package	Implementing RDCK Climate Actions

Project	Responsible	Update of Activity	Staff time & funding	Current allocation of resources by SP	Activity to next meeting	Activity for 2023
REGIONAL INVASIVE SPECIES PLAN	SP	Awaiting budget approval for both management of RDCK properties and Regional Invasive Species Strategy	Staff time + \$48,230 for RDCK properties + \$27,000 for strategy	Minimal	Budget approval in March for contracts to begin	Implementation of management of RDCK properties and Regional Invasive Species Strategy

Project	Responsible	Update of Activity	Staff time & funding	Current allocation of resources by SP	Activity to next meeting	Activity for 2023
COMMUNITY GEOTHERMAL – GIS PROJECT	SP	Phase 2 project complete, reporting at February CSLAC meeting	Staff time	Minimal	None	None
GRID RESILIENCE	SP	Application to CBT for regional pilot complete, awaiting response – working in partnership with LINKS in Lardeau Valley	Staff time	Minimal	Waiting for funding response	Will report to CSLAC following funding response on project details

Project	Responsible	Update of Activity	Staff time & funding	Current allocation of resources by SP	Activity to next meeting	Activity for 2023
WEBSITE UPDATE & PRINT MATERIAL	SP & Communications Coordinator	Website continues to be updated and prepared for transition to new website	Staff time	On-going	On-going monitoring and updating	Ensure that website supports internal and external communication effectively
ADMIN	SP	Project management, relationship building, meetings, communication, reporting	Staff time	4-5 hours per week	On-going	

BOARD RESOLUTIONS THAT GUIDE CSLAC’S WORK

FOOD & AGRICULTURE	
CENTRAL KOOTENAY FOOD POLICY COUNCIL	<ol style="list-style-type: none"> 718/17 That the Board direct staff to include a \$10,000 per year funding for the Central Kootenay Food Policy Council within the 2018-2022 draft financial plan for Service S105. 741/18 That the Board grant the balance of \$22,083.62.00 to the Central Kootenay Food Policy Council (CKFPC) contingent on all grant reporting and society action reporting deliverables be presented and approved by the Board; AND FURTHER, that staff obtain documentation form CKFPC that indicates they are in compliance with the British Columbia Societies Act. 757/18 That the Board appoint the following Directors to the Central Kootenay Food Policy Council for a term to end December 31, 2020 Director Faust and the second appointment BE REFERRED to December 13, 2018 Board meeting. 03/19 That the Board appoint the following Director to the Central Kootenay Food Policy Council for a term to end December 31, 2020 as per resolution 757/18: Director Peterson Director Main (Alternate) 48/19 That the Board agrees that the Central Kootenay Food Policy Council has satisfied the Board’s requirements and has demonstrated that it is in compliance with funders and the BC Societies Act; AS SUCH, the RDCK Board grants the balance of the \$29,347.87 to the Central Kootenay Food Policy Council from Community Sustainability Service S105. 284/20 That the Board approve the \$25,000 in the 2020 Financial Plan from Community Sustainable Living Service S105 be held for a Food Security Coordinator position within the Emergency Operations Centre as leveraging funds.

	<ol style="list-style-type: none"> 7. 285/20 That the Board direct staff to report on options to establish a Food Security Coordinator position to be fully funded through Community Sustainable Living Service S105 with a budget up to \$25,000. 8. 377/20 That the Board send a letter of support for the Columbia Basin Food Security Plan; AND FURTHER, that the Board allocate funds to the first phase of the "Central Kootenay Interim Food Security Action Plan" from Community Sustainability Service S105 in the amount of \$22,145.00 to the Central Kootenay Food Policy Council. 9. 115/21 That the Board approve the Central Kootenay Food Policy Council's request for increase in core funding for a total amount of \$15,000 to be included in the 2021 Financial Plan from the Service 105 Community Sustainable Advisory. 10. 286/21 That the Board and staff review the draft Central Kootenay Interim Food Security Action Plan and provide their recommendations by May 11, 2021. 11. 288/21 That Board direct staff to complete an internal assessment, prior to requesting a Service Case Analysis, to understand if a Contribution Service for food and agriculture is possible. 12. 855/21 That the Board direct staff to work with Central Kootenay Food Policy Council to proceed with the proposed actions of the Regional Food Security Action Plan: (See minutes for full resolution)
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WATER

<p>WATERSHED GOVERNANCE INITIATIVE</p>	<ol style="list-style-type: none"> 1. 416/16 That the RDCK write a letter to the POLIS Project on Ecological Governance and invite the organization to the West Kootenay to hold a watershed workshop. 2. 592/16 That the RDCK invite The POLIS Project on Ecological Governance to attend the January 2017 Board meeting to give a presentation on watersheds and water sustainability. 3. 88/18 That the Board direct staff to invite the Polis Project to host a workshop with the RDCK staff and Directors on watershed governance; AND FURTHER expenses and stipend be paid by General Administration S100. 4. 256/18 The Watershed Governance workshop with the POLIS Project be booked for May 18th, 2018 and the Watershed Governance Workshop Discussion report be made available to all Board Directors. 5. 487/18 That the Board direct staff to develop a Regional Watershed Governance Initiative project plan, and identify an allocation for General Manager of Development Service and Sustainability Coordinator's time to implement the project plan for consideration in the draft 2019 five year financial plan within General Administration Service (S100). 6. 892/18 That the RDCK Board directs staff to seek funding to launch and coordinate a scoping study to better understand the potential watershed governance roles and responsibilities of the RDCK; with areas for the study to be determine by the Community Sustainable Living Advisory Committee at the January committee meeting; And Further, the Board allocates staff time of the Sustainability Planner (0.3 FTE), General Manager of Development Services (0.1 FTE) and Water Services Liaison (0.1 FTE) to support the procurement process for services. 7. 13/19 That the Board direct staff to develop a Regional Watershed Governance Initiative project plan, and identify an allocation for General Manager of Development Service and Sustainability Coordinator's time to implement the project plan for consideration in the draft 2019 five year financial plan within General Administration Service (S100).
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	<p>8. 121/19 That the RDCK Board approve funds in the amount of \$26,250 from S105 Community Sustainable Living Advisory Service for the Watershed Governance Initiative scoping study, to complement the work being done in Area H and I's ground water studies, for the following watersheds:</p> <ul style="list-style-type: none"> • Bourke, Sitkum & Duhamel Community Watershed (Area F); • Arrow Creek Community Watershed (Area B); • Ymir Community Watershed (Area G); • Argenta Watershed (Area D); • Harrop (Area E); • and Deer Creek (Area J) <p>9. 409/10 That the RDCK Board award the Regional Watershed Governance Initiative Scoping Study to Christina Metherall and Elucidate Consulting, and that the Chair and Corporate Officer be authorized to sign the necessary documents to a maximum value of \$26,880 (includes GST).</p> <p>10. 282/20 That the Board direct staff to prepare a workplan to determine the organizational capacity of the Community Sustainability Services and Water Services staff to pursue the recommendations of the RDCK Regional Watershed Governance Initiative report dated January 2020.</p> <p>11. 389/20 That the Board endorse the Watershed Governance Initiative Project Plan (May 2020) and direct staff to pursue the Project Plan as a collaboration between Community Sustainability and Water Services staff.</p> <p>12. 610/20 The Board direct staff to bring forward a project plan with budget that will seek to collate and map existing watershed information held by the RDCK and other sources at a regional scale to inform our next steps and as a support to communities and conducting a gap analysis; AND FURTHER bring this back to the Community Sustainable Living Advisory Committee to inform the RDCK's next steps on watershed governance.</p> <p>13. 828/20 That the Board approve transfer of funds to Community Sustainability Service S105 for a student position to support the Watershed Governance Initiative Data Collation and Mapping project in the amount of \$14,500 from the Climate Action Revenue Incentive Program (CARIP) Service S100 and include in the 2021 Financial Plan; That the Board approve transfer of \$9,000 in funds for the Watershed Governance Initiative Data Collation and Mapping project from Climate Action Revenue Incentive Program (CARIP) Service S100 to Community Sustainability Service S105.</p> <p>14. 112/21 That the Board send a letter of support to Living Lakes Canada for the Columbia Basin Water Monitoring Collaborative and Water Hub.</p> <p>15. 113/21 That the Board direct staff to report back to Community Sustainable Living Advisory Committee on how the workplan for the Watershed Governance Initiative is modified and budgeted based on a collaboration with Living Lakes Canada.</p> <p>16. 584/21 That the Board approve the recommended next steps of Phase 3 of the Watershed Governance Initiative (WGI) with a focus on relationship building and planning, mapping and monitoring as outlined below and presented to the Community Sustainable Living Advisory Committee August 17, 2021:</p> <ol style="list-style-type: none"> 1. Supporting continued relationship building with Yaqaan Nukiy and Ktunaxa Nation Council, Syilx Okanagan Nation Alliance, Secwepemc and Sinixt 2. Provide technical support for community led watershed mapping and communication tools such as story mapping 3. Supporting management of RDCK water systems - pilot natural asset management 4. Supporting regional monitoring – investigate how the RDCK could support local level monitoring 5. Supporting community led mapping – investigate Nature Based Planning
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	<ol style="list-style-type: none"> 17. 585/21 That the RDCK Board direct staff to develop a work plan for continued work on the Watershed Governance Initiative (WGI) including seeking external partners; AND FURTHER, to prepare for discussion on how Community Sustainable Living Advisory Committee (CSLAC) can encompass the entire Board. 18. 658/21 That the Board direct the Chair of the Board and Chair of Community Sustainable Living Advisory Committee to reach out to MLA Brittny Anderson to discuss opportunities for engagement around the Regional Watershed Governance Initiative as it moves into Phase 3 focused on relationship building, monitoring and mapping. 19. 852/21 That the Board direct staff, Community Sustainable Living Advisory Committee Chair and Board Chair to work with MLA Anderson to develop a relationship with Forest Lands Natural Resource Operations and Rural Development and host community forums focused on watershed governance and stewardship in 2022. 20. 853/21 That Resolution 847/20, being the transfer of \$9,000 in funds for the Watershed Governance Initiative Data Collation and Mapping project from Climate Action Revenue Incentive Program (CARIP) Service S100 to Community Sustainability Service S105 and include in the 2021 Financial Plan BE RESCINDED because funds were not needed as anticipated. 21. 86/22 That the RDCK Board approve funding up to \$25,000 for the 2022 Watershed Governance Initiative budget from S105 Community Sustainable Living Service and include this in the 2022 Financial Plan; AND FURTHER, the Board allocates staff time of the Sustainability Planner and Water Services Liaison to support the 2022 Watershed Governance Initiative. 22. 128/22 That the Board direct staff to submit a response on behalf of the RDCK to the Province on the Watershed Security Strategy and Fund; AND FURTHER, invite Board members and staff to comment on the draft responses by Monday, February 28, 2022. 23. 258/22 That the RDCK Board direct staff to send a request to Yaqan Nukiy Chief and Council for their participation on developing a Water Sustainability Plan for the Creston Valley; AND FURTHER, request that the Province order a Water Sustainability Plan be developed in the Creston Valley in partnership with RDCK and Yaqan Nukiy SUBJECT TO agreement from Yaqan Nukiy. 24. 433/22 That the Board direct staff to prepare a service case analysis and report back to the Board on the implications of establishing the requisition of a Drinking Water & Watershed Protection Service bylaw for protection of watersheds and drinking water in the Regional District of Central Kootenay to be added to the workplan in 2023. 25. 515/22 That the Board direct staff to work with the Wynndel community residents to create a story map, request an investigation under the Drinking Water Protection Act (Section 29) and request that the Ministry of Forests confirm the VRI (vegetation regeneration index) for the Duck Creek Watershed; AND FURTHER, that the Community Sustainable Living Service (S105) contribute up to a total of \$25,000 of funds over 2022 and 2023 budget years to conduct a cumulative impact study of proposed logging in the Duck Creek Watershed. 				
<p>KOOTENAY LAKE PARTNERSHIP</p>	<ol style="list-style-type: none"> 1. 91/18 That the RDCK Board approve funding of \$10,000 under S105 Community Sustainable Living Service to support the contracted service of the Kootenay Lake Partnership Coordinator position within the 2018 budget. 2. 414/19 That the RDCK Board extends its support for Living Lakes Canada's Foreshore Inventory and Mapping for Aquatic Species at Risk proposal to the Canada Nature Fund with in-kind contributions of mapping data and staff hours for a total contribution of \$175,000.00 over the four (4) year term of the project, which is: <table border="1" data-bbox="564 1339 1169 1435" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">PROJECT</th> <th style="text-align: left;">IN-KIND CONTRIBUTIONS</th> </tr> </thead> <tbody> <tr> <td>Regional Flood and Hazard Risk Assessment</td> <td>Completed in 2018 \$40,000.00 Completed in</td> </tr> </tbody> </table> 	PROJECT	IN-KIND CONTRIBUTIONS	Regional Flood and Hazard Risk Assessment	Completed in 2018 \$40,000.00 Completed in
PROJECT	IN-KIND CONTRIBUTIONS				
Regional Flood and Hazard Risk Assessment	Completed in 2018 \$40,000.00 Completed in				

	<p>LIDAR Acquisition and Processing 2018 \$40,000.00</p> <p>Floodplain Mapping Kootenay Lake Inundation Study In Process \$60,000.00 Process \$10,000.00</p> <p>Planning staff time for review and outreach Pending \$25,000.00</p> <p>3. 390/20 That the Board direct staff to transfer the remaining grant funding from the Real Estate Foundation (REF) in Community Sustainability Service S105, administered by RDCK on behalf of the Kootenay Lake Partnership, to Living Lakes Canada to support the Program Coordinator Position upon receiving confirmation from REF to do the transfer; AND FURTHER, that final report comes back to RDCK for information</p> <p>4. That the Board approve an allocation of \$10,000 annually from 2022-2024 to fund the Kootenay Lake Partnership Coordinator from the Community Sustainable Living Service S105 and this amount be added to the 2022-2026 Financial Plan; AND FURTHER, the Board approve that amount be paid to the Ktunaxa Nation Land and Resource Division annually, to support the Kootenay Lake Partnership through contract administration of the Coordinator position SUBJECT TO a contribution agreement with the Ktunaxa Nation Council being prepared and brought back to the Board.</p>
ENERGY	
REGIONAL BIOENERGY & FULL FIBER UTILIZATION PLANNING	<p>1. 119/19 That the Board direct staff to explore partnerships possibilities with Columbia Shuswap Regional District, Regional District East Kootenay and Regional District Kootenay Boundary on the Timber Deadstock Biofuel scoping study; AND FURTHER, that staff explore funding opportunities for the study</p> <p>2. 232/19 That the Board approve the RDCK entering into a Contribution Agreement with Columbia Basin Trust to support the research and development of a business plan for timber deadstock biofuel in the Regional District of Central Kootenay, and that the Chair and Corporate Officer be authorized to sign the necessary documents; AND FURTHER, the required matching funds of up to \$25,000 come from Service S105 - Community Sustainable Living Advisory; AND FURTHER, that the grant funds be received and administered through S105.</p> <p>3. 500/20 That the Board direct staff to further develop the business case potential of the Wood Pellet Boiler Network, District Energy in Castlegar and Village District Energy Systems as part of the Timber Deadstock Bioenergy Feasibility Study in coordination with municipal staff.</p> <p>4. 845/20 That the Community Sustainable Living Advisory Committee Chair, RDCK Board Chair and senior staff approach the new Minister of Forests, Lands, Natural Resource Operations & Rural Development to ask what emerging direction may be coming which would assist the RDCK in further investigating bioenergy projects which would align with provincial objectives of maximizing fiber utilization and reducing forest fuel loading; AND FURTHER to make a similar outreach to Forest Enhancement Society BC.</p> <p>5. 285/21 That the Community Sustainable Living Advisory Committee take no further action at this time on the following recommendation: 845/20 That the Community Sustainable Living Advisory Committee Chair, RDCK Board Chair and senior staff approach the new Minister of Forests, Lands, Natural Resource Operations & Rural Development to ask what emerging direction may be coming which would assist the RDCK in further investigating bioenergy projects which would align with provincial objectives of maximizing fiber utilization and reducing forest fuel loading; AND FURTHER to make a similar outreach to Forest Enhancement Society BC.</p>

COMMUNITY GEOTHERMAL - GIS PROJECT	<ol style="list-style-type: none"> 1. 451/21 That the Board approve funding \$10,000 for the South Kootenay Lake Community Services Society's Community Geothermal - GIS Project Set-up and Data Integration from S105 Community Sustainable Living Service and include this in the 2021 Financial Plan.
RURAL GRID RESILIENCE INVESTIGATION	<ol style="list-style-type: none"> 1. 516/22 That the Board direct staff to work with Community Energy Association to understand the potential and limitations of energy storage, micro generation or bi-directional charging and prepare a workplan and budget for 2-3 community pilots in 2023, with the report to come back to the Community Sustainable Living Advisory Committee for review.
CLIMATE ACTION	
CLIMATE ACTION STRATEGY	<ol style="list-style-type: none"> 1. 124/19 That the Board direct staff to prepare a resolution that responds to ramping up RDCK's climate action in response to the climate emergency by April, 2019. 2. 272/19 - WHEREAS Climate change is recognized to be an urgent reality requiring rapid decarbonisation of energy across all sectors; Climate change is recognized to be an urgent reality where risks are compounded by increased climate change weather related events (more precipitation in the winter, dryer hotter summers) and increased levels of uncertainty. Preparing for increased resilience and adaptability is critical; THEREFORE BE IT RESOLVED That the Regional District of Central Kootenay Board recognizes that the world is in a global state of climate crisis. This reality creates an imperative for ALL ORDERS OF GOVERNMENT to undertake "rapid and far reaching" changes to building construction, energy systems, land use and transportation. 1. 701/19 That the Board direct staff to update the RDCK Policy Framework to incorporate a climate action lens; AND that, the 3-phased Climate Action Lens Policy strategy will seek input from the Senior Management Team to ensure smooth integration with operations and will bring recommendations to the Board for approval. 2. 861/19 That the Board direct staff to distribute the 2019 RDCK State of Climate Action full report and summary handout to the public. 3. 848/20 That the Board approve transfer of funds to Community Sustainability Service S105 for a student position to support climate action work in the amount of \$14,500 from the Climate Action Revenue Incentive Program (CARIP) Service S100 and include in the 2021 Financial Plan; AND FURTHER, to offset the costs of the student position, the Board direct staff to apply to the Pacific Institute for Climate Solutions (PICS) for \$12,000. 4. 604/21 That the RDCK Board endorse updating the RDCK State of Climate Action (SoCA) reporting framework to include a combination of reporting efforts such as – a dashboard, an annual scorecard, and reports (less frequent than current annual reports) with expenses to be paid from General Administration Service S100. 5. 44/22 That the Board adopt Policy 200-01-17 Better Corporate Building Policy and accompanying Procedures effective January 20, 2022 6. That the RDCK Board adopt science based carbon pollution (greenhouse gas emissions) reduction targets of 50% below 2018 levels by 2030, and 100% by 2050; AND FURTHER that the Board directs staff in 2022 to prepare 4-year climate action plans as a pathway to 2030 climate action targets and bring a report back to the Board. 7. 259/22 That the RDCK Board approve the budget of up to \$80,000 for the development of the 2023 -26 Climate Action Plan and associated four (4) year Communication and Engagement Strategy, and that these funds be drawn from the Climate Action Revenue Incentive Program (CARIP) reserve in General Administration Service S100. 8. 514/22 That the Board appoint the following Directors to an advisory group to support the completion of the Regional District of Central Kootenay Climate Action Plan: (see

