



WATERFRONT PROPERTY

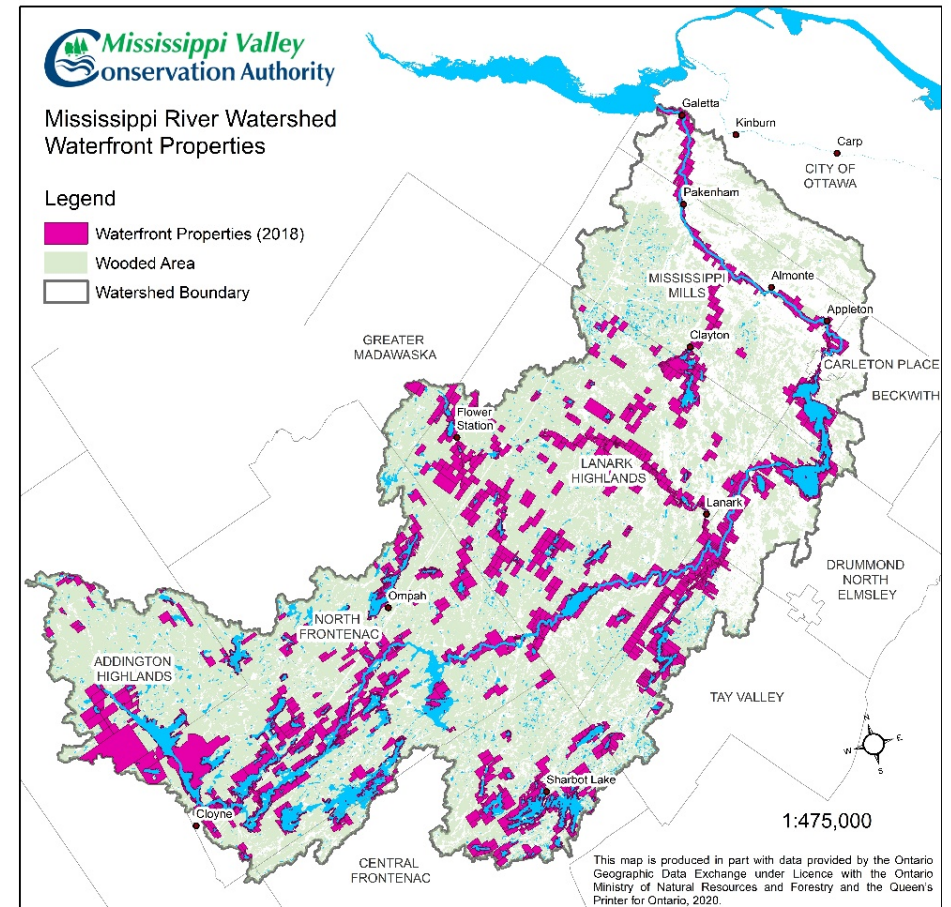
Mississippi River Watershed Plan Discussion Paper Series

WATERFRONT IN THE MISSISSIPPI WATERSHED

The Mississippi River watershed is vital to the social, physical, and economic wellbeing of its residents. The 212 km river is fed by another 7,100 km of smaller rivers and streams, and has over 200 lakes located mostly in the western part of the watershed. The waterway system is a tremendous attraction with almost a third of properties in the watershed classified as waterfront.

KEY FACTS:

- There are over 8,500 waterfront properties in the watershed. In the east (Mississippi Lake and downstream) they are used mostly for permanent/year-round homes. In the west, seasonal cottages predominate, with a steady rate of conversions to permanent use.
- With relatively few vacant waterfront lots remaining, waterfront development consists primarily of additions/enhancements to existing structures and uses, development of more difficult sites, and second tier (back lot) developments.
- Most waterfront properties rely on private services comprising of a septic system and either a drilled well or a surface water intake that draws water from a lake or river via a private treatment system.
- Water quality is a key concern of waterfront property owners. Harmful Algae Blooms (HABs) have been confirmed on Mississippi and Dalhousie Lakes in recent years.
- The Mississippi-Rideau Septic System Office (MRSSO) delivers a septic reinspection program focused on lakefront properties in North Frontenac, Central Frontenac and Tay Valley Township,



mostly as a voluntary program, with mandatory participation required on specific lakes.

