

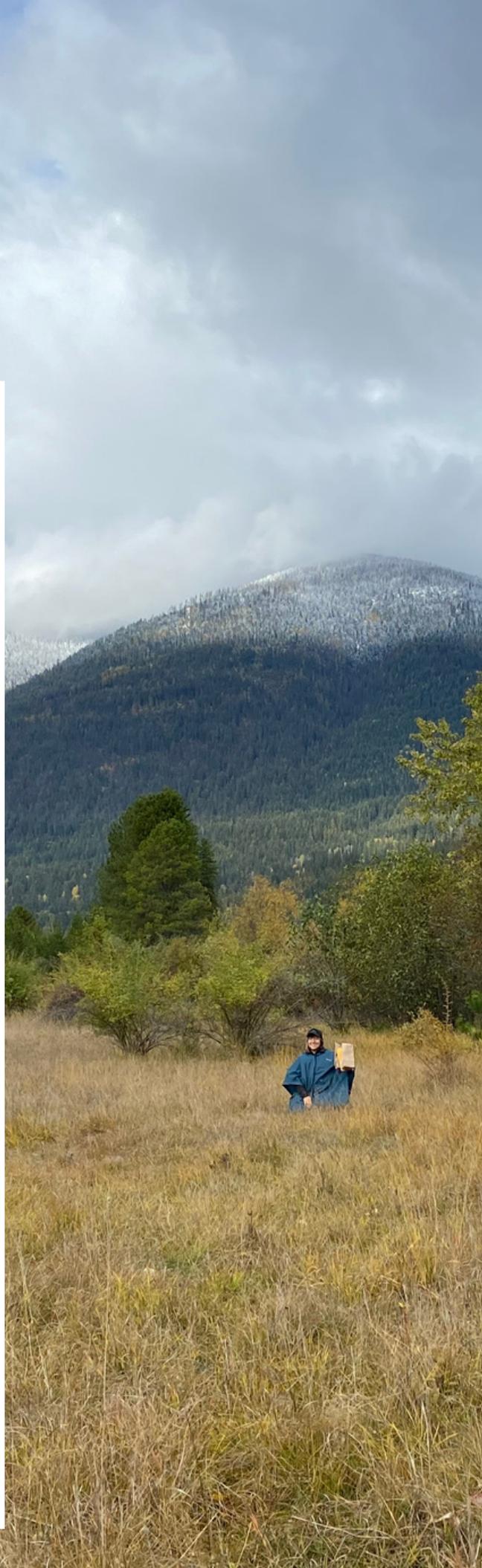


Friends of
Kootenay Lake

2022 IMPACT REPORT

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THANK YOU TO OUR FUNDERS & SPONSORS





INTRODUCTION

Formed in 2012, Friends of Kootenay Lake Stewardship Society (FoKLSS) is a not-for-profit organization dedicated to sustaining a healthy Kootenay Lake for future generations.

Kootenay Lake is a long, narrow, ultraoligotrophic lake bordered by the Selkirk and Purcell mountain ranges in southeastern British Columbia. The lake connects numerous quaint mountain communities and holds immense cultural, spiritual, environmental, economic, and recreational value. Kootenay Lake's sensitive aquatic ecosystems are impacted by altered water levels, altered shorelines, urban runoff, littering and pollution, erosion and disturbance, low nutrients, and climate change. A local history rich in environmental advocacy has created a culture of concerned citizens who want to see the lake thrive for future generations. We believe that on-the-ground stewardship action and environmental education is the best way to build upon this legacy and continue to promote sustainability and resilience in an increasingly uncertain future.

This report provides an overview of our 2022 accomplishments thanks to the support of our community of members, volunteers, partners, and supporters.

OUR MISSION

Our mission is to improve the health and stewardship of Kootenay Lake through monitoring, habitat restoration, capacity building, and the empowerment of local communities, First Nations, and stakeholders.

