



**Growing Assurance – Ecological Goods and Services  
Beneficial Management Practice (BMP)**

**Water Retention Structures**

**Background/Objective:**

Innovative, multi-purpose water retention projects provide adaptive capacity for climate change, landscape resiliency, flood mitigation, water supply for irrigation or livestock watering and ecosystem resilience. Projects could include small dams or berms for headwater retention, or on-farm retention basins designed for multi-benefit, including the reduction of nutrient loading, mitigation of flooding and to nutrient recycling.

By building a water retention structure, you can:

- Store water to reduce effects of flooding or drought
- Retain water for agronomic use
- Improve water quality by capturing sediments, nutrients and pesticides
- Improve ecosystem resilience

**Practices eligible for funding:**

| <b>Eligible Practices</b>   | <b>Practice Code</b> |
|---|----------------------|
| Engineering and consultation fees   | 0701                 |
| Construction of water retention structures to reduce effects of flooding and drought and for nutrient recovery and other multi-benefits | 0702                 |

**Eligible and Ineligible Costs:**

|                         |   |
|-------------------------|---|
| <b>Eligible costs</b>   | Engineering and consultative fees                   |
|                         | Geotechnical costs                                  |
|                         | Earthwork   |
|                         | Construction materials                              |
|                         | Incremental labour costs                            |
| <b>Ineligible costs</b> | Use of applicant's equipment (at set program rates) |
|                         |   |



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**Wetland Restoration**

**Background/Objective:**

A wetland is a seasonally or permanently water saturated area that takes on characteristics of a distinct ecosystem. Wetlands in agro-Manitoba have been lost and degraded at an alarming rate as a result of human activities. The benefits derived from wetlands are extensive and extend beyond the agricultural sector. Wetlands help to prevent flooding, filter and purify water, recharge ground water, reduce erosion and provide extensive biodiversity and habitat.

By restoring a wetland, you can:

- Reduce surface runoff and provide water storage
- Improve water quality by capturing sediments, nutrients and pesticides
- Reduce soil erosion;
- Improve wildlife habitat; and
- Increase carbon sequestration.

**Practices eligible for funding:**

| Eligible Practices  | Practice Code |
|---|---------------|
| Engineering and consultative fees to restore a previously drained wetland | 0801          |
| Earthwork, ditch plugs, and equipment rental                              | 0802          |

**Eligible and Ineligible Costs:**

|                         |   |
|-------------------------|---|
| <b>Eligible costs</b>   | Consultative fees                                   |
|                         | Geotechnical costs                                  |
|                         | Earthwork   |
|                         | Construction materials                              |
|                         | Incremental labour (at set program rates)           |
| <b>Ineligible costs</b> | Use of applicant's equipment (at set program rates) |
|                         |   |

**Notes:**

- Funding is provided to restore a previously drained wetland. To construct a wetland where one did not previously exist, please see the Constructed Wetlands BMP.



## Growing Assurance – Ecological Goods and Services Beneficial Management Practice (BMP)

### Constructed Wetlands

#### Background/Objective:

Wetlands can be constructed to emulate ecological benefits that result from naturally occurring wetlands. Wetlands are created in order to address objectives of improving water quality and managing flow from farmyards and sources of wastewater, while integrating wetland infrastructure and enhancing biodiversity. The intent is for the constructed wetland to prevent flooding, filter and purify water, recharge ground water, reduce erosion and provide extensive biodiversity and habitat.

By constructing a wetland, you can:

- Provide water storage;
- Reduce surface runoff and enhance water quality;
- Reduce soil erosion;
- Improve wildlife habitat; and
- Increase carbon sequestration.

#### Practices eligible for funding:

| Eligible Practices  | Practice Code |
|---|---------------|
| Engineering and consultative fees to construct a wetland for wastewater treatment where one did not previously exist. | 0901          |
| Earthwork, equipment rental and consultant fees   | 0902          |

#### Eligible and Ineligible Costs:

|                         |   |
|-------------------------|---|
| <b>Eligible costs</b>   | Engineering and consultative fees                   |
|                         | Material, earthwork and equipment rental fees       |
|                         | Incremental labour (at set program rates)           |
|                         | Use of applicant's equipment (at set program rates) |
| <b>Ineligible costs</b> |   |

#### Notes:

- Funding is provided to construct a wetland where one did not previously exist. To restore a wetland that was previously drained, please see the Wetland Restoration BMP.



## Growing Assurance – Ecological Goods and Services Beneficial Management Practice (BMP)

### Riparian Area Enhancement

#### Background/Objective:

Riparian areas are the “green zones” around rivers, streams, lakes, and wetlands. A riparian area is considered a transition zone or interface between the surface water of a river, stream, wetland or lake and the surrounding drier upland.

