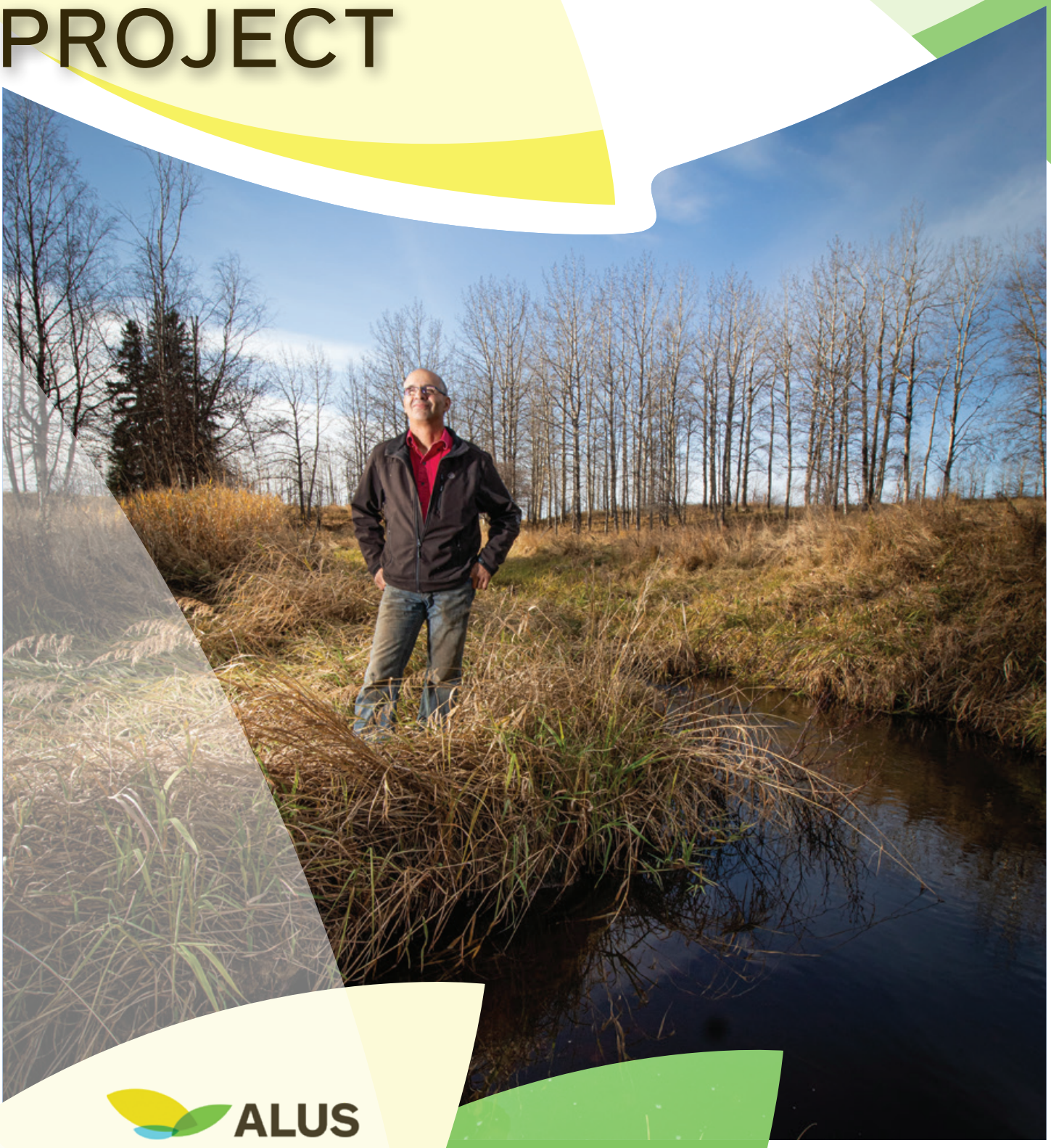
THE MODESTE NATURAL INFRASTRUCTURE PROJECT



ALUS

The Modeste Natural Infrastructure Project

The Modeste Natural Infrastructure Project assessed the environmental and financial benefits of conserving and enhancing natural infrastructure on agricultural lands in the Modeste Creek watershed in Alberta, Canada.

Experts from the University of Guelph, InnoTech Alberta, and ALUS worked with local communities to understand how restoring natural infrastructure will improve water quality and reduce the impact of flood and drought.

Using modelling, they evaluated scenarios where natural infrastructure is restored, enhanced, and conserved to meet the needs of local and downstream communities.

A cost-benefit analysis comparing different combinations of natural infrastructure has helped create a knowledge base and value proposition for natural infrastructure investment from the public and private sector.

The Modeste Natural Infrastructure Project contributed to the creation of green infrastructure. Through the ALUS program, over 1,116 hectares of agricultural land have been restored or enhanced in the Modeste watershed.

Project Partners

ALUS

University of Guelph

NSWA North Saskatchewan Watershed Alliance

InnoTech Alberta — A subsidiary of Alberta Innovates

EPCOR

La Fondation McConnell Foundation

The City of Edmonton

parkland county

Welcome Home Brazeau County

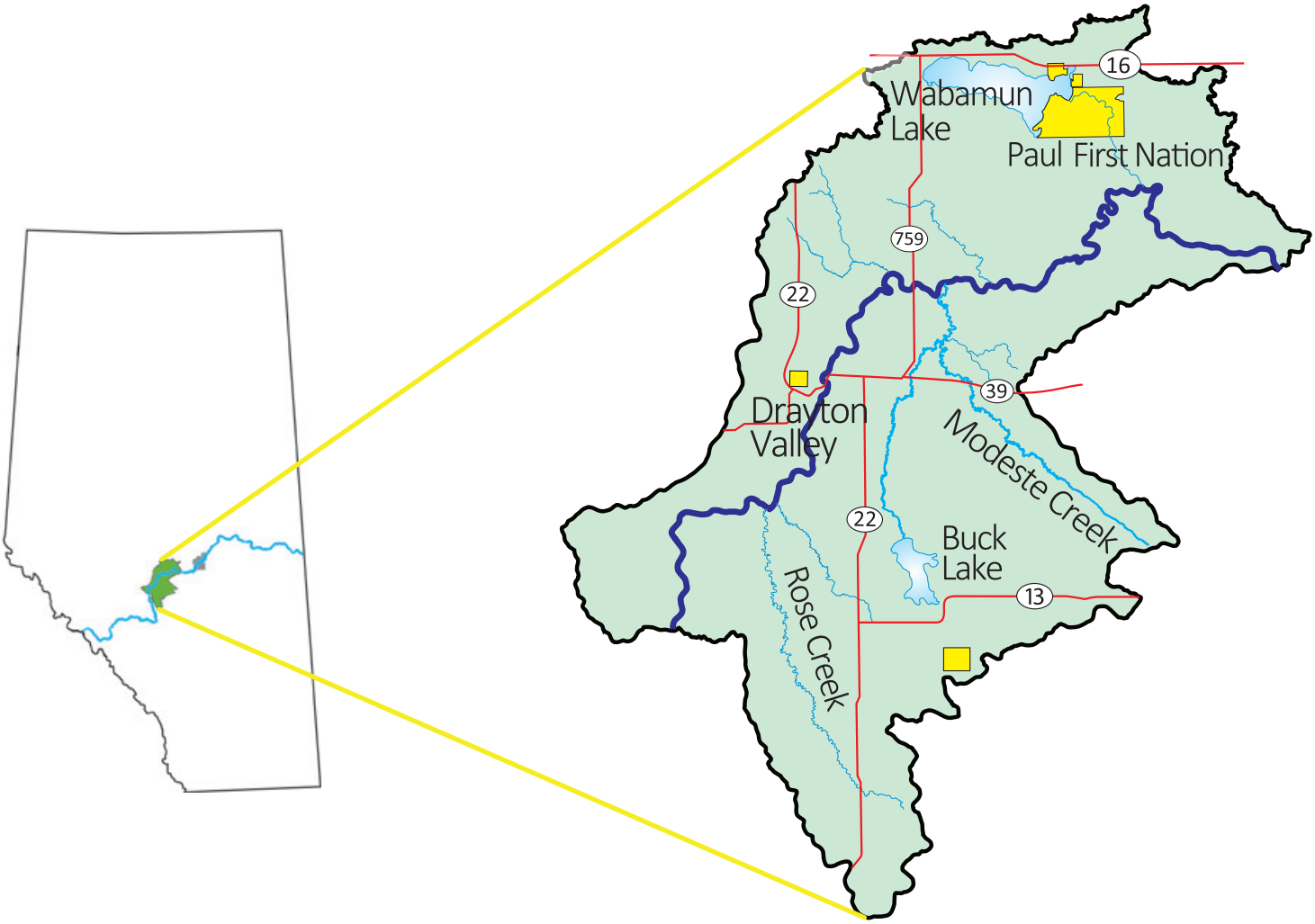
Leduc County

The primary funder of the project is Alberta Environment and Parks' Watershed Resiliency and Restoration Program (WRRP). This project is funded in part through Natural Resources Canada's Climate Change Adaptation Program. Additional funding is supplied by the City of Edmonton, EPCOR, and the McConnell Foundation.