	minutes for full resolution)
RURAL DEVELOPMENT INSTITUTE (RDI) – CLIMATE ADAPTATION PROJECT	<ol style="list-style-type: none"> 233/19 That the Board partner with the Rural Development Institute’s Regional Approach to Rural Climate Adaptation Project Partnership and direct staff to finalize the agreement; AND FURTHER, allocate \$12,500 of in-kind staff time from Service S105 for 2019-2020 (2 years) to support the Partnership. 595/19 That the Board approve the RDCK entering into a Collaborative Research agreement with Selkirk College for the Regional Approach to Rural Climate Adaptation Project Partnership for the period from May 1, 2019 to March 1, 2021, and that the Chair and Corporate Officer be authorized to sign the necessary documents.
100% RENEWABLE ENERGY BY 2050	<ol style="list-style-type: none"> 257/18 That the Board commit to the development of strategies and implementation of projects to achieve the long-term goal of deriving 100% of its net energy from renewable sources by 2050, and commit to demonstrate strong political leadership and significantly contribute to the reduction of greenhouse gases in the region. 222/19 That the Board appoint the following individual(s) to work with the West Kootenay EcoSociety towards the 100% Renewable Energy by 2050 from the Community Sustainable Living Advisory Committee; AND FURTHER, stipend and expenses to come from S105: Director Faust & Lockwood 412/19 That the Board Chair and Corporate Officer sign the Memorandum of Understanding with West Kootenay 100% Renewable Energy Plan. 139/21 That the Board receive the West Kootenay 100% Renewable Energy Plan dated December 2020 as presented in the January 6, 2021 West Kootenay 100% Renewable Energy Plan Board Report; AND FURTHER, that the adoption of the plan be considered after the workshop has taken place.
REGIONAL INVASIVE SPECIES PLAN	<ol style="list-style-type: none"> 483/21 That the Board direct Development and Community Sustainability Services staff to coordinate with staff from Geographic Information Services, Resource Recovery, Water Services, Recreation Facilities and Parks to create a proposal for an implementation plan of the draft Regional Invasive Species Strategy. 50/22 That the Board direct staff to negotiate and enter into a sole-source agreement with the Central Kootenay Invasive Species Society for an invasive plant inventory on RDCK-owned or leased properties and development of a detailed implementation plan of the Regional Invasive Species Strategy for an amount not to exceed \$44,472 exclusive of GST; AND FURTHER, that the costs for the inventory be paid from the services responsible for the lands and buildings sites identified and the costs of \$8,500 for the Regional Invasive Species Implementation Plan be paid from General Administration Service S100. 780/22 That the Board direct staff to enter into a sole-source agreement with the Central Kootenay Invasive Species Society for invasive plant management on RDCK-owned-leased properties, as outlined in the 2022 RDCK Invasive Plant Management Plan up to a maximum amount of \$48,230 plus GST; AND FURTHER, that the costs for the invasive plant management be added to the 2023-2027 Financial Plan for the departments responsible for the lands and building sites identified. 60/23 That the Board direct staff to negotiate an agreement with the Central Kootenay Invasive Species Society for implementation of Option 1 (\$15,000) and PILOT the Good Neighbour program (\$12,000) of the Regional Invasive Species Strategy for the 2023; AND FURTHER, that the costs of no more than \$27,000 + GST be included in the S100 General Administration draft 2023 Financial Plan; AND FURTHER, that the agreement be brought back to the March 16, 2023 Board meeting.
REGIONAL ACTIVE & LOW CARBON TRANSPORTATION STRATEGY	<ol style="list-style-type: none"> That the Board direct staff to prepare a detailed project budget to investigate regional active transportation solutions as outlined in the report from Community Sustainable Living Advisory Committee (CSLAC) staff dated September 10, 2022 and report back to CSLAC for approval.

CSLAC ADMINISTRATIVE & COMMUNICATION SUPPORT	
WEBSITE UPDATE & PRINT MATERIAL	<ol style="list-style-type: none"> 1. 601/18 That the Board direct staff to highlight the work of the Sustainability Service (105) through the RDCK website and announce with a media release. 2. 578/19 That the Board directs staff to procure services from Little H Design Works for \$2,500 for the work of designing the summary report for the RDCK's Climate Action Indicator Project with funds to come from Service 105; AND FURTHER, staff be directed to seek quotes to produce a graphic illustration of this report for distribution on line.
ADMIN	<ol style="list-style-type: none"> 1. 382/18 That the RDCK Board support the allocation of S105 funds 'Grants' leveraging and linking additional funds from external agencies for sustainability initiatives, as described in the Community Sustainable Living Advisory Committee Terms of Reference. 2. 123/19 That the Board approve the 2019 Community Sustainable Living Advisory Committee draft budget; AND FURTHER, that the directors stipend and expenses be reduced to \$5,000 for the years 2020-23 inclusive.



Community Sustainable Living Advisory Committee (CSLAC) 2023 Actions & Workplan

Paris Marshall Smith
February 14, 2023



Outline

- 1 CSLAC Overview
- 2 How CSLAC projects are funded
- 3 2023 Workplan
- 4 CSLAC Review



CSLAC Objectives

- **Discuss and review** projects and initiatives that are socially, culturally, economically and environmentally sustainable
 - Examples - food security and agriculture, climate change initiatives, region wide economic development initiatives, affordable housing strategies
- **Provide input** that will result in sustainability initiatives that are supported by the Board and acceptable to the public.
- **Make recommendations** on sustainability projects, opportunities, service provision, and other related matters of the Service to the RDCK Board
- **Receive and relay feedback** from the community
- **Initiate and participate** in the review of Climate Action Strategy and State of Climate Action annual reporting to develop strategies that are current



CSLAC Role

CSLAC has 2 types of activities it supports – projects and programs:

- 1. Projects** are short one-off initiatives that have a distinct beginning and end, they are intended to be investigations of novel ideas focused on increasing rural resilience - \$25,000 per year
- 2. Programs** are multi-year initiatives – often projects that have moved past the incubation phase – undefined amount per year

TYPE OF FUNDING	DESCRIPTION	APPLICATION PROCESS	REQUEST LIMIT	CRITERIA
PROJECT (INVESTIGATION) FUNDING	One time requests after which can be considered for program funding	Funding will be allocated on a first come, first serve to a maximum of \$25,000 per year	\$10,000 per year	<ul style="list-style-type: none"> • Be within one of the 5 CSLAC focus areas – food & agriculture, water, climate action, energy or housing • Follow the project evaluation process
PROGRAM (CORE) FUNDING	Can be multi-year for a maximum of 5 years, after which funding expires and/or a service case analysis can be requested	Ideally, applications received once per year in November to be presented to CSLAC in December for inclusion in budget	\$15,000 per year	<ul style="list-style-type: none"> • Must have existing relationship with CSLAC (eg. has completed a project) • Must be working towards financial sustainability or establishment of a service • Be with one of the 5 CSLAC focus areas (see above) • Follow the project evaluation process



CSLAC focus areas - climate action, energy, housing, food & agriculture and water

Examples of regionally impactful initiatives that have benefited from CSLAC support either as incubation or to investigate ideas:

- [Kootenay Lake Partnership](#)
- [Friends of Kootenay Lake](#)
- Slocan Lake and River Partnership*
- Duck Creek Watershed investigation*
- [Kootenay Boundary Farm Advisors](#)
- [Central Kootenay Food Policy Council](#)
- Timber Deadstock Bioenergy Study
- East Shore Geothermal GIS Study
- Grid Resilience Investigation – current*
- [Regional Energy Efficiency Program](#)

*started in 2022



CSLAC 2023 workplan - climate action, energy, housing, food & agriculture and water

Given the on-going work of initiatives such as Watershed Governance Initiative and RDCK Climate Actions, and the success of soliciting new projects ideas - CSLAC **staff time is fully allocated** for 2023 – more detail on following slide.

There is still project funding that can be allocated. And there are 2 requests for funding that have been received.

Projects can be considered for 2024

CSLAC AREA OF FOCUS	PROJECT	DETAILS	STATUS	FUNDING REQUEST	SERVICE	TIMELINE	CSLAC STAFF TIME
CLIMATE ACTION	RDCK Climate Actions	Implementation of action items + oversight of staff	Board will review proposal in fall 2021		\$100	2023-2026	0.25 FTE
WATER	Watershed Governance Initiative	Service case review + on-going project work	Active and confirmed		\$105	On-going	0.45 FTE
	Kootenay Lake Partnership		Active and confirmed	\$10,000	\$105	On-going	
	Slocan Lake and River Partnership	Providing support to partnership establishment & hiring of coordinator	Active and confirmed	\$5,000	\$105	2022	
	Duck Creek Watershed	Relationship building with Province, Yaqan Nukiy & Wynndel-Creston community, Cumulative Impact Study	Active and confirmed	\$25,000	\$105	2022 (\$6,500) & 2023 (\$18,500)	
	Ground Water Monitoring		Proposed	\$10,000	\$105	2023	
	CABIN water monitoring expansion		Proposed	\$10,000	\$105	2023	
ENERGY	Grid Resilience Investigation	Investigation of next steps for RDCK support	Active and confirmed	tbd	\$105	Spring 2023	0.1FTE
FOOD AND AGRICULTURE	Central Kootenay Food Policy Council	On-going	Active and confirmed	\$15,000	\$100	On-going	0.1 FTE
Administration time							0.1 FTE

2023 staff time commitment 1.0 FTE
(if staff recommendations approved)

Available staff time for 2023 0.0 FTE

Total PROJECT funding requests from CSLAC S105 for 2023 \$44,500 for project funding, this is an increase of \$19,500 from annual \$25,000 project fund

Total PROGRAM funding requests from CSLAC S105 for 2023 \$10,000 for KLP (as per Board recommendation 88/22)



CSLAC Role (again)

CSLAC has 2 types of activities it supports – projects and programs:

- 1. Projects** are short one-off initiatives that have a distinct beginning and end, they are intended to be investigations of novel ideas focused on increasing rural resilience - \$25,000 per year
- 2. Programs** are multi-year initiatives – often projects that have moved past the incubation phase – undefined amount per year



CSLAC over the last term

Since 2017, CSLAC has initiated 25 projects and programs (Kootenay Lake Partnership, existed prior to 2017) – an average of 3.6 projects per year. Most of its initiatives are regional in scope and benefit.

Over the last 6 years, the Committee has effectively leveraged its relatively small contribution over 5.3 times for more than \$2,207,000 of community contribution



QUESTIONS?





KOOTENAY LAKE GEOTHERMAL PROJECT - PHASE TWO

***GEOLOGICAL, GEOCHEMICAL AND GEOSPATIAL
INVESTIGATIONS INTO THE GEOTHERMAL POTENTIAL
OF THE EAST SHORE OF KOOTENAY LAKE***

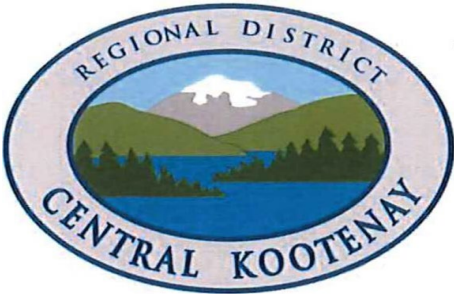
**Presentation To:
Community Sustainable Living Advisory Committee**

**On Behalf of:
South Kootenay Lake Community Services Society**

February 14, 2023



Phase Two Partners



Natural Sciences and
Engineering Research
Council of Canada

Canada



University
of Victoria



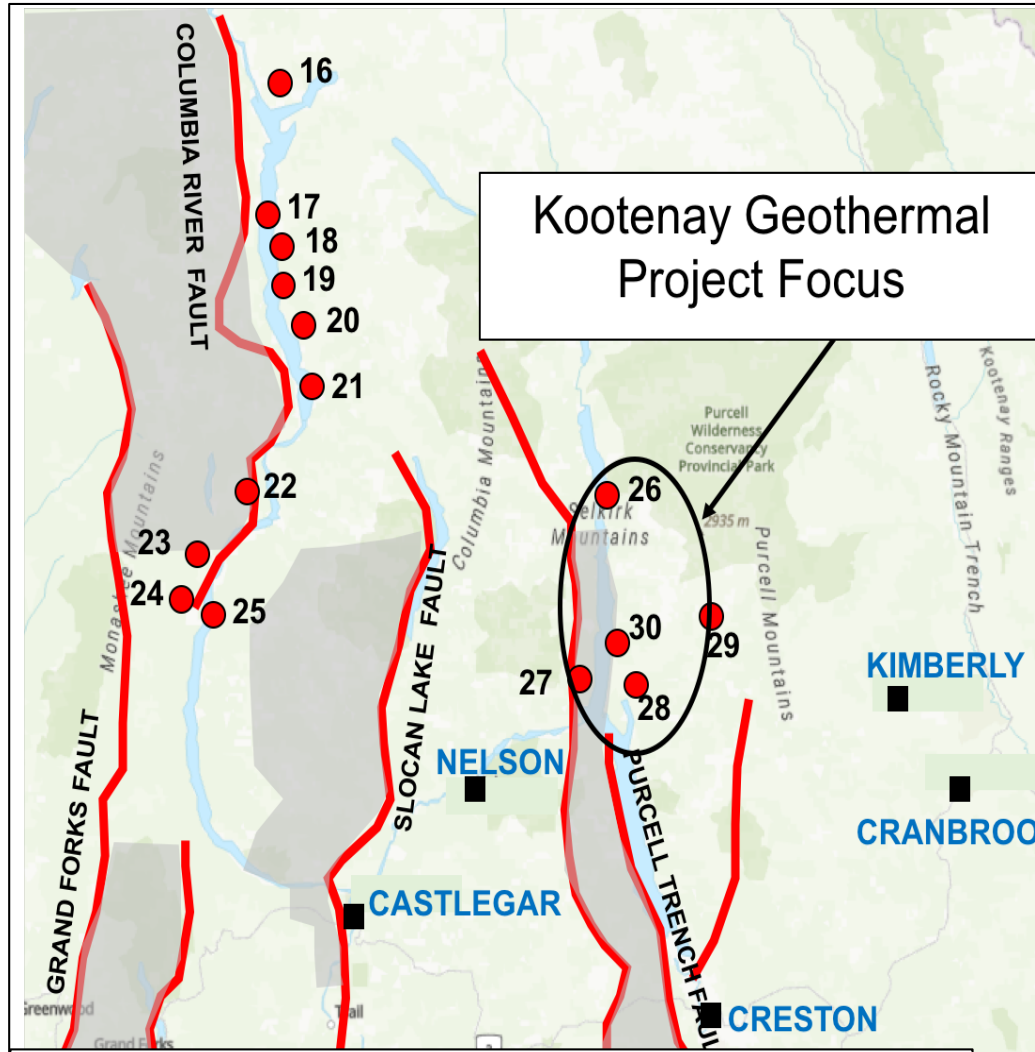
SKLCSS

Geothermal - Why here, why now?

- ▶ The Kootenay Lake area has an identified anonymously high geothermal heat flow.
- ▶ The inflow of hot geothermal fluid (40°C) at high rates was experienced in the mine in Riondel.
- ▶ This project is targeting geothermal fluid temperatures in the range of 40-80°C representing a spectrum of potential commercial-based geothermal, direct heat applications.
- ▶ There are currently no geothermal tenures within the study area.



Kootenay Lake Geothermal Project Focus



Kootenay Geothermal Project Focus

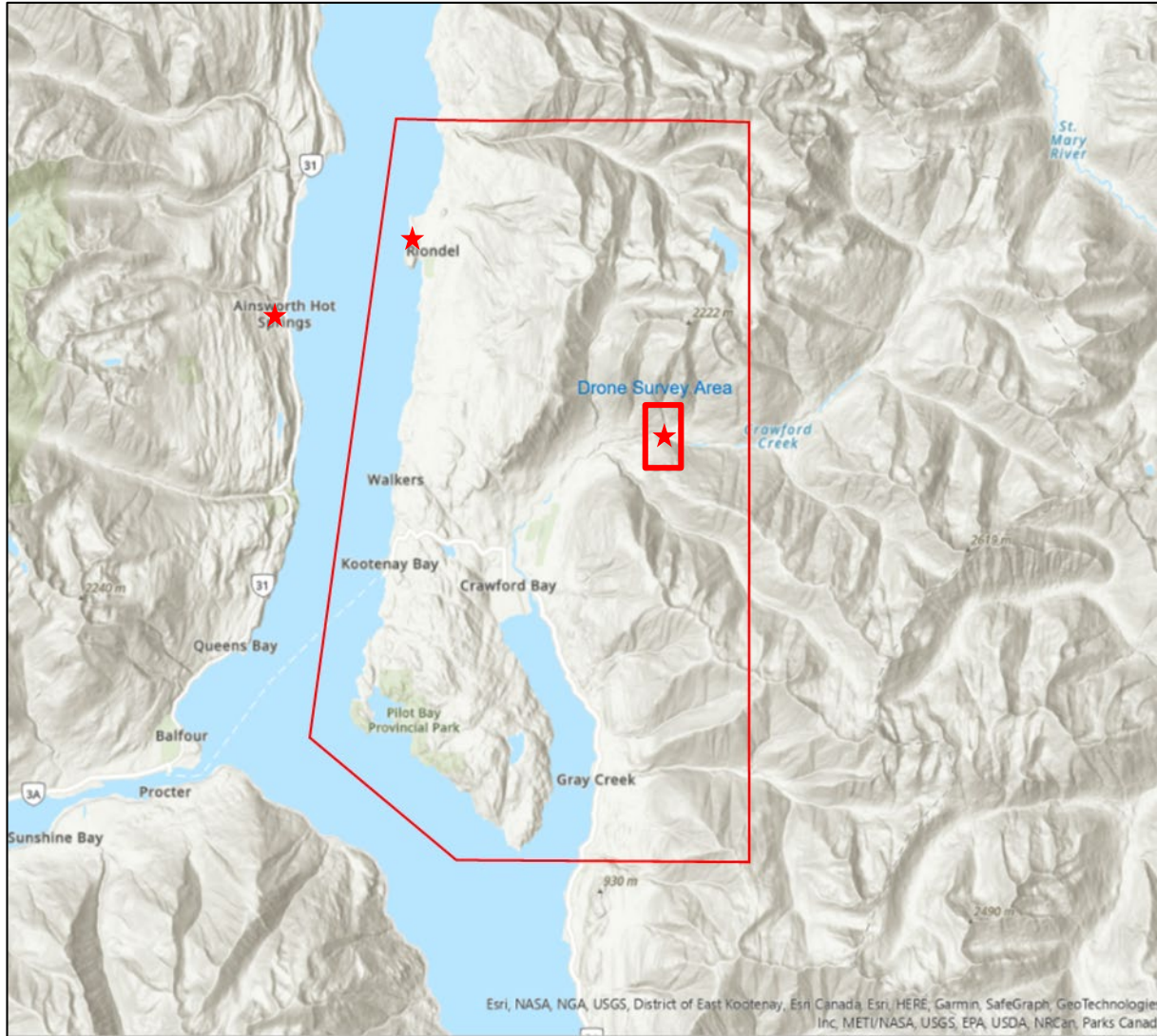
		Surface Temp C	Max Temp C
16	Whiskey Point	?	?
17	Halcyon	50.7	132
18	Halfway	58.9	117
19	St Leon	46.5	123
20	Nakusp	55.8	131
21	Wilson Lake	30	
22	Taylor	25	
23	Snowshoe	?	
24	Jordan Ranch	12	
25	Octopus Creek	49	
26	Fry Creek	?	
27	Ainsworth	45	163★
28	Crawford Creek	32	
29	Dewar Creek	83★	147
30	Riondel Mine	40	

