



Vermilion River

WATERSHED ALLIANCE

ANNUAL REPORT 2020-2021





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25 June 2021

Prepared by:





Vermilion River

WATERSHED ALLIANCE

INTRODUCTION

The Vermilion River Watershed Alliance (VRWA) is comprised of local volunteers working side by side in the watershed (Figure 1). Members come from local towns and counties, federal and provincial governments, conservation groups, and the public. The VRWA also has a strong partnership with the North Saskatchewan Watershed Alliance (NSWA), who provides project management and administrative support.

The VRWA is guided by the goals, directions, and actions of the Vermilion River Watershed Management Plan (2012). This plan was designed with input from the public to define what the watershed means to those who live, work, and play here. The VRWA believes the watershed is the unit of management for human activities that affect the environment, including air, land, water, and wildlife.

VRWA Goals (as listed in the 2012 VRWMP)

- Develop capacity and knowledge in the watershed
- Improve reliability of surface water supply
- Improve and maintain surface water quality
- Improve and maintain water ecosystem health
- Protect and sustain groundwater quality and supply

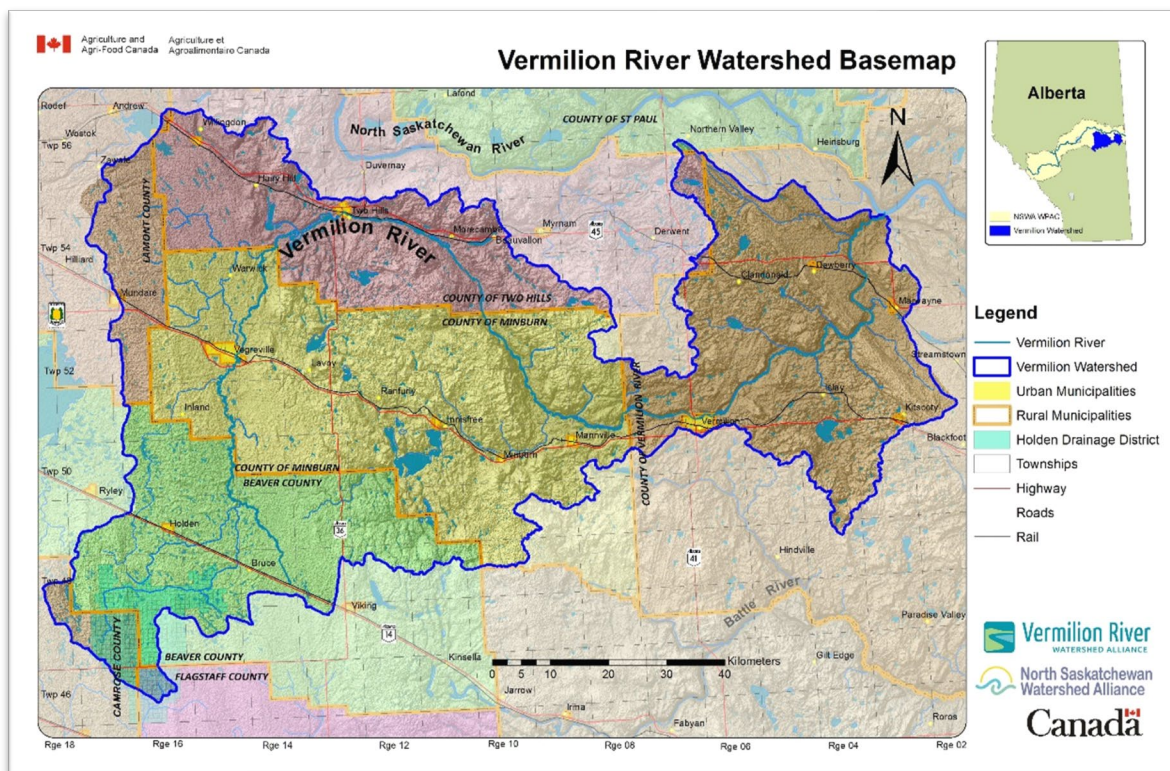


FIGURE 1: VERMILION RIVER WATERSHED

2020-2021 BOARD OF DIRECTORS

The VRWA is governed by a Board of Directors elected from and by the membership to serve a minimum two-year term. The Board is structured to represent all major stakeholder sectors. The current VRWA Board of Directors is comprised of the following individuals/organizations:

Position	Name	Sector - Organization
Chair	David Berry	Municipal - Town of Vegreville
Vice-Chair	Murray Phillips	Municipal – County of Two Hills
Treasurer	Willie Babiuk	Municipal - Town of Two Hills
Secretary	Chris Elder	Non-profit - Alternative Land Use Services
Director	Candace Vanin	Federal - Agriculture and Agri-Foods Canada
Director	Greg Barr	Municipal – Town of Vermilion
Director	Kevin Bentley	Municipal - County of Minburn
Director	Stacey Hryciuk	Municipal - County of Vermilion River
Director	Barry Bruce	Municipal - Beaver County
Director	Nicole Nadorozny	Education - Lakeland College
Director	Rick Passek	Provincial - Alberta Environment & Parks
Director	Ralph Boe	Agriculture
Director	Bryon Wolters	Non-profit - Ducks Unlimited Canada
Director	Al Corbett	NSWA; Alberta Drainage Council
Director	Carlin Soehn	Provincial - Alberta Environment & Parks
Director	Tim Knudsen	Holden Drainage District
Director	Daniel Warawa	Municipal – Lamont County

The VRWA board is supported by the following NSWA staff for the 2020-21 year:

- Leah Kongsrude, Executive Director
- Michelle Gordy, Watershed Planning Coordinator

VERMILION RIVER WATERSHED RESTORATION & ENHANCEMENT PROJECT



Since 2016, the VRWA has partnered with the North Saskatchewan Watershed Alliance (NSWA) to restore and enhance wetlands and riparian areas in the Vermilion River watershed (VRW; Figure 1) as part of the Vermilion River Watershed Restoration & Enhancement Project (VRWREP). As of March 2021, the alliances—in partnership with local landowners—have completed five years of on-the-ground restoration and enhancement activities as well as accompanying outreach events and educational initiatives.

With 2016-2018 funding from Environment & Climate Change Canada and current funding from the Watershed Resiliency and Restoration Program (WRRP, Government of Alberta) (Table 1), activities as part of this multi-year initiative are collectively managed by the NSWA as the VRWREP.

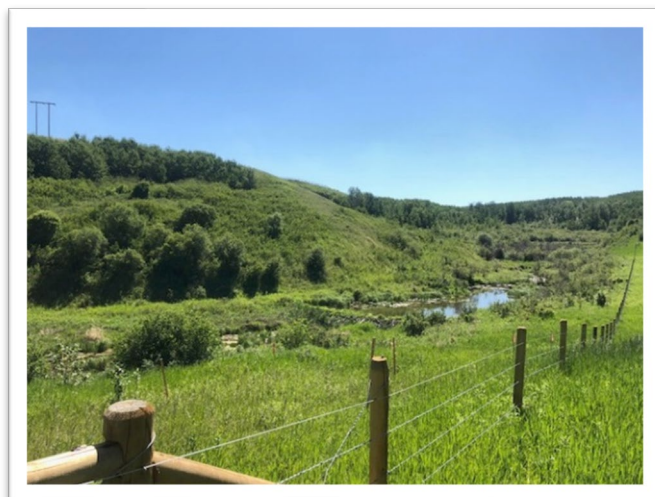
*Table 1: VRWREP Funding Sources, deliverables, goals and **total** grant amounts. Grants are held, managed and reported on by the NSWA*

Funding Source	Deliverables	Goals	Grant (\$)	Funding Period
Watershed Resiliency & Restoration Program (WRRP), Government of Alberta	Restore degraded or lost, or enhance existing wetland and riparian areas in the Vermilion River watershed: Wetlands = 40 ha total Riparian areas = 10 km total (20 ha equivalent)	Improve watershed resiliency to floods and drought	1,445,000	2015-2022
National Wetland Conservation Fund (NWCF), Environment Canada	Restore degraded or lost wetlands in the Vermilion River watershed = 24 ha total	Improve biodiversity and watershed function	534,254	2015-2018
EcoAction Community Funding Program (EcoAction), Environment Canada	Restore degraded riparian areas in the Vermilion River (main stem) = 2 km (equivalent 4 ha), and conduct a survey of aquatic species & habitat	Improve water quality, assess aquatic condition	100,000	2015-2018

VRWREP Funding Source Summary

Funding sources for the VRWREP in 2020-21 included WRRP, the NSWA (cash and in-kind) and the VRWA (in-kind).

The NSWA received an extension on its VRWREP-affiliated WRRP grant through the fiscal year 2022 as a no-cost extension due to COVID-19 restrictions on planned activities. The extension will allow for continuation of riparian and wetland restoration/enhancement projects, provide more opportunities for partnership building, and increase wetland/riparian-related communications activities in the basin, with a special focus on restoration activities in Lamont County and planting an Eco-Buffer in Two Hills.