Natural Resources Canada | Ressources naturelles Canada

Alberta

About the Modeste Watershed



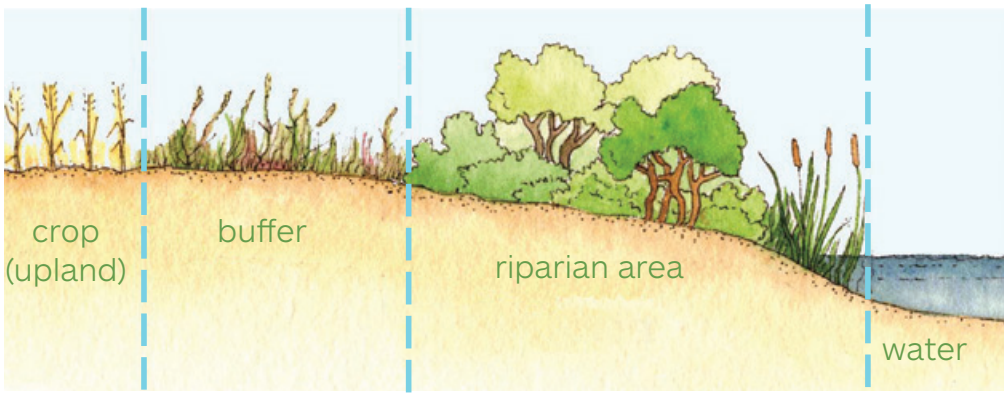
The Modeste watershed is a sub-basin of the North Saskatchewan River basin, and is located upstream of Alberta's Capital Region. This 4,827 km² area is part of the Boreal Forest (Dry and Central Mixedwood) and Lower Foothills Natural Regions.

The Government of Alberta has identified the Modeste watershed as a priority for flood and drought mitigation, as well as an important area affecting water quality in the province.

The Modeste was chosen for this project because of the support provided by the North Saskatchewan Watershed Alliance's Headwaters Alliance—a water-focused intermunicipal collaboration group established in 2014. Each of the five counties in the Alliance has a program to engage farmers and ranchers in the enhancement and protection of natural infrastructure: Parkland, Brazeau, Leduc and Wetaskiwin Counties administer the ALUS program, while Clearwater County administers the LandCare Program.

What is a riparian area?

Riparian areas are the productive zones of water-loving plants and saturated soils found between the upland and adjacent waterbody

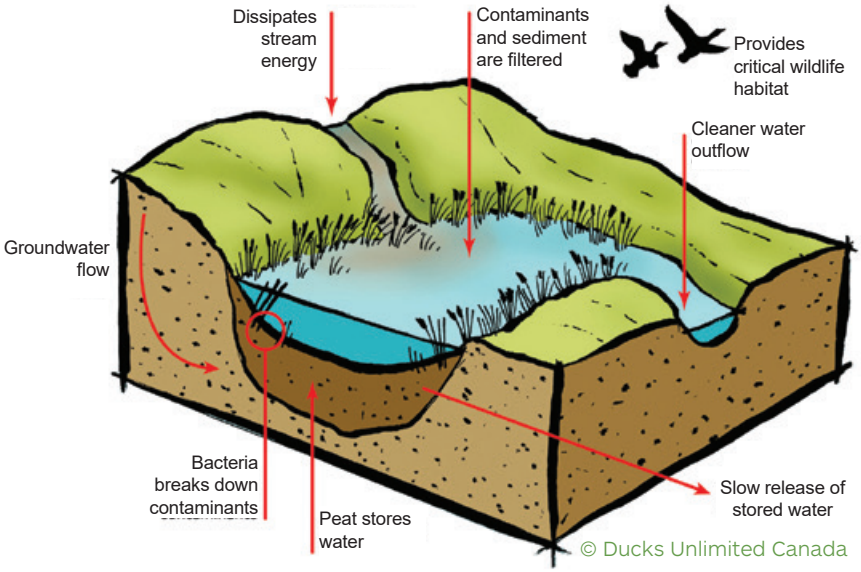


Graphic: ©Cow and Fish www.cowsandfish.org

What is a wetland?

Whether you call it a slough, marsh, swamp or pond, these "wetlands" collectively make up about 20% of Alberta's surface area. Both wetlands and their surrounding riparian areas provide a multitude of benefits to humans and the environment. Prairie wetlands may have permanent standing water, or they may have short periods of standing water seasonally or in wetter years and are often referred to as "prairie potholes."

Wetlands serve as both a natural filter and a sponge, which is important as they can store water in times of floods and slowly release it in times of drought.



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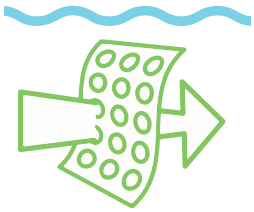
Natural infrastructure & its benefits

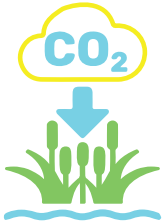
Also called "green infrastructure", natural infrastructure consists of landscape features — such as wetlands, riparian buffers, and forests — that improve water quality and lower the risk of flooding and drought. Researchers are now quantifying and recognizing their financial benefits to society.

Mitigates floods and droughts by storing and slowing the release of water and reducing erosion

Extends life of built or "grey" infrastructure such as floodways, culverts, bridges, and water treatment plants

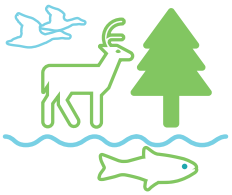


Retains and filters water after flooding, which replenishes groundwater and cleans drinking water



Sequesters carbon into wetland and riparian areas

Co-benefits of natural infrastructure



Improves biodiversity by providing fish and wildlife habitat

Provides aesthetically pleasing areas for recreation or cultural activities

Adds economic value by increasing property values or providing areas for nature viewing

Project activity examples

Grass buffers are areas of seeded permanent cover (native or tame, forage, and hay species, etc.) planted between agricultural crop margins and an adjacent riparian zone. Grass buffers help trap and filter excess sediment and nutrients, as well as slow water runoff.

Riparian Fences are used to keep livestock away from waterbodies, to protect both water quality and the surrounding riparian area condition. Managing livestock access in riparian areas prevents soil compaction as more sponge-like soil helps filter and store water. Riparian fences can also be used to create riparian pastures, as part of a strategically managed grazing plan.

Wetland restoration repairs the natural function of a once-drained wetland. From earthern ditch plugs to engineered structures, restored wetlands provide wildlife habitat, water storage during times of drought, and have a sponge-effect in wetter seasons to mitigate overland-flooding.

Off-stream watering systems pump water from a waterbody to a trough some distance away. This allows livestock to consume water without contaminating it and also reduces physical impacts on sensitive riparian and aquatic ecosystems. Livestock using these systems gain weight more quickly than drinking directly from the source, benefitting both the ecosystem and livestock operations.

Revegetation includes seeding bare patches along waterbodies with grass seed or planting site-appropriate tree seedlings. This prevents soil erosion, as deep-binding root systems build and reinforce stream banks. Riparian trees shade the water (which regulates water temperature) and provide habitat for birds and wildlife.

Pasture pipeline involves burying shallow pipelines to get water to livestock. It benefits farmers who use rotational grazing and need to provide water to several points which may not be close to a natural water source. Keeping livestock out of the water and riparian areas keeps waterways cleaner and lessens impacts on riparian plants. More evenly distributed rotational grazing also reduces impacts to soil and minimizes plant overgrazing.

LANDOWNER PROJECTS IN
THE MODESTE WATERSHED

Buffering the banks of Washout Creek

PROJECT ACTIVITIES: Riparian fencing Off-stream Watering

Above: Brian and Joann Bohning stand in front of their newly fenced portion of Washout Creek as their cattle drink from their new offstream waterer. Photo credit: Sarah Caissie Photography.

As the first landowners to launch an ALUS project within the Modeste watershed, the Bohnings were eager to do their part. Because they live in an area that often floods, they were happy to collaborate with ALUS to protect riparian areas along the aptly named Washout Creek. Riparian fencing and an offstream waterer were a win-win solution, as cattle drinking clean water have better weight gains, while also benefitting downstream users.

