A home-grown ecological goods and services program for Manitoba

GROW

Growing Outcomes in Watersheds

GUIDE 2021

THE CONSERVATION & GROW TRUSTS

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

Manitoba

TABLE OF CONTENTS

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 the conservation of natural areas and land use changes that provide EG&S on agricultural land. The program works with farmers to develop projects that work for their operations and maintain or improve local watershed health. 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 projects will help reduce flooding and drought vulnerability and improve water quality and nutrient management in Manitoba. The GROW framework is delivered by watershed districts in partnership with landowners, non-government organizations, and all levels of government. These partnerships are formalized as ***Local GROW Committees*** and guided by the provincial requirements for GROW.

This document describes 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 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 non-government funding sources, where priorities align with the local GROW framework.

Principles of GROW			
✔ Watershed-Based ✔ Locally-Driven	✔ Producer-Focused ✔ Measurable Outcomes	✔ Sustainable ✔ Balances Incremental with Existing EG&S	✔ Collaborative

Outcomes and Co-Benefits of GROW

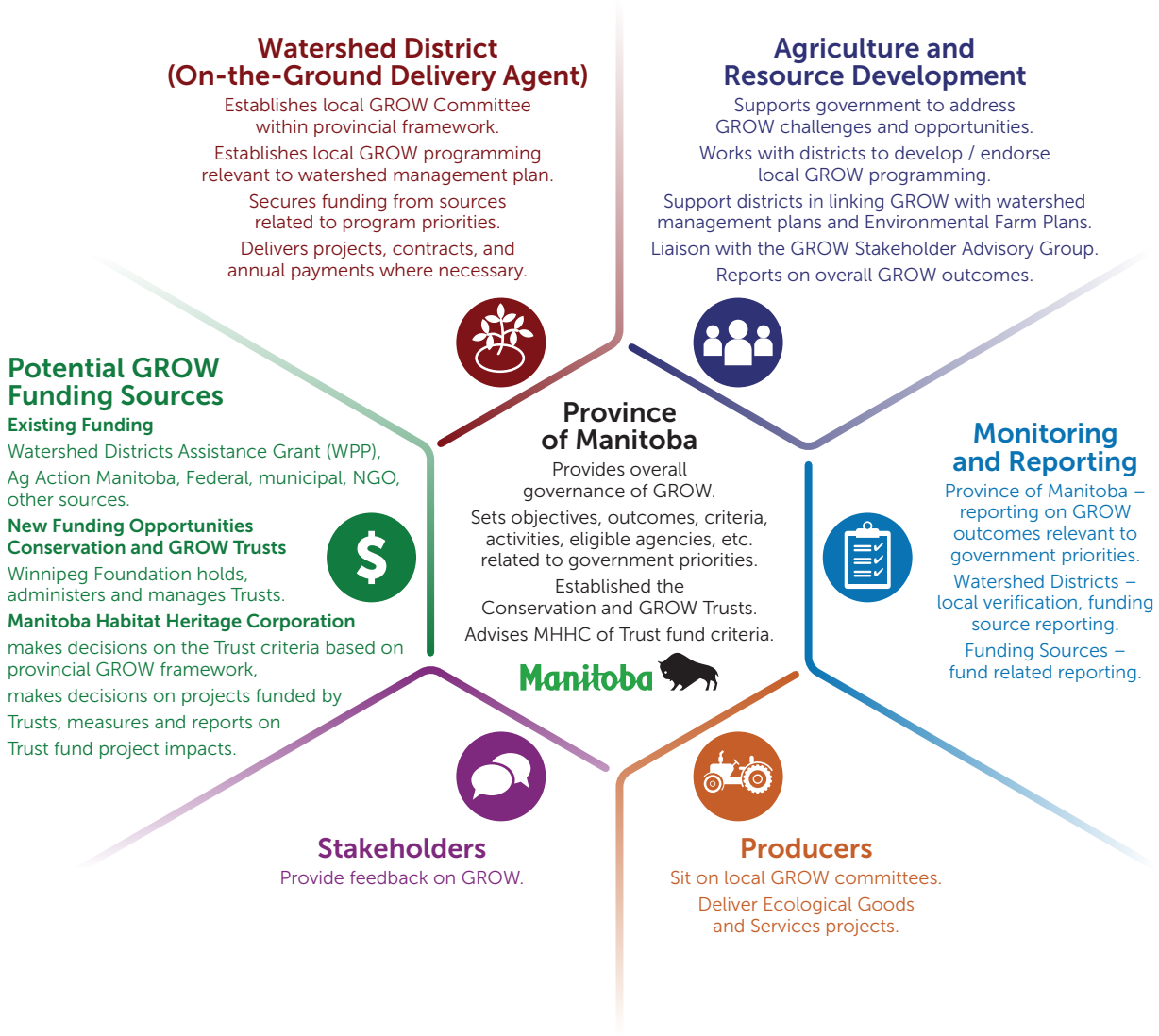
Priority Outcomes

- improved watershed resilience to the impacts of a changing climate (ex: extreme weather events, drought and flooding)
- improved water quality (ex: 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?

GROW is a targeted, watershed-based approach to delivery. Projects are implemented on a watershed basis, according to the principles, objectives and outcomes of GROW. Eligible projects are limited to working lands within Agro-Manitoba. Each project addresses provincial outcomes and targets prioritized actions in integrated watershed management plans (IWMPs).

GROW is Locally Driven, Locally Delivered by

- ✔ 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 and integrated decision-making
- ✔ using a locally-targeted approach to improving watershed health

Locally-delivered and producer-focused: GROW is delivered by Manitoba's Watershed Districts. Each district delivering GROW establishes a Local GROW Committee that includes 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 (EFP) and participating producers should have an Environmental Farm Plan.

Balanced: GROW supports projects that sustain or restore EG&S 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 1 and 2 wetlands, native grasslands, grassed and treed areas on erodible slopes, etc.

Sustainable: Projects must demonstrate that EG&S 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 demonstrates evidence-based environmental improvements. Project monitoring and reporting on GROW metrics is required.

