

2024-2025 ANNUAL REPORT



NSWA

NORTH SASKATCHEWAN
WATERSHED ALLIANCE



VISION

People working together to improve the health and sustainability of the North Saskatchewan River watershed today and into the future.

MISSION

To protect and improve watershed health, water quality, and water quantity by:

- seeking, developing, and sharing knowledge;
- facilitating partnerships and collaborative planning;
- working in an adaptive management process; and,
- striving to advance the practice of watershed stewardship.



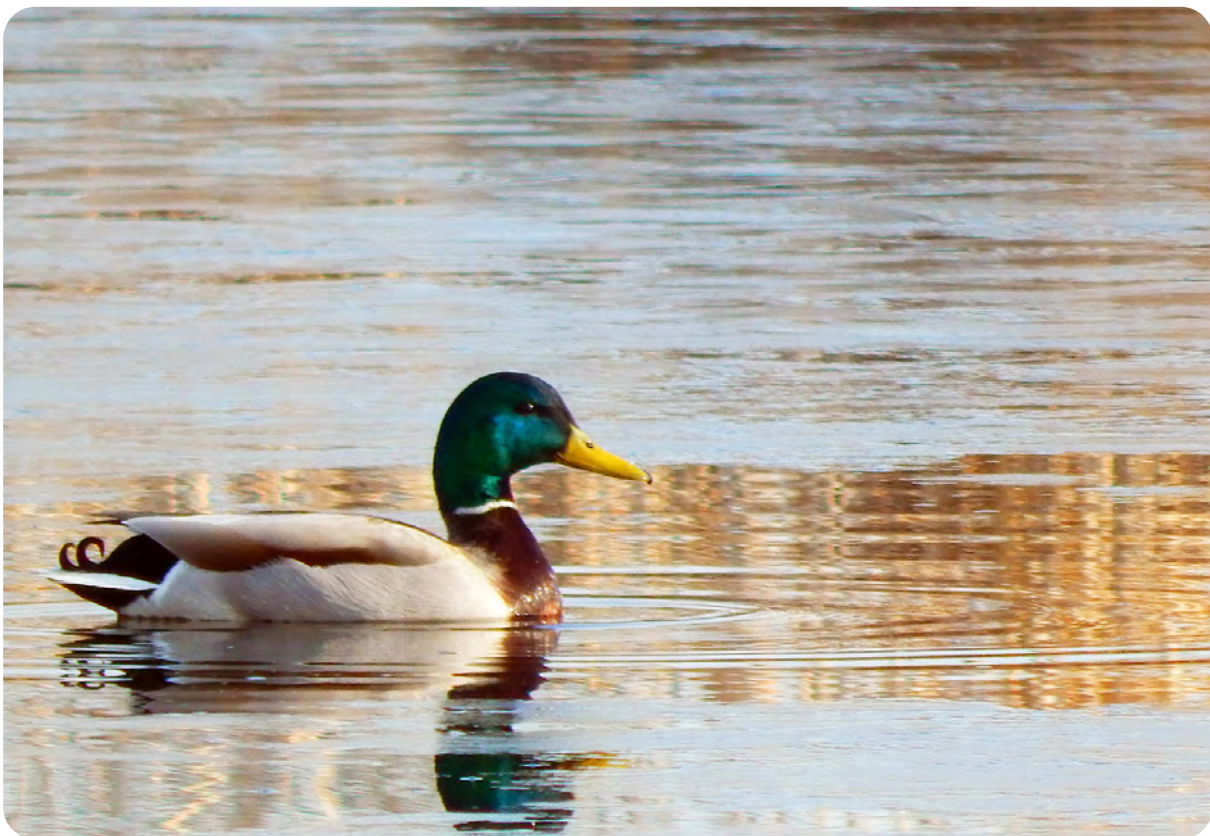
PHOTO CREDITS IN THIS REPORT

Cover - Ryan Northcott
Page 3- Ryan Northcott
Page 5- Stephanie Neufeld, Ryan Northcott
Page 12- U of A Water Engineering School (bottom right), Maricor Arlos
Page 21 all photos- Ryan Northcott
Back Cover- Ryan Northcott

All other photos without photo credits were taken by NSWA staff.