- Provincial guidelines recommend that structures be situated 30-metre from the high water mark as the minimum needed to protect water quality. About 3,450 homes/cottages, and another 3,450 auxiliary structures such as garages lie within the 30 m setback.
- Almost 500 homes/cottages and 1,000 auxiliary structures are within a mapped floodplain areas around Dalhousie Lake, Mississippi Lake, portions of the Clyde River, Clayton/Taylor Lakes, the Indian River and downstream reaches of the Mississippi River. These areas, developed before implementation of provincial regulations, pose a risk to residents, structures, and access roads.
- Mississippi Valley Conservation Authority (MVCA) administers regulations in these areas to restrict further development and to require landowners to implement floodproofing measures. A “Two-Zone” policy around Mississippi Lake allows for intensification of the “flood fringe” portion of the floodplain where sufficient floodproofing can be demonstrated.
- Hydro producers and MVCA operate dams along the river system in accordance with limits set out in the *Mississippi River Water Management Plan* (MRWMP) and approved by the Ministry of Natural Resources & Forestry (MNRF.) Operating limits are designed to mitigate flooding, erosion, and ice hazards; to provide low flow augmentation; to support recreation, fisheries, and tourism; and to enable sustainable power generation.

WATERFRONT - CHALLENGES

Land use intensification, particularly within the 30 m setback, impacts water quality, water levels, shoreline aesthetics, and aquatic and riparian habitats. Every year, area municipalities and the MVCA receive planning and permit applications to allow expansion of existing structures, which have the potential to exacerbate water quality and other environmental impacts.

Two-zone policies around Mississippi Lake encourage property owners to push the limits of development within the floodplain and 30-meter setback. This is particularly challenging where applications involve undersized and/or physically challenging properties, and is administratively challenging for both MVCA and area municipalities.

Planning and permit processes are managed in parallel but are not fully and consistently integrated. This can cause frustration for

applicants, short and long-term impacts to the environment, and potentially exacerbate the potential impacts of natural hazards.

Limited water storage capacity within the watershed limits the ability of water operators to mitigate flood and drought risks. Six reservoir lakes provide a fraction of the storage capacity needed to reduce impacts to flood-prone areas. All storage capacity lies in the upper watershed, with no storage available downstream of Crotch Lake.

Near shore and in-water structures such as retaining walls, docks, and boathouses are a source of conflict in the management of the river system as they are vulnerable to fluctuations in water levels. They are also susceptible to major storms and ice damage, and can cause environmental impacts if designed incorrectly.

Water quality is impacted by nutrients and other chemicals that enter the water from residential, municipal and agricultural activities. Faulty

septic systems, fertilizer runoff and road salt application are identified as primary sources of pollution.

Climate change research predicts that more frequent and extreme storm events will increase runoff, erosion and the flushing of nutrients and pollutants into waterways; and more frequent drought conditions.

WATERFRONT – OPPORTUNITIES

Asset Management Plans and integrated infrastructure planning are needed to ensure the integrity and appropriate sizing and operation of dams, municipal road structures, and municipal drainage infrastructure.

Modeling of the watershed is needed to determine if opportunities exist to create new storage capacity or to adjust operating regimes to mitigate existing risks and the projected impacts of climate change. Where appropriate, the *Mississippi River Water Management Plan* should be updated to capitalize on those opportunities and to maintain coordinated operation of the river system.

Public education and awareness are needed to increase awareness of system and operational limitations; and of the role that residents and landowners play in mitigating risks to themselves and others through appropriate development and use of shoreline properties.

A coordinated policy review by MVCA and area municipalities would help to clarify and address mutual goals and responsibilities for minimizing flood hazard risk and the protection of water quality and natural systems; and improve effectiveness and consistency in the management of development in and near floodplains, wetlands and shorelines. This could include review of both the 30 m setback policy and the Two-zone approach.

Projected increases in water temperature will create conditions favorable to algae blooms including the harmful green-blue algae (cyanobacteria), and the proliferation of new invasive species.

These changes could impact private water intakes, water quality, water levels, and local recreation and tourism.

Expanded and enhanced septic reinspection programs by area municipalities could be used to improve management of private septic systems and mitigate leaks to the environment. Programs can be voluntary or mandatory, and phased in geographically and over time.

Review of water quality monitoring and reporting programs and other environmental conditions could be used to enhance identification of changes over time, flag areas concern and raise awareness and understanding about the interactions between human activities, the land, and the water, and the various resulting impacts.