ABOVE: VRWREP PROJECT SITE FROM 2018

VRWREP Landowner Projects

As the VRWREP grant holder, the NSWA worked with Lamont County and Cows and Fish to spread awareness of the VRWREP projects and gain interest from landowners.

Due to the pandemic, no new applications were received. However, interest for the installation of Beaver Management devices by two different landowners led to the provincial and federal reviews and approval permits for installation in the coming year. For these two locations, Cows and Fish were hired to complete pre-project Riparian Health Inventories.

The NSWA also worked with Cows and Fish to connect with seven landowners from previous years' projects to complete Riparian Health Inventories. These inventories are assessments of riparian health around the project location and provide landowners with management recommendations to promote further riparian and wetland restoration efforts.

2020-21 Projects Completed

In June, this year, we partnered with the Alberta Woodlot Extension Society, the Town of Two Hills, and the County of Two Hills to plant an Eco-Buffer demonstration site at Geleta Park in Two Hills, right along the Vermilion River. The location was chosen, both for its proximity to the river and to help with bank stabilization, but also because it is a park that people visit often and will benefit from learning about what an Eco-Buffer is and why it is a useful restoration strategy.



ABOVE: REBEKAH ADAMS OF AWES (RIGHT), TERRY STEFIUK OF TOWN OF TWO HILLS (LEFT) AND OTHER TOWN AND COUNTY STAFF LAYING THE MULCH BLANKET FOR THE ECO-BUFFER.

Though our original plan was to include local school kids in the project, to help with planting, we felt it was not safe to do so considering the pandemic and associated restrictions. Therefore, instead, we hired AWES to plant the seedlings along with the Town of Two Hills' staff. The CAO of Two Hills graciously gave, in-kind, the cost of using the machinery and the cost of staff time to the project. In total, 415 trees and shrubs were planted among three rows within the park. Since the seedlings were planted, the town has been maintaining the site and monitoring it.

VRWREP Summary

To date (i.e., 2016-2021), 40 landowner projects, including 16 riparian and 24 wetland projects, have been completed, resulting in the enhancement of approximately 20 kilometers of riparian areas and 153 hectares of wetlands, including 24 ha of wetland restoration.

VRWREP Evaluation 2015-21

The VRWREP has had a positive effect on both the local community as well as riparian and wetland ecosystems in the watershed. For VRWREP landowner participants, the access to funding to implement projects they have been wanting to incorporate into their operation has been appreciated. For instance, when asked what motivated a project participant to apply, they responded:

“Maintaining and enhancing riparian areas and waterways makes so much sense, but isn’t always the easiest to do financially.”

-VRWREP participant, Minburn County

The high promotional component of the VRWREP has raised the profile of the VRWA in the community. As well, these projects have helped to solidify partnerships with other restoration organizations in the area who are keen to collaborate on projects, such as ALUS, Cows & Fish, and the Agroforestry Woodlot Extension Society.

“The dedication shown by [the program team] towards the Vermilion River Watershed Restoration project was very influential for me to become interested in being a partner and improving the water quality in the Vermilion River.”-VRWREP participant, Minburn County



SOCIETY BUSINESS

During the 2020-21 fiscal year, the VRWA hosted its fifth Annual General Meeting virtually over Zoom (June 2020) and held four regular board meetings (April 2020 – GoToMeeting, June 2020 – Zoom, October 2020 – Two Hills, January 2021 – Zoom). This year, the board worked on strategic planning for the next three years and approved the development of an Education Committee to work on expanding VRWA outreach efforts across the watershed.

EDUCATION AND ENGAGEMENT

Education and engagement are a major focus of the VRWA; both facets are incorporated in each of the five goals within which the Alliance operates. To both cultivate watershed knowledge and encourage participation of stakeholders in improving watershed health, the VRWA focused on expanding communications materials and developing an Education Committee. Here are the major milestones and deliverables achieved:

- Monthly blog posts on the VRWA website (vrwa.ca/blog)
 - **May:** Stories of Stewardship Story Map
 - **June:** Speaking of health...Vermilion River Aquatic Ecosystem Health Assessment