TERRITORIAL ACKNOWLEDGEMENT

The North Saskatchewan Watershed Alliance acknowledges that the traditional land on which our watershed resides is in Treaty 6 Territory, Treaty 8 Territory, and the Métis Homeland. We deeply respect and wish to honour the diverse Indigenous Peoples whose ancestors' footsteps have marked this territory since time immemorial, including the Nêhiyawak/Cree, Denesų́liné/Dene, Anishinaabe/Saulteaux, Nakata Isga/Nakota Sioux, and the Niitsitapi/Blackfoot peoples. We further acknowledge this territory as the Métis homeland and the home of one of the largest communities of Inuit south of the 60th parallel.



NOTE FROM THE CHAIR



This past year, the NSWA continued to demonstrate the value of collaborative watershed management across our diverse region. As Chair, I am proud of the Board's strong governance, strategic oversight, and commitment to supporting a thriving watershed. We welcomed new partners, strengthened relationships with municipalities and Indigenous communities, and provided leadership on key water issues.

The work of the NSWA remains essential, not only in producing trusted science and planning tools, but also in fostering the partnerships that turn knowledge into action.

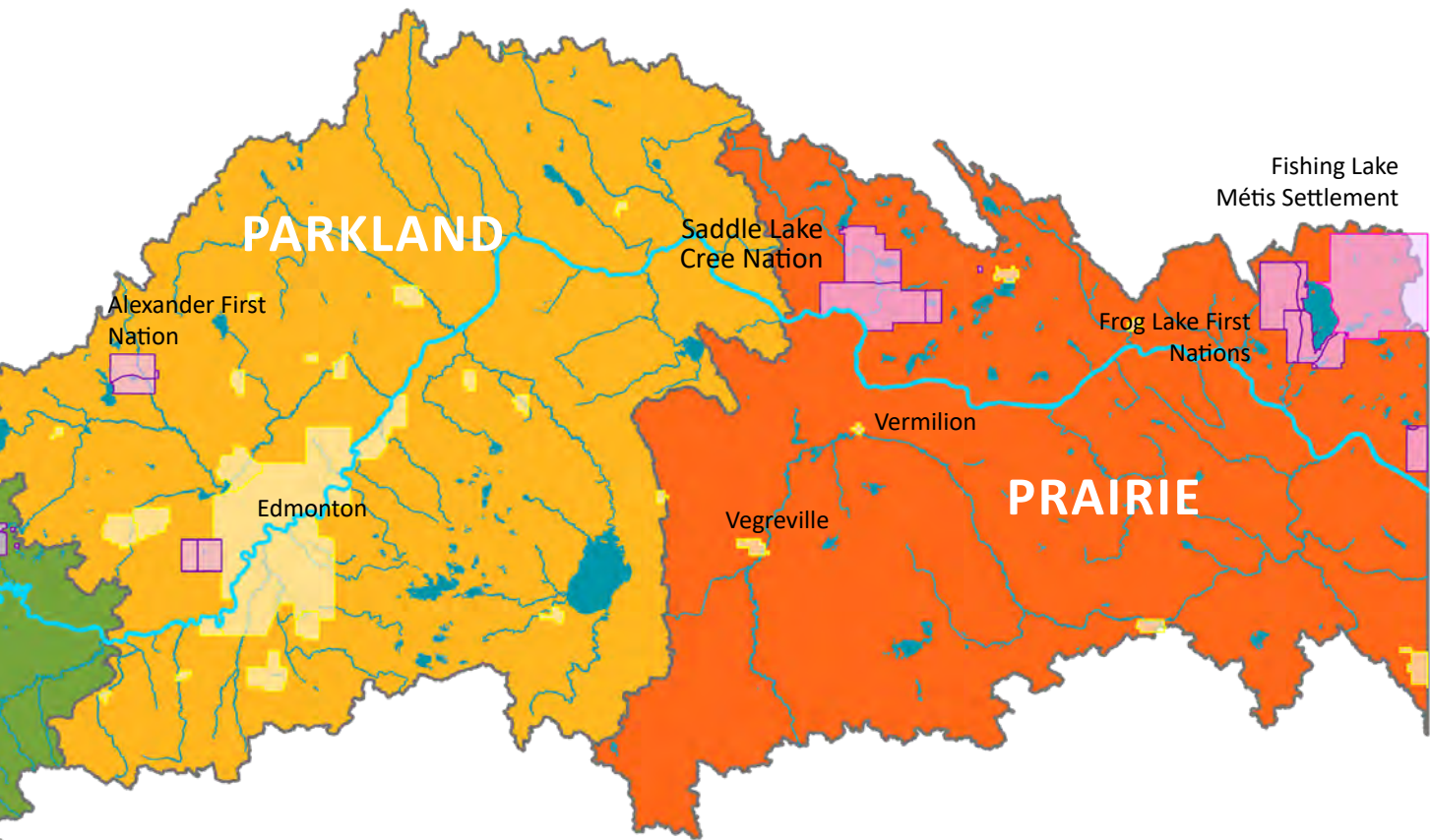
I thank my fellow Board members for their dedication and extend our gratitude to the staff and supporters who carry our work forward. Together, we are building resilience in the North Saskatchewan River watershed.

