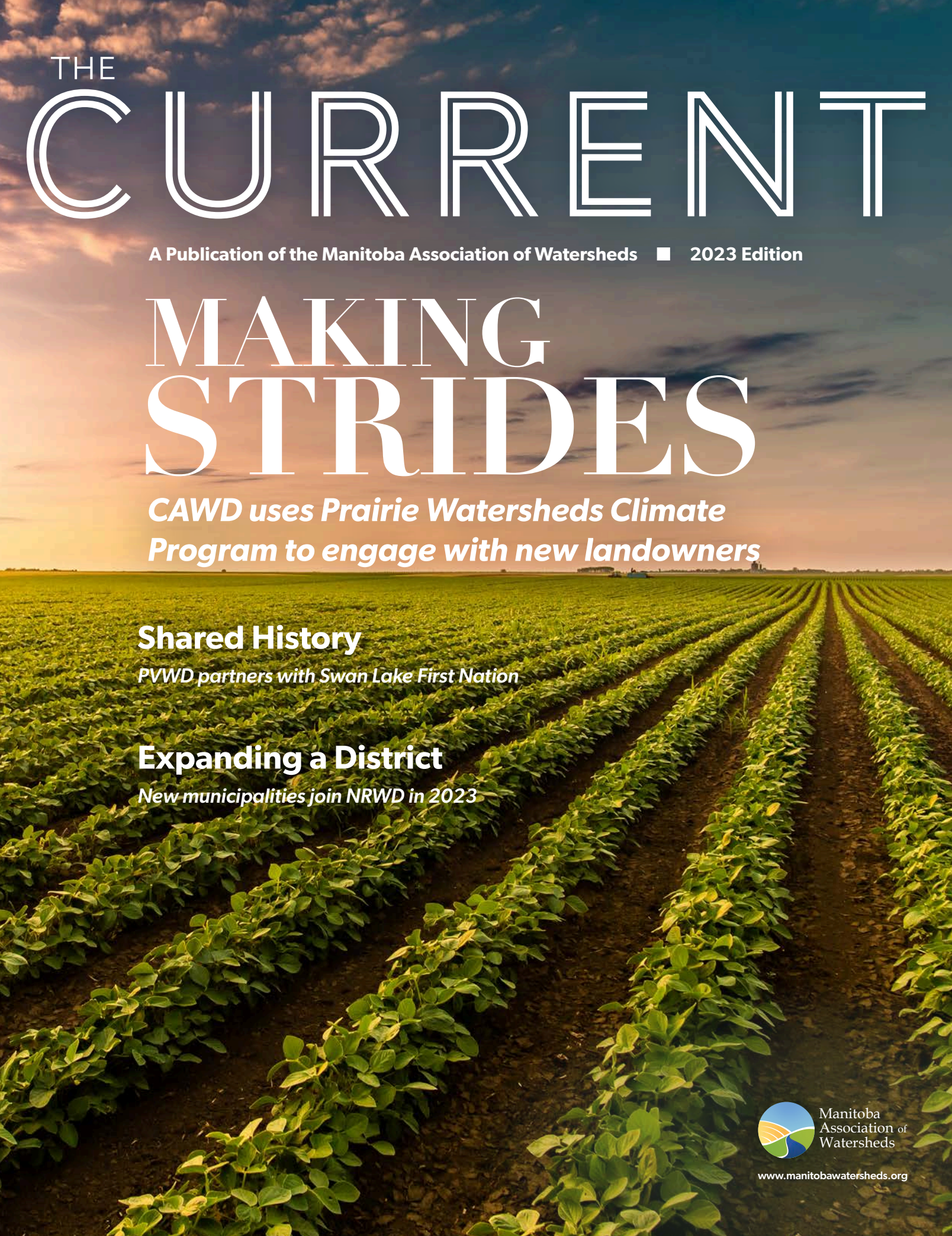

THE CURRENT

A Publication of the Manitoba Association of Watersheds ■ 2023 Edition

MAKING STRIDES

CAWD uses Prairie Watersheds Climate Program to engage with new landowners

Shared History

PVWD partners with Swan Lake First Nation

Expanding a District

New municipalities join NRWD in 2023

Manitoba Association of Watersheds

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For more information about MHC's programs, partners and funders, please visit **mbhabitat.ca**

THE CURRENT

Published annually, *The Current* is the official publication of the Manitoba Association of Watersheds. It features editorial from Manitoba's 14 watershed districts.

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Winnipeg, MB R3T 1L8
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Produced by

LESTER
701 Henry Ave.
Winnipeg, MB R3E 1T9
www.lester.ca

President, Jeff Lester
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DESIGN & LAYOUT

Senior Graphic Designers, Daniel Costa, John Lyttle
Advertising Coordinator, Kelsey Ainslie
Online Media Designer, Mark Aquino
Web Developer, Matt Rock

DISTRIBUTION

Administrative Assistant, Maryanne Li

Publication Mail Agreement #40606022.
Return undeliverable Canadian addresses to: 701 Henry Ave., Winnipeg, MB R3E 1T9

Printed in Canada.
Please recycle where facilities exist.

IN THIS ISSUE

Cover photo: fotokostic/123RF
Above: danhusseyphoto/123RF

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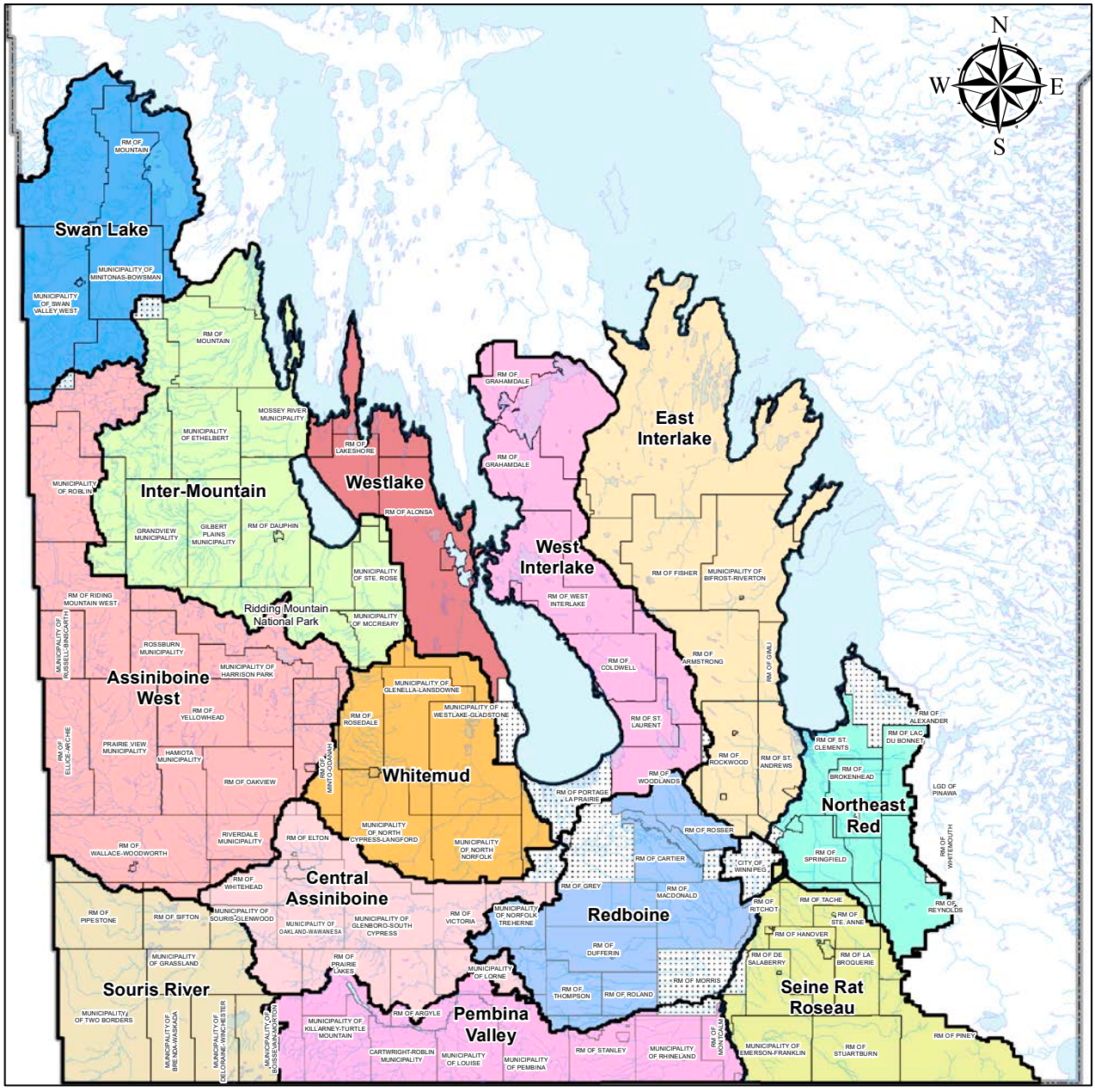
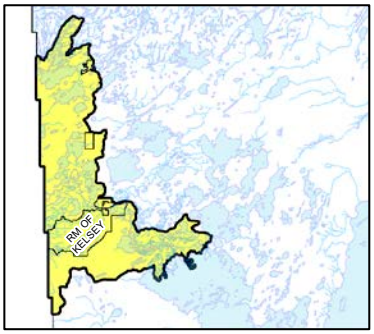
In partnership with Manitoba