Exploration area focused on the central-northern portion of Kootenay lake And Hot Spring sources at Ainsworth, Riondel Mine, Crawford Ck and Dewar Ck

Modified after Grasby & Hutcheson (2001)

- HOT SPRINGS
- HIGH GRADE METAMORPHICS
- DEEP SEATED FAULTS

Phase Two Project Study Area - 2022

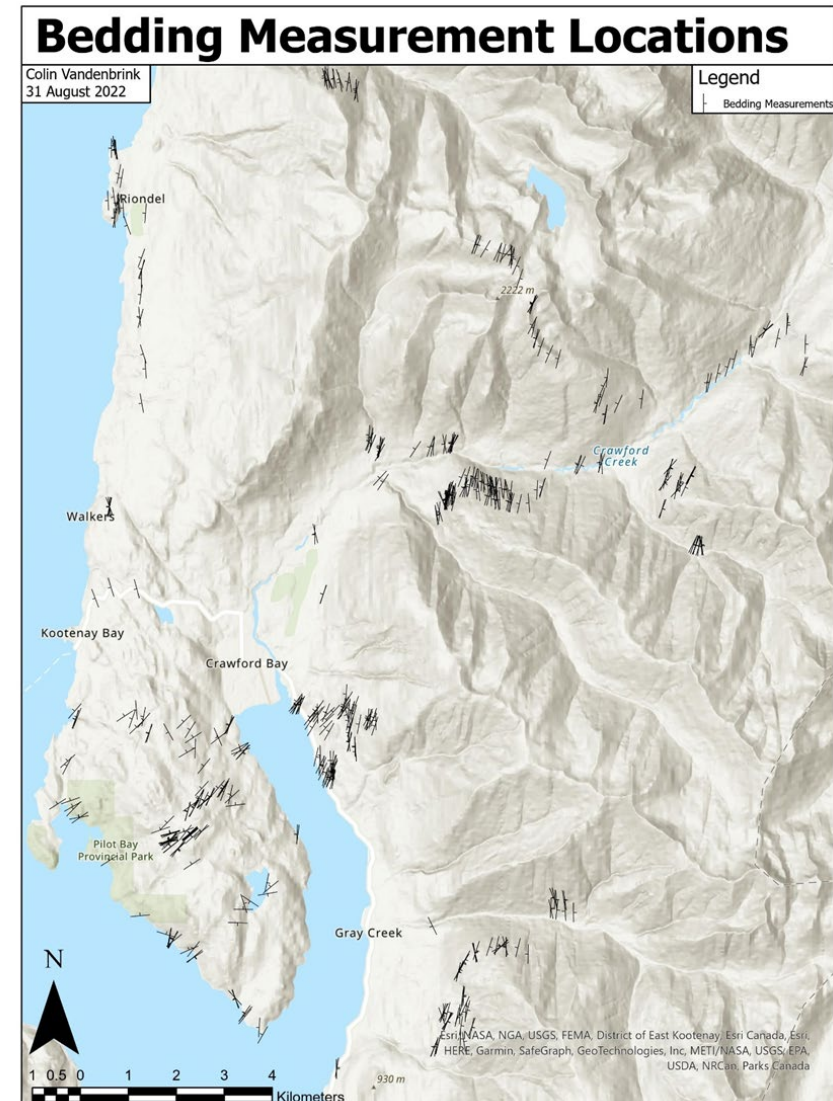


Phase Two study area covered roughly 350-400 Sq Kms. Extending from Riondel in the north to Gray Creek in the south.

Note position of drone-based evaluation on Crawford Creek in Phase Two

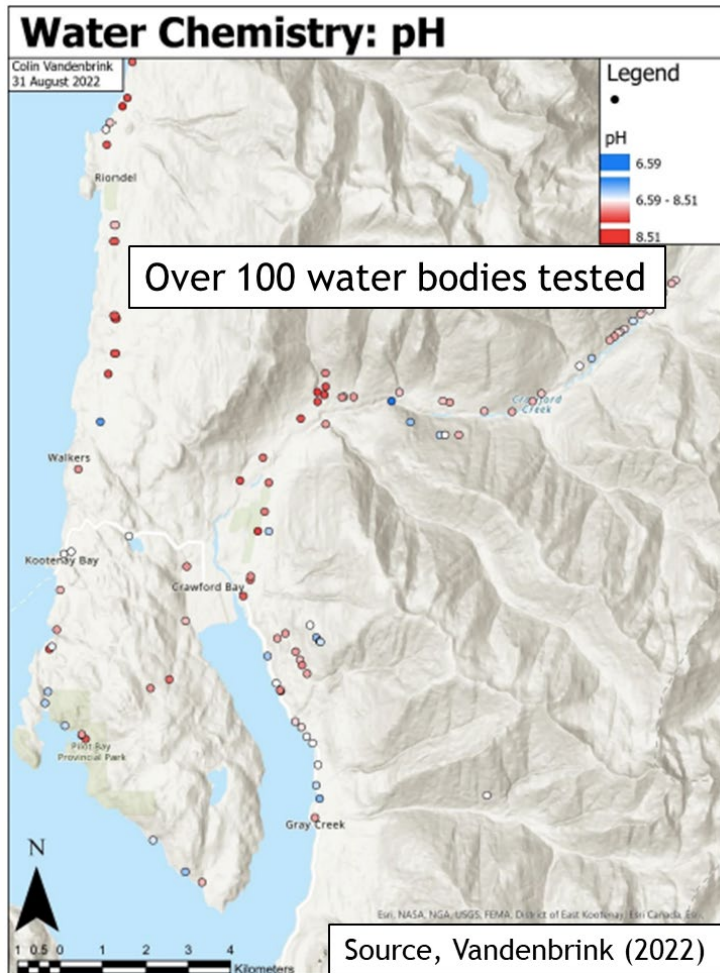
Phase Two - Preliminary Geological, Structural Indications

- ▶ Bedrock measurements were collected using Stereonet Mobile App. Version 4.0.X (Allmendinger, 2022) on an iPhone
- ▶ This app allowed for the collection of bedding, jointing and faulting data across a broad area.
- ▶ A total of over 1,750 structural measurements were gathered.
- ▶ This data was analyzed both by area and rock type

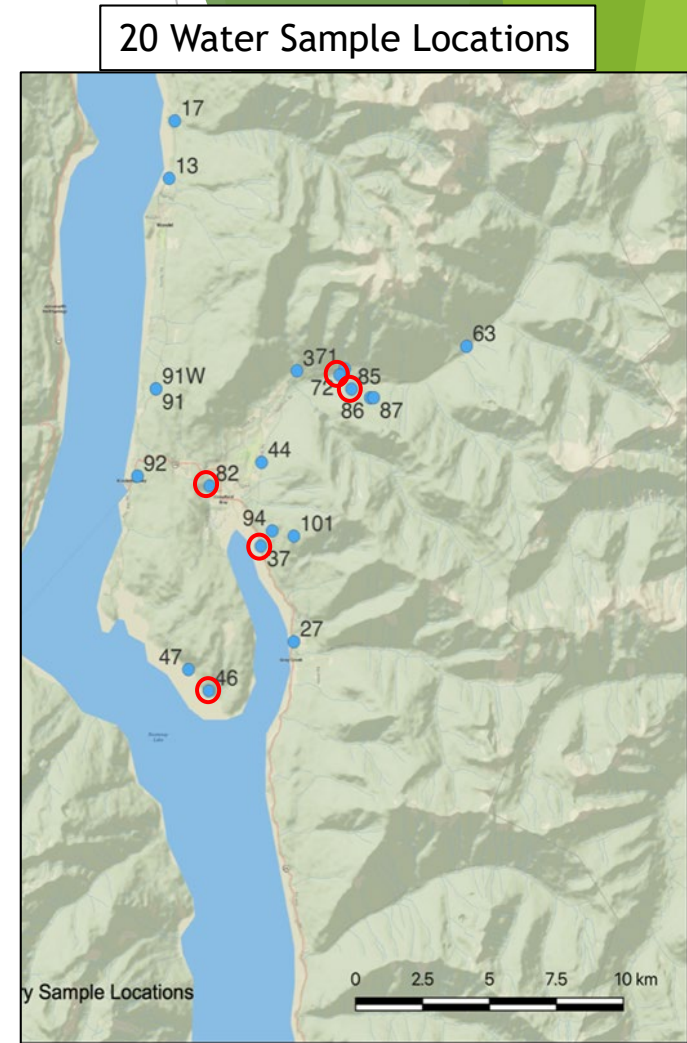


Map showing locations where bedding attitudes were recorded (Vandenbrink 2022)

Phase Two - 2022 Geochemistry



- ▶ Multi-parameter testing on-site to gather pH / Conductivity / Temperature ($^{\circ}\text{C}$) / TDS (Total Dissolved Solids) and Salinity
- ▶ Laboratory analysis included a wide range of minerals:
 - ▶ Sodium, calcium, potassium, magnesium, chloride, carbonate/ bicarbonate, fluoride, silicon, iron, manganese, arsenic, sulphide, lithium, boron, bromide, uranium & sulphate
- ▶ Integration and interpretation of results will be assisted using AqQA software by Rockware.
- ▶ Interesting results observed in subset of samples (red circles right)



2022 Drone Survey Area - Orebin Creek

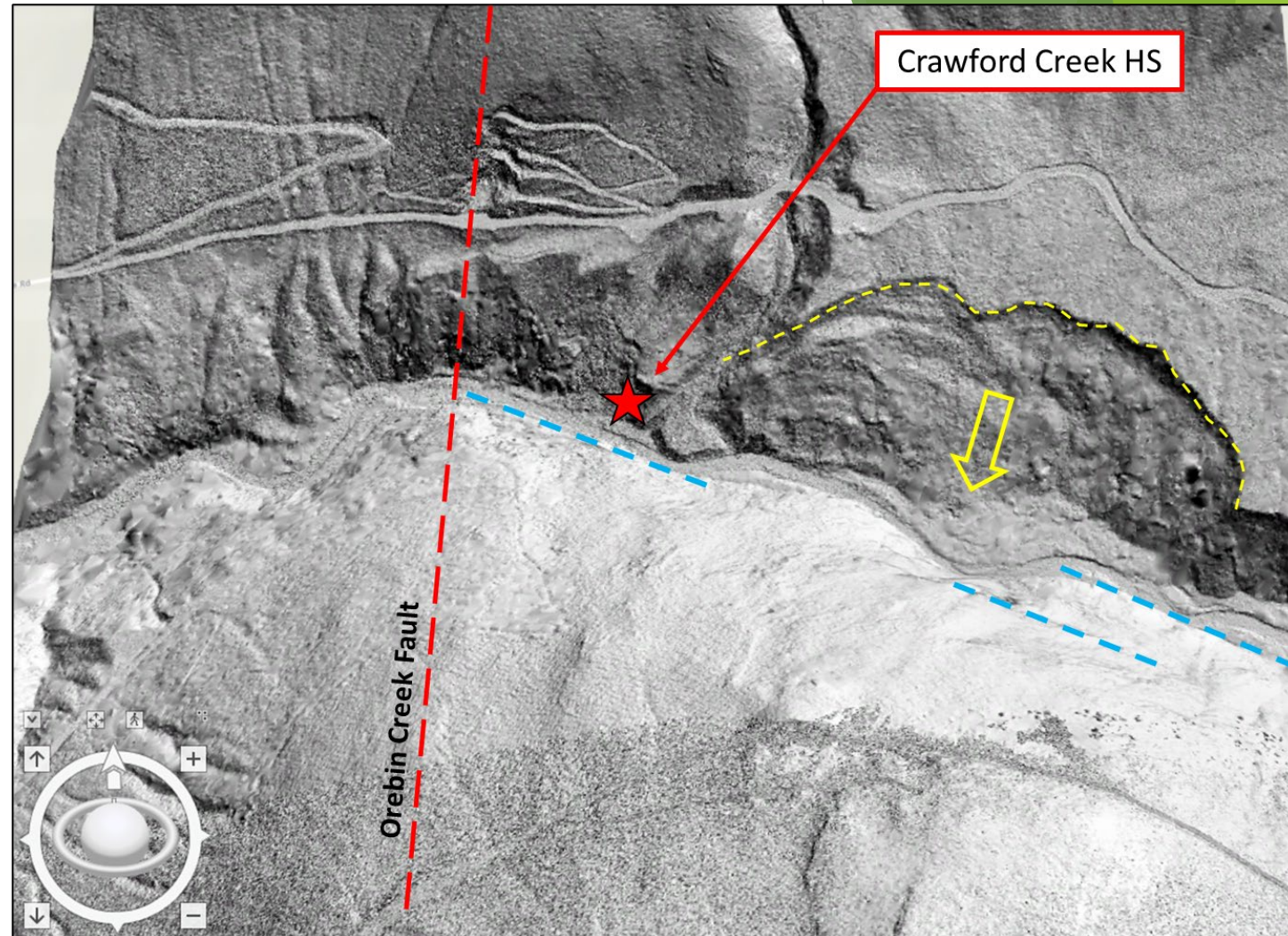
- ▶ This area hosts a pre-existing surficial expression of geothermal activity - Crawford Creek hot spring (32 °C).
- ▶ It also hosts a major regional fault - the Orebin Creek Fault (OCF).
- ▶ Steeply dipping, very regular, near perpendicular sets of bedding and jointing planes.
- ▶ The bedrock adjacent to the fault is Hamill formation quartzite.
- ▶ Quartzites are more conductive with higher heat flow (compared to phyllite, gneiss & schist), and more brittle and therefore more pervasively fractured and potentially permeable.



Orebin Creek Fault Zone,
above Crawford Creek hot spring (32 °C)

2022 Drone Based Evaluation, LiDAR

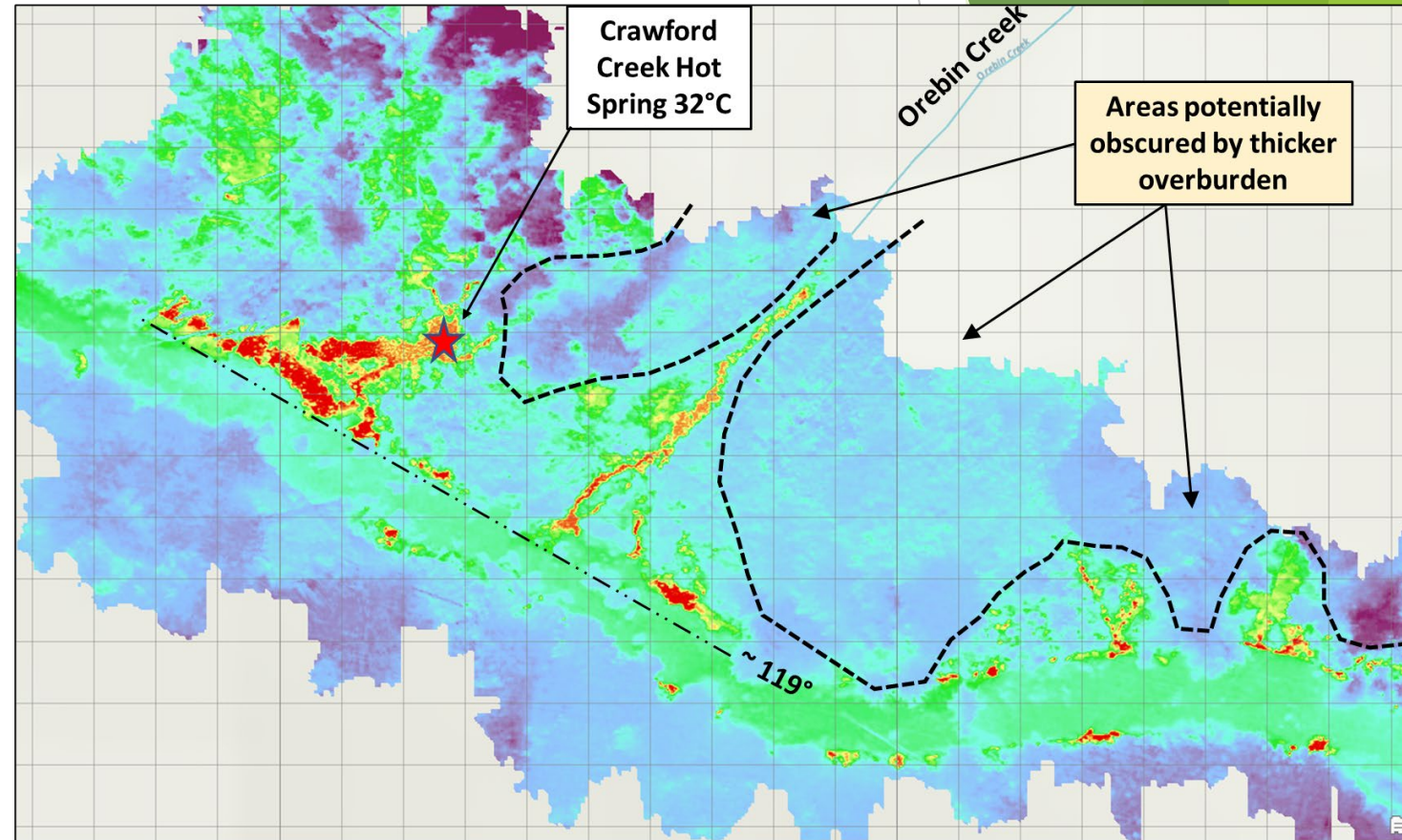
- ▶ Selkirk College students utilizing their Remote Sensing drone conducted two detailed evaluations
 - ▶ 2.5 Sq Kms Lidar program
 - ▶ 1.5 Sq Kms Total Infrared (TIR) program
- ▶ Work conducted over 4 days in October
- ▶ Data processing by Selkirk research assistant is ongoing



Preliminary LiDAR image over the Crawford Creek area of interest, WNW striking lineaments highlighted in blue and slump feature highlighted in yellow.