Stephanie Neufeld
Chair, North Saskatchewan Watershed Alliance

ABOUT THE NORTH SASKATCHEWAN RIVER

The North Saskatchewan River watershed covers about 57,000 square kilometers in Alberta, starting in the Rockies and flowing east through Edmonton and other communities to the Saskatchewan border. It's home to a mix of ecosystems and supports a wide variety of plants and animals. As a key water source for people, farms, industry, and wildlife, this complex system requires a well-rounded approach to stewardship, management, conservation, and protection.





NOTE FROM THE EXECUTIVE DIRECTOR

The NSWA team made significant strides this year in advancing watershed planning, coordination, and engagement. We launched several impactful projects, contributed to regional initiatives, and expanded our outreach programming.

One significant highlight is our ongoing effort to expand youth leadership with programming like our Youth Water Council, a creative and inspiring journey that culminated in a Council-led comic book. We also launched innovative data tools and continued our role as a trusted source of watershed knowledge.

These achievements are possible thanks to the commitment of our partners, funders, and the dedication of our staff. As we look ahead to our 25th anniversary in 2025, we remain focused on building collaborative solutions that protect and enhance the health of the watershed for generations to come.

Scott Millar

Executive Director, North Saskatchewan Watershed Alliance



ABOUT THE NSWA

The North Saskatchewan Watershed Alliance (NSWA) is a non-profit, multi-stakeholder organization dedicated to promoting the health and sustainability of the North Saskatchewan River and its watershed. Under the *Alberta Water for Life* strategy, the NSWA carries the responsibility of developing and then encouraging voluntary implementation of an integrated watershed management plan. Implemented through collaboration and community engagement, the plan sets out the actions needed to protect and enhance the quality of water and the health of aquatic ecosystems within the watershed, while also supporting the social and economic well-being of the region.

NSWA STAFF



Back row, left to right: Amanda Hardman, Mary Ellen Shain, Scott Millar, Heather Marshall, Caitlin Hilsen-Ashford

Front row, left to right: Ellen Cust, Emily Specht, Kelsie Norton, Lauren Comba, Kaila Belovich, Michelle Gordy

Missing: Jillian Peterson

Strategic Goals



Collaboration:
Preferred partner in watershed management



Stewardship:
Leader in watershed stewardship



Knowledge:
Resource for watershed information and education



Management:
Sustainable and well managed organization



BOARD OF DIRECTORS | 2024-2025

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Utilities Sector

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Member at Large

TREASURER

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Industry
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Rhonda King

Non-governmental
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ALUS Canada

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Alberta Beef Producers

Jatinder Tiwana

Advisory Position
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Rick Wallace

Utility
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THANK YOU TO OUR FUNDERS

We are grateful to the many supporters of the NSWA. We would not be able to facilitate partnerships, complete studies, or share knowledge in our watershed without the time and resources provided by our generous contributors.

We acknowledge the Government of Alberta for providing a multi-year operational grant and important contributions from EPCOR and 39 municipalities in our watershed.



