

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. SPC-21-01-04

DATE: January 21, 2021

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: Proposed Implementation of Updates to Ontario's Water Quantity Management Framework (ERO # 019-2017)

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-21-01-04 – Proposed Implementation of Updates to Ontario's Water Quantity Management Framework (ERO # 019-2017) – for information.

THAT the Lake Erie Region Source Protection Committee direct Lake Erie Region Source Protection staff to submit report SPC-21-01-04 – Proposed Implementation of Updates to Ontario's Water Quantity Management Framework (ERO # 019-2017) as comments to the Environmental Registry.

SUMMARY:

The Ministry of Environment, Conservation and Parks (MECP) has posted for comment draft implementation guidance under the proposed Ontario water quantity management framework. The deadline for comments is February 5, 2021. This draft guidance is an update to the current guidance used to manage and make decisions regarding permits to take water in stressed areas and for priority of water use. Modernization of the permit to take water process is encouraged.

This report provides a summary of the proposed GRCA response to the MECP posting. The draft guidance has provisions for an area-based approach to managing permits to take water in stressed areas and for priority of water use. The move to an area-based approach is encouraged; it can provide the basis for a more comprehensive, proactive approach to managing permits to take water.

It will be important for MECP to work collaboratively with local agencies like municipalities and Conservation Authorities. It is important to ensure local information and recommendations are incorporated and considered in MECP water quantity management strategies for designated areas.

In the Grand River watershed, for example, a great deal of effort and expense has been invested in source water protection plans and models, in municipal water supply master plans, in municipal waste water master plans and in water management infrastructure. It is essential that existing information and models are leveraged by the ministry when creating area-based water quantity management strategies and that local agencies and stakeholders are engaged and included to assist the ministry.

Staff comments to the MECP ERO posting are explained in this report and summarized in the table appended to this report. Staff have been in communications with local municipal water

managers and have coordinated comments regarding the proposed provincial water management framework.

REPORT:

In June, the MECP proposed changes to the Water Taking and Transfer regulation under the Ontario Water Resources Act (ERO # 019-1340). The GRCA provided comments (provided in SPC report SPC-20-10-06) on the proposed changes which covered four goals:

1. Establish clear provincial priorities of water use;
2. Update the approach to managing water takings in stressed areas;
3. Make water taking data more accessible; and
4. Give host municipalities more input into water bottle decisions.

On December 7, 2020, the MECP released draft water quantity management implementation guidance documents on the Environmental Registry (ERO # 019-2017). The posting is seeking input on draft implementation guidance for enhancements under the first two goals listed above. In particular, the draft guidance documents focus on area-based water quantity management and priorities of water use.

The priority of water use draft guidance document explains what the priorities of use are under the regulation and provides direction on when and how the priorities may be applied. Priorities of water use are to be used at the discretion of the permit Director to resolve competing demands for established water takers and are intended to be applied as a last resort.

The area-based management draft guidance outlines how the Ministry will determine when an area-based approach is needed and how a strategy for assessing and managing water takings in such an area will be developed. Included in the draft guidance are sections describing local engagement and aligning developed strategies with other Provincial policies and programs.

Key comments are summarized below. Detailed comments are included in **Appendix A**.

- Provide clearer direction for when an area-based management strategy is initiated. Clearer direction could include triggers, criteria and processes that would require the PTTW director to consider an area-based strategy.
- Links to existing water management programs such as source water protection, municipal water supply planning, subwatershed studies, and the low water response program need to be recognized early on in the process when developing an area-based management strategy. Data and knowledge from these programs, where available, should form a basis for development of an area-based strategy as well as improve proactive water management in areas of constraint or increased growth pressures.
- The guidance should include a detailed engagement strategy (or a process to develop one) for engagement and collaboration with local agencies, e.g., conservation authorities, municipalities, indigenous communities etc., to take advantage of local knowledge and expertise, minimize duplication of effort and cost, and share resources/capacities. Ministry could delegate establishment of strategy or components of it to a local agency.
- The current draft guidance limits priorities of water use to existing conflicts and established water takers. The Ministry is encouraged to enhance the concept of priority of use by using it in conjunction with area-based management to proactively avoid conflicts and constraints.