Lake Associations and individuals support and participate in programs offered by MVCA and others, that are directed at maintaining or improving the health of the water and surrounding environment. Volunteer activities include water quality and invasive species monitoring, shoreline naturalization projects and fish habitat enhancement projects. Many volunteers and volunteer groups also work independently of MVCA in carrying out environmental work.

Stewardship programs encourage and support remedial and land management actions at the community and individual lot level. There is great opportunity to work with lake associations and other partners to continually build on education and awareness for our lake/ waterfront communities.

PARTNERS IN WATERFRONT MATTERS

Many organizations have an interest in waterfront matters. In addition to engaging area municipalities, provincial agencies, and lake associations, the 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 existing and potential partners include the following:

- Federation of Ontario Cottage Associations (FOCA)
- Lanark County Stewardship Council
- (The) Lake Networking Group
- Mississippi Valley Field Naturalists (MVFR)
- North Frontenac Lake Association Alliance (NFLAA)
- Rideau Valley Conservation Authority (RVCA) and South Nation Conservation (SNC)
- Watersheds Canada

35 DRAFT ACTIONS

MVCA has identified 35 potential actions designed to address the goals and objectives developed 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 waterfront. 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 2. Continue to collaborate with and promote collaboration among lake associations through networking groups and direct partnerships.

Action 7. Update Mississippi River Water Management Plan to address modeling and water budget work completed under Actions 5

and 6, and to assist in rebalancing the competing interests for the watershed's water resources where needed.

Action 15. Support waterfront property owners in implementing adaptive management measures to address potential impacts of variable water levels.

Action 16. Maintain up to date hazard mapping to identify and map flood and erosion risk areas, including effects of climate variability and change. *This may include:*

- *Implement a mandatory review schedule for revisions and updates to floodplain mapping, not exceeding 10 years*

Action 17. Assess and update current floodplain standard (100 Year), regulation and planning policies, and floodproofing measures to address conditions under typical and extreme events. *This may include:*

- *Establish a CA/Municipal Working Group to collaborate in achieving sustainable and coordinated management of development in hazard areas.*
- *Encourage the Counties to include more prescriptive policies in the County Official Plans encouraging consistent development standards for waterfront and floodplain areas.*
- *Review MVCA two-zone implementation policies relative to municipal Official Plan policies for natural hazards, to ensure the policies are consistent and are achieving the intended goals*
- *Explore establishing intensification limits for redevelopment and new development within floodplain areas.*

Action 18. Work with municipalities to undertake a roadway flood vulnerability assessment to; identify flood prone roadways; and properties potentially impacted by unsafe access; and to develop a strategy to address properties potentially impacted by unsafe access. *This may include:*

- *Continue to restrict/limit development where the requirements for safe access cannot be achieved (i.e. for private roads, continue to make floodproofing of the roadway a condition of approval).*
- *Encourage municipalities to undertake roadway reconstruction/redesign to address safe access where needed.*

Action 21. Continue to support the MECP Provincial Water Quality Monitoring Network (PWQMN) in collecting baseline surface water quality data.

Action 22. Support community based citizen science monitoring programs.

Action 23. Review existing environmental monitoring programs and identify opportunities for improvement. *This may include:*

- *Determine if current monitoring is sufficient in supporting climate modelling and vulnerability assessments and adjust where needed.*
- *Determine if a baseflow monitoring network is needed for key locations throughout the watershed.*
- *Improve forest and wetland cover monitoring and reporting through more frequent updates to mapping and ensure reporting systems include clear environmental targets.*
- *Improve monitoring, analysis and reporting of changes/trends in land use including both natural features (wetland and forest cover)*
- *Improve monitoring of growth and development features (lots/subdivisions, drainage infrastructure, etc.*
- *Work with industry partners to research and document changes on the landscape.*

Action 24. Continue annual analysis and reporting of water quality conditions presented at a subwatershed scale and adjust reporting cycles, parameters, and geographic coverage where needed.

Action 26. Continue to offer Septic Approval and Re-Inspection Programs for municipalities and encourage all municipalities to

implement septic re-inspection programs in high priority area such as waterfront and rural settlement areas

Action 28. Work with municipalities and the Ministry of Natural Resources & Forestry (MNR) to improve application and coordination of regulatory tools for the protection of water quality.

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.*
- *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.*
- *Develop and implement innovative approaches to communicating the fundamentals of Mississippi River water management for a broad audience. (a possible example - computerized graphic representations of the impact of different water level/flow and weather scenarios - a potential academic project (thesis) for computer modelling student).*