Legend

- Watercourses
- Waterbodies
- Manitoba Provincial Boundary
- Watershed Districts
- Municipal Boundaries
- Non-Member Municipalities

Watershed Districts

- Assiniboine West
- Central Assiniboine
- East Interlake
- Inter-Mountain
- Kelsey
- Northeast Red
- Pembina Valley
- Redboine
- Seine Rat Roseau
- Souris River
- Swan Lake
- West Interlake
- Westlake
- Whitemud

Manitoba Association of Watersheds

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2023 Board Chair's Report

By Garry Wasylowski, Board Chair, Manitoba Association of Watersheds

It's a pleasure to announce that fiscal year 2022–2023 has been a record year for the watershed district program, and I am inspired by the competency, commitment and adaptability districts have shown this past year. The scope and significance of the work being done across the province has been incredible.

With funding delivery reaching in the millions, along with new projects, opportunities and partnerships, there have been changes and growth in leaps and bounds over a short period. This is an unprecedented level of programming being offered through the districts in addition to the ongoing quality projects and programs they already deliver.

I would like to recognize districts' efforts and the high calibre of work they are doing in Manitoba communities in support of watershed health. I would also like to congratulate all district staff on an extremely successful year.

As you read through this magazine, you will see the range of projects, educational events, community building and some of the impact this work has on the health of our watersheds. What you read here is of course only a fraction of the work that happens in watershed district offices and out in these communities.

The watershed district program currently operates in more than one hundred rural municipalities, towns, cities and villages across the province. It is the immense success of this program that has been the catalyst for the tremendous growth we have seen in 2022 and 2023.

In April 2023, the watershed district program expanded through enhanced core funding from the provincial government. Expansions occurred in Northeast Red, Pembina Valley and Redboine watershed districts. This means many new landowners will be able to access programs like the province's Growing Outcomes in Watersheds (GROW) program. I would like to thank the Province of Manitoba for their continued efforts to support watershed health and welcome the new municipalities that have joined the watershed program.

In September 2022, MAW launched the Prairie Watersheds Climate Program (PWCP), and the program was fully subscribed by March 2023. Through PWCP, new beneficial management practices have been implemented on more than 550,000 acres of land this past year in Manitoba alone and more than 875,000 acres in Saskatchewan. Thank you to the Government of Canada for helping watershed districts deliver several millions of dollars to landowners, working to create a lasting impact on water quality and climate change resiliency throughout both provinces.

There have also been changes this past year at MAW. We have had a year of enormous growth, adding several staff members to our team. I commend MAW staff on a job very well done. The work completed through the watershed program this past year has proved beyond a doubt that MAW and watershed districts can work with governments to deliver their programs, and I look forward to seeing what we can do in the future. ■

In September 2022, MAW launched the Prairie Watersheds Climate Program, and the program was fully subscribed by March 2023.

ahavelaar/123RF

A Tribute to Watershed District Members Passed

This page is dedicated to the passionate members and staff from Manitoba's watershed districts who passed away recently. We honour these individuals for their vision and leadership, and as integral contributors to the foundation of watershed districts.

Inter-Mountain Watershed District
Steve Nadolney

Northeast Red Watershed District
Brent Wery

Pembina Valley Watershed District
George Jackson

Seine Rat Roseau Watershed District
Cornie Goertzen

Swan Lake Watershed District
Walter Kolisnyk
Walter Pacamaniuk

isogood/123RF

Living Lab – Eastern Prairies Project Wraps Up

Direct and indirect benefits, and where we go from here

By Manitoba Association of Watersheds

Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

If there's one takeaway from the four years of research that went on through Manitoba's contribution to the national network of Living Labs in Canada that wrapped up in March 2023, it's that you don't have to have a be a big agricultural operation to have an impact on your local environment.

Research done through the Living Lab – Eastern Prairies (LLEP) project in Manitoba showed that many innovative agricultural projects have a cascade of co-benefits in addition to a project's main purpose.

Building a retention pond on a farm to prevent erosion, for example, had direct benefits downstream like reduced peak flow in the rivers, less downstream erosion and less sediment in the water. It also helped to increase biodiversity of plants, insects and wildlife due to surrounding buffer areas, and provided a direct benefit to the farmer, who now had a new water source for crops or livestock.

LLEP launched in 2019, through funding from the Agriculture and Agri-Food Canada (AAFC) Living Labs Initiative, with the goal of bringing together farmers, scientists and other collaborators to develop and test innovative agricultural practices directly on local farms in Manitoba watershed districts. Primary research was done by AAFC scientists, while additional research was done by the International Institute for Sustainable Development (IISD) on socio-economic impacts of practices, and by Nature Conservancy of Canada (NCC) on habitat and conservation impacts.

Water retention projects were constructed in each of the four watershed districts that participated in LLEP, and a tremendous amount of work went into those projects at the district and sub-district level. While some aimed to prevent erosion and provide a water source, another was built as a lagoon for wastewater treatment, and one converted agricultural land back into a wetland.

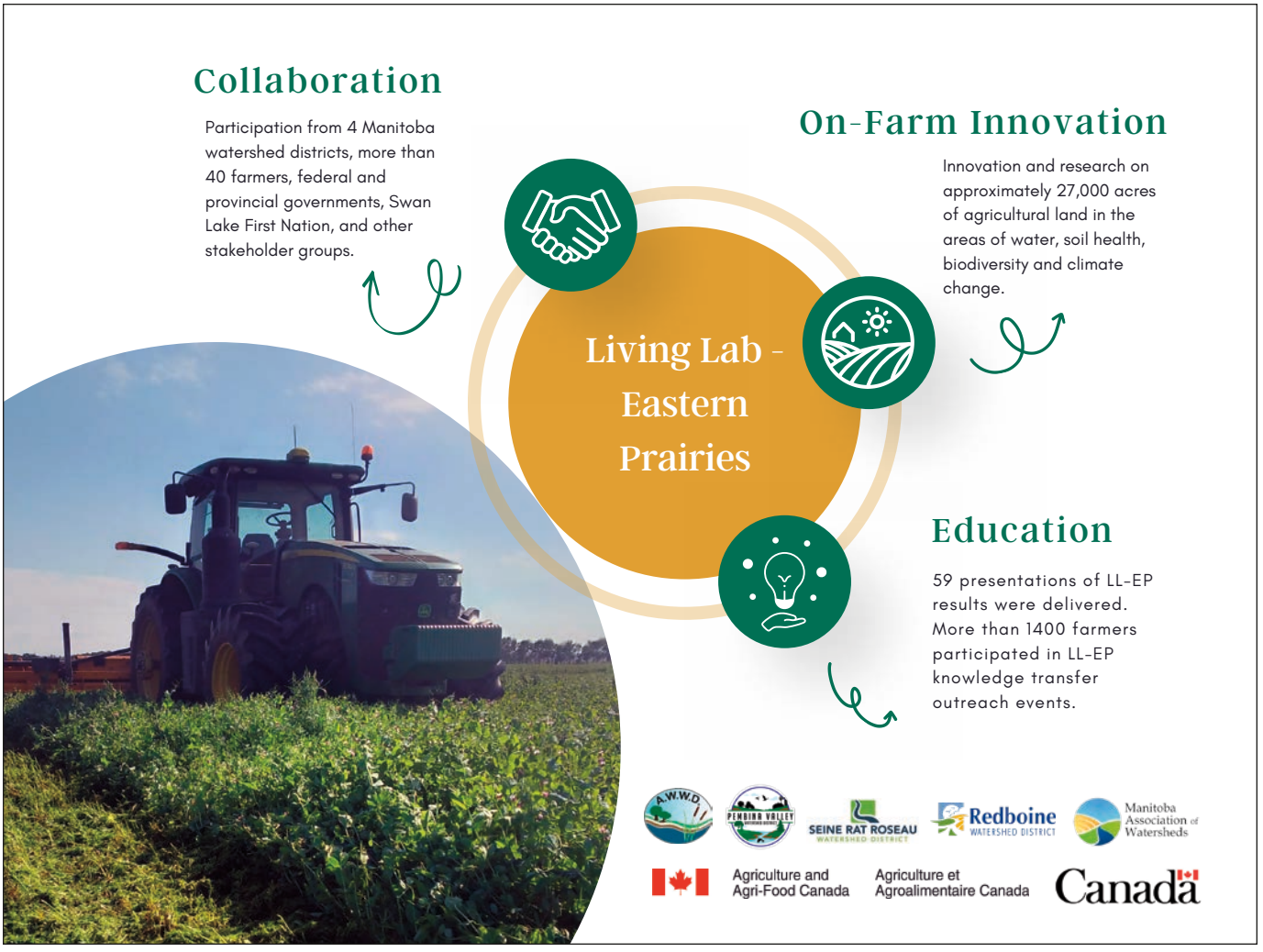
Other LLEP projects included soil landscape research to determine which factors impact crop yield. These projects aimed to help farmers more effectively manage nutrients and determine cost-benefits of conservation projects like buffer strips. Some of the research on rotational grazing practices determined that a 30-day grazing rotation seemed to be an ideal practice to prevent overgrazing and maximize plant growth.