A board report with these comments will be presented to the GRCA General Membership meeting on January 22, 2021. Staff recommend that this report be submitted to the Environmental Registry on behalf of the Lake Erie Region Source Protection Committee by February 5, 2021 as per the report recommendation.

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Appendix A

GRCA Response Table to MECP ERO #019-2017

Comment Table

| <u>DRAFT Water Quantity Management Implementation Guidance</u> | |
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| Draft Guidance to Support Area-based Water Quantity Management | |
| Sections of Draft Guidance | CA Comments |
| <p>Area-based Water Taking Management Strategy</p> | <ul style="list-style-type: none"> - Support replacing high use watershed maps and related policy with adaptable area-based water quantity management strategies to assess cumulative water takings. - The guidance document is fairly vague on particulars and, although this will allow for flexibility, it also leads to ambiguity and confusion as to when an area-based strategy is required, the extent of the area and details such as funding and timelines. While there is agreement that there is no one size fits all strategy approach across the province and there will need to be flexibility in terms of the process of how a strategy is developed, there should be greater certainty and direction as to when an area-based strategy is required, which should be included in regulation. - The guidance would benefit from integrating and including local knowledge and expertise from conservation authorities, indigenous peoples and municipalities and spelling out in more detail how this will be achieved. By utilizing local knowledge, expertise, and assessments the ministry can avoid costly duplication and focus on areas that would most benefit from an area-based strategy. - Developing area-based approaches in some watersheds will be complex and the area may be extensive. For example, in the Grand River watershed, there may be multiple bedrock and/or overburden aquifers that can encompass large areas. Piloting/testing the approach to establish the geographic boundaries for area-based strategies should be considered. - Area-based strategies should be large enough in scale to take into account multiple water users and potential concerns with cumulative impacts instead of focusing on a small local area of concern. Defining the limits of an area-based strategy in this manner will better allow for the assessment of potential impacts. - Well-defined geological conceptual models will be critical in areas where a groundwater-based strategy is proposed. The Ontario Geological Survey (OGS) should be engaged in areas where a groundwater area-based strategy is anticipated to ensure the best geological information can be incorporated into the study. Priorities should be identified where improved geological information would benefit the area-based strategy. |

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| | <ul style="list-style-type: none"> - The area-based strategy should include flexibility to define regulated reaches of a river downstream of large multipurpose reservoirs as geographic areas to manage permits. In the Grand River watershed this includes portions of the Grand River, Conestogo River and Speed River downstream of large multipurpose reservoirs. The proposed framework needs to have provisions to incorporate reservoir operating policies and flow augment targets developed in previous provincially led studies like the Grand River Basin Management Plan (1982) and recent municipal water supply plans, waste water assimilation studies and natural environment needs. This type of comprehensive area-based approach is important since a new surface water taking could have significant implications in an area like the Grand River where significant planning and infrastructure investment has been put in place to manage water quantity and quality. |
| <p>Considerations for Initiating a Water Taking Management Strategy</p> | <ul style="list-style-type: none"> - Considerations for initiating a strategy should be proactive rather than only retroactive (i.e. after well interference, water level decline or ecosystem degradation) to not just respond to stresses, but also avoid creating stressed areas. - Proactively establishing water management strategies would reduce overall costs, conflicts and long term degradation of water resources and would lead to economic benefits and the outcomes desired from the water quantity management framework. - Source protection water quantity studies, watershed studies, water management plans, municipal water supply master planning studies, waste water assimilative capacity studies, and ecological flow studies, where available, should be included as starting points for assessment of stressed areas and whether a strategy is needed. Approach to building a strategy should be based on broader framework that includes other sources of information, context and inclusion of other agencies. - There is a need to have clear procedures for how to request a strategy by water managers outside of the MECP. - Triggers for water taking strategies should include recommendations and requests from source water protection authorities and recommendations and requests from municipal water supply master plan studies or requests from municipal master waste water supply studies. |
| <p>Preliminary Assessment</p> | <ul style="list-style-type: none"> - Engagement with stakeholders should be started early in the process to minimize conflict. |

