

35 DRAFT ACTIONS FOR THE MISSISSIPPI RIVER WATERSHED PLAN

Note: These draft actions were developed to support the eight Watershed Plan goals and their associated objectives. They're presented here according to the goal they were originally drafted for, but there is a great deal of overlap and interplay between each and they will be reorganized under a different set of headings in the final watershed plan.

1. Extend the role of the MVCA Public Advisory Committee (PAC) for the implementation and updating of the Watershed Plan. *(Representation includes: agriculture, development, forestry, hydro-power, lake communities, tourism)*
2. Continue to collaborate with and promote collaboration among lake associations through networking groups and direct partnerships.
3. Undertake meaningful engagement and establish new relationships with indigenous partners through implementation of an Indigenous Engagement Plan and through ongoing engagement in watershed initiatives. *This may include:*
 - *Improve MVCA's corporate understanding of indigenous rights, values and customs, and provide indigenous awareness training within the organization.*
 - *Determine when and how Indigenous communities would like to be involved in watershed matters.*
 - *Foster relationships and partnership with the indigenous community through continued engagement in watershed initiatives.*
4. Improve the MVCA hydrometric (water level and flow monitoring) network, to increase automated monitoring capabilities and overall efficiency. *This may include:*
 - *Continue to collaborate with Water Survey Canada in monitoring/maintaining water level/flow gauges.*
 - *Review location of gauges to ensure there is appropriate coverage and where necessary add or reposition gauges.*
5. Prepare a Mississippi River Watershed Model incorporating historical, near real-time, and projected future hydro-climatic data, based on up to date information and science, (e.g. new climate change scenarios based on the upcoming IPCC Assessment Report).
6. Update the Mississippi River Water Budget to better evaluate water needs and use by completing the recommendations of the MRSPP Tier 1 budget assessment and incorporating climate change considerations. *This may include:*

- *Improve understanding of local wetland, surface and groundwater interactions. (collaboration with the academic community?)*
- *Assess past drought occurrences to determine impacts on river flow, and the conditions under which the target flows could not be achieved.*
- *Survey (voluntary) partners from all sectors on a regular basis to maintain up to date information on water use, water needs, and water availability.*
- *Work with the Town of Carleton Place to ensure both the projected growth and proposed expansions of its water and wastewater facilities can address water supply/demand, and quality requirements.*

7. Undertake a Water Storage Capacity and Management Study of both man-made (dams and reservoirs) and natural storage (i.e. wetlands) options and capacity.

8. Update Mississippi River Water Management Plan to build on modeling, water budget work and storage assessment completed under Actions 5, 6, and 7, to assist in rebalancing the competing interests for the watershed's water resources where needed. *This may include:*

- *Assess groundwater information to determine information needs and gaps, and work with MECP to address.*
- *Establish a centralized system of collecting and consolidating groundwater data collected through the subdivision review process (already in early development with RVCA).*

9. Improve the groundwater monitoring program to meet MVCA and municipal source water protection requirements.

10. Develop and implement an Asset Management Plan for water control structures.

11. Undertake an Ice Risk Assessment in partnership with hydro power producers and municipalities. *This may include:*

- *Collaborate with hydro power producers in determining solutions for frazil ice issues.*

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

13. Enhance response planning and readiness through the Low Water Response Team, to address low water response and to ensure it includes representation from all key water use sectors. *This may include:*

- *Further implementation of water conservation measures, such as municipal water conservation by-laws, where needed.*
- *Encourage municipalities that haven't already done so, to adopt and implement Water Conservation By-laws.*



14. Work with municipalities, landowners and other partners to enhance on-site retention and infiltration of water.
15. Support waterfront property owners in implementing adaptive management measures to address potential impacts of variable water levels.
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.*
17. Assess and update current floodplain standard (100 Year), 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.*
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.*
19. Develop an approach to identifying and mitigating potential risks associated with unstable slopes and unstable soils throughout the watershed.
20. Support municipalities in assessing and enhancing stormwater management in new and existing developments. *This may include:*

- *Inventory catchment areas lacking, or requiring upgraded, stormwater management facilities and work with municipalities to determine best management practices and retrofit solutions for existing stormwater facilities that are deficient in meeting current quantity and quality objectives.*
- *Promote and participate in the development of master stormwater drainage plans, to address quantity and quality control, for the rural settlement areas where high growth is projected and/or already occurring.*
- *Recommend municipal Official policy for coordinated stormwater planning for concentrated rural settlement.*
- *Promote implementation of Low Impact Development practices in the design of new developments and retrofits to existing development.*

21. Continue to support the Ministry of Environment, Conservation and Parks (MECP) Provincial Water Quality Monitoring Network (PWQMN) in collecting baseline surface water quality data.

22. Support community based citizen science monitoring programs.

23. Review existing environmental monitoring programs and identify opportunities for improvement.

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. *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.*

25. Set measurable environmental targets. *This may include:*

- *Work with municipalities to achieve zero loss in wetland area and function.*
- *Through MVCA plan review/advisory services, continue to support municipalities in protecting natural heritage features and systems, and promote municipal policy to include Environment Canada 2013 targets for wetland and forest cover.*

- *Align monitoring and reporting to track progress against environmental targets.*

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 areas such as waterfront and rural settlement areas.

27. Continue to support municipalities in actions prescribed by the Mississippi-Rideau Source Protection Program. *This may include:*

- *Review and update the Mississippi-Source Protection Plan to address climate change impacts.*
- *Ensure significant Groundwater Recharge Areas (SGRAs) are identified and protected in municipal Official Plan policies.*
- *Promote implementation of Salt Management Plans and "Smart About Salt" Programs by municipalities.*
- *Review the implementation/effectiveness of the MRSPP best practices guidelines and education/outreach initiatives with respect to rural areas.*
- *Determine whether a rural servicing assessment may be beneficial in determining potential risk to private well water supplies (quantity and quality).*

28. Work with municipalities and the MNRF to improve application and coordination of regulatory tools for the protection of water quality.

29. Determine environmental valuations for the ecosystem services and climate resiliency provided by natural asset features and functions (wetlands, woodlands, etc.).

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.

31. Support counties and municipalities in fulfilling Provincial Policy Statement (2020) requirements for Natural Heritage Systems.

32. Develop and implement a 3 Year MVCA Stewardship Program Pilot for protection of water quality, wetland cover, 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.*

33. Work with MNRF to identify crown holdings and develop strategies to ensure the protection of crown natural assets.

34. Develop a Land Conservation Strategy to mitigate flood, erosion and other natural hazards, and to support the ecological services provided by natural systems. *This may include:*

- *Continue partnership with Lanark County in the sustainable management of the Community Forests.*
- *Support the promotion of land trusts as a means of protecting natural features and systems.*
- *Pursue acquisition of natural features and systems, and suitable corridor holdings, either by MVCA, land trusts, municipalities, or other appropriate bodies.*

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).*
- *Use the inventory of watershed natural assets and the services they provide to create an interactive online Atlas of the Watershed; To help build the Atlas, conduct surveys of the watershed communities and sectors to determine the natural assets and services they value and why.*
- *Investigate opportunities to create Stewardship/Best Management Demonstration Projects at MVCA properties (Administration Centre and Conservation Areas) or other public properties (municipal lands).*