Assiniboine West Watershed District

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DUGOUT RESILIENCY PROGRAM FACT SHEET

Funding for this program has been provided through the Conservation Trust and delivered by the Assiniboine West Watershed District.

Dugout Resiliency Program Overview:

This program delivers site-specific drought risk evaluations and recommends management practices to improve water security concerns for on-farm water sources.

Using spatial and mapping data modelling, the project evaluates landscape-level factors that influence surface water movement, snow accumulation, and runoff dynamics. These evaluations are used to determine drought risk, specifically as it relates to dugout recharge in runoff-dependent systems.

Participating landowners will receive a customized report that outlines risks and recommendations for management strategies to mitigate future drought impacts.

Background

Drought has wide-ranging impacts on watershed systems, especially in regions where agricultural water supplies depend on surface runoff and snowmelt. Surface water availability can be a major limiting resource for livestock. Climate patterns and landscape features can influence water movement and storage, which significantly impacts the reliability of dugout recharge and other on-farm water sources.

Strategically planted, snow-capturing vegetation (such as living snow fences) are a cost-effective approach to mitigating these risks. The maximum delivery of benefits from living snow fences are not immediate, so early identification and implementation is crucial.

Benefits of Living Snow Fences

Living snow fences consist of strategically planted rows of trees, shrubs, and grasses that form a barrier to blowing snow. Once established, they require minimal maintenance.

- Improved water security
    - Living snow fences provide alternative snow catch and slow surface runoff
    - Improves water infiltration
    - Increases recharge of dugouts
- Reduce erosion
    - acts as a windbreak, which reduces soil loss and minimizes wind damage to crops
- Promotes biodiversity and increases wildlife habitat availability
    - Provides habitat for birds, pollinators, and beneficial insects

    - Enhances ecological diversity on agricultural lands
- Influences nutrient distribution and cycling on the landscape
    - Reduces nutrient accumulation in water systems
    - improves nutrient retention in targeted areas

Dugout Resiliency Program Approach

1. Interested landowners enroll through the watershed district
2. AWWD evaluates on-farm water sources using geographical mapping and spatial modelling
3. An evaluation report is created with input from professionals
4. Site-specific evaluation and recommended natural infrastructure designs to increase dugout recharge potential are communicated with the landowner
5. Should the landowner decide to proceed with these recommendations, the AWWD offers other funding programs to support their implementation

For more information:

- Contact your local office:
    - Miniota: 204-567-3554
    - Oak River: 204-566-2270
    - Inglis: 204-564-2388
- Visit **myawwd.ca**

Manitoba Habitat Conservancy

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