2022 Drone Based Evaluation, Total Infrared (TIR)

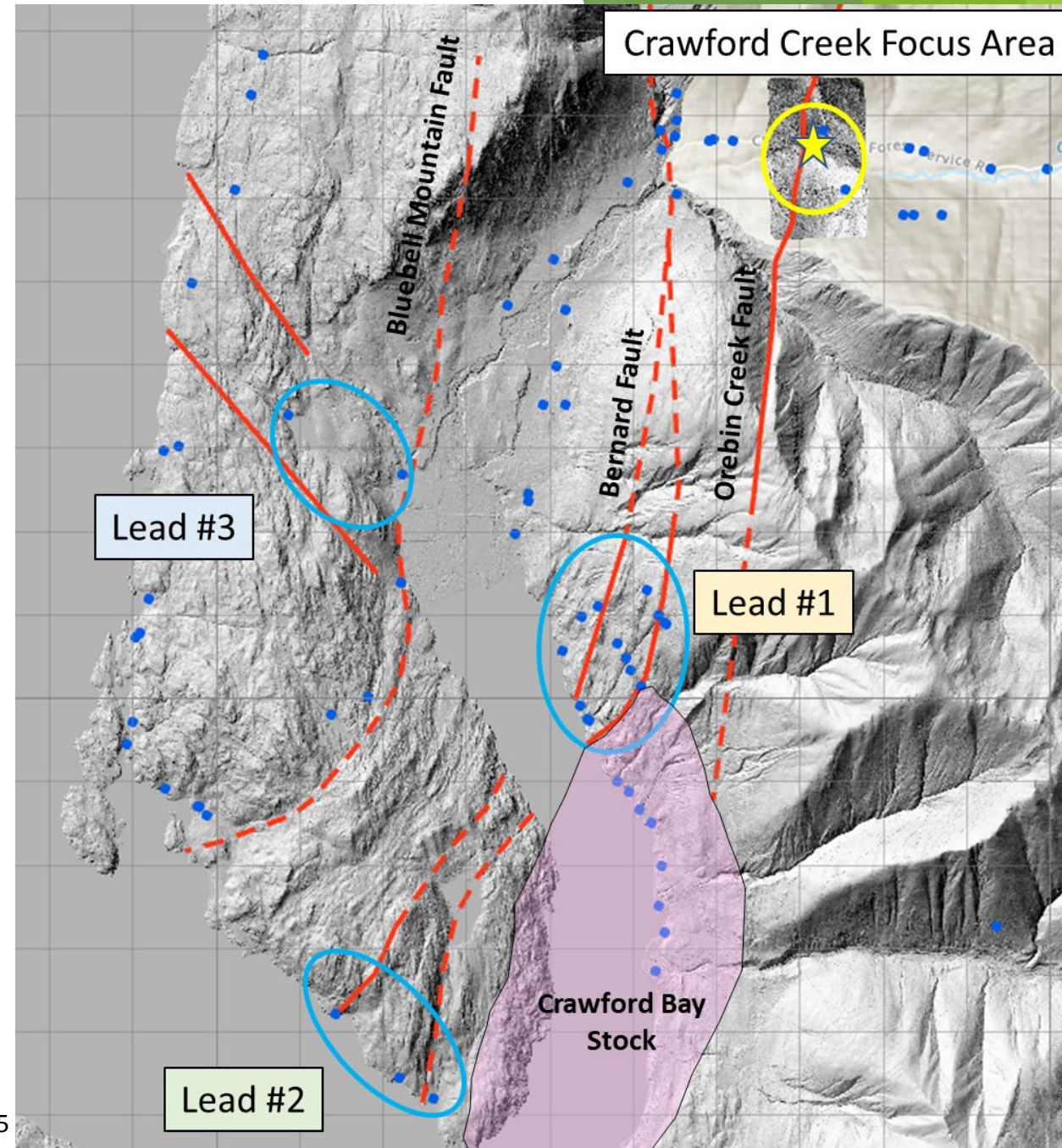
- ▶ Three thermal features close to the valley bottom emerged
 - ▶ The hot spring itself
 - ▶ Lower 50-60m of Orebin Ck.
 - ▶ Down slope edge of overburden & slump feature
- ▶ Thermal anomalies diminish upslope perhaps due to overburden thickening away from the valley bottom
- ▶ Strike of Crawford Creek (119°) fits within the data range for WNW jointing, strike of a fault inferred from Lidar



Preliminary (partial) Total Infrared (TIR) thermal image mosaic over the Crawford Creek area of interest. Area of anomalous thermal signature extends across an area of approximately 190m by 55m.
44 (Grid shown is 10m by 10m)

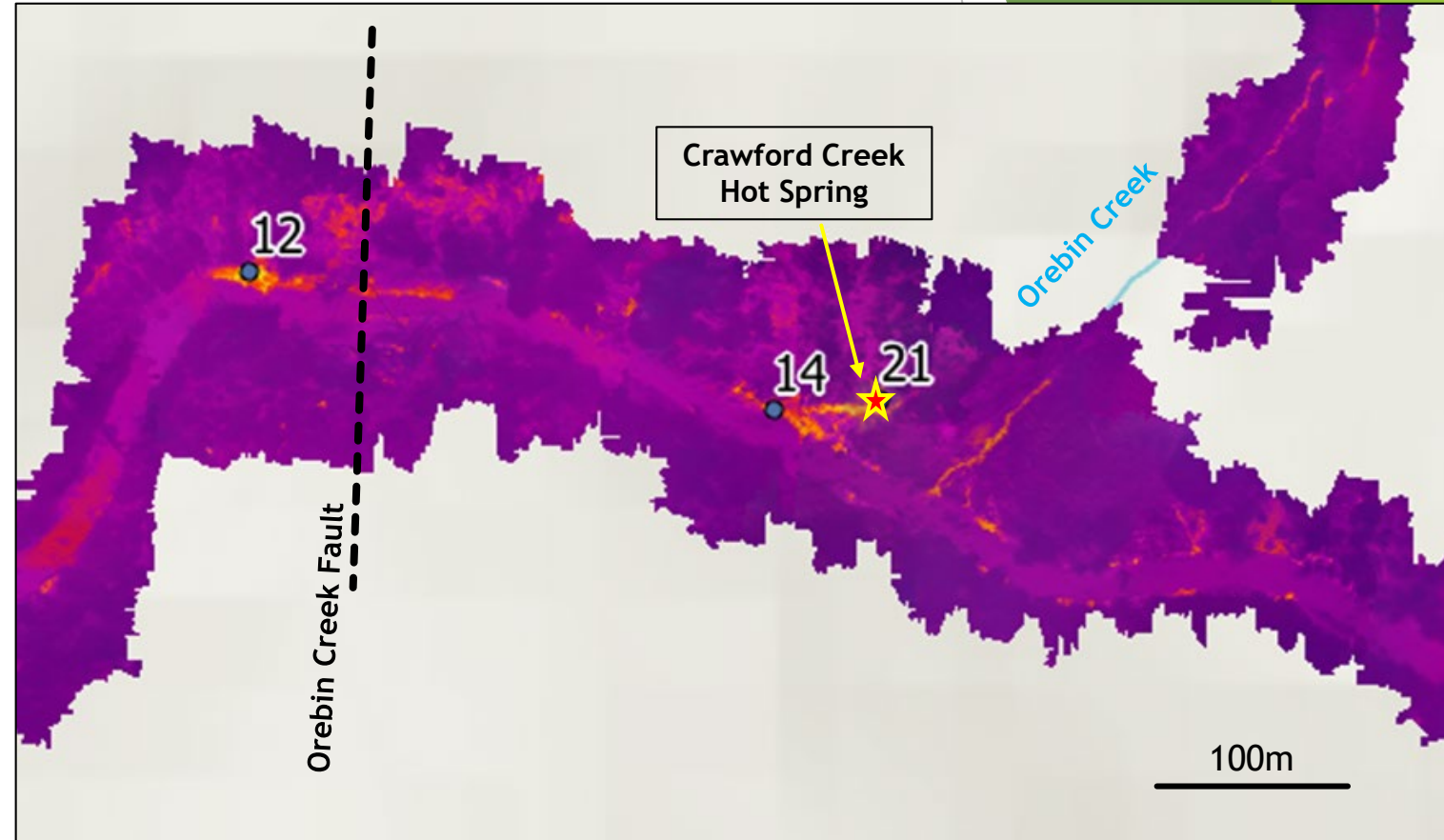
Prospect and Leads

- ▶ 3 additional areas of potential interest have been identified through geology, faulting and preliminary geochemistry.
- ▶ Lead # 1 stands out over the other leads:
 - ▶ Highly faulted area
 - ▶ Surface water has elevated TDS and Conductivity
 - ▶ Elevated surface water temperatures recorded (19 -24.8°C)
 - ▶ Proximal to possible regional deep seated fault (Bernard Fault) as well as Crawford Bay Stock
 - ▶ Surface is mostly crown land



Work In Progress, Next Steps

- ▶ As thermal data processing continues the area of interest expands.
- ▶ Currently approx. 5% of thermal data has been processed.
- ▶ Anomalous thermal features are now evident just west of the Orebin Creek Fault (OCF).
- ▶ The anomalous thermal signature extends approximately 400m along the Crawford Creek valley.
- ▶ Work will continue to expand thermal processing to cover full survey area and to quantify the geothermal resource evident here.



Thermal mosaic of the Crawford Ck. valley bottom (received Jan 13, 2023)

2023 - Phase Three Recommendations

- ▶ Detailed geological & geochemical evaluation of Crawford Creek prospect area & Lead #1
- ▶ Geospatial program to include a Multi-Spectral Infrared survey and possibly a thermal video of a broader area around Lead #1.
- ▶ A ground based Electrical Resistivity Tomography (ERT) survey to map overburden thickness & groundwater saturation related to the thermal seeps.
- ▶ All data gathered in Phase Two and Phase Three will be fully integrated into a 3D model.
- ▶ Upon success, Phase Three could potentially result in a drill-ready status for the project.

In Closing

- ▶ Area has anonymously high geothermal heat flow with several hot springs.
- ▶ Phase 2 has continued to support the hypothesis of an active geothermal system.
- ▶ Data collected provides compelling evidence of a potentially viable geothermal target, warranting a Phase Three work program.
- ▶ Success with Phase Three could lead to drilling one or two test wells in the next 12-24 months.
- ▶ Encountering geothermal fluids in the 40-80° C range could foster a commercial-based pilot geothermal direct-heat demonstration project within 2-3 years.

Thank You

For further information,
Contact Gord MacMahon at 250-777-7372

or

Garry Sly

South Kootenay Lake Community Services Society at 250-505-2634



Community Sustainable Living Advisory Committee (CSLAC) 2023 Budget

February 14, 2023



Outline

- 1 2022 Budget summary
- 2 2023 Draft Budget



2022 Budget Review

AREA OF SPENDING	DETAILS	AMOUNT
Grants (projects) Delivered	<ul style="list-style-type: none">• CKFPC – Food and Farm Guide & Food Asset inventory• Kootenay Lake Geo Thermal Phase 2• Duck Creek Watershed Cumulative Impact Study• Slocan Lake & River Partnership	Total of \$25,000
CSLAC Program Spending	<ul style="list-style-type: none">• KLP – KNC Coordinator	Total of \$10,000



2023 Draft Budget

ASK	2022	2023
Budget	\$245,818	\$272,132 <i>Includes all proposed project costs</i>
Requisition	\$206,561	\$212,330
Program Costs	\$10,000	\$10,000 <i>KLP</i>
CSLAC Grant (25k) Committed	\$25,000	\$18,500 \$6,500 uncommitted for 2023



CSLAC over the last term

Since 2017, CSLAC has initiated 25 projects and programs (Kootenay Lake Partnership, existed prior to 2017) – an average of 3.6 projects per year. Most of its initiatives are regional in scope and benefit.

Over the last 6 years, the Committee has effectively leveraged its relatively small contribution over 5.3 times for more than \$2,207,000 of community contribution



QUESTIONS?





Committee Report

Date of Report: November 10, 2022
Date & Type of Meeting: November 29, 2022, Community Sustainable Living Advisory Committee
Author: Paris Marshall Smith, Sustainability Planner
Subject: LIVING LAKES GROUND WATER MONITORING
File: 5200-20-CSLAC-Projects-LLC
Electoral Area/Municipality All

SECTION 1: EXECUTIVE SUMMARY

This report provides Step 2 of Community Sustainable Living Advisory Committee project evaluation for a funding application from Living Lakes for the 2023 Phase of the Columbia Basin Groundwater Monitoring Program. The full project evaluation can be found as **Attachment A – CSLAC_LL-ATTACH01**

Recommendation – That the Board direct staff to defer the Living Lakes Canada 2023 Columbia Basin Groundwater Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

SECTION 2: BACKGROUND/ANALYSIS

This report provides Step 2 of Community Sustainable Living Advisory Committee project evaluation for a funding application from Living Lakes for the 2023 Phase of the Columbia Basin Groundwater Monitoring Program. Living Lakes Canada has requested \$10,000 to expand the ground water monitoring program throughout the RDCK.

OVERVIEW – from the application

Living Lakes Canada's (LLCs) Columbia Basin Groundwater Monitoring:

- To understand the long-term (since 2017) water level trends in local aquifers to help maintain healthy freshwater resources for people, animals, and ecosystems, and,
- To inform future decisions about groundwater.

The Basin Groundwater Monitoring project established three new volunteer observation wells (VOWs) in Creston this year with funding from an Area B Community Development Grant and provincial and other funding sources, as well as new wells in Nelway, Box Mountain, and Slocan Park.

Objectives for 2023:

1. ongoing data collection in the 16 VOWs in the Regional District of Central of Kootenay (RDCK),
2. expand the data collection network and establish new VOWs, and

- continue to share data publicly to educate and socialize the community on groundwater topics. This will be achieved by building on LLC’s successful program to date.

BACKGROUND

As glaciers melt, surface water resources become less reliable, and precipitation is less predictable, climate change is creating water uncertainty. Groundwater resources in the RDCK are generally poorly understood. The aquifers are generally small and fragmented and the impact of climate change and increased extraction for drinking and irrigation is unknown.

Greater understanding through increased monitoring will assist in ensuring supplies are sustainable for residents and nature into the future. This project will continue to collect long-term groundwater level trends and publish data publicly to inform future watershed planning efforts, licensing and policy, and drinking water protection and management.

SECTION 3: DETAILED ANALYSIS

3.1 Financial Considerations – Cost and Resource Allocations:

Included in Financial Plan:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Financial Plan Amendment:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Debt Bylaw Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Public/Gov’t Approvals Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

CSLAC has 2 types of activities it supports – projects and programs:

- Projects** are short one-off initiatives that have a distinct beginning and end, they are intended to be investigations of novel ideas focused on increasing rural resilience

FOR 2023 - Of the annual \$25,000 CSLAC project fund, \$18,500 has been allocated for 2023 (res 515/22), leaving \$6,500 available for 2023.

- Programs** are multi-year initiatives – often projects that have moved past the incubation phase – undefined amount per year

Living Lakes Canada has requested \$10,000 for 2023.

Staff provide 4 options -

- Fully fund the request – requires running a deficit in the project fund account for 2022.
- Partially fund the request - proponents would be grateful for reduced funding if that is all that is available
- Deferred funding - CSLAC could defer this application for consideration in the 2024 CSLAC budget
- No funding – CSLAC do not further consider funding this request

3.2 Legislative Considerations (Applicable Policies and/or Bylaws):

None at this time

3.3 Environmental Considerations

This project supports the goals of the RDCK Water Governance Initiative and priorities that emerged from the Integrated Community Sustainable Planning process. Key action steps for communities seeking to protect their watershed compiled by the Watershed Governance Initiative team include establishing monitoring, reviewing watershed data, and building relationships. Currently there are 16 VOWs in areas B, E, F, G, H, K, and the municipality of Castlegar. These VOWs would continue to be monitored for long-term trends adding to the baseline data already being collected in the RDCK. Further, additional VOWs would be included in other priority areas. By increasing the VOWs throughout the region, understanding of current monitored aquifers, as well as establish water level data on currently unmonitored aquifers.

3.4 Social Considerations:

This project will further unite communities across the district to advance Phase 3 of the Watershed Governance Initiative.

3.5 Economic Considerations:

Support for this project will provide economic opportunities across the regional district.

3.6 Communication Considerations:

A communication strategy will be developed as needed.

3.7 Staffing/Departmental Workplace Considerations:

Evaluation of this project proposal is within the Sustainability Planner's workplan.

3.8 Board Strategic Plan/Priorities Considerations:

Actions to support ground water monitoring align with the following Board priorities:

- 1. Seek opportunities for partnerships with local communities:**
 - Moving towards reconciliation with First Nations through respectful interactions and exploring partnerships
 - Achieve better coordination between the RDCK and local municipalities on common strategic priorities
- 2. Protect our water sources**
 - Develop comprehensive watershed management plan with all stakeholders and include them in OCP
 - Crown land logging and private land logging have limited impact on the quality and quantity of water available to RD residents for drinking and recreation
- 3. Establish a governance model for watershed management in the RDCK**
 - The RDCK determines what available tools it has to protect watersheds

SECTION 4: OPTIONS & PROS / CONS

That the Board direct staff to defer the Living Lakes Canada 2023 Columbia Basin Groundwater Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

OPTION 1 – APPROVE

PRO:

- CSLAC project funds are limited
- Staff time can be used elsewhere

CON:

- Missed opportunity to investigate a project that could have regional benefit

OPTION 2 – DO NOT APPROVE

Direct staff to fund the Living Lakes Canada 2023 Columbia Basin Groundwater Monitoring application in 2023 – will require an increased requisition or funding could be allocated in part – proponents would be grateful for reduced funding if that is all that is available

PRO:

- There is no additional demand on RDCK staff beyond current workplan commitments

CON:

- No con at this time

SECTION 5: RECOMMENDATIONS

That the Board direct staff to defer the Living Lakes Canada 2023 Columbia Basin Groundwater Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

Respectfully submitted,

Paris Marshall Smith, Sustainability Planner

CONCURRENCE

Chief Administrative Officer – Stuart Horn

General Manager of Development and Community Sustainability Services – Sangita Sudan

Manager of Community Sustainability Services – Chris Johnson

ATTACHMENTS:

Attachment A – CSLAC_LLC-ATTACH01

Attachment B - CSLAC_LLC-ATTACH02



COMMUNITY SUSTAINABLE LIVING ADVISORY (Service 105)

EVALUATION for PROJECT INITIATION

This evaluation is the second step in preparing your project for consideration by the Community Sustainable Living Advisory Committee (CSLAC).

1. Fill out the following questions to the best of your ability/knowledge. If you require assistance, contact the Sustainability Coordinator or General Manager of Development Services;
2. Once complete, the project will be reviewed by Staff and brought to the next CSLAC meeting. To be included on the agenda, ensure that forms are received by the 15th of the month before the meeting;
3. **Projects must be submitted by November 15, 2020 to be considered for 2021 planning and budgeting;**
4. Proponents are invited to attend the CSLAC meeting as delegates for discussion and questions; and,
5. Once reviewed and questions satisfied, CSLAC will direct staff to develop a project evaluation in partnership with the project proponent that will eventually go to the Board for review.

PROPOSAL INFORMATION

APPLICANT INFORMATION

Project Proponent: Living Lakes Canada

Phone: 778-802-8392

Email: groundwater@livinglakescanada.ca

PROJECT INFORMATION

Project Title: 2023 Phase of the Columbia Basin Groundwater Monitoring Program

Project Location: Regional District of the Central Kootenays

Identify the geographical location(s) that will benefit from this project: All 11 electoral districts; A, B, C, D, E, F, G, H, I, J & K.

Project Classification (water, energy, climate change, food & agriculture or housing) : Water, Climate Change and Agriculture

Estimated Start Date: April 2023

Estimated Completion Date: March 2024

The CSLAC will evaluate proposals received and will recommend projects to the Board based on the following criteria. Respond to the following questions using as much space as needed. Please use page 5 & 6 for your answers.

See the list at the end of this worksheet for more information on each category.

1. Relevance

What will the project do? How will this be achieved?

Living Lakes Canada's (LLCs) Columbia Basin Groundwater Monitoring Program has been collecting and sharing groundwater level data across the basin since 2017. The primary goal of this program is to understand the long-term water level trends in local aquifers to help maintain healthy freshwater resources for people, animals, and ecosystems. By collecting long-term groundwater level data and publishing this data publicly, high quality information can be used to inform future decisions about groundwater. This program partners with existing well owners to collect water level data and engages community members in data collection to inspire public understanding and involvement in water resource management. This proposed project of the Columbia Basin Groundwater Monitoring Program has 3 main objectives; (1) ongoing data collection in the 16 Volunteer Observation Wells (VOWs) in the Regional District of Central of Kootenay (RDCK), (2) expand the data collection network and establish new VOWs, and (3) continue to share data publicly to educate and socialize the community on groundwater topics. This will be achieved by building on LLC's successful program to date. The Program established three new VOWs in Creston this year with funding from an Area B Community Development Grant and provincial and other funding sources, as well as new wells in Nelway, Box Mountain, and Slocan Park. The Program has processes, tools and a team already in place to collect and share data.

Explain why this project is important to our community.