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

By improving riparian areas, you can:

- build and maintain banks and shorelines;
- protect aquatic life;
- store water and reduce flood energy during high water events;
- maintain the quality of surface water; and
- ensure the riparian areas serve as islands and corridors for biodiversity.

#### Practices eligible for funding:

| Eligible Practices   | Practice Code |
|--|---------------|
| Alternative watering systems (i.e.: solar, wind or grid power) to manage livestock: pumping, delivery, storage, power and pipeline construction equipment – only riparian pastures are eligible                      | 1001          |
| Buffer Establishment: establishment of forages   | 1002          |
| Fencing to manage grazing and improve riparian condition/function  | 1003          |
| Native rangeland restoration or establishment: seeding and planting of native plant species and maintenance of the restored or established site.   | 1004          |
| Improved stream crossings: costs associated with improved structures or removal of structures to enhance riparian condition.   | 1005          |
| Constructed works to stabilize riparian areas: contour terraces, gully stabilization, bank stabilization, drop inlet and enhanced infiltration systems, in-channel control, retention ponds and erosion control dams | 1006          |

#### Eligible and Ineligible Costs:

|                       |   |
|-----------------------|---|
| <b>Eligible costs</b> | Engineering and consultative fees                 |
|                       | Fencing/construction materials and fees           |
|                       | Watering systems equipment and installation costs |
|                       | Seed and seeding operation for re-vegetation      |

|                         |   |
|-------------------------|---|
|                         | Incremental labour (at set program rates)           |
|                         | Use of applicant's equipment (at set program rates) |
| <b>Ineligible costs</b> | Perimeter fencing for upland grazing management     |

**Notes:**

- **Only riparian pastures 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).
- Pipelines associated with an alternative water system (e.g. pipe from wet well or water source to nearby trough) are also eligible.



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**Natural Area Maintenance and Enhancement**

**Background/Objective:**

Natural areas such as treed areas and grasslands require maintenance of their ecological integrity in order to function optimally. These natural areas are valued as they intercept rain, delay and reduce runoff, increase groundwater recharge, slow spring melt, reduce flooding, stabilize soils and reduce erosion while providing wildlife habitat and biodiversity. Management of these areas through activities such as selective harvesting and replanting is required in order to sustain ecological function.

By managing natural areas, you can:

- Improve the ecological function of natural areas;
- Promote healthy wildlife habitat, corridors and biodiversity;
- Increase carbon sequestration ;
- Store water and reduce flooding; and
- Reduce soil erosion.

**Practices eligible for funding:**

| <b>Eligible Practices</b>   | <b>Practice Code</b> |
|---|----------------------|
| Renovation and enhancement of naturally vegetated areas to improve the ecological health and function of forested areas, grasslands, wetlands or riparian habitats. | 1101                 |
| Native trees and shrubs, native perennial forage seed, seeding, weed control, and materials required for renovation and enhancement of natural areas.               | 1102                 |

**Eligible and Ineligible Costs:**

|                         |  |
|-------------------------|--|
| <b>Eligible costs</b>   | Site preparation   |
|                         | Planting   |
|                         | Weed control (e.g. mulches)  |
|                         | Temporary fencing  |
|                         | Tree and shrub seedlings or cuttings for appropriate species   |
|                         | Perennial forage seed  |
|                         | Incremental labour (at set program rates)  |
| <b>Ineligible costs</b> | Use of applicant's equipment (at set program rates)  |
|                         | Tree and plant species intended for harvesting for economic benefit (e.g. Christmas trees, fruit orchards, etc.) |
|                         | Maintenance and renovation costs incurred after the first year   |
|                         | Purchase and relocation of established trees   |

**Notes:**

- Species used should be adapted to Manitoba conditions, hardy and non-invasive.
- The use of certified seed (or an equivalent) is recommended to ensure high quality in terms of germination and purity.



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## **Buffer and Grassed Waterway Establishment**

**Background/Objective:**

Buffers and grassed waterways are areas of permanent vegetation bordering water that help to maintain air, soil and water quality. Buffer and grassed waterway establishment is designed to convey concentrated runoff while preventing soil erosion, flood effects, the formation of gullies and nutrient and pesticide losses from the site.

By establishing a buffer or grassed waterway, you can:

- Reduce soil erosion
- Improve water quality by trapping sediment and enhancing filtration of nutrients and pesticides
- Stabilize stream banks
- Provide biodiversity and habitat

**Practices eligible for funding:**

| <b>Eligible Practices</b>   | <b>Practice Code</b> |
|---|----------------------|
| Establishment of perennial tame or native forages along waterways or natural runways. Eligible expenses include seed, seeding, weed control and materials required for grassed waterway construction. | 1201                 |

**Eligible and Ineligible Costs:**

|                         |  |
|-------------------------|--|
| <b>Eligible costs</b>   | Consultative fees  |
|                         | Site preparation   |
|                         | Planting   |
|                         | Weed control (e.g. mulches)  |
|                         | Temporary fencing  |
|                         | Tree and shrub seedlings or cuttings for appropriate species   |
|                         | Incremental labour (at set program rates)  |
| <b>Ineligible costs</b> | Use of applicant's equipment (at set program rates)  |
|                         | Tree species intended for harvesting for economic benefit (e.g. Christmas trees, fruit orchards, etc.) |
|                         | Maintenance and renovation costs incurred after the first year   |
|                         | Purchase and relocation of established trees   |

**Notes:**

- Species used should be adapted to Manitoba conditions, hardy and non-invasive.
- The use of certified seed (or an equivalent) is recommended to ensure high quality in terms of germination and purity.