- **July:** Buffering our impact: How Eco-buffers can help reduce our impact on the river and provide ecosystem services
 - **August:** “Do Fence Me In!” Fencing with water and wildlife in mind
 - **September:** Living with Beavers: How to co-exist with nature’s Eco Engineer
 - **October:** Watershed Resilience: what strategies work best?
 - **November:** Morecambe Structure and the Two Hills Floodplain: History and Operation
 - **December:** Invasive vs. Native Plants: Knowing & Growing Your Riparian Area
 - **January:** Graphic Summary of the Vermilion River Water Quality Study
 - **February:** Partner Series: Getting to Know Cows and Fish’s Riparian Specialist, Tonya Lwiwski
 - **March:** Partner Series: Getting to Know Chris Elder, Coordinator for ALUS Canada – Vermilion River
- To help boost viewership for the blogs, we have partnered with the County of Vermilion River, the County of Two Hills, and the County of Minburn to include an advertisement for the blog in their monthly county newsletters. We have also recently set-up a Google Analytics profile to track views of the website and specifically the blog content. We have also recently made a VRWA Instagram account (@vrwalliance) to share these advertisements and to share pictures of when we are out in the field and future outreach events.
 - Other communications work has focused on connecting the community with the VRWA society and the stewardship work that has been done in the Vermilion River watershed. We developed a tri-fold handout with basic information that we can give to people at future events and to share with our partners and municipalities, to encourage connection and partnership. This tri-fold highlights the successes of the work of the VRWREP.
 - Finally, to help create awareness of the Eco-buffer projects completed in Vegreville last year and in Two Hills this year, we have made large signs, with general information and graphics about what an Eco-buffer is and to highlight features specific to the Eco-buffer in that area. These signs have been printed, and in partnership with New Myrnam School, now have a wooden structure to display them on location. Staff and students at New Myrnam School worked together to build the sign structures, as an educational opportunity for the students. The signs will be installed in Summer 2021.
 - December 2020, an Education Committee was formed, developed a Terms of Reference, and annual working plan, and has met regularly to discuss plans for outreach with youth and the broader community. We are partnering with neighboring watershed alliances (Battle River Watershed Alliance and LICA), the Agroforestry Woodlot Extension Society, The Village of Myrnam and New Myrnam School to plan events and outreach.

Strategic Priorities for Watershed Resiliency in the Vermilion River Watershed

Defining Watershed Resiliency: Maintaining key hydrological features to perform various functions and absorb natural and human disturbance without shifting outside the bounds of normalcy.

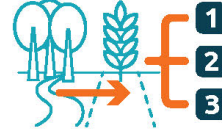
5 KEY GOALS OF THIS REPORT



Create a set of indicators for assessing watershed resilience



Develop hydrologic & land use models for the watershed



Model scenario simulations of the impact of climate and land use changes on indicators



Recommend conservation and restoration areas



Create a user-friendly web-based tool to view model simulation scenarios

8 Streamflow Indicators were created to measure resilience based on:

- **MAGNITUDE:** peaks, lows, and frequency of flows
- **TIMING:** flood and drought events
- **YIELD:** changes in annual water yield and availability



2 models were used to describe or assess the effects of:

- Landscape and climate on the streamflow indicators
- Current and future land use and climate on streamflow
- Conservation or restoration strategies on streamflow

Landscape and land use shape the driving processes in the VR watershed's water balance

- Evaporation is a dominant factor in the system
- A lot of the water in the VR system doesn't make its way into rivers and streams
= Big effects on streamflow

