

GRowing Outcomes in Watersheds (GROW): A home-grown ecological goods and services program for Manitoba

GROW Guide

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THE
CONSERVATION
TRUST

A Manitoba Climate and Green Plan Initiative
delivered by The Manitoba Habitat Heritage Corporation



THE
GROW
TRUST

Manitoba Climate and Green Plan Initiatives
delivered by The Manitoba Habitat Heritage Corporation

Manitoba



GROWING OUTCOMES IN WATERSHEDS:

Identified under the Water Pillar in Manitoba’s Climate and Green Plan, GRowing Outcomes in Watersheds (GROW) is a way of encouraging the delivery of ecological goods and services (EG&S). GROW promotes conservation of natural areas or changes to land uses that provide EG&S by helping farmers develop projects that maintain or improve local watershed health and work for their operations. GROW is a made-in-Manitoba program on working lands that focuses on “farming the best, conserving the rest.”

With a focus on watershed health, management and resiliency, GROW will help reduce flooding and drought vulnerability and improve water quality and nutrient management in Manitoba. The GROW framework will be delivered by watershed districts in partnership with landowners, non-government organizations, and all levels of government. These partnerships will be formalized as **Local GROW Committees** and guided by the provincial requirements for GROW.

This document is intended to describe GROW program fundamentals and provide guidance on the approach to align local GROW programs with the provincial GROW framework. Long term funding is available for GROW delivery beginning in 2020/21 through the GROW and Conservation Trusts. These new stable funds will solidify and enhance existing funding programs already in place that support the establishment and delivery of EG&S programming. These include the Manitoba Watershed Districts Program, Ag Action Manitoba – Assurance: Watershed Ecological Goods and Services Program, as well as other provincial, federal, municipal, and local funding sources where priorities align with the local GROW framework.

Principles of GROW

- | | |
|--|---|
| <ul style="list-style-type: none">✓ Watershed-Based✓ Locally-Driven✓ Producer-Focused✓ Measurable | <ul style="list-style-type: none">✓ Sustainable✓ Balances Incremental with Existing EG&S✓ Collaborative |
|--|---|