OUR VISION

Kootenay Lake is a productive ecosystem supporting abundant fish and wildlife with land and water uses that support clean water and long-term sustainable communities. Residents, First Nations, and other stakeholders have a strong sense of place and engage actively in lake stewardship and governance.

OUR TEAM

Photo: Douglas Noblet

STAFF



CAMILLE LEBLANC

Former Executive Director



KAYLA TILLAPAUUGH

Program Manager



JOELLE BURNIE

Outreach Coordinator



MORIAH TANGUAY

Stewardship Coordinator

BOARD OF DIRECTORS



MARTIN CARVER

Chair



CHAD LUKE

Vice-Chair



RORY GALLAUGHER

Treasurer



BEN SIMONI

Secretary



JOHN BETTS

Director



GREG UTZIG

Director



SWAMI SUKHANANDA

Director



TINA DEENIK

Director

Special thanks to Richard Epton who was a board member from June–December 2022



MESSAGE FROM OUR PROGRAM MANAGER

KAYLA TILLAPPAUGH

Thanks to our donors, volunteers, funders, members, and supporters, 2022 was enriched by many great accomplishments. I am honoured to have been able to work alongside so many of you this year - feet in the water, hands in the soil, and smiles on our faces. Whether you became a member, or a monthly giver, or attended one of our many monitoring, restoration, or cleanup workshops, you made a positive impact on Kootenay Lake, and I want to thank you for supporting this important mission.

In 2022, we cleaned over 10,000 lbs of trash from Kootenay Lake shorelines; we advanced research on shore-spawning kokanee habitat preference and fry survival and trained residents² to monitor spawning kokanee; we restored 3,500m of wetland habitat and motivated local communities to get involved in stewardship; we trained and certified a dozen community members to monitor water quality and monitored ten tributaries of Kootenay Lake; we expanded our osprey nest monitoring program by 30%, now covering the entire lake; we released eight episodes of the Voices of the Lake podcast, and we delivered many successful events, workshops, presentations, and much more! Looking back on the year gives me pride in our community, and so much hope.

FoKLSS has introduced me to a community of caring and motivated people. I have been inspired by so many, including inquisitive students in classes we worked with, dedicated volunteers who put in hard labour on the ground, professionals in the community that mentor us, my most beloved co-workers, and our dedicated board of directors. I am so excited to see what this incredible group of Friends will accomplish in 2023.

A handwritten signature in black ink, appearing to read 'Kayla Tillapaugh'.

Kayla Tillapaugh
Program Manager



2022 HIGHLIGHTS



700+
VOLUNTEER HOURS



SEVEN PROJECTS &
PROGRAMS



60+ PARTNERS
SUPPORTED
KOOTENAY LAKE

2022 AT A GLANCE

TRANSITIONS

2022 was a year of transitions. We said farewell to our beloved Executive Director, Camille LeBlanc after three years of dedicated work developing and strengthening programs within FoKLSS. We welcomed Kayla Tillapaugh as our new Program Manager and hired Moriah Tanguay as our Stewardship Coordinator. With these changes came growth, exciting ideas, and new ways to manage our projects and team to work effectively and strategically.



Photo: Bill Metcalfe

2022 SUSTAINABILITY LEADERSHIP AWARD

We were awarded the 2022 Sustainability Leadership Award from the City of Nelson in recognition of our leadership in making Nelson a resilient community with robust ecosystems.

We dedicate the award to all of the incredible members, volunteers, funders, and supporters who continue to stand by our mission and collectively work toward creating a clean and healthy Kootenay Lake.

CELEBRATING 10 YEARS

We celebrated 10 years of stewardship and education work on Kootenay Lake in 2022! Founded in 2012, we have developed seven stewardship and education projects to date. These initiatives have directly improved the health of Kootenay Lake and contributed to important datasets that help us better understand how Kootenay Lake is responding to stressors.