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| | <ul style="list-style-type: none"> - Early engagement will strengthen the integration of other agencies in the assessment and reduce duplication of efforts by recognizing and acknowledging local work/studies, knowledge, and expertise. - Discussion of results of the preliminary assessment needs to be carried out with stakeholders prior to an ERO posting. - More detail is needed on how the director will determine if an area is or could become stressed and when a strategy is required. - The focus of the preliminary assessment appears to be at a fairly small scale (e.g. cluster of groundwater takings or segment of a stream). Often a larger scale is needed to understand issues around water quantity stresses. The preliminary assessment may need to be broader in scope than the final area used for the area-based strategy. |
| <p>Preparing a Water Taking Management Strategy</p> | <ul style="list-style-type: none"> - Leverage information from Tier 3 source protection studies, where available (models, technical recommendations, and local knowledge from completed studies). - There should be more focus on cumulative impacts and collective monitoring. At a technical scale, it will require a champion/leader to manage and consolidate collective data. The current PTTW program is focused on individual reporting. This will have to change to integrate in area-based management. - Details on how priorities of water use will be integrated into an area-based strategy are needed. - Significant effort and expense has been invested in the creation of Tier 3 water budget models across the Lake Erie Region (Long Point Region, Whitemans Creek, Region of Waterloo, Guelph-Guelph/Eramosa, and Centre Wellington). Area-based management strategies should leverage, build upon these models, and maintain and update these models into the future. The goal should be to have a common model and base information to support the proposed water quantity management framework, source water protection planning, master water supply planning and other water management analysis. Information should be shared freely between agencies; for this a model management framework is needed and a custodian for model management needs to be considered. A cost sharing framework is needed to manage, update and maintain the decision support models. Creating a model management framework will create |

efficiencies and provide a consistent information base that can be continually maintained and improved over time.

- In preparation of an area-based water management strategy, an assessment of the state of water use and a conceptual model of the water resources are needed to identify the potential area to consider for management. Depending on the complexity, numeric modelling may be required to model existing conditions and proposed conditions applying alternative management options to optimize and manage water used.
- The conceptual model stage is very important. It provides a possible tool for a pragmatic, simplified approach to understanding and managing the resource, facilitating timely decisions of low risk takings. It is also the basis for creating a detailed numeric model, if needed.
- The Whiteman's Creek area in the Grand River Watershed is a high use irrigation area. In recent years, a conceptual geologic model and a fully integrated, numerical groundwater – surface water Tier 3 water budget model, including an irrigation demand model, has been completed at the subwatershed scale. The Whitemans Creek watershed could offer a pilot area for the MECPP to test the development of an area-based water management strategy to manage permitted taking. Leveraging the information in models that currently exist is encouraged.
- An outreach program was used by the GRCA in the Whiteman's Creek watershed to promote off line storage and better understanding of crop irrigation needs by working with farmers. The project was a funded program over approximately 2 years and was well received by the local agricultural community. The project promoted increased water use efficiency and resiliency by encouraging the creation of off line storage. Experience gained from this program may be of assistances to the ministry.
- The Provincial Groundwater Monitoring Network (PGMN) could play an instrumental role in helping to monitor and manage water in a given area. Increased real-time data collection of PGMN data is encouraged. Potentially expanding this network or reviewing location of PGMN wells to better support the permit to take water program should be considered.
- In areas where area-based strategies are implemented, there should be annual reporting on monitoring and assessment activities. Regular reporting on a strategy is an important consideration.

