



Agriculture

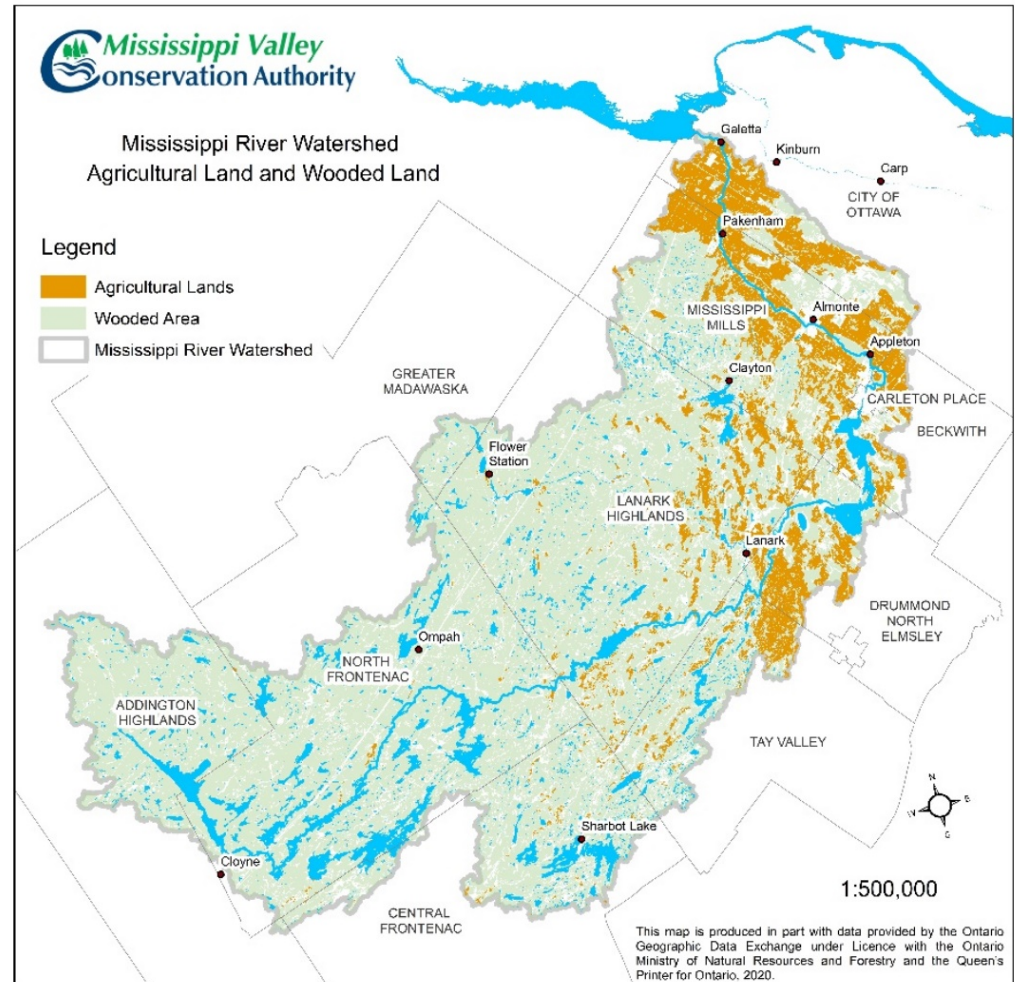
Mississippi River Watershed Plan Discussion Paper Series

AGRICULTURE IN THE MISSISSIPPI WATERSHED

The Mississippi River is vital to the social and economic wellbeing of its watershed residents. It provides drinking water, replenishes wetlands and groundwater, provides water for agricultural crops and livestock, supports recreation and tourism, provides hydroelectric power, and provides essential habitat for fish and wildlife.

KEY FACTS:

- Agricultural land is found throughout the watershed. Most is located in the lower watershed downstream of Mississippi Lake, where one-third of the land is used for farming.
- Crop (grain and oilseed) production is the prominent agriculture, but farmlands are also used for dairy and beef cattle and other livestock, maple syrup production, market gardens, and specialty farming operations - a fast growing sector.
- The shift from livestock farming to crop farming has led to the consolidation of farmland holdings (increased field size and increased tile drainage). While improving efficiency and maximizing productivity potential, these actions can reduce resiliency to climate impacts.
- Increasing field size has required the removal of hedgerows, woodlots, and some wetlands.



AGRICULTURE - CHALLENGES AND OPPORTUNITIES

Conservation Authorities (CAs) manage water resources, with a primary focus on flood and erosion control, flood forecasting and warning, and the protection of water quality. They rely on sound water and land use practices to achieve those goals. Agricultural producers manage land to maximize productivity in order to profitably produce food and feed. They rely on the availability of suitable land, healthy soils and a sufficient supply of water.

With mutual goals of sustained water availability (storage, infiltration) and healthy soils, there are opportunities for greater collaboration between MVCA and the agricultural community. This is particularly relevant as we collectively contend with the impacts of climate change which project: more frequent extended wet spring conditions, causing delayed and poor planting; more frequent extreme weather events, causing soil erosion and flushing of nutrients; and more frequent extended hot and dry summers during peak growing seasons.