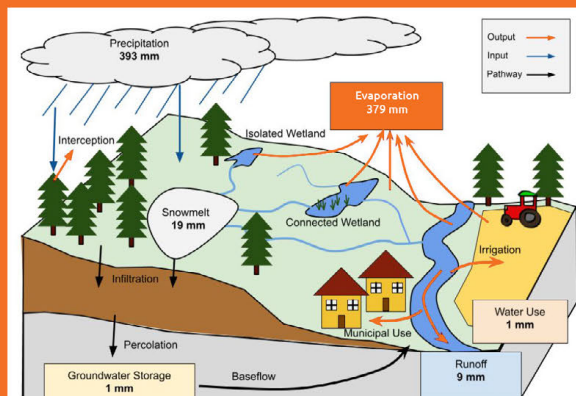


Figure 2a: Example infographic from October's blog post

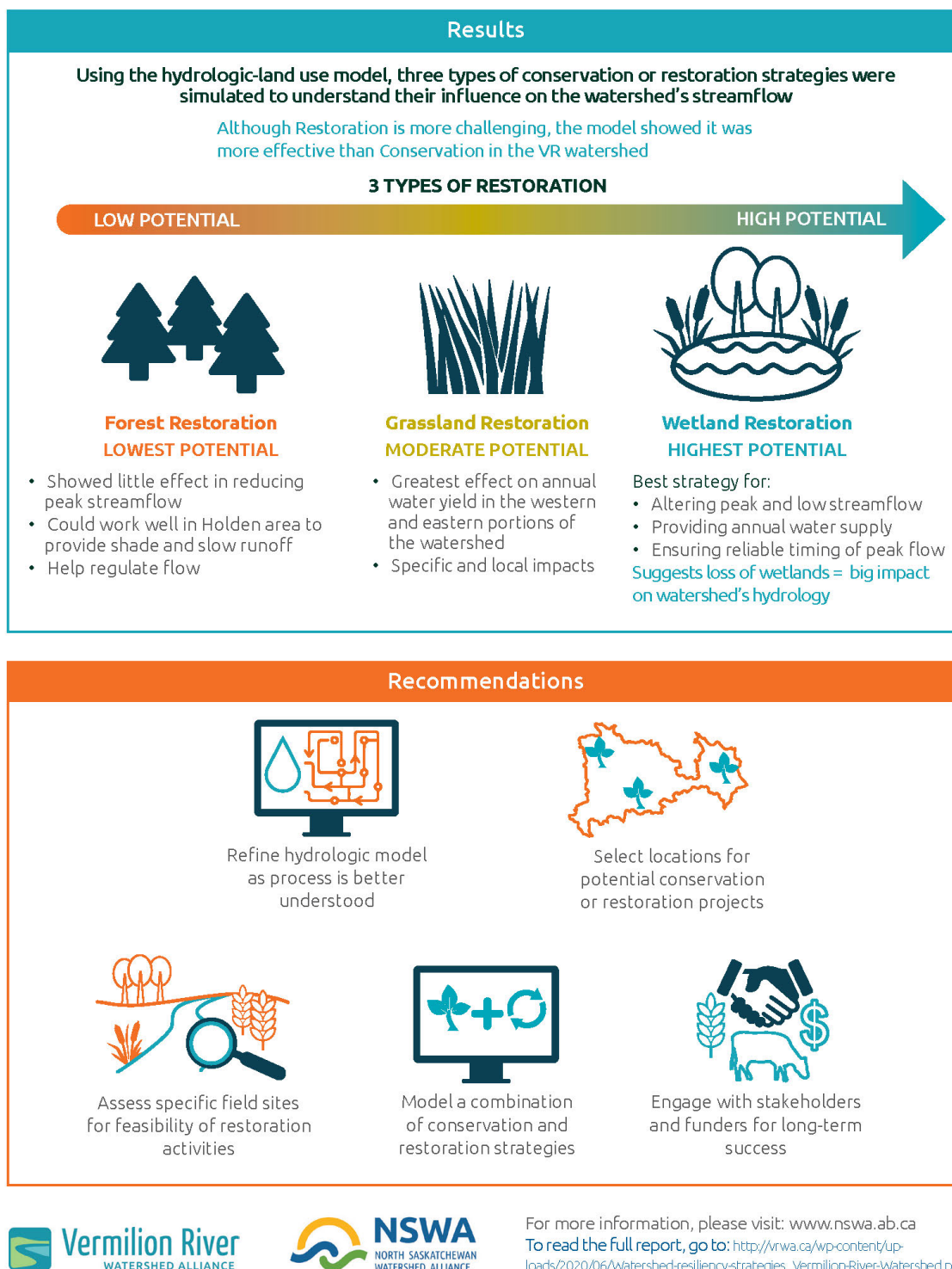


Figure 2b: Example infographic from October's blog post

FINANCIAL INFORMATION

Vermilion River Watershed Alliance Financial Statement for the year ending March 31, 2021:

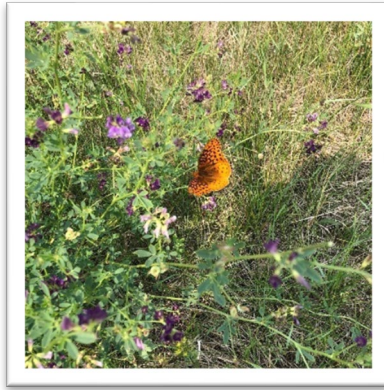
Statement of (unrestricted) Revenues and Expenditures

Revenue	\$0.00
Expenditures	\$0.00

Statement of Financial Position

Assets	\$5,429.10
Liabilities	\$0.00

Including board meetings, event and committee participation, and mileage, the value of VRWA's in-kind services & travel support for 2020-21 was \$33,432.50.



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