This project is important to RDCK communities, because we are currently in a time of water uncertainty as glaciers melt, surface water resources are becoming less reliable, and precipitation becomes less predictable. The groundwater resources in the region are generally poorly understood. The aquifers are generally small and fragmented and we do not know how aquifers will be impacted by climate change and extraction by people. The province is only monitoring 2 of the 57 mapped aquifers in the region. Groundwater is an important resource for people in the region with many private domestic wells supplying water to homes, especially in rural areas, and many water supply systems relying on groundwater. Understanding these groundwater resources will assist in ensuring supplies are sustainable for people and nature into the future. It is more important than ever to understand and preserve this resource for future generations. This project will further allow the success of the Program by continuing to collect long-term groundwater level trends and publishing data publicly to inform future watershed planning efforts, licensing and policy, and drinking water protection and management.

Why is the RDCK best suited to deliver the project?

The RDCK is best suited to help deliver this project because this project supports the goals of the RDCK Water Governance Initiative and priorities that emerged from the Integrated Community Sustainable Planning process. Key action steps for communities seeking to protect their watershed compiled by the Watershed Governance Initiative team included establishing monitoring, reviewing watershed data, and building relationships. This project will further unite communities across the district to advance Phase 3 of the Watershed Governance Initiative. Currently there are 16 VOWs in areas B, E, F, G, H, K, and the municipality of Castlegar. With RDCK funding, these VOWs would continue to be monitored for long-term trends adding to the baseline data already being collected in the RDCK. Further, additional VOWs would be included in other priority areas. By increasing the VOWs throughout the region, we can improve our understanding of currently monitored aquifers, as well as establish water level data on currently unmonitored aquifers. This funding would allow for the communities of the RDCK to work together towards preserving our shared resources and a creating more sustainable future.

Where will the project take place?

This project will take place in all electoral areas and municipalities. It will allow ongoing collection of data in existing VOWs (in areas B, E, H, F, K, G and the municipality of Castlegar) and the project will work in other electoral areas and municipalities to establish new VOWs. Support from the RDCK will help LLC secure funding from the provincial government and other organizations to continue to collaborate with communities in all electoral districts in the RDCK to

collect groundwater data. The Program works closely with individuals who volunteer their wells for monitoring, including First Nations, municipalities, water supply system operators, and private well owners. Groundwater management and protection is important to everyone because clean, fresh water is central to our economy, ecosystems, and health.

How many people will directly benefit from the project and who are they?

All area residents of the RDCK would benefit from this project. In particular, this project will support communities that withdraw groundwater, including water supply systems managed by the RDCK and those managed by other organizations as well as homes and industries that are on private wells. Reliance on groundwater as a supply of freshwater affects domestic, commercial, industrial, and agricultural uses. Current water use habits are causing surface water resources to be stressed and the effects of climate change are compounding these issues. The data collected through the 2023 - 2024 project of the Columbia Basin Groundwater Monitoring Program will be critical to informing groundwater management resources during these uncertain times. Lastly, all data acquired throughout this program will be publicly available - First Nations, academics, consultants, water supply operators, activists, business owners, statutory decision-makers, and politicians all have access to the data. This education and socialization will help to preserve freshwater resources for humans, animals, and ecosystems for future generations.

2. Effectiveness

What RDCK structures, systems, issues or opportunities will be addressed? How were they identified?

The proposed project gives the RDCK a concrete ability to advance its sustainability and water governance goals. Service 105, the Community Sustainable Living Advisory Committee, is committed to advancing objectives identified during the Integrated Sustainable Planning process. One of the items outlined as a priority in this report is *water protection and advocacy*. This project is a tangible opportunity to address that specific priority by addressing the concerns of the community members. The RDCK established water as one of the five areas to be addressed by the RDCK's Sustainability Services. Drinking water is essential to our communities and the RDCK recognizes the importance of effectively managing its 19 water systems - 7 of which are groundwater wells. The RDCK's Water Governance Initiative has indicated that the Living Lakes Canada's Columbia Basin Water Hub is a key instrument for actionable steps to provide effective drinking water management, which is a crucial objective of this project. In summary, by investing in publicly accessible long-term water level data and community socialization and education, we can help form the basis for future watershed planning and drinking water protection.

The need for data was identified by residents and organizations in the RDCK. Since Living Lakes Canada began the Groundwater Monitoring Program, all VOWs were established based on requests from residents and organizations concerned about their water resources. The province of British Columbia is monitoring similar water level parameters within the Provincial Groundwater Observation Well Network scattered throughout the Province. Though, there are currently only 2 Provincial Groundwater Observation Wells in the RDCK, monitoring 2 of the 57 mapped aquifers in the region. Drilling a new well can be expensive and it is not a sustainable way or cost-effective way to get the data we need. Therefore, this Program collaborates with existing well owners rather than drilling new wells. Collaboration across jurisdictions and with various partners is an effective way to get the data needed to effectively manage water at a large scale.

In 2021, LLC received requests to monitor groundwater in the Canyon area. Living Lakes Canada received an *Area B Community Development Grant* to partially support increased monitoring in that area. The goals of this grant were to engage partnerships in the community to identify existing wells that could be used for monitoring and sharing the data publicly. Within a year, three new VOWs were established and data collection began in the spring of 2022. Continuous, long-term funding from the RDCK has the opportunity to benefit the community for generations through the collection of quality data and using funds from the RDCK as matching funding to bring other fundraising sources to the region.

The effectiveness of this program is further demonstrated by the success of a similar program in the Regional District of Nanaimo (RDN). The RDN has been working for over a decade to assess groundwater resources for their constituents. First, they assessed which aquifers were being monitored by the Provincial Groundwater Observation Well

Network. They then used a priority matrix to identify key data gaps needed to assess water security. Next, they initiated an outreach program to connect with landowners to find existing wells that could fill these data gaps. This program has been extremely successful and has doubled the number of wells monitored in their region and closed many data gaps. The RDN project is funded by their “Drinking Water and Watershed Protection Service”. The RDN and Living Lakes Canada programs have been developed concurrently and both programs are sharing ideas. The RDN said that one of their project goals was to inspire similar programs in other regions, but that funding is the biggest barrier to the success of these types of programs. Link to their website for more information: <https://www.rdn.bc.ca/groundwater-monitoring>.

3. Efficiency

Name 3 objectives and supporting activities of this project.

The 2023-2024 stage of the Columbia Basin Groundwater Monitoring Program has three main objectives:

1. Maintain current data collection efforts in the 16 Volunteer Observation Wells (VOWs) in the RDCK:
 - a. Three visits to each well per year to download and review data, collect manual water level measurements for calibration and quality assurance, provide maintenance to the installed water level loggers, and
 - b. Engage well owners in data collection to increase community engagement and groundwater literacy;
2. Expand the data collection network and establish new VOWs:
 - a. Identify priority areas for monitoring in collaboration with communities and other organizations and projects,
 - b. Identify and assess pre-existing wells to determine their feasibility for monitoring
 - c. Establish a partnership with the well owner to monitor groundwater water levels in these wells;
3. Continue to share data publicly to educate and socialize the community on GW topics:
 - a. Process data from VOWs and share data publicly on the [Columbia Basin Water Hub](#), [Depth2Water](#), and WGI story map,
 - b. Engage community members by involving well owners in volunteer data collection efforts,
 - c. Host outreach programs in the community, engage local youth, and
 - d. Actively share and promote data with key water stakeholders such as drought response teams, BC Wildfire, etc.

How will the project be evaluated and how will you know if it has been successful?

The success of this project will be determined by five performance indicators:

1. The number of VOWs established (#),
2. The number of aquifers/VOWs being monitored (#),
3. The number of publicly available data sets (#)
4. The number of community members engaged (#), and
5. The number and variety of data use stories (#).

Three of these performance indicators relate directly to the data collected. Increasing the number of VOWs and aquifers being monitored will increase the number of data sets, therefore reducing the number of data gaps for groundwater management. All indicators will be assessed based on a comparison of the numbers before and after the implementation of the proposed project.

The final two indicators for the success of this program relate to the education, engagement, and socialization of the project within our communities. This project will evaluate the total number of community members engaged through initiatives such as VOWs, volunteer events, youth engagement programs, and outreach initiatives. Finally, this program will assess its effectiveness based on the volume and variety of the data use stories that are collected. Data use stories are an effective way to understand who and how the data is being used for water management. All indicators will be

assessed based on a comparison of the numbers before and after the implementation of the project.

4. Impact

How will this project influence RDCK systems, structures and or processes in order to create change?

This project has the power to increase RDCK's contributions toward the sustainability of our shared resources and supporting ecosystem services. Groundwater is significant for human, animal, and ecosystem health and proper management of this resource will play a key role in water security as a response to climate change. Water level measurements from observation wells are crucial to understanding how aquifers respond to hydrological, anthropogenic, and climate change stresses. A stable network of water level monitoring will provide essential data to evaluate changes in groundwater over time and will form the basis for watershed planning and drinking water and protection services. It will allow decision-makers to make educated recommendations for the benefit of area residents and the local environment. This will positively impact the longevity of industries, businesses, individuals, animals, and ecosystems within the RDCK community.

5. Sustainability

How will this project contribute to advancing sustainability at the RDCK by addressing its social, economic, cultural and environmental priorities?

The priorities of the RDCK reflect those of its constituents and the Integrated Community Sustainability Planning process demonstrated that the area residents' priorities include *water protection and advocacy*. Further, they also indicated that climate change, natural areas, and agricultural land are important to residents and groundwater is central to these systems and there are many examples of this. The water supply in lakes and streams in the RDCK is sustained by groundwater and helps maintain low temperatures crucial for fish health. Further, irrigation for agriculture often relies on groundwater and without a stable, reliable source there could be adverse impacts on the agri-food economic network in the RDCK. Groundwater is also the main source of domestic water supply for many rural, low-income homes due to the limited availability of public services. Additionally, water is incredibly important for many Indigenous groups' spirituality and groundwater is no exception. By addressing the sustainability of groundwater through our program, the RDCK can address the sustainability of social, economic, cultural, and environmental priorities.

How does it build partnerships and long-term local capacity?

Sustainability is a collaborative process and this project harnesses community by working with private well owners, First Nations, governments, and industry to build partnerships in the local communities. Due to the nature of this project, long-term data and long-term relationship building are crucial for project success. This project has received funding from TD Friends of the Environment, the Province of British Columbia, Columbia Basin Trust, and ECO Canada and was previously awarded funding from the RDCK for a Community Development grant in Area B. The RDCK funding will be used to leverage additional funding this year and in future years. Thus contributing to continuing local capacity building and the longevity of the Program.

6. Participation

In addition to RDCK staff, who will be involved in implementing the project?

Living Lakes Canada will be the leading organization for this project. The organization has many resources such as regional field technicians for data collection and logger installation and maintenance, groundwater experts for reviewing, processing, and uploading the data to the public portals, and a wide network for educating and engaging the community in groundwater initiatives. Well owners who volunteer their wells to the program are also involved by

allowing their wells to be accessed and their data to be shared publicly. These well owners can access the data through Bluetooth on their phones, but hold no responsibility for data downloading or management. Well owners include municipalities, First Nations, and private landowners. Furthermore, Living Lakes Canada employs the advice of geological, hydrological, First Nations, and political experts to prioritize and plan the establishment of new wells. Provincial and local government officials are also consulted and have supported the goals and objectives of the overall program.

7. Responsibility

WORK PLAN

Provide brief descriptions of your proposed project activities along with timelines for each.

Activity	Overseen by	Start Date	End Date
Spring Monitoring (Visit well sites, download data, maintain monitoring equipment and connect with well owners)	LLC Regional GW Technicians/Well owners	April 2023	April 2023
Summer Monitoring (Visit well sites, download data, maintenance and connect with well owners)	LLC Regional GW Technicians/Well owners	July 2023	July 2023
Fall Monitoring (Visit well sites, download data, maintenance and connect with well owners)	LLC Regional GW Technicians/Well owners	October 2023	October 2023
Identify priority areas (aquifers) for monitoring (Consult with RDCK and community members)	Groundwater Program Manager/Groundwater Data Manager	April 2023	April 2024
Identify and assess existing wells for their suitability for monitoring (Desktop review of well construction reports and available information, site visits as required)	Groundwater Field Manager/Groundwater Program Manager	April 2023	April 2024
Establishing New VOWs (agreements with well owners, install equipment, well upgrades if needed)	Groundwater Program Manager/ Groundwater Field Manager	June 2023	August 2023
Community Outreach (student engagement, well owner engagement and sharing data)	Groundwater Program Manager	April 2023	October 2023
Data Management (data processing and uploading to the portal)	Groundwater Data Manager	April 2023	November 2023
Hydrogeological Consulting	Hydrogeology Consultants	April 2023	April 2024

(data management advisors, data portal maintenance when needed)	(e.g. GW Solutions / Associated Environmental)		
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8. Funding

PROJECT BUDGET

List specific budget items under each heading to identify your expenses that you require cash for. Round up values to the nearest dollar.

Budget Item	Total Amount Required
Program manager (budget tracking, grant reporting, fundraising, program development)	25,000
Data and field manager (process the data, order loggers and uploading/sharing data)	23,000
Regional Groundwater Technicians (travel to well sites, coordinate meeting well owners, download data and install new loggers)	10,000
Monitoring Supplies (Data Loggers, batteries, tools)	10,000
Travel (Mileage, Accommodation, Meals)	6,000
Communications	6,000
Administration	6,400
Total Amount Required	76,400
Total Eligible Funding	76,400

REVENUE SOURCES

Who have you identified as contributing to the project? Please identify in the description if it is internal (staff time), external (cash) or in-kind.

Source Name	Description	Applied For (Y/N)	Confirmed (Y/N)	Amount

Living Lakes Canada	Staff time	Y	Y	6,000
TD friends of Environment	Cash	Y	Y	3,500
Province of British Columbia	Cash	Y	Y	56,900
Volunteer Observation Well Owners	In kind	N	Y	
RDCK CSLAC	Cash	Y	N	10,000
Technical/Scientific Advisors	In-kind	N	Y	

IN-KIND SOURCES & CONTRIBUTIONS

Describe what contributions are being made to the project other than cash. (200 words)

The Program has support from experts working in the field such as hydrogeological consultants, government staff, and academics. They act as advisors on the scientific aspects of the Program, often as in-kind support. In addition, we work closely with water supply operators, drillers, and well pump installers. Their time and support are critical to the success of the technical portion Program and are often secured in-kind or at a reduced rate. Finally, the well owners who volunteer their wells are extremely important to the long-term sustainability of this Program. Drilling new wells is costly and time-consuming, partnering with existing well owners is a cost-effective way to collect data that are needed to effectively manage water resources.

Are you providing additional material that provides further evidence to support your project idea (such as letters of support, outcomes of community engagement, report executive summaries, quotes, approvals maps, etc)?

List what you are submitting:

1. Map of Volunteer Observation Wells overlaid with RDCK areas
2. Testimonials from student engagement with Selkirk College
3. Program Brochure

ADDITIONAL INFORMATION

Is there anything else you would like to add that has not already been mentioned?

Data currently shared on BC Real time data tool (<https://agrt.nrs.gov.bc.ca/Data>) and Depth to water portal (<https://depth2water.gwsolutions.ca/client/living-lakes-canada/#/wells>) this project will improve data sharing on these platforms.

The Living Lakes Canada website is an up to date resource for a summary of the Columbia Basin Groundwater Monitoring Program. (<https://livinglakescanada.ca/project/columbia-basin-groundwater-monitoring-program>)

QUESTIONS?

Paris Marshall Smith, Sustainability Coordinator
236-532-2016

For reference - EVALUATION CRITERIA FOR PROJECTS

The CSLAC will evaluate proposals received and will recommend projects to the Board based on the following criteria:

1. **Relevance** - Although a project may engage with the RDCK extended community, the primary impacts of the project must be felt in the RDCK and must affect and influence RDCK constituents.
2. **Effectiveness** – How will this project contribute to advancing sustainability at the RDCK by addressing the social economic, cultural and environmental dimensions of sustainability in its planning and in its objectives in alignment with RDCK Integrated Community Sustainability Plan (or 2010 Sustainable Central Kootenay Vision Statement)?
3. **Efficiency** – Does this project have SMART objectives and activities that are Specific, Measurable, Achievable, Relevant and Time limited. Also must define realistic indicators to measure progress.
4. **Impact** – How will this project influence RDCK systems, structures and or processes used by RDCK stakeholders in order to create expectedly positive and transformative change in their behavior and RDCK service delivery?
5. **Sustainability** – How will this project contribute to building a culture of sustainability means the project should provoke positive change, influence current systems, structures and/or processes, to influence a change in behavior towards a more sustainable result. And align with goals in ICSP and Board priorities?
6. **Participation** – Will this project involve a variety of qualified individuals and or partners for the purpose of endorsing and supporting the project during its implementation and following its completion? Participants are expected to support the project to a successful completion.
7. **Responsibility** - The project lead, who is the project's main contact person and the individual accountable for the project's finances and outputs, must be a RDCK staff or Board.
8. **Funding** - Demonstrate that it is financially worth the investment through comprehensive, pertinent, logical, reasonable and realistic inputs and budget considering the project's planned goal, expected impacts, objectives, and activities, with alternative sources of funding having been identified where appropriate.

Please use these pages for your responses to the application questions.



Columbia Basin Groundwater Monitoring Program

Regional District of Central Kootenay
Community Sustainable Living Advisory Committee
November 29th, 2022



Kayla Harris
Groundwater Program Manager
Kayla@livinglakescanada.ca

Presentation Overview

- Introduction
 - Living Lakes Canada (LLC)
 - LLC Groundwater Monitoring Program
- Groundwater and the importance to the RDCK
- Proposed Project - \$10,000 from the RDCK
- Questions





Living Lakes Canada
collaborates to protect
water in a changing
climate.

RDCK's commitment to sustainability

The RDCK recognizes the importance of protected water sources for drinking, habitat, and recreation by providing effective management of its 19 water systems and being an advocate for safe, clean, and abundant water.

Integrated Community Sustainability Plan 2010

- All residents should have access to clean water
- Water conservation is a priority for all water users

Watershed Governance Initiative

Possible action steps for communities seeking to protect their drinking water watersheds, 2022

- Establish monitoring – upload to Columbia Basin Water Data Hub
- Build relationships – Living Lakes Canada



Columbia Basin Groundwater Monitoring Program

Objectives

1. Collect hourly groundwater level measurements to determine how levels change seasonally and from year to year;
2. Share data publicly for others to use; and
3. Engage citizens in data collection and share data in easy-to-interpret formats to increase knowledge and awareness about groundwater

Our Collaborators

- Well owners volunteer their wells for monitoring. These include municipalities, First Nations, and private landowners. Using existing wells is a way to educate the community members while ensuring the long-term suitability of the program by saving costs.
- LLC team, hydrogeologists, provincial government
- Funders: Provincial Government, Foundations, RDCK

RDCK Area B Community Development Grant 2021

- 3 new LLC volunteer wells established
- Well owner engagement and publicly available data
- New provincial monitoring well



Why bother?