LLEP research also looked at impact on pollinators, water quality and the effects of biodiversity in cover cropping practices on crop yield.

The impact of biodiversity was evident even on a visual basis – walking through a cover cropped field, one can observe different plant combinations every 10 feet. Some strips might have only two plants, and the next might have five, 10 or more.

One farmer participating in LLEP said his land was able to hold four times more water than the provincial average after he put a perennial crop into his rotation. This is significant because it lowers a farmer's risk of erosion, keeping soil and nutrients on the land. It also acts as a reserve, keeping vital moisture in the land during drought scenarios, and increases how much water the land can take on during flooding.

In total, projects took place in four Manitoba watershed districts: Assiniboine West Watershed District; Seine Rat Roseau Watershed District; Redboine Watershed District; and Pembina Valley Watershed District. In the fall of both 2021 and 2022, each watershed district hosted a field tour where landowners, producers, government, Indigenous groups and industry groups could see LLEP project sites firsthand. MAW also hosted two to four



workshops each year of the project, where local researchers could provide general outcomes and landowners could provide insight on what was happening on their land. Workshop recordings are available for viewing on the MAW YouTube channel.

Analysis of the large volume of data collected from the research activities funded through LLEP is ongoing. Once completed MAW looks forward to sharing the results and recommendations with the participating producers and the agriculture industry.

The goal of the Living Labs Initiative and now the Agricultural Climate Solutions – Living Labs program is to gather data from living labs across Canada to help inform the development of agricultural best practices and future policy and incentive programs designed to fight climate change.

MAW notes that there is there is an additional co-benefit to the program that isn't necessarily captured in the research.

"It's important to note how the project grew," said Garry Wasylowski, MAW board chair. "Not just the research, but the goodwill that was generated through the watershed districts. Farmers would talk to neighbours, and it really built a grassroots momentum of community-building.

"It provided an opportunity for the watershed districts to be a resource in their communities, and for the farmers to see that watershed districts are also a part of their farming communities. It showed that farmers' concerns are also watershed concerns."

MAW would like to thank the participating watershed districts and sub-districts, Agriculture and Agri-Food Canada, IISD, NCC, and all the landowners and partner groups who supported this initiative. The overall success of LLEP was a direct result of their dedication and commitment to the objectives of LLEP, and the living lab innovation model. Please visit the Living Lab Eastern Prairies web page for ongoing project updates and research results. ■

Prairie Watersheds Climate Program (PWCP)

A first year of engagement in beneficial management practices to help reduce greenhouse gas emissions in agriculture

By Manitoba Association of Watersheds

Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

Agriculture is one of the sectors being called upon to reduce greenhouse gas (GHG) emissions, according to the federal 2030 Emissions Reduction Plan. In that plan, Environment and Climate Change Canada (ECCC) reported GHG emissions from Canada's agriculture sector as 73 Mt CO_2e (metric tonnes of carbon dioxide equivalent) by 2019. Saskatchewan and Manitoba emitted 13.43 Mt CO_2e and 5.55 Mt CO_2e, respectively.

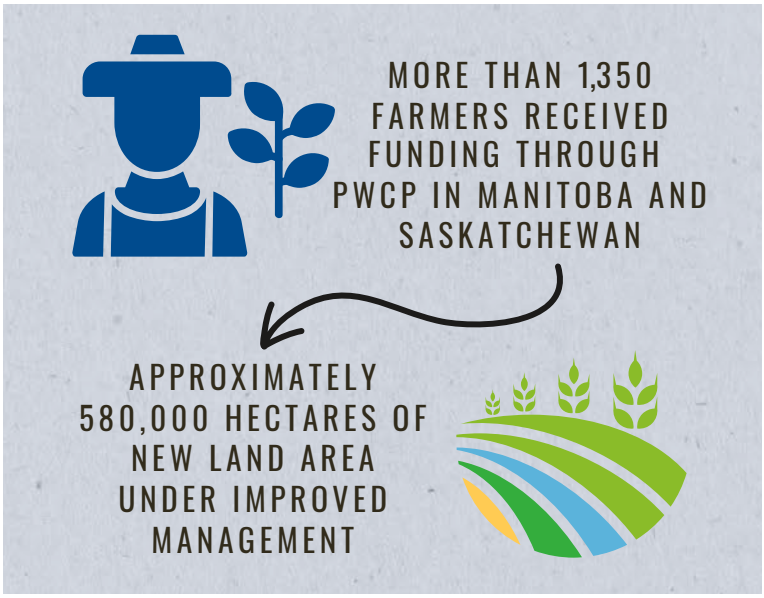
Considering that both provinces emitted 26 per cent of the total GHG emissions from the agriculture sector, it is essential to keep adopting beneficial management practices (BMPs) in the region to tackle the negative impacts of climate change.

Starting in 2022, 13 watershed districts in Manitoba and the Saskatchewan Association of Watersheds engaged in the mission of delivering PWCP to help make agriculture more sustainable in the region. PWCP successfully delivered in its first year, with a fully subscribed program providing funding for cover cropping, nitrogen management and rotational grazing activities. Therefore, PWCP contributed significantly to GHG emission reduction in the prairies in 2022. The Manitoba Association of Watersheds (MAW) as an advocate of PWCP cannot be more grateful to all its partners and farmers in Manitoba and Saskatchewan for their hard work and commitment to the program.

In terms of program metrics, MAW approved over $15.5 million in funding to over 1,350 farmers in Manitoba and Saskatchewan in the fiscal year 2022–2023. Approved applications were distributed approximately 16 per cent in cover cropping, 79 per cent in nitrogen management and five per cent in rotational grazing.

$15.5 MILLION TO FARMERS

In its inaugural year (fiscal 2022-2023) the Prairie Watersheds Climate Program (PWCP) will administer approximately $15.5 million in funding to farmers in Manitoba and Saskatchewan.



BENEFICIAL MANAGEMENT PRACTICES

Through PWCP, farmers in the prairies have implemented new practices that benefit watershed health.

Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

Anna and Haydn Donahue explain the BMPs they're implementing on a tour of their farm

These percentages reflect a significant interest in adopting sustainable practices in nitrogen management, but do not mark a trend for the fiscal year 2023–2024. This is due to the variable weather conditions of the current year and earlier application intake compared to the previous year. MAW anticipates that there will be an increase in cover cropping and rotational grazing applications in 2023–2024 to balance the adoption of the PWCP BMPs across the region.

PWCP educational and instructional resources

MAW held educational events to help delivery agents, agrologists, technicians, farmers and the public to access information about the BMPs that PWCP supports. In fall 2022, MAW and the Manitoba Forage and Grassland Association (MFGA) hosted a bus tour for our delivery agents. The goal was to visit early adopters of GHG emissions reduction practices in the region and to help understand the multiple activities and exceptional potential of cover cropping, nitrogen management and rotational grazing BMPs locally.

