

Elk River Watershed Qukin ʔamakʔis Collaborative Monitoring Program

Year 3 Progress Report
September 6, 2024



Year 3 Highlights

Over the Year 3 reporting period, from July 15, 2023, to July 15, 2024, Collaborative Partners worked to:

- **Select** Kat Hartwig, (Executive Director, Living Lakes Canada) as the new Chair of the Steering Committee, taking over from George Greene on April 3, 2024
- **Recruit** two new organizations to participate in the Program: the District of Sparwood and the BC Ministry of Water, Land and Resource Stewardship
- **Consolidate** Elk River watershed data from public federal, provincial, and regional public databases into a single database using an R script. Data includes publicly available water quality and quantity data on Elk Valley streams, rivers and creeks including water flow, water temperature, turbidity, water chemistry, and benthic invertebrates
- **Develop** first iterations of a data visualization app to view existing data on the Elk River watershed from wide range of sources
- **Launch** the Program website: <https://elkrivercollaborative.ca>
- **Host** “Knowing Water” symposium with 5 Collaborative Partner organizations presenting different ways of understanding water. A total of 89 in-person attendees, with over 500 combined views of recordings on YouTube.
- **Decide to Engage** with the International Joint Commission to see where the Program’s goals align with IJC’s Kootenay/ai scope of work. Respond to IJC interest in the data being collected by the Monitoring Collaborative
- **Raise** \$55,000 for Program coordination on March 31, 2023, with a commitment from EVR Operations Limited to continue contributions to the Monitoring Collaborative for the next three years
- **Apply** for \$150,000 in Real Estate Foundation of BC funding for Program coordination and the implementation of Theme 1-3 monitoring activities. Grant application accepted in Sept 2024.

Land Acknowledgement

The Elk River Watershed Collaborative Monitoring Program recognizes that our work takes place on the traditional land and waters of Yaq̓it ʔa·knuq̓i'it 'ʔ**akanuxunik ʔamakʔis**, the People from where the water comes out, within Qukin ʔamakʔis, the **Land of the Raven** in the Ktunaxa language

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Celebrating the Program’s 3 Year Anniversary

The Elk River Watershed Collaborative Monitoring Program celebrates its three-year anniversary, following the initiative’s launch in July 2021. Designed to combine data and knowledge from diverse groups, the Program builds towards a comprehensive understanding of water knowledge to “feel the pulse” of the Elk River watershed.

In Year 3, two organizations joined the Program, bringing the number of partners to eleven. All Collaborative Partners commit to work with one another in good faith and an open heart and acknowledge that their activities take place on the traditional lands and waters of Yaqit ?a·knuqti ‘it.

CANADIAN WILDLIFE
FEDERATION



FÉDÉRATION
CANADIENNE DE LA FAUNE

SPARWOOD




EVR
A GLENCORE COMPANY

FERNIE
CITY OF FERNIE
BRITISH COLUMBIA



Yaqit ?a·knuqti 'it



Ministry of
Environment and
Climate Change Strategy



Ministry of
Water, Land and
Resource Stewardship

**NC NORTH
COAL**

Steering Committee Update

The Steering Committee is the highest-level decision-making body for the Program, deciding on the direction, scope, and priorities. With the assistance from the Program Coordinator, the Steering Committee assigns roles and responsibilities for the:

- Monitoring Working Group
- Implementing Partners: organizations that agree to lead specific work activities to further Program goals under the direction of the Steering Committee and Monitoring Working Group

The Steering Committee is composed of 13 seats, distributed across the range of Elk River watershed interests and right holders. Ten of thirteen seats are currently served, with three seats being vacant:

- Ktunaxa Nation Council (1 seat)
- Rod & Gun Clubs (1 seat)
- Forest industry (1 seat)