Now that livestock are out of the riparian area, trees are regrowing along the Washout Creek shoreline. Their deep roots will store and capture water during flooding, while also providing stability to the creek's banks.

Sustaining water quality for Buck Lake Creek

PROJECT ACTIVITIES: Riparian fencing

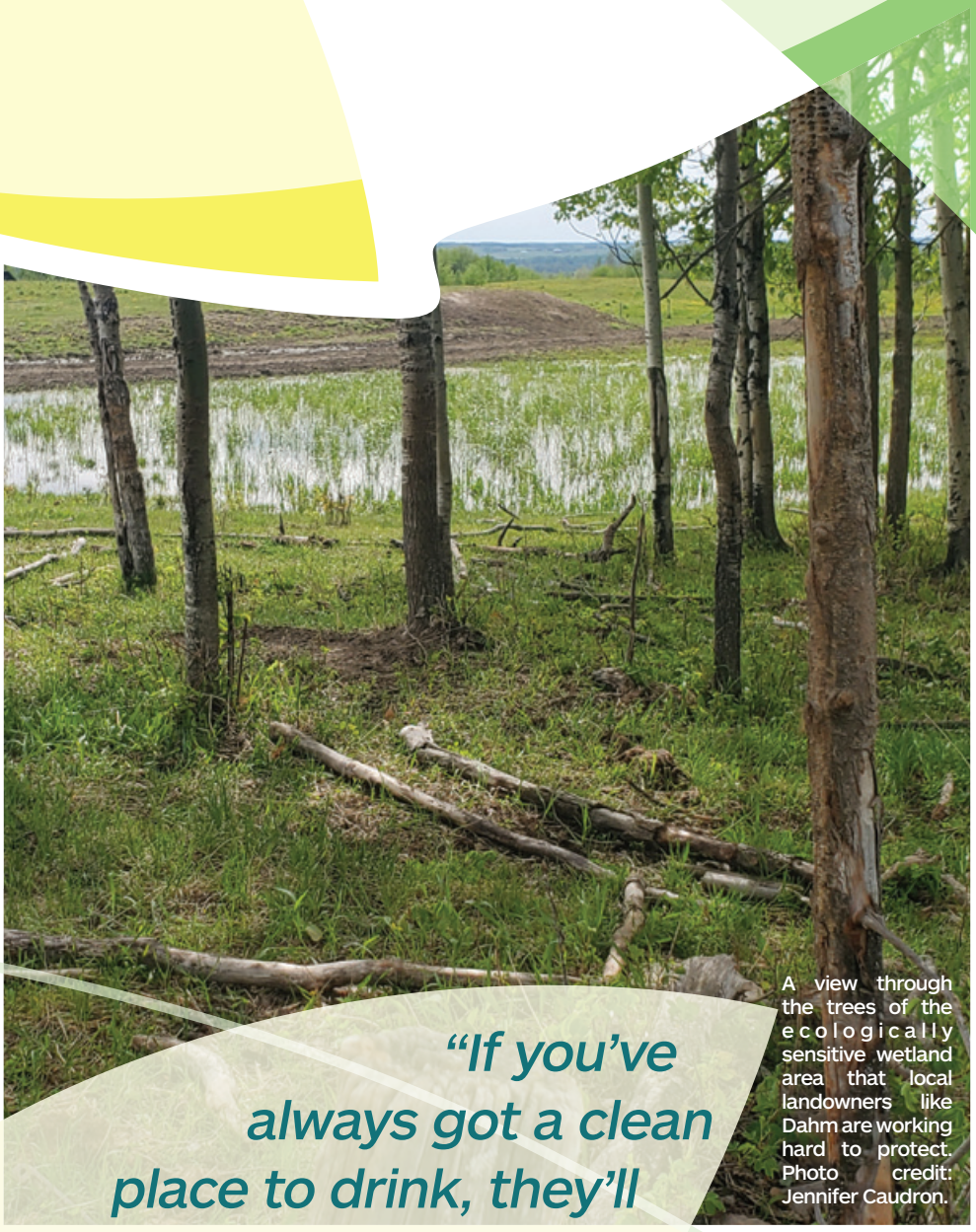
Henry Hughes standing next to the riparian areas that flanks one of several creeks on his property.
Photo credit: Keith Ahlstrom

Henry Hughes and his family run a mixed beef and grain operation in Brazeau County. Small creeks and streams flow throughout their quarter sections, so Hughes partnered with ALUS to protect these watercourses which flow into Buck Lake Creek. The Hughes farm installed cattle-exclusion fencing along the creeks to create 78 acres of riparian buffer zones. The fencing has reduced the amount of riparian compaction and decreased bank sloughing and erosion. Keeping cattle out of the creeks regulates their movement and has created some smaller pastures for controlled grazing. Exclusion fencing means cleaner water for livestock and for downstream users and allows native vegetation —such as willow and poplar saplings — to regrow. The new growth also provides wildlife habitat and the creek's cleaner waters will benefit the various fish that swim through the Hughes' property.

Piped water promotes peregrine falcon habitat

PROJECT ACTIVITIES: Pasture Pipeline

Joe and Sandra Dahm were looking for a way to benefit their cattle operation and the local watershed. Their property sits within an Environmentally Significant Area called the Burtonsville Island Reach. Large, undisturbed patches of natural vegetation along the North Saskatchewan River provide corridors for wildlife movement and peregrine falcon nesting sites. Because erosion control and maintaining riparian buffer zones are keys to conserving this sensitive area, pasture pipeline seemed like a good solution for this farm. Dahms worked with ALUS and Pasture Pipeline to install more than five miles of pasture pipelines over three years, which will provide reliable, clean drinking water for cattle across 2,000 acres. Keeping livestock out of the wetlands will increase cow/calf weight gains and prevent previous issues such as e-coli and hoof rot, while also allowing this vital wetland ecosystem to flourish.



A view through the trees of the ecologically sensitive wetland area that local landowners like Dahm are working hard to protect. Photo credit: Jennifer Caudron.

"If you've always got a clean place to drink, they'll [cattle] come in a few at a time and you don't actually need that much flow to water a pretty good sized herd of cows." ~ Barry Irving, Co-owner of Pasture Pipeline, speaking about this farm

Restoring ravines along Horseshoe Creek

PROJECT ACTIVITIES: Riparian fencing Off-stream Watering

A view of the steep banks of Horseshoe Creek where pipeline now carries water to livestock. Photo credit: Kim Barkwell.

These landowners wanted to protect picturesque Horseshoe Creek, which meanders through a ravine on their property. From the gates of their hay, pasture, and bison farm south of Alder Flats, you can see the peaks of the Rockies on a clear day. Part of their land is rented out to a neighbour with cattle, so they partnered with ALUS to put in fencing to protect the stream banks along Horseshoe Creek. This meant they had the hard work of running a long line of pipe up a steep slope through the fencing above to an offstream waterer.

This project will allow vegetation and soil along the banks to recover and gives the cattle grazing on the land — and those living downstream — access to better quality water.

Fencing off vital wetland and riparian areas

"I like that the program calls on those who know the land better than anyone else to work with nature and produce ecosystem services that truly have an impact."
~ Duane Movald, ALUS participant

Fencing work in progress from an on the ground and aerial perspective. Photo credit: Keith Ahlstrom.

Planting eco-buffers for pollinators and wildlife

Participants tour a recently planted ecobuffer.
Photo credit: Christine Campbell.

Moderating the banks of Modeste Creek

PROJECT ACTIVITIES: Riparian fencing

Fencing protects the scenic banks of Modeste Creek. Photo credit: Corbyn Pankonin.

This cattle farm in Brazeau County borders a meadering section of Modeste Creek. Although part of the creek was already fenced, the landowner was keen to add more fencing to preserve the valuable nearby watercourse. By adding riparian fencing along the creek, this project keeps banks from eroding and allows new vegetation to flourish. Protecting these banks from livestock pressure will allow wildlife to move through these riparian corridors and keep the waterway free from livestock waste.

Benefitting crops, wetlands, & beavers

PROJECT ACTIVITIES: Riparian fencing Pond Leveler installation

A view of the wetland and the outflow from the pond leveler. Photo credit: Christine Campbell.

Cara Langille farms hay crops and boards horses on her quarter section west of Stony Plain. She was enthusiastic about conserving the wetland bordering her hay fields, as it is part of a chain of important wetlands that provide habitat for waterfowl and wildlife. Langille was also pleased to hear about a solution for beaver activity which had been flooding her hay crops. The ALUS coordinator talked to her about pond levelers, which mitigate flooding and allow people to co-exist with beavers. ALUS partnered with Cows and Fish to install a pond leveler for Langille, which will keep her hay crops from excess flooding. Langille's property will also benefit from the wetland's sponge-like effect, which absorbs and maintains healthy water levels on the landscape throughout the year.