SURVIVING A PANDEMIC

After over two years of social distancing and transferring most of our activities online, we were back in the swing of in person gatherings in 2022. We missed seeing and working with our volunteers, members, supporters, and partner organizations and we were excited to reconnect again in person. 2022 was a great getting back out on Kootenay Lake together. In 2022 we hosted:

- 12** Community events
- 6** Training Workshops



Photo: Soraya Olszewski

EDUCATE & INSPIRE

Kootenay Lake's shorelines continue to be littered with polystyrene foam, garbage, plastics, metals, glass, and other debris. Cleaning our local shorelines is necessary to keeping wildlife and our communities safe.

2022 was our most successful year for removing trash from Kootenay Lake's shorelines thanks to our incredible team of volunteers.

9,000+ POUNDS

We removed over 9,000 lbs of trash from Kootenay Lake's shorelines in 2022. Our two largest events were our Earth Day Cleanup at Lakeside Park and our 10 year anniversary celebration at the Nelson Dogwalk. Over 115 volunteers pitched in during our shoreline cleanups, contributing over 350 volunteer hours.

"As a volunteer with Friends of Kootenay Lake, I monitor Osprey nests, I help restore Shoreline wetland areas, I help to protect habitat for Shoreline Spawning Kokanee and I help to keep the beaches clean of styrofoam and garbage. I am doing this with like-minded people, trying to keep Kootenay Lake as pristine as possible, considering population growth and development."

-David Cunningham, volunteer and supporter



IMPACT



3,325 meters of shoreline cleaned



115 volunteers pitched in



9,000 lbs of trash removed

Educating our community about Kootenay Lake continues to be an important initiative at FoKLSS. Through attending public events, educating youth inside and outside the classroom, and guest presenting for community groups, we continued to keep our local community inspired to protect Kootenay Lake and its surrounding watershed in 2022.

KOOTENAY LAKE SUMMIT

At a time when we could not host our Kootenay Lake Summit in person, we modified it to an online webinar and podcast series featuring two panels of knowledgeable speakers. This event educated over 300 individuals on Sustainable Boating on Kootenay Lake and Restoring Kootenay Lake's Fisheries. The Summit provided our community with a space to voice their concerns to local experts and brainstorm ways to move forward.



RACE TO ALASKA FILM SCREENING

So many amazing groups and organizations supported Kootenay Lake in 2022 including the Kootenay Pedalwheelers, a local sailing group in Nelson. In preparation for their participation in the Race to Alaska, they launched a fundraiser in support of FoKLSS, raising over \$3,000 for stewardship and education projects on Kootenay Lake. This was also the first sold out show at the Capitol Theatre since 2019. A huge thank you to this wonderful group and the amazing community that came out to support.



IMPACT



800+ people engaged through events, education days, and outreach booths



50,000+ engaged online



8 Voices of the Lake podcast episodes released



RESTORE & RESEARCH

FoKLSS first heard about Harrop Wetland a decade ago when concerned citizens sounded the alarm about destructive activities occurring along the shoreline, and the mass mortality of western toad tadpoles occurring in the wetland. Since 2013, FoKLSS has worked to improve habitat conditions by monitoring, restoring, and enhancing wetland and shoreline areas, and encouraging sustainable recreation in the area.

2022 was a big year for Harrop Wetland. FoKLSS staff, volunteers, and partner organizations enhanced 3,500 square meters of wetland habitat.

20,000 WESTERN TOADS

Staff and dedicated citizen scientists monitored western toads, water levels, and wildlife every week from May - October. We recorded a peak abundance of approximately 20,000 juvenile western toads in late July; this was the largest population recorded since monitoring began in 2015 and was likely due to the wet spring we experienced.

IMPROVING RESILIENCY

We improved the wetland habitat by removing invasive grass cover and distributing woody debris to establish perching, loafing, and sheltering sites. We revegetated the area by planting over 1,700 plants and 18 million seeds of over 32 different species of native shrubs, grasses, reeds, sedges, and other plants in and around the basin. Together, we created a more climate-resilient, natural wetland that will benefit people and wildlife alike, but especially the western toad population that breeds there every year.