Land use practices that improve the natural storage and infiltration of water are a key priority that can benefit both parties. Here are some examples:

Maintenance/regeneration of forested lands, hedgerows and watercourse buffers: can help to reduce soil erosion by intercepting and slowing runoff during storm events. They also improve water quality through filtration and the uptake of nutrients.

Rural Clean Water (Stewardship) Program: a collaboration between Ottawa and Mississippi, Rideau and South Nation CAs to provide funding to rural property owners to implement best practices for protection of water quality with a strong emphasis on agricultural best practices (nutrient management). This program is currently available only in Ottawa.

Land retirement programs: provide funding to help farmers retire marginal, inefficient and fragile farmland, by converting it into natural areas (ex. hedgerows, wetlands, buffer zones, reforested areas). It can provide payments for retired land based on local land rental rates. The

ALUS (Alternative Land Use Services) program, which is expanding into eastern Ontario, offers this opportunity.

Natural and Constructed Wetlands: reduce flooding, erosion and drought impacts by storing water during high water/flow conditions and slowly releasing it back into the system during lower flow conditions. They also filter water, taking up nutrients and toxins, and provide habitat for many species. Other Conservation Authorities (CAs) and agricultural communities have worked together to implement constructed wetlands to provide a water supply that the farmer can draw from during dry conditions.

Controlled Tile Drains: a retrofit to existing tile drains that allows growers to better control the timing and amount of water drained from a field. It can reduce agricultural run-off, reduce irrigation and fertilizer requirements, and provide resiliency in times of drought.

These, and other Best Management Practices (BMPs) to improve on-site retention of water, benefit both the agricultural community and the

Conservation Authority by: controlling runoff; slowly releasing runoff back into the drain; reducing sediment and nutrients in the runoff; providing greater uptake of nutrients; and reducing peak volumes of water entering the watercourse, reducing erosion and flooding. The South Nation CA and agricultural community have successfully collaborated to implement tile drainage solutions.

PARTNERS IN AGRICULTURE

Many organizations have an interest in agriculture. In addition to engaging area stewardship groups and our neighboring Conservation Authorities, the Mississippi Valley Conservation Authority (MVCA) has been working with a Watershed Public Advisory Committee (PAC) made up of representatives from key communities in the watershed including: agriculture, development, forestry, hydro producers, lake associations, tourism and the general public. Other potential partners include the following:

- Alternative Land Use Services (ALUS)
- Christian Farmers Federation of Ontario
- 4H Ontario
- Landowners
- Lanark County and member municipalities
- Lanark Federation of Agriculture
- National Farmers Union
- Ontario Soil and Crop Improvement Association (OSCIA)
- Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
- Ontario Federation of Agriculture (OFA)

35 DRAFT ACTIONS

MVCA has identified 35 potential actions designed to address the goals and objectives identified through the watershed planning process. A much longer list was reviewed and culled in consultation with the Watershed PAC. The following actions are relevant to municipal infrastructure. To see all 35 draft actions visit: <https://mvc.on.ca/watershedplan/>

Action 1. Extend the role of the MVCA Public Advisory Committee (PAC) for implementation and update of the Watershed Plan. (committee is made up of agriculture, development, forestry, hydro power, lakes, tourism)

Action 12. Work with municipalities, landowners and other partners to quantify, value and protect wetlands as hydrologic and natural assets.

Action 14. Work with municipalities, landowners and other partners to enhance on-site retention and infiltration of water.

Action 29. Value the ecosystem services and climate resiliency provided by natural asset features and functions (wetlands, woodlands, etc.).

Action 30. Work with municipalities and public agencies to improve the application and coordination of regulatory tools for the protection of wetlands, riparian areas, woodlands and natural systems.

Action 32. Develop and implement a 3 Year MVCA Stewardship Program Pilot for protection of where needed for water quality, wetland and forest cover, and other environmental features. *This may include:*

- *Work with Stewardship Council(s) to review current stewardship programming, needs, overlap and gaps.*
- *Promote participation in existing stewardship initiatives by other groups.*
- *Collaborate with municipalities in expanding implementation of a Rural Clean Water Program to include watershed areas outside of Ottawa.*

- *Find and work with champions in the agriculture community to supporting farmers in implementing stewardship best practices.*
- *Collaborate with ALUS and other partners to support implementation ALUS or similar program within the watershed.*
- *Promote participation in land conservation incentive programs such as the RVCA Tree planting Program, Conservation Land Tax Incentive Program (CLTIP), the Managed Forest Tax Incentive Program (MFTIP) and the Alternative Land Use Services (ALUS) program.*
- *Work with the province, agricultural community, and other owners of large land holdings, to protect and enhance wetlands, woodlands, and natural corridors through land retirement and restoration programs and incentives.*
- *Support indigenous communities in protecting and raising awareness about the importance of wild rice.*

Action 35. Develop and implement an MVCA Education Strategy. *This may include:*

- *Facilitate information sharing opportunities to advance collective understanding of impacts and opportunities for adaptation.*
- *Consult with specific communities (agriculture, development industry, indigenous community, lake communities, etc.) to determine tailored strategies for effective communication and messaging.*