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| Engaging Water Users, Local Stakeholders, and Indigenous Communities on a Water Taking Management Strategy | <ul style="list-style-type: none"> - Engagement is loosely defined and appears to vary by strategy. A well-defined engagement plan should be developed and shared with conservation authorities, municipalities, indigenous communities, and local stakeholders prior to working on the strategy so stakeholders are clear on the involvement and engagement processes. - Engagement needs to be undertaken at all stages of the process. |
| Aligning a Water Taking Management Strategy with Other Provincial Policies and Programs | <ul style="list-style-type: none"> - More detail is needed on how other Provincial Policies and Programs will be integrated into area-based strategies. - This could be accomplished through the development stage by bringing local stakeholders to the table in the beginning. Many of the other programs listed are administered by other agencies and they will therefore need to be at the table early in the process to ensure the programs align. - Thresholds identified by the Director need to align with the low water response program thresholds for a given area. - The Ministry will also need to ensure there is alignment with municipal water supply master plans, municipal waste water master plans, multi-purpose reservoir water management plans and expected long term needs as well as incorporating source protection studies and align with recommendations from technical work. - The Ministry will also need to ensure there is alignment with watershed water management plans where they exist. - There is a need for an overarching provincial water management framework, a permit to take water strategy is just one element of an overall provincial water management framework. |

| Draft Guidance to Support Priorities of Water Use | |
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| Sections of Draft Guidance | CA Comments |
| Overall | <ul style="list-style-type: none"> - Guidance states that priority of water use is only applied to established water users in areas of a water shortage. This is very reactive. Priority of use could be used as a proactive tool to secure water supplies for high priority use. |

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| | <ul style="list-style-type: none"> - Combining priority of water use with area-based water quantity strategies would be a very proactive way of managing water resources in areas of conflict or constraint. - Better linkage with Water Quantity Threats through source water protection plans is needed. - The Ministry should consider future municipal water supply needs, as identified in municipal long term water supply plans (EA's), when applying priority of water use. - The Ministry should also consider future municipal master waste water planning needs, as identified in municipal waste water plan (EA's), when applying priority of water use. |
| What are the Priorities of Water Use? | <ul style="list-style-type: none"> - More detail is required on what to do for conflict within a priority level. - Wetlands are missing from the list of environmental needs for water. Wetlands need to be included in this list as an environmental water use. |
| When do the Priorities of Water Use Apply? | <ul style="list-style-type: none"> - The ministry should consider using priority of use beyond "a tool of last resort" to proactively manage water takings in areas of potential conflict or areas with an area-based management strategy. |
| How do the Priorities of Water Use Apply? | <ul style="list-style-type: none"> - The guidance states that focus is on modifying existing permits and not on denial of a permit if the use is a lower priority in a stressed area. Denial or cancellation of a permit may be required in highly stressed areas to maintain water for high priority uses. - More details are needed on how non-permitted uses, especially the natural environment, will be included in decisions. |
| Other Considerations for Applying Priorities of Water Use | <ul style="list-style-type: none"> - Focus is on existing (established) water users in an area, the guidance document lacks discussion on long term water supply planning or water supply master plans for municipalities. - There was no mention of growth targets for development and the need to secure water supplies to meet growth targets. |

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| | <ul style="list-style-type: none"> - Guidance should better integrate municipal needs as expressed in municipal water supply master plans and how priority of use support other provincial requirements such as growth targets. - The ability to set collective expiry dates is important. In areas where permitted takings have been over allocated the ability to set collective expiry dates may be needed to allow cumulative impacts to be managed. |
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| General Comments | |
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| <p><i>Proposed Implementation of Updates to Ontario's Water Quantity Management Framework (ERO#019-2017)</i></p> | <ul style="list-style-type: none"> - Provide clearer direction for when an area-based management strategy is initiated. Clearer direction could include triggers, criteria and processes that would require the PTTW director to consider an area-based strategy. - Links to existing water management programs such as source water protection, municipal water supply planning, subwatershed studies, and the low water response program need to be recognized early on in the process when developing an area-based management strategy. Data and knowledge from these programs, where available, should form a basis for development of an area-based strategy as well as improve proactive water management in areas of constraint or increased growth pressures. - The guidance should include a detailed engagement strategy (or a process to develop one) for engagement and collaboration with local agencies, e.g., conservation authorities, municipalities, indigenous communities etc., to take advantage of local knowledge and expertise, minimize duplication of effort and cost, and share resources/capacities. Ministry could delegate establishment of strategy or components of it to a local agency. - The current draft guidance limits priorities of water use to existing conflicts and established water takers. The Ministry is encouraged to enhance the concept of priority of use by using it in conjunction with area-based management to proactively avoid conflicts and constraints. |