Partnership-focused: Collaboration with landowners, municipal governments, Indigenous communities, and other organizations enhances 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 an integrated 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 per cent local producers, watershed district manager and board, and other organizations.

3 Producer-Focused

- Agricultural producers complete projects on their working lands within agro-Manitoba.
- 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, they must adhere 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 endowed $204 million with The Winnipeg Foundation, made up of $102 million in The Conservation Trust (2018-19), $52 million in The GROW Trust (2019-20), and $50 million in The Wetlands GROW Trust (2019-20). Annual interest generated from the three trusts funds 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.

Manitoba Habitat Heritage Corporation (MHHC) administers and disburses revenues from the trusts through a proposal-based granting process. Watershed districts are eligible to apply for funding from the trusts to implement a local GROW program.

Starting A LOCAL GROW PROGRAM (LGP)

As GROW's primary delivery agents, **watershed districts** work with their provincial watershed planner to initiate a Local GROW Program (LGP) before applying to the GROW and Conservation Trusts. Staff from Watershed Districts and Programs (Manitoba Agriculture and Resource Development) assist districts in developing their LGP and funding proposals.

Trusts:
Watershed districts submit a letter of interest (LOI) proposing a Local GROW Program to MHHC and their intent to apply for funding from the trusts. Once the letter of interest has been approved by MHHC, watershed districts work with their watershed planner to complete a full funding application to the trusts.

Local GROW Committees (LGC)

Each watershed district establishes a Local GROW Committee, consisting of representatives of the following groups:

- Producers – at least 50 per cent (current or retired)
- Watershed District – board member(s) and manager or designated staff
- Ex-officio (non-voting members) representatives of provincial departments – watershed planner or farm production extension specialist
- Other optional members could include technical experts, non-government organizations, Indigenous communities, etc.

Local GROW Committees

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

Photo taken prior to mask use and physical distancing requirements.

ELIGIBLE GROW ACTIVITIES

GROW provides incentives for the delivery of EG&S on private lands in Agro-Manitoba. Incentives to landowners include cost-shared support for project establishment and/or annual incentive payments for land enrolled in the program.