## Growing Assurance – Ecological Goods and Services Beneficial Management Practice (BMP)

### Perennial Cover for Sensitive Land

#### Background/Objective:

The long-term health of soils is impacted by degradation processes such as erosion and salinity. While erosion occurs on all soils, its rate varies considerably depending on soil type, landscape characteristics, and management practices. Salinity levels can also be affected by a producer's management practices. The objective of this BMP is to minimize erosion and salinization in sensitive areas on agricultural land.

In addition, the conversion of sensitive lands from annual crop production to perennial cover can improve levels of soil organic matter and may contribute to improved grazing and increased biodiversity. Converting sensitive lands from annual crop rotation to perennial forages serves to reduce greenhouse gas emissions by:

- reducing nitrogen fertilizer application rates on land that tends to be less productive (i.e. less uptake of the nitrogen fertilizer applied). This will reduce the production of the greenhouse gas nitrous oxide (N<sub>2</sub>O).
- increasing carbon sequestration through the production of perennial forages. Perennial forages remove carbon dioxide (CO<sub>2</sub>) from the atmosphere and store it in plant biomass and soil.

Specific soil risk areas include:

- Areas with concentrated water flow; or areas with a significant runoff risk;
- Steep slopes susceptible to water erosion;
- Extremely sandy soils susceptible to wind erosion; and
- Land affected by soil salinity.

#### Practices eligible for funding:

| Eligible Practice   | Practice Code |
|---|---------------|
| Establishment of tame or native perennial forages on sensitive land (e.g. severely erodible or saline soils). Eligible expenses include seed, seeding and weed control. | 1301          |

#### Eligible and Ineligible Costs:

|                         |  |
|-------------------------|--|
| <b>Eligible costs</b>   | Costs of seed, seeding and weed control                        |
|                         | Incremental Labour (at set program rates)                      |
|                         | Applicant's equipment use (at set program rates)               |
| <b>Ineligible costs</b> | Fencing for grazing management                                 |
|                         | Cover crops/nurse crops to aid in perennial crop establishment |
|                         | Pre-seeding field preparation                                  |

**Notes:**

- The intention of this BMP is to maintain permanent perennial cover on sensitive land; therefore, the land should not be converted from perennial forages to annual crops as the environmental benefits would not be upheld.
- Species used should be adapted to Manitoba conditions, hardy and non-invasive.
- The use of certified seed (or an equivalent) is recommended to ensure high quality in terms of germination and purity.



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**Shelterbelt/Tree Establishment**

**Background/Objective:**

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. The objective of this BMP is to help producers establish shelterbelts and simplify their maintenance.

By establishing shelterbelts, you can:

- Reduce soil erosion;
- Improve water conservation efforts;
- Use less energy (e.g. heating costs for home, barn, shop, etc.);
- Improve wildlife habitat;
- Increase crop yields;
- Have better control of farmyard dust;
- Increase carbon sequestration;
- Provide thermal protection for livestock;
- Enhance herd productivity by reducing heat and cold stress; and
- Reduce surface runoff and enhance water quality.

**Practices eligible for funding:**

| Eligible Practices   | Practice Code |
|--|---------------|
| Establishment of windbreaks, shelterbelts and block planting to provide shelter from the wind and to protect soil from erosion, or to reforestation of existing areas. Eligible expenses include native tree/shrub and materials required for shelterbelt establishment. | 1401          |

**Eligible and Ineligible Costs:**

|                         |  |
|-------------------------|--|
| <b>Eligible costs</b>   | Site preparation   |
|                         | Planting   |
|                         | Weed control (e.g. mulches)  |
|                         | Irrigation (e.g. trickle or drip systems)  |
|                         | Temporary fencing  |
|                         | Tree and shrub seedlings or cuttings for appropriate species   |
|                         | Incremental labour (at set program rates)  |
| <b>Ineligible costs</b> | Tree species intended for harvesting for economic benefit (e.g. Christmas trees, fruit orchards, etc.) |
|                         | Maintenance and renovation costs incurred after the first year   |
|                         | Purchase and relocation of established trees   |

**Notes:**

- Species used should be adapted to Manitoba conditions, hardy and non-invasive.