Water supply

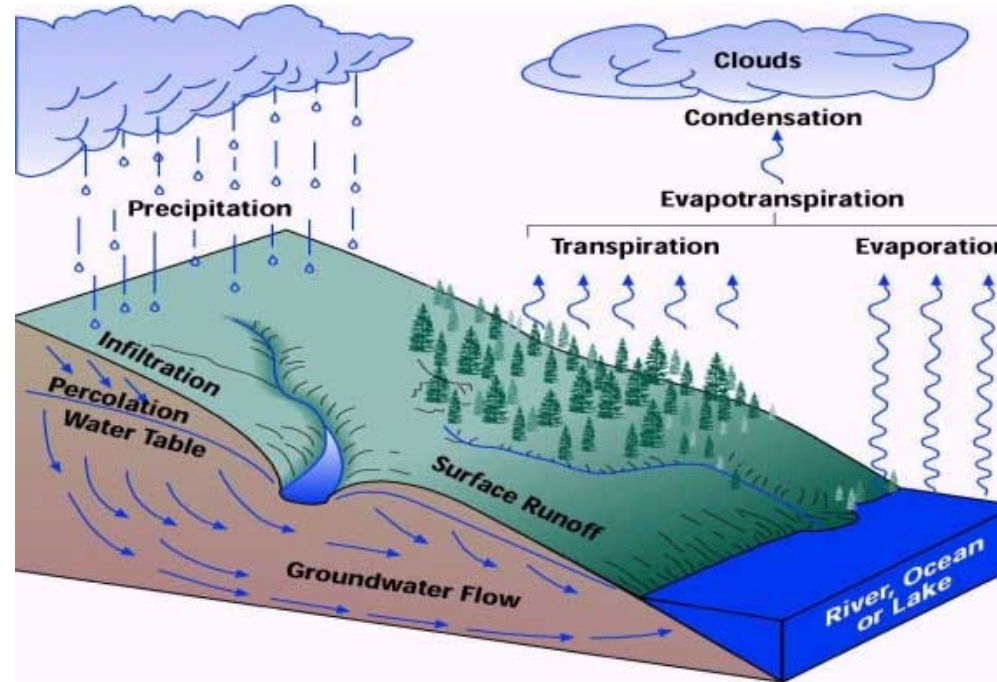
- Domestic
- Agricultural
- Industrial

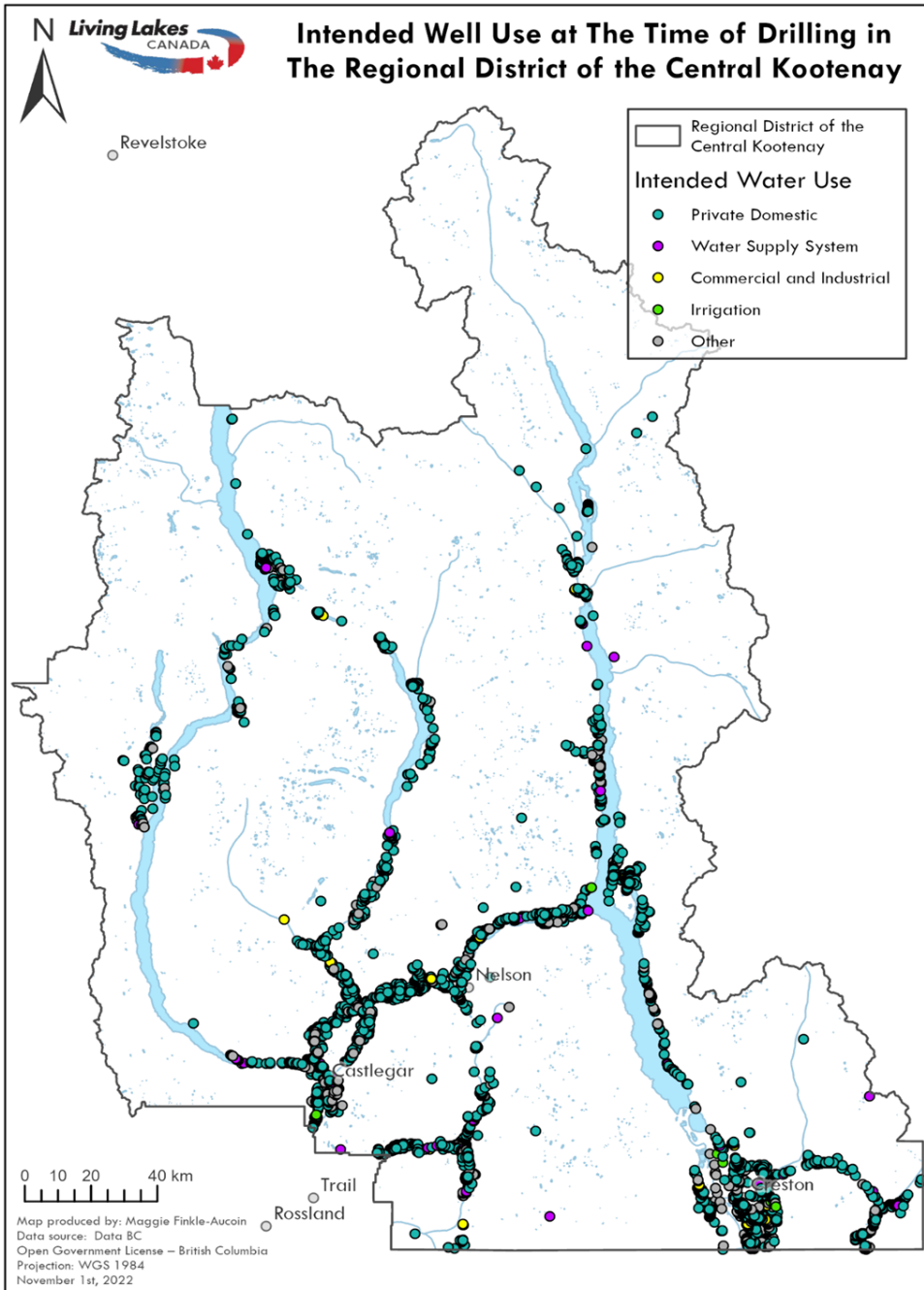
Maintains ecosystems

- Temperature
- Nutrient exchange

Maintains flows and water levels in surface waters

- Aesthetic value
- Surface water supplies





Well use in the RDCK

Private domestic: 3094

Irrigation: 27

Industrial/Commercial: 57

Water supply system: 91

Other: 594

Correlated to an aquifers: 1259

Uncorrelated to an aquifer: 2605

Why is groundwater sustainability important to the RDCK?

1. Large percentage of the constituents rely on groundwater for domestic and agricultural water use
 - More individuals are turning to groundwater for a reliable source of water, the cumulative effect of water extraction from multiple wells can influence groundwater conditions
2. Groundwater is a critical resource to adapt to climate change
 - Maintains ecosystems, important for the health of streams and rivers (cool and oxygen-rich)
 - Water supply for people
3. Groundwater needs to be managed to be protected
 - Quality data are needed to inform management (policy, droughts and flood response, resource allocations)
4. BC Water Sustainability Act links groundwater pumping with environmental flows since 2016
 - Pumping can be linked to streamflow depletion but quantifying is expensive and time-consuming, Water level measurements are good indicators of aquifer conditions

How the program works



Identify suitable existing wells to monitor



Install & maintain groundwater level data loggers to collect hourly water level measurements

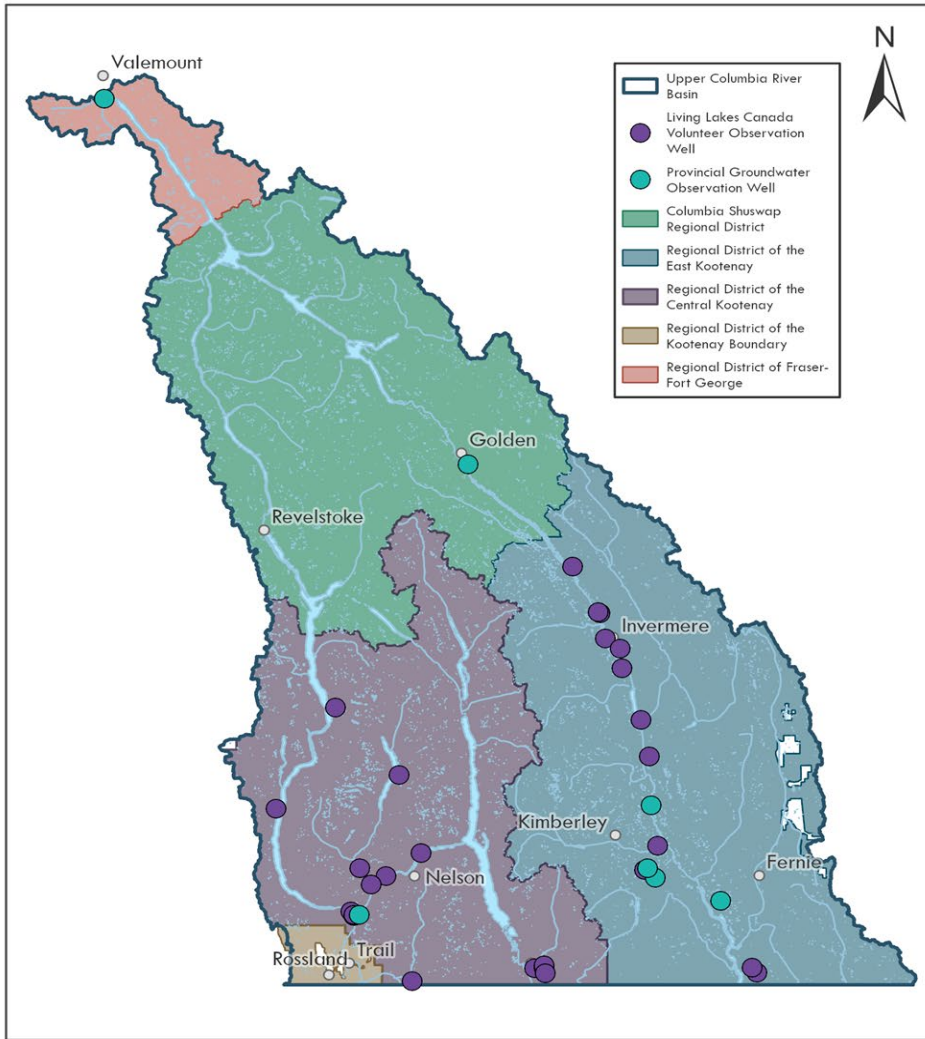


Review, store, and analyze the data in the database system Depth2Water



Share data publicly on Columbia Basin Water Hub: www.cbwaterhub.ca & BC Realtime Water Data Tool: <http://aqrt.nrs.gov.bc.ca/>

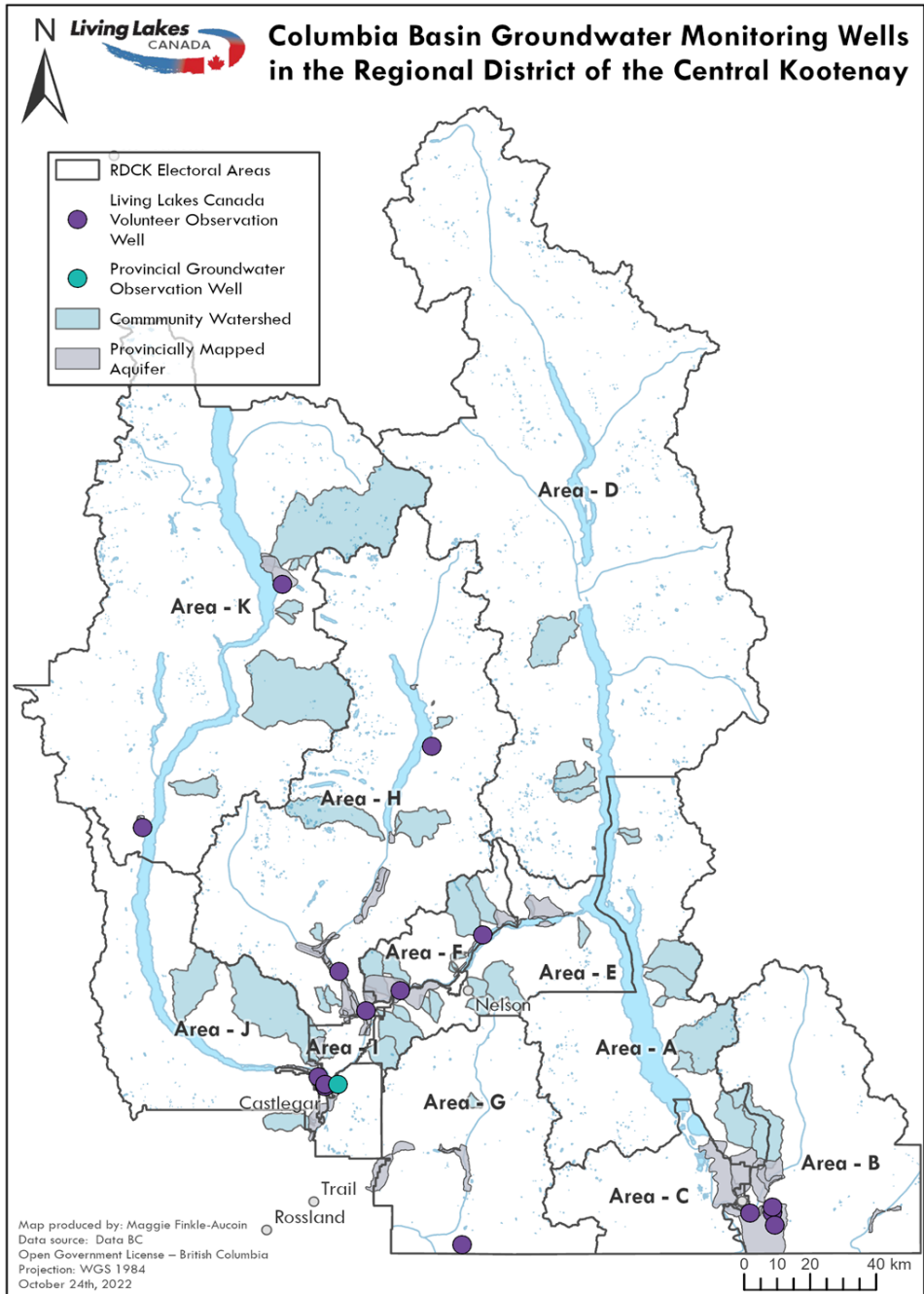
Groundwater Observation Wells in the Upper Columbia Basin



Map produced by: Maggie Finkle-Aucoin
Data source: Data BC
Open Government License – British Columbia
Projection: WGS 1984
October 24th, 2022

Overview of monitoring wells in the Columbia Basin

Living Lakes Monitoring wells: 32
Provincial Observation wells: 7
Mapped Aquifers: 183



Overview of monitoring wells in the RDCK

Living Lakes monitoring wells: 16
 Provincial Observation wells: 1
 Mapped aquifers: 57

- Area B: 4
- Area E: 1
- Area F: 1
- Area G: 1
- Area H: 3
- Area J: 3 - Provincial Observation Well
- Area K: 3



Proposed Project

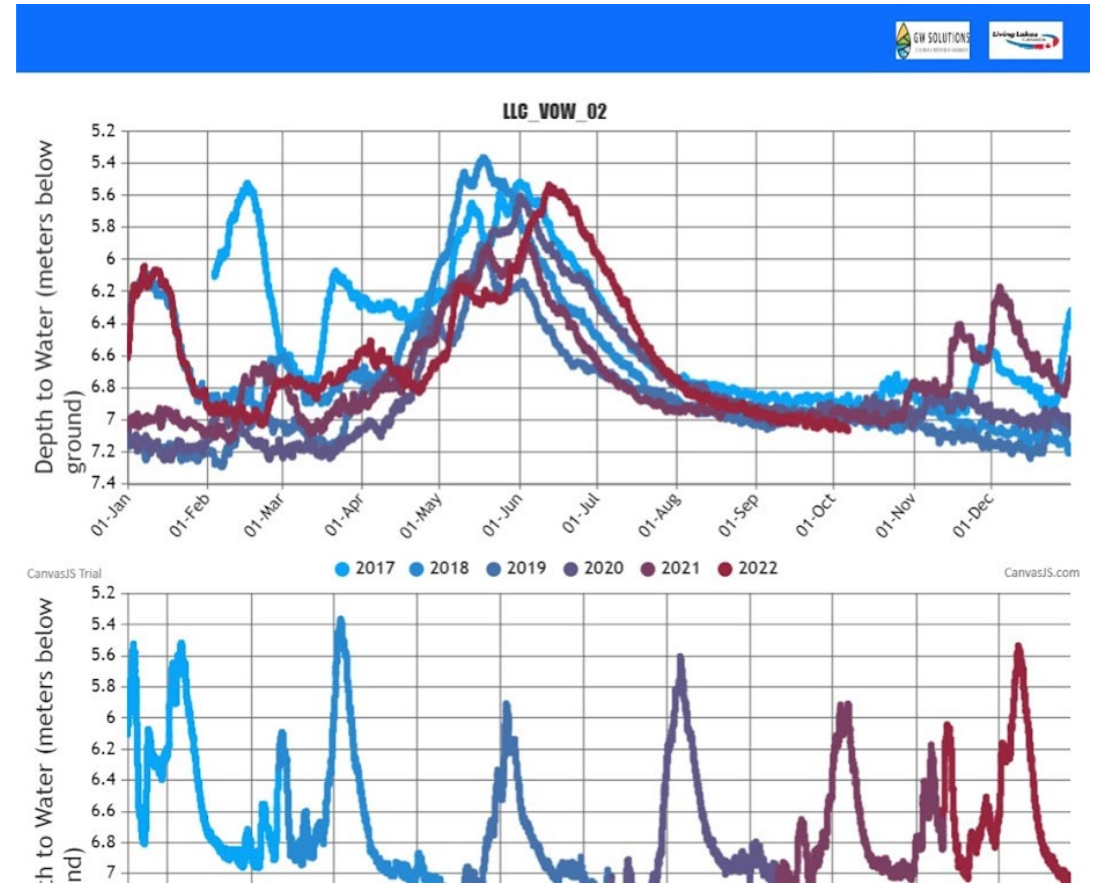
2023-2024 project of the Columbia Basin Groundwater Monitoring Program

Objectives

1. Maintain current data collection in the 16 Volunteer Observation Wells (VOWs) in the RDCK
 - Three visits a year
 - Engage well owners, increase literacy
2. Expand the data collection network and establish new VOWs
 - Identify priority areas
 - Identify and assess existing wells for monitoring
 - Establish partnerships with well owners
3. Continue to share data publicly to educate and socialize the community on GW topics
 - Process and share publicly data WGI story map, Columbia Basin Water Hub
 - Host outreach programs
 - Engage community members in active volunteering

Outcomes

- Increased understanding of groundwater conditions
- Increased socialization and education about groundwater
- Increased funding from outside sources to projects on RDCK



Summary

\$10,000 from the RDCK to reach 3 objectives:

1. Continued groundwater level monitoring in the RDCK at the 16 existing wells.
2. Expand and establish new monitoring wells in priority areas.
3. Increased education and socialization around topics related to groundwater and publicly available data.



Benefits to the RDCK:

- Assist the RDCK to reach their sustainability goals and commitments.
- Increase the capacity to address the concerns of the area residents.
- Build and foster relationships between community members, provincial and regional government, and other invested parties.

QUESTIONS?





Committee Report

Date of Report: November 10, 2022
Date & Type of Meeting: November 29, 2022, Community Sustainable Living Advisory Committee
Author: Paris Marshall Smith, Sustainability Planner
Subject: KOOTENAY LAKE WATERSHED MONITORING PROGRAM
File: 5200-20-CSLAC-Projects-FOKL
Electoral Area/Municipality All

SECTION 1: EXECUTIVE SUMMARY

This report provides Step 2 of Community Sustainable Living Advisory Committee project evaluation for an application from Friends of Kootenay Lake for the Kootenay Lake Watershed Monitoring Program (KLWMP). The full project evaluation can be found as **Attachment A – CSLAC_FOKL-ATTACH01**

Recommendation – That the Board direct staff to defer the Friends of Kootenay Lake - Watershed Monitoring Program application to August 2023 for consideration as part of the 2024 CSLAC budget.