GROW is locally led by producers and managed by watershed districts. It focuses on watershed health, management and resiliency. In addition to the seven guiding principles (found on page 7), GROW is:

- **Producer-delivered** – farmers cost-share in project establishment costs and maintain projects over time.
- **Voluntary** – producers can choose to participate in the program and sign a contract with their local watershed district.
- **Farming the best, conserving the rest** – sustainable production while conserving the EG&S of the working agricultural landscape.
- **Market-driven** – if annual incentive payments are warranted, payment rates are based on local land values, and factor in both the economic costs and environmental benefits.

GROW: Outcomes and Co-Benefits for Watershed Health

Priority Outcomes

- ✔ improved watershed resilience to the impacts of a changing climate (ex: extreme weather events, drought and flooding)
- ✔ improved water quality (ex: 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 focus on priority outcomes and co-benefits that are consistent with integrated watershed management plans. 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 (ex: shelterbelts and multi-species buffer strips)
- ✔ upland area conservation, restoration, or enhancement (ex: woodlot management, grassland conservation, converting marginal cropland to grassland, and soil health improvements)
- ✔ innovative approaches - other projects that provide innovative ideas to conserving or enhancing EG&S in Agro-Manitoba will also be considered

These activities require varying levels of landowner cost-shares, implementation and maintenance. Not all contracts will require annual incentive payments (see *Incentives*, page 12). When exploring projects and agreements with landowners, Local GROW Committees should focus on the following watershed features:

Wetlands: Wetlands store water, sediment, 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 1 and 2) wetlands not protected by legislation, regulation, or provincial policy, and therefore vulnerable to drainage
- wetland **enhancement and restoration** for all wetland classes

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**

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 (reducing erosion, improving both water holding capacity and carbon sequestration), biodiversity and habitat. Agreements with landowners should prioritize:

- upland area **enhancement and restoration**

Water Retention areas: Areas suitable for permanent or temporary water storage should be targeted and verified using technical data.

Additional information for Local GROW Committees to consider:

- GROW projects support incremental EG&S (additionality) through construction, restoration or enhancement activities.
- GROW projects also support 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 1 and 2 wetlands is a priority due to the public benefits and high risk of loss of these watershed features. Local GROW Committees should develop a targeted decision matrix based on EG&S benefits, lost opportunity costs for the producer, and risk level for loss, when considering annual incentive payments for conservation-based projects. A sample decision matrix is available from Watershed Districts and Programs Section staff.
- An innovative approach (ex: novel technology, delivery mechanism and practice) that supports GROW priority outcomes (as listed on page 5), and also meets one or more of the following criteria, may be considered for inclusion in a Local GROW Program:
  - addresses chronic watershed management issue(s) that have created local economic, social or environmental challenges (ex: conservation auction for projects that mitigate phosphorus-rich runoff into surface waters)
  - enables landowners to adopt innovative practices, supported by scientific research, to improve watershed resilience and/or water quality (ex: novel BMP)
- Some terminal basins programming may be considered an innovative approach within the Wetland Activity (see pages 16-18).

Prioritizing

- Program participation should be targeted based on watershed features and issues, as identified in IWMPs, where possible. If IWMPs do not include geographic target zones, Local GROW Committees should target areas based on technical and working knowledge of the watershed.
- Projects that include multiple GROW activities should be prioritized by Local GROW Committees. For example, a project that proposes to conserve Class 1 and 2 wetlands and establish permanent cover in a previously annually-cropped area of the quarter section should rank higher than a similar project that proposes just the establishment of permanent cover.
- Local GROW Committees will rate and rank individual projects based on GROW priority outcomes (see page 7), and local watershed priorities to determine the best local use of Trust funding for EG&S. A project prioritization template is available from Watershed Districts and Programs Section staff.

Conservation Contracts

In order to secure the delivery of EG&S and outcomes for watershed health over time, conservation contracts set out terms and conditions, including project details, maps, establishment costs, associated incentive payments (if required), maintenance requirements, and other duties and responsibilities of both the participating producer and local watershed district.