"I've enjoyed volunteering with Friends of Kootenay Lake ever since it was established, mostly with the West Arm Water Quality Monitoring and Harrop Wetland Restoration initiatives. This has given me a chance to give back to the aquatic and riparian ecosystems that fascinated me while growing up on the West Arm waterfront in the 1950s. The shoreline changes from all forms of development around Kootenay Lake since then are dramatic, including the local loss of many riparian species. FoKLSS initiatives help reduce further species loss and recover critical biodiversity. It is a privilege to be part of that effort."

-Eric Sargent, volunteer and supporter

SHORE SPAWNERS

Shore-spawning kokanee (SSK) are a genetically distinct subspecies of kokanee salmon that spawn along shorelines in areas of upwelling groundwater, rather than within streams. SSK are heavily impacted by Kootenay Lake's managed water levels which are kept high in the fall during spawning and low in the spring during the time of fry emergence. As a result, it is thought 70-90% of SSK redds and fry are dewatered across all known spawning sites on Kootenay Lake. Through our Shore-Spawning Kokanee Habitat Restoration & Research Project, we have sought to reduce extensive kokanee fry dewatering in McDonald's Landing Regional Park and improve habitat quality by installing ideally sized gravel below the low water mark in hopes spawners would lay eggs at lower elevation.



WRAPPING UP THREE YEARS OF RESEARCH

With the help of numerous partners and volunteers, we researched shore-spawning kokanee habitat conditions, habitat preference, spawning, egg-to-fry survival above versus below the LWM, and fry dewatering. We also hosted a shore-spawning kokanee monitoring workshop.

With three years of data and research under our belt, we will be analyzing our findings in 2023 to assess the overall success and outcomes of this project. The results of this work will inform conservation actions for shore-spawning kokanee on Kootenay Lake.



"It has been such a rewarding experience volunteering with the FoKLSS since my retirement from BC Fisheries. Of particular note is my involvement with the FoKLSS and the West Arm Kokanee shore spawners which has been a passion of mine for many years. FoKLSS in collaboration with BC Fisheries, BC Hydro, Fortis, UBC Okanagan, MOF and various volunteers were the first to initiate a project to mitigate the high mortality rate and the work on this project continues to date. I'm very proud to be involved with the project and the work the society continues to be involved in, and look forward to many more years of association."

- Gary Munro, volunteer and supporter



MONITOR & ASSESS

The ever-increasing demands and pressures on water systems including land-use, water-use, and climate change are expected to accelerate local concerns for fresh water quantity, quality, and stream ecosystem health. Locally, there is a lack of necessary data being collected to even understand changes that are happening, let alone manage local stressors to water resources in the face of climate change. FoKLSS is filling this crucial data gap by empowering communities to participate in community-based water monitoring.

EMPOWERING VOLUNTEERS

Providing volunteers with necessary resources and training to monitor their local streams continues to be vital for understanding changes in the Kootenay Lake watershed related to climate change and other stressors.

In the summer and fall of 2022, we conducted our third year of stream monitoring using the standardized Canadian Aquatic Biomonitoring Network (CABIN) protocol, in partnership with Living Lakes Canada. We trained 12 community members to assess stream health using the standardized protocol. And with the help of recently trained volunteers, we monitored the health of 10 tributaries to Kootenay Lake in the West and North Arms. We continued contributing to a regional dataset that helps decision-makers sustainably manage our local water resources.



"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."

-Melanie Jacques- CABIN training participant

IMPACT



12 volunteers trained



10 tributaries monitored



Ospreys are indicator species and are important to monitor. Because they feed primarily on fresh fish, their population size and reproductive success indicate fish abundance and quality and tell us a lot about lake health.

Our Osprey Monitoring Program program supports the environmental sector by furthering wildlife conservation on the lake and teaching Kootenay Lake residents to monitor lake ecosystem health.