Outcomes and Co-Benefits of GROW

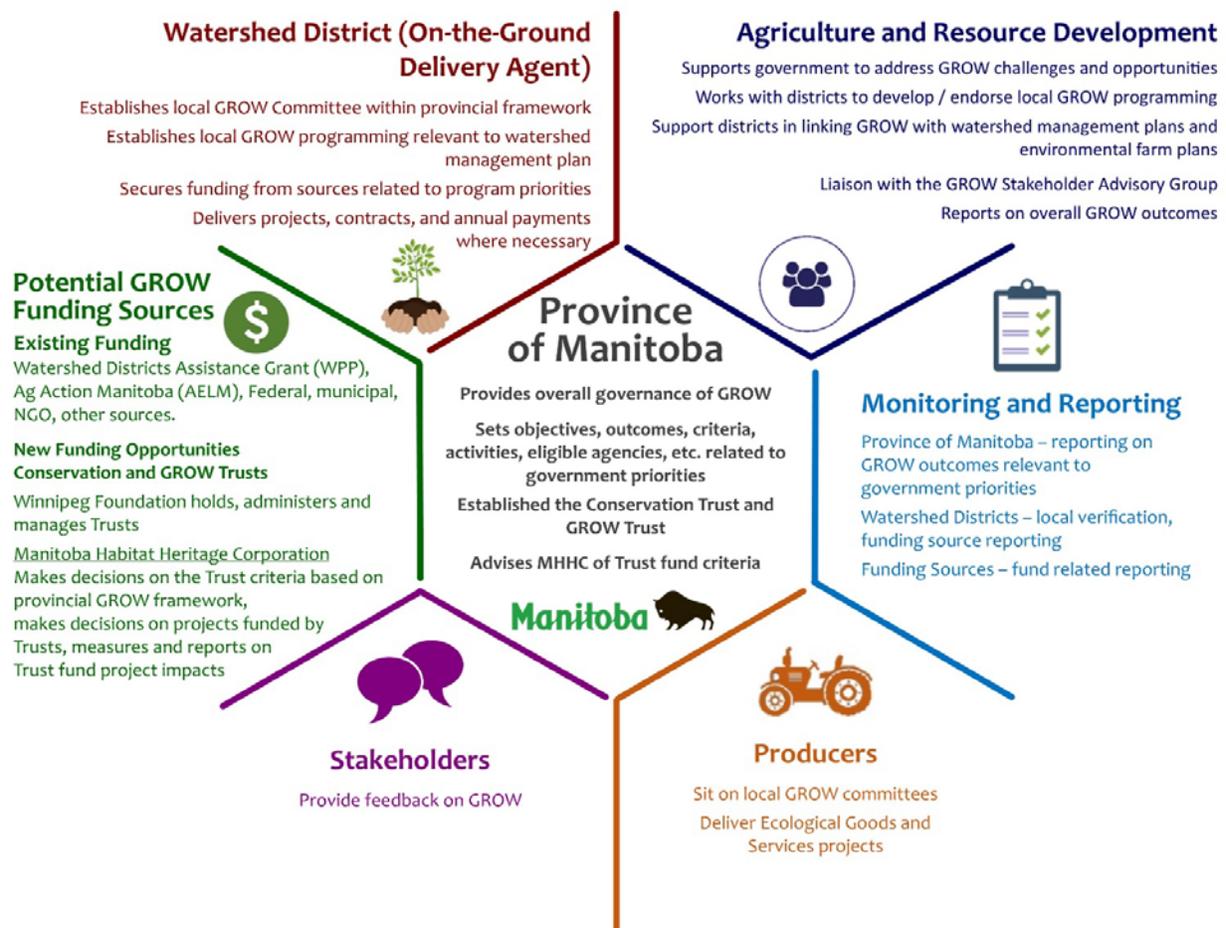
Priority Outcomes

- improved watershed resilience to the impacts of a changing climate (e.g., extreme weather events, drought, flooding)
- improved water quality (e.g., improved nutrient management)

Co-Benefits

- improved on-farm water management
- enhanced sustainable agricultural production
- improved biodiversity and habitat
- carbon sequestration and storage

A Shared Governance Approach



What is GROW?

A targeted, watershed-based approach to delivery – Projects will be implemented on a watershed basis, according to the principles, objectives and outcomes of GROW. Eligible projects will be limited to working lands within Agro-Manitoba. Each project will address provincial outcomes and target prioritized actions in watershed management plans.

Locally-delivered and producer-focused – GROW will be delivered by Manitoba's Watershed Districts. Each district delivering GROW will establish a Local GROW Committee that will include representation from agricultural producers, watershed district members, as well as partners and technical experts, where necessary. GROW is aligned with the principles of the Environmental Farm Plan Program and participating producers should have an environmental farm plan.

GROW is Locally Driven, Locally Delivered

- ✓ a group of local people passionate about improving watershed health
- ✓ local people entrusted to make decisions on projects based on local priorities
- ✓ farmers leading farmers in local committees through peer-to-peer learning and influence
- ✓ local champions and leaders focused on long-term change guided by science, integrated decision-making
- ✓ a locally targeted approach to improving watershed health

Balanced – GROW will support projects that sustain or restore EG&S delivery on private lands. Sustaining existing EG&S must be limited to natural capital that is generally at high risk of conversion and has high public benefit such as Class I and II wetlands, native grasslands, grassed/treed areas on erodible slopes, etc.

Sustainable – Projects must demonstrate that ecological goods and services will continue beyond the establishment of the project, through the use of term contracts with landowners that may include annual payments for those services.

Measurable – GROW will demonstrate evidence-based environmental improvements. Project monitoring and reporting on GROW metrics will be required.

Partnership-focused – Collaboration with landowners, municipal governments, Indigenous communities, and other organizations will enhance positive outcomes for watershed health, and may also bring in additional funding. These partners may provide guidance, expertise, funding (in kind/cash), etc.



GUIDING PRINCIPLES – GROW IS:

1. Watershed-Based

- The proposed local GROW program meets the principles, objectives and expected outcomes of GROW – projects must meet one or more desired outcomes.
- Addresses the priorities and targets identified in a watershed management plan (IWMP, or other watershed-based planning initiatives if IWMP is not completed).
- Established by a **watershed district**.