Local GROW Committees approve proposed term lengths, within activity guidelines (pages 14-23). Local GROW Committees should 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. The contract should include provision for the return of funds for projects that have not been implemented or have been terminated before the end of the contract period. Contract provisions should include 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 (ex: native prairie) or require a longer period of time before the intended benefit is achieved (ex: shelterbelts or wetland restoration).

Incentives

There are two types of landowner incentives:

1. Establishment costs (infrastructure): This is 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 Local GROW Committees. Landowner cost-shares may vary, depending on watershed district, Local GROW Program priorities, project type and local conditions.

2. Annual payments (not required for all projects): Annual incentive payments for acres enrolled in Local GROW Programs are available for producers. Local GROW Committees set annual payment rates for participating landowners (where required), based on the following guiding principle:

   Incentive payments should not exceed land rental rates for similar lands in the watershed district.

   Local GROW Committees must consider the following in the development of maximum incentive payment rates (see Appendix I for additional guidance):

   i. **Assessed Land Value** – What is the assessed value of land in the area or watershed?

ii. **Agricultural Capability (i.e., soil classes defined in the Canada Land Inventory)** – What is the capability of the soil to sustain agricultural crops, based on limitations due to soil properties, landscape features and climate?

iii. **Local demand/price factors** – Are there any external factors that are contributing to higher or lower land values or local land rental rates (ex: influence of urban areas on land assessment value, competition for available land to rent, etc.)?

In addition to the above factors, impacts on agricultural production also influence the final incentive payment. For example, projects that result in significant impacts to agricultural production potential may receive a higher payment than projects where agricultural production proceeds without impact. Justification for incentive payments should be documented, as noted in Appendix I.

Note that provincial and federal Crown Lands are not eligible for annual incentive payments.

GROW ACTIVITY CATALOGUE

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees should carefully 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 backfloods, 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
- other structures and activities for permanent or temporary water retention (ex: berms and gated culverts)

Ineligible Practices:

- water retention activities designed to consolidate wetlands
- irrigation infrastructure (although it could be integrated into an approved GROW-funded project at the landowner's expense)
- surface and sub-surface drainage excavation and installation (although it could be integrated into an approved GROW-funded project at the landowner's expense)

Notes:

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

Reporting Metrics:

- Structure footprint:
  acre feet of storage : Temporary
  acre feet of storage : Extended
  acre feet of storage : Permanent
  area of basin: Temporary
  area of basin: Extended
  area of basin: Permanent
- potential peak flow reductions
- number of producers
- number of producers with Environmental Farm Plans

Terms:

Conservation contracts will adhere to guidelines established on page 12. 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.

The Water Rights Act, regulation, and policies govern drainage practices in Manitoba. Under this regime, Class 4 and 5 wetlands are protected outright from drainage. Class 3 wetland loss requires compensation if licensed for drainage. Drainage of Class 1 and 2 wetlands can proceed through a new registration approach. As a result, valuable Class 1 and 2 wetlands across Agro-Manitoba are vulnerable to drainage.

In the Prairie Pothole Region of Manitoba, Class 1 and 2 wetlands as classified in the Stewart and Kantrud classification scheme are at high risk of loss. An estimated 40 to 75% of Agro-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.

Terminal (Closed) Basins are drainage basins that under normal circumstances retain and allow no outflow to other external bodies of water, such as rivers or other tributaries. For the purposes of GROW, these defined basins have a significant contributing area that converges into a lake that equilibrates through evaporation. Basins with subsurface outflows which eventually lead to another source are not considered terminal basins. For the purposes of GROW, basins that have a relatively small, localized drainage area are not considered Terminal Basins.

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, and contaminants;
- Protection to aquifers and enhancement of recharge;
- Improved wildlife habitat and biodiversity; and
- Increased carbon sequestration.

Eligible Practices:

- **Conservation** of **existing** Class 1 and 2 wetlands on private lands with priority for:
    - Class 1 and 2 wetlands on annual croplands due to a higher risk of loss. Continued cropping of these wetlands is permitted as long as wetlands are not drained or filled. Class 1 and 2 wetlands in seeded forages on Canada Land Inventory Class 1-3 soils are eligible, but those in Canada Land Inventory Class 4, 5 or 6 soils are of low priority.