COLLECTING DATA ON RAPTORS

2022 was the first year monitoring Osprey and Bald Eagle reproductive success on the entire lake. The Nelson Naturalists previously monitored the West Arm from 1997 to 2021 and provided FoKLSS with their dataset to continue their monitoring efforts. Surveying 104km of Kootenay Lake, we continued contributing to our long-term dataset showing trends in raptor numbers over time.

We didn't do this alone. Thanks to the support of Wildlife Biologist Joanne Siderius, we trained 13 volunteers on how to monitor Osprey and Bald Eagle on Kootenay Lake. Some volunteers monitored nests from the shoreline and others joined us on the boat, surveying a total of 95 nests.

ANALYZING THE DATA

With seven years of data collected, we summarized Osprey and Bald Eagle trends on Kootenay Lake from 1997-2021. We have been busy developing our first report in 2022, which will be released publicly in 2023. This report will help inform sustainable land and lake use guidelines around the lake.



Photo: Shirley Smith

IMPACT



7th year of data collection



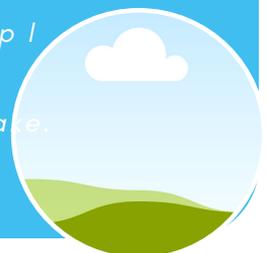
13 volunteers trained



95 nests surveyed

"As a citizen scientist on this program since 2016, I have gained valuable knowledge that has enriched my understanding of Kootenay Lake and supports my work as a wildlife guide and host/educator in Africa and beyond. The training workshop I took was engaging and informative and prepared me well for conducting high-quality osprey monitoring on Kootenay Lake."

- Timothy Jackson, volunteer



VOLUNTEERS

Ben Alken
Beth Austin
Dina Bambrick
Ilene Bell
John Betts
Jay Blackwell
Alex Bouhn
Noni Byers
Wendy Caldwell
Taylor Caldwell
Penny Caldwell
Ian Cardon
Ellis Caron
Eloise Carr
Martin Carver
Ethan Castilloux
Jenn Chic
Mitch Chickloski
Sarah Clark
Osvaldo Clarotto
David Cunningham
Dorothy Dalba
Erika Danks
Jen Datchkoff
Tina Deenik
Lindsay Donald
Lorraine Donald
John Dutton
Laura Dykhuizen
Daniel Eisen
Richard Epton
Jacob Ewashen
Alexis Fidler

Stuart Flood
Alex Freeman
Adam Fryer
Cythia Fraser
Rory Gallagher
George Gehrig
Dustin Geyer
Janis Gillbert
Marcelo Goncalves
Sheri Granite
Andrea Howland
Sarah Hudson
Ella Hurst
Amelia Hurst
Kimberly Hyatt
Timothy Jackson
Ryan Jackson
Anders Jakobsen
Camille Jobin
Deborah Johnson
Linda Kalbun
Vicki Keenan
Victoria Kennan
Heather Kennedy
Doug Kennedy
Mary Anne Kettenbell
Jenni Konken Stol
Brody Kunze
Alec Kvarnstrom
Lorry Laskowski
Genna Lazier
Lisa Leavens
Mike Leavens
Ashley Lebasis

Owl Lelek
Tyson Leonard
Karen Leung
Peter Lewis
Chad Luke
Terry Lund
Allison Lutz
Tara Lyons
Tennille Mackinnon
Holly Macris
Paul Mason
Alison Masters
Catherine Masters
Birch Matrowski
Tatiana Maxwell
Patti Miller
Gina Miller
Ken Moore
Bruce Morrison
Jayme Moye
Jane Muller
Gary Munro
Curt Nixon
Soraya Olszewski
Phil Pappin
Leslie Payne
Murielle Penrin
Orrin Petton
Laurie Pollard
Natalie Portlock
Anna Reid
Charlie Roberts
Richard Rowberry