SECTION 2: BACKGROUND/ANALYSIS

This report provides Step 2 of Community Sustainable Living Advisory Committee project evaluation for an application from Friends of Kootenay Lake for the Kootenay Lake Watershed Monitoring Program (KLWMP). Friends of Kootenay Lake have requested \$10,000 to expand KLWMP all around Kootenay Lake.

OVERVIEW – *from the application*

The Kootenay Lake Watershed Monitoring Program (KLWMP) was established in 2020 by Friends of Kootenay Lake Stewardship Society (FoKLSS) in response to a local need to fill water data gaps and increase capacity for community-based water monitoring. The Program focuses on collecting water quality and quantity data on Kootenay Lake tributaries each year and providing free training to community groups in the Canadian Aquatic Biomonitoring Inventory Network (CABIN) protocol, a nationally standardized method of water quality monitoring that analyzes biological, physical and chemical parameters of freshwater streams.

Each summer for the past three summers, 15 members of the public (targeting environmental societies and First Nations communities) are invited to participate in a free-of-charge, two-day, in-field workshop delivered by certified CABIN trainers with Selkirk College to receive their CABIN Field Assistant certification. Certified volunteers accompany FoKLSS staff to monitor ten tributaries of Kootenay Lake, thereby providing practical experience to participants. The data gathered through monitoring is uploaded to the national CABIN database and the FoKLSS [website](#), and are provided by request to local governments, interested community members, and water license holders of monitored creeks. The first three years of the program

focused on monitoring streams in Kootenay Lake’s west arm. Beginning in 2023, sites will be selected from all around Kootenay Lake, with the goal of monitoring all of Kootenay Lake’s accessible tributaries throughout the life of the program.

Streams are chosen using various data including number of residences, number of water licenses, length of roads, area of mining tenures, and area of forestry cut blocks categorized by date within each watershed. Selecting those with the highest amounts of disturbance and the highest water licenses.

Collaboration with Living Lakes - LLC has not and does not currently plan to do CABIN monitoring around Kootenay Lake. LLC and FoKLSS are currently in the process of identifying synergies between all of our water monitoring initiatives and whether there are opportunities for partnership. LLC is the entity that enabled the KLWMP for FoKLSS as significant program advisors in the initial days and partnering to deliver the first CABIN training workshop in 2020. LLC and FoKLSS still partner on the project through LLC’s STREAM program. Samples are sent to the University of Guelph to test and strengthen the use of e-DNA metabarcoding as an alternative insect identification method.

SECTION 3: DETAILED ANALYSIS

3.1 Financial Considerations – Cost and Resource Allocations:

Included in Financial Plan:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Financial Plan Amendment:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Debt Bylaw Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Public/Gov’t Approvals Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

CSLAC has 2 types of activities it supports – projects and programs:

1. **Projects** are short one-off initiatives that have a distinct beginning and end, they are intended to be investigations of novel ideas focused on increasing rural resilience

FOR 2023 - Of the annual \$25,000 CSLAC project fund, \$18,500 has been allocated for 2023 (res 515/22), leaving \$6,500 available for 2023.

2. **Programs** are multi-year initiatives – often projects that have moved past the incubation phase – undefined amount per year

Friends of Kootenay Lake have requested \$10,000 for 2023.

Staff provide 4 options -

1. Fully fund the request - requires running a deficit in the project account for 2022
2. Partially fund the request - proponents would be grateful for reduced funding if that is all that is available
3. Deferred funding - CSLAC could defer this application for consideration in the 2024 CSLAC budget
4. No funding – CSLAC do not fund this request

3.2 Legislative Considerations (Applicable Policies and/or Bylaws):

None at this time

3.3 Environmental Considerations

The CABIN protocol is unique in that it includes a biological analysis, providing an accurate understanding of the biological health of the stream and whether biological communities have been disturbed or impacted. Benthic macroinvertebrates (bottom-dwelling invertebrates visible to the naked eye) are collected from the stream and sent to a lab for identification. Stream health can be inferred from the richness and abundance of disturbance-tolerant, and disturbance-intolerant species.

3.4 Social Considerations:

This project will further unite communities around Kootenay Lake to advance Phase 3 of the Watershed Governance Initiative.

3.5 Economic Considerations:

Support for this project will provide economic opportunities across the regional district.

3.6 Communication Considerations:

A communication strategy will be developed as needed.

3.7 Staffing/Departmental Workplace Considerations:

Evaluation of this project proposal is within the Sustainability Planner's workplan.

3.8 Board Strategic Plan/Priorities Considerations:

Actions to support water monitoring align with the following Board priorities:

- 1. Seek opportunities for partnerships with local communities:**
 - Moving towards reconciliation with First Nations through respectful interactions and exploring partnerships
 - Achieve better coordination between the RDCK and local municipalities on common strategic priorities
- 2. Protect our water sources**
 - Develop comprehensive watershed management plan with all stakeholders and include them in OCP
 - Crown land logging and private land logging have limited impact on the quality and quantity of water available to RD residents for drinking and recreation
- 3. Establish a governance model for watershed management in the RDCK**
 - The RDCK determines what available tools it has to protect watersheds

SECTION 4: OPTIONS & PROS / CONS

That the Board direct staff to defer the Friends of Kootenay Lake CABIN Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

OPTION 1 – APPROVE

PRO:

- CSLAC project funds are limited
- Staff time can be used elsewhere

CON:

- Missed opportunity to investigate a project that could have regional benefit

OPTION 2 – DO NOT APPROVE

Direct staff to fund the Friends of Kootenay Lake CABIN Monitoring application application in 2023 – will require an increased requisition or funding could be allocated in part – proponents would be grateful for reduced funding if that is all that is available

PRO:

- There is no additional demand on RDCK staff beyond current workplan commitments

CON:

- No con at this time

SECTION 5: RECOMMENDATIONS

That the Board direct staff to defer the Friends of Kootenay Lake CABIN Monitoring application to August 2023 for consideration as part of the 2024 CSLAC budget.

Respectfully submitted,

Paris Marshall Smith, Sustainability Planner

CONCURRENCE

Chief Administrative Officer – Stuart Horn

General Manager of Development and Community Sustainability Services – Sangita Sudan

Manager of Community Sustainability Services – Chris Johnson

ATTACHMENTS:

Attachment A – CSLAC_FOKL-ATTACH01



COMMUNITY SUSTAINABLE LIVING ADVISORY (Service 105) EVALUATION for PROJECT INITIATION

This evaluation is the second step in preparing your project for consideration by the Community Sustainable Living Advisory Committee (CSLAC).

1. Fill out the following questions to the best of your ability/knowledge. If you require assistance, contact the Sustainability Planner - pmarshallsmith@rdck.bc.ca
2. Once complete, the project will be reviewed by Staff and brought to the next CSLAC meeting. To be included on the agenda, ensure that forms are received by the 15th of the month before the meeting;
3. **Projects must be submitted by Monday November 14, 2022 to be considered for 2023 planning and budgeting;**
4. Proponents are invited to attend the CSLAC meeting as delegates for discussion and questions; and,
5. Once reviewed and questions satisfied, CSLAC will direct staff to develop a project evaluation in partnership with the project proponent that will eventually go to the Board for review.

PROPOSAL INFORMATION

APPLICANT INFORMATION

Project Proponent

Friends of Kootenay Lake Stewardship Society

Phone

(250) 777-2744

Email

manager@friendsofkootenaylake.ca

PROJECT INFORMATION

Project Title

Kootenay Lake Watershed Monitoring Program

Project Location

RDCK Electoral Areas E, F, D, A, C in tributaries of Kootenay Lake

Identify the geographical location(s) that will benefit from this project

RDCK Electoral Areas E, F, D, A, C

Project Classification (water, energy, climate change, food & agriculture or housing)

Water

Estimated Start Date

April 1, 2023

Estimated Completion Date

March 31, 2024, repeating annually

The CSLAC will evaluate proposals received and will recommend projects to the Board based on the following criteria. Respond to the following questions using as much space as needed. Please use page 5 & 6 for your answers. See the list at the end of this worksheet for more information on each category.

1. Relevance

What will the project do? How will this be achieved? Explain why this project is important to our community. Why is the RDCK best suited to deliver the project? Where will the project take place? How many people will directly benefit from the project and who are they?

The Kootenay Lake Watershed Monitoring Program (KLWMP) was established in 2020 by Friends of Kootenay Lake Stewardship Society (FoKLSS) in response to a local need to fill water data gaps and increase capacity for community-based water monitoring. The Program focuses on collecting water quality and quantity data on Kootenay Lake tributaries each year and providing free training to community groups in the Canadian Aquatic Biomonitoring Inventory Network (CABIN) protocol, a nationally standardized method of water quality monitoring that analyzes biological, physical and chemical parameters of freshwater streams. The CABIN protocol is unique in that it includes a biological analysis, providing an accurate understanding of the biological health of the stream and whether biological communities have been disturbed or impacted. Benthic macroinvertebrates (bottom-dwelling invertebrates visible to the naked eye) are collected from the stream and sent to a lab for identification. Stream health can be inferred from the richness and abundance of disturbance-tolerant, and disturbance-intolerant species.

Over the past three summers, 15 members of the public (targeting environmental societies and First Nations communities) have been invited to participate in a free-of-charge, two-day, in-field workshop delivered by certified CABIN trainers with Selkirk College to receive their CABIN Field Assistant certification. Training takes place in July at accessible streams within 20 km of Nelson. Trainees have the option to upgrade their certification to Field Technician by completing an online training module offered through the University of New Brunswick with fees reimbursed by FoKLSS (a value of \$750). Newly certified volunteers then accompany FoKLSS staff to monitor ten tributaries of Kootenay Lake, thereby providing practical experience to participants. The data gathered through monitoring is uploaded to the national CABIN database and the FoKLSS website, and are provided by request to local governments, interested community members, and water license holders of monitored creeks. The first three years of the program focussed on monitoring streams in Kootenay Lake's west arm. Beginning in 2023, sites will be selected from all around Kootenay Lake, with the goal of monitoring all of Kootenay Lake's accessible tributaries throughout the life of the program.

By providing opportunities for professional development and removing financial barriers to participants, we are helping to create a network of informed citizens with the capacity to contribute to community-based water monitoring. Anyone is welcome to participate in this program; no previous experience or knowledge in water quality monitoring is required. This program increases participants' employability and offers great networking opportunities. Past participants have expressed immense gratitude for the training opportunity and have been utilizing their skills in their professional lives. Some participant testimonials are included in the letters of support attached to this application. This program also produces valuable data that not only helps us better understand the health of local streams, but is

added to the growing national database used by scientists and decision makers to better understand the health of streams across Canada. The data are also useful for other scientific applications such as climate modelling. Monitoring in 2020, 2021 and 2022 revealed that landowners are increasingly concerned about the quality of their surface water resources and the ecological health of stream ecosystems. Many have expressed gratitude for and personal interest in the program. Quantifying the reach of this program's benefits is challenging, but the number is upwards of 20,000 people, including training participants, water license holders of monitored creeks, land use planners, and those who benefit from improved water management practices locally as a result of increased data availability.

The RDCK is obligated to understand and protect the integrity of freshwater resources, with water protection and advocacy identified as one of seven regional priorities and with a stated commitment to support water conservation and source water protection. However, the current lack of water quality and quantity data makes adequate stream management difficult. The data collected through this program provides a unique understanding of the ecological health of streams that often is overlooked, providing the regional district with valuable knowledge that could guide land-use, conservation, restoration, and other nature-based planning all around Kootenay Lake. The program covers five RDCK electoral areas and includes streams on which the RDCK owns water systems. It focuses on monitoring streams that have high impacts and high residential usage (water licenses), making the data relevant, interesting and/or important for many interest groups. The data is easily accessible from the FoKLSS website or can be directly shared and presented to the RDCK. Our results will likely reveal that some streams are less healthy or intact than others and point to potential causes of stream degradation that will help identify restoration potential. In addition, the data provides a baseline for local streams so that when future changes or disturbances occur (e.g., climate warming, wildfire, logging), the associated impacts on streams will be measurable.

2. Effectiveness

What RDCK structures, systems, issues or opportunities will be addressed? How were they identified?

Responding to the science:

In February 2017, Columbia Basin Trust (CBT) released the report "Water Monitoring and Climate Change in the Upper Columbia Basin, Summary of Current Status and Opportunities", outlining the current state of knowledge on water quality and quantity in the Columbia Basin. The research revealed a decline in local monitoring efforts for hydrometric, water quality and snow melt metrics and identified an overall lack of necessary water data for managing and protecting the Columbia Basin's water resources in the face of a changing climate. The report made clear the importance of filling data gaps to improve our knowledge of water quality and quantity in the Basin. FoKLSS responded by initiating the KLWMP in 2020. The program aims to build community-based monitoring networks to improve climate awareness and resilience while filling some data gaps identified in the CBT report.

Responding to the community:

Locals are increasingly concerned about stream health and the quality and quantity of freshwater resources. Many people in the community reach out to FoKLSS with questions or concerns regarding various impacts to stream health including forestry practices, climate change, forest fires, and private development. Some people fear that stream degradation is flying under the radar and that

initiatives to enforce laws, monitor water systems, and restore degraded habitats are not keeping pace with the negative impacts. The KLWMP aims to provide citizens with the knowledge and tools to monitor streams, as well as provide community members and decision makers with stream health data.

Responding to the RDCK's priorities for sustainability:

SustainABLE Central Kootenay envisions a pristine natural environment providing peace, balance, and wildness, and monitoring the natural environment is the only way to know whether we are realizing this vision. Regional priority #4, identified through the Integrated Community Sustainability Plan, is "water protection and advocacy". Stream health data is necessary to understand local water protection and advocacy needs. The program also aligns with the Watershed Governance Initiative, in that it supports community-led stream documentation, standardized monitoring, and relationship building.

3. Efficiency

Name 3 objectives and supporting activities of this project.

1. Train 15 people to receive CABIN Field Assistant certification in July 2023.
 - a. Hire certified CABIN trainers (Allison Lutz and Doris Hausleitner) to host the training workshop by April 30 2023.
 - b. Invite members of water stewardship groups, environmental societies, and First Nations to participate, then extend the invitation to the general public by June 15, 2023.
 - c. Host 2-day CABIN training workshop in mid-July and reimburse participants to complete online modules to upgrade certification by March 15, 2024.
 - d. Release participant satisfaction survey with regard to program delivery by August 1, 2023.
2. Monitor 10 Kootenay Lake tributaries by October 2023, and submit samples for analysis
 - a. Acquire all necessary equipment and supplies and arrange plans with laboratories by June 1, 2023.
 - b. Scope access sites and conduct landowner engagement to obtain stream access permission by August 1, 2023.
 - c. Reserve monitoring dates with volunteers by August 1, 2023.
 - d. Conduct monitoring, preserving samples and saving datasheets August to October 2023.
 - e. Ship samples to laboratories by October 7, 2023.
3. Data distributed publicly.
 - a. Upload data for the 10 streams to the national CABIN database by December 31, 2023
 - b. Create short watershed reports for each of the 10 target streams, highlighting the findings, by March 1, 2023.
 - c. Share raw data and any associated reports/data summaries with governments, community groups, First Nations, and interested community members by March 31, 2023.

How will the project be evaluated and how will you know if it has been successful?

Project success will depend on five factors: (1) whether we have met our project objectives; (2) whether work is completed within our scheduled timeline; (3) whether we have properly allocated funds and stayed within our budget; (4) the results of the participant satisfaction survey with regard to program delivery, and (5) the quality of collected data. Budget management is overseen bi-weekly, and schedule evaluation occurs weekly. Participant numbers and feedback will be compiled, summarized, and included in our final evaluation of the program. We will enumerate earned media articles that highlight the project, as well as the number of people reached through social media, measured by likes, shares and reach. Quality assurance and quality control protocols are implemented prior to, during, and after data collection. All participating staff receive CABIN training and follow the standardized protocol from equipment maintenance to data collection, cleaning, and management.

4. Impact

How will this project influence RDCK systems, structures and or processes in order to create change?

This program influences positive change at the regional level by providing stream health information and data and capacity building for community-based water monitoring. The program improves the ability of communities and land managers to understand and adapt to current and projected water-related challenges. Water monitoring data enables improved planning relating to land-use needs and conflicts, ecosystem health, and natural hazards and disasters.

5. Sustainability

How will this project contribute to advancing sustainability at the RDCK by addressing its social, economic, cultural and environmental priorities?

The program aligns with the RDCK's regional priority of Water Protection and Advocacy. The program also aligns with the RDCK's Environmental Education initiative. The program empowers people to get involved with water stewardship and provides them the skills and tools to do so. The program results in standardized data that can be used by anyone to better understand the health of local streams as well as how stream health may be changing over time. This in turn would aid in nature-based and land-use planning.

How does it build partnerships and long-term local capacity?

The KIWMP connects water stewards through the training program and provides monitoring equipment (kicknets, bottles, water chemistry meters, measuring tools etc.) for other stewardship groups to borrow, increasing their ability to monitor. This provides groups an opportunity to network and share resources. The training workshop also provides students and entry-level professionals an opportunity to network and become better integrated in their community and their chosen field. The program continues to strengthen partnerships with Selkirk College through the training program, and the University of Guelph and Living Lakes Canada through their macroinvertebrate e-DNA analysis program "STREAM" (Sequencing the Rivers for Environmental Assessment and Monitoring) which is testing the use of DNA metabarcoding to identify benthic macroinvertebrate species within biological samples. We collect extra benthic samples to be sent to the University of Guelph and they provide the analysis free of charge. This partnership helps to develop their methodology, which in the future could

help remove barriers to stewardship groups like FoKLSS for biological sample analysis as it is more cost effective and less time consuming.

6. Participation

In addition to RDCK staff, who will be involved in implementing the project?

- Allison Lutz, Hydrologist and certified CABIN instructor, Selkirk College. Role: leading CABIN training.
- Doris Hausleitner, Biologist and certified CABIN instructor, Selkirk College. Role: leading CABIN training.
- CARO Analytical Services. Role: processing water quality samples.
- Cordillera Consulting. Role: processing taxonomy samples.
- Michael Wright, University of Guelph. Role: Processing e-DNA samples.
- Trained, certified volunteers consisting of students, First Nations, or members of water stewardship groups, environmental non-profits, or the general community. Role: assisting with CABIN monitoring.
- FoKLSS Program Manager, Stewardship Coordinator and Outreach Coordinator. Role: coordinating monitoring workshops. Acquiring necessary supplies. Coordinating monitoring days. Monitoring. Submitting samples. Uploading data. Reporting. Distributing data. Community engagement and outreach.

7. Responsibility

WORK PLAN

Provide brief descriptions of your proposed project activities along with timelines for each.