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

Since every situation is unique across Manitoba's diverse landscape, Local GROW Committees must consider ways to prioritize projects that provide additional EG&S when developing projects that conserve high value, at-risk natural capital.

- Class 1 and 2 wetlands less than 5 acres in size should be prioritized due to higher risk of loss and greater biodiversity benefits.
- Local areas of the watershed with greater densities of wetlands (for example: a minimum of 20 basins of all classes or 20% of wetland area per quarter section).

- **Enhancement** of existing wetlands (all classes) 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, 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.
- **Terminal basins** as defined above, may be considered in a Local GROW Program; however, efforts must focus only on extreme or chronic situations tied to a significant basin (ex: Lake). Incentives must have a commitment by the landowner to convert land use from annual cropland to permanent cover (when available), and could be offered for 5-10 year term lengths for flooded acres above the natural, average historic range of water levels.
  - Specific annual incentive rates for terminal basin programming should be established and approved as part of GROW funding applications to take into account fluctuating land values with chronic flooding.

Ineligible Practices:

- Projects that are part of a compensation requirement under The Water Rights Act.
- Contracts that pay incentives for flooded acres that:
  - Are not in a terminal basin, as defined above,
  - Do not have an associated land use conversion commitment from the landowner,
  - Were not previously annual cropped lands prior to the extreme situation (ex: permanent cover lands that were flooded as a result of higher water levels of a terminal basin).

Notes:

- Projects will be required to obtain all necessary licenses, permits, and approvals prior to construction.
- Projects secured under GROW are not eligible as future compensation projects for authorizations under The Water Rights Act.
- Decommissioning of projects secured under GROW are subject to future legislation, regulation and policies. If a landowner wishes to decommission a project after the contract has expired, they will be required to obtain all the necessary licences, permits and approvals that are in existence at the time of decommissioning.

Reporting Metrics:

- acres conserved, restored or enhanced
- acre-feet of water storage
- wetland classification
- estimated GHG reduction
- number of producers
- number of producers with Environmental Farm Plans.

Terms:

- Because continued cropping of Class 1 and 2 wetlands will not affect eligibility, as long as wetlands are not drained or filled, incentive payments are recommended to be no more than 75% of the maximum incentive rate established by the Local GROW Committee (as described on page 12 and in Appendix I).
- Because terminal basin programs can provide annual incentive payments for annual cropland flooded acres, incentive payments should be designed to offset annual costs associated with the land (ex. taxes). If extreme conditions subside, a new contract can be negotiated for any additional practices and the incentive payment could be increased to reflect those additional practices as a new project.
- Conservation contracts will adhere to guidelines established on page 12.
- Conservation contracts for wetland activities should be 10 year terms. Terminal basins contracts should be 5 to 10 year terms – a new contract can be negotiated if extreme situations recede during the initial term and additional ecological goods and services are added to the project.
- Maintenance requirements and agricultural use will be outlined in detail within conservation contracts.

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 or restore 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
- wildlife habitat and continuity, and greater biodiversity through the re-establishment or rehabilitation of riparian vegetation

Eligible Practices:

- **Enhancement** of existing riparian areas on private lands that result in measurable incremental benefits. 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 re-establishment of riparian vegetation.
- **Restoration** of degraded riparian areas. For example, constructed works to stabilize banks and prevent

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

While riparian conservation is important, enhancement and restoration of riparian areas may be prioritized. 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.

erosion, re-establishing important riparian vegetation (ex: native trees or shrubs) or other types of projects that would improve riparian health and function.

- **Conservation** of existing healthy riparian areas on private lands.