Fern Sabo
Eric Sargent
Joanne Siderius
Matisse Simard
Suzanne Simoni
Ben Simoni
Peter Singh
Baylie Sjodin
Shirley Smith
Jim Smith
Sue Stanyer
Patrick Steiner
Megan Strong
Sangita Sudan
Swami Sukhananda
Jake Sullivan
Danika Swift
Carrie Thurston
Seiden Tillapaugh
Hailey Tillapaugh
Greg Utzig
Daphnie VanAlstine
Mark Veitch
Michelle Villemaire
Ted Weaver
Edward Weaver
Carolyn Well
Blair Weston
Jordan Weston
Madeleine Whelan
Bruce Wilson
Brennan Wittig
Max Wong



"I had an amazing time volunteering for FoKLSS this past summer. I loved getting to learn about the people, stories, and communities behind the love of the lake. The FoKLSS team is incredibly approachable, dedicated, and passionate about their work. From watershed monitoring, to beach cleanups, to osprey surveying - I was inspired by how many ways there are to get involved and the impact they have on the local ecosystems."

-Soraya Olszewski, volunteer

SUPPORTERS

Supporters are individuals who have donated money to support Kootenay Lake in 2022.

Beth Austin
Alex Balcer
Peter Beug
Jonathan Brooks
Joelle Burnie
Penny Caldwell
Eloise Carr
Jenn Chic
Malin Christensson
Carmela Clare
Nicole Coenen
David Cunningham
Al Danks
Grant Day
Kristina Deenik
Dave Diplock
Colleen Driscoll
Tracey Fellowes
Khaylish Fraser
Gerald Garnett
Dan Gatto
Gillian Graeme

Kimberley Hyatt
Anders Jakobsen
Khaylish Fraser
Gerald Garnett
Dan Gatto
Gillian Graeme
Kimberley Hyatt
Anders Jakobsen
Scott Jeffery
Tina Kane-Callender
Todd & Tara Kettner
Gregoire Lamoureux
Marilyn Lawrence
John Le Bleu
Janelle Lewchuk
Lorna Louise
Tara Lyons
Tatiana Maxwell
Jane McIntosh
Stuart McKinnon
Roger Mellor
Linda Monea

Jayme Moye
Gary Munro
Tanna Patterson
Ruth Prosser
Barry Reid
Norm Richard
Jamie Robinson
Judi Rollnick
Eric Sargent
Carolyn Schramm
Baylie Sjodin
Shirley Smith
Moriah Tanguay
Tim Thurston
Kayla Tillapaugh
Michelle Villemaire
Edward Weaver
Catherine White
Teresa Wright
Melanie Wright-Day
Confederation of University Women



Photo: Joanne Siderius

OUR PARTNERS

COMMUNITY PARTNERS

BC Ministry of FLNRORD
BC Wildlife Federation
Central Kootenay Invasive Species Society
FortisBC
Kinseed Ecologies
Kokanee Creek Nature Centre
Kootenay Co-op Radio
Kootenay Lake Partnership
Kootenay Native Plant Society
Kootenay Pedalwheelers
Ktunaxa Nation Council/ Yaqaan Nukiy
Living Lakes Canada
Masse Environmental Consulting

CONTRACTORS/BUSINESS PARTNERS

Above Sensing
Allison Lutz
Clelie Chevrier
Dosenberger Excavating
Gregoire Lamoureux
Kelsey Baerg
Kinseed Ecologies
Masse Environmental Consulting
Mountain Bin
Nelson Civic Theatre
Okanagan Nation Alliance
Reel Adventures Fishing Charters
Rewilding Water & Earth
Seepanee Ecological Consulting
Simon de la Salle
Spring Creative Design