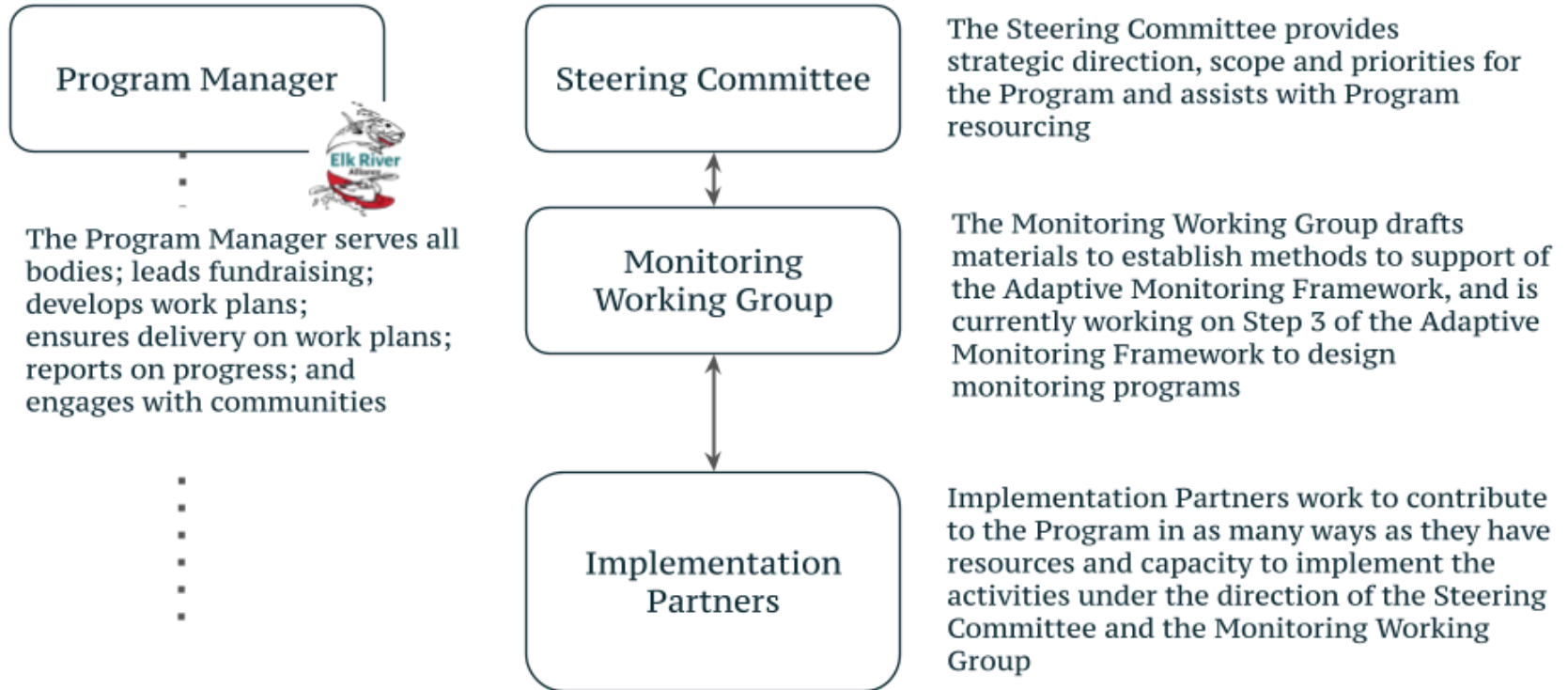
The Steering Committee assembles twice annually to provide guidance on high-level strategic decisions. In Year 3, the committee held two meetings, on June 27, 2023, and on June 3, 2024, to:

- **On-board** Patrick Sorfleet, Director of Planning & Development and representative on the Program for the District of Sparwood (June 27, 2023)
- **On-board** Shannon White, Ecosystems Section Head, as a representative of the BC Ministry of Water, Land and Resource Stewardship (June 27, 2023)
- **Elect** Kat Hartwig, Living Lakes Canada's Executive Director, to take the Steering Committee Chairmanship over from George Greene (June 3, 2024)
- **Approve** next steps for data overview and monitoring program design as outlined by the Monitoring Working Group
- **Approve** ERA plans to apply for \$150,000 from the Real Estate Foundation of BC for a mutual application by Yaqit ?a·knuqi 'it and Elk

River Alliance for Theme 1-3 monitoring activities and continued Program coordination. Yaqit ?a·knuqhi ‘it will hire Two Eyed Seeing Consulting to carry out a Past and Present Yaqit ?a·knuqhi ‘it Land and Water Use study with information from the study released at the discretion of Yaqit ?a·knuqhi ‘it Council.

- **Approve** a Communications Protocol, with rules and guidelines for internal communications among Collaborative Partners and external communication between Collaborative Partners and Elk Valley communities
- **Decide** on future public outreach goals and extent of external communications
- **Decide to engage** with the International Joint Commission which announced on March 8, 2024 its plans to undertake an International Elk - Kootenai/y Watershed Water Pollution Study, that is aligned it its goals and scope with the Program

Organizational Structure (v7: August 29, 2024)



Composition of the Steering Committee (v8: August 29, 2024)