2. Locally-Driven

- Establishes a Local GROW Committee through the **watershed district**, consisting of at least 50% local producers, watershed district manager and board, and other organizations.

3. Producer-Focused

- Agricultural producers complete projects on their working lands within agro-Manitoba.
- Meets producer committee requirement - Local GROW advisory committees must have at least 50% agricultural producer representation.
- Is aligned with the principles of Environmental Farm Planning. Delivery agents will emphasize EFP participation and report on Watershed EFP statistics.

4. Measurable

- Demonstrates evidence-based outcomes of the proposed activities that provide measurable environmental improvements.
- Will align with performance indicators in Manitoba's Climate and Green Plan.
- Supported by technical expertise.
- Requires project monitoring and reporting on GROW metrics.
- Local GROW delivery may be subject to third party auditing for project compliance.

5. Sustainable

- Landowners sign term contracts, ensuring that EG&S will continue to be provided beyond the establishment of the project.
- If landowner payments are to be awarded, adheres to established guidelines for payment structure and eligible lands.

6. A way to support both Incremental and Existing EG&S

- GROW projects provide incremental EG&S ("additionality") through construction, restoration or enhancement of EG&S infrastructure.
- GROW projects can also provide support for existing EG&S. These projects must be limited to natural capital that is at high risk of conversion, has high public benefit, and/or limits agricultural activities.

7. Collaborative

- Producers cost-share establishment costs and maintain projects over time.
- Establishes new partnerships or enhances existing partnerships with landowners, municipal governments, Indigenous communities or external funders to deliver projects that support positive outcomes for watershed health.

ADMINISTRATION AND FINANCIAL BACKGROUND

GROW and Conservation Trusts

The Province of Manitoba has invested \$150M with The Winnipeg Foundation, made up of \$100M in the Conservation Trust and \$50M in the GROW Trust. The annual interest generated from the two Trusts will be used to fund local GROW programs that provide EG&S to Manitobans. This unique approach provides a continued source of funding that is expected to keep up with inflation, thereby maintaining its relevance into the future.

As part of the original arrangement, the Manitoba Habitat Heritage Corporation (MHHC) administers and disburses revenues from the Trusts through a proposal-based grants process. The GROW program is an eligible activity under the Trusts and Districts are eligible to apply for funding.

Anticipated annual funding allocations

The \$100M Conservation Trust (CT) is anticipated to generate about \$4.5M in revenue each year. There are five funding categories, and the largest percentage of funds (about 60%) will be dedicated to the Watersheds category. Watershed Districts and the GROW program will be the highest priorities in this category. Assuming that 60% of the annual revenue will be allocated to the Watersheds Category each year, this could result in approximately \$2.7M (of the \$4.5M total) becoming available from the Conservation Trust for Watersheds projects and local GROW programs annually.

Additionally, the \$50M GROW Trust (GT) will be available for annual incentive payments to agricultural producers in support of EG&S. Assuming the GT generates 4.5% in revenue each year, it would result in an additional \$2.25M becoming available for local GROW program annual incentive payments.

Overall, revenue from the Conservation and GROW Trusts should result in approximately \$4.95M becoming available for watershed districts' local GROW programs each year.

Starting A LOCAL GROW PROGRAM

As GROW's primary delivery agents, **watershed districts** will work with their watershed planner to initiate a local GROW program before applying to the GROW and Conservation Trusts. Staff from Watershed Planning and Programs will assist districts in establishing their local GROW program and funding proposals. If a district is interested in establishing a local GROW program without funding from the Conservation or GROW Trust, they should still contact their watershed planner.

Trusts:

Watershed districts will submit a Letter of Interest for local GROW programs to MHC with one application to the GROW and Conservation Trusts. Once the Letter of Interest has been approved by MHC, watershed districts will work with their planner from Watershed Planning and Programs to complete an application for GROW funding.

Local GROW Committees

Each watershed district will establish a local GROW committee, consisting of representatives of the following groups:

- Producers – at least 50%
- Watershed District – Board member(s) and Manager or designated staff
- Ex-officio (non-voting members) representatives of Provincial departments – e.g., Watershed Planner, Farm Production Extension Specialist
- Other optional members could include technical experts, non-government organizations, Indigenous communities, etc.