DONORS

Ainsworth Hotspring Resort
Back to Nature Apparel
Backroads Brewery
Cantina del Centra
Chamber of Commerce
Ellisons Market & Café
Gilbert Parts Depot
Homehardware Nelson
Kootenay Woodstoves
Lillie & Coho
Living Lakes Canada
Mallard's Source for Sports
Maverick Strength
Midas Nelson
Morning Mountain Coffee
Mustang Survival
Nature school donation
Nelson Nordic Ski Club
Nelson Olive Oil Co.
Oso Negro Coffee
Prestige Lakeside Resort
ROAM shop
Sail Nelson
Save On Foods
Shoebox Theatre
Sprout Eatery
Terratherma Geothermal Heating & Plumbing
The Outer Clove Restaurant
The Sentinel
The Tickle Trunk
Viva Cacao
Yasodhara Ashram

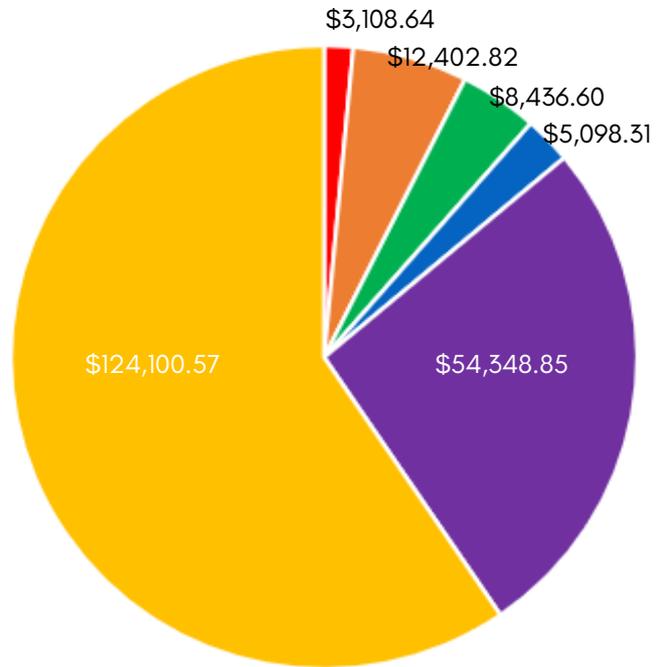


FINANCIAL REPORT

The financial report covers January 1, 2022 to December 31, 2022.

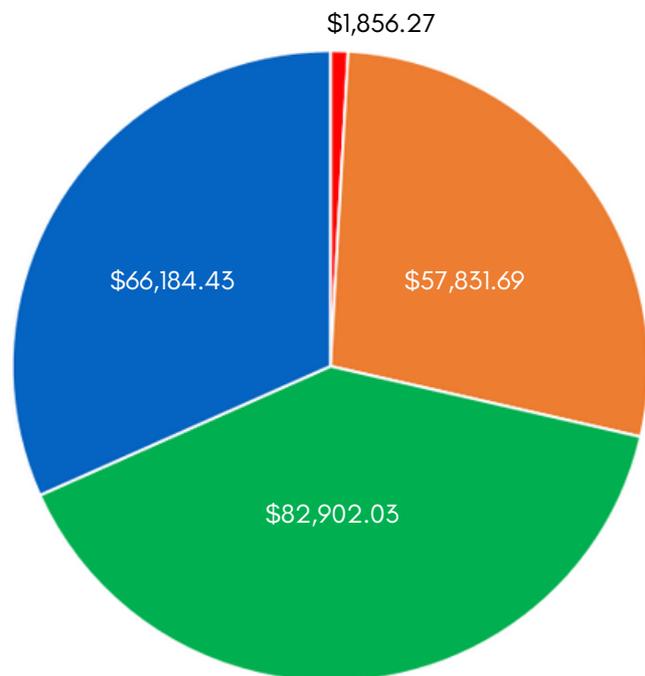
EXPENSES

- Non-capital supplies
- Overhead costs
- Other project costs
- Capital supplies
- Professional fees
- Payroll



REVENUES

- Sales, membership dues, and donations
- Carry-over from 2021
- Non-government grants and sponsorships
- Government grants





GET INVOLVED

[DONATE](#) | [BECOME A MEMBER](#) | [VOLUNTEER](#)

CONTACT US

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