At the 2022 Manitoba Watersheds Conference in Winnipeg, MAW hosted a panel discussion focused on PWCP. This discussion helped gather insights from experts and farmers regarding BMPs. The purpose was to educate potential PWCP applicants and the public about the program's advantages. The panel showed how BMPs can improve the environment as well as provide additional benefits to farmers, such as increased crop yield, improved soil health and enhanced water quality.

On June 28, 2023, the PWCP Summer Speaker Series kicked off with Denis Tremorin, sustainability director for Pulse Canada, covering the topic, "Nitrogen Management: Pulses and Production Practices." The presentation helped everyone understand how this BMP has a positive effect on crops, soil health and air and water quality. MAW hosted additional speaker series events throughout the summer and fall of 2023, covering each of the program's BMPs.

Recordings of all the PWCP Speaker Series events are available for viewing on MAW's YouTube page (www.youtube.com/@mbwatersheds5523).

If you farm in Manitoba and are interested in applying for funding through PWCP, please get in touch with your local watershed district for assistance with the application and documentation required for this program.

Additional PWCP resources

On May 4, 2023, MAW announced the launch of a grazing mentorship program through MFGA, a PWCP partner actively engaged in supporting Manitoba's watershed districts. The program aims to provide watershed districts and farmers with additional support in successfully implementing rotational grazing BMPs funded through PWCP, with the support of 15 grazing experts located across Manitoba.

How can I apply to PWCP?

Please visit MAW's website (www.manitobawatersheds.org/prairie-watershed-climate-program) to learn about the program and eligibility and to access factsheets, webinars and contact information.

If you farm in Manitoba and are interested in applying for funding through PWCP, please get in touch with your local watershed district for assistance with the application and documentation required for this program. If you farm in Saskatchewan, please contact the Saskatchewan Association of Watersheds (www.saskwatersheds.ca), who will also walk you through the process. ■

GROWING OUTCOMES IN WATERSHEDS AND THE WATERSHED DISTRICTS PROGRAM

A proud Manitoba partnership

By Watershed Planning and Programs, Environment and Climate

Growing Outcomes in Watersheds (GROW) is a made-in-Manitoba approach that enhances ecological goods and services (EG&S) on the agricultural landscape.

GROW improves watershed health and resiliency by prioritizing and funding projects that mitigate and prepare for flooding and drought, improve nutrient management and improve water quality. In addition, GROW projects can improve on-farm water management, enhance sustainable agricultural production, improve biodiversity and habitat and sequester carbon.

GROW was made possible in 2018–2019 by the Manitoba government's initiation of three trusts established through agreements between Manitoba, the Winnipeg Foundation and Manitoba Habitat Heritage Corporation: the Conservation, GROW and Wetlands GROW Trusts. Permanent endowment of $204 million in the trusts has secured a stable source of funding, supporting EG&S in Manitoba.

As the delivery agents for GROW, watershed districts have the capacity to develop and deliver projects that align with GROW priority outcomes and co-benefits. In addition, watershed districts develop locally relevant programming to ensure projects support actions identified in local watershed management plans and address watershed needs. Each district delivering GROW relies on a Local GROW Committee with representation from agricultural producers, watershed district members, technical experts and other partners.

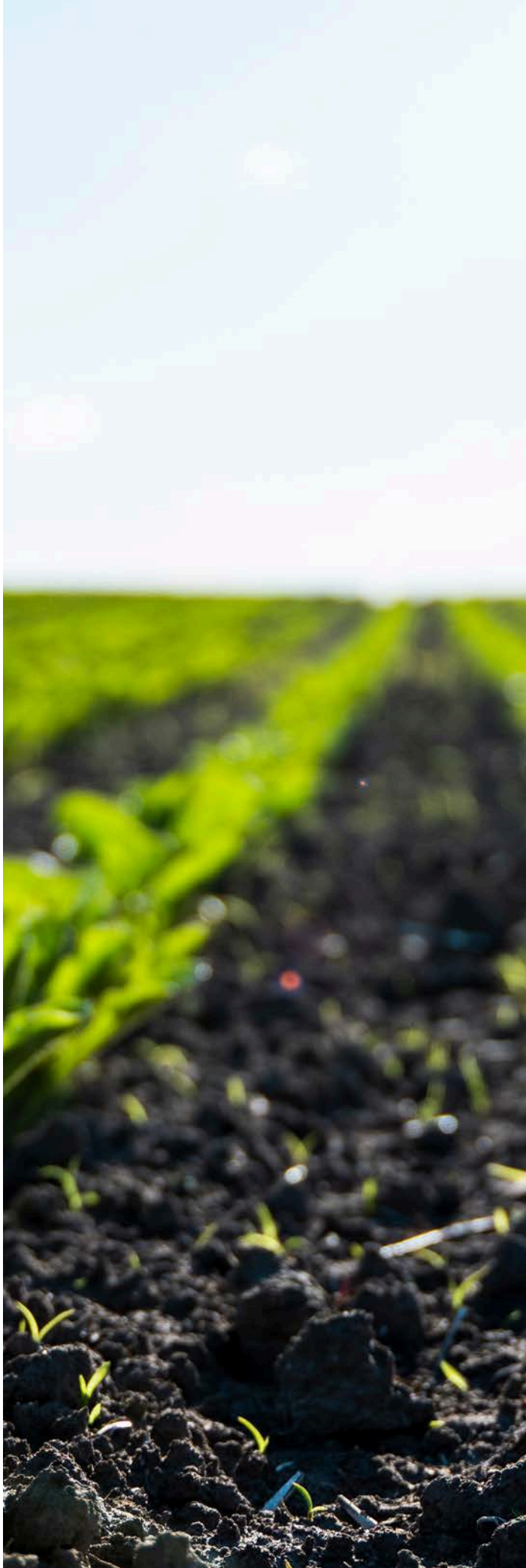


Photo: olodymyrshturmak/123RF

As the delivery agents for GROW, watershed districts have the capacity to develop and deliver projects that align with GROW priority outcomes and co-benefits.

Over the last two years, and in partnership with agricultural producers and landowners, watershed districts have achieved the following outcomes through local GROW programs:

- Water retention – Over 500 cubic decametres of water storage established
- Wetlands – Over 1,900 hectares of Class 1 and 2 wetlands conserved through 150 landowner agreements; over 95 hectares of wetlands enhanced
- Riparian areas – Over 415 hectares of riparian areas conserved through 35 landowner agreements; 28 kilometres (km) of riparian areas fenced to exclude over 8,000 cattle from waterways
- Buffers – Over 30 km of shelterbelts established
- Upland areas – Over 550 hectares of sensitive grassland or wooded areas conserved through 34 landowner agreements; over 10,000 hectares of soil health improvements (cover crops, forage establishment, etc.)

The Manitoba Watershed Districts Program is a cost-shared partnership between Manitoba and municipal governments that choose to participate in the program. In 2023–2024, Manitoba will provide over $7 million to watershed districts, matched by over $3.3 million from 113 municipal partners.

Watershed districts use these core operating grants to leverage millions (e.g., $6.7 million in 2021–2022) in additional funds from the trusts, federal and provincial granting programs and many other granting agencies. These funds support watershed district programs, including surface water management, nutrient reduction and water quality protection, natural area protection and enhancement, drinking water protection and watershed education and awareness. Local GROW programs offer a subset of these watershed district program activities for local landowners.

For more information and to view the Watershed Districts Program Annual Report, please visit www.manitobawatersheds.ca. ■

Funding provided by the Manitoba Government.

Back to Our Roots

Tree planting programs alive and strong in AWWD

By Assiniboine West Watershed District

It isn't considered all that innovative, but planting trees is an important cornerstone of the conservation efforts happening in Assiniboine West Watershed District (AWWD).

Be it in the form of educating youth about the benefits trees provide (including food), reducing electrical demand on farms and ranches, or adding to the biological diversity and ecological function of the watershed, trees are an investment that we recoup many times over and for many decades.

With the help of landowners, volunteers, families and school age students, AWWD helped plant about 55,000 trees across our watershed this past spring. Our field and farm shelterbelt program was robust this year, with 45 individual projects funded in part by the 2 Billion Trees (2BT) program through Alternative Land Use Services (ALUS). Other projects were funded by the 2BT program through the forestry and peatlands branch of the provincial government. We also got involved in a project funded by the recently resurrected MB Hydro's Forest Enhancement Program. Lastly, we sought funding from local community foundations to provide apple trees to youth in the district.