Funders by Project

**“A River Runs Through Us” NSR
Documentary Film:** EPCOR

**Building Drought Resilience with First
Nations of Treaty 6:** Climate West

Regional Lake Stewardship Project:
Pembina Pipeline

**NSR Water Management Roadmap
Project:** Prairies Economic
Development Canada, Alberta
Innovates, Government of Alberta,
Results Driven Agricultural Research,
City of Edmonton, Cenovus, EPCOR,
Keyera, Edmonton Metro Region
Board, ATCO, City of Spruce Grove

State of the Watershed Report: NSWA

Urban Creeks Collaborative: EPCOR

Youth Water Council: Enbridge,
Sherritt International, Imperial Oil,
TransAlta, and TD Friends of the
Environment Foundation

Counties

Beaver County
Clearwater County
Minburn County
County of St. Paul
County of Vermillion River
Lac Ste Anne County
Lamont County
Leduc County
Smoky Lake County
Strathcona County
Sturgeon County

Cities

Edmonton (through EPCOR)
Fort Saskatchewan
St. Albert

Towns

Bruderheim
Calmar
Devon
Drayton Valley
Elk Point
Gibbons
Lamont
Onoway
Redwater
Rocky Mountain House
Smoky Lake
St. Paul
Tofield
Two Hills
Vegreville

Villages

Alberta Beach
Chipman
Innisfree
Spring Lake

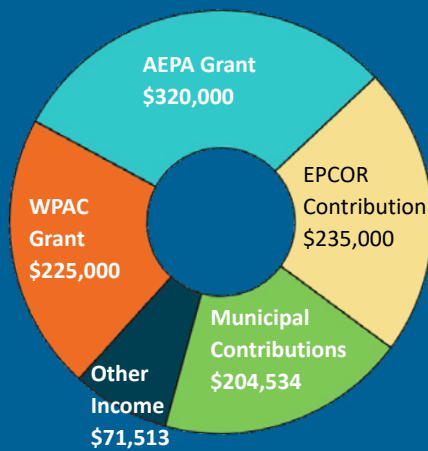
Summer Villages

Horseshoe Bay
Silver Sands
South View
Sunrise Beach
West Cove
Yellowstone

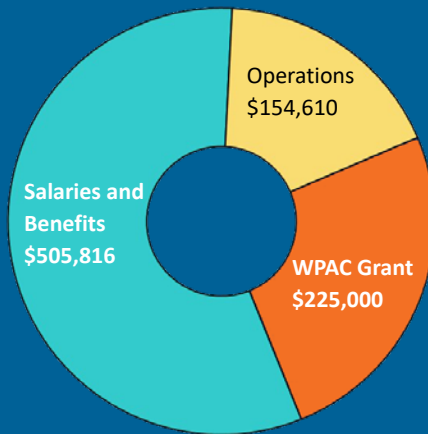
FINANCIAL SUMMARY

Operational Funding

The NSWA receives core operational funding from:



Operational Revenue



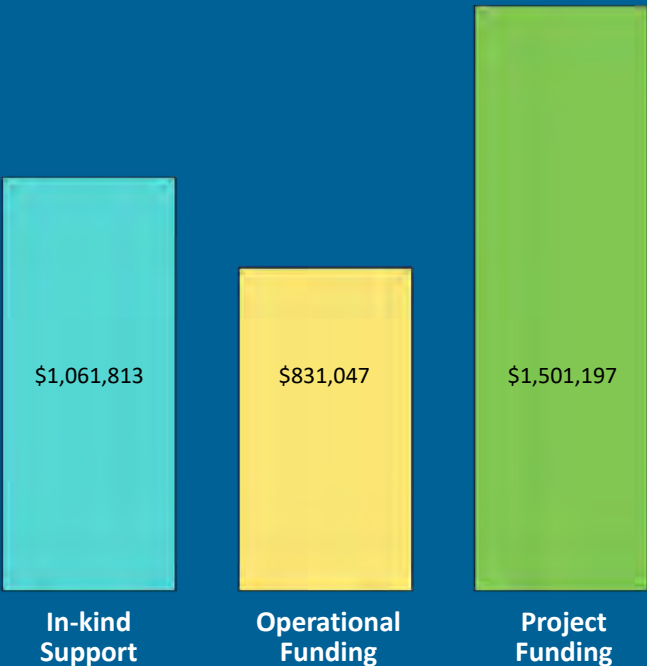
Operational Expenses

- An operating grant from Alberta Environment and Protected Areas
- A contribution from EPCOR Water Services Canada
- Municipal contributions equivalent to \$0.60 per capita

Project Funding

The NSWA seeks grants and other types of project funding from federal, provincial, and private funders for watershed project specific works such as technical studies, education and outreach projects, technology development, and on-the-ground restoration activities.

The [NSWA 2024-2025 Audited Financial Statement](#) can be found [here](#).