Local GROW Committees will...

- Establish local priorities and target areas within the watershed to implement GROW activities;
- Apply for and coordinate funding sources;
- Establish rates for eligible activities and cost-shares based on GROW criteria and established provincial guidelines;
- Determine term lengths where required, based on GROW criteria;
- Prioritize and approve local GROW projects brought forward by watershed district staff;
- Help identify landowners in target areas that may be interested in participating in GROW; and,
- Sign contracts with landowners.

ELIGIBLE GROW ACTIVITIES

GROW provides incentives for the delivery of EG&S from private lands in Agro-Manitoba. Incentives to landowners include cost-shared support for project establishment (e.g., small dams or off-site watering systems) and/or annual incentive payments for land enrolled in the program (e.g., wetland restoration project on cultivated land).

GROW is locally led by farm communities and managed by **watershed districts**. It focuses on watershed health, management and resiliency. In addition to the seven guiding principles (found on page 5), GROW is:

- **Producer-delivered** – farmers and ranchers cost-share in establishment costs and maintain projects over time;
- **Voluntary** – producers may or may not choose to participate in the program and sign a contract with local watershed district;
- **Farming the best, conserving the rest** – sustainable production while conserving ecological goods and services offered by agricultural land; and,
- **Market-driven** – when annual incentive payments are warranted, payment rates are based on land assessments and factor in economic costs and benefits.

GROW: Outcomes and Co-Benefits for Watershed Health

Priority Outcomes

- improved watershed resilience to the impacts of a changing climate (e.g., extreme weather events, drought, flooding)
- improved water quality (e.g., improved nutrient management)

Co-Benefits

- improved on-farm water management
- enhanced sustainable agricultural production
- improved biodiversity and habitat
- carbon sequestration and storage

Targeted Improvements to Watershed Health

In order to achieve targeted improvements to watershed health, local GROW committees will focus on priority outcomes and co-benefits that are consistent with their local integrated watershed management plans (IWMPs). Activities that are eligible for inclusion in a local GROW program include:

- ✓ Water retention;
- ✓ Wetland conservation, restoration or enhancement;
- ✓ Riparian area conservation, restoration or enhancement;
- ✓ Buffer establishment (e.g., shelterbelts, multi-species buffer strips);
- ✓ Upland area conservation, restoration, or enhancement (e.g., woodlot management, grassland conservation, converting marginal cropland to grassland, soil health improvements); and,
- ✓ Innovative approaches - Other projects that provide innovative ideas to conserving or enhancing EG&S in Manitoba will also be considered.

These activities will require varying levels of landowner cost-shares, implementation and maintenance. Not all contracts will require annual incentive payments (see *Incentives*, page 11). When exploring agreements with landowners, local GROW committees will focus on the following watershed features:

A. Wetlands: Wetlands store water, nitrogen, phosphorus, and carbon, thereby contributing to watershed resilience and water quality while providing numerous benefits related to biodiversity, habitat, and climate change. Agreements with landowners should prioritize:

- Conservation of **existing** temporary/ephemeral (Classes I and II) wetlands that are not protected by legislation, and therefore continue to be vulnerable to drainage.
- Wetland **enhancement and restoration** for all wetland classes.

B. Riparian areas: As the transition zone between waterbodies and surrounding uplands, riparian areas provide riverbank and shoreline stabilization and erosion control, and capture sediments, pathogens, nutrients and pesticides from surface runoff before entering waterbodies. Healthy riparian areas contribute to water quality, biodiversity, habitat and carbon storage outcomes. Agreements with landowners should prioritize:

- Riparian area **enhancement and restoration** linked to local IWMP priorities.

C. Uplands: Management practices on annual cropland, pasture, hayland, sensitive soils, and wooded areas influence watershed resilience and water quality. Encouraging

management appropriate to soil types and topography will provide benefits to soils (both water holding capacity and carbon sequestration), biodiversity and habitat, and reduced erosion. Agreements with landowners should prioritize:

- Upland area **enhancement and restoration** linked to local IWMP priorities.