Several funding opportunities have returned, as mentioned above, which is great to see. We are also excited to explore new funding opportunities like agroforestry projects funded through the Resilient Agricultural Landscape Program (RALP). RALP even funds the cost of maintaining trees through our planting efforts, which is new.

The practice of combing trees in a planned manner into the ag landscape is scoffed at by some who are focused on short-term profit maximization, but those who have a longer, more holistic view understand that we benefit from working with nature and are more resilient with diverse and complex landscapes. ■

With the help of landowners, volunteers, families and school age students, AWWD helped plant about 55,000 trees across our watershed this past spring.

Photo: Ryan Canart

Photo: Sandy Hearman

Making **Strides**

CAWD uses Prairie Watersheds Climate Program to engage with new landowners

By Neil Zalluski

Getting farmers interested in conservation projects is not always an easy task.

So, when a program comes along that helps us engage with a wider pool of producers, it is a huge benefit to our district.

That's exactly what we found when delivering the Prairie Watersheds Climate Program (PWCP) this past year. Manitoba Association of Watersheds (MAW) successfully obtained federal funding under the On Farm Climate Action Fund to deliver PWCP through watershed districts in Manitoba (and through the Saskatchewan Association of Watersheds in Saskatchewan). In the Central Assiniboine Watershed District (CAWD), the program has generated a lot of interest from producers that we typically do not engage with. This helps more producers learn about and try out conservation practices on their land.

Nitrogen management and cover cropping funding initiatives offered through PWCP helped us to target new grain producers. These funding initiatives really opened the door to connect with grain producers in a meaningful way within CAWD, giving us the opportunity to build trust with new producers and allowing us to have conversations with them about their land management issues. Conversations about PWCP have often transitioned into talks about other programming the district offers, which is fantastic. All programming offered through CAWD is geared toward improving watershed health and building resilience towards climate change, so reaching more producers has an impact on our local environment.

The conversations we've had with producers about the PWCP program have also had a noticeable impact in our district. Several dams and erosion control projects are underway as a result, and we are optimistic that getting information out about CAWD programs will lead to future projects and partnerships as time goes on. In CAWD, grain producers are accumulating more and more land, so if we want to impact watershed health, we need to increase our work with those large landowners. PWCP is a great way to do that since it helps us to improve the watershed and makes a producer's daily life in farming easier. With a little conversation and planning, both are possible.

At CAWD, we are happy that MAW took the initiative to secure the PWCP grant, allowing all watershed districts to offer programming to a wider spectrum of producers. This will improve watershed health throughout the province and build the strength of the watershed district program within Manitoba. We are hopeful that if a second iteration of PWCP will be offered, we can work together to make the program even stronger and more accessible to producers within Manitoba. ■

Neil Zalluski is the manager of the Central Assiniboine Watershed District.

Central Assiniboine Watershed District

Full season cover crop

Saving our Farmland for the Next Generation

Educative collaboration between the EIWD and Understanding Ag

By Emma McGill

Humans have been learning to cultivate and care for land since the beginning of the first agricultural revolution about 11,000 years ago, and have continued to develop more efficient methods and technology for arable husbandry. The second agricultural revolution brought us things like mechanization, large-scale irrigation and the use of pesticides and herbicides.

Though these methods of farming put into practice on the Canadian Prairies have significantly assisted in the foundation that agriculture brings to our communities, they need to be revised. There is major concern rising across the country for the biodiversity of the land, and for the health and viability of the crops under current practices.

On May 4, Blain Hjertaas and Michael Thiele visited the South Interlake Rockwood Ag Society as a part of a regenerative agriculture workshop hosted by manager Armand Belanger of the East Interlake Watershed District (EIWD). Hjertaas and Thiele, about five years into their project, come from Understanding Ag, which is an organization of farmers and ranchers who work with clients who are willing to learn about and put a model of regenerative principles into place to create more sustainable and profitable farms. They work with services like Ducks Unlimited to promote conservation.

Hjertaas is a farmer of 49 years from Saskatchewan, 25 of which have been under the regenerative model, who does consulting work for Understanding Ag. Thiele is from the Dauphin area and has always been curious about agriculture, having completed a plant science degree at the University of Manitoba.

Concerningly, after about 20 years of cultivating land using past methods, organic matter in soil has dropped from 12 to two per cent. One-third of farmable land has been lost in the last 40 years.

"We are wrecking the resource that our livelihoods depend on," said Hjertaas.

Regenerative agriculture involves using the rules of nature and co-operating with them, and working these rules into our understanding and relationships with nature itself. The six regenerative principles are context (the only man-made principle), living root for as long as possible, diversity, armour on the surface, minimizing disturbance and animal incorporation. These are the principles that will allow farmers to accommodate nature and its economic processes: energy flow, the water cycle, the mineral cycle and biodiversity.

Photos: East Interlake Watershed District

During their presentation, Hjertaas and Thiele guided the audience through each principle, its history and its benefits. They also guided everyone through a few big things that can be done to create healthier soil; the ideal soil is not compact and concentrated, but a spacious balance between soil and carbon that allows for water to soak in and that has room for roots.

This can be tested using a water infiltration test. Understanding Ag also promotes the power of observing the soil directly, using the senses and watching how it changes from day to day. They are highly enthusiastic about these changes being picked up across the prairies.

"There's so much cool stuff being done here in Manitoba and Saskatchewan," said Thiele.

Not only do these methods produce healthier soil with more nutrients and allow for a more biodiverse environment involving large feeders and pollinators, but they also reduce the risk of both droughts and floods.

This is where the EIWD comes in. A watershed is an area of land that carries rainfall and melted snow down to creeks and rivers and eventually to larger bodies of water. The EIWD is all about protecting those areas of land and sustainably making use of aquatic resources. They also aim to protect wetlands, native grasslands, forests and riparian areas.

Currently, fields that are farmed using typical methods can often take about an hour to absorb one inch of rain, making those fields highly susceptible to floods during intense rainfall. Also, if the field is not soaking up and storing water, it will become dry quickly, causing a drought.

In contrast, a field that is farmed under regenerative agriculture's ideals would take about 10 to 30 seconds to soak up that one inch of rain. Now, the example being used is just one inch of rain, so let's look at things on a larger, more realistic scale: it is estimated that 25,000 gallons of water could be stored on just one acre of land when following these regenerative principles.

If you missed the collaborative workshop event between the EIWD and Understanding Ag, you can learn more about EIWD's funding for things like reforestation, prairie rehabilitation and regenerative agriculture practices on their website at eastinterlake.ca. ■

This article was first published in The Express Weekly News *and is reprinted with permission.*

IMWD ENHANCING HABITAT FOR DAUPHIN LAKE WALLEYE

Phase 1 and Phase 2 now complete

By Zabrina Nolin

The Inter-Mountain Watershed District (IMWD) has received funding from the Fish and Wildlife Enhancement Fund (FWEF) in back-to-back years to investigate the conditions and effectiveness of fish riffles constructed in Dauphin Lake tributaries during the 1990s. Fish riffles are rock structures designed to provide spawning habitat for walleye. Walleye require smooth, hard surfaces for their eggs to attach to, as opposed to being buried in a muddy stream bottom. Riffles also function to reduce stream erosion by slowing the flow of water in channels.

The first phase of the fish riffle project was finding the 127 riffle sites in the field and assessing each site's structural conditions. This phase was completed in fall 2022 and involved the use of aerial drones. On days when it was too windy to use the drones to capture imagery, IMWD's technicians hiked to the sites, often through wooded terrain, to take photos of and observe each site's condition.

The report of Phase 1 compiled for FWEF notes that most riffles had lost their shape over the decades, likely due to the several flooding events occurring in the Dauphin Lake watershed over that time. Phase 2 of the project would focus on one river, so the report was reviewed with the Intermountain Sport Fishing Enhancement (ISFE) group and a local biologist from Manitoba Fisheries, and a collaborative decision was made. The Vermillion River was chosen for Phase 2, having been the focal point of work completed by the ISFE in recent years, including a fish ladder through a low-level crossing near some of the fish riffles that had been identified in Phase 1.

The first phase of the fish riffle project was finding the 127 riffle sites in the field and assessing each site's structural conditions.

Photos: Inter-Mountain Watershed District

Phase 2 of IMWD's fish riffle project began in spring 2023 and focused on in-stream monitoring for water conditions and fish presence. Local professionals from ISFE and Manitoba Fisheries oversaw the data collected. Before the walleye spawning season began, these professionals assessed the water temperature and flow measurements near the fish ladder to identify when conditions suitable for spawning would begin.