Provincial Government	Municipalities and Districts	First Nations Government	Resource industry	Recreational Groups	eNGOs	Observer
ENV (Patrick Williston)	City of Fernie (Joanna Line)	Yaqit ʔa-knuq̓li'it (Kyle Shottanana)	Teck Coal (Matthew Gay)	Rod & Gun Club (tbd)	Living Lakes Canada (Kat Hartwig)	Ian Sharpe
WLRS (Shannon White)	District of Sparwood (Patrick Sorfleet)	Ktunaxa Nation Council (tbd)	Forestry or energy industry (tbd)	Elk River Guiding Co. (Paul Samycia)	Elk River Alliance (George Greene)	
					Canadian Wildlife Federation (Nick Lapointe)	



Vacant position



Outside of Elk River Watershed Collaborative Monitoring Program, i.e. non-voting member

Composition of the Monitoring Working Group (v9: Oct 2nd, 2024)

Provincial Government	Municipalities and Districts	First Nations Government	Resource industry	eNGOs	Recreational groups	External Advisors
ENV Keith Story Jonathan Jeffery Jeremy Krogh Dwayne Minton	City of Fernie Joanna Line	Yaqit ʔa-knuq̓i'it Jason Gravelle Myra Juckers	Teck Coal Jessica Mackie Mariah Arnold	Elk River Alliance Stella Swanson	Kootenay Fly Shop Josh McSkimming	Jon Bisset & co. Jon Bisset
WLRS Samantha Mertens	Elkford Jesse Huisman	Ktunaxa Nation Council Kamila Baranowska	North Coal Abby Cousins	Living Lakes Canada Paige Thurston Ben Gormley Maggie Finkle-Aucoin		MacHydro Ashlee Jollymore
FOR Chris Williams Natasha Neumann	Sparwood Andre LeBlanc			Canadian Wildlife Federation Nick Lapointe		University of Calgary Kelly Munkittrick
	RDEK Kara Zandbergen Chris Hust			CLEAR Jeph Virtue		University of Lethbridge Stewart Rood
						University of Waterloo Bill Annable

Steering Committee's Early Years Priorities

Theme 1: Climate change driven flooding & drought

Provide information on extreme stream flows, including their spatial and temporal patterns, to support effective planning and management decisions to mitigate flood and drought in streams.

*Indicators: stream flow, stream turbidity and stream temperature

Theme 2: Fish habitat

Provide fish habitat quality information to support planning and management decisions to safeguard fish habitat in streams.

*Indicators: stream flow, stream turbidity, stream temperature, water chemistry, and benthic invertebrates (CABIN).

Theme 3: Ktunaxa traditional water and land uses

Provide information on traditional Ktunaxa land and water uses in the Qukin ?amak?is to support their recognition, protection, and restoration.

* Flow, turbidity and temperature overlap the first two themes, as input to answer separate questions.

Monitoring Working Group Update

The Monitoring Working Group (MWG) is chaired by Dr. Stella Swanson, who has decades of experience in water quality and water policy. Dr. Swanson assembles the assigned technical staff from Collaborative Partners and outside advisors & subject matter experts. The goal of the MWG is establishing the methods for the Program, including data collection, data management, data sharing, data visualization, and data interpretation methods, as required in Steps 3, 4, and 5 of the Adaptive Monitoring Framework. The MWG ensures the methods employed in the Program have a sound footing based on available science, Indigenous knowledge, and local knowledge.

In Year 3, the MWG advised on the overview of publicly accessible online data, under Step 3 of the Adaptive Monitoring Framework. The responsibilities for this work were assigned to the Elk River Alliance in the role of Implementation Partner, with the Monitoring Working Group in the role of oversight.

The work was led by Evgeni Matveev (Elk River Alliance), starting with an R script code to consolidate the federal, provincial and regional public databases on the publicly available and readily accessible data for streams, rivers and creeks within the Elk River watershed. This work is necessary as most official repositories do not separate Elk River watershed data from other areas (with the exception of the Columbia Basin Water Hub). A summary of the consolidation work and the rationale can be seen in the Knowing Water presentation ([here](#)). The following data sources were queried:

- **Environment and Climate Change Canada:**
 - [Water Survey of Canada](#)

- [Canadian Aquatic Biomonitoring Network \(CABIN\)](#)
- **Province of British Columbia:**
 - [BC Data Catalogue: Environmental Monitoring System](#)
 - [BC Data Catalogue: Hydrometric Data](#)
- **Living Lakes Canada:**
 - [Columbia Basin Water Hub](#)

The script extracts data on 487 parameters, with 65 parameters being of interest to Monitoring Themes 1 & 2, including:

- Water flow
- Water temperature
- Sediment load
- Water chemistry (selenium, nitrates, etc.)
- Benthic communities

So far, data from 377 sites within the geographical boundaries of the Elk River watershed have been extracted:

- 194 locations operated by EVR Operations Limited
- 26 locations operated by Elk River Alliance
- 23 locations operated by the Water Survey of Canada
- 17 locations operated by BC ENV
- 6 locations operated by the RDEK
- 4 locations operated by the District of Sparwood
- 4 locations operated by the Resorts of the Canadian Rockies
- 2 locations operated by the District of Elkford,
- 1 location operated by the City of Fernie
- 1 location operated by ECCC
- 1 location operated by the Columbia Basin Water Hub
- 1 site operated by Foothills Pipe Lines
- 97 locations operated by unknown entities

In Year 4, Elk River Alliance's efforts will be devoted to the completion of a data overview report summarizing publicly available and accessible data. The Monitoring Working Group will guide the technical aspects of the report.

Discussion with the Steering Committee is needed in order to ensure that there is full understanding and agreement regarding the scope of the data overview. After approval of the draft report by the Steering Committee, the report and associated code will be released for public access. The goal is to provide an overview of the extent of data and knowledge currently available for the streams of the Elk River watershed. The report would also:

- Provide insights into what the data tell us about the monitoring questions we have posed under our three themes (i.e., what can we learn from looking at existing data about local and regional hydrology? What are the current values of key stream indicators?)
- Provide insights into gaps in data and knowledge, over space and time, that need to be addressed to answer the Program's three monitoring themes
- Provide recommendations for additional monitoring efforts needed to provide answers to the monitoring questions

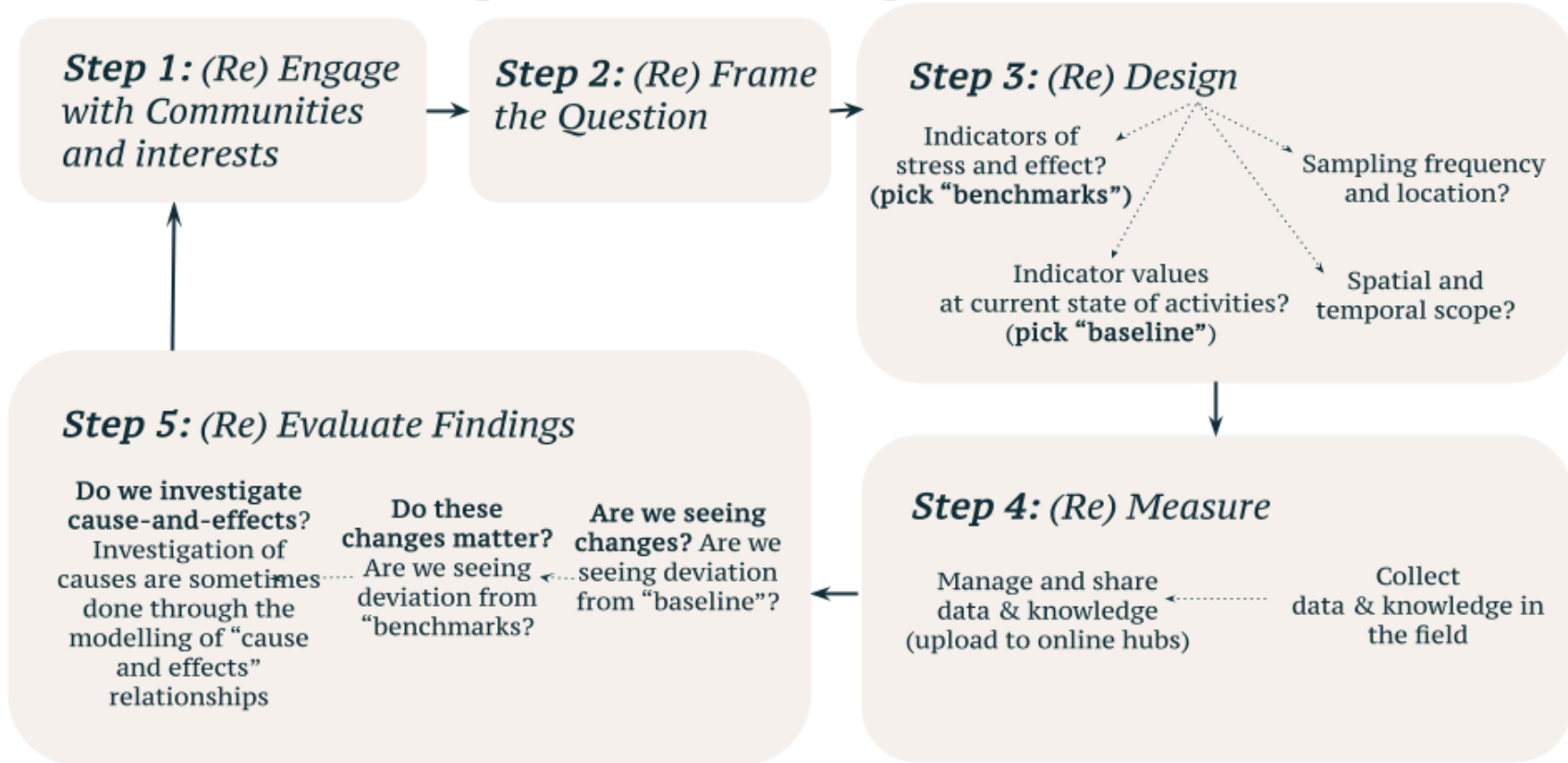
The results of the data overview will form the basis of the design of future monitoring efforts. The future design will include enhancements to existing monitoring to extend spatial and/or temporal scope and may include targeted monitoring studies focused on a specific monitoring question.