Additional information for Local GROW Committees to consider:

- Program participation should be targeted based on watershed features and issues, as identified in local IWMPs where possible. If local IWMPs do not include geographic target zones, Local GROW Committees should justify target areas based on technical and working knowledge of the watershed.
- GROW projects provide incremental EG&S (“additionality”) through construction, restoration or enhancement activities.
- GROW projects also provide support for conservation of existing EG&S. These projects must be limited to natural capital that is generally at high risk of conversion, has high public benefit, and/or limits agricultural activities. For example, conservation of remaining Class I and II wetlands is a priority due to the public benefits and high risk of loss of these watershed features. Local GROW Committees should follow the provided decision matrix (see *Incentives*, below) based on ecological goods and services benefits, lost opportunity costs for the producer, and risk level for loss, when considering annual incentive payments for conservation-based projects.

Conservation Contracts

In order to secure the delivery of EG&S and outcomes for watershed health over time, conservation contracts will set out the terms and conditions to ensure that GROW funds are spent appropriately. Terms and conditions will include project details, maps, establishment costs, associated incentive payments (if required), maintenance, and other duties and responsibilities of both the participating producer and local **watershed district**.

Contract lengths have been identified by activity below (pages 13-21). Local GROW Committees should also consider the level of investment, the timeline for benefits to accrue and the nature of EG&S being provided. Ideally, projects will be retained over the long term, but provisions should be included in the contract for the minimum length of time the project must be maintained as outlined in this framework. Longer contract lengths are encouraged for projects that are expensive to establish (e.g., native prairie) or require a longer period of time before the intended benefit is achieved (e.g., shelterbelts or wetland restoration, which will

take a number of years to establish and perform at their optimal level). Proposed term lengths should be outlined during the endorsement process with your Local GROW Committee.

Incentives

There are two types of landowner incentives:

1. *Establishment costs (infrastructure)*: The cost of establishing projects that provide enhanced or new EG&S. These costs include labour, equipment and material costs, and eligibility is at the discretion of the local GROW committee. In most cases, costs will be shared equally between the local **watershed district** and the individual producer.
2. *Annual payments* (not required for all projects): Annual incentive payments for acres enrolled in the local GROW program will be available for producers. Payment rates will vary based on lost agricultural revenues as a result of the project, level of risk for loss of EG&S, local land values, and the EG&S provided by the enrolled acres. Local GROW committees will establish annual payment rates for participating landowners (where required) based on the following guiding principles:
 - a. The ceiling for setting annual incentive payment rates will be based on land values. Assessed land values for the type of land on which the activity will take place (i.e., high value cropland, pasture land, or non-agricultural land) should be determined for each quarter section. Annual incentive payments should generally not exceed 3% of the average assessed value of the land.
 - b. Lost opportunity costs, economic benefits to the producer, and EG&S priorities will be used to “pro-rate” the incentive payment. For example, a project in which upland areas are converted from cropland to permanent forage or native grasses represents a “lost opportunity” for the producer (loss of annual crop production), but there may still be some economic benefit to the producer through haying or grazing whereby annual payments are reduced by 50%.

Note that Provincial and Federal Crown Lands are not eligible for annual incentive payments.

Additional guidance and examples are provided on the next page.

QUESTIONS TO ASK WHEN SETTING VALUE OF ANNUAL INCENTIVE PAYMENT:

Risk of Loss

- Are the ecological goods or services protected?
- Is that level of protection sufficient to avoid loss?
- What is the level of risk of loss?

Impact to the Farm Operation

- Is the producer modifying management to provide the EG&S?
- Is there an economic loss or benefit to the farm operation? At what level?