STATE OF THE WATERSHED

The NSWA is responsible for assessing and reporting on watershed health through a *State of the Watershed* Report. This report offers a baseline, highlights data gaps, supports action, and serves as an educational tool. The last assessment was in 2005, using the data and methods available at the time. Since then, both the data and the needs of the watershed have changed significantly.



The Freshwater Health Index

NSWA is currently updating the State of the Watershed using the Freshwater Health Index (FHI)—a science-based tool developed by Conservation International. This is the first time FHI is being used in North America, and it's being tailored to fit Alberta.

The FHI looks at three areas: Ecosystem Vitality, Ecosystem Services, and Governance & Stakeholders, scoring each from 0 to 100. These scores help identify where management or restoration is needed. Because it brings in multiple perspectives, the FHI supports Alberta's *Water for Life* approach and helps ensure results are useful for local decision-makers.



Bringing FHI to the North Saskatchewan Watershed

The NSWA began to adapt and implement the FHI in early 2023. Key steps in this process were:

- Adapted the FHI indicators to better reflect available data for the watershed.
- Hosted workshops for input and feedback on problem areas across disciplines, backgrounds, and sectors.
- Worked with other WPACs to facilitate repeatable, transparent results across Alberta watersheds.
- Developed a web-based *State of the Watershed* report.
- Consulted with technical experts on all indices and data to ensure they reflect the indicator accurately.



LAKE STEWARDSHIP

Regional Lake Stewardship Project

The Regional Lake Stewardship project, supported by Pembina Pipeline, aims to coordinate lake stewardship activities across lake groups and enable lake shoreline restoration activities in key locations. Learn more about these [stewardship projects here](#).

In 2024, the project undertook two shoreland enhancement projects, which included:

- Bringing 30 students from the New Humble Community School to plant more than 400 native plants along the shore of Wizard Lake, in partnership with the Wizard Lake Watershed and Lake Stewardship Society and Leduc County.
- Assembling community members, joined by MLA Shane Getson, to naturalize a runoff channel and day use area on the shores of Lac Ste. Anne, in partnership with the Summer Village of Yellowstone and the Lake Isle and Lac Ste. Anne Stewardship Society.



eDNA Monitoring

The NSWA partnered with Dr. Patrick Hanington from the University of Alberta's School of Public Health to conduct environmental DNA (eDNA) monitoring throughout the watershed. With support from Smoky Lake County and the Government of Alberta, the NSWA hosted two field technicians who collected 108 samples across the watershed's four reaches. Additionally, the technicians collaborated with Whitefish First Nation and Alexis Nakota Sioux Nation to support monitoring and broader terrestrial and aquatic health assessments.

Preliminary results show no new invasive species have been detected, and Whirling Disease—first found in the watershed's headwaters in 2018—has not shown signs of expanding its range.



Collaborations

The NSWA co-hosted a Lake Stewardship Community of Practice Forum alongside the Alberta Lake Management Society at Snow Valley Lodge in May 2024. Learn more about the [Community of Practice](#).

The NSWA hosted an Invasive Plants and Beaver Coexistence Workshop at Elk Island National Park that included presentations from Parks staff, NSWA, and Cows and Fish, as well as a guided walk to various sites within the park.



EDUCATION & OUTREACH

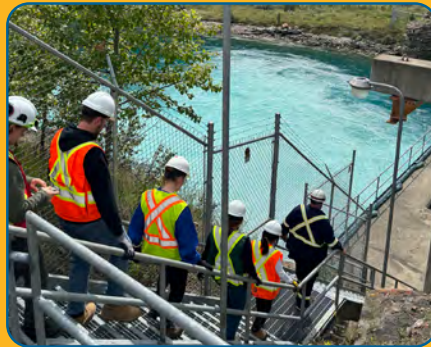
Sharing knowledge and reaching out to the watershed's diverse community is important to the NSWA. This year, the NSWA participated in a variety of events with municipal partners, local watershed stewardship groups, and other organizations. Highlights included Open Farm Days, Alberta Métis Fest, the TELUS World of Science Virtual Youth Climate Summit, the c5 summer kick-off community event, and the St. Albert Clean & Green River fest!

Field Workshops & Training

NSWA joined University of Alberta Engineering students at the faculty's inaugural Engineering Water School. NSWA hosted the watershed management and water quality learning portion of the field school at the Cline River WaterSHED Monitoring station.