Activity	Overseen by	Start Date	End Date
Book training dates with CABIN trainers	Program Manager (PM)	April 3, 2023	April 7, 2023
Purchase sample jars, preservation fluids, calibration fluids, equipment replacements, and send equipment away for necessary repairs.	PM	May 1, 2023	May 5, 2023
Invite local streamkeeper groups, non-profits, First Nations and interested community members to sign up for CABIN training workshop	Outreach Coordinator (OC)	June 5, 2023	July 12, 2023
Promote workshop online	OC	June 5, 2023	July 12, 2023
Identify potential streams for monitoring using Geographic Information Systems	PM, FoKLSS Science Committee	July 3, 2023	July 7, 2023
Scope streams for viable access points and monitoring sites and request landowner permission to access streams.	PM and Stewardship Coordinator (SC)	July 10, 2023	August 4, 2023
De-winterize monitoring equipment	SC	July 12, 2023	July 14, 2023

Host CABIN training workshop	PM, hired CABIN trainers	July 13, 2023	July 14, 2023
Send out training feedback survey	OC	July 17, 2023	July 17, 2023
Publish project updates online	OC	July 17, 2023	October 13, 2023
Contact landowners and volunteers and schedule monitoring days	PM	July 21, 2023	September 29, 2023
Monitor (using CABIN protocol) ten streams, labelling water samples upon office return	PM, SC, certified volunteers	August 7, 2023	September 29, 2023
Compile and summarize training feedback results	OC	August 14, 2023	August 18, 2023
Label, package, and ship samples to University of Guelph, CARO Analytical Services, and Cordillera Consulting.	PM	October 2, 2023	October 6, 2023
Submit data to National CABIN database	SC	November 6, 2023	November 17, 2023
Receive sample data from laboratories	PM	November 6, 2023	March 1, 2024
Summarize monitoring results and publish on FoKLSS website. Forward to landowners and other interest groups.	SC	March 4, 2024	March 29, 2024
Complete final project and financial reporting	PM	March 18, 2024	March 29, 2024
Educate the public about the project through outreach at schools, markets, festivals, and special events, as well through content creation (videos, photos, podcast episodes, blog posts, etc.)	OC	April 1, 2023	March 31, 2024

8. Funding

PROJECT BUDGET

List specific budget items under each heading to identify your expenses that you require cash for. Round up values to the nearest dollar.

Budget item	Total amount required
Program Manager wages (\$30/hr * 250 hrs) + MERCs @ 12%	\$8,400.00
Stewardship Coordinator wages (\$24/hr * 250 hrs) + MERCs @ 12%	\$6,720.00
Outreach Coordinator wages (\$24/hr * 50 hrs) + MERCs @ 12%	\$1,344.00
Summer Student wages (\$19/hr * 50 hrs) + MERCs @ 12%	\$1,064.00
CABIN Trainers (\$1,450 * 2 instructors)	\$3,045.00

Water quality sample analysis for 10 samples (\$28 TSS * 10 + \$17 turbidity * 10) + handling fee (\$3.80 * 10) + 5% GST	\$512.40
Taxonomic sample analysis (\$330 * 10) + 5% GST	\$3,465.00
Shipping samples - 15 lb CARO lab Purolator ground (\$50) + 23 lb Cordillera Consulting Purolator ground (\$90) + 53 lb Guelph University Purolator express (\$500) (inclusive of GST)	\$640.00
Reimbursement to upgrade Field Assistant to Field Technician (\$125 * 15 people) + 5% GST	\$1,968.75
Parts replacement and equipment maintenance (metal mesh for kicknet, kicknet repairs, turbidimeter repairs, DO meter maintenance and/or repairs)	\$400.00
Calibration fluids (pH, \$22 ea * 3) + (conductivity, \$21) + 5% GST	\$91.35
Preservation fluids (ethanol, \$100/4L bottle * 2) + (antifreeze, \$15/4L bottle * 4) + 5% GST	\$273.00
Sample jars (\$6.50/jar * 44) and parafilm (\$44)	\$346.50
Printing of training and educational materials (\$0.25/sheet * 500 sheets) + 5% GST	\$131.25
Misc. supplies (pens, markers, forceps, gloves, masks, bags, first aid kit supply replacements)	\$134.75
Travel expenses (average 45 km per monitoring location * 12 locations * 2 visits/location * 2 vehicles/location * \$0.61/km)	\$1,464.00
Administration (15%)	\$4,500.00
Total amount required	\$34,500.00
Total eligible funding	\$30,000.00

** cannot find information on eligible vs. ineligible funding so going off the assumption that administration costs are ineligible based on CIP/AAP guidelines.

REVENUE SOURCES

Who have you identified as contributing to the project? Please identify in the description if it is internal (staff time), external (cash) or in-kind.

Source name	Description	Applied for (Y/N)	Confirmed (Y/N)	Amount
CSLAC	External	Y	N	\$10,000.00
BC Community Gaming Grant	External	Y	N	\$20,000.00
Nelson Hydro	External	N	N	\$2,000.00
Columbia Power	External	N	N	\$2,500.00

Total:	\$34,500.00
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IN-KIND SOURCES & CONTRIBUTIONS

Describe what contributions are being made to the project other than cash. (200 words)

The University of Guelph is providing e-DNA analysis of macroinvertebrates free of charge through STREAM (Sequencing the Rivers for Environmental Assessment and Monitoring), a partnership program with Living Lakes Canada. This is an approximate \$2,000-\$3,000 value provided in-kind.

Eighty hours of volunteer monitoring valued at \$20/hr totalling \$1,600 labour-hours offered in-kind.

SUPPORTING DOCUMENTS

Are you providing additional material that provides further evidence to support your project idea (such as letters of support, outcomes of community engagement, report executive summaries, quotes, approvals maps, etc)?

List what you are submitting:

1. Letters of support
2. Video outlining the project

ADDITIONAL INFORMATION Is there anything else you would like to add that has not already been mentioned?

QUESTIONS? Paris Marshall Smith, Sustainability Planner 236-532-2016

pmarshallsmith@rdck.bc.ca



Selkirk College

Allison Lutz
300 Frank Beinder Way
Castlegar, BC
V1N 4L3

August 30, 2022

Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

This letter is in support of Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their Kootenay Lake Watershed Monitoring Program – a community-based water monitoring initiative that increases capacity of local stewards to monitor their fresh water sources through the provision of free training and real-world monitoring experience.

As a certified instructor in the nationally standardized CABIN (Canadian Aquatic Biomonitoring Inventory Network) water monitoring protocol, I have assisted FoKLSS with delivering CABIN training each year the program has been run (2020, 2021, 2022). FoKLSS has demonstrated utmost professionalism, time management and organization in the delivery of the training which resulted in the successful certification of 31 citizen scientists.

Community-based watershed monitoring is emerging across Canada as an effective and impactful means of better understanding freshwater resources, while engaging residents to get involved in water stewardship. FoKLSS is the ideal local organization to catalyze community-based water monitoring at the local level, having gained the trust and support of community groups through a decade of successful program delivery.

I will support the Kootenay Lake Watershed Monitoring Program through the provision of CABIN training in 2023 and I strongly endorse this funding opportunity as an important step toward local freshwater sustainability.

Kind regards,

ALLISON LUTZ
Geography/Hydrology Instructor
School of Environment and Geomatics
Selkirk College, West Kootenay & Boundary Region
t. 250.365.1276 or c. 250.551 3094 | e. alutz@selkirk.ca

August 29, 2022



Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

This letter is in support of Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their Kootenay Lake Watershed Monitoring Program – a community-based water monitoring initiative that increases capacity of local stewards to monitor their fresh water sources through the provision of free training and real-world monitoring experience.

As a certified instructor in the nationally standardized CABIN (Canadian Aquatic Biomonitoring Inventory Network) water monitoring protocol, I have assisted FoKLSS with delivering CABIN training for the past two of the three years the program has been run (2020- 2022). FoKLSS has demonstrated utmost professionalism, time management and organization in the delivery of the training which has resulted in the successful certification of 31 citizen scientists.

Community-based watershed monitoring is emerging across Canada as an effective means to understand freshwater health, and engages residents to be involved in water stewardship. FoKLSS is the ideal local organization to facilitate community-based water monitoring at the local level, having gained the trust and support of community groups through a decade of successful program delivery.

I look forward to supporting the Kootenay Lake Watershed Monitoring Program through the provision of CABIN training in 2023 and strongly endorse this funding opportunity as an important step toward local freshwater sustainability.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Hausleitner".

Doris Hausleitner M.Sc, R.P.Bio

Instructor, Selkirk College Environment and Geomatics

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301 Frank Beinder Way
Castlegar BC V1L 4L3

TENTH STREET CAMPUS
820 Tenth Street
Nelson BC V1L 3C7

VICTORIA STREET CAMPUS
606 Victoria Street
Nelson BC V1L 4K9

SILVER KING CAMPUS
2001 Silver King Road
Nelson BC V1L 1C8

TRAIL CAMPUS
900 Helena Street
Trail BC V1R 4S6
CANADA



Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

This letter is in support of the Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their *Kootenay Lake Watershed Monitoring Program*. This is a community-based water monitoring initiative that increases the capacity of local water stewards to monitor their fresh water sources through the free training with valuable hands-on monitoring experience.

In 2022 I completed the CABIN (Canadian Aquatic Biomonitoring Inventory Network) training session as a participant in this FoKLSS program. Because the training opportunity provided by Friends of Kootenay Lake was free it enabled a member of our society to obtain a CABIN Field Assistant Certification. In the three days of training I gained important water quality monitoring skills that now gives our society, as water stewards, improved capabilities to monitor the water quality of our Duhamel Watershed. I would very much encourage and recommend this CABIN training program to anyone interested in actively stewarding watersheds in the Columbia Basin region. With the water monitoring skill set gained from the CABIN training program, I am pleased that we have improved capabilities to steward our watershed and our region.

I strongly endorse this funding opportunity so that others may benefit from the program and to expand the water stewardship capabilities throughout the Columbia Basin region.

Most Sincerely,

Adam Sutherland

On behalf of the Duhamel Watershed Society



August 29th, 2022

Re: Friends of Kootenay Lake 2022: Kootenay Lake Watershed Monitoring Program Letter of Support

Dear Review Committee,

Living Lakes Canada fully supports the Friends of Kootenay Lake Stewardship Society's (FoKLSS's) application to continue their Kootenay Lake Watershed Monitoring Program through 2023. This is a community-based water monitoring initiative that increases the capacity of local stewards to monitor freshwater streams and rivers through the provision of free training and real-world monitoring experience.

Living Lakes Canada facilitates collaboration in education, monitoring, restoration, and policy development initiatives for the long-term protection of Canada's lakes, rivers, wetlands and watersheds. We believe that freshwater monitoring using cutting-edge technology is a vital and timely means of providing organizations such as the Friends of Kootenay Lake with the resources they need to carry out biomonitoring programs that help to improve community understanding of watershed health.

Living Lakes Canada is partnering with the Friends of Kootenay Lake to apply new technology - eDNA metabarcoding - through the Sequencing The Rivers for Environmental Assessment and Monitoring (STREAM) project. Benthic macroinvertebrate samples are collected using the Canadian Aquatic Biomonitoring Inventory Network (CABIN) protocol through FoKLSS's Kootenay Lake Watershed Monitoring Program. Through the STREAM project, hosted by University of Guelph, with a multitude of cross sectional partnerships, analysis and eDNA identification and sequencing generates biodiversity data for freshwater benthic macroinvertebrates.

Community-based watershed monitoring is emerging across Canada as an effective and impactful means of better understanding freshwater resources, while engaging residents to get involved in water stewardship. FoKLSS is the ideal local organization to catalyze community-based water monitoring at the local level, having gained the trust and support of community groups through a decade of successful program delivery.

Living Lakes Canada supports the Friends of Kootenay Lake with their efforts to increase watershed monitoring capacity at the local level, while supporting the validation of the emerging DNA metabarcoding technology.

Sincerely,

#220A, 330 Baker Street • Nelson, BC • V1L 4H5



A handwritten signature in black ink, appearing to read "Kat Hartwig", is positioned above the typed name.

Kat Hartwig
Executive Director
Living Lakes Canada
kat@livinglakescanada.ca



August 29, 2022

Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

This letter is in support of Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their Kootenay Lake Watershed Monitoring Program – a community-based water monitoring initiative that increases capacity of local stewards to monitor their fresh water sources through the provision of free training and real-world monitoring experience.

As a participant in Friends of Kootenay Lake's 2021 CABIN (Canadian Aquatic Biomonitoring Inventory Network) training session, I gained valuable water quality monitoring skills that I have since applied to developing a CABIN monitoring protocol in the Creston Valley. Without this free training opportunity provided by Friends of Kootenay Lake, I would have had to wait another year to complete the CABIN Field Assistant Certification. I will whole-heartedly recommend the course to anyone interested in actively stewarding watersheds in the Columbia Basin region.

The Creston Valley has many ongoing water concerns around agriculture, development and forestry. CABIN training provides a rigorous and national standards to monitor health of our watersheds. This year we are doing our first year of CABIN monitoring on the Goat River. Without the course last year we would not be sampling this year. Three participants from the Creston Valley were trained last year.

I felt empowered and inspired by this training program, and I am excited to continue applying my new water quality monitoring skillset in my community. I strongly endorse this funding opportunity, so that others may benefit from the program as I have.

Sincerely,

A handwritten signature in black ink that reads "M Flint".

Melissa Flint

Project Director-Coordinator

Wildsight Creston Valley Branch

Heather McIntyre
2131 Glade Road
Castlegar, B.C.
V1N 4R3

August 28, 2022

Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

This letter is in support of Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their Kootenay Lake Watershed Monitoring Program – a community-based water monitoring initiative that increases capacity of local stewards to monitor their fresh water sources through the provision of free training and real-world monitoring experience.

As a participant in Friends of Kootenay Lake's 2022 CABIN (Canadian Aquatic Biomonitoring Inventory Network) training session, I gained valuable water quality monitoring skills that I will apply to monitoring of Glade Creek: our community source for drinking water. Without this free training opportunity provided by Friends of Kootenay Lake, I would not have completed my CABIN Field Assistant Certification. I will wholeheartedly recommend the course to anyone interested in actively stewarding watersheds in the Columbia Basin region.

Repeat monitoring of Glade Creek will alert the community to any changes associated either with climate change or industrial development in our watershed.

I felt empowered and inspired by this training program, and I am excited to continue applying my new water quality monitoring skillset in my community. I strongly endorse this funding opportunity, so that others may benefit from the program as I have.

Sincerely,

Heather McIntyre

August 27, 2022

Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

I am providing this letter of immense support to Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their Kootenay Lake Watershed Monitoring Program. This community-based water monitoring initiative has already increased the capacity of local stewards monitoring fresh water sources in their communities through accessibility to free training and incredible opportunities for real-world water monitoring experience. It would be fantastic to see this invaluable opportunity grow and flourish with support from this funding.

As a Friends of Kootenay Lake's Summer 2022 CABIN (Canadian Aquatic Biomonitoring Inventory Network) training participant, I had the great opportunity to spend two immersive days gaining a full understanding of the CABIN water monitoring protocol and techniques, which I intend to apply to future career aspirations within freshwater ecology and conservation. This is a course and certification I have been wanting to complete for quite some time and without this free training opportunity provided by Friends of Kootenay Lake, I would not have completed my CABIN Field Assistant Certification due to financial barriers. I will whole-heartedly recommend the course to anyone interested in actively stewarding watersheds in the Columbia Basin region and beyond, on everything from a level of personal interest to that of professional monitoring.

Water is life, and water stewardship is incredibly important to gaining a greater understanding of the health of our natural spaces. As we continue to face increasing disturbances to natural systems from human impact, I believe it is the responsibility of each and every one of us to take the initiative to better understand how these impacts really have cause and effect to all species and all environments. FoKLSS is taking the lead on increasing the accessibility for members of the community to step up and take this responsibility seriously.

I truly cannot express my full gratitude for the opportunity to complete this training. I feel confident with my new skillset and empowered to apply these skills to an array of future opportunities in stewardship both in my local community and throughout my national and international travels, volunteering and employment. I strongly endorse this funding opportunity, so that others may also have the opportunity to gain these skills and become empowered water stewards.

Sincerely,



Melanie Jacques

August 29, 2022

Re: Support for the Kootenay Lake Watershed Monitoring Program

Dear Review Committee,

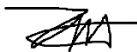
This letter is in support of Friends of Kootenay Lake Stewardship Society's (FoKLSS) funding application for their Kootenay Lake Watershed Monitoring Program – a community-based water monitoring initiative that increases capacity of local stewards to monitor their fresh water sources through the provision of free training and real-world monitoring experience.

As a participant in Friends of Kootenay Lake's 2022 CABIN (Canadian Aquatic Biomonitoring Inventory Network) training session, I gained valuable water quality monitoring knowledge that I have since applied to my work as communications assistant with Living Lakes Canada, an ENGO focused on freshwater protection and stewardship across Canada. Without this free training opportunity provided by Friends of Kootenay Lake, I would not have completed my CABIN Field Assistant Certification. I will wholeheartedly recommend the course to anyone interested in actively stewarding watersheds in the Columbia Basin region.

I was thrilled to find out about this excellent learning opportunity with Friends of Kootenay Lake Stewardship Society. I am currently pursuing a Bachelor of Science in Biology with a minor in Environmental Sciences so I expect this certification will be relevant to and support my undergraduate learning. I also am hoping to join a water stewardship group in my local area, and I would love to be able to directly apply my new knowledge from the CABIN Certification course to stewarding the water bodies in my area.

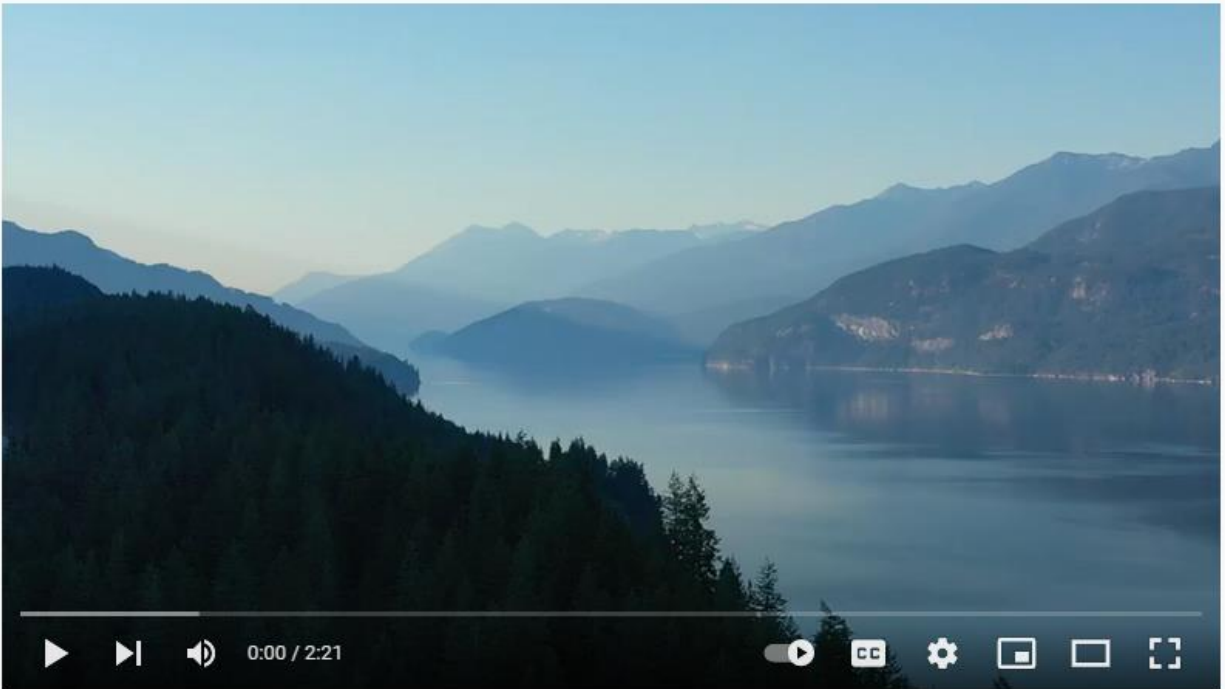
I felt empowered and inspired by this training program, and I am excited to continue applying my new water quality monitoring skillset in my community. I strongly endorse this funding opportunity, so that others may benefit from the program as I have.

Sincerely,



Tracey Mitchell

Watch our [brand new video](#) highlighting the program.



Kootenay Lake Watershed Monitoring Program

Click image to be directed to video.