EXAMPLES:

Ecological Good or Service Scenario:	Class I and II Wetland Conservation on Annual Croplands.	Wetland Buffer Establishment on Annual Croplands.	Riparian Area – No direct pasture use; but access for off-site watering.
Are the ecological goods or services protected?	No	No	No
What is the level of risk of loss?	High	High	Low
Is the producer modifying management to provide the EG&S?	No, currently farming through these wetlands.	Yes, will convert cropland to grassland around the wetland.	No, riparian area is not used.
Is there an economic benefit to the farm operation to implement the project?	No, producer could easily register to drain these wetlands.	Yes, producer could hay the buffer, but doesn't get full economic benefit of annual cropping.	Yes, if producer pumps water from riparian area up to adjacent pasture for cattle.
Resulting Decision on Payment Approach	FULL ANNUAL INCENTIVE PAYMENT *Occasionally Cropped Wetlands are eligible for payments	FULL or PRO-RATED ANNUAL INCENTIVE PAYMENT – pro-rated payment (50%) when conditions allow for haying.	NO INCENTIVE PAYMENT REQUIRED – however, capital costs for fencing and watering system may be cost-shared under GROW

GROW ACTIVITY CATALOGUE

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees should consider their options to maximize provision of EG&S in Manitoba watersheds.

GROW Activity: Water Retention

Water retention projects increase adaptive capacity for climate change, landscape and ecosystem resiliency, including reducing peak flows and enhancing water supply opportunities for agricultural use. Water retention projects should enhance water management capabilities at various scales, including on-farm and watershed scales. Projects including small dams, temporary backflows, or on-farm water retention basins can reduce flooding downstream, improve water quality, and provide local habitat benefits.

The purpose of the water retention activity is to build structures that improve the management of surface water throughout a watershed to protect against flooding, drought and the impacts of climate change, and provide:

- Enhanced water storage;
- Reduced peak flows, which can moderate the timing and volume of runoff and reduce negative impacts downstream;
- Improved water quality by capturing sediments, nutrients, contaminants and pesticides;
- Protection to aquifers and enhancement of recharge;

Eligible Practices:

- Small dam construction
- Culvert re-sizing, berms and controlled tile- or surface- drain outlets

Ineligible Practices:

- Water retention activities designed for the purpose to consolidate wetlands

Notes:

- Preference should be given to projects that provide multiple benefits.
- Projects will be required to obtain all necessary licenses, permits, and approvals prior to construction.

Metric for reporting:

Acre-feet of storage, contributing area managed by structure, potential peak flow reductions.

Terms:

Conservation contracts will adhere to guidelines established on page 10. Conservation contracts for these activities should be 10 year terms.

GROW Activity: Wetland Conservation, Enhancement, or Restoration

A wetland is a permanently or temporarily water-saturated area characterized by distinct plant and soil types. Wetlands in agro-Manitoba have been lost and degraded at an alarming rate because of human activities such as drainage. The benefits derived from wetlands are extensive: wetlands help to prevent flooding, filter and purify water, recharge groundwater, maintain baseflow to waterways (especially important during dry periods), reduce erosion and provide extensive habitat to support biodiversity.

In southern Manitoba, Class I and II wetlands as classified in the Steward and Kantrud classification scheme are at high risk of loss. An estimated 40 to 75% of Manitoba's original wetlands have been lost, and Manitoba continues to lose about 0.5% of remaining wetlands in agricultural areas annually (Watmough *et al.*, 2017). The Aspen Parkland Ecoregion (which includes most of the "prairie potholes") is particularly vulnerable to wetland loss.

In Manitoba, The Water Rights Act, Regulation, and policies protect Class IV and V wetlands outright and Class III wetland loss can be mitigated if licensed for drainage. Drainage of Class I and II wetlands can proceed through a new streamlined authorization/registration approach. As a result, valuable Class I and II wetlands are vulnerable to drainage.

The purpose of the Wetland Activity is to conserve, enhance and/or restore wetlands to provide ecological goods and services that include:

- Enhanced water storage;
- Reduced peak flows, which can moderate the timing and volume of runoff and reduce negative impacts downstream;
- Improved water quality by capturing sediments, nutrients, contaminants and pesticides;
- Protection to aquifers and enhancement of recharge;
- Improved wildlife habitat and biodiversity; and
- Increased carbon sequestration.

Eligible Practices:

- **Conservation** of existing Class I and II wetlands on private lands
 - Priority will be for temporary wetlands in annual cropland and secondary consideration for wetlands in forage and pasture land of higher classed soils.