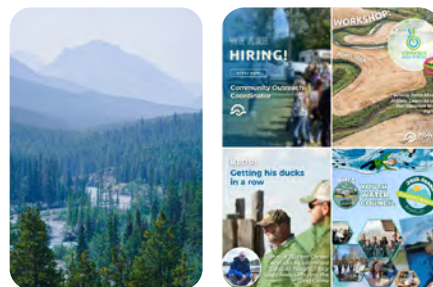
Students learned how WaterSHED's one-of-a-kind tributary monitoring network informs regional planning, how parameters are assessed, and did some hands-on water quality testing at the river bank!

TransAlta provided a tour of the Bighorn Dam facility. Students learned how the North Saskatchewan River's flows are managed and got an inside look at the dam's hydroelectric power generation.



SOCIAL MEDIA & WEB COMMUNICATIONS

Social media continues to evolve as an important way for the NSWA to connect with people from across the watershed and share educational information. NSWA's Summer Photo contest had photographers sharing their favourite views of the watershed on social media. The winning shot, "Summer Smoke" shows a smoky wildfire haze unfurling in the Abraham Lake area. The photographer, Harmony Medland-Wolgemuth won a six glaciers helicopter tour for her efforts!



Monthly Instream Newsletter

The NSWA monthly newsletter keeps 1130 subscribers informed about our latest project updates, partner events, watershed news, and ways to get involved! Throughout 2024-2025, blogs featured topics on wildfire research, climate change, drought, and Indigenous perspectives on water. Join our mailing list and become an NSWA member on our website!



5,960 followers



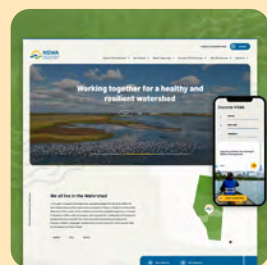
1,130 subscribers



409 attendees



2,850 people reached



New NSWA Website

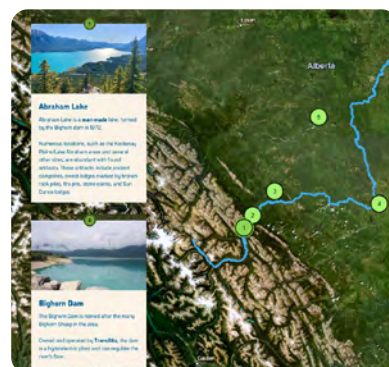
NSWA unveiled a brand-new website in June 2024, developed by local Edmonton web designer, Box Clever. The new site makes watershed learning accessible and features some new pages, such as an event calendar, blog posts, and resources that can be searched by job or interests.

The Canadian Heritage River StoryMap

The NSWA created a new [StoryMap](#) for the North Saskatchewan River's Canadian Heritage River designation. Meander through history, explore Indigenous heritage, and learn about the unique ecological features of kisiskâciwani-sîpiy/ Omaka-ty!

Watershed Wednesday Webinars

This year's six Watershed Wednesday Webinars featured guest speakers showcasing local initiatives, research, and projects happening in our watershed. The sessions covered topics such as resilient agriculture, Indigenous environmental monitoring, natural infrastructure, and urban creek daylighting initiatives. Watch them on [NSWA's YouTube channel](#).



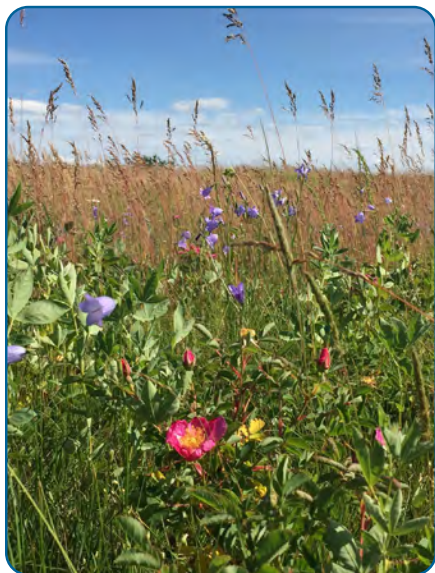




STURGEON RIVER WATERSHED ALLIANCE (SRWA)

The SRWA continues to implement the 2020 Sturgeon River Watershed Management Plan and conducted a 2024 SR WMP Evaluation Report.

- The Alliance proposed a three-year water quality evaluation and infrastructure planning project for SRWA and received \$200,000 through the Alberta Community Partnership Grant – Intermunicipal Collaboration Stream to support the project.
- The project involves an analysis of existing water quality data to identify hot spots and explores nature-based solutions for high and medium-risk areas identified in the 2018 Watercourse Crossing Assessment.
- Parkland County is the project's municipal managing partner — along with other Alliance members' ongoing support.



VERMILION RIVER WATERSHED ALLIANCE (VRWA)

- The VRWA remains committed to the Vermilion River Watershed Management Plan and is seeking specific on-the-ground projects and funding to improve its watershed's health.
- In collaboration with Lakeland College, the VRWA is developing an activity book designed for children aged 10–12. This interactive resource helps young readers explore their local watershed while introducing sustainability, watershed health, and ecological connectivity in a fun, engaging way.
- The VRWA supported outreach and education activities such as the annual Bugging Out Down by the River event (with the Town of Vermilion Library) as well as County of Vermilion River's Wetland Adventure Days.



URBAN CREEKS COLLABORATIVE

- In 2024, the Collaborative began developing educational and engagement materials to raise awareness about local creeks, the pressures they face, and the actions individuals and communities can take to improve urban creek watershed health.
- An interactive digital tool is being developed, featuring maps, data, and historical context for each urban creek watershed. The tool will be available through the NSWA website in 2025.
- The Collaborative has begun envisioning an Urban Creeks Strategy with the goal to co-develop a shared vision for returning natural hydrology to urban creek watersheds.

INDUSTRIAL HEARTLAND- DESIGNATED INDUSTRIAL ZONE (IH-DIZ) WORKING GROUP

The NSWA is a partner in the IH-DIZ Water Task Team that is working to streamline regulatory processes and meet economic and environmental goals. The group had three key areas of focus over the past year:

- **Aquatic Ecosystem Health (AEH) Study:** This study intends to assess river health using water quality, macroinvertebrates, algae biomass, and sediment with the results being used to inform development of the long-term monitoring program.
- **IH-DIZ LSPC Model Update:** The updated model will be used to assess the potential impact that landscape changes and other pressures will have on water quality downstream of the DIZ.
- **Wetland Waterbody Characterization Study:** Working closely with Alberta Industrial Heartland Association on the 'Waterbody Characterization and Policy in the IH-DIZ' study, with the goal to optimize wetland regulations, policies, and practices within the IH-DIZ.



BUILDING RESILIENCE TO DROUGHT IN THE NORTH SASKATCHEWAN WATERSHED

The spring and summer of 2024 brought concerning drought conditions across Alberta. While the North Saskatchewan River fared better than our southern neighbours, parts of our watershed experienced extremely dry soils and low tributary flows. Local farmers, who mostly depend on rainfall rather than irrigation, were especially impacted.

Although drought is a natural and recurring part of our watershed's history, it is still essential for communities to prepare for future droughts.



How the NSWA supported drought resilience efforts:

- Co-hosted two Building Drought Resiliency workshops, featuring the Drought Toolkit by the Alberta Water Council
- Presented at key events, including the AB Municipalities Climate COP Conference
- Hosted Watershed Wednesday sessions on drought modeling and water shortage planning
- Featured Dr. Gina Ziervogel, author of Day Zero, in a special webinar on Cape Town's 2015–2018 drought
- Provided regular drought updates through media interviews, our website, and newsletters

Partnering with Treaty Six First Nations on Drought Resilience

In 2024, the NSWA began an important partnership with the Emergency Management Department of the Confederacy of Treaty Six First Nations to better understand and respond to First Nations' needs around drought resilience. Existing drought planning tools in Alberta are designed for municipalities and often don't reflect the realities of First Nation communities.

Highlights from Phase 1: Needs Assessment

- Secured funding support from ClimateWest
- Hosted two workshops (Nov 2024 and Apr 2025) to hear directly from Nations
- Co-drafted a Needs Assessment with our Indigenous Liaison, Azure Johnson, and the Confederacy of Treaty 6
- Engaged 12 of 16 Confederacy member Nations

This project is an important step toward equitable access to drought planning tools, while also advancing reconciliation, self-determination, and long-term climate resilience. Phase 1 wraps up in June 2025 and Phase 2 launches next year.