The MWG will be briefed on the overview results to date at its next meeting in the fall of 2024. ERA and the MWG will work together in an iterative manner over the next 18 months, ultimately leading to a draft formal design of monitoring programs for Themes 1 and 2 by the end of **March 2026**. If additional resources become available from Partners and/or funders, this timeframe could be compressed. This may be important if the Collaborative Monitoring design is to be complementary to the IJC Study Board draft recommendations, which are due in September 2025.

Monitoring program design work will include:

- Data quality objectives for monitoring activities to ensure the Program answers monitoring questions with the appropriate data quality and assurance for decision-makers
- Detailed spatial and temporal scopes
- Consideration of the need for targeted studies to test hypotheses judged to be high priority for Themes 1 and 2
- Cost estimates of additional monitoring activities to answer the Program's monitoring questions
- Consideration of draft recommendations from the IJC Study

Framework: Adaptive Monitoring



Public Outreach

The Program Coordinator engages Elk Valley communities and interests to build awareness of the Program and provide an opportunity for diverse Partner organizations to address community watershed concerns. Community engagement and outreach are requirements for the Program as per Step 1 of the Adaptive Monitoring Framework.

In Year 3, the Program Coordinator launched the Program dedicated stand-alone website (<https://elkrivercollaborative.ca>) which reached just under 1000 visitors and 2000 views. Outreach activities of the Program Coordinator over Year 3 included the hosting of the Program’s 3rd Annual public event aiming to bring the Program to Elk Valley communities. The “Knowing Water Symposium” was held on April 3, 2024, from 6:30-8:30 PM at the Fernie Arts Station and it:

- **Featured** five Collaborative Partners presenting on their unique ways of knowing water
 - Kyle Shottanana (Yaqit ʔa-knuqti) ([link](#))
 - Joanna Line (City of Fernie) ([link](#))
 - Nate Medinski (BC Ministry of Climate Change Strategy) ([link](#))
 - Paige Thurston (Living Lakes Canada) ([link](#))
 - Evgeni Matveev (Elk River Alliance) ([link](#))
- **Free of charge** with registration open to all members of the community
- **Attended** in-person by 89 individuals
- **Recorded** by a professional freelance videographer with video recordings posted online on the Program website and YouTube <https://elkrivercollaborative.ca/public-engagement>, with a total of 500 combined presentation views

The Program Coordinator is in talks with Yaqit ʔa-knuqti ‘it’s Council and staff to host the Program’s 4th Annual Forum at Yaqit ʔa-knuqti ‘it in late **January 2025**.



Elk River
Watershed
—
Qukin
ʔamakʔis

Collaborative
Monitoring
Program



What do you
know about the
water you drink
and play in?

Knowing Water

Public Symposium

ABOUT

Good quality water is essential for thriving ecosystems and communities. The Elk River Watershed Collaborative Monitoring Program works to unite perspectives, knowledge bases, and data sources for a mutual understanding of Elk Valley water. During this public symposium, we invite you to join us for an evening of learning and knowledge sharing.



Wednesday, April 3rd
6:30-8:30 PM
Fernie Arts Station

REGISTER FOR FREE:
elkrivercollaborative.ca

**Ktunaxa
Perspectives on
Knowing Water**



Kyle Shottanana
Yaqit ʔa-knuqʔit
First Nation

**The History of
Fernie Drinking
Water**



Joanna Line
City of Fernie

**How Do We
Assess Water
Quality?**



Nathan Medinski
BC Ministry of
Environment and Climate
Change Strategy

**A Path Towards
Available and
Accessible Data**



Paige Thurston
Living Lakes Canada

**The State of Current
Knowledge of Elk
Valley Water**



Evgeni Matveev
Elk River Alliance