- **Enhancement** of existing wetlands on private lands to provide measurable incremental increases in wetland benefits. For example, re-establishing a perennial upland buffer (inter-pothole seeding) around a wetland to limit mechanical disturbance, fencing, off-site watering, grazing management to limit grazing disturbance, or other types of projects that would improve wetland health and benefits.
- **Restoration** of drained or degraded wetlands on private lands. For example, this may include plugging surface drains or re-establishing natural topographic contours.

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

While wetland restoration is important, conservation and enhancement of existing at-risk wetlands may be more a cost-effective approach. Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees should consider ways to maximize provision of ecological goods and services in Manitoba watersheds.

Ineligible Practices:

- Projects that are part of a compensation requirement under The Water Rights Act are not eligible for funding under GROW.

Notes:

- Projects will be required to obtain all necessary licenses, permits, and approvals prior to construction.

Reporting Metrics:

- Acres conserved, restored or enhanced, acre-feet of water storage, wetland classification, estimated GHG reduction.

Terms:

Conservation contracts will adhere to guidelines established on page 10. Conservation contracts for these activities should be 10 year terms.

GROW Activity: Riparian Area Management

Riparian areas are the vegetated (trees, shrubs and herbs) zones adjacent to rivers, streams, lakes and wetlands. A riparian area is considered a transition zone or interface between a waterbody or wetland and the surrounding drier upland.

Riparian areas need to be healthy to function at a high level. Healthy riparian areas can produce an abundance of forage, and provide shelter for livestock and maintain habitat for wildlife and fish. A producer can enhance economic and environmental productivity by improving both the condition and function of a riparian area.

The purpose of Riparian Area Management is to conserve, enhance and/or restore healthy riparian areas to provide:

- improvements to surface water quality, by capturing sediments, pathogens, nutrients and pesticides;
- water storage and flow reductions that reduce downstream flooding during high water events;
- greater landscape resiliency to the impacts of climate change;
- carbon storage and sequestration;
- riverbank and shoreline stabilization and erosion control; and,
- wildlife habitat and continuity and greater biodiversity through the re-establishment or rehabilitation of riparian vegetation.

Eligible Practices:

- **Conservation** of existing healthy riparian areas on private lands.
- **Enhancement** of existing riparian areas on private lands that result in measurable incremental benefits. For example, re-establishing riparian vegetation or other types of projects that would improve riparian health and function.
- **Restoration** of degraded riparian areas. For example, this may include fencing that optimizes grazing impacts, alternative watering systems, improved stream crossings, constructed works to stabilize banks and prevent erosion, and establishment of riparian vegetation.

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

While riparian conservation is important, enhancement and restoration of existing riparian areas may also serve to secure valuable ecological services. Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees should consider their options to maximize provision of EG&S in Manitoba watersheds.

Ineligible Practices:

- Perimeter fencing for upland grazing management (unless included in management or enhancement of uplands - see *Uplands Activity*).

Notes:

- Only riparian areas are eligible under this category.
- Pipelines must provide a direct riparian benefit and cannot extend significantly beyond the riparian area (typically less than 300m in total length). Pipe extending from wet well or water source to nearby trough are eligible.
- Crossing improvements are not intended to add supplement access points to fields or pastures for convenience of farming operations and field access. Must display strong riparian benefits.

Metrics to Report on:

- Number and type of livestock excluded, kilometres fenced, acres seeded, acres protected by type (wooded, shoreline, wetland class, etc.), estimated GHG reduction.

Terms:

- Conservation contracts will adhere to guidelines established on page 10.
- Conservation contracts for these activities should be 5-10 year terms.

GROW Activity: Buffer establishment – shelterbelts, multi-species buffer strips

Buffers are natural or engineered transitions between landscape features managed for different outcomes – for example, shelterbelts between annual cropland and other features to reduce wind-based soil erosion; perennial cover buffers between field edges and riparian areas to protect riparian vegetation from chemical or mechanical disturbance.

Planting shelterbelts in yards, fields, around livestock facilities, and near dugouts offers many benefits from minimizing the impacts of wind, creating habitat and providing shelter to farmyards and livestock. Shelterbelts planted near annually cropped fields also reduce wind erosion, while providing yield benefits to adjacent crops. The objective of this activity is to help producers establish shelterbelts and simplify/incentivise their maintenance.