Local fisheries professionals and IMWD staff watched the Vermillion River with bated breath for the walleye to enter. Towards the end of April, sightings of walleye in the river began and six riffles were selected to be monitored every day. Murky water conditions made it difficult to see the fish and Manitoba Fisheries discouraged the use of hoop nets to capture the spawning fish. Most walleye sightings happened at the fish ladder. Unfortunately, a large amount of predation by pelicans occurred downstream of the crossing as the walleye waited in large groups to muster the energy to pass over the ladder.

Despite the challenges the walleye faced this spring, with high flows during their spawning season and avian predators, eggs were found in the riffles closer to Dauphin Lake. IMWD staff found these eggs using handmade kick nets in sample sites on the selected riffles. There is hope that repairing these riffles will improve the success of walleye spawning for Dauphin Lake in the future. IMWD will be applying for FWEF again to continue onto Phase 3 of the fish riffle project, which will be to repair selected sites. ■

Zabrina Nolin is a resource technician at the Inter-Mountain Watershed District.

Expanding a District

New municipalities join NRWD in 2023

By Colin Gluting

The Northeast Red Watershed District (NRWD) is excited to be in the midst of a significant expansion process. The expansion of the NRWD was formally announced on April 17, 2023, in a provincial news release, confirming that the amendment to the Watershed Districts Regulation was registered on March 24, 2023. This amendment formalized the expansion of the NRWD to include the RMs of St. Clements, Lac du Bonnet and Reynolds, and expand the area in the RMs of Brokenhead, Ste. Anne, Taché and Springfield.

This will be a big change in geography and will impact the operations of the district. Prior to the expansion, the NRWD's total membership was made up of four sub-districts and a total of 16 members. Now NRWD will have seven sub-districts and 41 members. The additional sub-districts are Brokenhead River, Red River, Devils Creek and Catfish Creek-Gull Lake. It is an exciting opportunity to work with new people in new areas.

The newly expanded area will also allow the district more opportunity to partner with producers and landowners to deliver ecological goods and services to the watershed through the Growing Outcomes in Watersheds program. NRWD has entered several conservation contracts with landowners to provide water retention, wetland enhancement and riparian area management within its boundaries.

NRWD has also been working with the Manitoba Association of Watersheds to deliver the Prairie Watersheds Climate Program, helping producers with nitrogen management, cover cropping and rotational grazing. Although there was a slow uptake in the inaugural year, the NRWD was able to approve 19 applications. As word travels throughout the district, we expect the applications will continue to increase.

The NRWD will continue to manage waterway infrastructure as it has since its inception. However, the expanded areas will not include an infrastructure mandate. The district is currently responsible for 500 kilometres of waterways, 800 culvert crossings and 12 bridges. The district relies on local knowledge to prioritize infrastructure projects as there is no shortage of infrastructure requests. Sub-district meetings have led to the successful completion of several large infrastructure projects including drain reconstruction, drain cleanouts and large complex crossing upgrades. The district has been successful in partnering with its rural municipalities to work together on these projects, to provide a better service to the watershed and its residents. ■

Colin Gluting is the manager of the Northeast Red Watershed District.

The additional sub-districts are Brokenhead River, Red River, Devils Creek and Catfish Creek-Gull Lake. It is an exciting opportunity to work with new people in new areas.

Shared History

PVWD partners with Swan Lake First Nation

By Alma Thiessen

David Scott, an elder of the Swan Lake First Nation, has been a tremendous influence in the Pembina Valley Watershed District (PVWD) and is a strong local advocate for watershed health. Scott has also been instrumental in getting people to work together with the common, mutually beneficial purpose of protecting the health of the watershed.

The PVWD is proud to be in partnership with the Swan Lake First Nation. Through our partnership, we held a presentation led by Scott to educate participants about Swan Lake First Nation's history and culture on March 28, 2023. Three watershed districts and other watershed partners were in attendance. Funding for this workshop, as well as two blanket exercises held in the evenings of March 28 and 30, was provided through the Lake Winnipeg Basin Program.

Facilitators Denise Unrau Thiessen and Courtney Yeo-Thiessen took participants through the blanket exercises held in Manitou and Morden.

The blanket exercise is an interactive and experiential teaching tool that explores the historic and contemporary relationship between Indigenous and non-Indigenous Peoples in Canada. The blanket exercise uses Indigenous methodologies, and the goal is to build understanding about our shared history as Indigenous and non-Indigenous Peoples. The exercise walks through pre-contact, treaty making, colonization and resistance.

"The goal for us as facilitators is to create an environment where people can ask the tough questions, share their feelings amongst each other and work together to make a change in our communities," said Unrau Thiessen. "It's about reconciliation and having the opportunities to learn together.

The blanket exercise uses Indigenous methodologies, and the goal is to build understanding about our shared history as Indigenous and non-Indigenous Peoples.

Turtle representing Turtle Island

"With regards to the blanket exercise, and PVWD providing this opportunity to work alongside David Scott, it was an absolute honour. It was amazing to see all the questions that came out, how people are wanting to make a difference and to be able to be a part of that is a wonderfully overwhelming experience. Each exercise is always a new experience, and being able to share that with others is exactly what reconciliation is about."

PVWD board member Grant Matchullis said, "I was not sure what to expect, but went with an open mind. There were two facilitators trained to give this presentation. The participants were asked to select an artifact or two, and assigned a number.

"We were asked to enter a circle completely covered in blankets. As historic events unfolded from pre-contact to treaty making – and the subsequent disregard of many of those treaties – to government policies implemented to the detriment of Indigenous Peoples, blankets representing these events and the people

David Scott presentation

Blanket exercise held in Manitou

standing on them were removed from the circle. Near the end of the exercise, I was one of the few people standing, but the size of my blanket was reduced a couple of times – a sobering representation of historical facts.

"This was an emotional and thought-provoking experience for all the participants. I thought I knew a fair bit about Canadian history and treaties, but I had a lot to think about after this exercise. We had the benefit of a Q and A with an elder from Swan Lake. It was a lively and interesting discussion, and people stayed behind for a quite a while. If you have an opportunity to participate in a blanket exercise, I encourage you to do so." ■

Alma Thiessen is the assistant administrator at the Pembina Valley Watershed District.

Blankets used to represent Turtle Island

Photos: Pembina Valley Watershed District

RBWD Does it Again!

Positive partnerships in action

By Rob Nichol

On Gordon Turner's farm northeast of Treherne in spring 2022, a frozen culvert caused the meltwater to back up, overflow an RM road and divert north across Turner's field. The sandy soil was stripped away by the deluge, leaving a gorge 12 metres wide, four metres deep and 120 metres long. Over the course of two days, thousands of cubic metres of sand and topsoil washed away, leaving an ever-growing chasm in its wake.

Turner's farm was one of many farms hit with the late spring snowstorm followed closely by a heavy rain. Blocked culverts, snow-filled spillways and widespread flooding and erosion issues affected most of southern Manitoba.

Gordon approached Redboine Watershed District (RBWD) for assistance with repairs and for advice on how to proceed. It was apparent that replacing the lost material would be prohibitively expensive and there would be the potential for a similar scenario in the future to undo that work.

With the approval of Disaster Financial Assistance (DFA), the landowner and his renter, RBWD proposed reshaping the new drain to stabilize the slopes to prevent further erosion. The plan was to take the affected area out of cultivated production and plant it to a forage mix, providing some added stability once the plants were established. A significant area around the erosion site would also be turned to forage to act as a buffer, intercepting sediment and nutrients in any runoff. Harvesting the forage grass in the fall would help reduce the amount of nutrients entering the Boyne River. In the meanwhile, an erosion control blanket would help hold the light soil in place while the forage mix grew.

July proved how fragile the soil in this area can be when a heavy summer rain significantly increased the size of the gully. The width of the erosion cut into the nearby seeded canola field and the length of the cut grew by nearly 30 metres. Although the summer rain was heavy and fast, it was the vulnerable shape of the site – steep sides and head cuts – that allowed for so much further erosion.

Taking into consideration the possibility of a repeated spring melt, RBWD also began looking into two future projects upstream of the site: one along the RM road to help control the peak volume entering Turner's property and another to the west to divert peak flows to another existing drain. In addition, three rock check dams helped mitigate any future erosion that may occur.

RBWD was able to complete the project with the help of DFA and the landowner. We will continue to monitor the site, evaluating the success of the designed solution to see how well it holds up to future run-off events.

Projects such as this show what can be accomplished with strong partnerships between landowners and watershed districts. ■

Rob Nichol is a technician at the Redboine Watershed District.