THE RIPARIAN WEB PORTAL

The Riparian Web Portal (RWP) continues to evolve as an important resource for riparian health and watershed improvement across Alberta and beyond. Since its launch in 2021, the RWP has served as a centralized hub for data, tools, and best practices, which in turn supports landowners, municipalities, stewardship groups, and decision-makers in their efforts to understand, protect, and restore riparian areas.

In 2024, we made significant strides in expanding the portal's reach and visibility, supporting more communities in making informed, data-driven decisions for riparian health, which included:

- Secured funding through the Watershed Resiliency and Restoration Fund to hire a full-time Portal Coordinator who will lead technical upgrades, provide training, and build long-term support for users.
- Completed our 3rd Annual RWP Student Competition, engaging 30 Lakeland College students in science communication.
- Collaborated with over 15 organizations to upload project examples and showcase on-the-ground success stories, including the major milestone of the first on-the-ground project from outside Alberta (located in British Columbia) to be uploaded to the Portal.
- Supported three WPACs in integrating new riparian assessment data for priority sub-basins.



NORTH SASKATCHEWAN RIVER WATER MANAGEMENT MODEL & ROADMAP PROJECT



In 2024, the NSWA began a project to collaboratively develop a roadmap for sustainable water management in the North Saskatchewan River Basin, balancing future water availability and water use demands. Stakeholders and rightsholders are developing a hydrological model of the watershed that includes current water use and management, and forecasts potential future water availability due to growth and changing climate. From this foundation, the project will define a 'roadmap' of potential improvements to water management in the basin.

Thanks to funding from 11 partners across federal, provincial, municipal, and industrial sectors, this project is now well underway. The Roadmap lays the groundwork for a coordinated, informed, and proactive approach to water management in the basin. The collaborative working group consists of over 30 members representing industry, government, agriculture, Indigenous communities, and non-governmental organisations which met 10 times in 2024.

YOUTH WATER COUNCIL

NSWA's Youth Water Council (YWC) places youth at the forefront of water conservation and watershed management. Throughout the school year, students from across the watershed come together through collaborative workshops, bi-weekly virtual learning sessions, and a weekend camp. They learn from environmental professionals and one another before co-creating their own Innovative Project.

The 2024 council's project, *River Time Vortex Extravaganza – A Watershed Time Travel Story*, is an educational comic book about watershed health. With the help of NSWA, the council distributed the comic to schools and libraries throughout the watershed in the hopes that it would teach kids about the importance of protecting their natural environment. Following positive reception, an additional 9000 copies of the comic were printed for the RiverWatch Institute's EcoFloats! See the [YWC 2024 webpage](#) and a [digital version of the comic here](#).

In session: The 2025 council features 12 high school students who share a common passion for their local environment. They are currently working on their own project, Education Kits for classrooms.



2025 students from left to right: Gurmehar, Paras, Humza, Samantha, Joanna, Abi, Ilinca, Cynthia, Aven, Tanya, Josie



A RIVER RUNS THROUGH US: THE STORY OF THE NORTH SASKATCHEWAN RIVER DOCUMENTARY FILM SERIES

Written & Directed by: Ryan Northcott (Panoramic Media), Steph Neufeld (EPCOR), & Kaila Belovich (NSWA)

The NSWA has been working with Panoramic Media and EPCOR to develop a 7-part documentary featuring the North Saskatchewan River. Filming, interviews, and scripting progressed throughout 2024, and the film is anticipated to premiere in Edmonton in mid-July 2025.




Teaser

From the glacial past to the present day, the North Saskatchewan River has shaped the land and the lives of those who rely on its waters. This documentary traces the river's geological origins, explores the delicate balance of its ecosystems, and examines the ways in which human activity has influenced its health. Through the voices of scientists, stewardship groups, Indigenous peoples, and local communities, the film uncovers the evolving relationship between people, the North Saskatchewan River, and its watershed.

This documentary is presented by EPCOR—the water utility provider for Edmonton and surrounding regions—and NSWA. Their shared belief is that education is key to stewardship. By watching the film and discovering more about the North Saskatchewan River, we hope to enhance your connection with the river, and inspire you to conserve the river for generations to come.



Carving its way through rugged landscapes and historic communities, the North Saskatchewan River is more than just a waterway, it's a lifeline, shaping industries, ecosystems, and cultural identities across time immemorial.



CONTACT US

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