Waterers for wetlands near grazing reserve

PROJECT ACTIVITIES: Off-stream Watering

Cattle make their way to the nearby offstream waterer. Photo credit: Kim Barkwell.

This panoramic property runs adjacent to Crown land east of the Buck Mountain Grazing Reserve. Cattle were wandering downslope to drink from a wetland on the property, so the landowner decided to intervene. After drilling a well, he installed a solar pump to carry water to a trough made from a recycled tractor tire.

Although the landowner had originally considered fencing the wetland, he noticed that having the watering system far enough upslope from the wetland (350-400 feet) was enough to keep them from wandering down into this ecologically sensitive area. Protecting the wetland from hoof compaction and waste contaminants will allow this “natural sponge” to better filter runoff, store excess water during floods, and release needed water during seasons of drought.

Fencing riparian banks near Breton

PROJECT ACTIVITIES: Riparian fencing

Duane Movald runs a fifth-generation family farm with his parents west of Breton. The Movalds grow cereal and forage crops, raise commercial and purebred Simmental cattle. When Duane heard about ALUS' work in 2017, he joined the Partnership Advisory Committee, where he was elected the ALUS Brazeau Chair and also became a landowner partner. He appreciates that the program works with those who know the land best — the landowners and farmers who live there. The Movalds have installed riparian fencing along their wetland, encouraging riparian grasses and sedges to re-establish along the wetland's edge, preventing erosion, and regulating water flow.

Right: Duane Movald stands in front of the wetland he worked to protect with riparian fencing. Photo credit: Keith Ahlstrom.

"We can already see a difference, with more birds and pollinators, less erosion, cleaner water and just a healthier environment all around"
~Duane Movald, ALUS participant

Conserving waterfowl & wildlife habitat

"ALUS is the best thing that ever happened around here. I like birds and wildlife and there should be a reason to keep these areas intact." ~Lawrence Robinson, ALUS participant

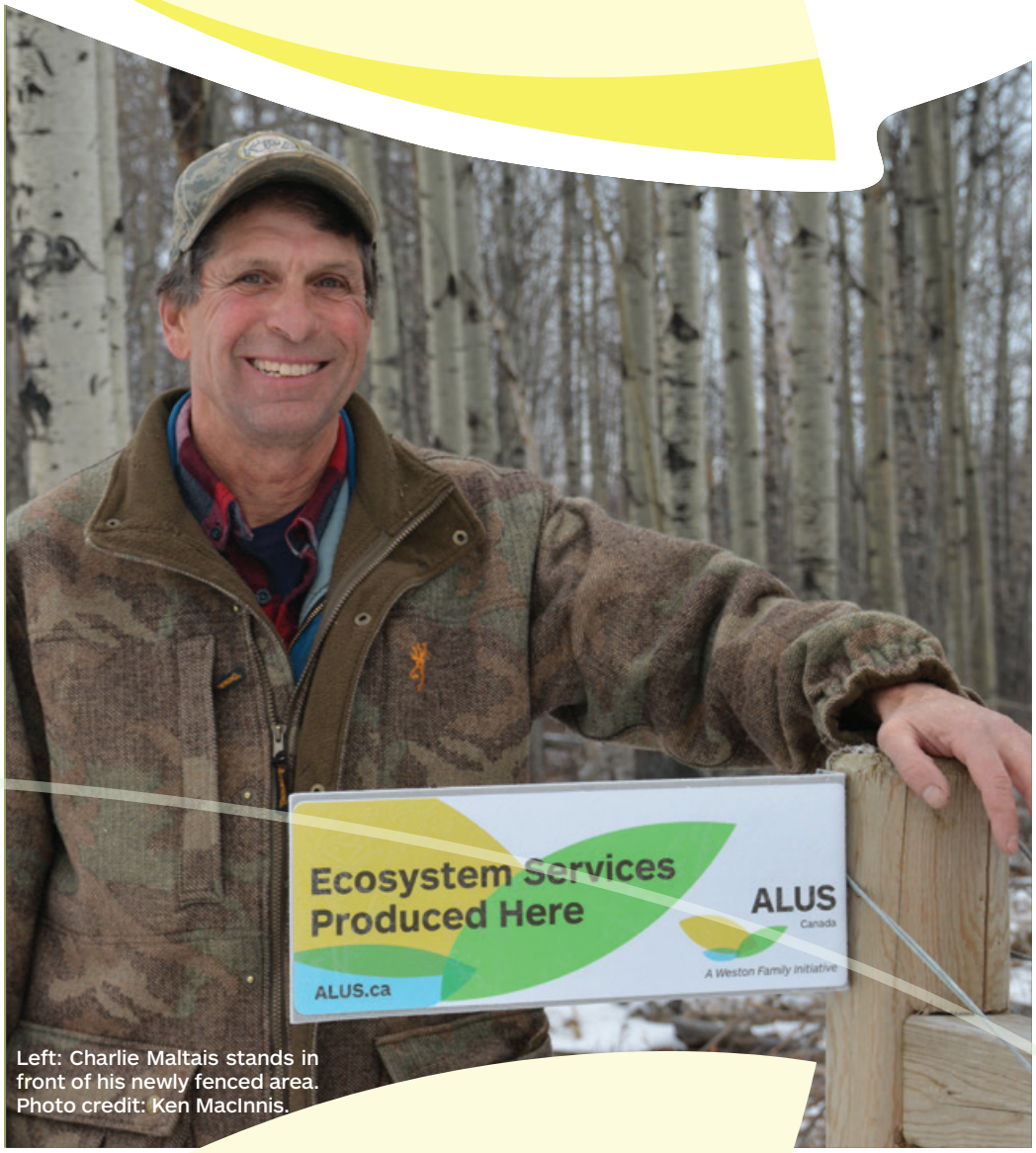
Above: Coyote are one of many mammals that frequent riparian areas for food or shelter. Below: American White Pelicans often nest on small islands created by seasonal wetlands. Photos by: Bill Trout.

Natural buffers and native species regrowth

Above: Paintbrushes and red clover are a favourite with pollinators. Below: Native vegetation regrows along Washout Creek. Photos by: Sarah Caissie Photography.

Restoring riparian areas near Modeste Creek

PROJECT ACTIVITIES: Riparian fencing



Left: Charlie Maltais stands in front of his newly fenced area. Photo credit: Ken MacInnis.

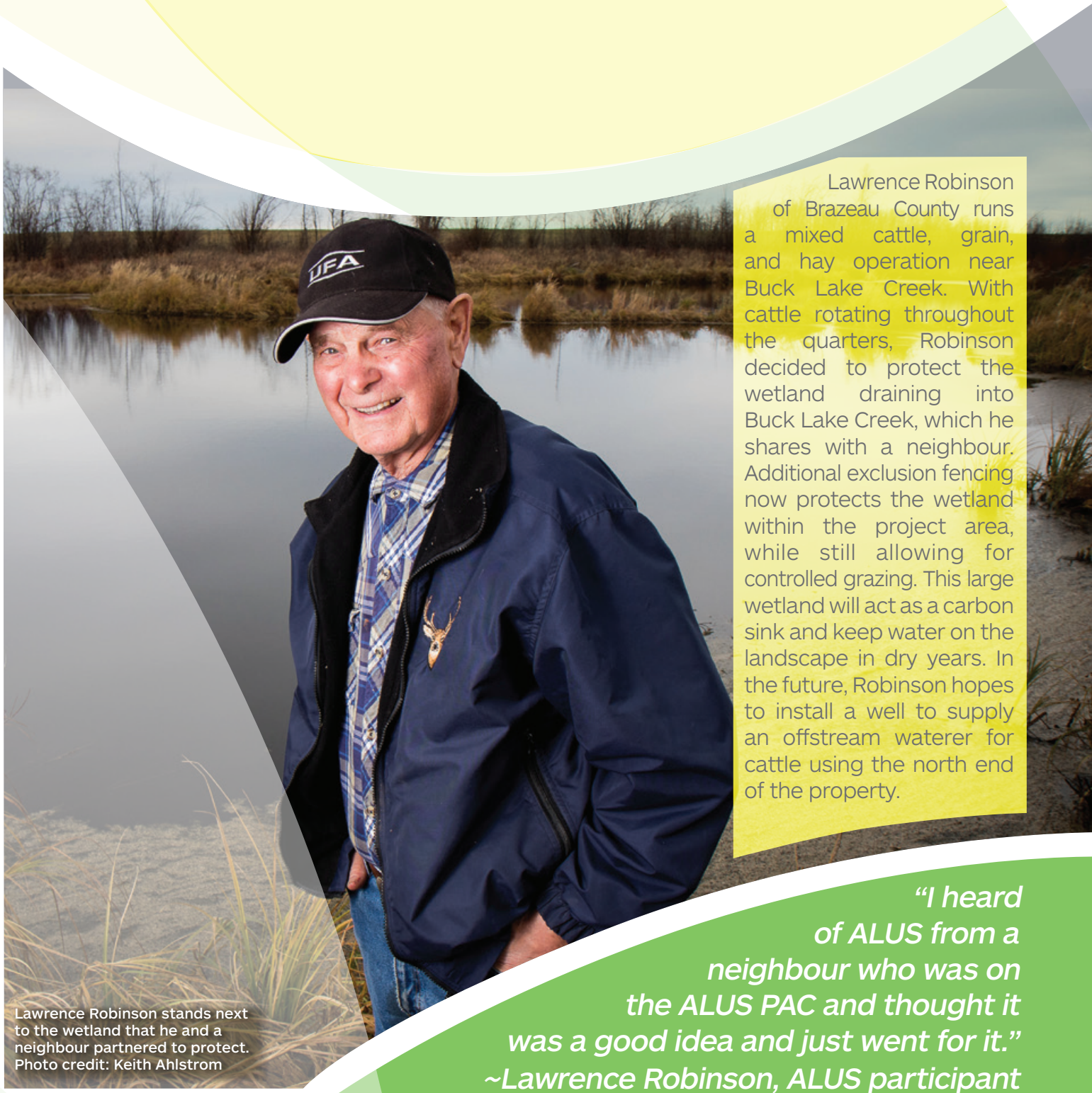
Charlie and Theresa Maltais were the first ALUS participants in Brazeau County. A large, branched waterway that flows into Modeste Creek runs through their scenic property, where they raise mixed breed Red Angus/Charolais cattle near Breton, Alberta.

Before the project began, the creek banks were eroded and compacted due to cattle use. This uneven terrain can break down soil aggregates and cause topsoil to run off into the water. Since installing riparian fencing, the Maltais family have noticed better plant cover in these fenced areas. As grasses, shrubs, and trees recover, an increasingly diverse and healthy ecosystem will offer habitat for pollinators, birds, and a wide array of wildlife.

"Theresa and I like to go for nature walks along the creek, and we can see that moose and deer have been coming back to the area, as well as two new beaver dams. The water is cleaner, too." ~ Charlie Maltais, ALUS participant

Caring for wetlands across shared borders

PROJECT ACTIVITIES: Riparian fencing



Lawrence Robinson stands next to the wetland that he and a neighbour partnered to protect. Photo credit: Keith Ahlstrom

Lawrence Robinson of Brazeau County runs a mixed cattle, grain, and hay operation near Buck Lake Creek. With cattle rotating throughout the quarters, Robinson decided to protect the wetland draining into Buck Lake Creek, which he shares with a neighbour. Additional exclusion fencing now protects the wetland within the project area, while still allowing for controlled grazing. This large wetland will act as a carbon sink and keep water on the landscape in dry years. In the future, Robinson hopes to install a well to supply an offstream waterer for cattle using the north end of the property.

"I heard of ALUS from a neighbour who was on the ALUS PAC and thought it was a good idea and just went for it."
~Lawrence Robinson, ALUS participant

Offstream waterers benefit wetlands and cattle weight gains

"It's good when people can see themselves in someone's project and think, 'This could be my farm. This could be a reflection of me.'"
~ Kim Barkwell, ALUS Wetaskiwin-Leduc

A landowner admires his newly fenced off wetland. Top: Cattle making use of their offstream waterer. Photo credits for both: Keith Ahlstrom.

Pasture pipelines improve ephemeral wetlands

Ephemeral wetlands provide important habitat for nesting birds and wildlife raising their young. Top: Laying the path for pasture pipeline. Photo credit: Sarah Caissie Photography.

Supporting ephemeral wetlands & habitat

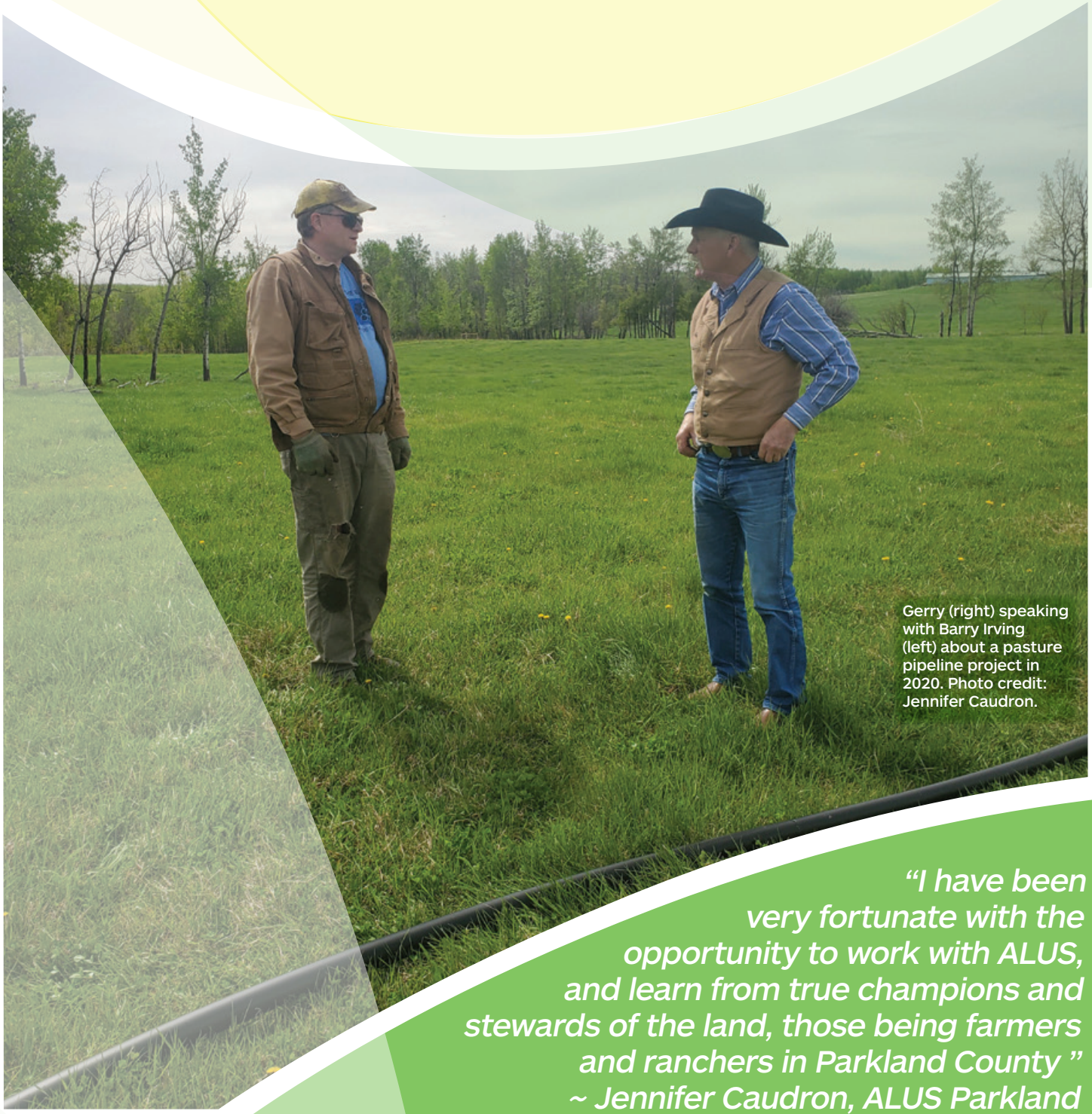
PROJECT ACTIVITIES: Riparian fencing Pasture Pipeline

Ephemeral wetlands at Western Ranchlands thrive the help of riparian fencing and pasture pipelines. Photo credit: ALUS Parkland.

Under the management of Gerry Taillieu, Western Ranchlands Tomahawk Ranch was the first ALUS project in Parkland County. In 2013, Taillieu and his team worked with ALUS to install riparian fencing. In 2018 and 2020, the ranch installed over 15 km of pasture pipeline. With the use of existing water wells (and a few news ones) across the ranch, backup lines ensure continuous water in the case that one pump should fail. This is critical on a ranch with herds ranging up to 500 cow/calf pairs as well as yearlings. Taillieu said that running these fewer, but larger herds allowed him "to increase the number of days of rest every pasture gets, which is significant in terms of soil and grass health."

"We estimate that at any given time, cattle only occupy 5 % of our land, which means that 95% is resting, regrowing and rejuvenating."
~ Gerry Taillieu, ALUS participant

... with water & livestock solutions



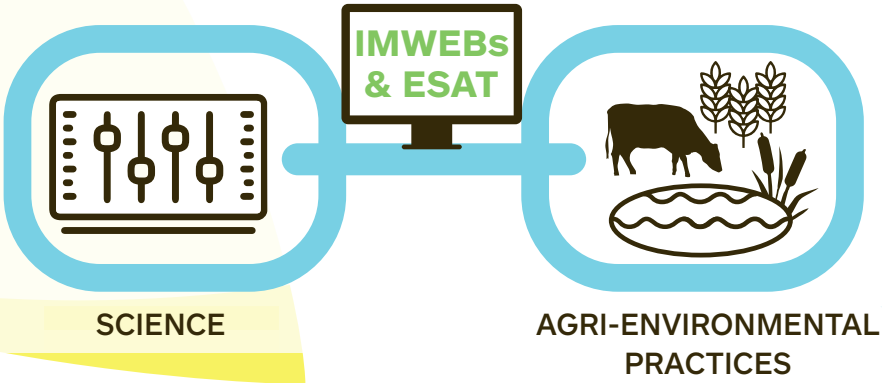
Gerry (right) speaking with Barry Irving (left) about a pasture pipeline project in 2020. Photo credit: Jennifer Caudron.

"I have been very fortunate with the opportunity to work with ALUS, and learn from true champions and stewards of the land, those being farmers and ranchers in Parkland County "
~ Jennifer Caudron, ALUS Parkland

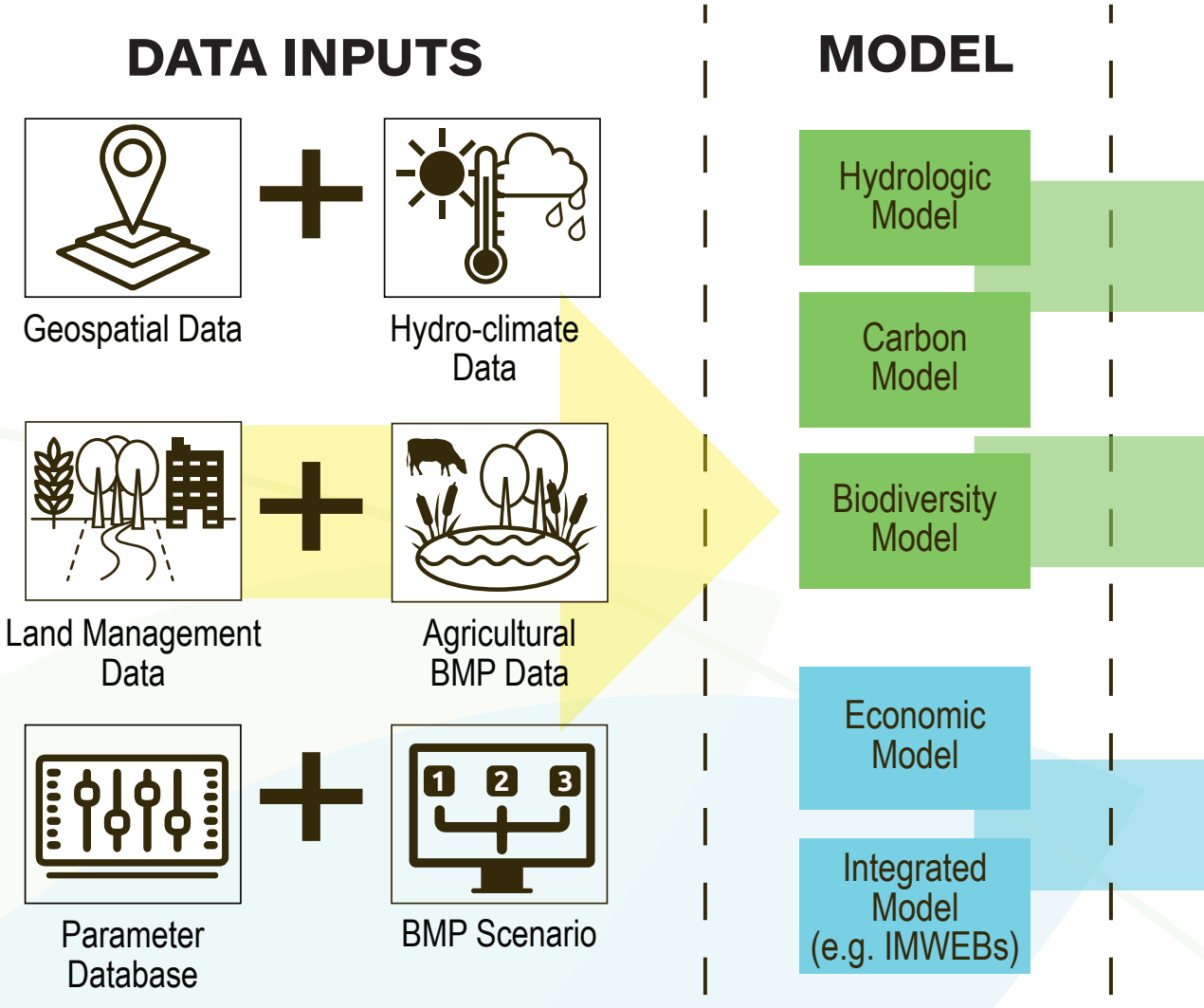
IMWEBs & ESAT: Bridging the gap between science and agri-environmental practices

What is IMWEBs?

- Integrated Modelling for Watershed Evaluation of BMPs
- A scientific model that examines the benefits of natural Infrastructure & agri-environmental practices



MODEL OVERVIEW



What does IMWEBs do?

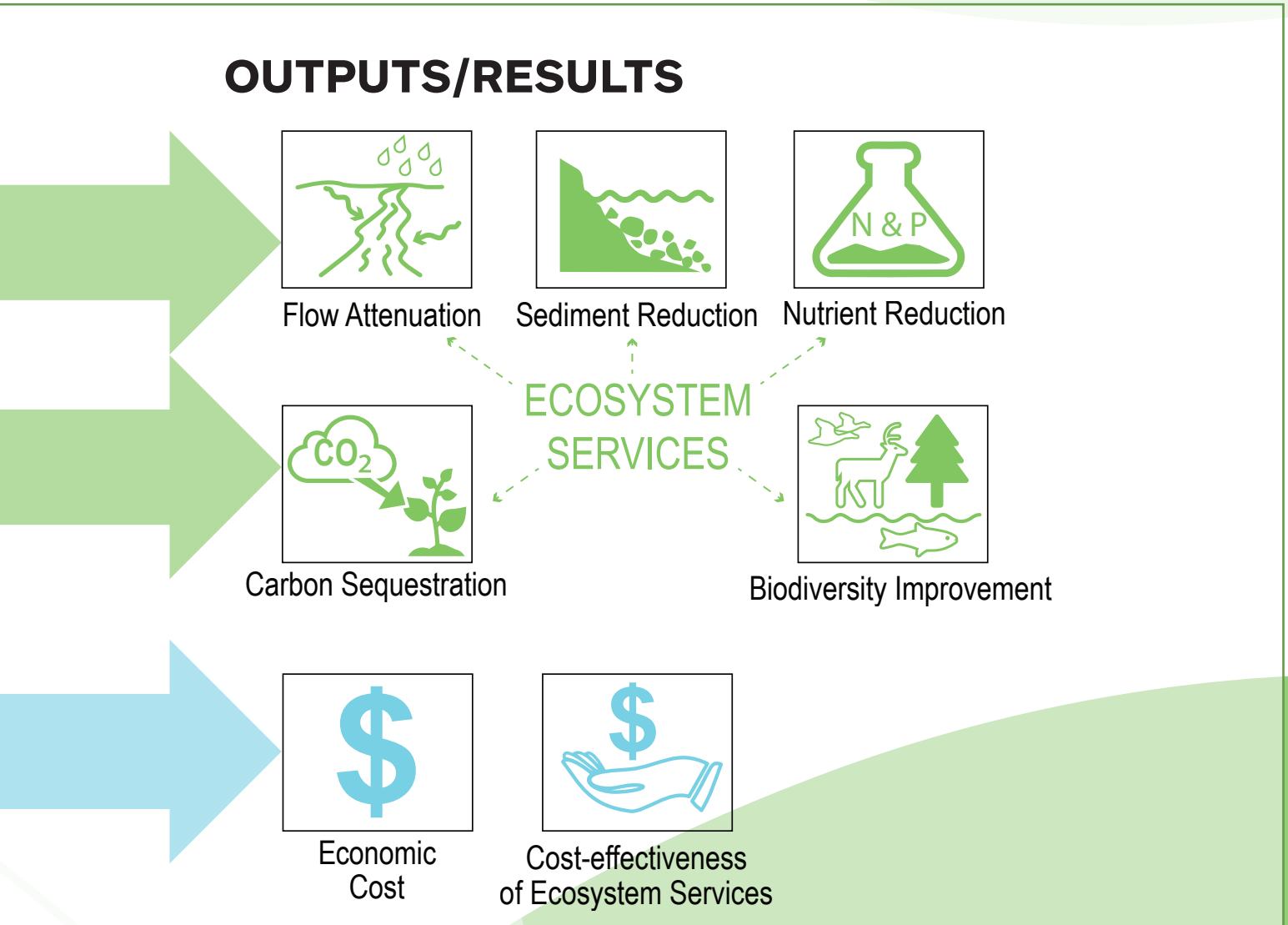
- Measures the benefits of agri-environmental practices at the watershed scale
- Integrates economic, hydrologic, and GIS modelling to assess:
  - Environmental benefits
  - Economic costs

What is ESAT (Ecosystem Services Assessment Tool)?

- A tool to make the IMWEBs model user-friendly and accessible to
  - Municipal land planners
  - Conservation managers
  - Farmers and ranchers
- Allows users to explore the impact of natural infrastructure and agri-environmental projects on:
  - Municipal conservation budgets/savings
  - Hotspots for flooding or water impacts
  - Ecosystem services, e.g. water quality and quantity, carbon or biodiversity benefits

Why does this matter?

- Long-term resilience for built infrastructure (particularly rural roads, bridges, culverts) means decreased municipal costs in these categories



Modelling Parkland County: A case study to inform land management & practices

Case study example:
How could Parkland County reduce the total suspended solids (TSS) in their water using agricultural BMPs?

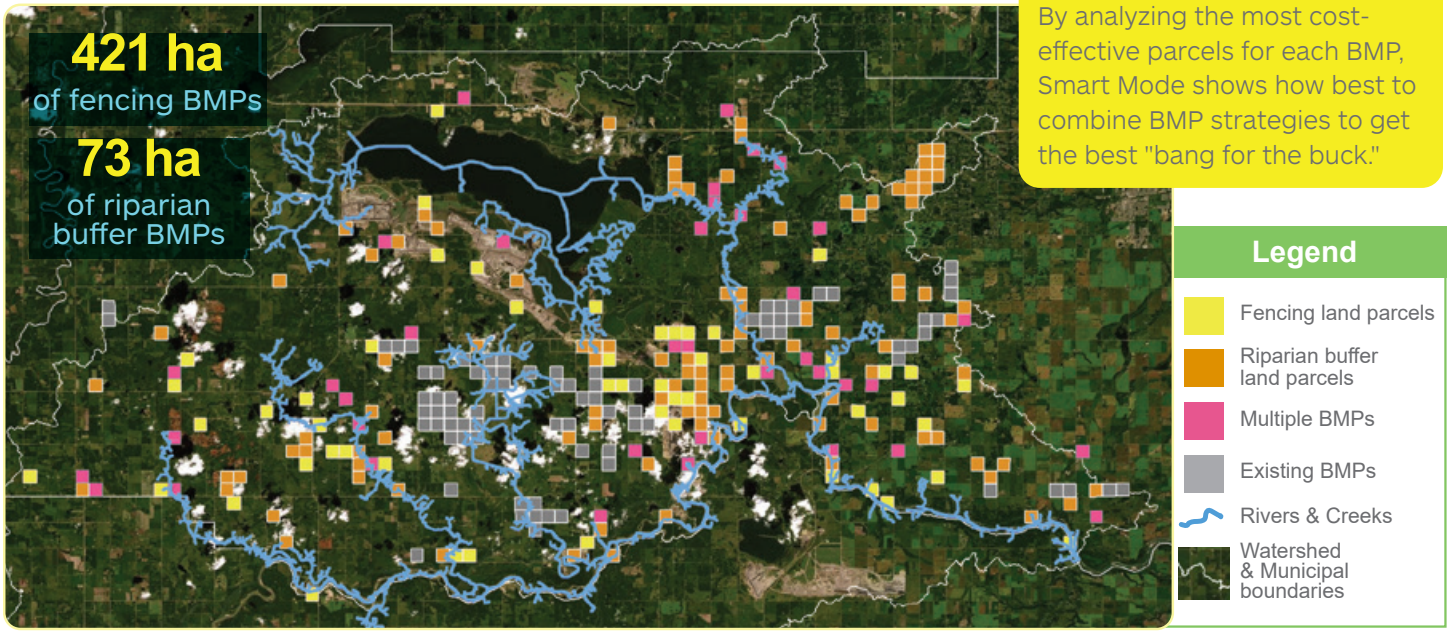
What are Total Suspended Solids (TSS)?

- Particles that float in water and don't dissolve. May include: sediment, algae, bacteria.
- They increase water temperature and decrease oxygen which degrades water quality for humans, fish, and other aquatic life.

Questions:

- How could livestock fencing and riparian buffers impact TSS (one part of water quality) in Parkland County?
- What parcels of land could be targeted to yield the most value for the cost ("bang for the buck")?

SETTING TARGETS IN "SMART MODE"



How does 'Smart Mode' determine optimal targets?
By analyzing the most cost-effective parcels for each BMP, Smart Mode shows how best to combine BMP strategies to get the best "bang for the buck."

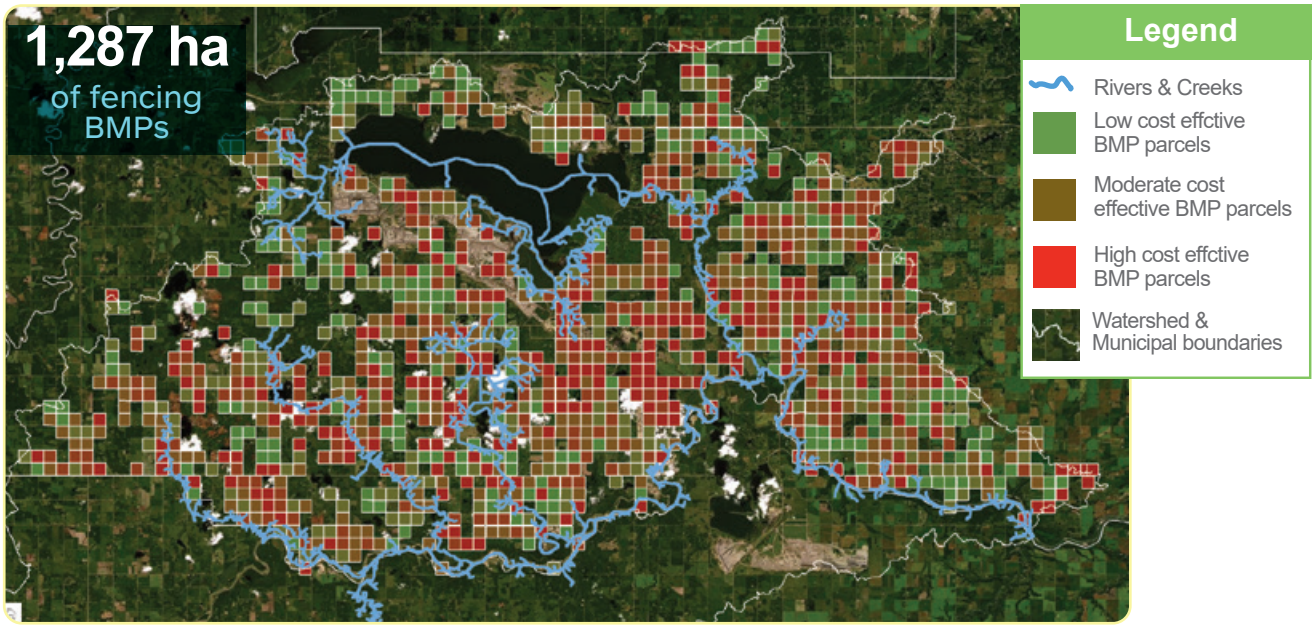
If Parkland County set a goal to reduce their TSS loading by 5% (3,000 tons) each year, the model provides "intelligent recommendations" about where to put in livestock fencing or riparian buffer BMPs to get the most TSS reduction for the lowest cost.

COST-EFFECTIVE, LESS RESOURCES, AND LESS TIME = BEST BANG FOR BUCK

$170,303 cost per year ÷ **3,000 tons** annual reduction in total TSS* = **$57/ton** average cost of TSS reduction → **MOST COST-EFFECTIVE**

*Based on all parcels implementing BMPs.

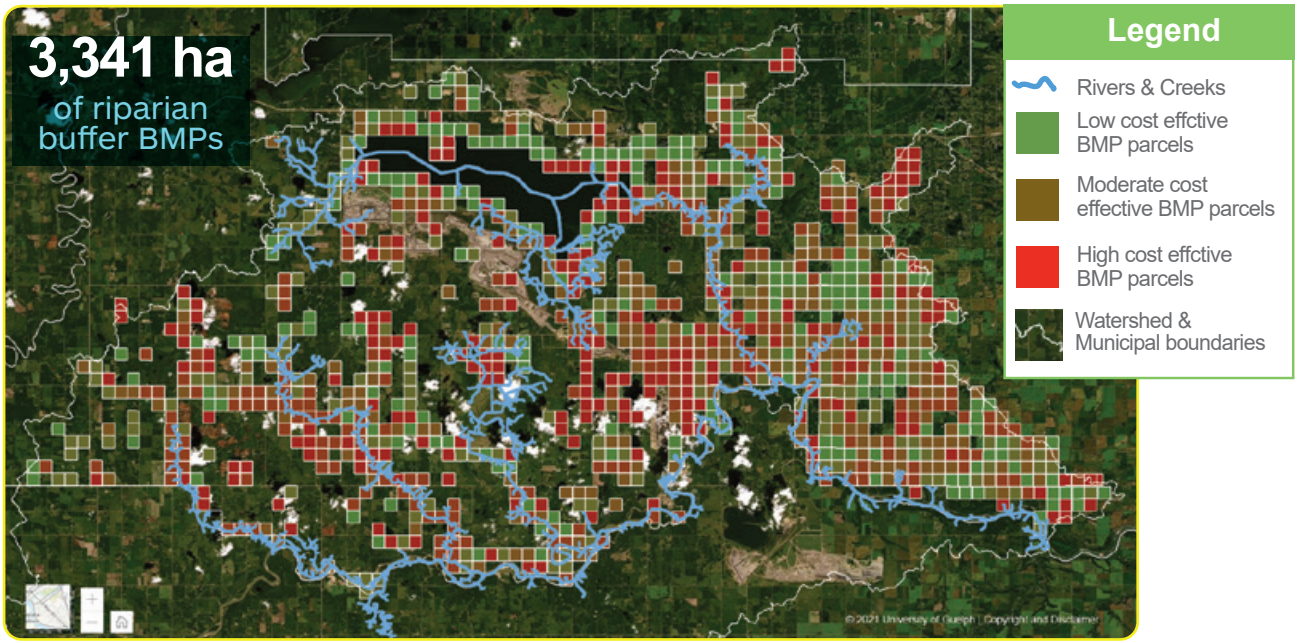
MODELLING BASED ON IMPLEMENTING **ONLY LIVESTOCK** FENCING BMPS THROUGHOUT THE COUNTY



$687,460 cost per year ÷ **1,476 tons** annual reduction in total TSS* = **$466/ton** average cost of TSS reduction → **LEAST COST EFFECTIVE**

CHEAPER BMPS TO IMPLEMENT → ← EXPENSIVE BMPS TO IMPLEMENT

MODELLING BASED ON IMPLEMENTING **ONLY** RIPARIAN BUFFER BMPS THROUGHOUT THE COUNTY



$843,950 cost per year ÷ **3,775 tons** annual reduction in total TSS* = **$224/ton** average cost of TSS reduction → **REASONABLY COST EFFECTIVE**

*Based on all parcels implementing BMPs.

Honouring ALUS Advocate & Pioneer (Western Ranchlands Tomahawk Ranch)

GERRY TAILLIEU 1957-2020

Gerry generously gave of his time when he spoke on behalf of ALUS.
Photo credit: ALUS Parkland.

The ALUS community lost advocate, partner, and friend, Gerard (Gerry) Taillieu on August 23, 2020. Gerry worked on cattle ranches across the Pacific Northwest and the Prairies for over 40 years. In 2001, he began managing Western Ranchlands Tomahawk Ranch, a 14,000-acre cattle ranch on ecologically sensitive land in Parkland County.

Gerry was Parkland's first ALUS participant in 2012. Not only did he enroll many acres in various ALUS projects, he was a member of ALUS Parkland's Partnership Advisory Committee (PAC), hosted tours of his projects at Western Ranchlands, and acted as an ALUS spokesperson.

Gerry was recognized in both agricultural and environmental circles, as a member of the West-Central Forage Association, a recipient of the Alberta Beef Producers Association Environmental Stewardship Award in 2013, and the Award of Excellence for Rangeland management from the California Pacific Society for Range Management. In 2016, he received ALUS' inaugural Producer Innovation Award.

"Gerry Taillieu was an inspiring land steward and community leader who had words of wisdom on many topics. The PAC often looked to him for guidance, as he truly embodied ALUS." ~ Christine Campbell, ALUS Canada's Western Hub Manager

Gerry at Western Ranchlands Tomahawk Ranch. Photo credit: Avanell Morawitz.

Upon receiving the inaugural ALUS Canada Producer Innovation Award in 2016, Gerry told us the following: "There's a saying, 'We don't own the land, but are just holding it in trust for the next generation.' That's a real social responsibility, and I take that quite seriously."

Outcomes of the Project

DELIVERABLES

- Improved water & ecosystem health
- Improved riparian health
- 1,116 hectares of enhanced or restored agricultural land

OPPORTUNITIES

- Stronger community partnerships
- Landowner-led projects
- Watershed health awareness
- Connection to bigger picture outcomes

CHALLENGES

- Creating and gaining community trust
- Natural infrastructure and restoration buy-in

Our Primary Funders

Alberta

Natural Resources Canada | Ressources naturelles Canada

Other Funding Partners

EPCOR

La Fondation McConnell Foundation

The City of Edmonton

About our Project Partners

ALUS

ALUS Canada is a federally-registered charity that partners with communities and farmers to restore and enhance natural ecosystems on agricultural lands. ALUS communities in the Modeste watershed—ALUS Wetaskiwin-Leduc, ALUS Parkland and ALUS Brazeau—restored and enhanced wetlands and riparian areas as a part of this project.

Contact: Lara Ellis, VP, Policy and Partnerships: lellis@alus.ca ALUS.CA

Department of Geography, Environment and Geomatics, University of Guelph

Dr. Wanhong Yang's research program integrates economic, hydrologic, and GIS modelling to examine the cost effectiveness of agricultural conservation programs, with a mission to develop modelling tools for agricultural BMP assessment at both field and watershed scales. Modelling projects using his IMWEBs tool have taken place in Canada and the U.S.

Contact: Dr. Wanhong Yang, Professor and Chair, Dept. of Geography, Environment and Geomatics: wayang@uoguelph.ca UOGUELPH.CA

North Saskatchewan Watershed Alliance

As a Watershed Planning and Advisory Council, the NSWA is a multi-stakeholder organization that seeks to improve the management of water quality, water quantity, and the health of aquatic ecosystems by developing and sharing knowledge and facilitating partnerships and collaborative planning processes. The NSWA contributed watershed data and advice toward this project.

Contact: Mary Ellen Shain, Watershed Planning and Mgmt. Coordinator: Maryellen.shain@nswa.ab.ca NSWA.AB.CA

InnoTech Alberta

InnoTech Alberta's primary focus is to facilitate the conversion of applied research to economic, social, and environmental benefits. InnoTech links basic research and commercial outcomes, in accordance with strategic directions set out by the GOA, by delivering specialized services for its government and industry clients.

INNOTECHALBERTA.CA

Brazeau County

Brazeau County is a robust community that is working to invest in green energy programs. In addition to supporting our rich oil and gas sector, we also strongly support the agricultural community, and encourage innovation.

Contact: Corbyn Pankonin, Assistant Ag Fieldman/ALUS Coordinator: CPankonin@brazeau.ab.ca BRAZEAU@ALBERTA.CA

Parkland County

Parkland County, located just west of the City of Edmonton, is a vibrant and robust community that is proud of its leadership toward sustainability and its long-time support of stewardship on both public and private lands.

Contact: Krista Quesnel, Community Sustainability Manager: krista.quesnel@parklandcounty.com PARKLANDCOUNTY.COM

County of Wetaskiwin

The County of Wetaskiwin No.10 is committed to the long term sustainability of our diverse agriculture community as we work to promote and protect our natural environment through education and awareness.

Contact: Kim Barkwell, Sustainable Agriculture Coordinator, County of Wetaskiwin and Leduc County, KimB@leduc-county.com COUNTY.WETASKIWIN.AB.CA/

Leduc County

Leduc County is an advocate for long-term, sustainable agriculture. Through our sustainable agriculture program, we are able to offer education, awareness and support for the adoption of beneficial management practices that benefit both the environment and our agricultural producers.

Contact: Kim Barkwell, Sustainable Agriculture Coordinator, County of Wetaskiwin and Leduc County, KimB@leduc-county.com LEDUC-COUNTY.COM

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Contact us:
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To learn more about ALUS and our programs, go to ALUS.CA

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