Photos: Rob Nichol

Growing Roots

Supporting regenerative agriculture in SRRWD

By Virginia Janzen

How do watershed districts support regenerative cropping systems in Manitoba?

It's a no-brainer: provide funding for regenerative practices.

Funding mitigates risk for producers as they explore how these practices fit into their individual farming systems. It allows them to take chances they wouldn't otherwise be able to take.

Across the province, Manitoba's watershed districts are instrumental in the organization and distribution of funding for regenerative practices, including cover crops and rotational grazing. However, additional types of support are needed for the continued use of regenerative agricultural practices in Manitoba.

In 2022, Seine Rat Roseau Watershed District (SRRWD) was given the opportunity to host a pilot program to provide financial support as well as peer-to-peer support for producers. Growing Roots is a regenerative agriculture pilot program funded by ALUS with support from General Mills. The objective of Growing Roots is to invite producers from the watershed district to implement projects on their farms that follow regenerative principles. Principles include minimizing soil disturbance, maximizing plant diversity, keeping the soil covered, keeping living roots in the ground for as long as possible and integrating livestock on cropland, with the understanding that methods used will differ from farm to farm. SRRWD is hosting two cohorts in this program. The first round of producers signed on from 2022–2024 and a second round from 2023–2025.

In addition to providing funding on a per-acre basis, the four main goals of Growing Roots will create a framework of support for producers to implement regenerative agriculture practices. SRRWD is working with producers to meet these four goals.

The first goal is information transfer and sharing. Through the ALUS model, producers in Growing Roots have access to guidance from multiple sources, including a local farmer coach, an advisory committee comprised of local farmers and other members of the community, Growing Roots program staff and a national technical advisory committee. Expertise from varying backgrounds offers a wide view of regenerative practices to guide producers in Growing Roots.

The second goal is implementation of projects rooted in regenerative principles. Growing Roots supports a variety of regenerative projects throughout SRRWD. These include livestock producers using cover crops to supplement their grazing land and grain producers using cover crops to cover soil after harvest or as an intercrop. The beauty of the Growing Roots program is the flexibility given to participants for project design and implementation. Regenerative practices can look very different from farm to farm and initial plans can change as the growing season progresses.

Thirdly, the Growing Roots program will support development of program resources and guidance. At the start of the pilot, SRRWD quickly recognized the absence of local resources on cover crops. The district partnered with the University of Manitoba to create a Cover Crops 101 resource document to address this need. SRRWD will continue to look for opportunities to work with partners to ensure that up-to-date information and support for regenerative agriculture practices is available to producers in our watershed district.

The final goal, building informed and supportive communities, is at the core of the SRRWD mission. On-farm field days, workshops and soil health meetings hosted by SRRWD have provided occasions for producers in Growing Roots to meet and network. Neighbours often share aspects of their farming operations including location, environmental conditions and farming system. Practical insights shared and discussed among local producers are invaluable to the continuation of regenerative agriculture in Manitoba.

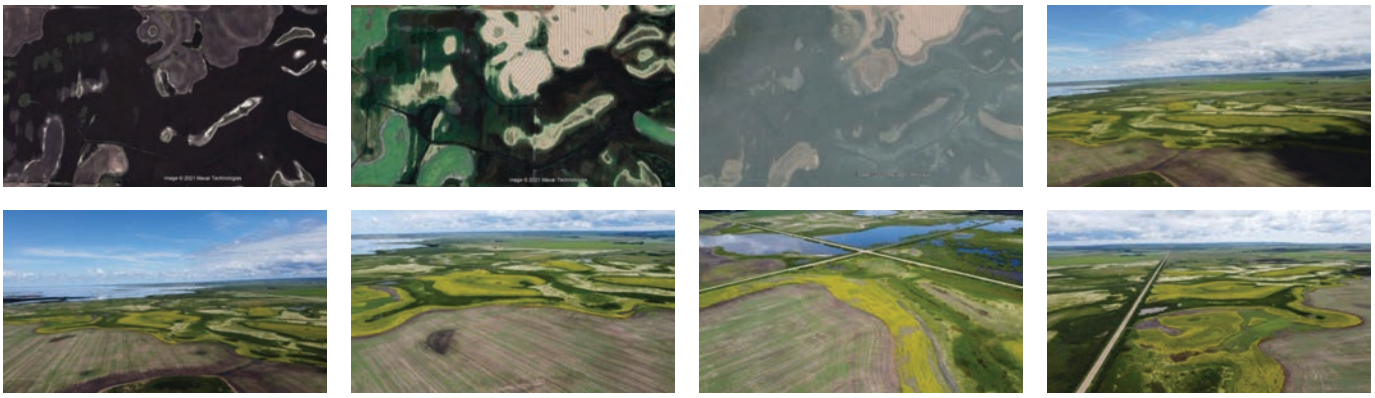
SRRWD looks forward to spending the growing season (and shoulder season!) with our Growing Roots participants to observe, discuss and take pictures of regenerative practices in action in southeast Manitoba. ■

Virgina Janzen is the regenerative ag program coordinator at the Seine Rat Roseau Watershed District.

Growing Roots producers at Regenerative Ag Day

On-farm knowledge sharing in a full season cover crop

Photos: Seine Rat Roseau Watershed District



INNOVATIVE APPROACH

SRWD works with producers to restore and enhance land around Whitewater Lake

By Breanna Sheppard

Whitewater Lake is located between Deloraine and Boissevain in southwest Manitoba in the Souris River Watershed District (SRWD). As a terminal basin with no natural outlet, the lake is heavily influenced by precipitation and experiences fluctuating levels due to droughts and floods.

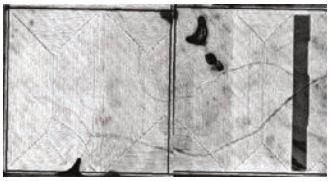
Surface water from the elevated Turtle Mountains flows into surrounding low-lying agricultural land and pasturelands and several smaller streams, which then flow into the lake. This causes constant cycles of flooding, drought and evaporation that results in high salinity levels in the lake and surrounding soil.

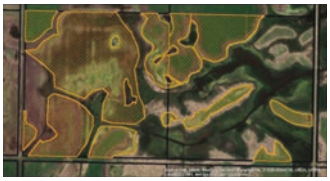
In 2021, a producer near Whitewater Lake approached the SRWD about the proposed funding available through its new GROW program. This program offered incentive payments and cost-sharing for seed to establish permanent cover around the lake. The producer faced challenges with soil salinity from frequent inundation, making it difficult to establish any vegetation.

SRWD consulted a local seed dealer who recommended using biennial yellow sweet clover mixed with a saline grass mix. Sweet clover's taproot system can penetrate up to two metres into compacted soils, and it exhibits high salt tolerance and competitiveness.

In 2021, a producer near Whitewater Lake approached the SRWD about the proposed funding available through its new GROW program.

In June 2022, the 140-acre project was seeded, successfully establishing most of the sweet clover by May 2023. A






new producer took over the land in 2023, maintaining a conservation-focused approach while seeking long-term solutions for rejuvenation and growth. The new producer wants vegetation to have a purpose not only for farming reasons, but for conservation too.

"When we purchased this land, we were looking to be part of a long-term solution on the acres in this project," said Brittany Williams, who took over the project from Barry Janssens in 2023. "Our interest in consistent ground cover, reduction of weeds and restoring and enhancing a more resilient parcel of land aligned with the GROW program. It has been great working with the [watershed] district on this project so far. It has inspired us to take some personal action on several other acres on our farm that need the same attention this area does."

This producer's overall goal is to see consistent ground cover, reduction of weeds and restoration and enhancement to create a more resilient parcel of land. If this project is successful, hopefully this land management practice can be applied in other areas around the lake, and even elsewhere throughout the district.

The ongoing plan for this project involves reseeding unsuccessful areas with yellow sweet clover and seeding successful areas with saline alfalfa at a high rate, mixed with a lower rate of sweet clover. This aims to ensure longevity and establishment of permanent perennial cover.

While this is not a complete solution for Whitewater Lake's issues, the project represents progress being made. SRWD will continue hosting informational sessions and workshops to share program updates and lessons learned with producers affected by Whitewater Lake's impacts. By working together to adapt to changes and manage land appropriately, the community can work on improving conditions over time. ■

Breanna Sheppard is the GROW coordinator at the Souris River Watershed District.

Environmental Education

SLWD connects students to nature

By Edward Shao

Educating youth on watershed health is an important part of programming at Swan Lake Watershed District (SLWD). We aim to target students in Grade 5, including blended grades for eight different schools in the Swan River Valley.