Notes:

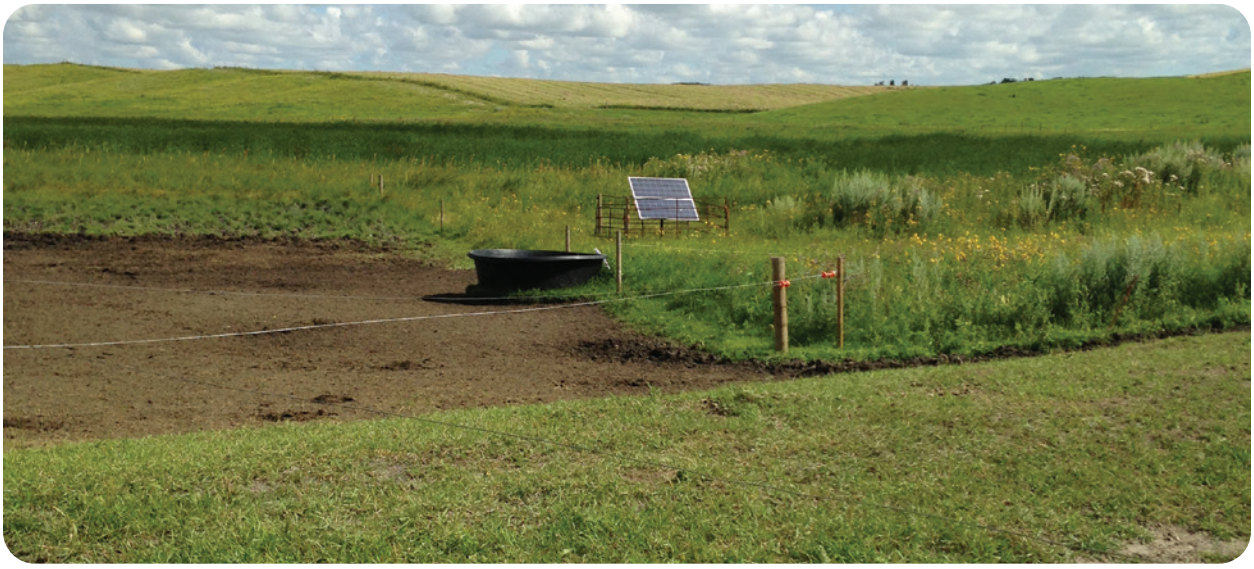
- Only riparian areas are eligible under this category.
- Pipelines must provide a direct riparian benefit and cannot extend significantly beyond the riparian area (typically less than 300 m in total length). Pipelines extending from wet well or water source to a nearby trough are eligible.
- Crossing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

Reporting Metrics:

- number and type of livestock excluded
- kilometres fenced
- acres enhanced or restored
- acres protected by type (wooded, shoreline, wetland class, etc.)
- number of trees planted
- estimated GHG reduction
- number of producers
- number of producers with Environmental Farm Plans

Terms:

- Conservation contracts will adhere to guidelines established on page 12.
- Conservation contracts for these activities should be five to 10-year terms.
- Maintenance requirements and agricultural use will be outlined in detail within conservation contracts.



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, to 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 support their maintenance.

Eco-buffers are made up of multiple rows, using a 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 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
- stabilized stream banks

Eligible Practices:

- **Establishment or Creation** of new buffers (shelterbelts, perennial cover buffers, or grassed waterways) on private lands. This could also include a period of required maintenance (ex: 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

CONSIDERATIONS FOR LOCAL GROW COMMITTEES

While buffer establishment is important, restoration and enhancement of existing buffers may also serve to provide 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.

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 (ex: Christmas trees and fruit orchards).
- Purchase and relocation of ornamental trees.
- Purchase and relocation of established trees from non-nursery areas.
- Species that are extremely vulnerable to disease (ex: emerald ash borer) or deemed to be invasive.

Reporting Metrics:

- acres seeded or planted
- number of trees and shrubs planted
- acres protected by type (ex: wooded, shoreline and wetland class)
- estimated GHG reduction
- number of producers
- number of producers with Environmental Farm Plans

Terms:

- Conservation contracts will adhere to guidelines established on page 12.
- Conservation contracts for these activities should be 10-year terms.
- Maintenance requirements and agricultural use will be outlined in detail within conservation contracts.

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 and provide wildlife and pollinator habitat, thus enhancing biodiversity. Many areas of native grassland serve as important habitat for species at risk. Enhancement of grassland areas may require changes in grazing management practices and other activities, such as controlled burns. Management of these areas through activities such as selective harvesting and replanting or brush management, may be necessary to sustain ecological function.