According to AAFC, eco-buffers are made up of multiple rows using variety of native trees and shrubs in a mixed planting arrangement. Unlike most traditional single or limited species shelterbelts, there is a much higher variety of woody plants in an eco-buffer. The plants are predominantly native trees and shrubs chosen from the local ecozone.

Buffers and grassed waterways are areas of permanent vegetation in low areas that have water flow in spring runoff or during heavy rain events. They are designed to convey concentrated runoff while preventing soil erosion, flood effects, the formation of gullies and nutrient and pesticide losses from a local collection area, between two bodies of water, or along a flowing waterbody.

The purpose of the Buffer Establishment Activity is to establish, enhance and/or restore shelterbelts or buffers that provide:

- reduced soil erosion;
- improved water conservation efforts;
- improved wildlife and pollinator habitat;
- increased crop yields;
- increased carbon sequestration;
- thermal protection for livestock;
- reduced surface runoff and enhanced water quality; and,
- stabilized stream banks.

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

While buffer establishment is important, restoration and enhancement of existing buffers may also serve to secure valuable ecological services. Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees should consider their options to maximize provision of EG&S in Manitoba watersheds.

Eligible Practices:

- **Establishment or Creation** of new buffers on private lands. This could also include a period of required maintenance, e.g., weeding, mulching and watering.
- **Enhancement** of existing buffers on private lands that result in measurable incremental benefits. For example, expanding existing buffers by adding new rows or inter-planting to increase species diversity within existing buffers.
- **Restoration** of degraded buffers. For example, this may include re-establishment of buffer vegetation, pruning and removal of dead or diseased trees.

Ineligible Practices:

- Tree species intended for harvesting for economic benefit (e.g. Christmas trees, fruit orchards, etc.).
- Purchase and relocation of ornamental trees.
- Purchase and relocation of established trees from non-nursery areas.
- Species that are extremely vulnerable to disease (e.g., emerald ash borer) or deemed to be invasive.

Metrics to Report on:

- acres seeded or planted, number of trees planted, acres protected by type (wooded, shoreline, wetland class, etc).

Terms:

- Conservation contracts will adhere to guidelines established on page 10.
- Conservation contracts for these activities should be 10 year terms.

GROW Activity: Upland area conservation, enhancement, or restoration

Natural upland areas, such as treed areas and grasslands, may require rejuvenation in order to function optimally. Some of these areas may also be vulnerable to conversion to other land uses, such as annual cropping or development. These natural areas are valued as they delay and reduce runoff from rain events and spring runoff thereby reducing flooding and erosion, and stabilizing soils. They can also increase groundwater recharge provide wildlife and pollinator habitat and biodiversity. Management of these areas through activities such as selective harvesting and replanting may be necessary to sustain ecological function.

Upland area conservation, enhancement, and/or restoration supports the health of natural areas to:

- improve the ecological function of natural upland areas;
- promote healthy wildlife and pollinator habitat, corridors and biodiversity;
- increase carbon sequestration and soil health;
- store water and reduce flooding; and,
- reduce soil erosion.

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

While natural upland area restoration is important, the conservation and enhancement of existing natural areas may also serve to secure valuable ecological services. Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees should consider their options to maximize provision of EG&S in Manitoba watersheds.

Eligible Practices:

- **Conservation** of existing native prairie or highly erodible upland areas on private lands.
- **Enhancement** of existing natural areas on private lands that result in measurable incremental benefits. For example, improved woodlot and native range management practices that enhance carbon sequestration and biodiversity.
- **Restoration** of soils, former natural areas or severely degraded existing natural areas. For example, this may include soil health crops, re-establishment of perennial native/tame cover on sensitive lands or reforestation of previous wooded areas. This could also include a period of required maintenance, e.g., weeding, mulching and watering.

Notes:

- Establishment of soil health crops could include cover crops, green manures and polycropping.
- Ineligible activities include fencing for rotational grazing management.

Metrics to Report on:

- Acres protected, restored or enhanced, acres of soil health crops established, changes in number and type of livestock managed, kilometres fenced, acres seeded, acres protected by type (wooded, grassland, etc.).

Terms:

- Conservation contracts will adhere to guidelines established on page 10.
- Conservation contracts for these activities should be 5 - 10 year terms.

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