To support our educational goals, SLWD partners with the Swan Valley School Division, environmental organizations, local volunteers, the local fire department and others to create awareness of conservation practices and environmental safety. With the use of interactive games, we can connect back to the students' school curriculum.

One of our favourite ways to connect with youth in the district is through our annual Water Festival. After a three-year hiatus, the SLWD was able to host the sixth annual festival once again this year. There were 208 students who attended our event, learning about environmental stewardship through fun activities. We also had more than 40 volunteers who ran stations and served lunch. We appreciate everyone who volunteered their time and attended the festival.

The Water Festival was held over one day at the Duck Mountain Forest Centre, where students rotated through 14 different stations and participated in different hands-on learning activities. Each station incorporated an environmental topic, using interactive games to quiz the students or to teach them something about the natural world.

One interactive gamed called "trash in my tummy" teaches students about littering and how animals sometimes eat food litter that may not be edible to them. Another station, the stream table, is a beloved station. It showcases the effects of erosion within the Swan Valley and highlights some of the programming that the SLWD has in place to combat water erosion.

New this year, we invited Birch River fire chief Dave Forbes to teach the students about fire safety, and what or what not to do in the wilderness. Educating the students on how to be prepared and protect themselves from wildfires is very important as climate change impacts us more and more. In SLWD, one year can be very wet and the next can be very dry, so helping students understand that is crucial.

One of the main goals of the Water Festival is to show students how water is connected to everything and that by protecting it we can help protect the watershed. We want youth in the SLWD to grow up having an excellent understanding of the world they live in and how they can create positive changes for our environment.

SLWD would like to thank our sponsors: Qwik Stop, Tim Hortons, Swan Valley Co-op, Extra Foods and Swan Valley Credit Union. Without these community-minded local businesses helping us out, we couldn't have made the Water Festival happen. We look forward to continuing connecting students to nature and share our knowledge of the watershed that we all live in through our annual Water Festival! ■

Edward Shao is the manager of the Swan Lake Watershed District.

Better Profits for Cattle Producers

Rotational grazing program uptake in WIWD

By West Interlake Watershed District

As many know, the cattle industry is not as profitable as it used to be. More and more producers are slowly getting out of the cattle industry and into the crop production industry, leading to once forested areas being knocked down for annual crop production.

Located on the east side of Lake Manitoba, the West Interlake Watershed District (WIWD) is home to an abundant amount of wildlife that live in the many natural wetlands and forested areas throughout the district. Although the risk of losing these natural areas to crop production is increasing, there is new funding available for cattle producers to implement and try new practices to make their operations more profitable.

The Prairie Watersheds Climate Program (PWCP) offers a funding incentive to encourage producers to implement beneficial management practices (BMPs) on their farms, such as cover cropping, rotational grazing and nitrogen management. One of the most popular BMPs in WIWD has been rotational grazing. Through PWCP, producers can receive repayment up to 85 per cent of their material and labour costs for installing cross-fencing infrastructure as part of a rotational grazing plan.

Keeping current pastureland as native and tame pasture is important for the health of our watershed. A pasture can operate with minimal disturbance to forested areas and wetlands. However, with cropland, it is more profitable to clear and drain the entire field. Rotational grazing offers a great solution by providing economic and environmental benefits to the farmer. This practice also benefits the watershed by reducing greenhouse gas emissions, providing wildlife habitat and a host of other benefits.

PWCP has also brought a lot of new producers into our office at WIWD. When a producer comes in to learn more about PWCP, we give them the entire spiel on all our programming! When they find out about other programming we offer, they often sign up for several other programs. They also leave the office with a greater understanding of the watershed district program.

With so many new producers applying for programming, both our PWCP and Growing Outcomes in Watersheds (GROW) funds that were allocated to rotational grazing projects were fully allocated to producers by the first week of June this year.

Not only has PWCP allowed various producers to implement many BMPs throughout our district, but the program also gives WIWD an opportunity to educate producers on the importance of implementing BMPs.

Many producers would not have been able to implement new practices on their operations without the help of financial funding through WIWD. However, as they start seeing benefits first-hand, they are more likely to carry out these practices well into the future. PWCP has allowed us to connect with many new producers and to build new relationships with producers that will continue for years to come. ■

Keeping current pastureland as native and tame pasture is important for the health of our watershed.

Photos: West Interlake Watershed District

WWD OVERCOMING CHALLENGES TOGETHER

Returning to full staffing capacity and benefitting the community

By Chance Bourassa and Beth Rudkewich

Over the past year, the Westlake Watershed District (WWD) had been faced with one of the biggest challenges in today's economy – staff shortages. Capacity issues limited what could be accomplished and those challenges were compounded by the flooding we experienced throughout the spring and fall in 2022.

With a long list of projects on the go, any progress seems to be monumental, so the co-operation of landowners and RMs that fall within our district is especially appreciated. We are also lucky to have a large board that spans our district and assists our team. They help ensure projects continue to move forward and that progress is made.

Despite this year's setbacks and slow progress, we are still proposing new projects and taking on new challenges. As we move into another year, we are excited and eager to have new employees joining our team.

For the first time, Westlake has a conservation program (GROW/PWCP) coordinator, Tatiana Sarigumba. She will be able to revive the conservation efforts in our district and provide more support and education for our landowners.

Sarigumba already has a busy schedule filled with webinars and meetings. She is learning more about the GROW and PWCP programs and looks forward to advertising available funding throughout our district. She also hopes to host several landowner workshops in our district to spread awareness and get to know, as well as educate, landowners.

We also recently hired a new financial administrator, Sandra. Sandra worked for our district 18 years ago and is now back! Now that we are working with a full team, work will get back to usual as we get projects done.

Being an infrastructure district, a lot of our time and resources are put towards infrastructure projects, such as drain and crossing maintenance. We have plenty of projects planned and hope to get as many of them done this year as possible throughout the district.

We are also pleased to be part of the town of Alonsa's homecoming. Our office is in Alonsa, and we celebrated the town's 100th anniversary in 2023 with a float in the parade! Our Green Team summer students completed projects to help spruce up our office and public park in town in preparation for the homecoming.

You may have also seen our summer students sanding and staining our community garden beds (pictured above). They have recently been reinforced with new materials and are available for seniors in Alonsa to use.

We are hopeful that with our new staff and the ongoing support of our board and the community, we will have a great year! ■

Chance Bourassa is a summer labourer and Beth Rudkewich is a technician at the Westlake Watershed District.

Photo: Westlake Watershed District

In 2023, 273 apple trees and 150 spruce seedlings were distributed to the Grade 5 students and their split class classmates.

Johnny Appleseed Program

WWD invests in the next generation of land stewards

By Whitemud Watershed District

Trees provide a host of benefits to communities and to the environment. They reduce erosion, promote water retention, provide habitat and promote biodiversity, to name a few. Planting trees helps make our communities more resilient. For young people in the Whitemud Watershed District (WWD), tree planting also provides a great connection to conservation.

Eleven schools and 18 colonies participated in the WWD Johnny Appleseed program this spring. One component of this conservation education program is a tree giveaway. WWD staff visit the elementary schools in the district to provide a free edible apple tree to each of the school's Grade 5 students.

This year marks the 29th year the Whitemud board has provided apple trees to students in the district. In 2023, WWD distributed 273 apple trees and 150 spruce seedlings to the Grade 5 students and their split class classmates.

This popular program provides a living example of conservation for the students. WWD staff visit the classroom and present a lesson on the importance of trees and proper care and handling. There is also a presentation on all the other programs that WWD has to offer. This is a great way to interact with the youth in the area and to increase their interest in and understanding of district activities.

In addition to the Johnny Appleseed program, WWD also takes part in Scout plantings with our local Scout groups. When there are trees and sites available, WWD staff will work alongside the Scouts and handplant trees on select sites. We teach the Scouts proper planting techniques and the importance of trees and teamwork.

The Johnny Appleseed program has become one of the most popular youth education programs offered by the WWD. In addition to the tree giveaway, the program also includes school plantings, field trips, youth speaking and funds visits to Oak Hammock Marsh. The board invests in youth education to encourage conservation for the next generation of land stewards. ■

Photos: Whitemud Watershed District

The Conservation and GROW Trusts, established through Manitoba's Climate and Green Plan, have invested

$38.6M

with Manitoba–based groups to support land, water and wildlife conservation projects.

To learn more about the Trusts and how to apply, please visit **mbhabitat.ca**

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