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

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

Eligible Practices:

- **Conservation** of existing native prairie and woodlands or highly erodible upland areas on private lands.
- **Enhancement** of existing natural and managed 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 (ex: weeding, mulching and watering).
- Permanent or alternative fencing and alternative watering systems are eligible under GROW to improve grazing strategies that support grassland and pasture health in sensitive and marginal areas.
- Establishment of soil health crops could include cover crops, green manures and polycropping:
    - Cover crops are defined as low-growing understory crops that often grow outside the main-crop growing period, and are typically not harvested for economic benefit. Cover crops offer services to the cropping systems, such as adding soil N, reducing soil erosion, increasing soil quality and suppressing weeds.
    - Green manure crops are crops grown specifically to replenish the soil system, typically with N, but also P and other nutrients.

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.

- Polycropping: Cover crops are also referred to as polycrops, polycultures and cocktail crops, when diverse mixtures of crop types are grown together.

Ineligible Practices:

- Farm equipment used for conventional practices, including conservation and zero tillage equipment (not funded through GROW; however, may be an important component of soil management at landowner's expense).
- Practices that are considered standard for most farmers in a region (ex: zero tillage).

Notes:

- Brassica species are not recommended in cover crop mixtures, especially if the current crop rotation includes other Brassica species (ex: canola or mustard) as the main crop.

Reporting Metrics:

- 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 (ex: wooded or grassland)
- estimated GHG reduction
- number of producers
- number of producers with Environmental Farm Plans

Terms:

- Conservation contracts will adhere to guidelines established on page 12.
- Conservation contracts for most of these activities should be five to 10-year terms. Soil health crop establishment contracts could be shorter (three years) to encourage initial establishment of trial cover crops.

APPENDIX I
Guidance for Local GROW Committees: Determining Incentive Payment Rates

Principle:

INCENTIVE PAYMENTS SHOULD NOT EXCEED LAND RENTAL RATES
FOR SIMILAR LANDS IN THE WATERSHED DISTRICT.

In development of *maximum* incentive payment rates, watershed districts must consider the following:

1. **Assessed Land Value** – What is the assessed value of land in the area or watershed?
2. **Agricultural Capability (i.e., soil classes defined in the Canada Land Inventory)** – What is the capability of the soil to sustain agricultural crops, based on limitations due to soil properties, landscape features and climate?
3. **Local demand/price factors** – Are there any external factors that are contributing to higher or lower land values or local land rental rates (ex: influence of urban areas on land assessment value, competition for available land to rent)?

NOTE:

- A maximum payment value can be determined for the entire watershed or subwatershed, meaning maximum payment rates can vary depending on the watershed, local land values, production value, and other price factors.
- A maximum payment value would be used in cases where projects are resulting in 100 per cent loss of production value on the land (for example, cropland whereby the land is converted to grass, trees, etc., with no agricultural use).
- The *final* incentive payment to a landowner should be pro-rated, based on any economic gain or loss on the enrolled acres (ex: hay and grazing income). 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 the producer may obtain economic benefit in years that are favourable for haying or grazing. Annual payments would therefore be reduced by 50 per cent (or another agreed-upon amount) in years in which haying or grazing occurs.

EXCEPTIONS (must be documented):

- areas where land values are depressed or elevated by other pressures (ex: demand for manure application, urban development pressures, etc.)
- where Local Grow Committee (LGC) has identified a strong linkage to IWMP priority actions
- areas deemed to be at risk that are of significant provincial importance (ex: very high EG&S value)

OUTCOMES:
Applications to the Conservation and GROW Trusts will identify standard incentive payment rates and will be evaluated against each other through a competitive funding application process.

Standard incentive payment rates will be defensible in an audit, due to the documentation of the above considerations.

ASSISTANCE:

Watershed Districts and Programs Section staff are available to support districts in the development of a standard incentive payment and pro-rated payment scheme, based on the guidance above. Please contact your watershed planner to assist the district and the Local GROW Committee.

Notes: