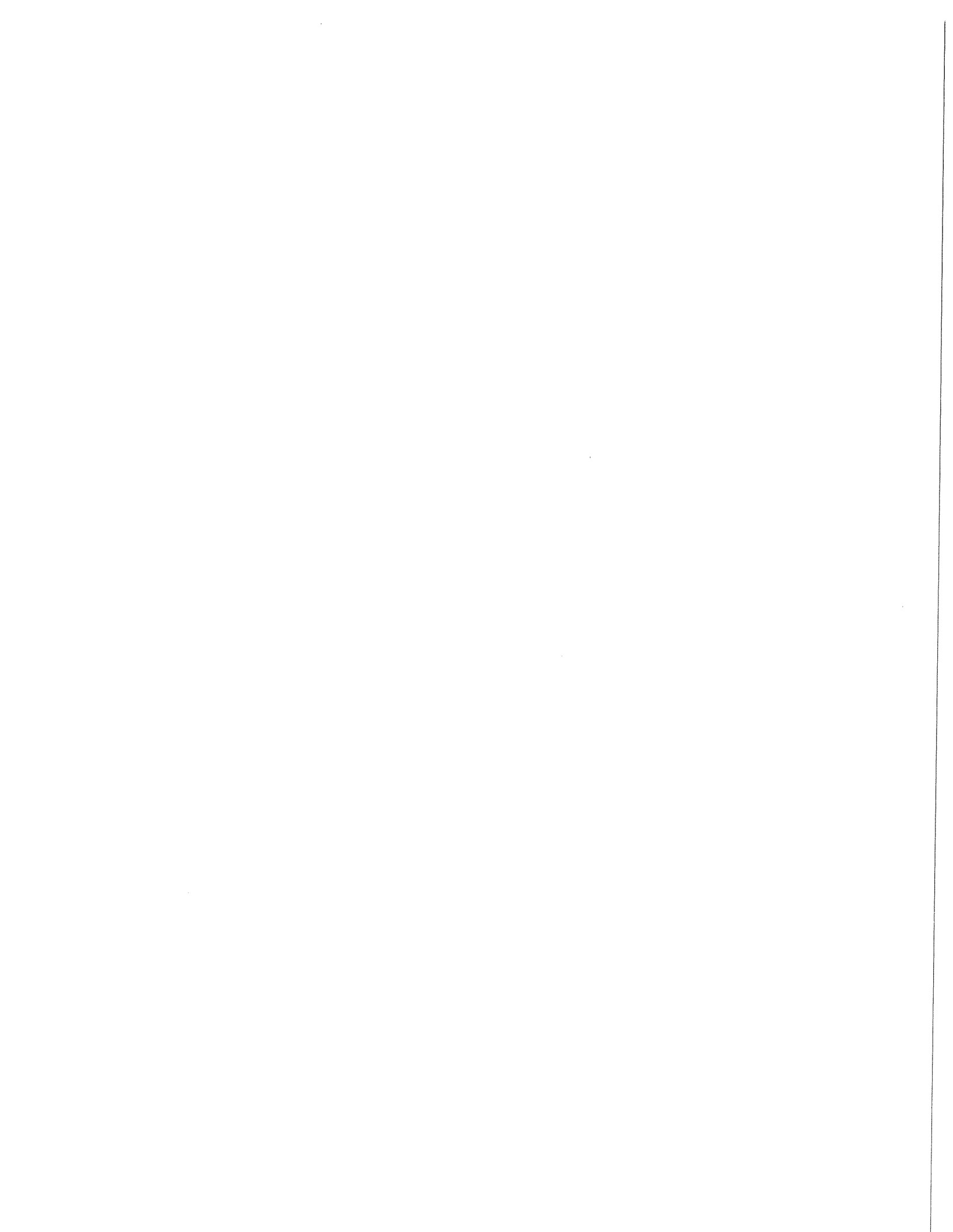


ONTARIO ANNEX ADVISORY COMMITTEE
-INTRA-BASIN DIVERSIONS

REGIONAL DATA REQUIREMENTS ADVISORY
COMMITTEE TO THE COUNCIL OF GREAT LAKES
GOVERNORS



Annex Advisory Panel Implementation Issues Central to Intra-basin Diversions

- A. Agreement Language Intra-basin**
- B. Original AAP workshop on Municipal Sector Feb. 2008**
- C. Technical Bulletin November 2008**
- D. CELA, Ecojustice Responses**
- E. Developing the Group Ask**
- F. CELA Final submission**

December 10th MSWG meeting:

- 1. Agenda
- 2. Baseline presentation with CELA Worksheet
- 3. Mapping presentation
- 4. Exception Criteria Part 1 presentation
- 5. Draft meeting notes

January 15th MSWG meeting

- 6. Agenda
- 7. Agreement Procedure Manual excerpts
- 8. Exception Criteria Part 2 presentation
- 9. Transfer of Sewage presentation
- 10. Draft meeting notes

January 21st AAP sub-group meeting:

- 11. Draft meeting notes

January 28th MSWG meeting:

- 12. Agenda
- 13. MP, Class EA presentation
- 14. Related Transferor presentation
- 15. Draft meeting notes

January 29th agriculture sector meeting:

- 16. EBR presentation
- 17. Draft meeting notes

February 2nd intra-basin sub-group meeting

- 18. Draft meeting notes

February 5th NGO meeting:

- 19. Agenda
- 20. Discussion deck
- 21. Draft meeting notes

February 12th AAP Webex teleconference

- 22. Agenda
- 23. AquaResources Report Development Standardized Methodology for Calculating Consumptive Water Demand in Ontario
- 24. Implementation Deck
- 25. Possible Municipal Transfers

Information and Science discussions ~ Ontario

February 12th AAP Webex teleconference

- 26. Report back from Sub-group

February 19th AAP Meeting 2009

Key Discussions

27, Intra-Basin Transfers

- Establishing the Baseline
- Connecting Channels
- Technical Bulletin

28. Regulating New and Increased transfers

- How to Apply the Exception Criteria
- When to apply the Exception Criteria

29.. DRAFT notes February 19th Meeting

February 26th Webex teleconference Ensuring adequate public notification of applications

30. Implementation Regional Review

31. Prior Notice-EBR Posting of Permits to Take Water

transferred shall be used solely for Public Water Supply Purposes within the Straddling Community, and:

- a. All Water Withdrawn from the Basin shall be returned, either naturally or after use, to the Source Watershed less an allowance for Consumptive Use. No surface water or groundwater from outside the Basin may be used to satisfy any portion of this criterion except if it:
 - i. Is part of a water supply or wastewater treatment system that combines water from inside and outside of the Basin;
 - ii. Is treated to meet applicable water quality discharge standards and to prevent the introduction of invasive species into the Basin;
 - iii. Maximizes the portion of water returned to the Source Watershed as Basin Water and minimizes the surface water or groundwater from outside the Basin;
- b. If the Proposal results from a New or Increased Withdrawal of 100,000 gallons per day (379,000 litres per day) or greater average over any 90-day period, the Proposal shall also meet the Exception Standard; and,
- c. If the Proposal results in a New or Increased Consumptive Use of 5 million gallons per day (19 million litres per day) or greater average over any 90-day period, the Proposal shall also undergo Regional Review.

Intra-Basin Transfers

2. A Proposal for an Intra-Basin Transfer that would be considered a Diversion under this Agreement, and not already excepted pursuant to paragraph 1 of this Article, shall be excepted from the prohibition against Diversions, provided that:
 - a. If the Proposal results from a New or Increased Withdrawal less than 100,000 gallons per day (379,000 litres per day) average over any 90-day period, the Proposal shall be subject to management and regulation at the discretion of the Originating Party;
 - b. If the Proposal results from a New or Increased Withdrawal 100,000 gallons per day (379,000 litres per day) or greater average over any 90-day period and if the Consumptive Use resulting from the Withdrawal is less than 5 million gallons per day (19 million litres per day) average over any 90-day period:
 - i. The Proposal shall meet the Exception Standard and be subject to management and regulation by the Originating Party, except that the Water may be returned to another Great Lake watershed rather than the Source Watershed;
 - ii. The Applicant shall demonstrate that there is no feasible, cost effective and environmentally sound water supply alternative within the Great Lake watershed to which the Water will be transferred, including conservation of existing water supplies; and,
 - iii. The Originating Party shall provide notice to the other Parties prior to making any decision with respect to the Proposal.
 - c. If the Proposal results in a New or Increased Consumptive Use 5 million gallons per day (19 million litres per day) or greater average over any 90-day period:

- i. The Proposal shall be subject to management and regulation by the Originating Party and shall meet the Exception Standard, ensuring that Water Withdrawn shall be returned to the Source Watershed;
- ii. The Applicant shall demonstrate that there is no feasible, cost effective and environmentally sound water supply alternative within the Great Lake watershed to which the Water will be transferred, including conservation of existing water supplies;
- iii. The Proposal undergoes Regional Review; and,
- iv. If the Originating Party is a State, the Proposal is approved pursuant to the Compact.

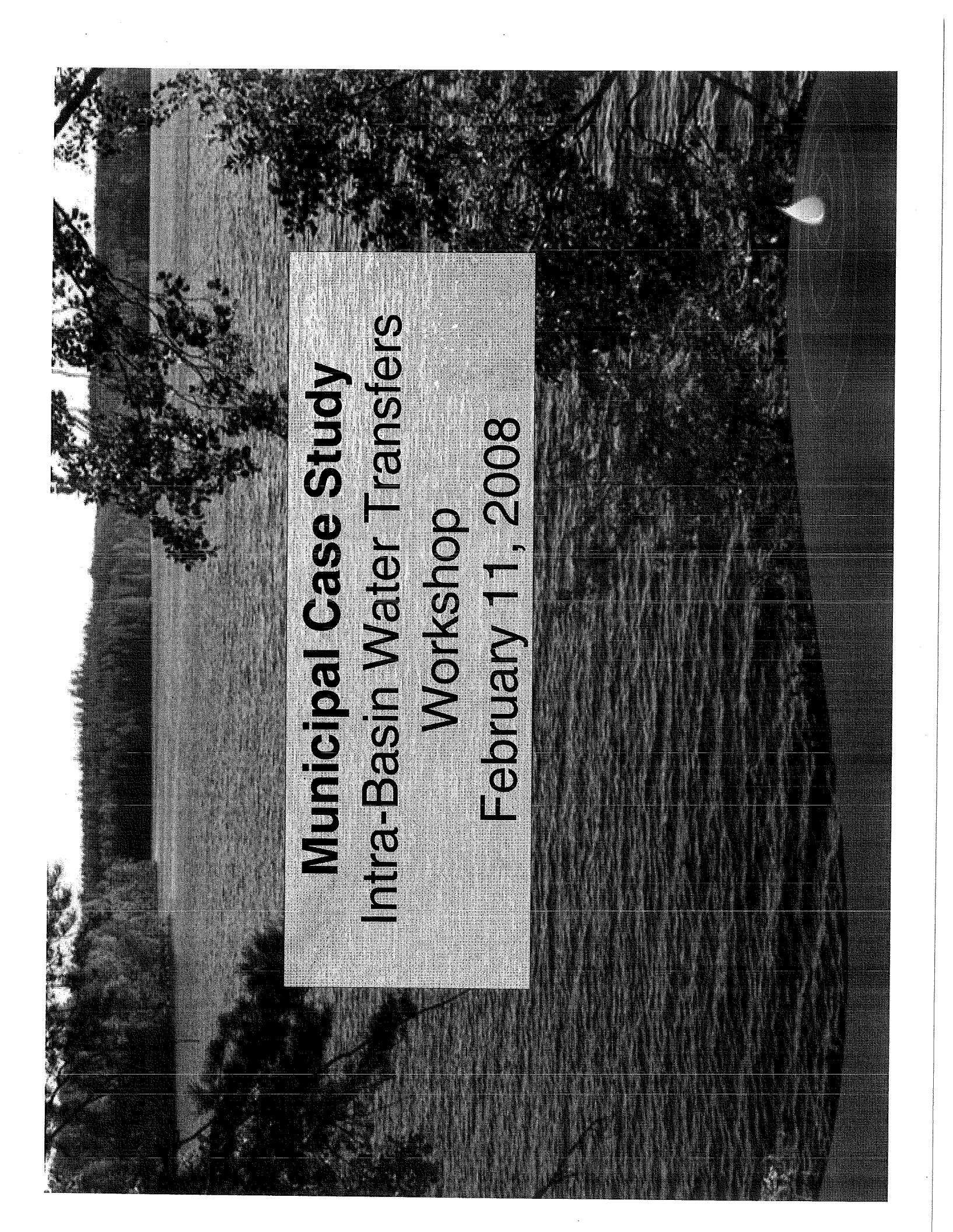
Straddling Counties

3. A Proposal to transfer Water to a Community within a Straddling County that would be considered a Diversion under this Agreement shall be excepted from the prohibition against Diversions, provided that it satisfies all of the following conditions:
 - a. The Water shall be used solely for the Public Water Supply Purposes of the Community within a Straddling County that is without adequate supplies of potable water.
 - b. The Proposal meets the Exception Standard, with particular emphasis upon ensuring that:
 - i. All Water Withdrawn from the Basin shall be returned, either naturally or after use, to the Source Watershed less an allowance for Consumptive Use;
 - ii. No surface water or groundwater from outside the Basin is used to satisfy any portion of subparagraph (i) above except if it:
 - (a) Is part of a water supply and/or wastewater treatment system that combines water from inside and outside of the Basin;
 - (b) Is treated to meet applicable water quality discharge standards and to prevent the introduction of invasive species into the Basin;
 - (c) Maximizes the portion of water returned to the Source Watershed as Basin Water, and minimizes the surface water or groundwater from outside the Basin;
 - iii. All such Water returned meets all applicable water quality standards.
 - c. The Proposal shall be subject to management and regulation by the Originating Party, regardless of its size;
 - d. There is no reasonable water supply alternative within the basin in which the community is located, including conservation of existing water supplies;
 - e. Caution shall be used in determining whether or not the Proposal meets the conditions for this Exception. This exception should not be authorized unless it can be shown that it will not endanger the integrity of the Basin Ecosystem;
 - f. The Proposal undergoes Regional Review; and,
 - g. If the Originating Party is a State, the Proposal is approved pursuant to the Compact.

A Proposal must satisfy all of the conditions listed above. Further, substantive consideration will also be given to whether or not the Proposal can provide sufficient

B

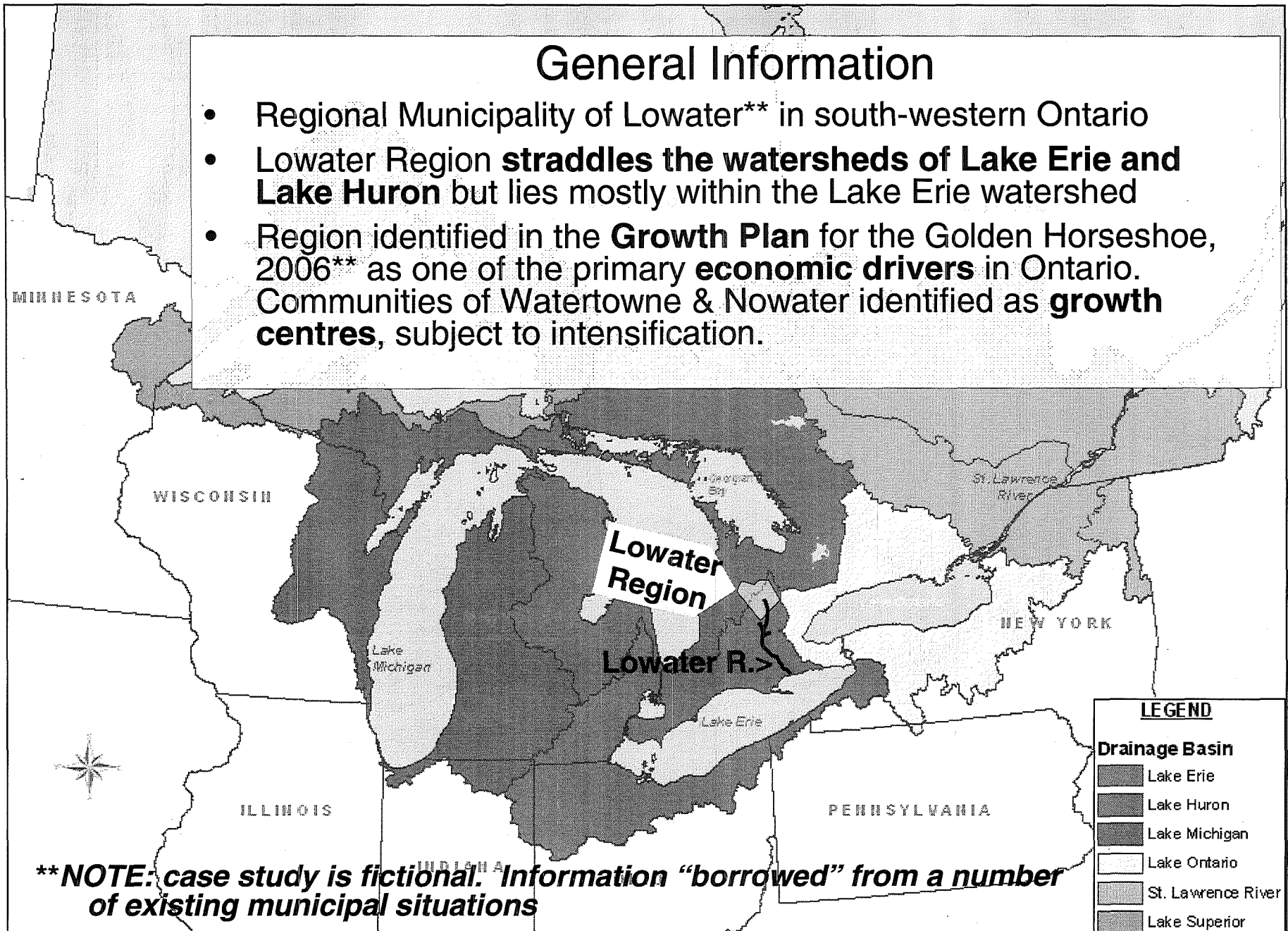
ORIGINAL APP
WORK STOP ON
MUNICIPAL SEE TOP
FEBRUARY 2008



Municipal Case Study
Intra-Basin Water Transfers
Workshop
February 11, 2008

General Information

- Regional Municipality of Lowater** in south-western Ontario
- Lowater Region **straddles the watersheds of Lake Erie and Lake Huron** but lies mostly within the Lake Erie watershed
- Region identified in the **Growth Plan for the Golden Horseshoe, 2006**** as one of the primary **economic drivers** in Ontario. Communities of Watertowne & Nowater identified as **growth centres**, subject to intensification.



****NOTE: case study is fictional. Information "borrowed" from a number of existing municipal situations**

Great Lakes Basin

0 35 70 140 210 280 Kilometers

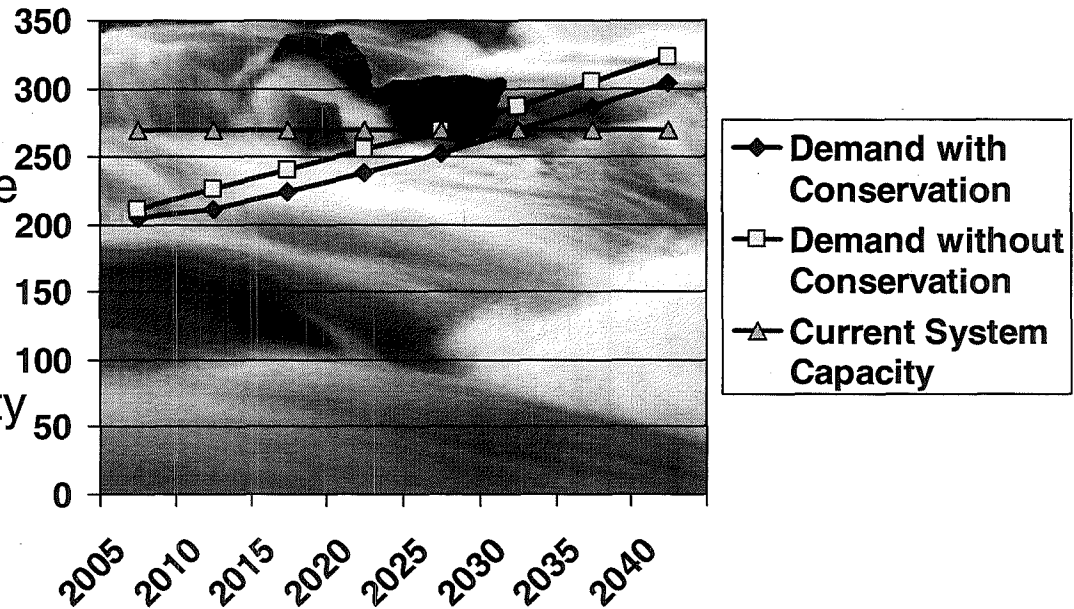


This map is for illustrative purposes only. Do not rely on it as a precise indicator of feature locations.
Published 28 June 2005.
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Water Supply & Demand

- General Information
- Water Supply, Demand**
- Long Term Water Supply Strategy
- GL Water Supply Options
- Current Approvals
- Options Analysis-Current
- Options Analysis- GLCA-SSOWA
- Discussion

- Current water supply – primarily groundwater wells, 1 surface water permit from the Lowater R. which drains into Lake Erie
- Some wells constrained by declining efficiencies, water quantity and quality issues.
- Region has projected its future water demand based on serviced population forecasts (confirmed in Growth Plan) – under a range of water conservation scenarios



- Current system capacity cannot meet future water demand projections - with or without water conservation program

Long Term Water Supply Strategy

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

Options Analysis-Current

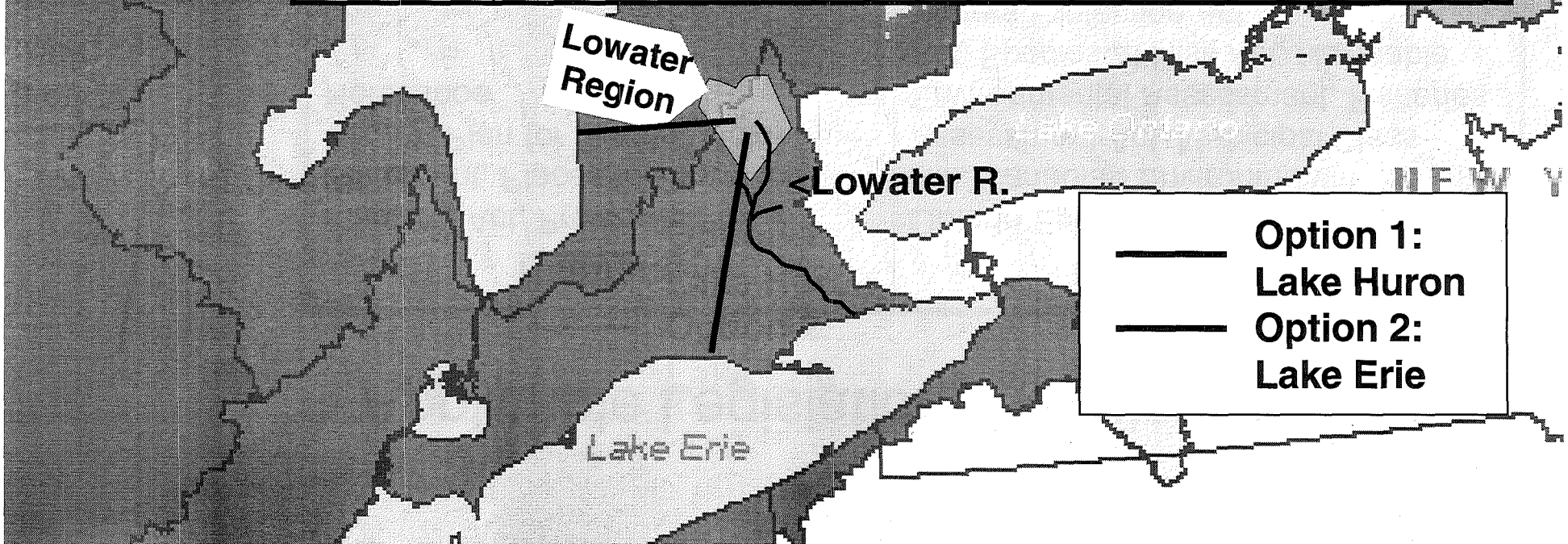
Options Analysis- GLCA-SSOWA

Discussion

COMPONENT	CAPACITY (mld)
Existing System Capacity	270
Near Term Upgrades, Approved Expansion (by 2010)	20
Water Conservation Program (10% reduction)-leakage reduction, toilet replacement, outdoor watering restrictions, public education, industrial commercial & institutional efficiencies, research & development	8
New Groundwater (Phase 1-2015; Phase 2-2025)	40
Great Lakes Displacement Pipeline (2035)	440

Great Lake Water Supply Options

OPTION	DETAILS
1. Lake Huron Pipeline (440 mld)	<ul style="list-style-type: none"> •No return flow (return to Lake Erie via Lowater R.) •Preferred option – perceived quality, least cost •Most costly if return flow pipeline required •440mld – transferred (330mld used in Lake Erie ws; 110 transferred as wastewater after use in L. Huron ws)
2. Lake Erie Pipeline (440 mld)	<ul style="list-style-type: none"> •Return flow via Lowater R. •330mld – withdrawal/consumptive use (used in L. Erie ws) (10-15% cons. use = 33-49.5mld) •110mld – transferred (used in L. Huron ws)



Applicable Legislation, Regulation, Policy

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

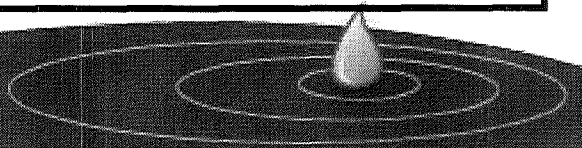
Options Analysis-Current

Options Analysis- GLCA-SSOWA

Discussion

<p style="text-align: center;">Planning</p> <p>Planning Act, Provincial Policy Statement, Places to Grow Act, Growth Plan for Greater Golden Horseshoe</p>	<p style="text-align: center;">Environmental</p> <p>Ontario Environmental Assessment Act, Canadian Environmental Assessment Act, Municipal Class Environmental Assessment, Fisheries Act, Species at Risk Act, Navigable Waters Protection Act</p>
<p style="text-align: center;">Water</p> <p>Great – Lakes St. Lawrence R. Basin Sustainable Water Resources Agreement, Safeguarding and Sustaining Ontario’s Water Act, Great Lakes Charter, Ontario Water Resources Act, Safe Drinking Water Act, Clean Water Act, Sustainable Water and Sewage Systems Act, Lakes & Rivers Improvement Act</p>	<p style="text-align: center;">Other</p> <p>Draft Guidelines on Consultation with Aboriginal Peoples Related to Aboriginal Rights and Treaties, Public Transportation and Highways Improvement Act</p>

Not a complete list



Key Leg., Regs, Policy: Implications

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

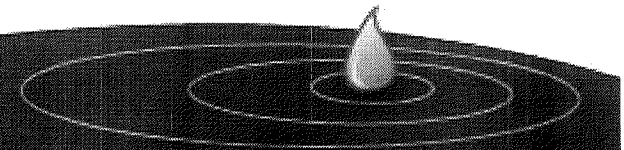
Options Analysis-Current

Options Analysis- GLCA-SSOWA

Discussion

Planning	<ul style="list-style-type: none"> •protect, restore water quantity, quality, minimize cross-watershed impacts, protect hydrologic functions (PPS) •coordinate pipeline with adjacent municipalities (Planning Act, PPS) •Address water needs of projected growth (Growth Plan) •Encouraged to plan water, wastewater systems that return water to source GL watershed; implement conservation, demand mgt.; consider applicable GL Basin Agreements, support culture of conservation (Growth Plan)
Water	<ul style="list-style-type: none"> •PTTW for all new, increased water takings- requires description of current, planned conservation measures; Great Lakes Charter obligations must be met; need to protect natural ecosystem functions, consider water availability, other existing uses (OWRA) •Approval of works forwarding, holding back, diverting water (LRIA) •GLCA Agmt, SSOWA ban on transfers, with regulated exceptions (e.g. intra-basin transfers) – While provisions not in force until regulations developed, parties committed to refrain from taking action that would defeat Agreement objectives
Environmental	<ul style="list-style-type: none"> • Region considering individual EA for pipeline (inter-regional supply issues, magnitude, need for public/ government review) •All water supply strategy elements subject to Mun. Class EA- 2007 revision recognizes GLCA Agreement •Need to coordinate EA with CEAA (e.g. federal approvals e.g. Fisheries Act, Navigable Waters Protection Act)
Other	<ul style="list-style-type: none"> •Consultation with aboriginal peoples in assessment of water supply options

Not a complete list



Options Analysis- Current Great Lakes Charter

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

Options Analysis- Current

Options Analysis- GLCA-SSOWA

Discussion

Option	Great Lakes Charter
1. Lake Huron Pipeline (440 mld)	<ul style="list-style-type: none"> • Would trigger Prior Notice & Consultation with 8 GL states, Quebec (440 mld transfer exceeds 19mld threshold) • May be challenged as contrary to spirit of GLCA (lack of return flow, particularly when return flow options exist)
2. Lake Erie Pipeline (440 mld)	<ul style="list-style-type: none"> • Would trigger PNC (110 mld transfer exceeds 19mld threshold; 33-50 mld consumptive use in L. Erie ws also exceeds threshold) • Return flow, conservation may be viewed favourably by other jurisdictions

Options Analysis- GLCA+SSOWA

General Information

Water Supply, Demand

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GL Water Supply Options

Current Approvals

Options Analysis-Current

Options Analysis-GLCA-SSOWA

Discussion

Option	GLCA Implementing Agreement + SSOWA
<p>1. Lake Huron Pipeline (440 mld)</p>	<ul style="list-style-type: none"> • 440 mld transfer would not be permitted unless return flow provided for (44-66 mld con. use exceeds 19 mld threshold requiring return flow) • Must meet Exception Standard criteria • Subject to Regional Review, Declaration of Finding • SSOWA requires Minister's approval following consideration of Declaration of Finding by Regional Body
<p>2. Lake Erie Pipeline (440 mld)</p>	<ul style="list-style-type: none"> • 11- 17 mld cons. use associated with 110 mld transfer does not trigger Regional Review or Minister's approval • Must meet Exception Standard, including return flow (OR return flow may be waived IF demonstrated that it is not feasible, environmentally sound or cost effective; must also demonstrate no feasible alternatives to transfer including conservation; subject to prior notice) • 33-50 mld consumptive use in L. Erie ws exceeds 19mld threshold requiring Prior Notice and Comment • Return flow, conservation may be viewed favourably by other jurisdictions

Exception Standard Criteria

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

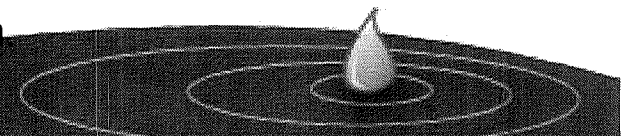
Options Analysis-Current

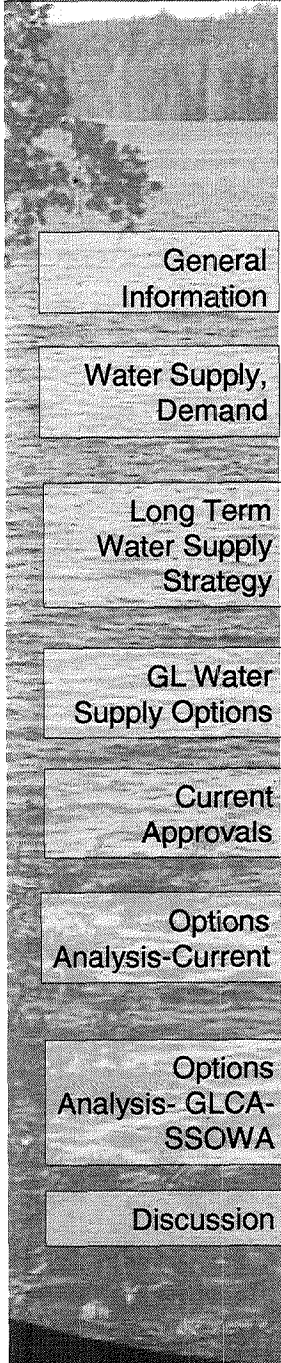
Options Analysis- GLCA-SSOWA

Discussion

1. The water transferred is returned to the Source Watershed (less an allowance for consumptive use);
2. Need for the water cannot be avoided through water conservation and efficiency;
3. Amount of water is limited to reasonable quantities;
4. There will be no significant individual or cumulative adverse impacts to water quantity or quality;
5. The proposal incorporates water conservation and efficiency measures;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criterion may be added by regulation to implement the findings of the cumulative impact assessment provided under article 209 of the Agreement including criteria related to climate change or other significant threats to the Great Lakes - St. Lawrence River Basin.

Note: terminology may be defined by regulation





General
Information

Water Supply,
Demand

Long Term
Water Supply
Strategy

GL Water
Supply Options

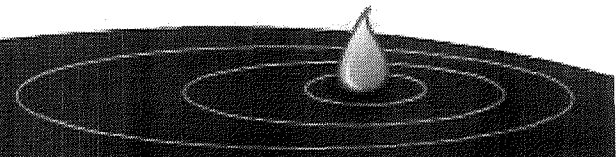
Current
Approvals

Options
Analysis-Current

Options
Analysis- GLCA-
SSOWA

Discussion

Appendices



Long Term Water Supply Strategy

General Information

Water Supply, Demand

Long Term Water Supply Strategy

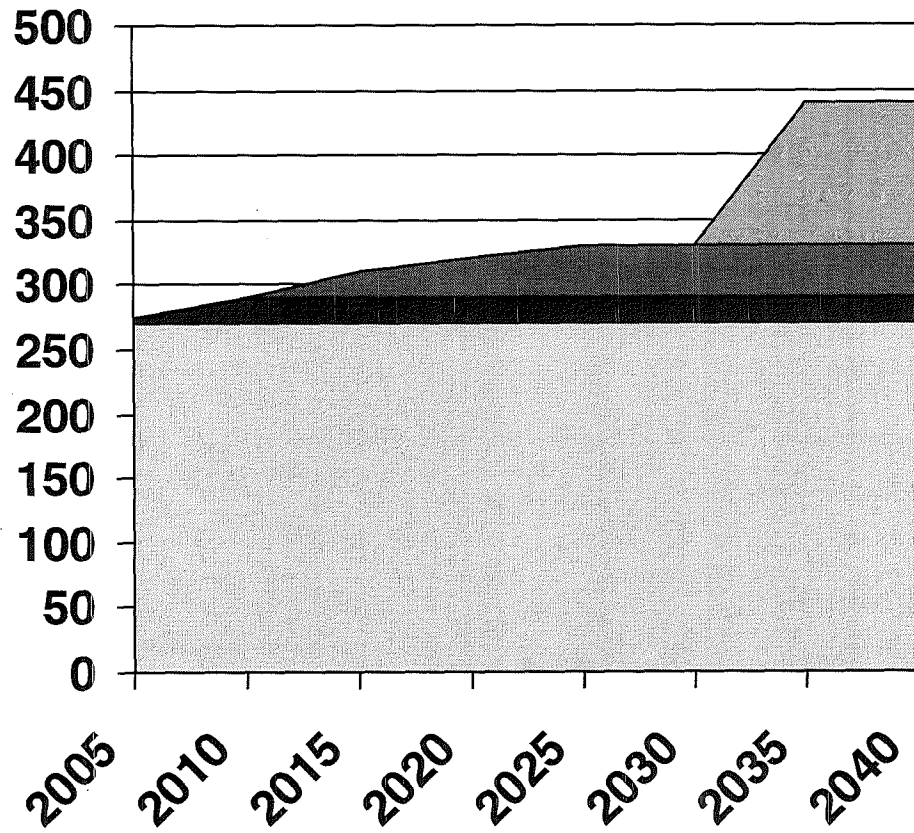
GL Water Supply Options

Current Approvals

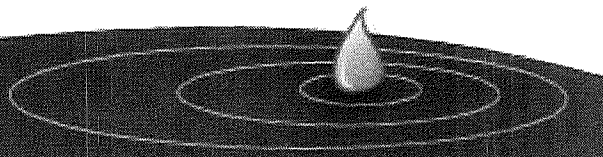
Options Analysis-Current

Options Analysis- GLCA-SSOWA

Discussion



- Great Lakes Pipeline
- Additional Groundwater
- Near Term Upgrades
- Current Capacity



Great Lake Water Supply Options

Additional options eliminated based on criteria (cost, quality, potential cost-sharing opportunities, reliability, sustainability)

OPTION	DETAILS
<p>1. Lake Huron Pipeline (440 mld)</p>	<ul style="list-style-type: none"> •No return flow (return to Lake Erie via Lowater R.) •Preferred option – perceived quality, least cost •Most costly if return flow pipeline required •440mld – transferred (330mld used in Lake Erie ws; 110 transferred as wastewater after use in L. Huron ws)
<p>2. Lake Erie Pipeline (440 mld)</p>	<ul style="list-style-type: none"> •Return flow via Lowater R. •330mld – withdrawal/consumptive use (used in L. Erie ws) (10-15% cons. use = 33-49.5mld) •110mld – transferred (used in L. Huron ws)

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

Options Analysis-Current

Options Analysis- GLCA-SSOWA

Discussion

Key Leg., Regs, Policy: Implications - Planning -

Legislation, Regulations, Policy	Potential Implications
Planning Act, Provincial Policy Statement	<ul style="list-style-type: none"> • Need to protect, restore water quantity, quality – need to minimize cross-watershed impacts, protect hydrologic functions • Need to coordinate pipeline with adjacent municipalities
Places to Grow Act, Growth Plan for Greater Golden Horseshoe,	<ul style="list-style-type: none"> • Region identified as economic driver – growth centres • Mun. encouraged to plan water, wastewater systems that return water to source GL watershed • Conditions- implement conservation, demand mgt strategies; support intensification targets; consider applicable GL Basin Agreements • Culture of Conservation – including water conservation, demand management, water recycling/reuse

General Information

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Options Analysis- GLCA-SSOWA

Discussion

Key Leg., Regs, Policy: Implications - Water -

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Current Approvals

Options Analysis-Current

Options Analysis- GLCA-SSOWA

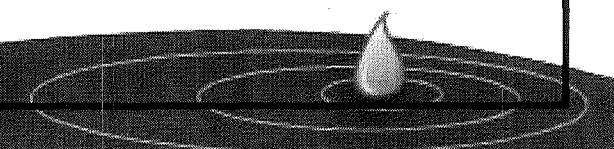
Discussion

Legislation, Regulations, Policy	Potential Implications
Ontario Water Resources Act, Regulations	<ul style="list-style-type: none"> •PTTW required for all new, increased water takings- requires description of current, planned conservation best practices •Reg. 387/04- requires that Great Lakes Charter obligations are met – i.e. Prior Notice + Consultation on consumptive uses, diversions over 19 mld – both pipeline options would trigger PNC •Agmt, SSOWA introduce ban on transfers, with regulated exceptions (e.g. intra-basin transfers) •Regulates wells, pollution discharges
Great Lakes-Sustainable Water Resources Agreement, SSOWA	<ul style="list-style-type: none"> • Agmt, SSOWA introduce ban on transfers, with regulated exceptions (e.g. intra-basin transfers) • Provisions not in force until regulations developed • Parties commit to refrain from taking any action that would defeat the objectives of the Agreement
Other	<ul style="list-style-type: none"> • For waters flowing into GL - Assessment reports, source protection plans must consider all GLB Agreements (Clean Water Act) • Regulation of drinking water systems (Safe Drinking Water Act) •Regulation of works forwarding, holding back, diverting water (LRIA)

Key Leg., Regs, Policy: Implications - Environment, Other -

- General Information
- Water Supply, Demand
- Long Term Water Supply Strategy
- GL Water Supply Options
- Current Approvals**
- Options Analysis-Current
- Options Analysis- GLCA-SSOWA
- Discussion

Legislation, Regulations, Policy	Potential Implications
Ontario Environmental Assessment Act/ Municipal Class Environmental Assessment	<ul style="list-style-type: none"> • Pipeline may best be undertaken as an individual EA - inter-regional supply issues, magnitude, public/government review • Mun Class EA- all water supply and wastewater projects subject • Need to coordinate EA with CEAA
Canadian Environmental Assessment Act - Fisheries Act, Species at Risk Act, Navigable Waters Protection Act	<ul style="list-style-type: none"> • Pipeline likely to require federal EA approval e.g. Fisheries Act, Navigable Waters Protection Act
Other – Draft Guidelines on Consultation with Aboriginal Peoples	<ul style="list-style-type: none"> • Consultation with aboriginal peoples in assessment of water supply options



Municipal Class EA

DESCRIPTION OF THE CLASS OF UNDERTAKINGS

The Municipal Class EA applies to municipal infrastructure projects including roads, water and wastewater projects. Since projects undertaken by municipalities can vary in their environmental impact, such projects are classified in this Class EA in terms of schedules:

- **Schedule A**
 - generally includes normal or emergency operational and maintenance activities
 - the environmental effects of these activities are usually minimal and, therefore, these projects are pre-approved
- **Schedule A+**
 - in 2007, MEA introduced Schedule A+. These projects are pre-approved, however the public is to be advised prior to project implementation. The manner in which the public is advised is to be determined by the proponent. Schedule A+ is discussed in Section A.1.2.2.
- **Schedule B**
 - generally includes improvements and minor expansions to existing facilities
 - there is the potential for some adverse environmental impacts and therefore the proponent is required to proceed through a screening process including consultation with those who may be affected
- **Schedule C**
 - generally includes the construction of new facilities and major expansions to existing facilities
 - these projects proceed through the environmental assessment planning process outlined in the Class EA

General Information

Water Supply, Demand

Long Term Water Supply Strategy

GL Water Supply Options

Current Approvals

Options Analysis-Current

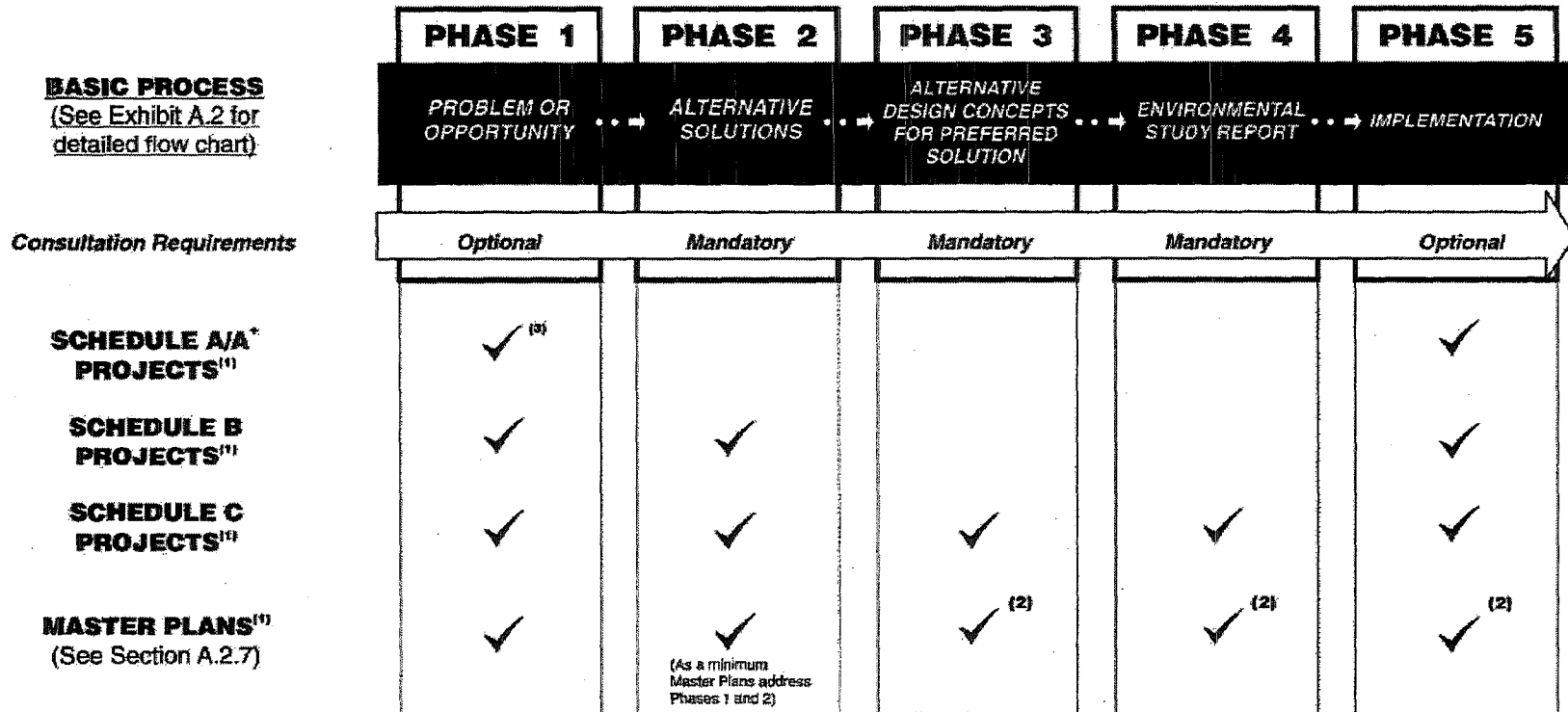
Options Analysis- GLCA-SSOWA

Discussion

EXHIBIT A.1

KEY FEATURES OF THE MUNICIPAL CLASS EA

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



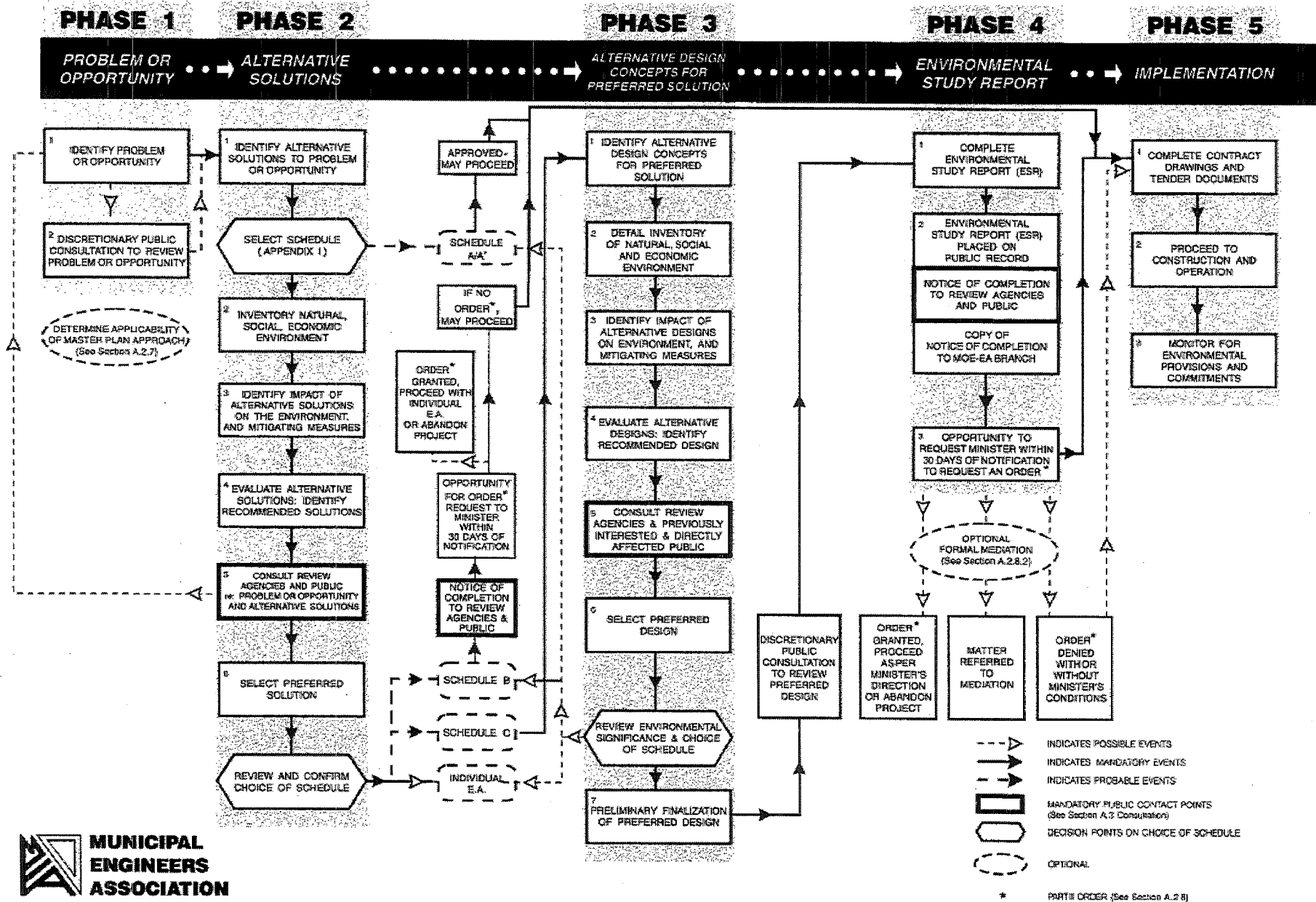
NOTES:

- ✓ Actions required during relevant phase
- (1) Schedule A, A*, B and C projects and Master Plans can also be integrated with the requirements of the Planning Act (See Section A.2.9)
- (2) Complete Phases 3 and 4 for any Schedule C projects included in the Master Plan prior to implementation
- (3) For Schedule A* projects, public to be advised. See Section A.1.2.2.


EXHIBIT A.2

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



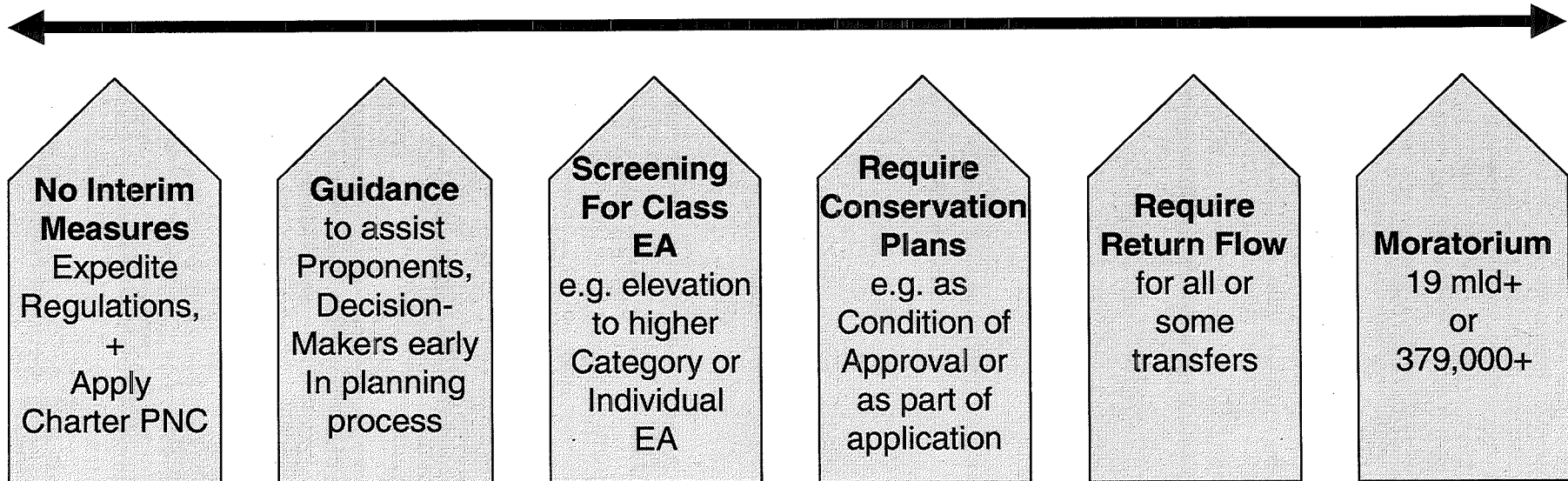
GLCA Agreement/SSOWA- Intra-Basin Transfers

<p>19+ Million L/Day Consumptive Use (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none"> •Meets exception criteria, including return flow to source GL watershed •No feasible alternatives to transfer, including conservation •Proposal undergoes Regional Review & the MOE Minister considers the Declaration of Finding by Regional Body before making a decision (ss. 34.1(12)-(14)) 	
<p>379,000+ L/Day (Consumptive Use less than 19 MLD)</p> 	<p>Municipal Drinking Water Systems:</p> <ul style="list-style-type: none"> •Meets exception criteria, including return flow to source GL watershed 	<p>All Uses (including Municipal Drinking Water Systems if return flow to source watershed cannot be met):</p> <ul style="list-style-type: none"> •Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed •No feasible, environmentally sound, cost effective alternatives to transfer, including conservation •Ont. gives prior notice to other GL jurisdictions
<p>50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none"> •Subject to PTTW water taking requirements, not prohibited 	

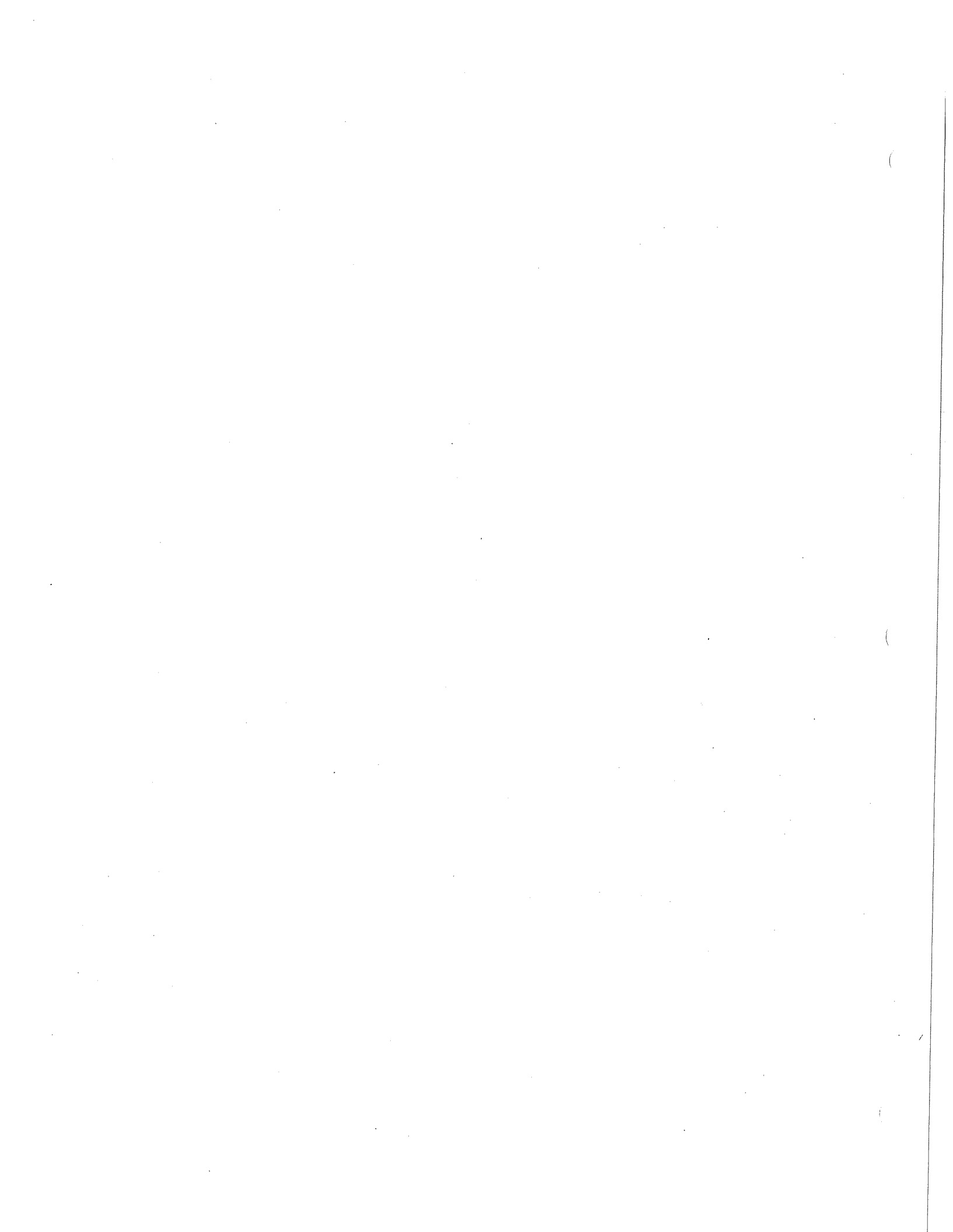
What is an Interim Measure?

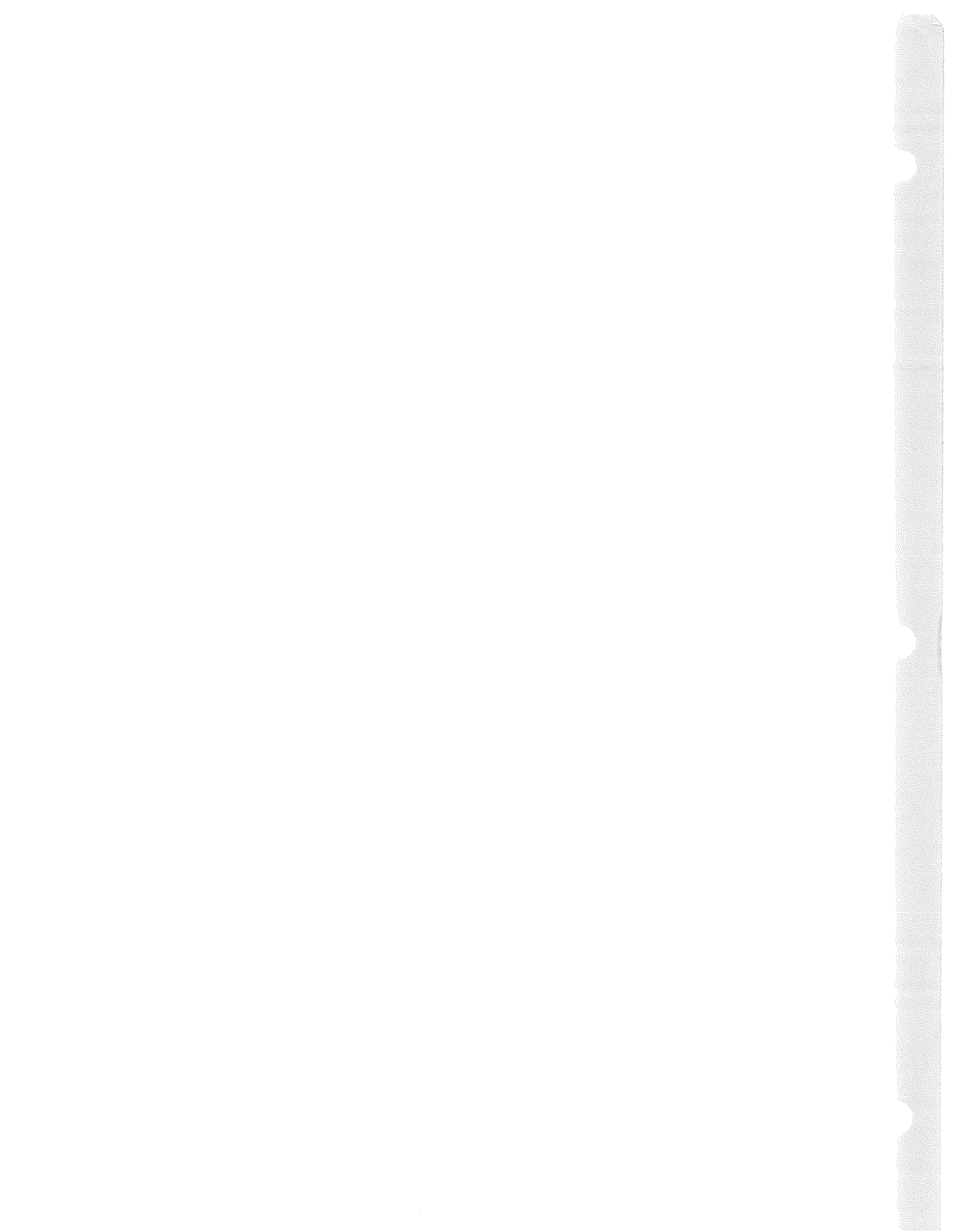
Range of Possibility

Continuum – from no measures to voluntary measures to mandatory/regulatory measures



Considerations: Merits of option; whether approach addresses key challenges; whether implementation is feasible i.e. not too complicated; unintended consequences; who affected ...other?





Technical Bulletin

Environmental Assessment Direction for Municipal Water and Wastewater Projects Proposing an Intra-Basin Transfer

PURPOSE

The purpose of this Technical Bulletin is to provide interim direction to municipalities planning water and wastewater projects to ensure that intra-basin transfers are not undertaken in a manner that is inconsistent with the provisions of the **Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement** until supporting regulations are in place. The Technical Bulletin also provides direction to municipalities on requirements under the Great Lakes Charter which currently remains in force.

BACKGROUND

In June 2007, the *Safeguarding and Sustaining Ontario's Water Act* (SSOWA) received Royal Assent, amending the *Ontario Water Resources Act* (OWRA). These changes to the OWRA help implement the commitments Ontario made in signing the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement, 2005 (Agreement) with Quebec and the eight Great Lakes States (parties of the Agreement). The Agreement committed the parties to a ban on water diversions (or transfers), with strictly regulated exceptions, strengthened water conservation and common environmental standards for regulating the use of surface or groundwater resources of the Great Lakes – St. Lawrence River Basin.

Among the amendments made to the OWRA through SSOWA is the *prohibition of a new or increased transfer of 379,000 litres of water per day or greater from one Great Lakes Watershed to another subject to strict exceptions*. While the OWRA was amended to incorporate the provisions of the Agreement in 2007, supporting regulations are required to fully implement the Agreement before these provisions can be proclaimed. The Ministries of Environment (MOE) and Natural Resources (MNR) are working collaboratively to develop regulations to manage intra-basin transfers.

Until regulations are completed and the other Great Lakes jurisdictions bring provisions of the Agreement into law, the Great Lakes Charter, 1985 (Charter) remains in force. The Charter commits Ontario to Prior Notice and Consultation with the eight Great Lakes States and Québec before approving any new or increased water diversion (transfer out of the Great Lakes Basin or from the watershed of one Great Lake to another) over 19 million litres per day. The Charter also requires *Prior Notice and Consultation for any new or increased consumptive use of water over 19 million litres per day*.

ENVIRONMENTAL ASSESSMENT

Municipal water and wastewater servicing proposals (such as expansions of water and sewage infrastructure i.e. pipes, treatment plants etc.) are generally planned and designed under the Municipal Engineers Association Municipal Class Environmental Assessment (MEA Class EA). MOE Regional Offices, specifically Environmental Resources Planner/Environmental Assessment Coordinators are

mandatory points of contact where a proposed undertaking (i.e. projects, activities etc.) is classified as Schedule B or C in the MEA Class EA.

The MEA Class EA, Section A.2.10 identifies the Agreement, the OWRA and SSOWA as key provincial legislation to consider while undertaking the Class EA process. Additionally, Section A.2.10.2 recommends that technical consultation with the MOE is undertaken for all complex projects involving the construction of water supply and treatment as well as sewage treatment and disposal systems. Projects resulting in an intra-basin transfer subject to the Agreement or consumptive uses that trigger the Prior Notice and Consultation provisions of the Charter are considered complex projects.

While this Technical Bulletin is geared to projects under the MEA Class EA, proponents undertaking an individual EA should also consider the principles of the Charter, the Agreement and the direction outlined below.

DIRECTION TO ENSURE COMMITMENTS UNDER THE CHARTER ARE SATISFIED IN RELATION TO CONSUMPTIVE USE

Consumptive use is defined as that portion of water withdrawn or withheld from the Basin that is lost or otherwise not returned to the basin due to evaporation, incorporation into products or other processes. For municipal water use, the consumptive portion of the withdrawal is estimated to be 10-15% of the new or increased withdrawal volume. Under the Charter, Prior Notice and Consultation is required for proposed new or increased consumptive use of water over 19 million litres per day.

All undertakings for municipal water projects which will result in a withdrawal involving a consumptive use of over 19 million litres per day or more will trigger the Charter. The proponent should contact the identified contact in Lands and Waters Branch, MNR (administrator of the Charter) to confirm the consumptive use, identify what supporting information is required and coordinate Prior Notice and Consultation if required.

DIRECTION TO ENSURE COMMITMENTS UNDER THE AGREEMENT ARE SATISFIED IN RELATION TO INTRA-BASIN TRANSFERS

Proponents of undertakings for municipal water or wastewater projects where one of the alternatives will result in a new or increased intra-basin transfer of 379,000 litres per day or more should consider treating the undertaking as a Schedule C undertaking under the MEA Class EA.

Schedule C undertakings proceed under the full planning and document procedures (Phase 1-5) as specified in the MEA Class EA. The five phases of the MEA Class EA require greater analysis of the preferred solution and additional public consultation. The Schedule C process includes identification of the problem or opportunity (Phase 1); identification of alternative solutions (Phase 2); identification of alternative design concepts for preferred solution (Phase 3); documentation of the rationale, planning, design and consultation process of the project in an Environmental Study Report (Phase 4); and implementation (Phase 5).

5). In comparison, Schedule B undertakings only require fulfillment of Phase 1 and 2 of the MEA Class EA process only.

The contents of the Environmental Study Report are outlined in Section A.4.2 of the MEA Class EA. In the Environmental Study Report, the proponent (with the assistance of the MOE and MNR) should demonstrate how intra-basin transfer provisions outlined in Section 34.6(1)-(3) of the OWRA (Schedule 1) have been met. The ESR should also show that the principles of the Agreement have been considered. Below is a summary of the intra-basin transfer provisions as outlined in Section 34.6(1)-(3) of the OWRA:

AMOUNT	INTRA-BASIN TRANSFER PROVISIONS	
New or increased intra-basin transfer of \geq 379,000 litres per day	<p><i>Municipal Drinking Water Systems:</i></p> <ul style="list-style-type: none"> ▪ Meets exception criteria (as outlined in Section 34.6(3) of the OWRA), including return flow to source Great Lake Watershed. 	<p><i>All Uses</i> (including Municipal Drinking Water Systems if return flow to source Great Lake watershed cannot be met):</p> <ul style="list-style-type: none"> ▪ Meets exception criteria (as outlined in Section 34.6(3) of the OWRA), except return flow may be to another Great Lakes Watershed if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source Great Lakes Watershed. ▪ No feasible, environmentally sound, cost effective alternatives to transfer, including conservation. ▪ Ontario provides prior notice to Great Lakes States and Quebec.
New or increased intra-basin transfer involving a consumptive use of \geq 19 million litres per day	<ul style="list-style-type: none"> ▪ Meets exception criteria (as outlined in Section 34.6(3) of the OWRA) including return flow to source Great Lakes Watershed. ▪ No feasible alternative to transfer, including conservation. ▪ An intra-basin transfer involving a consumptive use of 19 million litres per day is subject to Regional Review by the parties to the Agreement. Additional materials may be required to support Regional Review and consultation. 	

Consultation requirements for Schedule C projects as outlined in Section A.3.4 of the MEA Class EA, require three mandatory points of contact. At the third point, the Environmental Study Report is placed on the public record for at least 30 calendar days and the Notice of Completion of the Environmental Study Report shall advise the public and review agencies of their rights with regard to requesting a Part II Order ("Bump-up") request (section 16 of the *Environmental Assessment Act*). The appeal process of the MEA Class EA is outlined in Section A.2.8 of the MEA Class EA.

If the proponent is unwilling to voluntarily treat its proposed undertaking as a Schedule C undertaking, the Ministry may consider making a recommendation to the Minister of the Environment under ss. 16(3) of the *Environmental Assessment Act*, requesting that he/she order that the project be assessed as a Schedule C undertaking under the MEA Class EA. Additionally, the Ministry may consider

making a recommendation for a ss.16 (3) order for additional requirements such as specific monitoring and reporting.

Furthermore, the MOE (in consultation with a proponent) may determine that an undertaking should be assessed as an individual EA if the size of the proposed undertaking or complexity warrants such analysis (e.g. if Regional Review is required) and recommend that the Minister of the Environment make an order under ss. 16(1) of the *Environmental Assessment Act*.

Proponents who adhere to the Technical Bulletin and demonstrate that a proposed intra-basin transfer meets the criteria outlined in subsections 34.6 (1) to (3) of the OWRA to the satisfaction of the MOE and the MNR may also benefit under the intra-basin regulations that the MOE is currently working on. Those regulations may authorize a Director to consider an intra-basin transfer as an existing transfer of water and therefore proponents would not have to demonstrate compliance with the criteria mentioned in subsections 34.6 (1) to (3).

MASTER PLANS

Section A.2.7 of the MEA Class EA identifies that municipalities may consider a group of related projects under a Master Planning process. There are a variety of basic approaches to Master Planning as described in the MEA Class EA, all of which at a minimum, address Phases 1 and 2 of the MEA Class EA process. When preparing a Master Plan, proponents are encouraged to consider the Agreement and how it applies to specific projects identified by the Master Plan at this stage in the planning process. If a project identified in a Master Plan considers an alternative that will result in a new or increased intra-basin transfer of 379,000 litres per day or more, proponents should consider treating the specific project as a Schedule C undertaking under the MEA Class EA.

For more information, please contact:

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DRAFT

Schedule 1: Exceptions and Criteria for Intra-Basin Transfers

Water transfers: Great Lakes watersheds

34.6 (1) A permit shall not be issued or amended under section 34.1 so as to authorize the taking of water from a Great Lakes watershed if,
(a) any of the water would be transferred; and
(b) the new or increased transfer amount would be the threshold amount. 2007, c. 12, s. 1 (12).

Exceptions

(2) Subsection (1) does not apply to the following transfers:

1. A transfer that satisfies the following criteria:

- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - A. is always less than 19 million litres, or the lower amount prescribed by the regulations, per day, or
 - B. if a regulation is made prescribing the manner of calculating average amounts of water, is less than an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. The water is taken by the operating authority of a municipal drinking water system within the meaning of the Safe Drinking Water Act, 2002 and the system serves a major residential development within the meaning of that Act.
- iii. The criteria described in paragraphs 1 to 7 of subsection (3) are satisfied.

2. A transfer that satisfies the following criteria:

- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - A. is always less than 19 million litres, or the lower amount prescribed by the regulations, per day, or
 - B. if a regulation is made prescribing the manner of calculating average amounts of water, is less than an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. The water is taken by the operating authority of a municipal drinking water system within the meaning of the Safe Drinking Water Act, 2002 or by any other person.
- iii. It has been demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to,
 - A. the transfer, in the case of a new transfer, or
 - B. the transfer of the additional amount, in the case of an increased transfer.
- iv. There are no other feasible, environmentally sound and cost effective alternatives to,
 - A. the transfer, in the case of a new transfer, or
 - B. the transfer of the additional amount, in the case of an increased transfer.
- v. The criterion described in paragraph 1 of subsection (3) is satisfied, or it is not feasible, environmentally sound or cost effective to satisfy that criterion.
- vi. The criteria described in paragraphs 2 to 7 of subsection (3) are satisfied.

vii. Notice of the application for the permit or amendment has been given to the Province of Quebec, the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio and Wisconsin and the Commonwealth of Pennsylvania in accordance with the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement of 2005.

3. A transfer that satisfies the following criteria:

- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - A. is at least 19 million litres, or the lower amount prescribed by the regulations, on any day, or
 - B. if a regulation is made prescribing the manner of calculating average amounts of water, is at least an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. It has been demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to,
 - A. the transfer, in the case of a new transfer, or
 - B. the transfer of the additional amount, in the case of an increased transfer.
- iii. There are no other feasible, environmentally sound and cost effective alternatives to,
 - A. the transfer, in the case of a new transfer, or
 - B. the transfer of the additional amount, in the case of an increased transfer.
- iv. The criteria described in paragraphs 1 to 7 of subsection (3) are satisfied.
- v. The requirements of subsection 34.1 (14) have been complied with. 2007, c. 12, s. 1 (12).

Criteria

(3) The criteria referred to in subparagraphs 1 iii, 2 v and vi and 3 iv of subsection (2) are:

1. The new or increased transfer amount is returned, either naturally or after use, to the same Great Lakes watershed from which it was taken, except for an amount prescribed by the regulations that may be lost through consumptive use.
2. The efficient use and conservation of existing water supplies cannot reasonably avoid,
 - i. the transfer, in the case of a new transfer, or
 - ii. the transfer of the additional amount, in the case of an increased transfer.
3. The new or increased transfer amount is reasonable, given the purposes for which,
 - i. the transfer is done, in the case of a new transfer, or
 - ii. the transfer of the additional amount is done, in the case of an increased transfer.
4. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to ensure that it does not result in any significant individual or cumulative adverse impacts on the quantity or quality of the waters, or the water-dependent natural resources, of the Great Lakes-St. Lawrence River Basin, considering the potential cumulative impacts of any precedent-setting consequences associated with the transfer or the transfer of the additional amount, as the case may be.

5. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to incorporate feasible, environmentally sound and cost effective water conservation measures to minimize the taking of water and losses of water through consumptive use.

6. The transfer is implemented so as to ensure that it complies with,

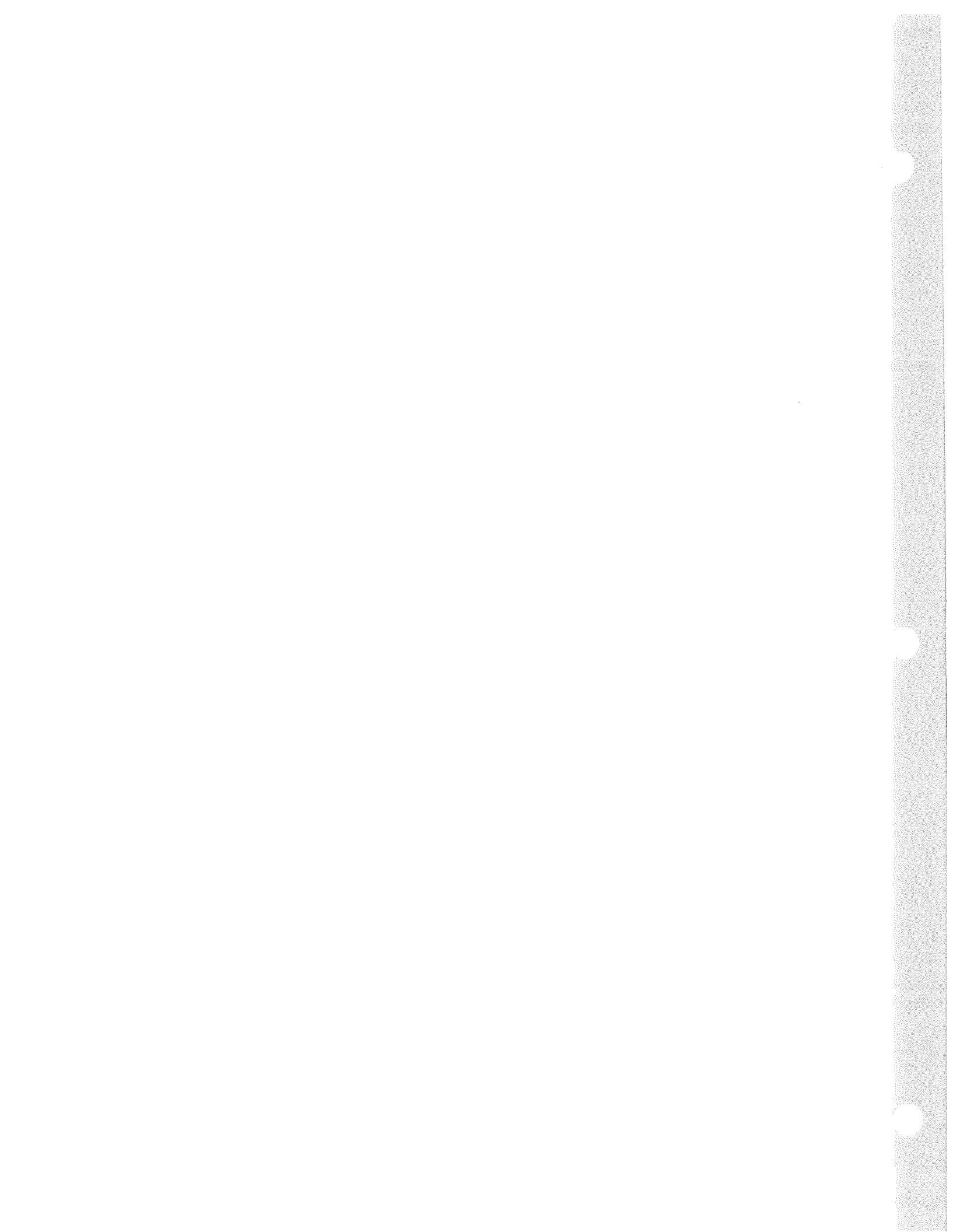
i. the Boundary Waters Treaty of 1909,

ii. the International Boundary Waters Treaty Act (Canada), and

iii. any other treaty, agreement or law that is prescribed by the regulations.

7. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to ensure that it complies with any other criteria that are prescribed by the regulations for the purpose of implementing Article 209 (Amendments to the Standard and Exception Standard and Periodic Assessment of Cumulative Impacts) of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement of 2005, including criteria relating to climate change or other significant threats to the Great Lakes-St. Lawrence River Basin. 2007, c. 12, s. 1

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CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

November 25, 2008

**Submission from the Canadian Environmental Law Association
Re: Interim Technical Bulletin Intra-Basin Transfers between Great Lakes Watersheds in
Ontario**

The Canadian Environmental Law Association (CELA) has been extensively involved in concerns leading to *The Great Lakes St. Lawrence River Basin Sustainable Water Resources Agreement* since the 1985 Great Lakes Charter. CELA is very concerned that this Agreement be fully implemented as soon as possible. To this end we would urge the government to give priority to drafting the regulations required for this agreement as soon as possible as a complete package. We have concerns that interim regulations take up time and energy that would be better spent on passage and implementation of the new regulations. Public energy would best be spent consulting on draft regulations at this time. CELA would also urge the government to decouple the Agreement regulations with other measures not central to the terms of the Agreement such as the Province's continuing program to charge for water so as not to delay implementation any longer. We have concerns that interim measures have the potential to create expectations and situations that may not be compatible with the final regulations.

The risk still exists in this interim technical bulletin that approvals can be gained for sections of pipes for transfers that are under the Agreement threshold and can escape notice. Several such proposals from separate neighbouring applicants once combined can create a cumulative taking that should be subject to Agreement scrutiny. As well other incremental growth can lead to pipelines extending right up to the boundary divide between water sheds as the Alliston pipeline has. Later small pipe applications can lead to these proposals jumping the watershed divide. We are not confident that reviewers of individual proposals necessarily have sufficient information to determine that smaller proposals should be aggregated and reviewed as one large withdrawal subject to the Agreement.

As we have learned in our Annex Advisory Panel meetings, the challenge is to move the consideration of water allocation to the beginning of the Official Plan drafting rather than one of the last steps when the Plan has insurmountable momentum for growth. Adequacy and renewability of water sources should be the first determinant of growth and development. One lesson we learned during the Agreement negotiations is that we do not yet have the science we can rely on to determine water budgets yet in many parts of the Great Lakes. Agreement regulations to frame the science program and fill these information deficits need to be part of the regulatory package and well underway so our decisions are made on sound science on ground and surface water supplies, interactions and renewability in times of climate change. In many cases we cannot yet confidently determine what baseline we are currently working with.

Ontario has been a leader in the Great Lakes Region in tracking information on withdrawals lower than Agreement thresholds. While six months ago we thought we had time to consider interim measures, we are now falling behind other US jurisdictions in moving ahead with the full legislative package to reach implementation timetables because of early Congressional approval of the US Compact. For these reasons we feel it would be advisable to have a short moratorium and to bring the draft regulatory package forward for review and introduction into the next session of the legislature. For more information on this submission please contact Researcher Sarah Miller by e-mail millers@lao.on.ca or by phone 4160 960-2284 ex. 213.

January 9, 2009

**Submission regarding
draft Technical Bulletin Environmental Assessment Direction for Municipal
Water and Wastewater Projects Proposing an Intra-Basin Transfer**

Ecojustice Canada appreciates the opportunity to comment on the draft Technical Bulletin. We have had the opportunity to read comments on an earlier draft Technical Bulletin from both the Canadian Environmental Law Association and the Georgian Bay Association. Ecojustice Canada believes that the concerns raised by those organisations continue to be relevant to the new draft Technical Bulletin (dated December 15, 2008).

In addition, Ecojustice Canada has two public interest environmental law concerns and one implementation concern. First, the "interim direction" that is being provided within the draft Technical Bulletin is essentially an implementation of the Ontario government's interim *policy* regarding Intra-Basin Transfers, which (we understand) is intended to be in place until such time as *regulations* are drafted and section 34.6 of the *Ontario Water Resources Act* is brought into force. Both environmental policy proposals and environmental regulation proposals should be subject to the public participation requirements of the *Environmental Bill of Rights* (EBR). When asked at the December 17, 2008 meeting of the Annex Advisory Panel about whether the Technical Bulletin would be posted to the EBR Registry for comment, the Ministry of the Environment representative replied, "No." If the Ministry does not intend to post the Technical Bulletin as a Policy Proposal (pursuant to section 15 of the EBR), we assume that the Technical Bulletin be posted to the EBR Registry as an Information notice (pursuant to section 6 of the EBR). The use of the term Technical Bulletin (or similar) to mask an environmentally significant policy that should be subject to section 15 of the EBR is problematic. In his Annual Reports to the Legislature, the Environmental Commissioner of Ontario (ECO) reports on the use of Information notices on the EBR Registry. Each year, there are examples of both *good* and *inappropriate* uses of Information notices. We are concerned that choosing not to seek public comment through the EBR Registry will be an inappropriate use of Information notice.

Furthermore, Ecojustice Canada is concerned that the proposed Technical Bulletin creates an expectation of future exemption from regulation (per page 4 of December 15, 2008 draft of the Technical Bulletin):

Proponents who adhere to the Technical Bulletin and demonstrate that a proposed intra-basin transfer meets the criteria outlined in subsections 34.6

ECOJUSTICE

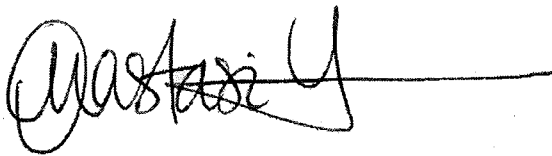
(1) to (3) of the OWRA to the satisfaction of the MOE and the MNR may also benefit under the intra-basin regulations that the MOE is currently working on. Those regulations may authorize a Director to consider an intra-basin transfer as an existing transfer of water and therefore proponents would not have to demonstrate compliance with the criteria mentioned in subsections 34.6 (1) to (3).

We are deeply concerned that this interim policy direction indicates an intention to exempt particular proponents from future compliance with the law. It would be more appropriate to suspend approvals of water and wastewater projects until such time as regulations associated with the implementation of the intra-basin transfer provisions of the *Ontario Water Resources Act* are complete.

Regarding implementation, Ecojustice Canada fully supports the early and meaningful integration of environmental assessment planning with land use planning. In practice, we feel that such integration has not been realized. In particular, when administrative tribunal oversight is triggered on land use planning decisions, we are concerned that aspects of environmental assessment planning may be reviewed solely by the Ontario Municipal Board, rather than by a joint panel of both the Ontario Municipal Board (with their land use planning expertise) and the Environmental Review Tribunal (with their environmental assessment planning expertise). Joint panel review makes the most sense for truly integrated planning decisions, should such review be needed.

For additional information or questions regarding this submission, please contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Anastasia", followed by a horizontal line extending to the right.

Anastasia M. Lintner, PhD, LLB
Staff Lawyer
x30
alintner@ecojustice.ca

ecojustice

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Implementation of the Great Lakes St. Lawrence River Basin Sustainable Water Resources Agreement

Questions regarding how Intra-Basin Transfers would be dealt with in Ontario -Some last minute thoughts from CELA

During negotiations about the Agreement the Parties preferred that each of the Parties would:

- Notify other parties of applications for large withdrawals within their boundaries,
- Would carry out the evaluations of those projects within each State or Province within a reasonable timeframe, and then pass on their findings to the Regional Body for their endorsement.

It is my understanding that our best chance as concerned public is to influence the outcome at the Provincial level. The US Compact has provisions for the US public to seek redress in the courts on a Regional Body Decision (Section 7.3 Enforcement) based on previous precedents and well established legal rights there. The Agreement does not have similar provisions leaving it unclear if the Ontario and Quebec public will have a role to play once something reaches the Regional Body level see the public participation section of the Agreement (Article 503) which allows public comment on Regional Body decisions but not guaranteed access to courts.

This makes it hugely important to ensure we direct the decisions on intra-basin as well as large withdrawals applications originating in Ontario to the process that will result in the best opportunities for public participation. To be frank the odds are not great right now with any of the options.

The Class Environmental Assessment (EA) for Water and Sewers is administered by the Municipal Engineers Association. Approvals are sought by municipalities for sections of water and sewer infrastructure or for regional systems. The process does not address need or alternatives and the only way the public can get adequate involvement is by requesting a bump-up to a full EA. Bump-ups are rarely granted and if they are full EAs can last for years which the other Parties to the Agreement would not likely be satisfied with. Full EAs do not guarantee the public of a hearing and the scoping of the issues in a full EA can be lacking. This has been a system for routine approvals and has meant that the PTTW will follow and be a fait accompli. Project notices are not required to be posted on the EBR. It is rare for a project to be turned down. The Class EA process only now covers public projects.

The other route being suggested would be to add new provisions to the Ontario Water Resources Act for intra-basin and large requests over Agreement trigger levels to require a more rigorous process. This would mean that applications would be posted on the EBR. The public would have the opportunity to ask for a leave to Appeal to the Environmental Review Tribunal. However the record right now only has 1/3 of the appeal requests going forward.

Under this option a new instrument would need to be created under the OWRA that would apply to the large withdrawal requests and for the requests for intra-basin diversions. This new instrument could specify appeals to the ERT, public notice as well as requirements for compliance with Source Protection Plans under the Clean Water Act. One other advantage of this option is that it would capture both public and private proposals.

Sarah Miller
February 4, 2009

Sarah Miller (CELA)

From: Brent Gibson [bgibson@glu.org]
Sent: February 13, 2009 12:25 PM
To: Brenda.Lucas@ontario.ca
Cc: 'Brent Gibson'; Sarah Miller (CELA); 'Mary Muter'; lino.grima@utoronto.ca; 'Tony Mass'; day@bmts.com; 'Dan McDermott'; 'Anastasia Lintner'; 'Mike Layton'; tim@gordonfn.org; 'John Jackson'; 'Derek Stack'; 'bob duncanson'; c.maas@polisproject.org
Subject: Intra-basin transfers - ask from Feb 5

Hello Brenda,

At Thursday's meeting last week you asked me to forward to you our ask. In light of that meeting, and the ones this week, some points have been refined. If you have any questions do not hesitate to ask.

Regards,
Brent

Our concerns:

1. That ME Class Environmental Assessments (EAs) will produce insufficient information on which to assess proposals for municipal intra-basin transfers.
2. That section 32 of the EBR, which allows the Minister to skip public participation and comment on a permit to take water or certificate to discharge wastewater when a ME Class EA has been done, undermines the public's ability to have meaningful impact on the use and health of the Great Lakes watershed, including the loss of the right under the EBR to appeal the decision to the Environmental Review Tribunal.
3. That the absence of intervener funding to appeal an intra-basin transfer permit decision to the Environmental Review Tribunal inherently favours the proponent of a water-taking and creates an access to justice barrier.
4. That no structure currently exists to guarantee public access to water-takings EA information.
5. That there is a clear disconnect between the permitting of water withdrawals and the permitting of wastewater discharges.

Our ask:

That the province not issue any new intra-basin transfer permits, including current proposed ones, until a new instrument is in place, pursuant to the Ontario Water Resources Act, that:

1. Creates a permitting system that enforces public participation by requiring notice to EBR and right to appeal to the Environmental Review Tribunal
2. Provides sufficient intervener funding to support an appeal to the ERT.
3. Ensures the right of the public to present their case to an entity other than the proponent of the intra-basin transfer permit.
4. Addresses impacts of water-takings, both at the point of withdrawal, and on the source lake watershed.
5. Considers the withdrawal of water from a watershed alongside the discharge of wastewater into the watershed.
6. Bases watertakings and return-flow requirements on the water withdrawn, not consumptive use.
7. Sets the standard for intra-basin transfers to align with those of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement for communities and counties that straddle the Great Lakes watershed.
8. Addresses the cumulative impacts on the local and Great Lake watershed from which the water is drawn,

as well as the broader Great Lakes and St. Lawrence River ecosystem.

9. Articulates the scientific capabilities and limitations for reporting the volume of takings and how much water is moved through sewage transfers.

Brent Gibson
Director, Communications
Great Lakes United
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GREAT LAKES – ST. LAWRENCE RIVER BASIN SUSTAINABLE WATER RESOURCES AGREEMENT

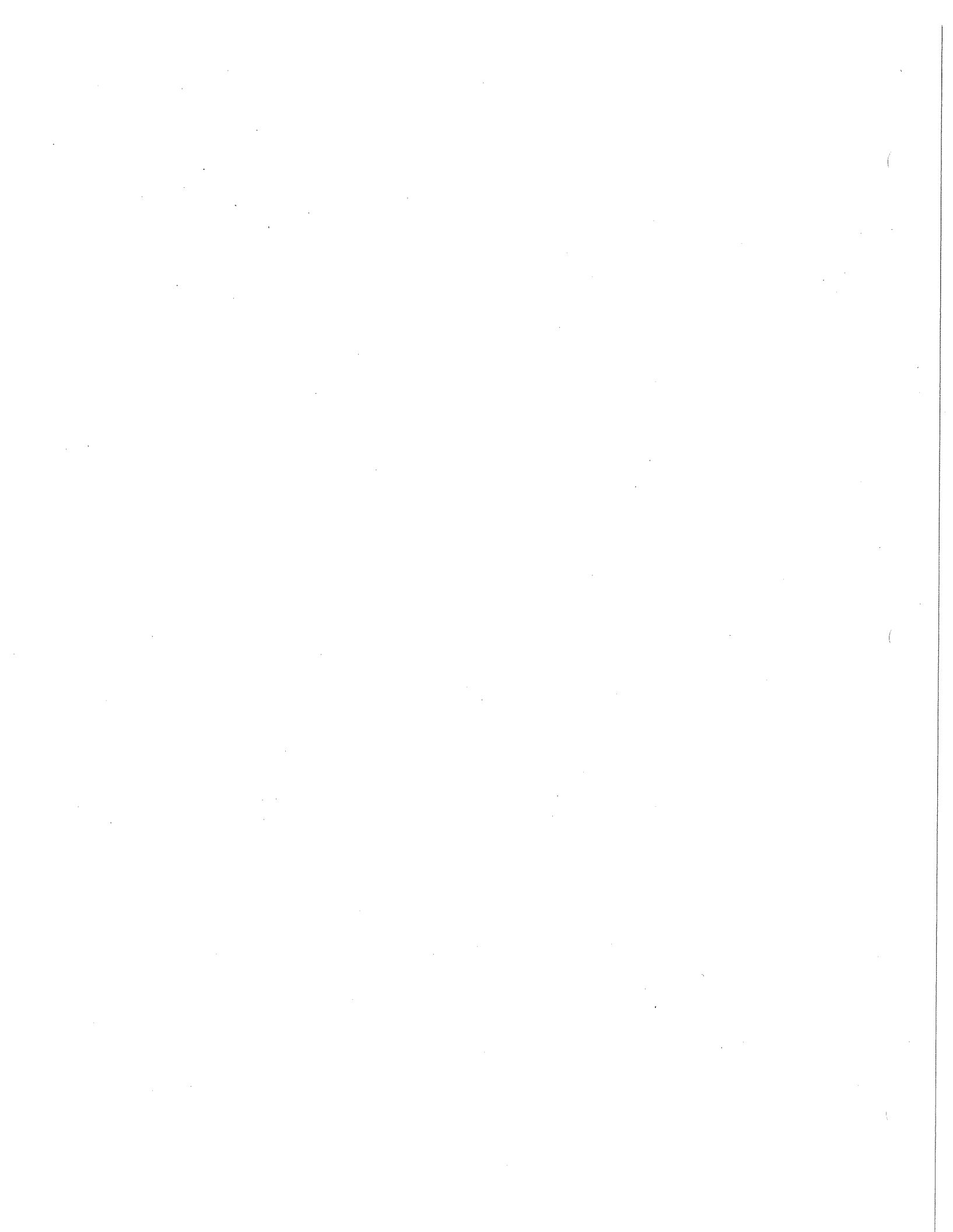
**Intra-Basin Water Transfers
Municipal Sector Consultation**

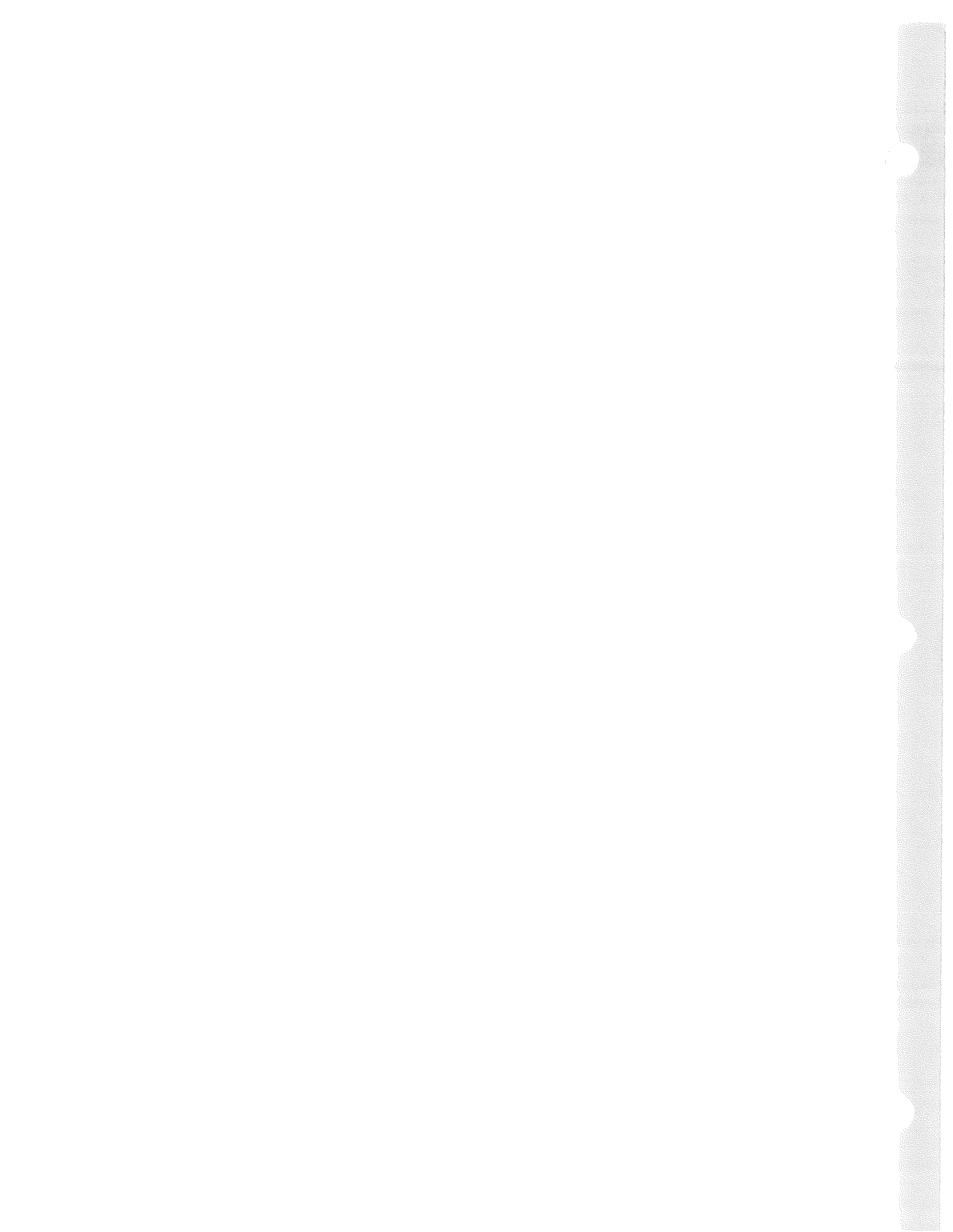
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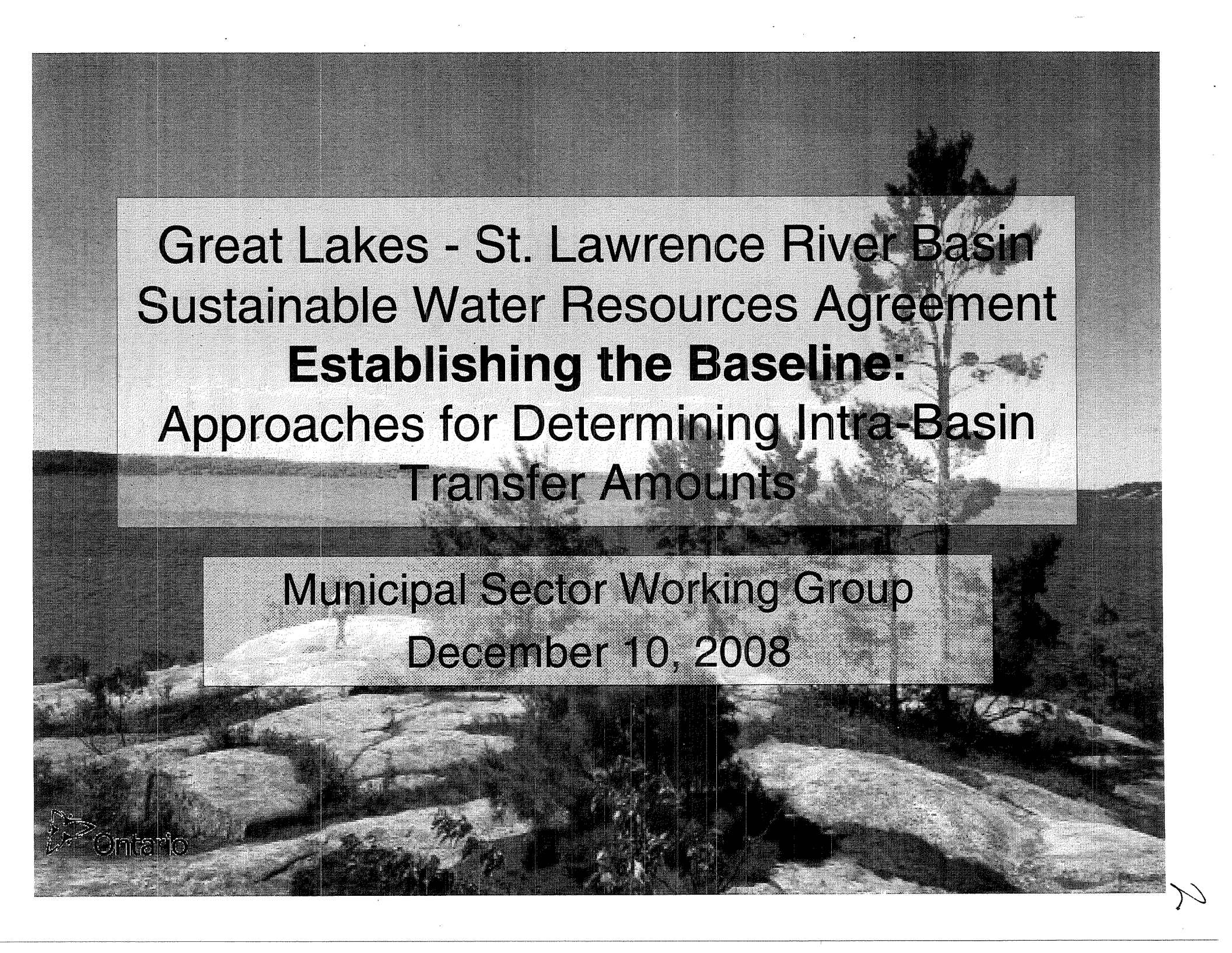
**Location: Courtyard Marriott, 475 Yonge Street, Toronto
Alexander Rooms A & B**

AGENDA

Time	Discussion Item
8:30 AM	Arrival and registration (continental breakfast provided)
9:30 – 10:00	Welcoming remarks and introductions MOE/MNR Review of session agenda Overview of consultation process MOE
10:00 – 10:20	Technical Bulletin
10:20 – 11:00	Baseline overview
11:00 – 12:30	Breakout group discussion (Baseline) - key questions - roundtable exploration of options Plenary session – feedback from breakout groups
12:30 – 1:15	Lunch
1:15 – 1:45	Introduction to maps Feedback on maps
1:45 – 2:30	Exception criteria overview
2:30 – 3:45	Breakout group discussion (exception criteria) Plenary session – feedback from breakout groups
3:45 - 4:00	Wrap-up and next steps







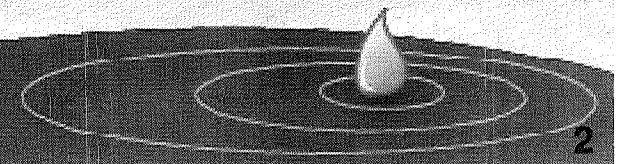
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Establishing the Baseline:
Approaches for Determining Intra-Basin
Transfer Amounts

Municipal Sector Working Group
December 10, 2008



Presentation Outline

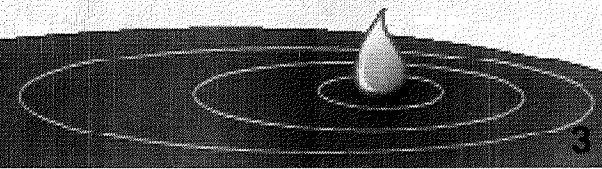
- Background
- Baseline Issues
 - Identifying transfers
 - Administrative process
 - Approaches for determining baseline
- Baseline options
 - Feedback to date from municipalities
- Key questions





Background

- The Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement commits each jurisdiction to providing a list of existing approval limits and/or the capacity of existing systems, as of the date Article 207 comes into force.
- This **baseline** volume is needed so that new or increased diversions, consumptive uses, or withdrawals can be determined. The capacity of the existing systems includes the withdrawal capacity, treatment capacity, distribution capacity, or other capacity limits. Existing capacity determinations are to be based on approval limits or the most restrictive capacity information.
- Ontario's Permit to Take Water (PTTW) program sets out specific requirements for water takings over 50,000 litres/day, as required under the *Ontario Water Resources Act* and the Water Taking Regulation (Reg. 387/04) including monitoring and reporting requirements.
- Ontario does not currently track the amount of water that is transferred from one Great Lakes watershed to another (an **intra-basin transfer**). This amount must be determined in order to develop the baseline. Therefore, a practical, cost effective way of calculating the baseline is required.





Identifying Transfers

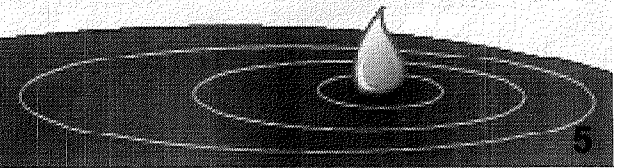
- How will **transfers be identified** geographically?
 - Transferors (i.e., a party that transfers water across the watershed divide) could be required to identify and describe all locations where water or sewage is or will be transferred across Great Lakes watershed boundaries, including locations of return flow.
 - Ministry needs to provide map of Great Lakes watershed boundaries to transferors. What does this map need to contain?



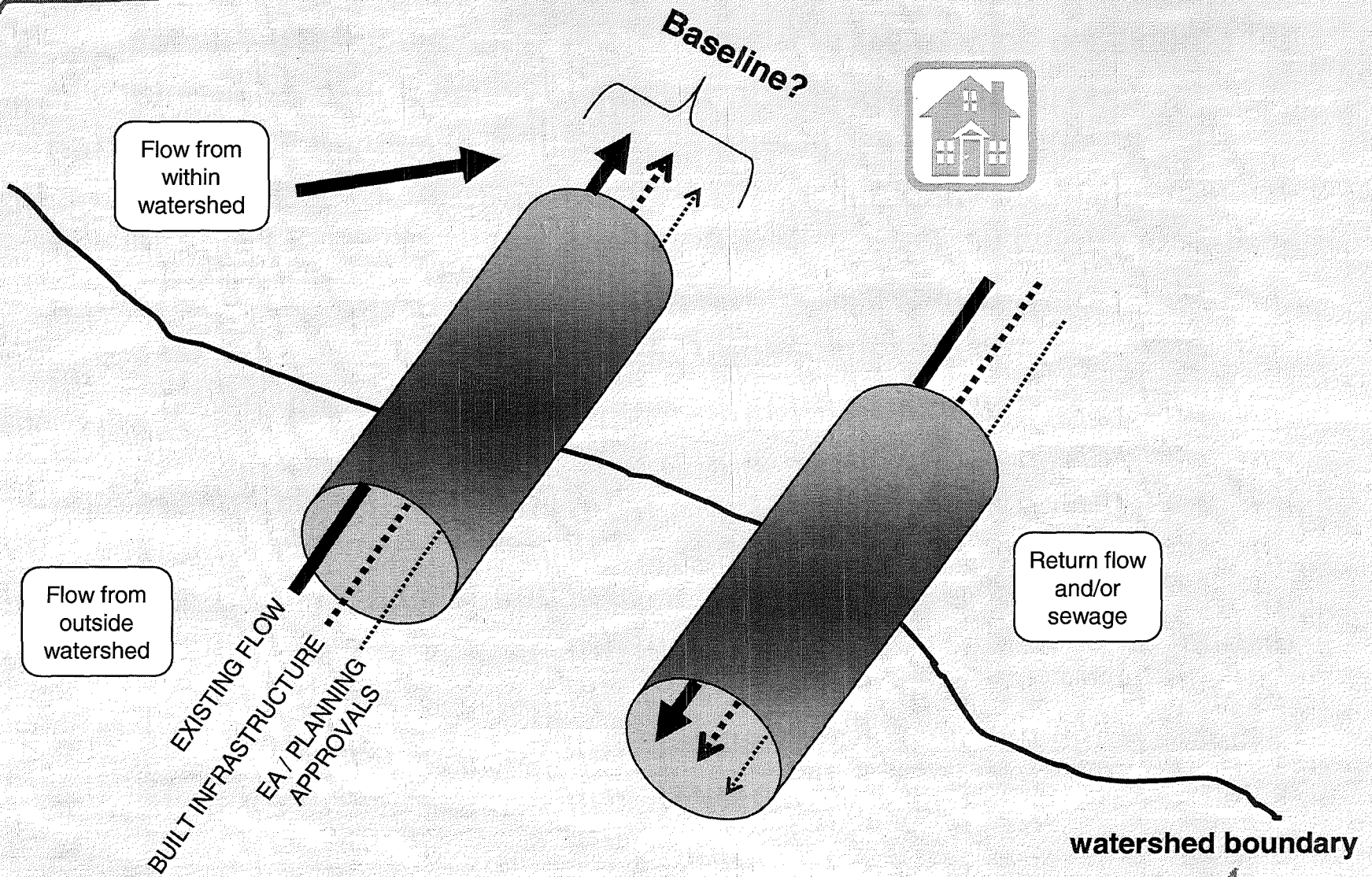


Administrative Process

- Administrative process – **Related Transferor**
 - In addition to the water taker, related transferors will be named on the PTTW as a “permit holder”.
 - Related transferors may have terms and conditions imposed on them in the PTTW in relation to transfers. A related transferor’s SDWA approvals and OWRA sewage works approvals may also be amended to ensure consistency with PTTW. Terms and conditions could, for example:
 - govern the amount of water that may be transferred
 - govern monitoring and reporting of amounts transferred
 - govern use and conservation of transferred water.
 - Parties to the permit will be subjected to the exception criteria for any new or increased transfer over the threshold amount.
 - Applications for new or increased transfers may be considered cumulatively over a period of time, as specified by regulations.
 - Transferred amounts under two or more PTTWs may be considered cumulatively.



Intra-basin Transfer Scenario



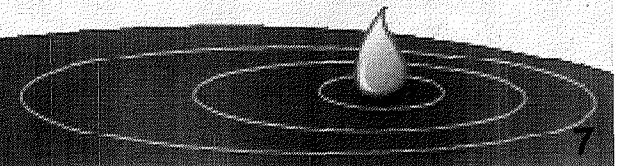


Approaches for Determining the Baseline

- There are many approaches that can be used to **determine the capacity of existing systems.**

“Withdrawal capacity, treatment capacity, distribution capacity, or other capacity limiting factors”

- What are practical, cost effective **ways of calculating the baseline?**
 - A. Actual volume transferred
 - B. Approved PTTW volume
 - C. Estimated amount
 - D. Rated pumping capacity
 - E. Estimated capacity of existing infrastructure
 - F. EA approved capacity
 - G. Master plan
 - H. Official plan
- More than one approach may be needed to calculate the baseline. For example, approaches could differ:
 - for areas currently serviced versus areas to be serviced in the future (i.e., approved but not yet built)
 - for specifics of a given transfer.





Baseline Options – What we've heard

General Comments

- Concerns that municipalities will have to go back and undertake additional analysis and obtain additional approvals for a project that was already approved.
- Concern about restrictions being placed on existing allocated and allotted unused system capacity.



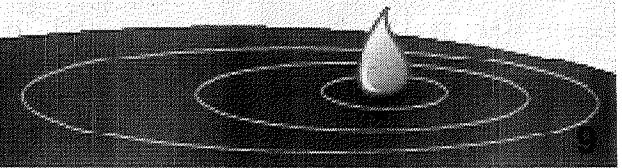


Baseline Options – What we've heard

A. Approach: *Measure actual amount*

Pros	Cons
<ul style="list-style-type: none">• Would provide an accurate assessment for specific points in time	<ul style="list-style-type: none">• Could result in increased costs if new metering is required• Does not account for future servicing of approved new development• Does not account for daily, seasonal variations• Does not account for operational and maintenance volumes• Meters may not be consistent

- Use of meters is the most objective way to calculate known quantities crossing watershed boundaries.
- Meters may be an effective tool to monitor flows but should not be used as the basis to establish the limits of a transfer.
- Water meters could be installed relatively simply, but more challenging to measure sewage.
- May not be an accurate assessment of municipal need (e.g., water needed for operational security, redundancy, inflow/infiltration).
- May be required looking at flow data on an individual property basis which would be very time consuming.





Baseline Options – What we've heard

B. Approach: Permitted volume as stated on the PTTW

Pros	Cons
<ul style="list-style-type: none">• Uses existing number (no new calculations)	<ul style="list-style-type: none">• Could result in over or under representation of amount transferred• Only accurate if entire permitted volume is transferred (i.e., an existing PTTW may include water supplied to areas in more than one watershed).

- Not a viable option for all municipalities because PTTW is at the source, not at the transfer point.
- PTTW permitted volumes include water used for processing into potable water.
- Some support/preference for this option as municipalities are familiar with these (simplicity).
- Permitted volume does not reflect amount being transferred.



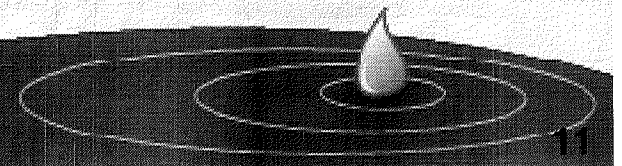


Baseline Options – What we've heard

C. Approach: *Estimated amount (e.g., per capita use)*

Pros	Cons
<ul style="list-style-type: none">• Could be a simple way to measure baseline	<ul style="list-style-type: none">• May not be most accurate method

- Seen to be a very subjective approach and should not be considered.
- Treats all jurisdictions equally; does not consider whether they are efficient or inefficient water users.
- Could be difficult to define or estimate consistently (e.g., how to define a serviced area? how to estimate non-residential flow? assumptions with respect to per capita flow?), leading to inaccuracy.





Baseline Options – What we've heard

D. Approach: *Rated pumping capacity*

Pros	Cons
<ul style="list-style-type: none">• Uses existing number (no new calculations). Certificate of Approval states approved pumping capacities.	<ul style="list-style-type: none">• Only useful where there is the need to pump and pump relates to transfer across watershed boundary• EA process for increase to pump capacity to match built infrastructure capacity will need to include exception criteria – double approval

- Need to consider risk of stranding public funds if approved and built infrastructure is not utilized due to restrictive capacity.
- Expectation exists that, if a C of A exists, then the infrastructure has been paid for to produce the quantities stated.
- Some support for use of C of A limit for baseline.
- If this method is to be used, it should be the max. rated pumping capacity.



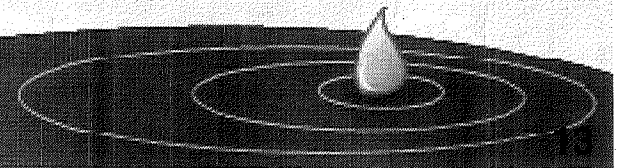


Baseline Options – What we've heard

E. Approach: *Estimated capacity of existing infrastructure*

Pros	Cons
<ul style="list-style-type: none">• Uses existing number (no new calculations)• Recognizes prior approvals and capital investments	<ul style="list-style-type: none">• Would not be the most restrictive capacity information• New calculations may be required if existing infrastructure services areas in more than one Great Lakes watershed

- Some support for this as a preferred option.
- Allows for better promotion of conservation and efficiency.
- No risk of delay for municipalities going forward.
- No need for alternative infrastructure to replace existing infrastructure.





Baseline Options – What we've heard

F. Approach: *EA approved capacity*

Pros	Cons
<ul style="list-style-type: none">• Has been subject to public and approval processes• Process has already considered impact of infrastructure• Accounts for forecasted need	<ul style="list-style-type: none">• Approval allows for up to 10 years to start construction• Would not be most restrictive capacity information

- Some support for this as a preferred option.
- Depending on the project, may involve different schedules of the Class EA.



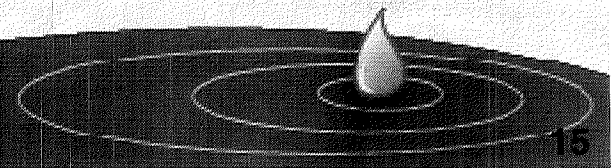


Baseline Options – What we've heard

G. Approach: *Master plan*

Pros	Cons
<ul style="list-style-type: none">• Considers planned growth	<ul style="list-style-type: none">• Would rely on EA approved capacities• Would not be most restrictive capacity information

- Built capacity and/or planned infrastructure should be considered from the Master Planning stage.



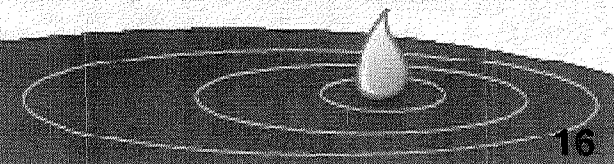


Baseline Options – What we've heard

H. Approach: *Official plan*

Pros	Cons
<ul style="list-style-type: none">• Considers planned growth	<ul style="list-style-type: none">• Would rely on estimated values• Would not be most restrictive capacity information

- No comments were received on this.





Key Questions

General

- For each of the approaches discussed, are there additional pros, cons, or considerations associated with this approach?

A. Actual volume transferred

- Is there a benefit to metering transfers on a go-forward basis after the baseline has been established? What are the implications?

B. Approved PTTW volume

- Are there any circumstances in which this would be an appropriate method for establishing the baseline?

C. Estimated amount

- What assumptions would be made with respect to per capita flow?
- How would non-residential flow be estimated?





Key Questions

D. Rated pumping capacity

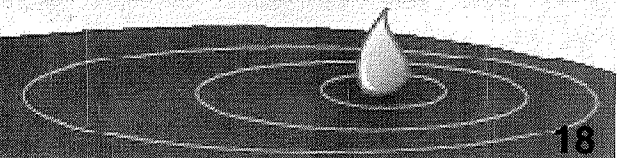
- How could this be used to establish the baseline? Would it be limited to cases where there is a pump that is located near the watershed boundary?

E. Estimated capacity of existing infrastructure

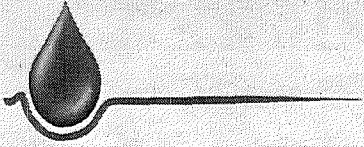
- How easy (and objective?) would it be to translate the capacity of the built infrastructure into a baseline volume? How would this be done?

F. EA approved capacity

- How easy (and objective?) would it be to determine the transfer component from the EA approval? How would this be done?



Key Questions



G. Master plan

- How would built capacity and/or planned infrastructure be considered in enough detail to allow a baseline volume to be estimated?

H. Official plan

- Are there any circumstances where this would be an appropriate approach?



Appendix



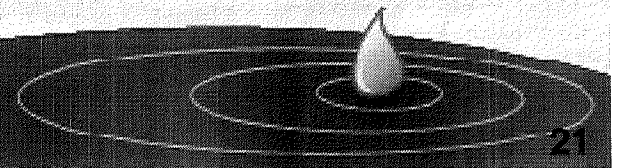
Article 207 – Applicability

1. To **establish a baseline** for determining a new or increased diversion, consumptive use or withdrawal, each Party shall develop either or both of the following lists for their jurisdiction.
 - a. A list of **existing water withdrawal approvals** as of the date this Article comes into force.
 - b. A list of the **capacity of existing systems** as of the date this Article comes into force (i.e., withdrawal capacity, treatment capacity, distribution capacity, or other capacity limiting factors). Existing capacity determinations shall be **based upon approval limits or the most restrictive capacity information**.

Volumes of the diversions, consumptive uses or withdrawals set forth in the list(s) prepared by each Party shall constitute the **baseline volume**.

The list(s) shall be furnished to the Regional body within 1 year of the date this Article comes into force (i.e., 60 days after the last Party completes the measures needed to ban diversions, regulate exceptions).

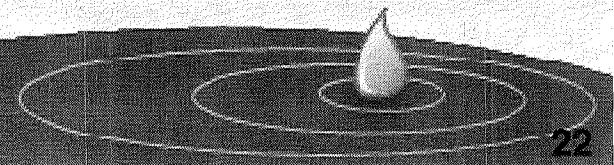
5. The total volume of surface water and groundwater resources that supply a common distribution system shall determine the volume of a withdrawal, consumptive use or diversion.





Regulating Intra-Basin Transfers

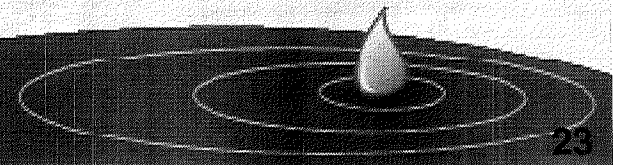
<p>>19M L/d Consumptive Use (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none">• Meets exception criteria, including return flow to source GL watershed• No feasible alternatives to transfer, including conservation• Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision	
<p>>379,000 L/d (Consumptive Use <19M L/d)</p>	<p><i>Municipal Drinking Water Systems:</i></p> <ul style="list-style-type: none">• Meets exception criteria, including return flow to source GL watershed	<p><i>All Uses (including Municipal Drinking Water Systems if return flow to source watershed cannot be met):</i></p> <ul style="list-style-type: none">• Meets exception criteria, except return flow may be to another GL watershed (if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed)• No feasible, environmentally sound, cost effective alternatives to transfer, including conservation• Ont. gives prior notice to other GL jurisdictions
<p>50,000 L/d to 379,000 L/d</p>	<ul style="list-style-type: none">• Subject to PTTW water taking requirements, not prohibited	





Ontario Water Resources Act

- Introduces a **prohibition on new or increased intra-basin transfers** of 379,000 L/d or greater (from one Great Lakes watershed to another Great Lakes watershed), subject to strictly regulated exceptions.
- **Adopts environmental criteria** from the Agreement including the Exception Standard that must be met for proposals of new or increased intra-basin transfers.
- Places **stricter rules** as the volume of transfers increases: e.g., an intra-basin transfer greater than 19 million L/d consumptive use requires Regional Review by the 10 members of the Regional Body and must return the water back to the source Great Lake watershed after use (“return flow”).





Relevant Definitions

Definitions, transfers between Great Lakes watersheds

34.5(1) In this section and in sections 34.5 to 34.8,

“increased transfer” means a transfer that would arise from an existing water taking where water is currently being transferred and an additional amount of water would be transferred;

“new or increased transfer amount” means,

- (a) in the case of a new transfer, the amount of water that would be transferred, and
- (b) in the case of an increased transfer, the additional amount of water that would be transferred;

“new transfer” means a transfer that would arise from,

- (a) a new water taking, or
- (b) a existing water taking where no water is currently being transferred;



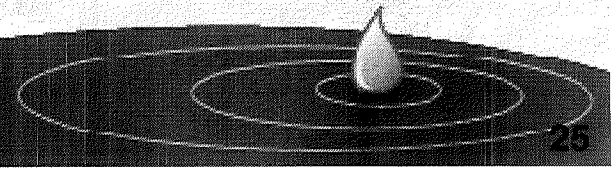


Relevant Definitions – Continued

“related transferor”, when used with reference to a permit, means,

- a person who does not take water under the permit but transfers water that has been taken under the permit, or
- a person who,
 - (i) does not take water under the permit but distributes water that
 - (A) has been taken under the permit, and
 - (B) has been or will be transferred,
 - (ii) belongs to a class of persons that is prescribed by the regulations;

“threshold amount” means 379,000 litres or more of water on any day or, if a regulation is made prescribing the manner of calculating average amounts of water, an average of 379,000 litres or more of water per day;





Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement
APPROACHES TO DETERMINING THE BASELINE FOR EXISTING INTRA-BASIN TRANSFERS

AAP Representative: Sarah Miller, Ramani Nadarajah Canadian Environmental Law Association

Context

The Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement commits each jurisdiction to providing a list of existing approval limits and/or the capacity of existing systems, as of the date Article 207 comes into force. This *baseline* volume must be established so that new or increased diversions, consumptive uses, or withdrawals can be determined. The capacity of the existing systems includes the withdrawal capacity, treatment capacity, distribution capacity, or other capacity limits. Existing capacity determinations are to be based on approval limits or the most restrictive capacity information.

- Ontario’s Permit to Take Water (PTTW) program sets out specific requirements for water takings over 50,000 litres/day, as required under the *Ontario Water Resources Act* and the Water Taking Regulation (Reg. 387/04) including monitoring and reporting of requirements.
- Although, Ontario has specific requirements for water takings, Ontario does not currently track the amount of water that is transferred from one Great Lakes watershed to another (an intra-basin transfer). This amount must be determined in order to develop the *baseline*. Therefore, a practical, cost effective way of calculating the *baseline* is required.

Possible Options and Considerations

The chart below identifies a number of possible approaches that could be considered (individually or in combination) for determining the *baseline* amount for intra-basin transfers. For each approach, a preliminary set of pros and cons, plus considerations, have been identified.

We are interested in your opinions and ideas. Please take this opportunity to let us know what you think about these approaches.

Approach	Pros	Cons	Comments and Considerations
Use permitted volume as stated on the Permit To Take Water	<ul style="list-style-type: none"> • Uses existing number (no new calculations) 	<ul style="list-style-type: none"> • Could result in over or under representation of amount transferred • Only accurate if entire permitted volume is transferred 	<p>CELA’s Comments Does not factor in seasonal or consumptive use.</p> <p>Does give us the best data available.</p> <p>Could Ontario reporting on all use over 50,000 litres result in the perception that we use more than other jurisdictions that will be reporting at much higher thresholds. It will be important to communicate this. It is important for us to demonstrate to other jurisdictions that we feel it is important to collect data at this threshold especially if water shortages and local supply problems grow as the result of overuse and climate change.</p>

Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement

Approach	Pros	Cons	Comments and Considerations
<p>Use built capacity of existing and/or planned infrastructure that transfers water between Great Lakes watersheds</p>	<ul style="list-style-type: none"> • Uses existing number (no new calculations) 	<ul style="list-style-type: none"> • May not provide the most restrictive capacity information (as required by Article 207) • New calculations may be required if existing infrastructure services areas in more than one Great Lake watershed 	<p>How would approved planned infrastructure be considered (i.e., at what approved planning stage)?</p> <p>As early in the process as possible when the need question is being considered. Given that decisions are already in plans for transfers that have not yet happened, we think these decisions should be revisited through the new lens of the Agreement and the out come of the other working groups on Conservation and Science.</p> <p>Our preference is to generate the most accurate and up to date information possible. Some of these questions also go to establishing the best science strategy to inform decision-making in the future so expediency in the short-term should not be the only driver.</p>
<p>Use rated pumping capacity of existing infrastructure that transfers water between Great Lakes watersheds</p>	<ul style="list-style-type: none"> • Uses existing number (no new calculations) 	<ul style="list-style-type: none"> • Pump capacities typically reflect maximum daily flow, as opposed to average daily flow or annual flow. Therefore, may not provide the most restrictive capacity information (as required by Article 207) • New calculations may be required if existing infrastructure services areas in more than one Great Lake watershed 	<p>See below</p> <p>Cautionary approach. We may want to anticipate and consider a level of data and detail that reflects uses and data needs in the whole basin even though they are not currently in practice in Ontario. For example US agricultural withdrawals are huge in comparison to Ontario use. Would we want to insure that our system is ready to respond to and generate data for a growth scenario. Most importantly Ontario's system has been among the best in the basin for tracking actual use along with Minnesota's. Should we be designing a system that would endure and be able to be replicated by others in the basin. Concerned citizens in the basin are discussing the value of a harmonized system. Ontario should plan for the highest common denominator so others could harmonize up to our practices.</p>

Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement

Approach	Pros	Cons	Comments and Considerations
Measure actual amount transferred	<ul style="list-style-type: none"> • Would provide an accurate assessment 	<ul style="list-style-type: none"> • Could result in increased costs if new metering is required • Does not account for future servicing of approved new development 	<ul style="list-style-type: none"> • How would this be measured? <ul style="list-style-type: none"> -Water meters -Bidirectional meters on water pipes crossing Great Lakes watershed boundaries -Through municipal servicing agreements -Other methods... <p>All of these need investigation that would include best practices for all sectors withdrawing, cost effective measurements, standards for measurement devices. Assessments of infiltration and leakage should be determined and measures to address the need to integrate infrastructure repairs into planning and conservation. If metering for households is achievable there is no reason universal metering for all sectors should not be possible.</p>
Estimated based on size of serviced area, number of lots, users, etc.	<ul style="list-style-type: none"> • Could be a simple way to measure baseline 	<ul style="list-style-type: none"> • May not be most accurate method 	<ul style="list-style-type: none"> • How would this be measured consistently across municipalities? <p>Agree this would not likely be very accurate.</p>
Water Balance Approach (suggested by some municipal representatives): determine the proportion of the municipal network water balance transferred then apply proportion to approved water taking volumes			<p>CELA would prefer that there be some new requirements to track and report return flow volume and point of return in the PTTW system. Water budgets are already required in drinking water source protection planning. This data needs to be integrated with PTTW data on a watershed basis for tributaries and groundwater systems flowing into the Great Lakes.</p>
Other approaches			<p>This document assumes that these transfers may only be occurring in the municipal sector. There is potential that the industrial and agricultural sectors may also request large withdrawals from one watershed and discharge wastewater into another watershed. In the US this was a concern with a proposal for a mining operation withdrawing from the GL and returning water to a river system flowing into the Mississippi River.</p>

Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement

Examples

The ministries are interested in current examples of water transfers between Great Lakes watersheds where a baseline calculation for intra-basin transfers will be required.

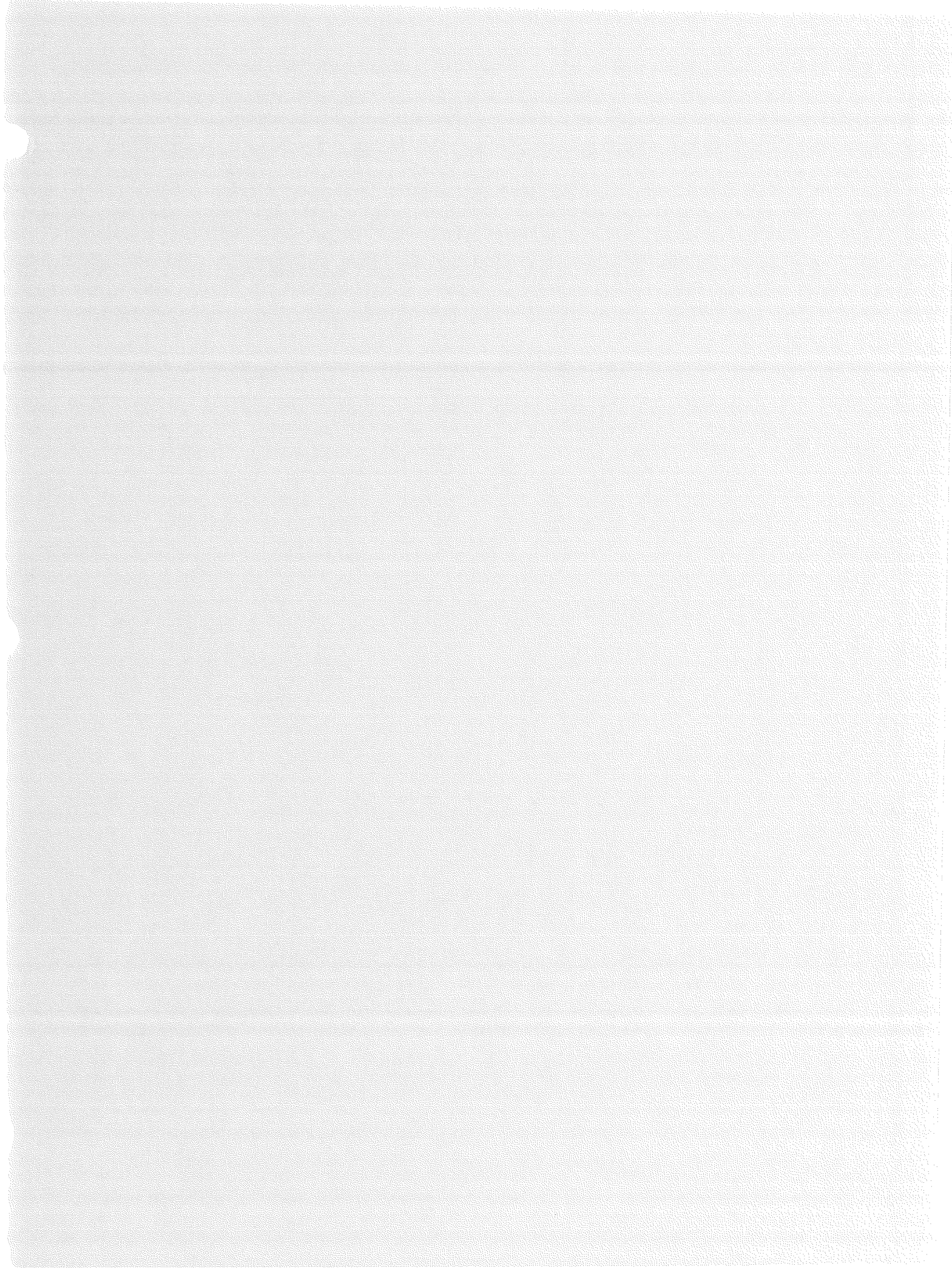
If this is the case with your water use, **please provide a detailed description of your situation, including considerations around the baseline options described above.**

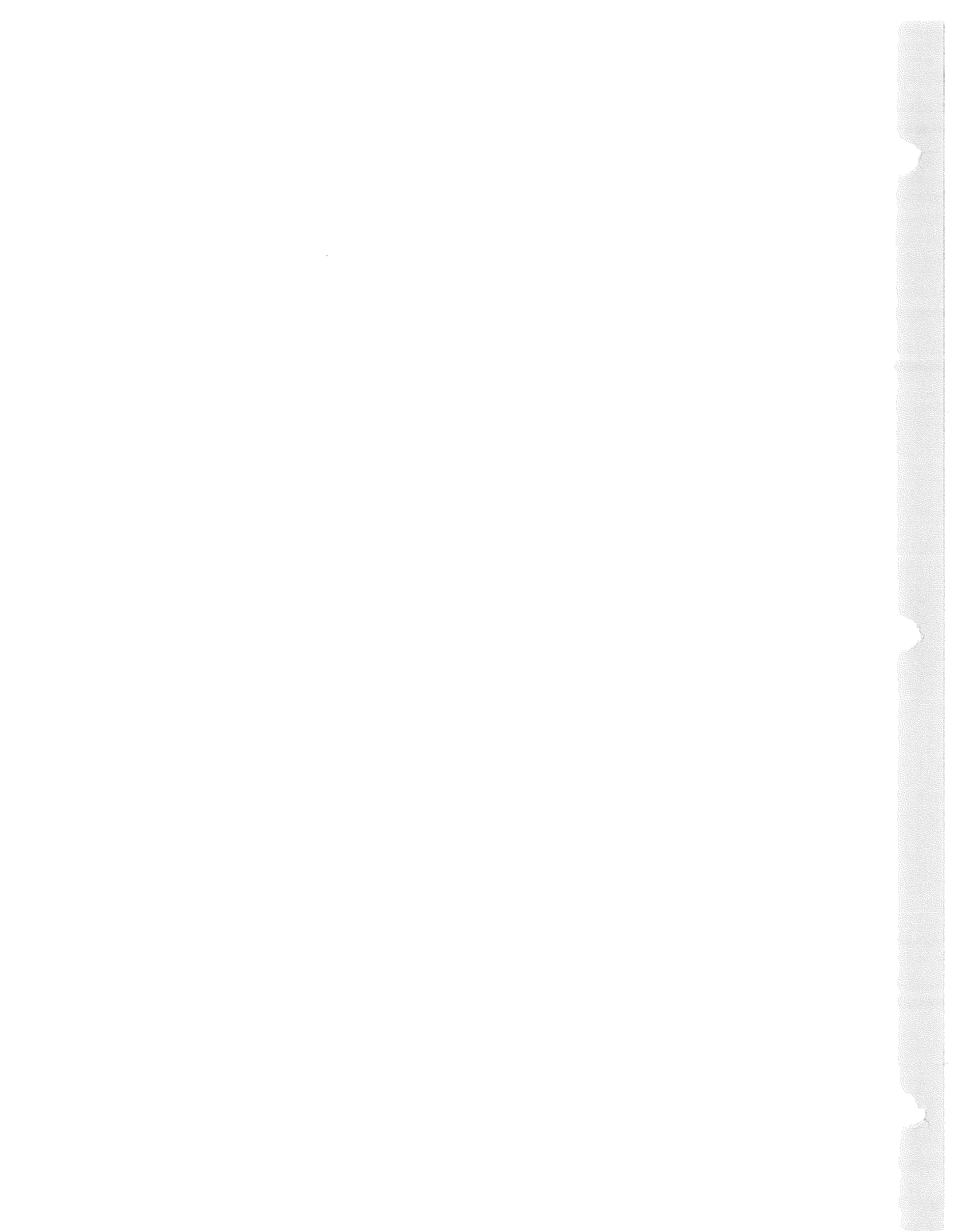
Because a representative of CELA was party, as a CGLG Advisory Committee Member during the full negotiations, we have had the benefit of the full discussions of these issues among the jurisdictions. In general Ontario's system has been superior to others in the basin. Now that we have new requirements we hope Ontario will continue to be leaders in putting new systems in place that will result in filling in our huge knowledge gaps about our current use, return flow, consumptive and cumulative use and aggressive prevention of over use and allocation through a conservation plan and other measures. Our comments are made with the view that the region needs to work within the boundaries set by the varying water availability and sustainability that already exist in the basin. Borrowing from one watershed to promote growth in another is not in our view sustainable or ecologically healthy.

We hope that there will be few exceptions and other measures and alternatives will be given more weight in the systems we design for implementation.

Staff Contact:

Joanne Di Maio
MOE, LWPB
(416) 314-3929
Joanne.DiMaio@Ontario.ca







Great Lakes Watersheds Mapping Update

**Municipal Sector Working Group
December 10, 2008**

Presentation Overview

Boundaries

1. Brief description of existing provincial-scale watershed mapping

Metadata

2. Metadata

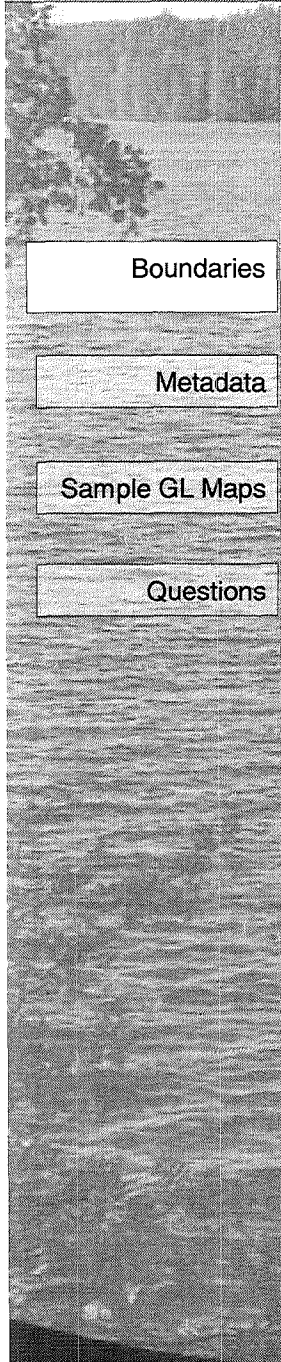
Sample GL Maps

3. Sample Great Lakes and tertiary watershed mapping

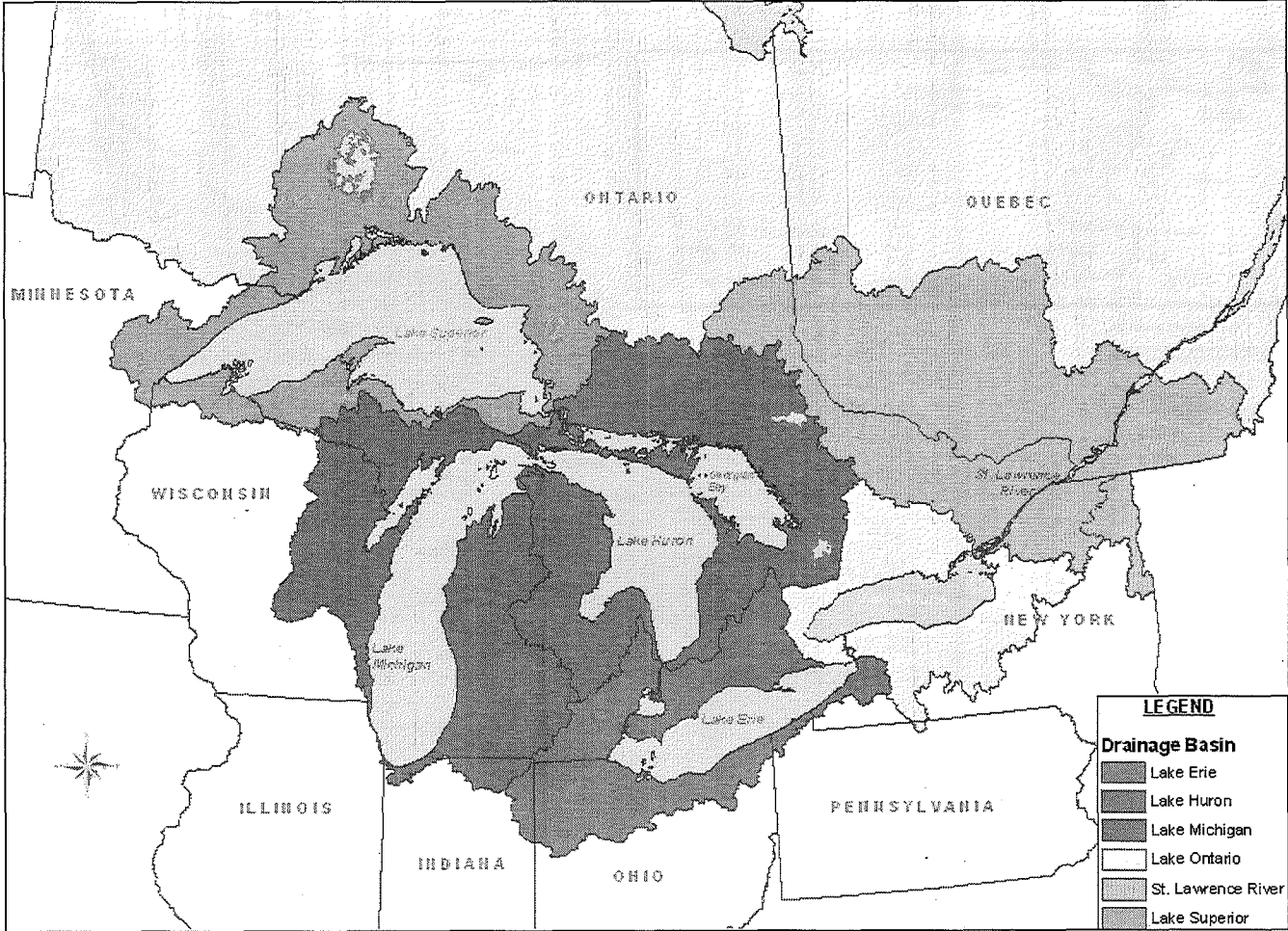
Questions

4. Questions

Great Lakes Watersheds



- Boundaries
- Metadata
- Sample GL Maps
- Questions

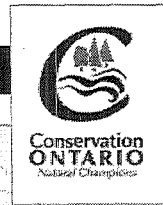


Great Lakes Basin

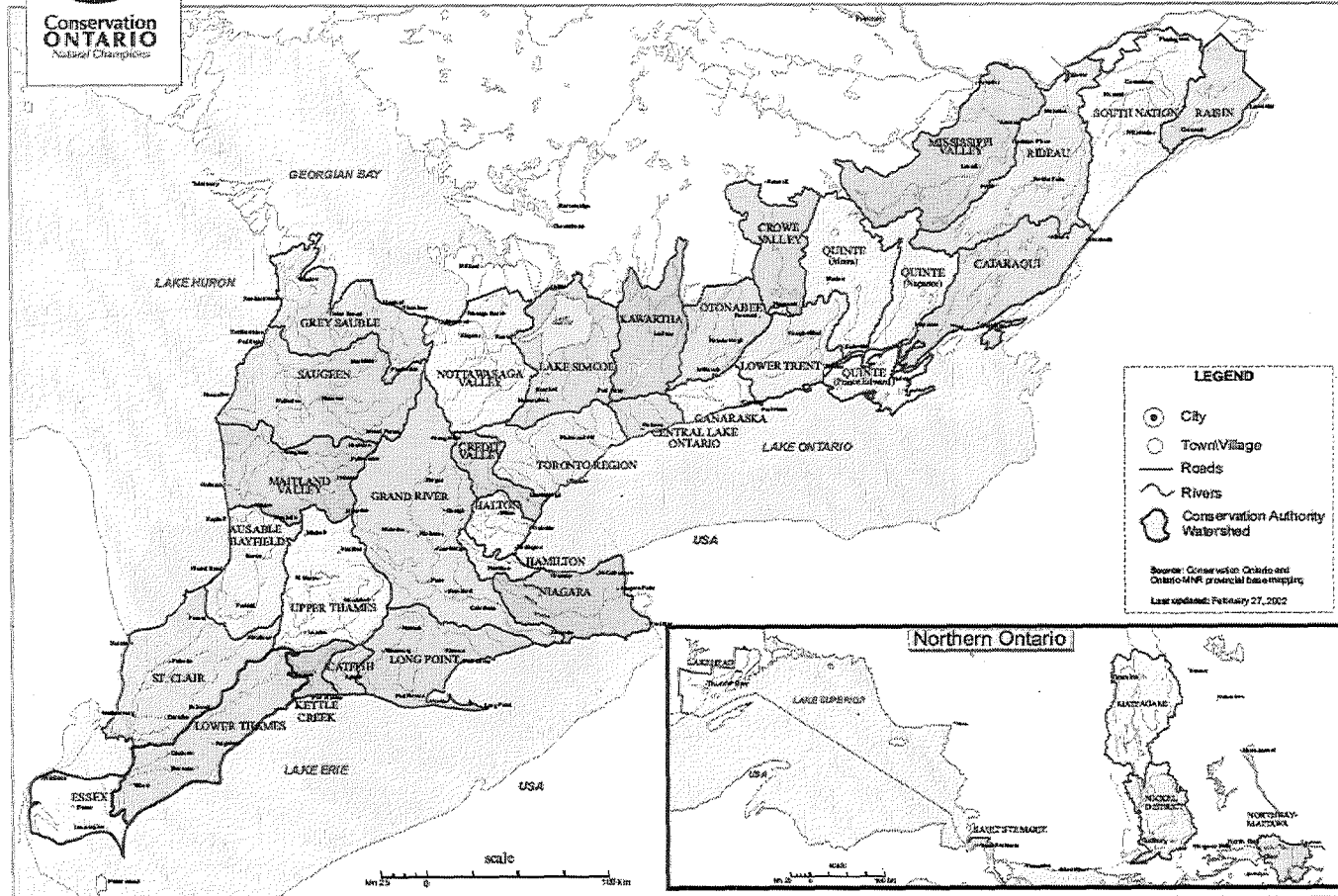
0 35 70 140 210 280 Kilometers

This map is for illustrative purposes only. Do not use as a precise indicator of water bodies.
 Published 25 June 2005.
 © 2005 Queen's Printer for Ontario Ministry of Natural Resources

Conservation Authorities, 2002



CONSERVATION AUTHORITIES OF ONTARIO



Boundaries

Metadata

Sample GL Maps

Questions

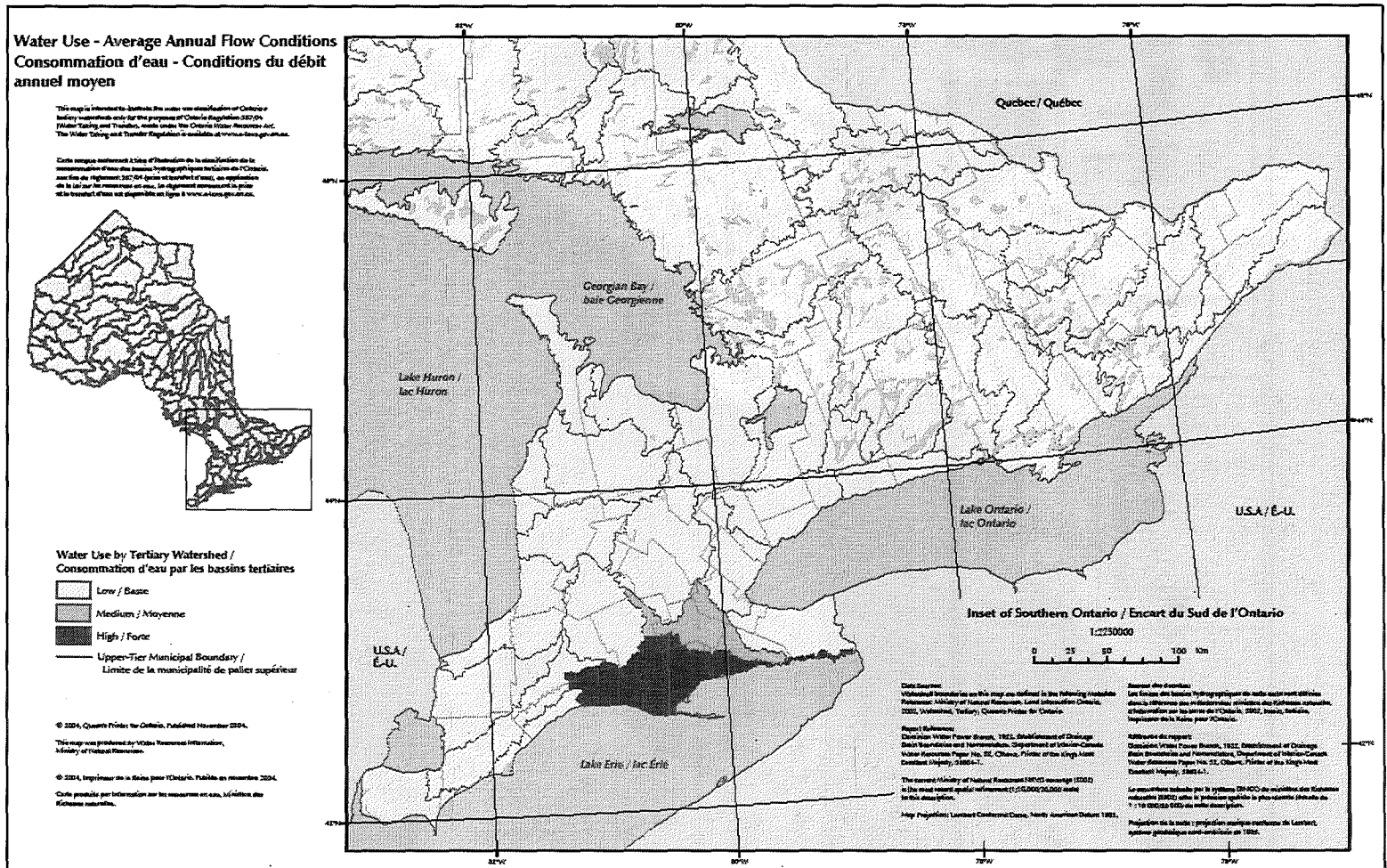
Water Use – Average Annual Flow Conditions Ontario Regulation 387/04

Boundaries

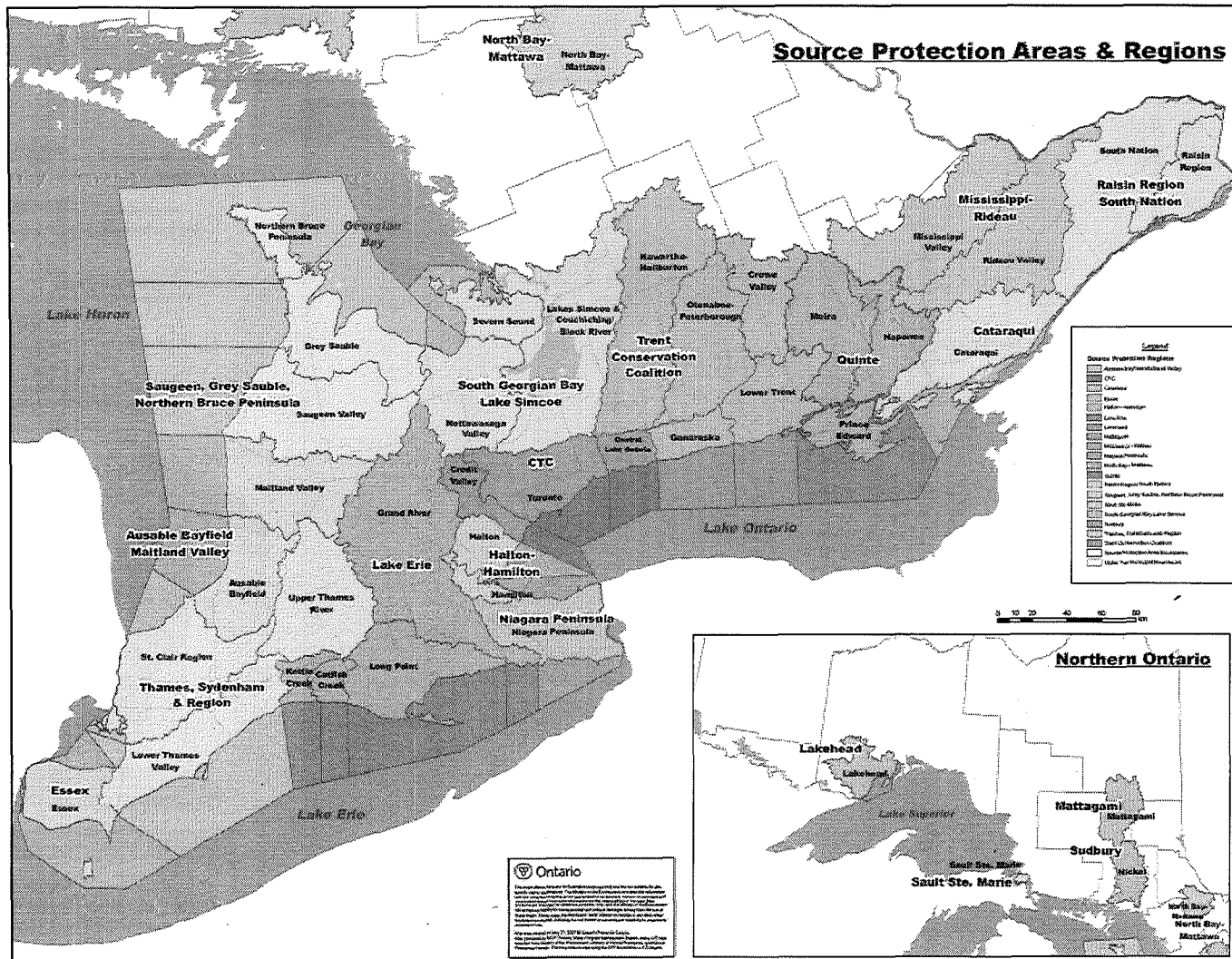
Metadata

Sample GL Maps

Questions



Source Water Protection Areas and Regions Ontario Regulation 284/07

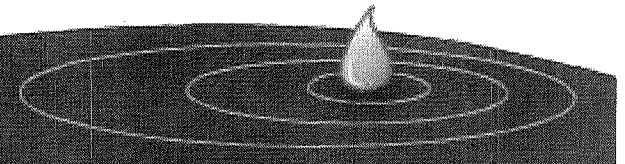
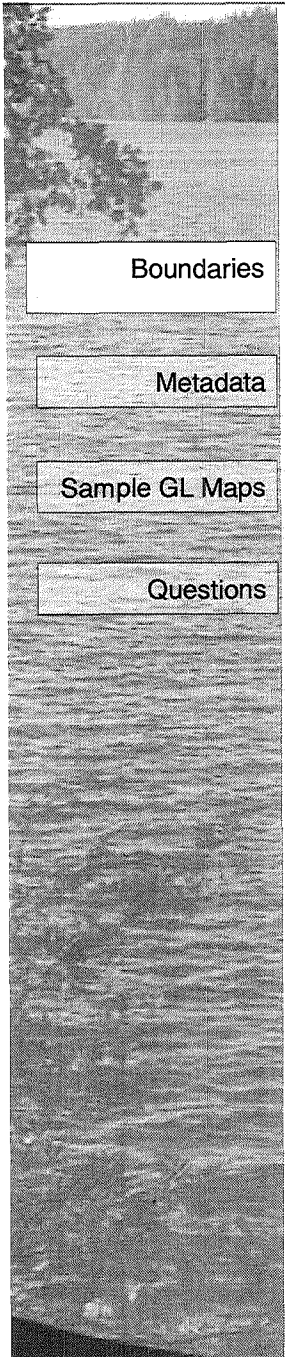


Boundaries

Metadata

Sample GL Maps

Questions



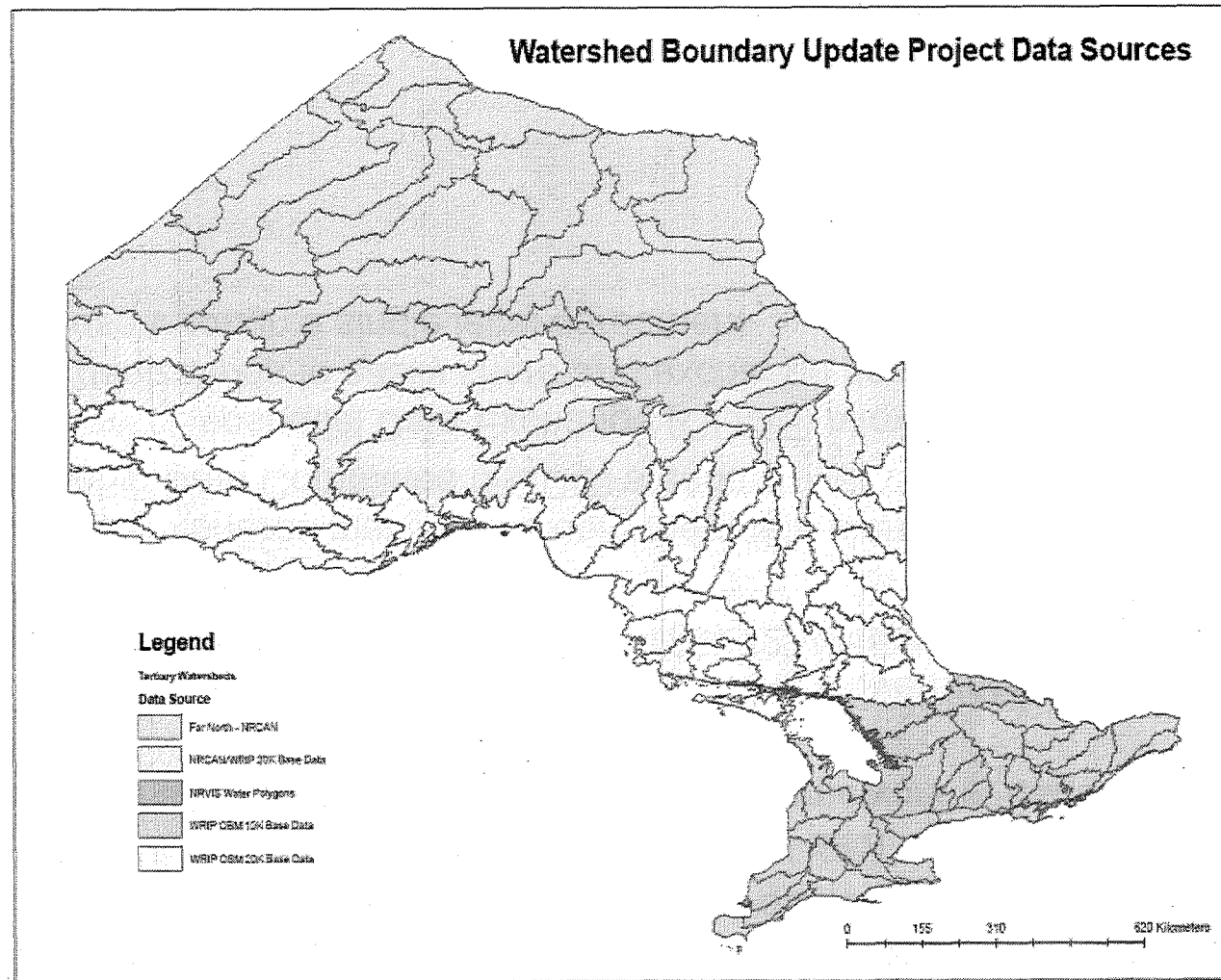
Tertiary Watershed Boundary Update, 2008

Boundaries

Metadata

Sample GL Maps

Questions



Metadata

Boundaries

Metadata

Sample GL Maps

Questions

- Metadata is data about data, and typically includes descriptive information about the context, quality and characteristics of the source data
- Geospatial metadata associated with provincial data is managed in the Ontario Land Information Directory (OLID) within the framework of Land Information Ontario (LIO)
- The metadata standards are documented in the Government of Ontario Information Technology Standard (GO-ITS) 72 Version 2, approved and published in March 2008
- The standard shares many of the core metadata elements in the U.S. Federal Geographic Data Committee (FGDC) standard
- The Ontario Geospatial Data Exchange (OGDE) allows government and non profit organizations to easily share and exchange geographic data from the LIO warehouse through a single legal agreement

Interactive Water Use Mapping Tool Web-based (PTTW Program)

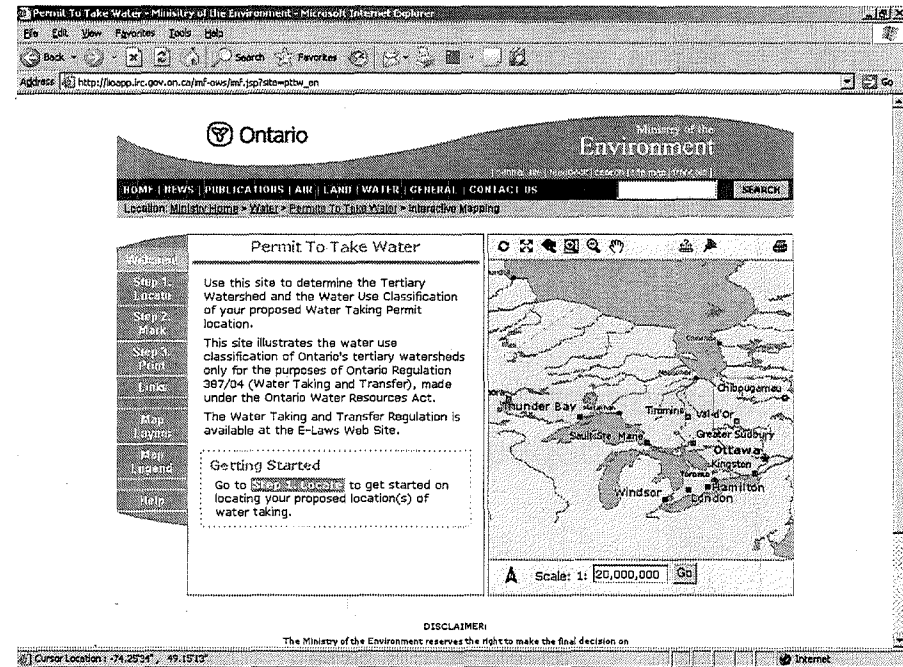
Boundaries

Metadata

Sample GL Maps

Questions

- <http://www.ene.gov.on.ca/en/vison/water/pttw.htm>
- An interactive web-based map tool that helps determine the Tertiary Watershed and the Water Use Classification of a proposed Water Taking Permit location.
- It can also be used by an applicant to prepare a map to be submitted with a Permit application
- Would this type of web-based tool, including GL watershed boundaries, be a useful tool for intra-basin transfer assessments?



Great Lakes Watershed Mapping

Proposed

Scale: 1:100,000

Coverage: Along GL watershed boundaries

Base Map Data

- Provincial drainage; lakes/reservoirs;
- Settlements: cities and communities (labelled)
- Municipalities: single tier, upper tier, lower tier (labelled)
- First Nation Reserves (labelled)
- Watershed Boundaries
 - Tertiary boundaries (updated 2008) shaded?
 - GL watershed boundaries (GL watersheds labelled)

Format

- Map sheets, or digital shape files (layers)?
- Colour-coded GL watershed boundaries (shaded)
- Key map (municipal boundary delineation)

Source: Provincial watersheds were updated July, 2008 by WRIP; watersheds were generated using the Provincial DEM Version 2.0.0 (completed July 2005) and the Provincial stream network

Boundaries

Metadata

Sample GL Maps

Questions

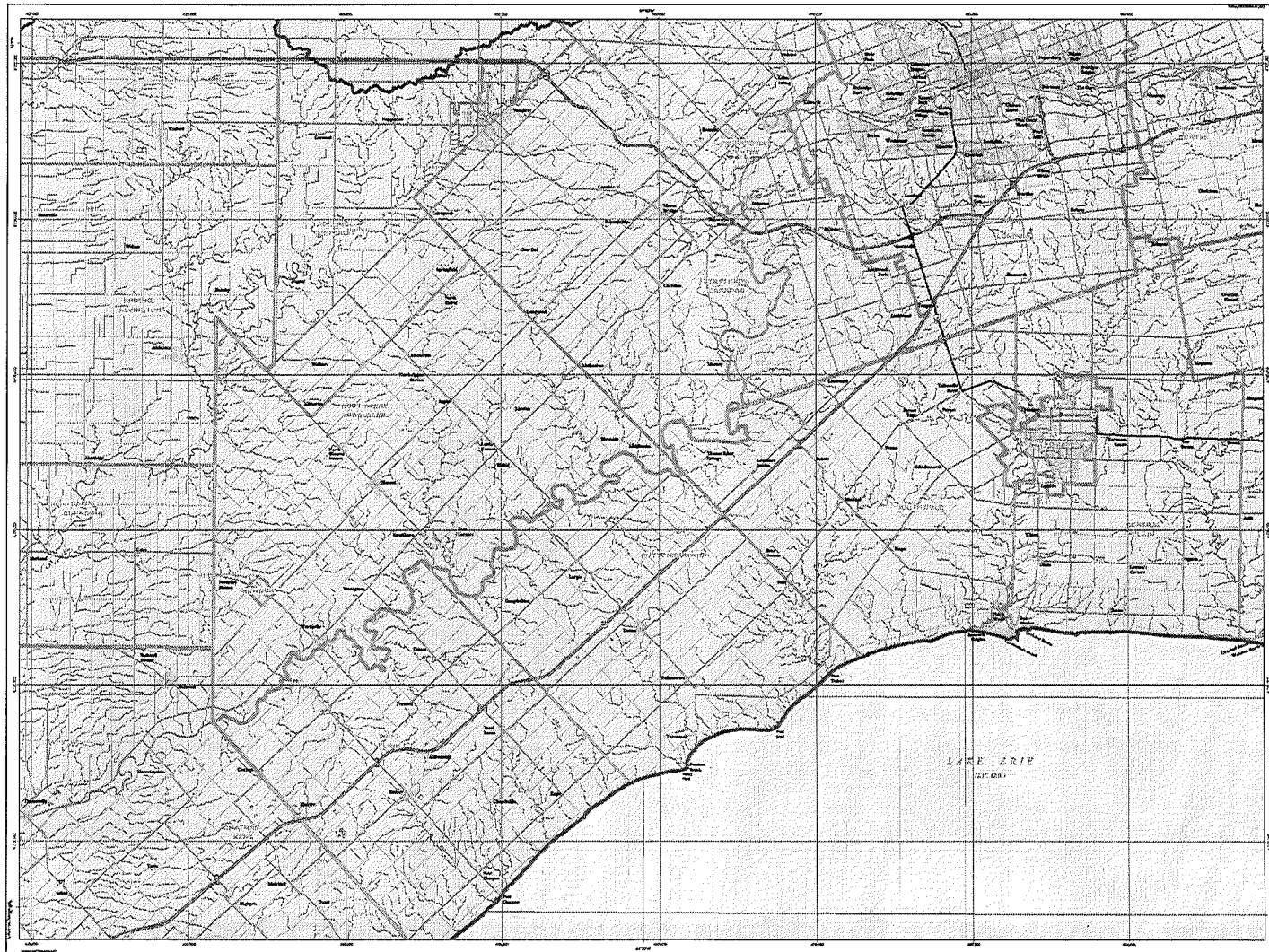
Great Lakes Watershed Mapping 1:100,000 - sample



Boundaries

Metadata

Sample GL Maps

Questions



 Ontario
 PROVINCIAL MAP SERIES
 920425
ST. THOMAS
 1:100,000
 1:50,000


Scale	Sheet	Sheet	Sheet
1:100,000	1000	1001	1002
1:50,000	1000	1001	1002

 DATE PUBLISHED: JUNE 1998
 THE GEOGRAPHIC NAMES BOARD OF CANADA
 2004 01
 This map is a reproduction of the original map published by the Ontario Ministry of Natural Resources and Forestry in 1998. It is not to be used for navigation purposes.

Great Lakes Basin Boundaries
 Province
 Easement / Highway
 Road / Trail
 Collector
 Artery
 Ramp
 Local / Drive
 Local / Drive
 Local / Drive
Lower Tier / Drain Tier Boundaries
 Upper Tier / Drain Boundaries
 Physical Boundary
 Lakes
 Rivers

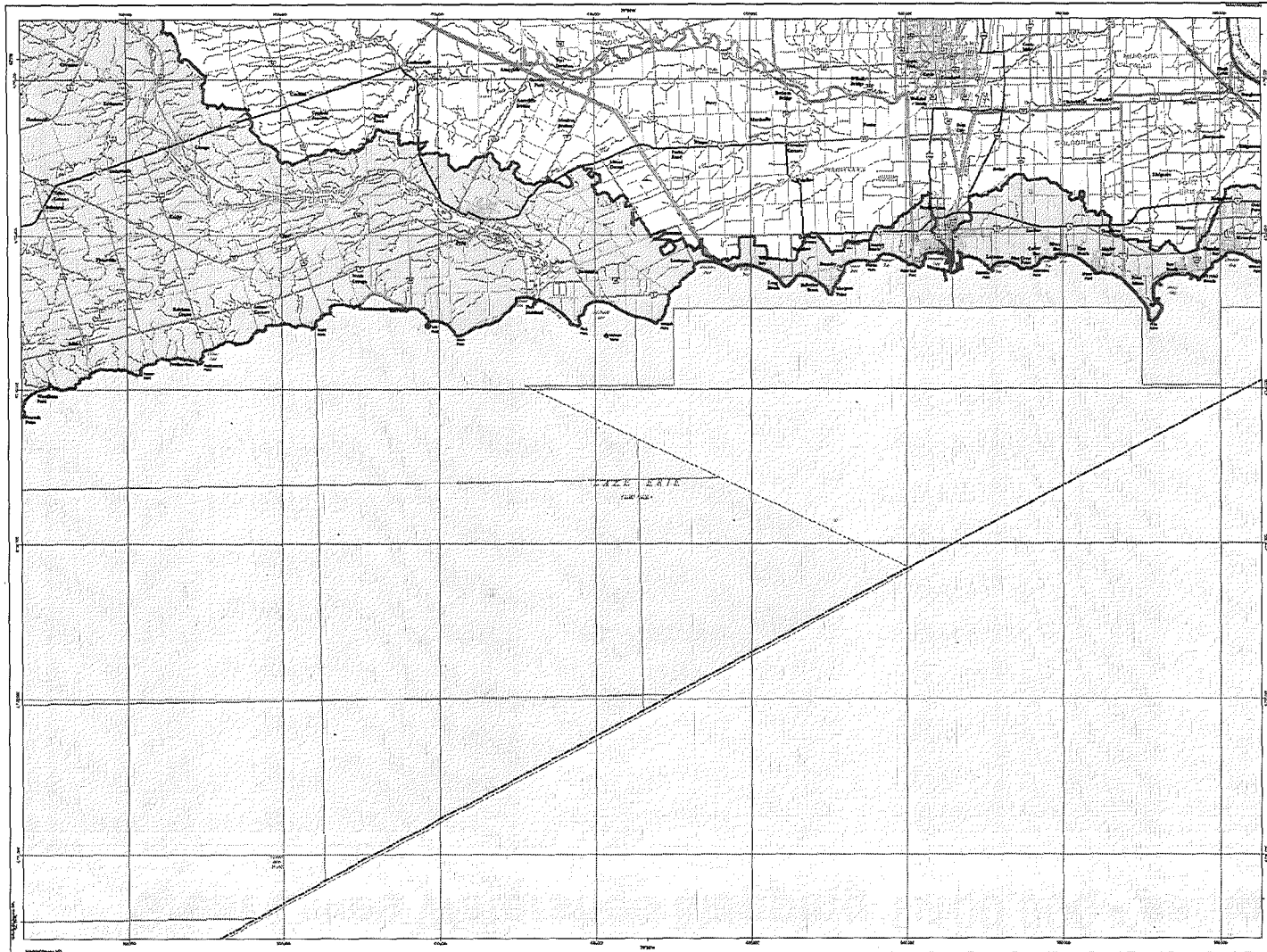
Great Lakes Watershed Mapping 1:100,000 - sample

Boundaries

Metadata

Sample GL Maps

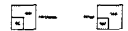
Questions



Ontario
PROVINCIAL MAP SERIES
800425

PORT COLBORNE

Scale 1:100,000



Year	Scale	Year
1980	1:100,000	1980
1985	1:100,000	1985
1990	1:100,000	1990

ONE THOUSAND METRE UNITS
PROVINCIAL MAP SERIES
800425

- Primary
- Secondary / Highway
- Railroad
- Canal
- Water
- Wetland
- Land Use
- Land Cover
- Lower Tier / Single Tier Boundaries
- Upper Tier / Double Boundaries
- Provincial Boundary
- Great Lakes Basin Boundaries
- Water
- Road

Map Information: This map is a sample map and is not for use in any legal proceedings. It is provided for informational purposes only. The map is based on the best available data and is subject to change without notice. The map is not a warranty of any kind and is provided as is.

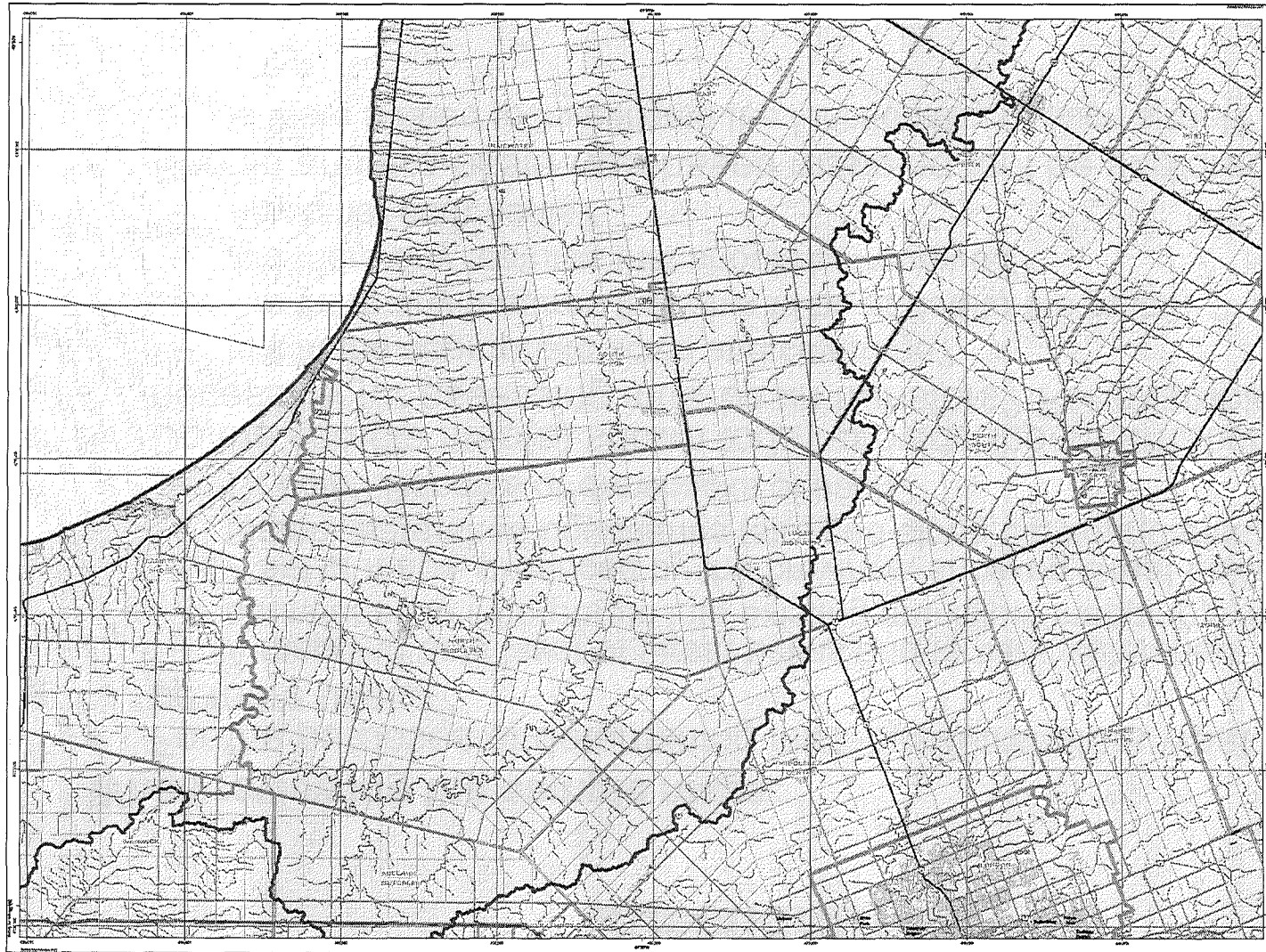
Great Lakes Watershed Mapping 1:100,000 - sample

Boundaries

Metadata

Sample GL Maps

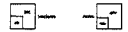
Questions



Ontario
PROVINCIAL MAP SERIES
820430

LONDON

1:100 000



Scale	Units	Area
1:100 000	1:100 000	1:100 000
1:50 000	1:50 000	1:50 000
1:25 000	1:25 000	1:25 000

PROVINCIAL MAP SERIES
820430

Great Lakes Basin Boundary

Freeway

Commonwealth Highway

Road Centreline

Centreline

Arterial

Drain

Local Drain

Lower Tier / Drainage Tier Boundary

Upper Tier / Drainage Tier Boundary

Provincial Boundary

Lakes

Water Features

Questions?

When reviewing the sample maps:

- For the purposes of determining intra-basin transfers what would be more useful?
 - A mapping data layer of Great Lakes and tertiary watershed boundaries to incorporate into existing municipal mapping systems?
 - A set of maps, produced by the province, showing Great Lakes and tertiary watershed boundaries (stepped along GL boundaries)?
 - Or both? Benefits or drawbacks of each?
- Do the sample map(s) shown today provide the information necessary for assessing intra-basin transfers? For example:
 - Is it at the appropriate scale and coverage?
 - Are there any features that should be added to the map?
 - Are there any features that should be removed?
 - Any other comments?
- Should an intra-basin web-based mapping tool be explored?
 - Is there a need to investigate the functionality of such a tool?

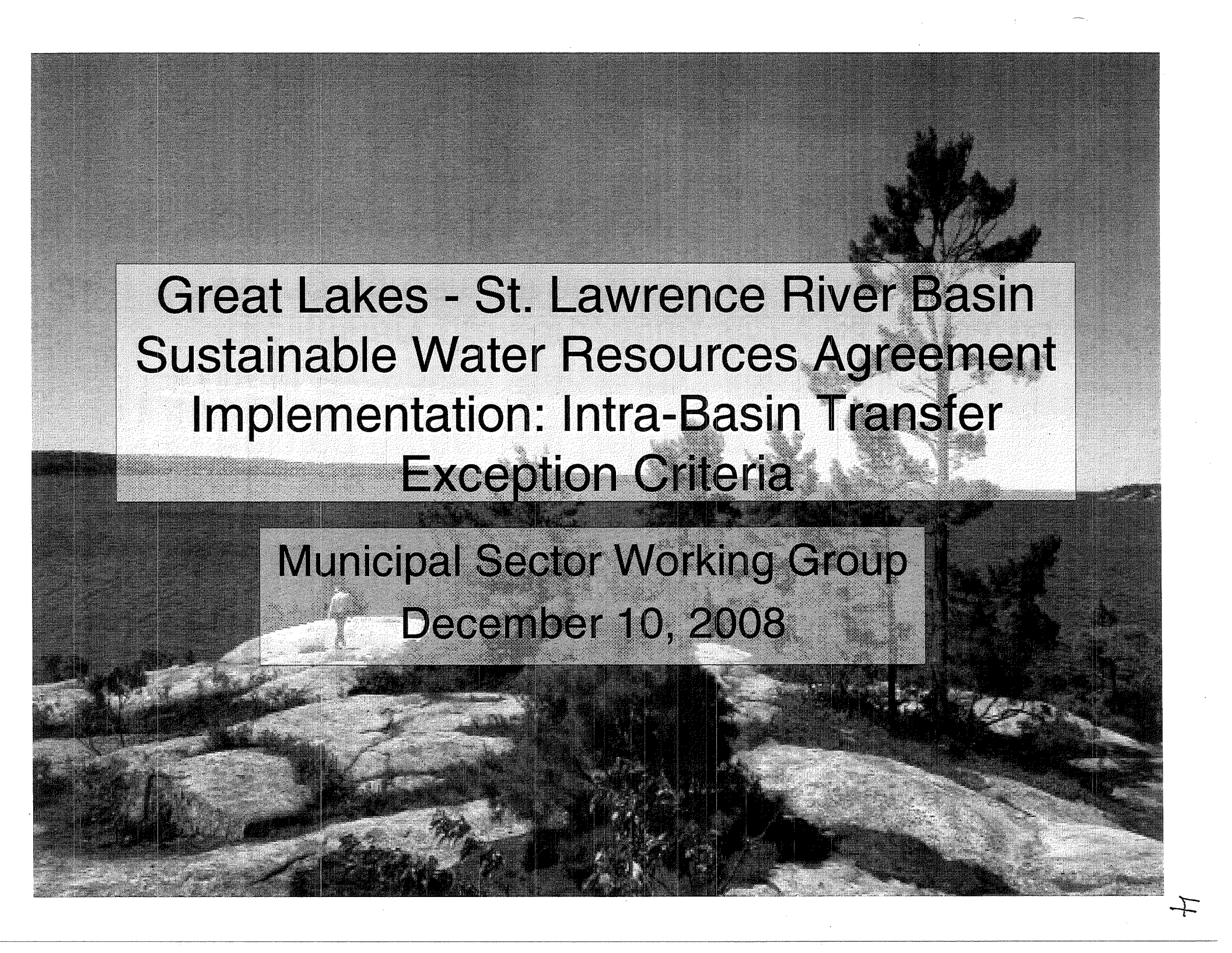
Boundaries

Metadata

Sample GL Maps

Questions





Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: Intra-Basin Transfer
Exception Criteria

Municipal Sector Working Group
December 10, 2008



Overview

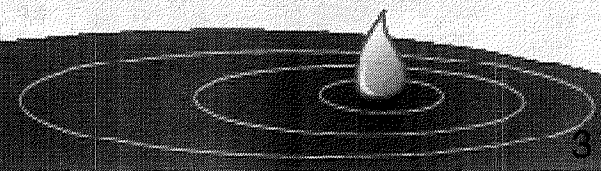
- Key Terminology:
 - Agreement/SSOWA Intra-Basin Transfer Provisions
 - Exception Standard Criteria
- For Each Element of Exception Criteria:
 - Related Agreement Definitions
 - Draft Exception Standard Criteria Guidance (preliminary draft procedures manual prepared during Agreement negotiations – later removed)
 - Questions for Discussion





Key Terminology: SSOWA Intra-Basin Transfer Provisions

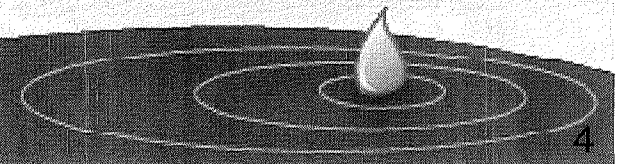
<p>19+ mld Consumptive Use (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none">•Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed)•No feasible, environmentally sound and cost effective alternatives to transfer, including conservation•Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision	
<p>379,000+ L/Day (Consumptive Use less than 19 mld)</p>	<p>Municipal Drinking Water Systems:</p> <ul style="list-style-type: none">•Meets exception criteria, including return flow to source GL watershed	<p>All Uses (including <i>Municipal Drinking Water Systems if return flow to source watershed cannot be met</i>):</p> <ul style="list-style-type: none">•Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed•No feasible, environmentally sound, cost effective alternatives to transfer, including conservation•Ont. gives prior notice to other GL jurisdictions
<p>50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none">•Subject to PTTW water taking requirements, not prohibited	

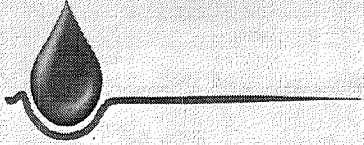




Key Terminology: Exception Criteria

1. The water transferred is returned, either naturally or after use, **to the same Great Lakes watershed from which it was taken** (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be no significant individual or **cumulative adverse impacts** on the quantity or quality of the **waters or water-dependent natural resources of the Basin**, considering the potential cumulative impacts of any precedent-setting consequences;
3. The efficient use and conservation of existing water supplies **cannot reasonably avoid** the transfer;
4. The transfer amount is **reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement





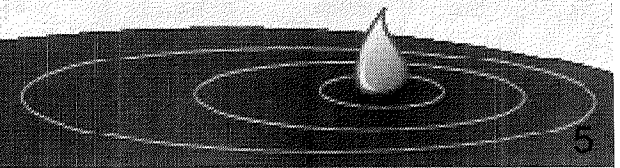
Return Flow

Exception Criterion:

- The water transferred is returned, either naturally or after use, **to the same Great Lakes watershed from which it was taken** (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;

Related Agreement Definitions:

- **“Consumptive use”** – “that portion of water withdrawn or withheld from the Basin that is lost or otherwise not returned to the Basin due to evaporation incorporation into products or other processes.”
- **“Source Watershed”** – “the watershed from which a withdrawal originates. If water is withdrawn directly from a Great Lake or from the St. Lawrence River, then the source watershed shall be considered to be the watershed of that Great Lake or the watershed of the St. Lawrence River...If the water is withdrawn from the watershed of a stream that is a direct tributary to a Great Lake or a direct tributary to the St. Lawrence River then the source watershed shall be considered to be the watershed of that Great Lake or the watershed of the St. Lawrence River respectively, with a preference to the direct tributary stream watershed from which it was withdrawn.”
- **“Connecting Channels”** (Article 207) – “the watershed of each Great Lake shall include its upstream and downstream connecting channels”





Return Flow

Draft Procedures Manual Guidance:

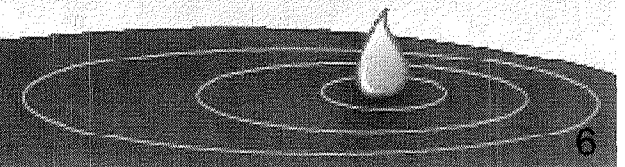
Intent:

- to ensure all water is returned to the source watershed, naturally or after use, less an allowance for consumptive use, to support the ecological health of the system.
- that consumptive use will be reasonable and return of water will be maximized, at a quality that meets all applicable requirements.

Application requirements:

- description of return flow volume, location, quality,
- agreements between water taker and the entity discharging the return flow (if entity returning water is different from the applicant- i.e. “related transferor”),
- estimate of consumptive use (coefficients or engineering design plans)

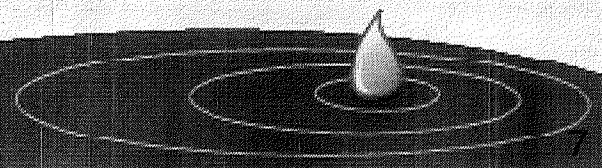
Review Criteria: clarity and completeness of descriptions, verification/justification of consumptive use, meets applicable quality standards





Policy Considerations

- Definition of connecting channels
 - St. Mary's R., Detroit R., St. Clair R., Niagara R., Lake St. Clair?, Welland Canal? St. Lawrence R.?
 - Watershed of connecting channels?
- If water returned to a tributary of a connecting channel, does that meet the return flow requirement?
- Estimation of consumptive use – focus of a future presentation/discussion





Questions for Discussion

1. What additional definitions are required?
2. What comments do you have with the draft Guidance?
3. What additional Guidance is required e.g. what additional policy considerations must be addressed?





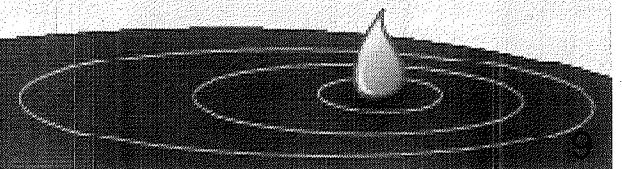
No Significant Individual, Cumulative Impacts

Exception Criterion:

- There will be no significant individual or **cumulative adverse impacts** on the quantity or quality of the **waters or water-dependent natural resources of the Basin**, considering the potential cumulative impacts of any precedent-setting consequences;

Related Agreement Definitions:

- **“Cumulative impacts”** – “the impact on the Great Lakes-St. Lawrence River Basin ecosystem that results from incremental effects of all aspects of a withdrawal, diversion or consumptive use in addition to other past, present and reasonably foreseeable future uses regardless of who undertakes them. Cumulative impacts can result from individually minor but collectively significant withdrawals, diversions and consumptive uses taking place over a period of time.”
- **“Water dependent natural resources”** – “the interacting components of land, water and living organisms affected by the waters of the basin.”





No Significant Individual, Cumulative Impacts

Draft Procedures Manual Guidance:


Intent: to ensure proposal results in no significant adverse impacts. Provision central to the Agreement's commitment to resource protection and management.

Application Requirements:

- source/location of withdrawal and return flow,
- description of baseline conditions regarding hydrologic flow, water quality, habitat,
- projected water use including peak demand,
- anticipated changes to water quality and water dependent natural resources,
- description of mitigation measures,
- statement of how proposal would relate to other existing uses;
- where watershed plans exist, applicants shall discuss impacts in context of these plans

Review Criteria: completeness of baseline information; location, type, extent & scale of physical, chemical or biological impacts; mitigation measures proposed

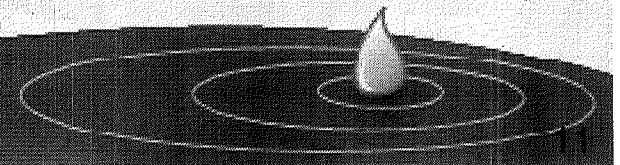




No Significant Individual, Cumulative Impacts

Cumulative Impact Assessment Criteria:

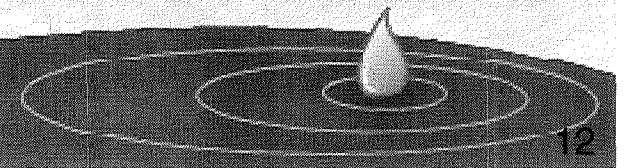
- Physical Criteria, e.g. measurable change to pre-proposal range of variability of the hydrologic regime, habitat degradation, measurable impacts to existing water uses
- Chemical Criteria, e.g. disruption of natural ecosystem productivity, disruption of the hydrologic system's ability to process contaminants and nutrients
- Biological Criteria, e.g. decline in population levels or health of native species, introduction of non-native species, disruption of biological interactions, impact on human health





Policy Considerations

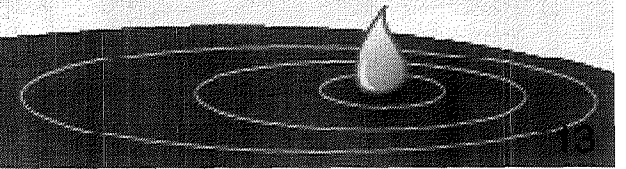
- Scale of impacts/analysis – local, tertiary watershed, Great Lakes Basin ecosystem
- Role of proponent vs. government in assessing cumulative impacts (e.g. impacts of individual proposal vs. broader cumulative effects)
- Use of existing tools (e.g. water budgets), Permit to Take Water program requirements (e.g. classification system, PTTW manual guidance)

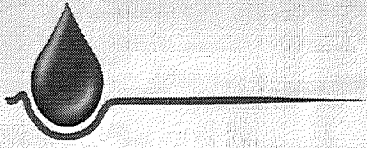




Questions for Discussion

1. What additional definitions are required?
2. What comments do you have with the draft Guidance?
3. What additional Guidance is required e.g. what additional policy considerations must be addressed?





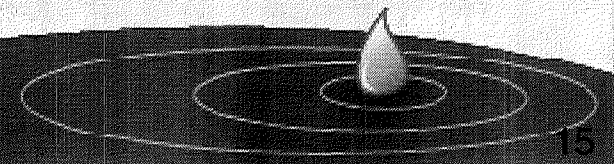
Appendix





SSOWA Regulation-Making Authorities for Intra-Basin Transfers

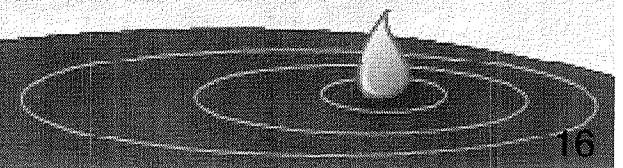
- Ability to **lower thresholds** for return flow, minister's PTTW – 76(j)
- Ability to **require return flow** by regulation - 76(2)
- Prescribing **additional Exception Standard criteria** – 75(1.2)(l)
- **Deeming existing transfers** – 75(1.2)(o)(p)
- Requiring **conservation measures**, including preparation of a conservation plan – 76(b.1)
- **Defining terminology, including exceptions standard** – 75(1.2)(h)
- Governing determination of amounts (e.g. if one or more applications must be considered collectively) – 75(1.2)(c)
- **Related Transferor** – 75(1.2)(f)
- Prescribing documents to coordinate with other approvals e.g. sewage works – 95(1.2)(n)
- Prescribing **terms and conditions** – 75(1.2)(m)
- **Transfer of sewage** – 76(b)(vi.1)
- Describing **Great Lake Watershed Boundaries** – 75(1.2)(g), 75(1.4)
- Determining **consumptive use** – 75(1.2)(i),(j)
- Prescribing **treaties, laws** requiring compliance – 75(1.2)(k)
- Coordinate PTTW/transfer with Safe Drinking Water Act (may be able to implement administratively)





Permit To Take Water

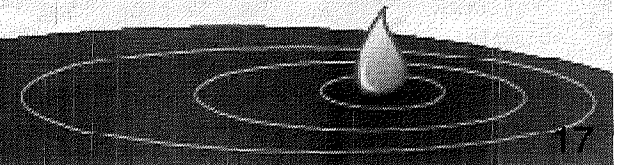
- **Ontario Water Resources Act (1961)**
 - “No person shall take more than a total of 50,000 litres in a day...without at Permit.”
 - Some exceptions (e.g., emergency/firefighting, domestic use, watering of livestock).
- **Water Taking Regulation (Regulation 387/04)**
 - Includes requirements for monitoring, reporting, notice, restrictions, MOE responsibilities, etc.
- **Purpose of Permit to Take Water (PTTW) Program**
 - Fair sharing, conservation and sustainable use of the waters of the Province.
 - Prevent water takings from causing unacceptable impacts to natural environment and existing water users.





PTTW Program Principles

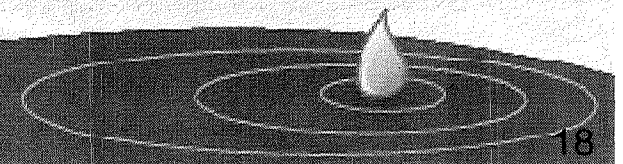
- Use an ecosystem approach.
- Control water takings to prevent unacceptable interference.
- Employ adaptive management.
- Consider cumulative impacts.
- Incorporate risk management principles into the application and review process.
- Promote public and local agency involvement.





PTTW - Notice and Consultation

- MOE notifies municipalities and conservation authorities of Permit to Take Water applications that are posted on the Environmental Bill of Rights Registry.
- Director can undertake or require additional notice and consultation.
- Director can require applicant to report on efforts made to resolve concerns.
- Regulation requires Director to notify municipalities and conservation authorities of permit applications.
- Public consultation on PTTW applications through posting on Environmental Bill of Rights Registry (exceptions: permits issued for <1 year; agriculture irrigation)





PTTW - Matters considered

Matters considered by MOE Director:

- The need to protect the natural functions of the ecosystem;
- Water availability – potential impact on water balance and on existing uses; low water conditions; high use or medium use watershed
- The use of water (e.g. water conservation);
- Other issues, including interests of other persons





Structure of a Permit

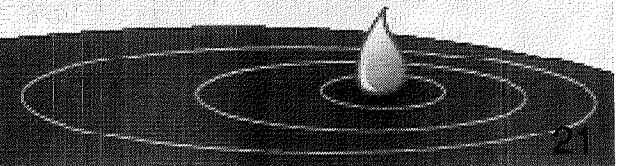
- Definitions: permit definitions are included for reference and clarity
- Terms and Conditions: permit conditions are included to safeguard human health and the ecosystem; foster efficient use and conservation of the water; and ensure fair sharing and sustainability of the resource
- Terms and Conditions will typically specify:
 - the details of the water taking
 - the manner in which the water is to be taken to limit interference with downstream uses and natural functions
 - the record keeping requirements for water taking and discharges inc. dates, times, amounts etc.
 - the Permit Holder's responsibility to notify the MOE of any complaints or environmental impact resulting from the water taking
 - the rights of the Ministry and the Permit Holder



Data and Reporting

Permit holders:

- Record volume of water taken daily
- Report annually to MOE
- Requirement Phased in 2005-08

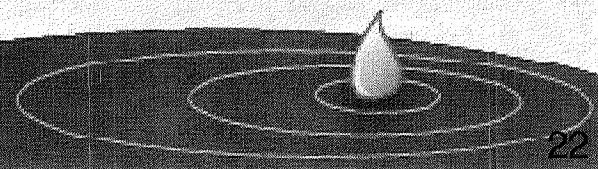




PTTW Manual

Clear rules and procedures for assessing and managing water takings, including:

- Principles of PTTW principles – build on existing MOE principles, e.g. Statement of Environmental Values, and provide a scientifically based consistent approach to managing water takings in Ontario.
- Outline of the responsibilities of applicants and Ministry.
- Classification system based on risk, where the level of scientific evaluation is commensurate with the potential for impact.
- Description of considerations for evaluating both groundwater and surface water takings.

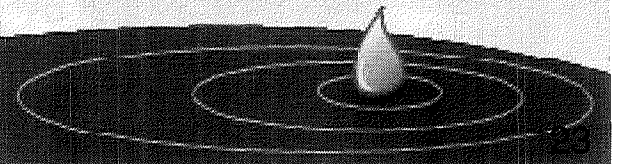




Moving Forward

Intra-basin Transfers

- The PTTW program sets out specific requirements for water takings over 50,000 litres/day, including reporting data of actual water takings.
- Ontario does not currently track the amount of water that is transferred from one Great Lakes watershed to another Great Lakes watershed (an intra-basin transfer).
- The Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement commits each jurisdiction to providing a list of existing approval limits and/or the capacity of existing systems, as of the date Article 207 comes into force.
- MOE & MNR, in consultation with interested parties, is reviewing approaches that can be used to determine the baseline of existing intra-basin transfers.

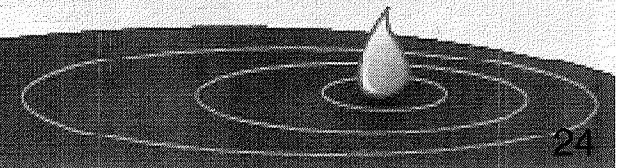




Moving Forward

PTTW & Source Protection

- Building partnerships with conservation authorities, Source Protection Authorities (PTTW data sharing)
- PTTW program principles fit well with the Source Water Protection watershed approach to management (e.g. ecosystem approach, cumulative impacts, input to PTTW from local agencies).
- Water taking data submitted through PTTW will provide input to the water budgets being developed as part of the Assessment Reports.
- Watershed Characterization Reports will help with assessment of future PTTW applications.

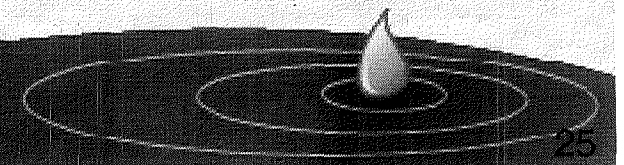


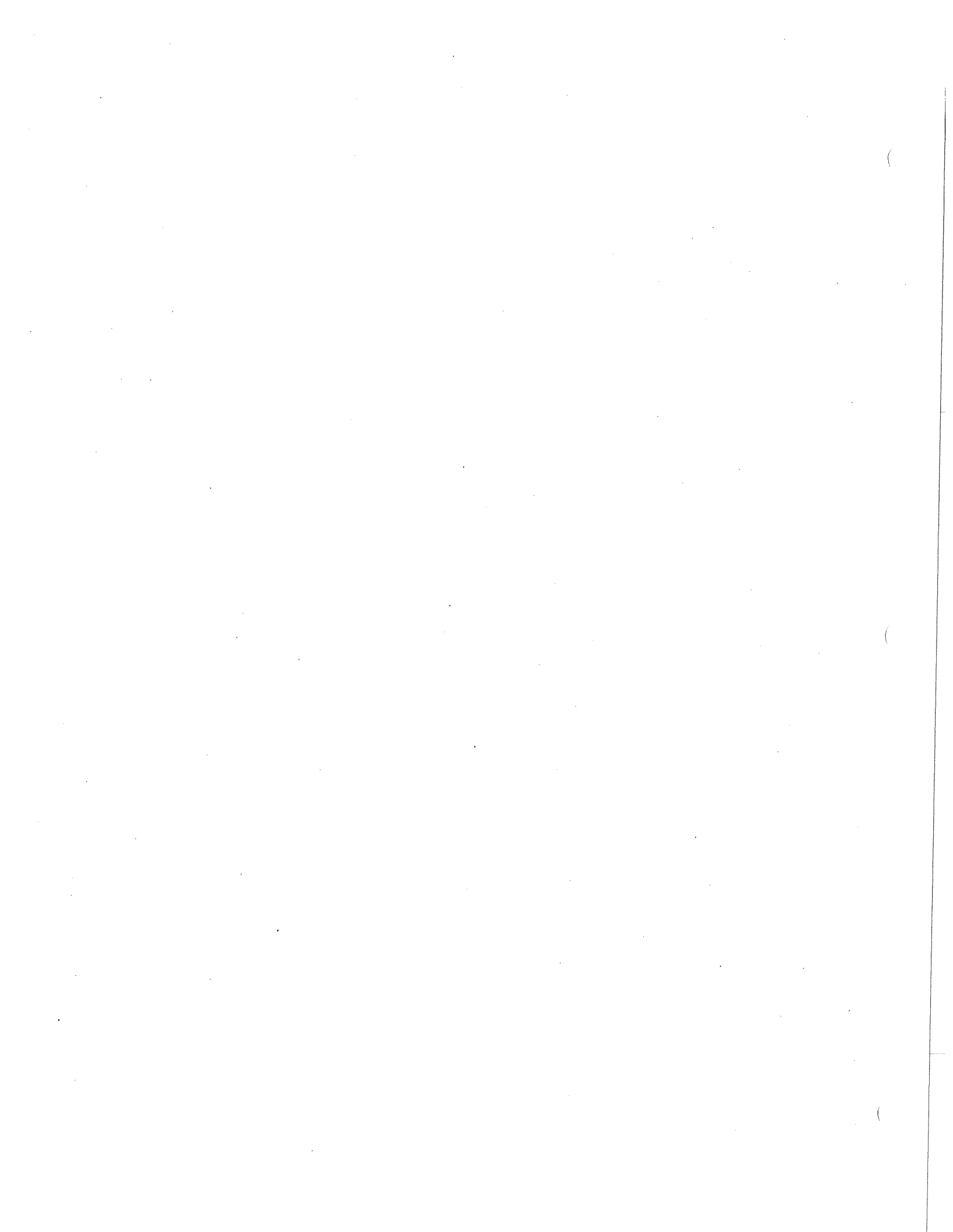


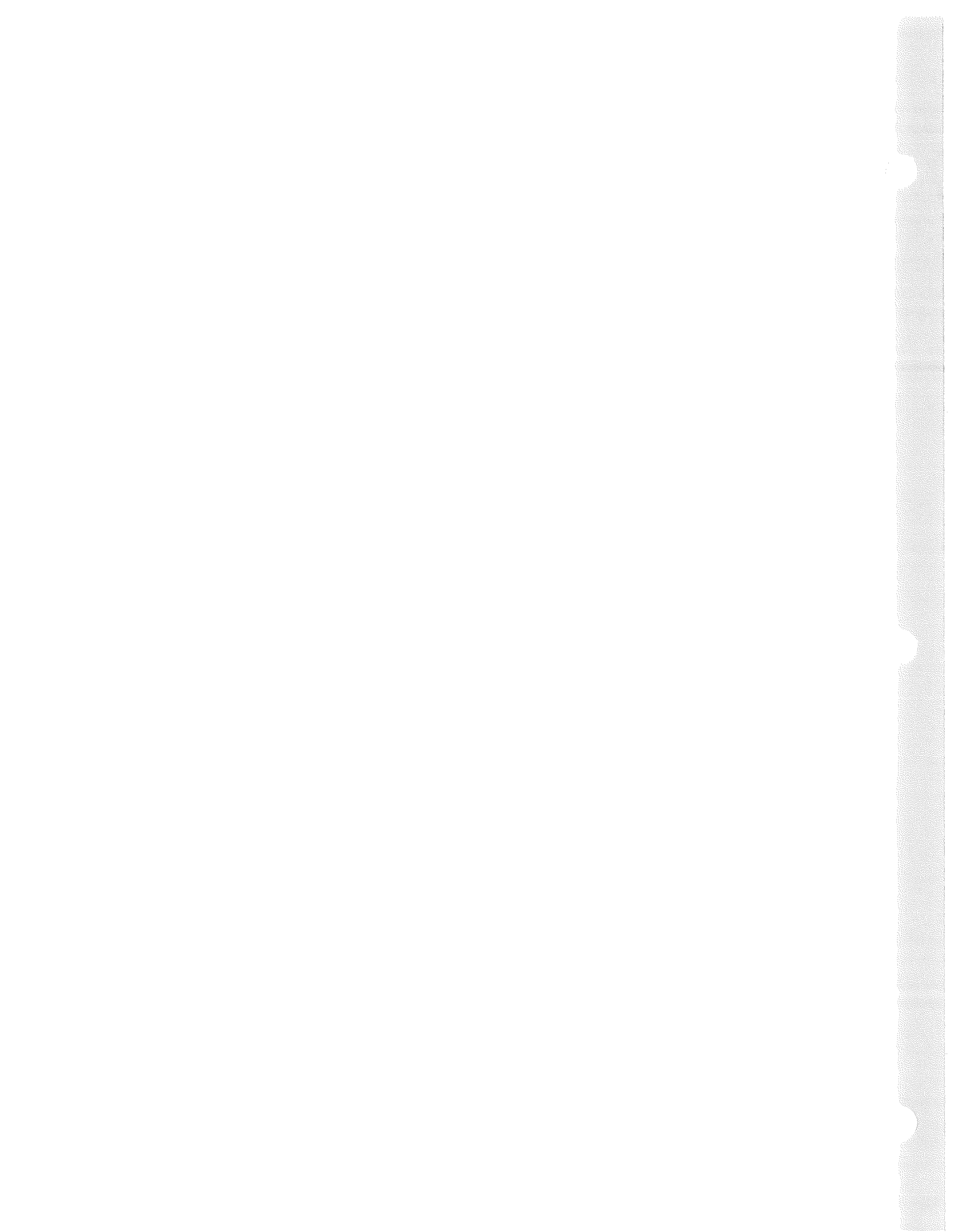
Moving Forward

Cumulative Impact Assessment

- Cumulative impact assessment requires site specific and regional information.
- Implementation of the *Clean Water Act* and the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement will contribute to MOE's understanding of cumulative impacts and further enhance MOE's ability to assess and address cumulative impacts of water takings on a watershed scale.







Intra-Basin Water Transfers
Municipal Sector Working Group Consultation
December 10, 2008

A consultation meeting on the *Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement* took place on December 10, 2008 in Toronto. The meeting with the Municipal Sector Working Group was held to discuss specific components of intra-basin water transfers included in the Agreement. Eighteen participants representing seven municipalities and two agencies attended the meeting (see Attachment 1 for the list of participants).

The goal of the meeting was to present attendees with an overview of the consultation process, and the baseline, mapping and exception criteria components of the agreement. Breakout group discussions were undertaken to secure input and feedback on key issues pertaining to the establishment of the baseline and exception criteria (see Attachment 2 for a copy of the meeting Agenda).

A general overview the Sustainable Water Resources Agreement consultation process was provided at the start of the meeting. Following from the presentation on the consultation process, the following questions/comments were raised about the general intent of the overall initiative:

- Municipalities already have water rates, conservation practices and/or plans in place – how is this initiative different from what currently exists?
- Need to address the issue of elasticity in water rates – consider that Australia/EU charge at rates of \$5 to \$7 per cubic meter while in Ontario the rate is about \$1.

Subsequent to an overview presentation of approaches for determining the intra-basin transfer amount, the following general questions/issues were raised by participants:

- Use restrictions in a careful way – municipalities plan long-term and should not be penalized for forward thinking.
- What is the definition of approval limit? Needs to be clearly defined.

In addition, the following item was identified as a “parking lot” issue to be dealt with at a subsequent consultation meeting of the Municipal Working Group:

- Combined sewer flows – storm water crosses transfer lines/infiltrates aquifer

Key questions were used to guide the breakout group discussions of the baseline, mapping and exception criteria components of the Agreement.

Although there were numerous and varied responses to key questions, some common themes emerged from the meeting. Common themes are those issues and/or recommendations for which there was general agreement amongst session participants. The key questions, themes and proceedings from the consultation meeting are summarized in Table 1 through Table 3 of this report.

TABLE 1: Breakout Discussion – Baseline

A. <u>Actual volume transferred:</u> <i>Is there a benefit to metering transfers on a go-forward basis after the baseline has been established? What are the implications?</i>	
Themes	<ul style="list-style-type: none"> ▪ Metering is not perfect but it is the most accurate method ▪ Some municipalities may be 100% metered, others are not, and therefore metering is not currently an option for all municipalities. ▪ Metering most accurate, but it would have to be a provincial requirement (for political support in municipalities) and phasing would be required to give municipalities time required to comply. ▪ For this approach, need standardization of metering and measurement requirements (compare apples to apples).
General / context	<ul style="list-style-type: none"> ▪ Metering is done at specific times and at specific points or locations and depending on type of meter used, where it is placed, how it is calibrated, measurements can vary (fluctuations can occur). ▪ Upper tier municipalities only meter water going to lower tier municipalities, no individual metering or necessarily metering at every transfer point. ▪ An “Operating Authority” (lower tier municipality) could be responsible for metering ▪ Main metering of water transfer is not needed to do a water balance. ▪ Metering is expensive. ▪ If undertake metering and find out that water consumption is in excess of C of A; then what happens – is the municipality charged? ▪ Don’t necessarily need meters at transfer points if you have lower tier municipalities with comprehensive metering – they can provide numbers and these can be compiled to give accurate picture. ▪ York gets water from two transfer areas/ Peel and Toronto/ has no way to read a split on the metering- gets one overall reading. ▪ City of Toronto should be metered.
B. <u>Approved PTTW Volume:</u> <i>Are there any circumstances in which this would be an appropriate method for establishing the baseline?</i>	
Themes	<ul style="list-style-type: none"> ▪ Permitted amount is not an accurate measurement, therefore not a useful approach on a stand alone basis. ▪ None of the approaches for establishing baseline are stand alone, need some combination.
General / context	<ul style="list-style-type: none"> ▪ Permitted amount of water is usually greater than actual amount taken, therefore need to know actual amount. ▪ PTTW volume is too generic. ▪ Infrastructure and permit don’t necessarily correspond ▪ PTTW does not account for existing plans and investments. ▪ Municipality may have multiple permits, therefore difficult to determine where water is coming from. ▪ Start with PTTW or C of A to report takings, then to a water balance and begin to make estimates from this point. ▪ Need map of current takings (PTTW), but raised the question of if there is enough detail. ▪ Municipality might not own permit but are transferring water. ▪ PTTW doesn’t determine where water is going.
Other	<ul style="list-style-type: none"> ▪ All numbers/data should be held at a central location – if want standardized process need access to information. ▪ Concerned that baseline won’t allow for future growth and development.

TABLE 1 (cont'd): Breakout Discussion – Baseline

C. <u>Estimated Amount:</u> <i>What assumption would be made with respect to per capita flow? How would non-residential flow be estimated?</i>	
Themes	<ul style="list-style-type: none"> ▪ Municipalities should establish baseline, without metering will require a combination of more than one method and one solution does not fit all.
General / context	<ul style="list-style-type: none"> ▪ Municipalities should be doing estimates based on existing meters ▪ Using a per capita estimate is <u>not</u> an objective measurement. ▪ Can estimate by taking the population and divide by consumption but does not take into account IC&I, (most ICI facilities are metered) ▪ What is measured – design (which is conservative) or metered/actually measured? ▪ If 100 percent metered, estimation not necessary; If not metered, it is a “stab in the dark”.
Other	<ul style="list-style-type: none"> ▪ Metering is more accurate and is a driver for conservation. ▪ There is a need to replace and update meters over time as they lose accuracy ▪ Requirement to meter must be part of provincial regulations. ▪ There is no sense of obligation on the part of the municipality to meter therefore a provincial requirement for metering is necessary. ▪ Reward system – need to reward pro-active municipalities – under current system mediocre municipalities given funding to catch up while municipalities that are doing thing correctly don't get access to funding.
D. <u>Rated pumping capacity:</u> <i>How could this approach be used to establish the baseline? Would it be limited to cases where there is a pump that is located near the watershed boundary?</i>	
Themes	<ul style="list-style-type: none"> ▪ Not a viable stand alone option – only potential for accuracy if used in combination with other approaches.
General / context	<ul style="list-style-type: none"> ▪ Can't be used as a stand alone because pumping capacity can far exceed what is actually being used. ▪ Few cases where pump is located at watershed boundary ▪ Not necessarily pumping at point of transfer – perhaps point of transfer should be metered. ▪ Pumping capacity does not address future conditions – needs to be considered. ▪ The distribution system doesn't have a pumping capacity.
Other	<ul style="list-style-type: none"> ▪ Rate of pumping doesn't reflect money invested in the transmission main.
E. <u>Estimated capacity of existing infrastructure:</u> <i>How easy (and objective) would it be to translate the capacity of the built infrastructure into a baseline volume? How would this be done?</i>	
General / context	<ul style="list-style-type: none"> ▪ Covered under EA already. ▪ Not relevant because pumping, and carrying capacity modelling would address this. ▪ All municipalities model pumping, carrying capacity of their systems. ▪ Modelling covers carrying capacity of system. ▪ Take into account existing agreements with other municipalities to transfer water when you set baseline because all building contracts/ land use plans etc. are based on these EA numbers. ▪ Anything that affects a transfer should become a schedule 'C' Class EA project.

TABLE 1 (cont'd): Breakout Discussion – Baseline

F. EA Approved capacity: How easy (and objective) would it be to determine the transfer component from the EA approval? How would this be done?	
Themes	<ul style="list-style-type: none"> ▪ EAs may not include transfer amounts.
General / context	<ul style="list-style-type: none"> ▪ Should make the calculation a requirement as part of the EA. ▪ Municipal Class EA should be amended to include master planning which should include intra-basin water transfer – This should be a requirement for all municipalities.
Other	<ul style="list-style-type: none"> ▪ Municipalities will need to meet and agree how to allocate the spare capacity – could become a political issue. ▪ May have established agreements and therefore can not just write-off those agreements, they must be taken into account. ▪ If municipality has already done a Master Plan for their EA, then they should be grandfathered, if not, then should have to do a Master Plan the addresses transfers or if approved EA considered transfers then also should be grandfathered.
Questions	<ul style="list-style-type: none"> ▪ Who gets the spare capacity? ▪ What does the ministry do with municipalities that have plans in place that are not supported by the EA's?
G. Master plan: How would built capacity and/or planned infrastructure be considered in enough detail to allow a baseline volume to be estimated?	
Themes	<ul style="list-style-type: none"> ▪ Provide only a general, subjective number because Master Plan is for the future and numbers would be an estimate at this stage. ▪ Master Plan does not delve into enough detail – does not get at location and necessary depth of data.
General / context	<ul style="list-style-type: none"> ▪ Difficulty with master plan is it's not an actual approved number and is changeable at any point. ▪ Not all Master Plans address transfers. ▪ No set approval process for Master Plans. ▪ If there is a new development that is not on a master plan then it would be necessary to go back to an EA - can't just allocate from master plan that might not have included/considered that particular new growth.
Other	<ul style="list-style-type: none"> ▪ There should be standardization for the timeframe covered by a Master Plan (10 years, 20 years, etc.). ▪ Consider the two types of master plans a) Strategic (long term) b) EA-based (approval).
H. Official Plan: Are there any circumstances where this would be an appropriate approach?	
General / context	<ul style="list-style-type: none"> ▪ Approaches F,G, & H are planning strategies and should considered together ▪ Don't want municipalities to be able to pick and choose – should have some level of prescription for consistency and level playing field. ▪ Official plans deal with population, areas of growth, available services, capacity to service and feasibility – not sufficient level of detail or type of information required to determine transfers. ▪ Official planning varies from one municipality to another. ▪ Official plans provide the vision.
Other	<ul style="list-style-type: none"> ▪ Need to consider future population growth in determining allocation of spare capacity. ▪ Allocation of spare capacity: need municipality to municipality agreements on water transfer allocations to prevent political problems.

TABLE 2: Great Lakes Watersheds – Mapping

<p>1. For the purpose of determining intra-basin transfers what would be more useful?</p> <ul style="list-style-type: none"> o A mapping data layer of Great Lakes and tertiary watershed boundaries to incorporate into existing municipal mapping systems? o A set of maps, produced by the province, showing Great Lakes and tertiary watershed boundaries (stepped along GL boundaries)? o Or both? Benefits or drawbacks of each? 	
General / context	<ul style="list-style-type: none"> ▪ Both methods should be considered acceptable. ▪ Some municipalities don't have GIS capabilities and could not do overlays. ▪ Some overlays do not line up – need some means to accurately line up maps for assessment purposes. ▪ There is a need for uniformity in how the data is mapped and assessed. ▪ Need co-ordination between agencies involved with mapping and methods used (e.g., aerial photography, symbology, lines, data) ▪ There should be harmonization of symbology
<p>2. Do the sample maps shown today provide the necessary information for assessing intra-basin transfers?</p>	
General / context	<ul style="list-style-type: none"> ▪ This issue is irrelevant if municipality has capability for layering. ▪ If municipality does not have technology for layering, need maps provided. ▪ Should add street names (important if available to public) ▪ Maps from Simcoe CA and Toronto CA don't match up ▪ CA's capabilities are varied. The CA's have to get together and combine their maps ▪ CAs may be using maps with different dates or focus which creates inconsistency. ▪ Conservation authority already producing maps therefore new maps for transfers need to be compatible. ▪ Contour lines should be added to maps to allow for lining up – this could assist with harmonization of maps.
Questions	<ul style="list-style-type: none"> ▪ What would be the contour measure? ▪ Is the watershed dividing line to scale, is it accurate if enlarged?
<p>3. Should an intra-basin web- based mapping tool be explored?</p>	
General / context	<ul style="list-style-type: none"> ▪ Would not be appropriate for transfers. ▪ Possibly useful for individual users like agriculture. ▪ Unlikely to be an effective tool for municipalities. ▪ Could be a public plain language communication tool to: <ul style="list-style-type: none"> a) Communicate concepts to council b) Educate and inform the public

TABLE 3 : Exception Criteria – Return Flow

1. What additional definitions are required?	
General / context	<ul style="list-style-type: none"> ▪ Need to define “naturally” and “after use” ▪ “Naturally” – does this mean not altered, not treated water? ▪ “Naturally”: Does it matter how the water is returned (e.g., through a pipe or through a natural water course) ▪ Define what is “connecting channel”. ▪ Definitions should be more restrictive - cannot be in two watersheds ▪ Define a transfer of from one water body into another water body within the watershed. ▪ Need more detail on definition of water quality standards.
Questions	<ul style="list-style-type: none"> ▪ What about leakage from the system if the distribution crosses boundaries? ▪ Connecting channel: <ul style="list-style-type: none"> a) Where does the boundary start – at outflow of lake? b) Do only upstream connecting channels belong to the lake? ▪ Can there be connecting water channels between two watersheds? ▪ How do the tributaries fit in? ▪ Legislation says the boundaries can overlap – confusing, because how then is a transfer defined/determined?
2. What comments do you have with the draft guidance?	
General / context	<ul style="list-style-type: none"> ▪ Identify specific exceptions (e.g., Kingston sends water down river, this is not a real transfer but is considered a transfer). ▪ Need to identify what specific information is needed from the “agreement” between water taker and entity discharging the return flow (under “Application Requirements” in the Procedures Manual) – the whole agreement represents too much information and is too onerous. ▪ Infiltration within the watershed is considered return flow, but if infiltration happens after transferred out of basin, then not return flow ▪ Need clarification on how to measure return flow. ▪ More details are needed on what is meant by “quality standards”.
Questions	<ul style="list-style-type: none"> ▪ Where are the watershed lines drawn? ▪ Source Watershed: Is Ontario obliged to abide by this definition in the agreement? – Province’s legislation appears to be less restrictive?
Other	<ul style="list-style-type: none"> ▪ Technical Bulletin (Threshold Table) – need to correct unit measurement symbols. ▪ Bulletin needs clarification – difficult to read, leading to misinterpretation.
3. What additional Guidance is required; e.g., What additional policy considerations must be addressed?	
General / context	<ul style="list-style-type: none"> ▪ Clarification of how flow is measured. ▪ Define within the Guidance that for the purpose of the return flow water quality, it is the point of discharge to the environment that is to be taken into account rather than transfer point. ▪ Assumption made that existing regulations/guidelines are in place to regulate quality of return flow – this Guidance is not a mechanism to do this but it should be made clearer in the Guidance that the regulations are in place elsewhere. ▪ Grandfather what is in existence at this time
Questions	<ul style="list-style-type: none"> ▪ Are the PWQO’S (the Blue Book - provincial water quality objectives) applicable water quality standards that return flow must meet? ▪ How are return water quality standards applied to flow when there is no sewage approval governing return flow? ▪ Need to indicate what regulations/guidelines are applicable and where to get information. ▪ Does Guidance reference the provincial water quality standards? 6

TABLE 3 (Cont'd.): Exception Criteria – Cumulative

1. What additional definitions are required?	
General / context	<ul style="list-style-type: none"> ▪ Define more clearly “precedent setting”. ▪ Define significant “individual impact”.
Questions	<ul style="list-style-type: none"> ▪ Is the description of the baseline to include all criteria (Biological, Physical, and Chemical)? ▪ Does it consider at source only or return location?
2. What comments do you have with the draft guidance?	
Themes	<ul style="list-style-type: none"> ▪ Consider all existing approvals; e.g., Sewage Works approvals, EA, Fisheries Act, etc.
General / context	<ul style="list-style-type: none"> ▪ Need clarification on what Regional body requires, so municipalities can address accordingly. ▪ Need to consider cumulative impact in context with the Regional body. ▪ Province should prescribe the extent of the evaluation. ▪ Cumulative impacts will have more effect on connective channels than lakes. ▪ Flesh out more details for criteria (biological, chemical, physical) – provide details and examples.
Questions	<ul style="list-style-type: none"> ▪ Are the PTTW requirements enough so that the PTTW’s can be used? ▪ Is it only environmental impacts or are there social and economical considerations? ▪ Is this just a quantity issue or is it a quality issue as well – volume of sewage discharged or also the quality of the discharge? ▪ Are the provincial quality standards sufficient (e.g., Sewage Works approvals, EA, Fisheries Act, etc.)? ▪ Do municipalities need to consider secondary impacts/effects?
3. What additional Guidance is required; e.g., What additional policy considerations must be addressed?	
General / context	<ul style="list-style-type: none"> ▪ Need a provincial clearinghouse for cumulative impact information with expert support (personnel) to which municipalities have access.

Intra-Basin Water Transfers
Municipal Sector Working Group Consultation
December 10, 2008

Representative	Organization
Debbie Korolnek	Bradford West Gwillimbury
Sarah Rang	GLSLCI
William Snodgrass	Toronto
Erin Kirk	London; Huron & Elgin Water Systems
Rick Newlove	Simcoe
Nathan Westendorp	Simcoe
Christian Meile	Simcoe
Adrian Coombs	York
Stephen Fung	York
Alex Hartley	York
Michele Maitre	York
Courtney Daniels	York
Marcus Firman	Collingwood
Janice Hatton	Peel
Rosemary Kelleher-Maclennan	OMWA
Max Christie	OMWA
Lisa Lin	York

**Intra-Basin Water Transfers
Municipal Sector Working Group Consultation**

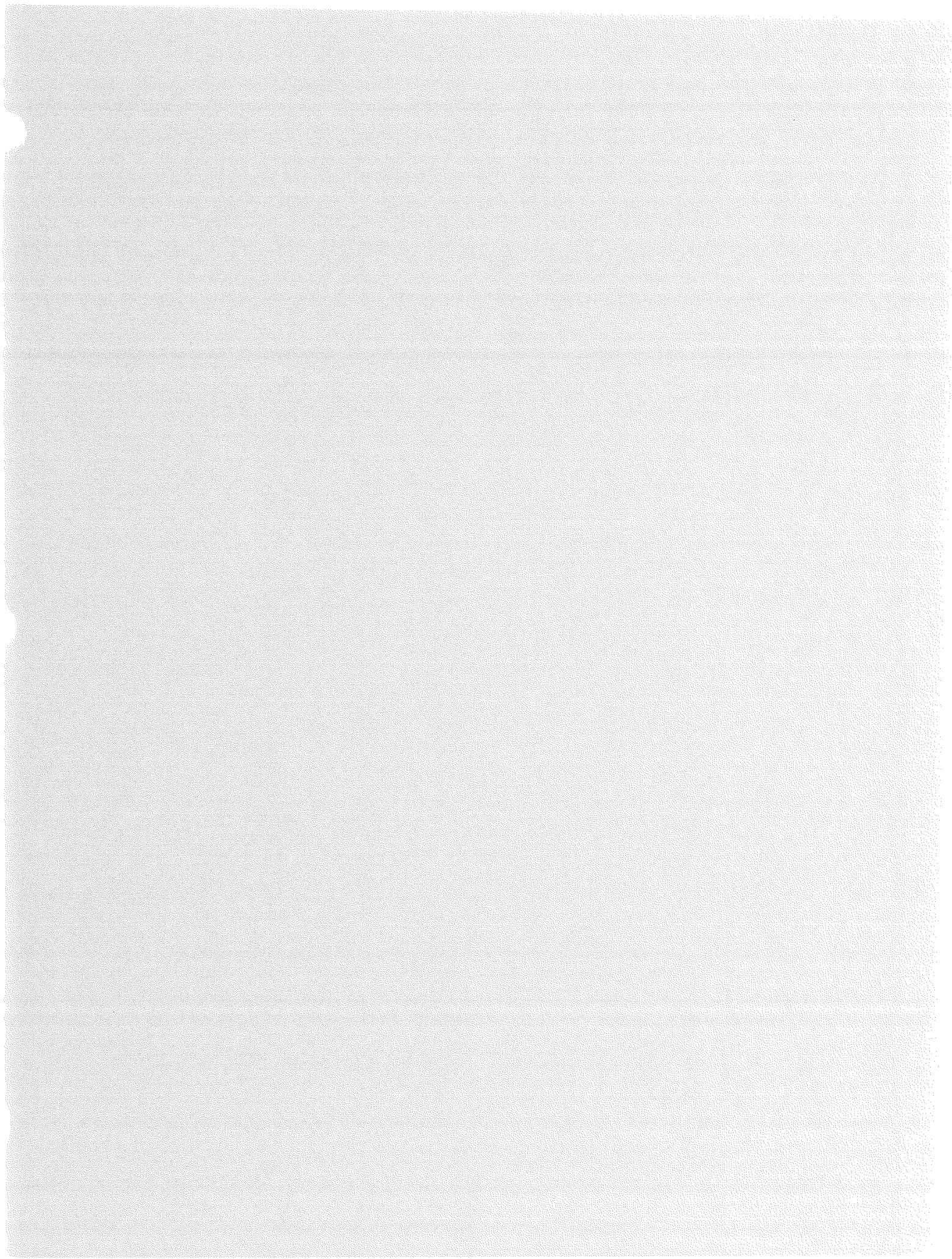
Date: December 10, 2008

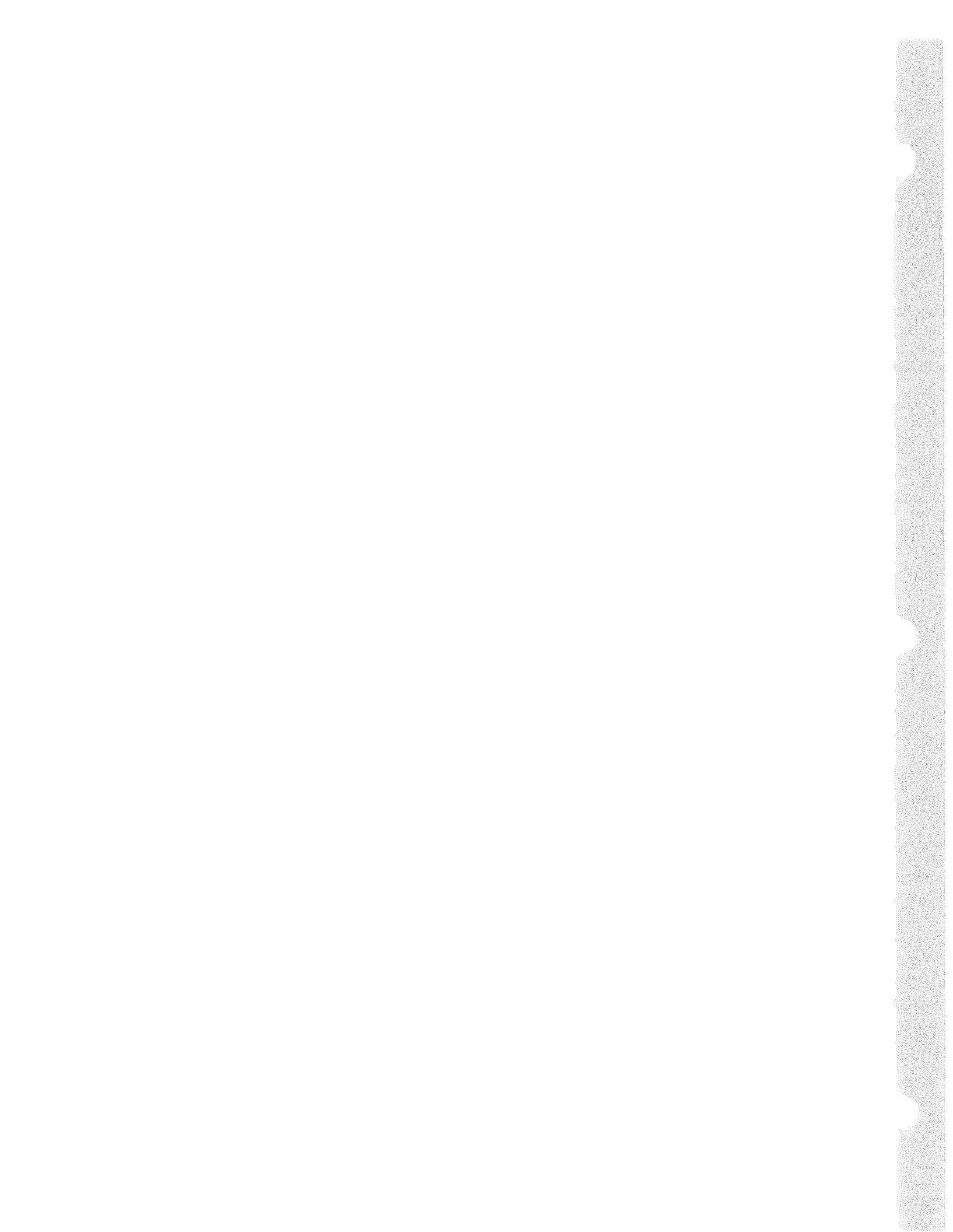
**Location: Courtyard Marriott, 475 Yonge Street, Toronto
Alexander Rooms A & B**

AGENDA

Time	Discussion item
9:00 AM	Arrival and registration (continental breakfast provided)
9:30 – 10:00	Welcoming remarks and introductions Ann Marie Weselan, MOE; Rob Messervey, MNR Review of session agenda Overview of consultation process Ann Marie Weselan, MOE
10:00 – 10:15	Technical Bulletin Lori Byers, MOE
10:15 – 10:45	Baseline overview Joanne Di Maio, MOE
11:00 – 12:30	Breakout group discussion (Baseline) - key questions - roundtable exploration of options Plenary session – feedback from breakout groups
12:30 – 1:15	Lunch
1:15 – 1:45	Introduction to maps Jonathan Staples, MNR Feedback on maps
1:45 – 2:30	Exception criteria overview Paula Thompson, MNR
2:30 – 3:45	Breakout group discussion (exception criteria) Plenary session – feedback from breakout groups
3:45 - 4:00	Wrap-up and next steps







6

**Intra-Basin Water Transfers
Municipal Sector Working Group Consultation**

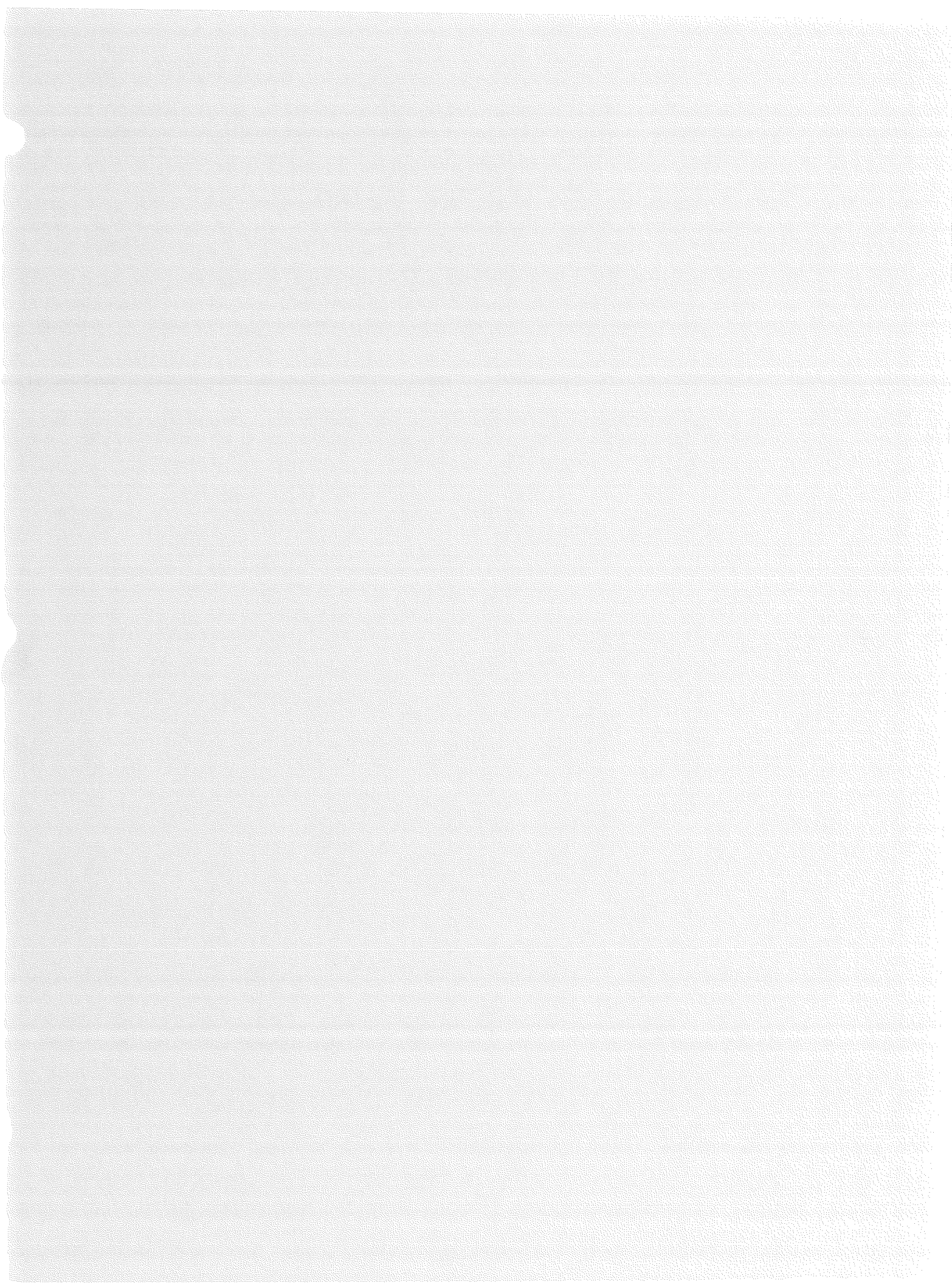
Date: January 15, 2009

**Location: 55 St. Clair Avenue West (at Yonge Street)
Toronto, Ontario**

AGENDA

- | | |
|----------|--|
| 9:00 AM | Arrival and registration (continental breakfast provided) |
| 9:30 AM | Welcoming remarks and introductions |
| | Review of session agenda and format for the day – comments and questions |
| 9:45 AM | Presentation on Exception Criteria:
No feasible, environmentally sound, cost effective alternatives |
| | Exploration and discussion – key questions |
| 10:45 AM | Presentation on Exception Criteria:
Transfer amount is reasonable |
| | Exploration and discussion – key questions |
| 12:00 PM | Lunch (provided) |
| 12:30 PM | Presentation on Exception Criteria:
Efficient use, conservation of existing supplies |
| | Exploration and discussion – key questions |
| 1:30 PM | Presentation on Exception Criteria:
Feasible, environmentally sound, cost effective water conservation measures |
| | Exploration and discussion – key questions |
| 2:30 PM | Overview – Transfer of sewage |
| | Exploration and discussion – key questions |
| 3:30 PM | Wrap-up and next steps |







Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement
EXCERPTS FROM DRAFT PROCEDURES MANUAL
October, 2005

PART 1: PREPARATION OF AN APPLICATION AND REVIEW OF A PROPOSAL TO WITHDRAW WATER

1. PROPOSAL REVIEW GUIDANCE

A) Return Flow

Description of Intent

The intent of the Return Flow requirement is to ensure that all of the Water Withdrawn from the Great Lakes Basin is returned to the Source Watershed, less an allowance for Consumptive Use, in order to support the ecological health of the system and for further use. It is recognized that Consumptive Uses will occur and the amount of Consumptive Use will differ depending of the use of the Water. The desire is that Consumptive Uses be reasonable and that the Proposal maximizes the return of Water at a quality that meets all applicable Water quality requirements. Except as provided for in the Agreement, Return Flow shall be required to the Source Watershed for all New or Increased Withdrawals subject to the Standard.

Application Requirements

Applicants must submit a description of their Return Flow program. This program description should include:

- A description on how the Water will be returned. To the extent the local entity that will be discharging the Return Flow is not the Applicant for the project, agreements must be presented demonstrating that the Return Flow will be guaranteed;
- An estimate of total Return Flow by volume and as a percentage of Water Withdrawn;
- Location of Return Flow;
- An estimate of Consumptive Use, including historic use information. These estimates may be presented in the form of project engineering design plans or utilizing United States Geological Survey (USGS) or other Consumptive Use coefficients. To the extent use estimates are greater than “generally accepted Consumptive Use coefficients,” the Application must include a detailed explanation and justification for projected additional Consumptive Use;
- A description of the anticipated Water quality of the Return Flow including a description of the proposed measurement methods (quality and quantity) and discharge location(s); and,
- A certification that the Return Flow shall consist only of Water Withdrawn from the Great Lakes Basin, except for groundwater that may infiltrate into wastewater systems.

Criteria for Decisions

In determining if a Proposal has successfully met the requirements for Return Flow, the following shall be evaluated:

- The clarity and completeness of the description of the Return Flow program, including the quantity, quality and location of the Return Flow.
- The verification and justification of Consumptive Use estimates, by sector, using engineering estimates or Consumptive Use coefficients.
- There is no replacement water from outside the Basin.
- The Return Flow meets all applicable water quality Standards.
- Water that is returned to the Source Watershed via non-point sources (e.g. percolation, infiltration, septic system seepage) shall be considered part of Return Flow.

In reviewing Consumptive Use estimates, commonly used coefficients shall be used as a benchmark. It is understood that specific use situations vary and that in some cases higher use amounts may be justified. It is also understood that research will continue and that Consumptive Use information will improve. As of now, the Great Lakes Commission Survey, Spring 2002, entitled, "Consumptive Use Coefficients By Water Use Category Among Great Lakes Jurisdictions and USGS" is one benchmark evaluation tool for the listed water use categories, recognizing that coefficients will be updated periodically to reflect advancements in conservation practices. Recommendations from the International Joint Commission's February 2000 report shall also be considered, as appropriate, in the context of evaluating the adequacy of the elements of the Proposal relating to Return Flow.

B) No Significant Individual or Cumulative Impacts

Description of Intent

The intent of this Standard provision is to ensure that New or Increased Withdrawals result in No Significant Adverse Individual or Cumulative Impacts to the Water and Water Dependent Resources of the Great Lakes Basin. This provision is central to the Parties' commitment to responsible resource protection and management.

Application Requirements

Applications must be submitted with detailed information related to the proposed project including the location of the New or Increased Withdrawal and Return Flow.

The Proposal should include the following information:

- Source and location of the Withdrawal and Return Flow;
- A description of baseline conditions regarding hydrologic flow, water quality and habitat;
- A projected Withdrawal schedule including peak 30-day demand over the 90-day averaging period;
- Anticipated changes in Water quality and Water dependent natural resources;
- A description of all mitigation measures that will be implemented to prevent or eliminate significant impacts; and,
- A statement of how the Proposal would relate to other existing Withdrawals, Diversions and Consumptive Uses for purposes of enabling the Parties to collectively evaluate Cumulative Impacts from this Proposal. The Applicant shall use data and analyses on Cumulative Impacts that are available from the Parties.

Criteria for Decisions

In determining whether a Proposal has the potential for significant impacts, the Parties shall consider the impacts that may be reasonably expected to occur from the Proposal based on consideration of the following criteria and factors:

- The completeness of baseline information presented;
- Location, type, extent, scale and duration of impacts;
- The mitigation measures proposed, if any;
- Potential cumulative effects of related or anticipated future projects (supply and demand analysis), including the potential for precedent-setting consequences;
- The geographic and temporal scale of potential impacts; and,
- Individual impacts will be evaluated in the context of Cumulative Impacts. Where watershed plans exist, Applicants shall discuss impacts based upon these plans. Potential impacts on other users will be evaluated.

A Water Withdrawal Proposal will be considered to have a significant ecological impact if there is a significant change to any of the following parameters:

Physical Criteria

- Measurable change to the pre-Proposal range of variability of the hydrologic regime
- Degradation of structural habitat
- Disruption of pre-Proposal connections between and among habitats
- Disruption of pre-Proposal temperature regime of the hydrologic system
- Significant/measurable impacts to existing Water uses

Chemical Criteria

- Disruption of natural productivity of the ecosystem
- Introduction of potentially harmful toxins, contaminants and excessive nutrients
- Disruption of the hydrologic system's ability to process toxins, contaminants, and nutrients

Biological Criteria

- Decline in population levels or health of native species
- Introduction of non-native species
- Disruption of biological interactions such as predation and competition
- Introduction of harmful microorganisms and no elevation of microorganisms to harmful level
- Impact on human health

Compliance with the Originating Party's environmental regulatory requirements (water and air) could contribute to a demonstration of the lack of significant ecological impact. In some cases, these processes require a showing of no impact. In these cases, such a finding by an Originating Party could meet the requirements of this section.

C) NO REASONABLE WATER SUPPLY ALTERNATIVE

(Applicable when Applicant is seeking an Exception)

Description of Intent

The purpose of this requirement is to ensure that there are no reasonable alternatives available that would eliminate or diminish the need for an Exception.

Application Requirements

Applications for the Exception shall include a narrative description of the need. This description should include an analysis of the efficiency of current water Withdrawals, including the application of Environmentally Sound and Economically Feasible Water Conservation Measures as outlined in Section 1.F. of this Manual.

The application shall include an analysis of water supply alternatives available and considered to meet the new or increased need. This analysis shall address quantity and quality (including treatability) of alternative sources. The analysis shall describe the rationale for not using the other considered water supply alternatives.

Criteria for Decisions

A clear demonstration of alternatives considered, the analysis undertaken and conclusions and findings of this analysis shall be evaluated. There must be a showing that no reasonable water supplies are available. To determine what is reasonable, three factors will be evaluated for alternative options, including: 1) resource protection; 2) technology; and, 3) cost.

Water conservation and efficient use of existing water supplies must be an alternative that is pursued first to minimize or eliminate the need for the New or Increased Withdrawals described in Section 1.F. of this Manual.

D) Efficient Use and Conservation of Existing Water Supplies

Description of intent

The purpose of this requirement is to ensure that the need for a New or Increased Withdrawal of Great Lakes Basin Water cannot be reasonably avoided through the efficient use and conservation of existing water supplies available to the Applicant.

Application Requirements

Applications shall include a narrative description of the need for the proposed New or Increased Withdrawal. This description should include an analysis of the efficiency of current water Withdrawals, including the application of Environmentally Sound and Economically Feasible Water Conservation Measures as outlined in Section 1.F. of this Manual.

Criteria for Decisions

Water conservation and efficient use of existing water supplies must be an alternative that is pursued first to minimize or eliminate the need for the New or Increased Withdrawal. A clear demonstration must be made that the requirement for additional Great Lakes Basin Water cannot be minimized or eliminated through the application of

Environmentally Sound and Economically Feasible Water Conservation Measures as outlined in Section 1.F. of this Manual.

E) Quantities that are Considered Reasonable

Description on Intent

The purpose of this requirement is to ensure that the Withdrawal of Great Lakes Basin Water shall be limited to quantities that are considered reasonable to meet the requirements of the intended use.

Application Requirements

The Applicant must estimate the highest 90-day average use for the period for which the approval is being sought. The Application must include a Water use plan. For a public water supply system, publicly or privately operated, the plan must include:

- A description and map of the service area at the time of the Application and projected for up to twenty years or for the period for which the approval is being sought.
- Water use and population projections at the time of the application and projected for the next five, ten and twenty years. Population projections should be credible and the entity conducting the projections identified. Water use must be presented in terms of maximum use for any 90-day period for a given year. Water use must also be presented in terms of annual average gallons or litres per day.
- A description of the capacity of the Withdrawal, treatment and distribution portions of the system.
- An assessment of the water use savings of current and proposed water conservation programs.

Applications for other uses, such as industrial or agricultural, must include a plan that projects Water use at the time of application and projected for up to twenty years or for the period for which the approval is being sought. Water use must be presented in terms of maximum 90-day average use for a given year and in terms of annual average gallons per day.

Criteria for Decisions

In determining if a Proposal has successfully met the requirements of this Standard provision, the Proposal shall be evaluated in terms of how realistic and reasonable the quantity of the proposed Water Withdrawal is to meet the requirements of the intended purposes for the Withdrawal. The review shall be conducted in concert with the review of the Proposal's Environmentally Sound and Economically Feasible Water Conservation Measures to determine how effective it is in minimizing the quantity of the Withdrawal or Consumptive Use.

The proposed Water use projections shall be evaluated upon the following criteria:

- The presentation of current use information – including proposed Withdrawal and/or Consumptive Use;
- The existence of a Water use plan with credible multi-year use projections; and,
- The potential effectiveness of current and proposed Water conservation programs in minimizing the Withdrawal and/or Consumptive Use of Water.

F) Environmentally Sound and Economically Feasible Water Conservation Measures

Description of Intent

The purpose of this Standard provision is to encourage efficient use through demand reduction and supply-side Environmentally Sound and Economically Feasible Water Conservation Measures and incentives. Environmentally Sound and Economically Feasible Water Conservation Measures can be grouped into two general categories: 1) “hardware” devices or equipment; and, 2) behavior or management practices. Examples of Water Conservation Measures for different water use sectors are provided in Table 1 from the *Handbook of Water Use and Conservation* (Vickers, 2001). Conservation incentives are incentives that motivate water users to implement Environmentally Sound and Economically Feasible Water Conservation Measures. They can be classified into three categories: 1) educational, 2) financial, and 3) regulatory. Examples of conservation incentives are presented in Table 2 from the *Handbook of Water Use and Conservation* (Vickers, 2001).

The Decision Making Standard includes a strong requirement regarding water conservation. All Proposals for New or Increased Withdrawals of Great Lakes Basin Water shall incorporate Environmentally Sound and Economically Feasible Water Conservation Measures to minimize Water Withdrawals or Consumptive Use.

Table 1. Types of Water Conservation Measures (Source: *The Handbook of Water Use and Conservation* (Vickers, 2001, p. 6) and the Great Lakes Commission’s Report *Water Resources Management Decision Support System for the Great Lakes-St. Lawrence River* (May, 2003)).

Water Use Sector	Hardware/Technology	Behavior/Management Practices
<i>Residential and Domestic</i>	<ul style="list-style-type: none"> • Low-volume toilets and urinals • Waterless and composting toilets and urinals • Low-flow showerheads and faucets • Water-efficient appliances such as clothes washers and dishwashers 	<ul style="list-style-type: none"> • Shut off unnecessary flows from faucets • Restrict outdoor water use • Use water-efficient practices for clothes washers and dishwashers (full loads, no pre-rinse, wash cycles)

Water Use Sector	Hardware/Technology	Behavior/Management Practices
<i>Landscapes</i>	<ul style="list-style-type: none"> • Native and drought-tolerant turf and plants • Drip irrigation • Automatic shut-off hoses • Rain sensors 	<ul style="list-style-type: none"> • Water less frequently (schedule during early or late hours) • Soil improvements and apply appropriate mulches • Use water-efficient landscape maintenance practices
<i>Industrial, Commercial, and Institutional Facilities</i>	<ul style="list-style-type: none"> • Cooling towers with recirculated water • Reuse process water • Leak detection and repair 	<ul style="list-style-type: none"> • Shut off unused valves • Use water-efficient operational practices
<i>Agriculture</i>	<ul style="list-style-type: none"> • Low-energy precision application of irrigation water • Canal lining • Tailwater recovery • Laser leveling • Drip irrigation 	<ul style="list-style-type: none"> • Use weather-controlled irrigation systems • Regular maintenance of irrigation systems • Use water-efficient cultivation practices
<i>Water Utilities</i>	<ul style="list-style-type: none"> • Distribution system leak detection and repair • Hydrant capping 	<ul style="list-style-type: none"> • Regularly service and adjust system valves and connections • Pressure management to reduce volume of water used

Table 2. Types of Conservation Incentives (Source: *The Handbook of Water Use and Conservation* (Vickers, 2001, p. 7) and the Great Lakes Commission's Report *Water Resources Management Decision Support System for the Great Lakes-St. Lawrence River* (May, 2003)).

Type of Conservation Incentive	Examples
Educational	<ul style="list-style-type: none"> • Direct-mail literature, television and radio advertisements, media coverage, demonstration gardens and projects, school education programs, conservation checklists developed for specific industries, local workshops and training programs for specialized users

Financial	<ul style="list-style-type: none"> • Bill credits, rebates, conservation pricing/rate structures
Regulatory	<ul style="list-style-type: none"> • Water-efficient policies, laws and plumbing codes for water-efficient fixtures and appliances, Standards for landscape design, irrigation scheduling, penalties for outdoor water waste, pollution prevention requirements

Application Requirements

All Proposals shall provide a detailed description of the Environmentally Sound and Economically Feasible Water Conservation Measures that have been and will be employed in the project. This must include water conservation goals as described below.

In addition to guidance provided by a Party's water conservation program, descriptions of an Applicant's Environmentally Sound and Economically Feasible Water Conservation Measures may include the elements outlined in the planning steps below. The planning steps, which are adapted from the *Handbook of Water Use and Conservation* (Vickers, 2001) and the USEPA's *Water Conservation Plan Guidelines* for Water systems (August, 1998), are meant as guidance for all water use sectors.

1. Identify Conservation Goals

- Establish Water use reduction goals (e.g. percent or volume per day).
- Determine the timeframe of the Water conservation program for existing and proposed Withdrawals.
- Description of community involvement in goals-development process.

2. Develop a Water-Use Profile and Forecast

- Identify existing Water supply sources, Water use (average and peak use/demand), total Withdrawal and Consumptive Use.
 - For Water systems, agricultural water districts, and industry, describe production characteristics of existing facilities if any.
 - For irrigation and other agricultural uses, the plan should demonstrate that systems are properly designed for soil characteristics, topography, climatic conditions, and crop types. Information should include:
 - Soil types and percentage of each
 - Purpose of irrigation (e.g. upland crops – corn, soybeans, fruit, etc.); golf course, sod, greenhouse etc.)
 - Acreage under each crop and total acres irrigated
 - Monthly irrigation schedule
 - Irrigation method(s) to be used
- Forecast anticipated future Water use/demand and costs associated with infrastructure changes (expansion, improvements or new facilities).

3. Identify and Evaluate Environmentally Sound and Economically Feasible Water Conservation Measures

- Review of Water conservation measures and incentives that have been implemented if any.

- Identify other Water conservation measures that save Water and identify conservation incentives that would motivate Water users to implement Water measures (see Tables 1 & 2 for examples), including consideration of generally accepted management practices and principles for the appropriate water use sector.
- Develop a matrix of Environmentally Sound and Economically Feasible Water Conservation Measures and incentives that can be considered options.
- Evaluate measures in terms of the following:
 - Potential Water savings (i.e. reducing Water loss and minimizing the need for a Withdrawal or increased Withdrawal to the maximum extent possible)
 - ◆ Estimate the short-term, long-term, average-day, and peak-day Water savings that can be achieved by each measure as well as the total (and/or per capita) Consumptive Use reduced.
 - Benefits and costs
 - ◆ For all Water uses, consider reduced need for new or additional Water supplies, reduced operation and maintenance costs, and environmental preservation. For water systems or agricultural water districts, consider deferred, downsized or eliminated new facilities for water systems and customer benefits.
 - ◆ Estimate conservation program costs including implementation and monitoring costs.
 - ◆ Determine cost-effectiveness of measures based on benefits and costs over the life of the program.
 - Applicable laws, regulations, and standards
- Identify any short-term or long-term obstacles (e.g. socio-economic, legal, etc.) to implementation of the measures.

4. Select Environmentally Sound and Economically Feasible Water Conservation Measures

- Identify quantitative criteria for selecting measures and associated program incentives. For example, identify the cost-effectiveness of Environmentally Sound and Economically Feasible Water Conservation Measures in terms of the avoidance of capital costs or through potential Water savings such as reducing Water loss and minimizing the need for a Withdrawal or increased Withdrawal.
- Identify qualitative criteria for selecting Environmentally Sound and Economically Feasible Water Conservation Measures and associated incentives, as appropriate. For example, identify the potential ease of implementation and the relationship of alternatives to other regulatory approvals that may be required.
- Evaluate and rank measures and incentives using quantitative and qualitative selection criteria.
- Justify why each measure and incentive should be selected or rejected.
- Refine total future Water use/demand forecasts taking into account Environmentally Sound and Economically Feasible Water Conservation Measures and incentives selected.

5. Implement the Conservation Plan

- Develop a strategy and timetable for implementing and monitoring the plan's Environmentally Sound and Economically Feasible Water Conservation Measures.

6. Monitor, Evaluate, and Revise Water Conservation Program as Needed

- Monitor and evaluate each measure's effectiveness by assessing actual Water savings (i.e. reducing Water loss and minimizing the need for a Withdrawal or increased Withdrawal to the maximum extent possible), and program costs and benefits.
- If necessary, adjust the Water conservation program, based on findings from the monitoring and evaluation process, to ensure that Water-savings goals are met.

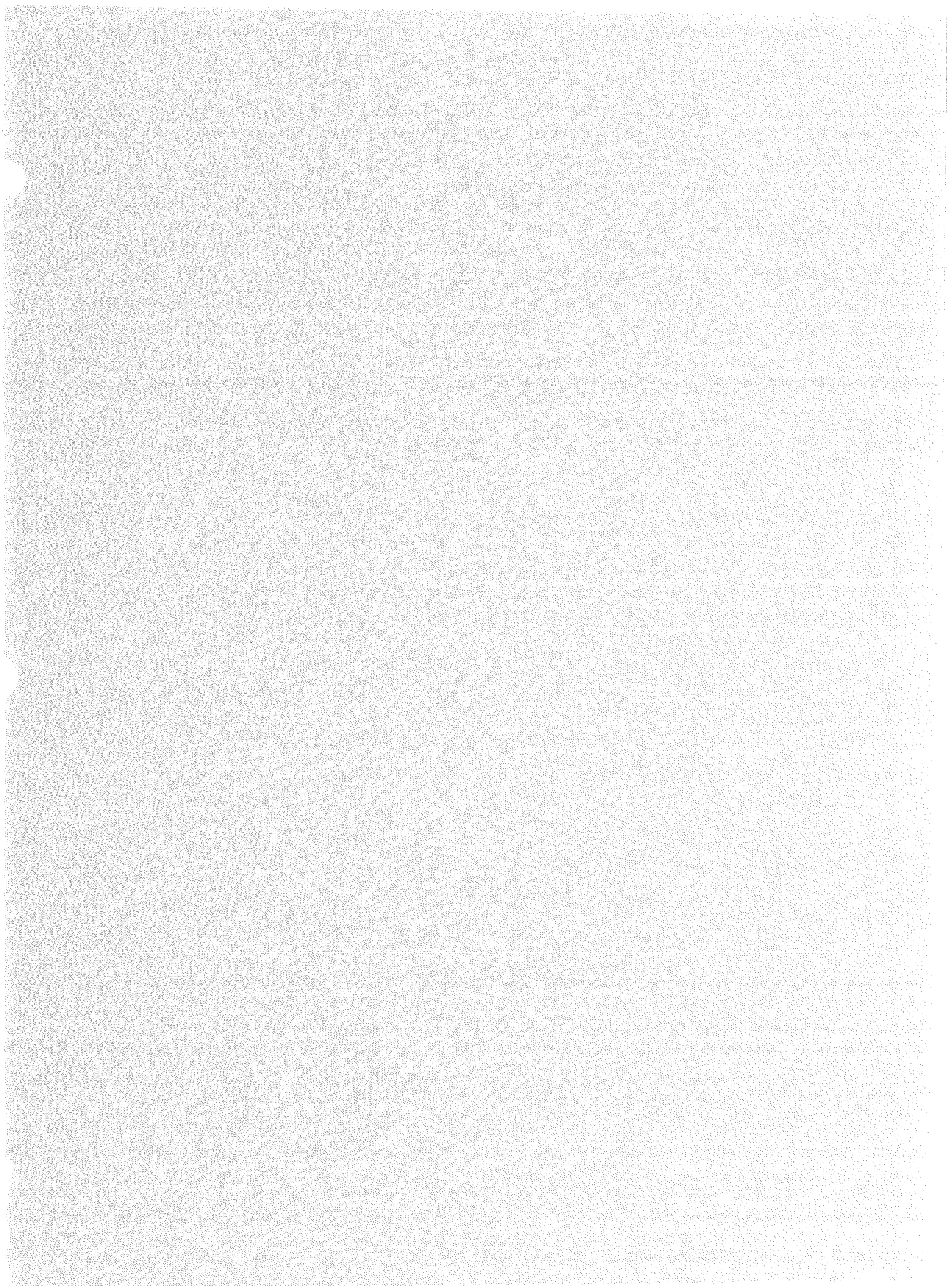
Criteria for Decisions

All Proposals will be evaluated on the adequacy of the Environmentally Sound and Economically Feasible Water Conservation Measures proposed and implemented. There must be water conservation goals to ensure efficient use. There must be a description of how water use is quantitatively measured (e.g. metering) to provide an accurate picture of water demand, supply, loss and projected savings; a forecast of anticipated future water use and demand; an identification and analysis of alternative methods and practices; and, an implementation and evaluation strategy.

G) COMPLIANCE WITH APPLICABLE LAWS

Description of Intent

The Applicant bears the responsibility that the proposed Withdrawal will be in compliance with all applicable municipal, State, Provincial and federal laws as well as regional, inter-State, inter-Provincial and international agreements, including the Boundary Waters Treaty of 1909.



- Identify other Water conservation measures that save Water and identify conservation incentives that would motivate Water users to implement Water measures (see Tables 1 & 2 for examples), including consideration of generally accepted management practices and principles for the appropriate water use sector.
- Develop a matrix of Environmentally Sound and Economically Feasible Water Conservation Measures and incentives that can be considered options.
- Evaluate measures in terms of the following:
 - Potential Water savings (i.e. reducing Water loss and minimizing the need for a Withdrawal or increased Withdrawal to the maximum extent possible)
 - ◆ Estimate the short-term, long-term, average-day, and peak-day Water savings that can be achieved by each measure as well as the total (and/or per capita) Consumptive Use reduced.
 - Benefits and costs
 - ◆ For all Water uses, consider reduced need for new or additional Water supplies, reduced operation and maintenance costs, and environmental preservation. For water systems or agricultural water districts, consider deferred, downsized or eliminated new facilities for water systems and customer benefits.
 - ◆ Estimate conservation program costs including implementation and monitoring costs.
 - ◆ Determine cost-effectiveness of measures based on benefits and costs over the life of the program.
 - Applicable laws, regulations, and standards
- Identify any short-term or long-term obstacles (e.g. socio-economic, legal, etc.) to implementation of the measures.

4. Select Environmentally Sound and Economically Feasible Water Conservation Measures

- Identify quantitative criteria for selecting measures and associated program incentives. For example, identify the cost-effectiveness of Environmentally Sound and Economically Feasible Water Conservation Measures in terms of the avoidance of capital costs or through potential Water savings such as reducing Water loss and minimizing the need for a Withdrawal or increased Withdrawal.
- Identify qualitative criteria for selecting Environmentally Sound and Economically Feasible Water Conservation Measures and associated incentives, as appropriate. For example, identify the potential ease of implementation and the relationship of alternatives to other regulatory approvals that may be required.
- Evaluate and rank measures and incentives using quantitative and qualitative selection criteria.
- Justify why each measure and incentive should be selected or rejected.
- Refine total future Water use/demand forecasts taking into account Environmentally Sound and Economically Feasible Water Conservation Measures and incentives selected.

5. Implement the Conservation Plan

- Develop a strategy and timetable for implementing and monitoring the plan's Environmentally Sound and Economically Feasible Water Conservation Measures.

6. Monitor, Evaluate, and Revise Water Conservation Program as Needed

- Monitor and evaluate each measure's effectiveness by assessing actual Water savings (i.e. reducing Water loss and minimizing the need for a Withdrawal or increased Withdrawal to the maximum extent possible), and program costs and benefits.
- If necessary, adjust the Water conservation program, based on findings from the monitoring and evaluation process, to ensure that Water-savings goals are met.

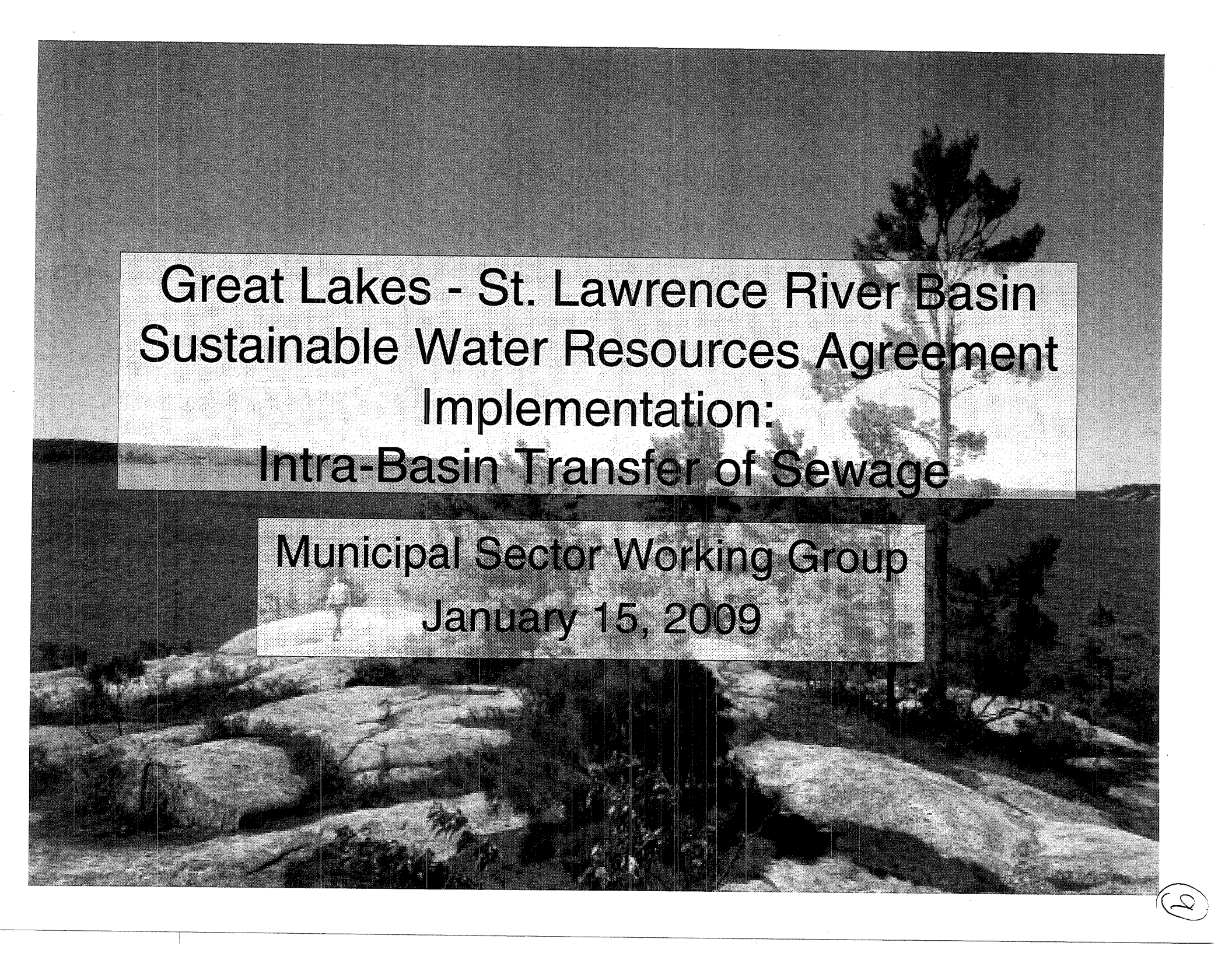
Criteria for Decisions

All Proposals will be evaluated on the adequacy of the Environmentally Sound and Economically Feasible Water Conservation Measures proposed and implemented. There must be water conservation goals to ensure efficient use. There must be a description of how water use is quantitatively measured (e.g. metering) to provide an accurate picture of water demand, supply, loss and projected savings; a forecast of anticipated future water use and demand; an identification and analysis of alternative methods and practices; and, an implementation and evaluation strategy.

G) COMPLIANCE WITH APPLICABLE LAWS

Description of Intent

The Applicant bears the responsibility that the proposed Withdrawal will be in compliance with all applicable municipal, State, Provincial and federal laws as well as regional, inter-State, inter-Provincial and international agreements, including the Boundary Waters Treaty of 1909.



Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation:
Intra-Basin Transfer of Sewage

Municipal Sector Working Group
January 15, 2009



Outline of Presentation

- Recap of provisions governing water transfers
- What is an intra-basin transfer of sewage?
- Authority to regulate sewage transfers
- Discussion: How should provisions be applied to sewage transfers?





Recap: Intra-Basin Transfer Provisions

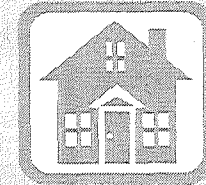
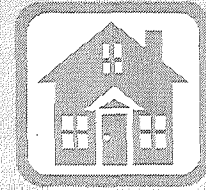
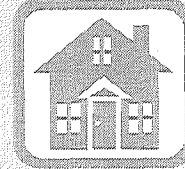
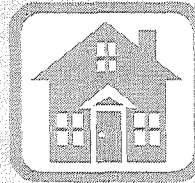
<p>Transfer involving a consumptive use of 19M L/Day or more (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none">• Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed)• No feasible, environmentally sound and cost effective alternatives to transfer, including conservation• Subject to Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision	
<p>Transfer resulting from a withdrawal 379,000 L/Day or more (with consumptive use <u>less than</u> 19M L/Day)</p>	<p>Municipal Drinking Water Systems:</p> <ul style="list-style-type: none">• Meets exception criteria, including return flow to source GL watershed	<p>All Uses (including <i>Municipal Drinking Water Systems</i> if <i>return flow to source watershed cannot be met</i>):</p> <ul style="list-style-type: none">• Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed• No feasible, environmentally sound, cost effective alternatives to transfer, including conservation• Ont. gives prior notice to other GL jurisdictions
<p>50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none">• Subject to PTTW water taking requirements, not prohibited	



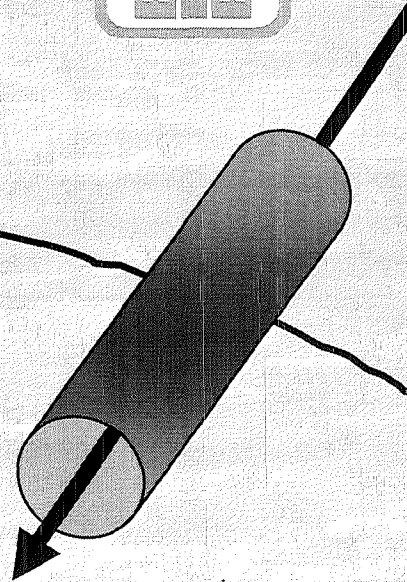
What is an intra-basin transfer of sewage?



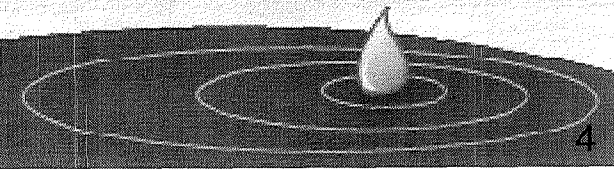
Flow from within watershed



Transfer of sewage



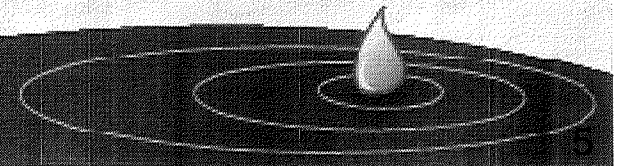
watershed boundary





Regulation of Sewage Transfers

- *Ontario Water Resources Act* s. 76 provides authority to make regulations prohibiting, regulating or controlling the transfer of sewage between Great Lakes watersheds.
- Authority to prescribe conditions for the prohibition, regulation, or control of the transfer.





Questions for Discussion

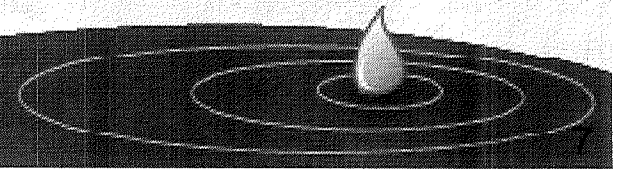
1. In light of the Agreement, how should sewage transfers of >19 mld be dealt with?
2. To meet the requirements of the Agreement for sewage transfers, what conditions should be applied to:
 - a) the water taking (e.g. efficient use and conservation)?
 - b) the sewage transfer (e.g. setting targets to reduce inflow and infiltration)?
3. In blended systems (i.e. include water from inside and outside the watershed), how would intra-basin transfers of sewage be distinguished from “return flow”?

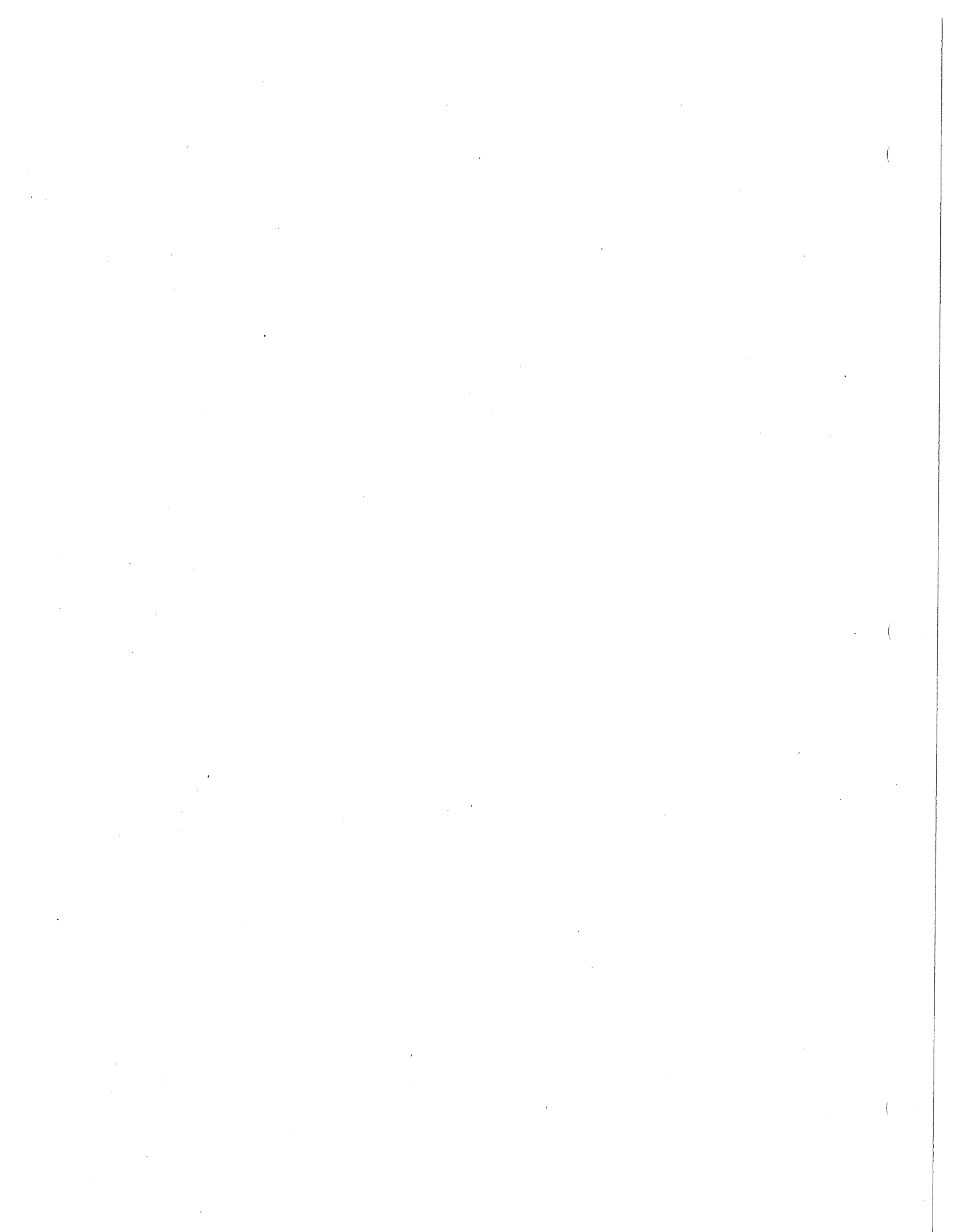




Appendix: Exception Criteria for Water Transfers

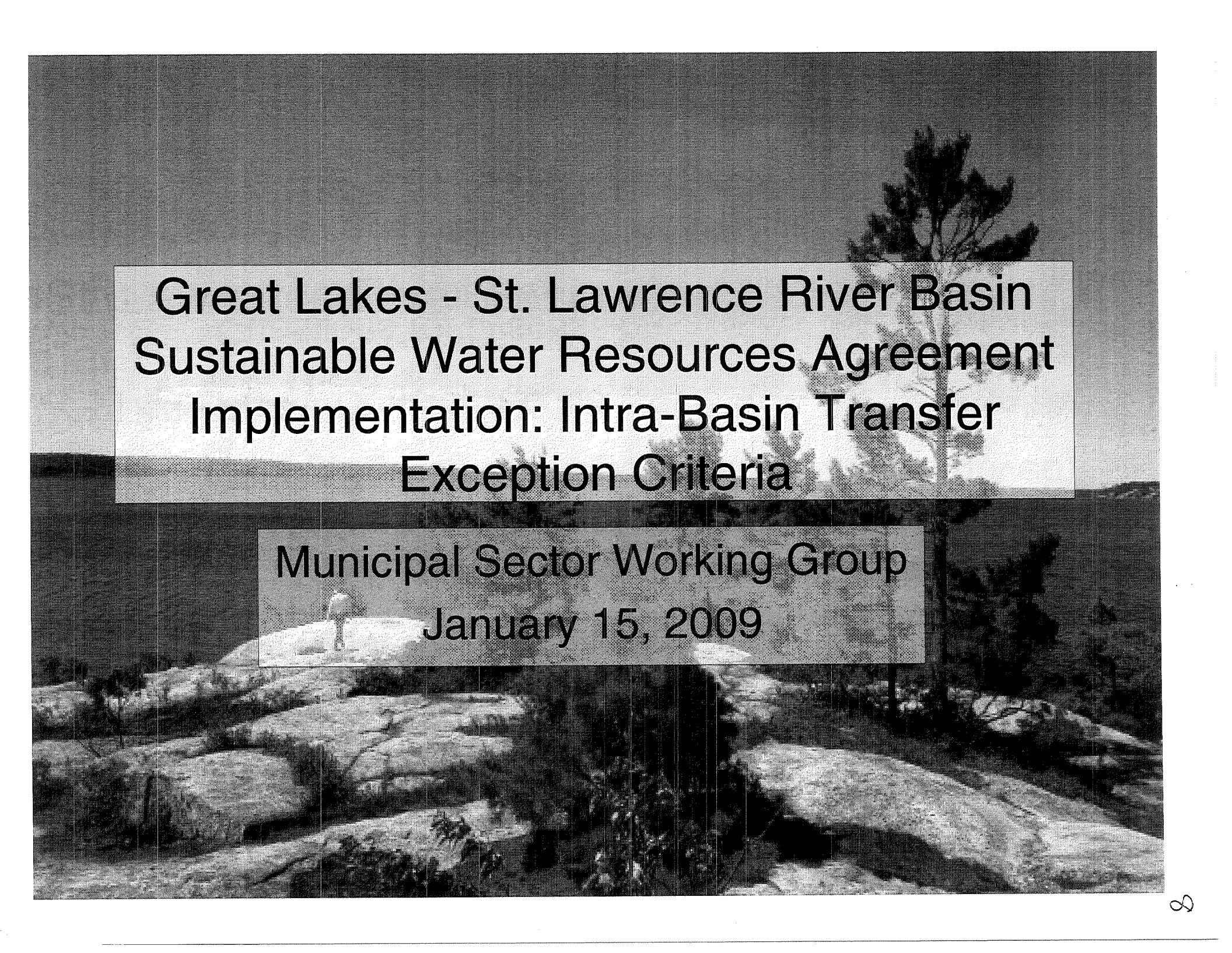
1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement





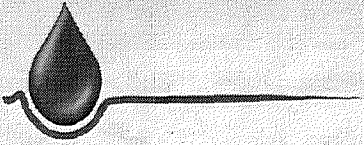
(10)

(L)



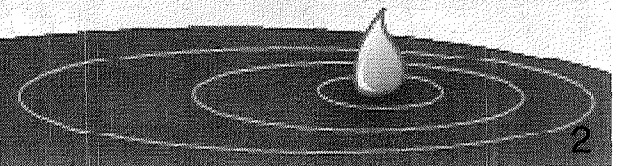
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: Intra-Basin Transfer
Exception Criteria

Municipal Sector Working Group
January 15, 2009



Overview

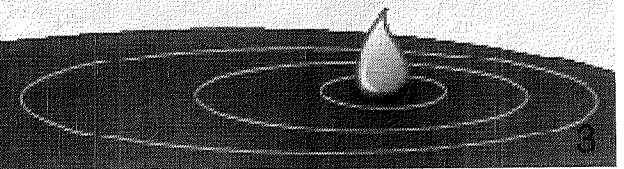
- For Each Remaining Element of Exception Criteria:
 - Related Agreement Definitions
 - Draft Exception Standard Criteria Guidance (preliminary draft procedures manual prepared during Agreement negotiations – later removed)
 - Policy Considerations
 - Questions for Discussion





Standard Elements

- Completed:
 - Return Flow
 - No significant adverse impacts
- Remaining:
 - No feasible alternatives
 - Transfer is reasonable
 - Efficient use and conservation of existing supplies
 - Feasible, environmentally sound, cost effective conservation measures



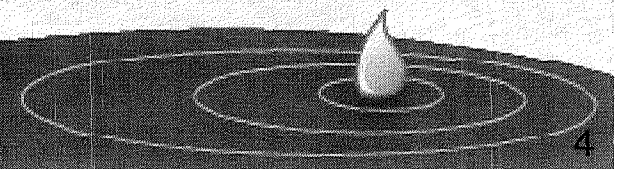


No Feasible, Environmentally Sound, Cost-Effective Alternatives

Intra-Basin Transfer Exception Language:

- “There are no other **feasible, environmentally sound and cost effective alternatives** to the transfer...”
- “It has been demonstrated that conservation of existing water supplies is not a **feasible, environmentally sound and cost effective alternative** to the transfer...”

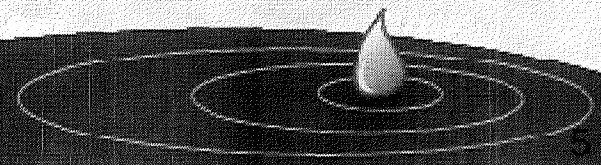
Related Agreement Definitions: N/A





Key Terminology: SSOWA Intra-Basin Transfer Provisions

<p>Transfer involving a consumptive use of 19 MLD or more (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none">•Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed)•No feasible, environmentally sound and cost effective alternatives to transfer, including conservation•Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision	
<p>Transfer resulting from a withdrawal 379,000 litres/day or more (with consumptive use <u>less than</u> 19 mld)</p>	<p><i>Municipal Drinking Water Systems:</i></p> <ul style="list-style-type: none">•Meets exception criteria, including return flow to source GL watershed	<p><i>All Uses (including Municipal Drinking Water Systems if return flow to source watershed cannot be met):</i></p> <ul style="list-style-type: none">•Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed•No feasible, environmentally sound, cost effective alternatives to transfer, including conservation•Ont. gives prior notice to other GL jurisdictions
<p>50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none">•Subject to PTTW water taking requirements, not prohibited	





No Feasible, Environmentally Sound, Cost-Effective Alternatives

Draft Procedures Manual Guidance:

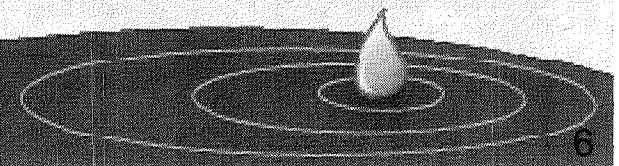
Intent: to ensure that there are no feasible alternatives available that would **eliminate or diminish** the need for a transfer

Application Requirements:

- narrative description of **need**,
- analysis of the **efficiency of current use** including the application of water **conservation** measures,
- analysis of **water supply alternatives** addressing **quality (treatability) & quantity** of alternative sources,
- **alternatives must include conservation & efficient use** of current water supplies
- rationale for preferred alternative

Review Criteria:

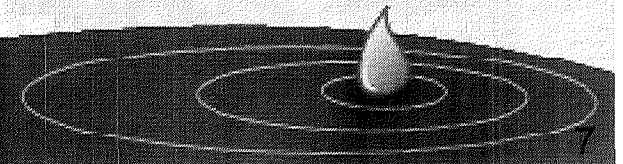
- **conservation alternative must be applied first to minimize or eliminate the need for the transfer;**
- clear demonstration and analysis of alternatives considered;
- must be a showing that no feasible alternatives to the transfer exist, considering resource and ecosystem protection, technology and cost factors





Policy Considerations

- Review of alternatives an existing part of the EA process
- Water conservation and efficiency (demonstration that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to the transfer)
 - Option: Applicant must show how improvements in water conservation and efficiency in existing development will be sustained
 - Option: Establish performance indicators and/or benchmarks which must be met prior to any future transfer
 - e.g. British Columbia Living Water Smart Plan - By 2020, water use will be 33% more efficient and 50% of new municipal water needs will be acquired through conservation, residential water use per capita, water loss (International Leakage Index)
 - Option: require the most effective water conservation and efficiency measures to already be implemented
 - e.g., 100% metering of all municipal customers, full cost recovery of water and sewer services, increasing block rates, aggressive leak detection and repair, lawn watering by-laws, demonstrated water efficiency at municipal facilities





Questions for Discussion

1. What additional definitions are required?
2. What comments do you have with the draft Guidance?
3. What additional Guidance is required?
4. Re: water conservation and efficiency, how strong should the requirements be for the demonstration of water conservation for existing development?





Transfer Amount is Reasonable

Exception Criterion:

- The transfer amount is **reasonable**, given the purposes for which the transfer is done;

Related Agreement Definitions: N/A

Draft Procedures Manual Guidance:

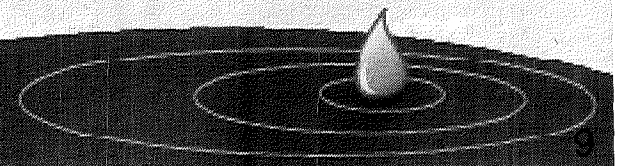
Intent: to ensure that amounts are considered **realistic** to meet the intended use

Application Requirements:

- estimate of **highest 90 day average use** over approval period;
- **water use plan** (municipal: service area, water use and population projections, annual average use, capacity of withdrawal, treatment, distribution portions of the system, assessment of water use savings of current & proposed conservation programs)

Decision Criteria:

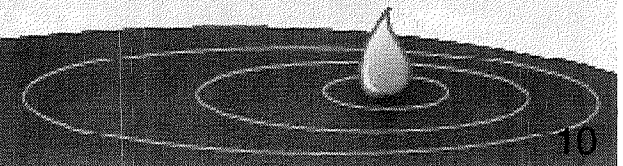
- how realistic the proposed quantity is to meet intended purpose, to be **reviewed in concert with review of proposed conservation measures**





Policy Considerations

- Water conservation and efficiency
 - Option: Establish performance indicators and/or benchmarks for new development, with regular monitoring and reporting
 - e.g. residential water use per capita, water loss (International Leakage Index)
 - Option: Require the most effective water conservation and efficiency standards and measures for new development (and encourage other effective measures)
 - e.g., leading-edge water efficient technology and services such as LEED and WaterSense, rainwater harvesting, greywater reuse, water efficient landscape by-laws, rain sensors and ET controllers for automatic irrigation systems, and all measures for existing development (as applicable)





Questions for Discussion

1. What additional definitions are required?
2. What comments do you have with the draft Guidance?
3. What additional Guidance is required?
4. Re: water conservation and efficiency, how strong should the requirements be for the demonstration of efficient water use and conservation for new development?





Efficient Use, Conservation of Existing Supplies

Exception Criterion:

- The efficient use and conservation of existing water supplies **cannot reasonably avoid** the transfer;

Related Agreement Definitions: N/A

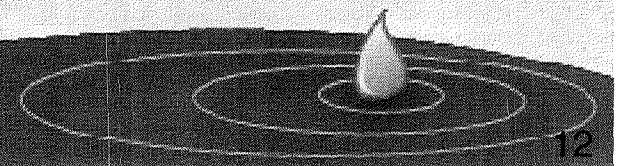
Draft Procedures Manual Guidance:

Intent: to ensure that the need for all or part of the water cannot be reasonably avoided through efficient use and conservation of **existing supplies**.

Application Requirements:

- description of need,
- analysis of the efficiency of current water use including the application of conservation measures.

Review Criteria: *conservation* must be an alternative pursued first to minimize or eliminate the need for additional water





Policy Considerations

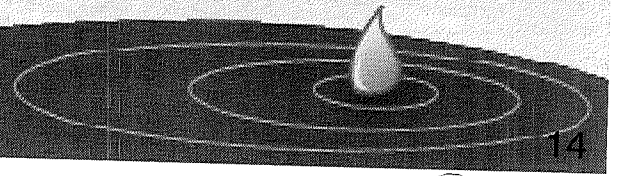
- Under the current PTTW program, PTTW Directors may require applicants to demonstrate conservation to reduce/avoid the need for an increased water taking.
- Water conservation and efficiency (linked to no reasonable alternatives including conservation of existing supplies, with similar options)
 - Option: Applicant must show how improvements in water conservation and efficiency in existing development will be sustained
 - Option: Establish performance indicators and/or benchmarks which must be met prior to any future transfer
 - e.g. British Columbia Living Water Smart Plan - By 2020, water use will be 33% more efficient and 50% of new municipal water needs will be acquired through conservation; residential water use per capita, water loss (International Leakage Index)
 - Option: Require the most effective water conservation and efficiency measures to already be implemented
 - e.g., 100% metering of all municipal customers, full cost recovery of water and sewer services, increasing block rates, aggressive leak detection and repair, lawn watering by-laws, demonstrated water efficiency at municipal facilities





Questions for Discussion

1. What additional definitions are required?
2. What comments do you have with the draft Guidance?
3. What additional Guidance is required?
4. How strong should the requirements be for the demonstration of water conservation for existing development?





Feasible, Environmentally Sound, Cost Effective Water Conservation Measures

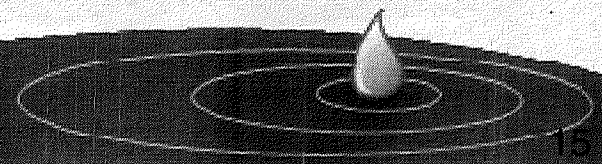
Exception Criterion:

- The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;

Related Agreement Definitions:

“Environmentally sound and economically feasible water conservation measures” – “those measures, methods, technologies or practices for efficient water use and for reduction of water loss and waste or for reducing a withdrawal, consumptive use or diversion that

- i) are environmentally sound,
- ii) reflect best practices applicable to the water use sector,
- iii) are technically feasible and available,
- iv) are economically feasible and cost effective based on an analysis that considers direct and avoided economic and environmental costs, and
- v) consider the particular facilities and processes involved, taking into account the environmental impact, age of equipment and facilities involved, the processes employed, energy impacts and other appropriate factors.”





Feasible, Environmentally Sound, Cost Effective Water Conservation Measures

Draft Procedures Manual Guidance:

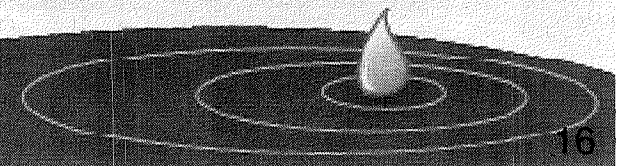
Intent: to encourage efficient use through demand reduction and supply-side conservation measures (hardware/technology, behaviour/management practices) and incentives (education, financial, regulatory)

Application Requirements:

- detailed description of measures that will be employed in the project.
- Manual includes guidance on the development of a conservation plan (not required but encouraged) (pgs 8-10 of manual excerpts)

Review Criteria:

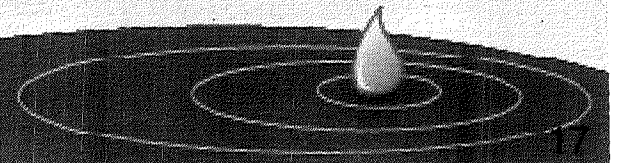
- adequacy of conservation measures to be implemented - must be conservation goals, description of how water use/savings will be measured (e.g. metering), forecast of anticipated use and demand, analysis of alternative methods and practices, and an implementation/evaluation strategy





Policy Considerations

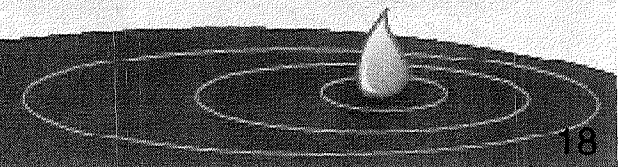
- The existing PTTW application and review process requires that conservation be considered (schedule included in application to document current and anticipated conservation measures)
- Water conservation and efficiency
 - Option: Applicant must show how improvements in water conservation and efficiency in existing development will be sustained
 - Option: Establish performance indicators and/or benchmarks for new development, with regular monitoring and reporting
 - e.g. residential water use per capita, water loss (International Leakage Index)
 - Option: Require the most effective water conservation and efficiency standards and measures for new development (and encourage other effective measures)
 - e.g., leading-edge water efficient technology and services such as LEED and WaterSense, rainwater harvesting, greywater reuse, water efficient landscape by-laws, rain sensors and ET controllers for automatic irrigation systems, and all measures for existing development (as applicable)

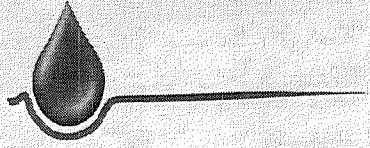




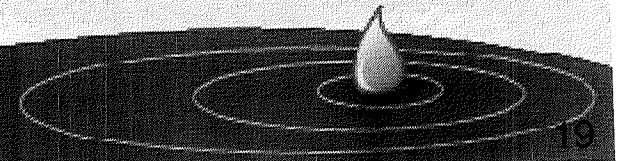
Questions for Discussion

1. What additional definitions are required?
2. What comments do you have with the draft Guidance?
3. What additional Guidance is required?
4. How strong should the requirements be for the demonstration of efficient water use and conservation for new development?





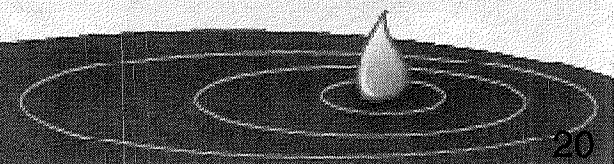
Appendix





Key Terminology: SSOWA Intra-Basin Transfer Provisions

<p>Transfer involving a consumptive use of 19 MLD or more (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none">•Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed)•No feasible, environmentally sound and cost effective alternatives to transfer, including conservation•Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision	
<p>Transfer resulting from a withdrawal 379,000 litres/day or more (with consumptive use <u>less than</u> 19 mld)</p>	<p><i>Municipal Drinking Water Systems:</i></p> <ul style="list-style-type: none">•Meets exception criteria, including return flow to source GL watershed	<p><i>All Uses (including Municipal Drinking Water Systems if return flow to source watershed cannot be met):</i></p> <ul style="list-style-type: none">•Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed•No feasible, environmentally sound, cost effective alternatives to transfer, including conservation•Ont. gives prior notice to other GL jurisdictions
<p>50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none">•Subject to PTTW water taking requirements, not prohibited	





Key Terminology: Exception Criteria

1. The water transferred is returned, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be no significant individual or cumulative adverse impacts on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The efficient use and conservation of existing water supplies **cannot reasonably avoid** the transfer;
4. The transfer amount is **reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement





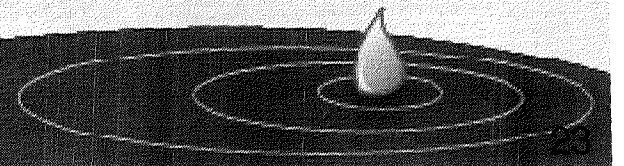
SSOWA Regulation-Making Authorities for Intra-Basin Transfers

- Ability to **lower thresholds** for return flow, minister's PTTW – 76(j)
- Ability to **require return flow** by regulation - 76(2)
- Prescribing **additional Exception Standard criteria** – 75(1.2)(l)
- **Deeming existing transfers** – 75(1.2)(o)(p)
- Requiring **conservation measures**, including preparation of a conservation plan – 76(b.1)
- **Defining terminology, including exceptions standard** – 75(1.2)(h)
- Governing determination of amounts (e.g. if one or more applications must be considered collectively) – 75(1.2)(c)
- **Related Transferor** – 75(1.2)(f)
- Prescribing documents to coordinate with other approvals e.g. sewage works – 95(1.2)(n)
- Prescribing **terms and conditions** – 75(1.2)(m)
- **Transfer of sewage** – 76(b)(vi.1)
- Describing **Great Lake Watershed Boundaries** – 75(1.2)(g), 75(1.4)
- Determining **consumptive use** – 75(1.2)(i),(j)
- Prescribing **treaties, laws** requiring compliance – 75(1.2)(k)
- Coordinate PTTW/transfer with Safe Drinking Water Act (may be able to implement administratively)



Permit To Take Water

- **Ontario Water Resources Act (1961)**
 - “No person shall take more than a total of 50,000 litres in a day...without at Permit.”
 - Some exceptions (e.g., emergency/firefighting, domestic use, watering of livestock).
- **Water Taking Regulation (Regulation 387/04)**
 - Includes requirements for monitoring, reporting, notice, restrictions, MOE responsibilities, etc.
- **Purpose of Permit to Take Water (PTTW) Program**
 - Fair sharing, conservation and sustainable use of the waters of the Province.
 - Prevent water takings from causing unacceptable impacts to natural environment and existing water users.





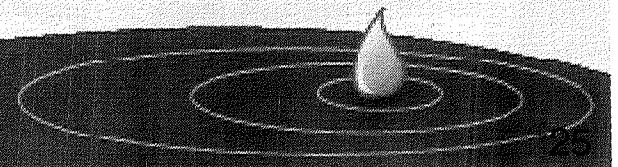
PTTW Program Principles

- Use an ecosystem approach.
- Control water takings to prevent unacceptable interference.
- Employ adaptive management.
- Consider cumulative impacts.
- Incorporate risk management principles into the application and review process.
- Promote public and local agency involvement.



PTTW - Notice and Consultation

- MOE notifies municipalities and conservation authorities of Permit to Take Water applications that are posted on the Environmental Bill of Rights Registry.
- Director can undertake or require additional notice and consultation.
- Director can require applicant to report on efforts made to resolve concerns.
- Regulation requires Director to notify municipalities and conservation authorities of permit applications.
- Public consultation on PTTW applications through posting on Environmental Bill of Rights Registry (exceptions: permits issued for <1 year; agriculture irrigation)

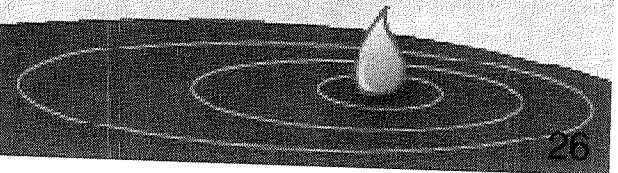




PTTW - Matters considered

Matters considered by MOE Director:

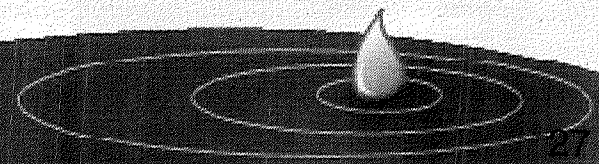
- The need to protect the natural functions of the ecosystem;
- Water availability – potential impact on water balance and on existing uses; low water conditions; high use or medium use watershed
- The use of water (e.g. water conservation);
- Other issues, including interests of other persons

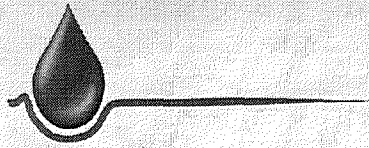




Structure of a Permit

- Definitions: permit definitions are included for reference and clarity
- Terms and Conditions: permit conditions are included to safeguard human health and the ecosystem; foster efficient use and conservation of the water; and ensure fair sharing and sustainability of the resource
- Terms and Conditions will typically specify:
 - the details of the water taking
 - the manner in which the water is to be taken to limit interference with downstream uses and natural functions
 - the record keeping requirements for water taking and discharges inc. dates, times, amounts etc.
 - the Permit Holder's responsibility to notify the MOE of any complaints or environmental impact resulting from the water taking
 - the rights of the Ministry and the Permit Holder

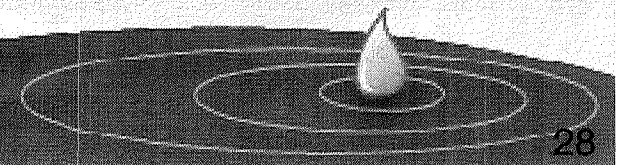




Data and Reporting

Permit holders:

- Record volume of water taken daily
- Report annually to MOE
- Requirement Phased in 2005-08

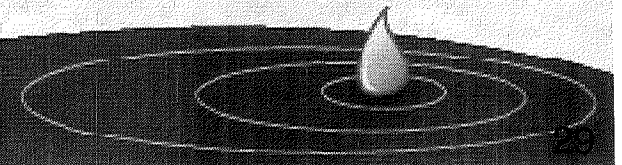




PTTW Manual

Clear rules and procedures for assessing and managing water takings, including:

- Principles of PTTW principles – build on existing MOE principles, e.g. Statement of Environmental Values, and provide a scientifically based consistent approach to managing water takings in Ontario.
- Outline of the responsibilities of applicants and Ministry.
- Classification system based on risk, where the level of scientific evaluation is commensurate with the potential for impact.
- Description of considerations for evaluating both groundwater and surface water takings.

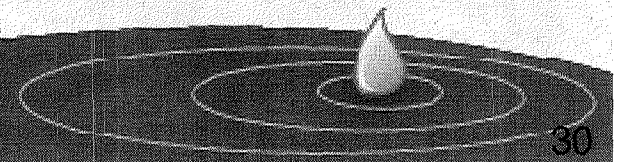




Moving Forward

Intra-basin Transfers

- The PTTW program sets out specific requirements for water takings over 50,000 litres/day, including reporting data of actual water takings.
- Ontario does not currently track the amount of water that is transferred from one Great Lakes watershed to another Great Lakes watershed (an intra-basin transfer).
- The Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement commits each jurisdiction to providing a list of existing approval limits and/or the capacity of existing systems, as of the date Article 207 comes into force.
- MOE & MNR, in consultation with interested parties, is reviewing approaches that can be used to determine the baseline of existing intra-basin transfers.

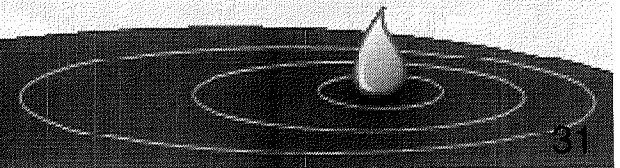


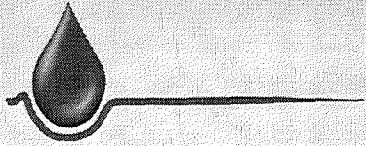


Moving Forward

PTTW & Source Protection

- Building partnerships with conservation authorities, Source Protection Authorities (PTTW data sharing)
- PTTW program principles fit well with the Source Water Protection watershed approach to management (e.g. ecosystem approach, cumulative impacts, input to PTTW from local agencies).
- Water taking data submitted through PTTW will provide input to the water budgets being developed as part of the Assessment Reports.
- Watershed Assessment Reports will help with assessment of future PTTW applications.

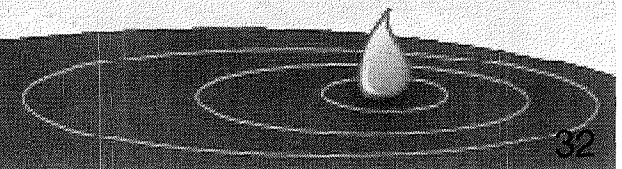




Moving Forward

Cumulative Impact Assessment

- Where cumulative impacts need to be considered, MOE initiates a watershed scale or aquifer scale assessment beyond a local-scale impact assessment, and may engage water takers to collectively reduce and better manage their water use.
- Implementation of the *Clean Water Act* and the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement will contribute to MOE's understanding of cumulative impacts and further enhance MOE's ability to assess and address cumulative impacts of water takings on a watershed scale.



Intra-Basin Water Transfers
Municipal Sector Working Group Consultation
January 15, 2009

A consultation meeting on the *Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement* took place on January 15, 2009 in Toronto. The meeting with the Municipal Sector Working Group was held to discuss specific components of intra-basin water transfers included in the Agreement. Eighteen participants representing seven municipalities and two agencies attended the meeting (see Attachment 1 for the list of participants).

The goal of the meeting was to present attendees with an overview of the Exception criteria and Sewage Transfer components of the Agreement. Breakout group discussions were undertaken to secure input and feedback on key issues pertaining to the following parts of the Agreement:

- No feasible, environmentally sound, cost effective alternatives
- Transfer amount is reasonable
- Efficient use, conservation of existing supplies
- Feasible, environmentally sound, cost effective water conservation measures

Refer to Attachment 2 for a copy of the meeting Agenda.

General issues raised by municipal representatives following the presentations on Exception Criteria were as follows:

- It would be helpful to municipalities and other stakeholders to understand how other jurisdictions implement their program
- All participating jurisdictions in the Agreement should have to deal with sewage transfers - needs to be raised at regional meetings
- Use this consultation process to determine what is the baseline.

Key questions were used to guide the breakout group discussions of Exception Criteria and Sewage. Although there were numerous and varied responses to key questions, some common themes emerged from the meeting. Common themes are those issues and/or recommendations for which there was general agreement amongst session participants. The key questions, themes and proceedings from the consultation meeting are summarized in Table 1 through Table 5 of this report.

Table 1: No Feasible, Environmentally Sound, Cost Effective Alternatives

1. What additional definitions are required?	
Themes	<ul style="list-style-type: none"> ▪ Clarification of “reasonable” ▪ Define “environmentally sound” and “economically feasible” ▪ Define “alternative” – how wide ranging? ▪ Clarification of weighting of factors (resource protection, technology and cost) ▪ Who defines what is reasonable or feasible? ▪ Define “cost effective” ▪ Define “environmentally sound”
General / context	<ul style="list-style-type: none"> ▪ Let the EA process define what is reasonable and feasible because an EA considers the lifecycle of the community involved ▪ Expression should be “economically feasible” because “feasible” alone can be interpreted as “possible” ▪ If using the EA process then that process decides reasonable and feasible ▪ Should be a process definition not an objective definition ▪ Consider the time horizon with the definition of what is reasonable
2. What comments do you have with the draft Guidance?	
3. What additional Guidance is required?	
Themes	<ul style="list-style-type: none"> ▪ Guidance should not be too definitive/prescriptive ▪ Amend the EA instead of recreating a whole new process ▪ Make economic analysis part of the EA process ▪ EA process includes technical guidance around a reasonable test (technical bulletin) ▪ Let EA process determine what is feasible – EA includes a life cycle analysis ▪ Should mirror EA process ▪ Amend Class EA to be fully inclusive of intra-basin transfers ▪ Include water conservation and efficiency in EA process ▪ Should be a requirement for a cost benefit analysis ▪ Provide guidance for the time horizons
General / context	<ul style="list-style-type: none"> ▪ Guidance on existing infrastructure, particularly related to expansion ▪ More detail on government direction in other jurisdictions – help to inform decision-making for Ontario Strategy ▪ “Environmentally sound” – transfers versus other options, this is more complex, need to consider at what scale (local vs. regional) and watershed impacts ▪ Need guidance not rules – “environmentally sound” involves more weighing of options to determine the least disruptive alternative ▪ Guidance around the weighing of impacts ▪ Consider timeframe – 20 years too short, maybe 30 or 50 years – can’t preclude future options (should not have to incur costs for 50 years, so build for 20 years out but design infrastructure for feasible future expansion) ▪ Not too prescriptive because you need creative solutions ▪ Identify limiting factors when outlining alternatives
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ What is “cost effective” – Is \$1 per cubic meter cost effective or \$2 per cubic meter (this varies with time horizons) ▪ How do the criteria fit in with the EA process? ▪ Is an overriding standard going to be used? ▪ If 5 EA’s are going forward at the same time, who gets priority/special scale impacts?

Table 1 (Cont'd): No Feasible, Environmentally Sound, Cost Effective Alternative

<p>4. <i>Re: water conservation and efficiency, how strong should the requirements be for the demonstration of water conservation for <u>existing</u> development?</i></p>	
<p>Themes</p>	<ul style="list-style-type: none"> ▪ All municipalities should be required to have water conservation programs. ▪ Need a universal benchmark against which to measure water conservation savings ▪ Design a universal benchmark e.g. existing water use on per capita basis ▪ Funding for conservation initiatives, projects, pilots, etc. ▪ Do not penalize municipalities that have had programs for 5 or 10 years when setting the benchmark ▪ Proactive municipalities often excluded from funding while poor players rewarded funding to bring performance level up. ▪ Tendency to punish the performers by offering incentives after the fact ▪ Water pricing and metering would be key to driving conservation practices ▪ Municipal guidance documents exist (e.g., AWWA) and these should be made available through web site or electronic information hub.
<p>General / context</p>	<ul style="list-style-type: none"> ▪ Conservation requirements must take into consideration cost-benefit (ROI) ▪ Some areas difficult to measure actual savings (e.g., education initiatives), need to consider for measurements/targets ▪ Difficult to force conservation requirements on existing development ▪ Difficult to assess impact of conservation measures because of volunteer nature of the end user ▪ Metrics can be applied but guidance would be required ▪ Not enough incentives for municipalities to fix leaks therefore hold them accountable
<p>Other / Issues / Questions</p>	<ul style="list-style-type: none"> ▪ Need to be careful about how conservation is demonstrated ▪ Municipality can demonstrate that programs are in place, but cannot demonstrate how effective or successful ▪ Need a stronger message from province to get political support at the municipal level – consider tying infrastructure funding to conservation requirements ▪ PTTW holder does not have direct control over the whole system / end user ▪ Where there is no agreement between the Permit holder and the municipal customer, need authority and guidance

Table 2: Transfer Amount is Reasonable

1. What additional definitions are required?	
Themes	<ul style="list-style-type: none"> ▪ Need to define “reasonable” ▪ Additional definition of “consumptive use” ▪ Discrepancy the two time periods for approval (EA and PTTW) ▪ Need clear guidance on taking vs. transfer approval. ▪ Deal with the amount of the transfer being requested for the service area
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ Who determines the definitions? What body is responsible for determining definitions? ▪ What is the “approval period”? Is it the EA approval period? The PTTW approval period? ▪ Not appropriate terminology, there is no approval period, once approved, always approved – remove the words “approval period” ▪ Service area mapping? Is it for both areas? Needs clarification as to what service area the map applies (is it for both areas, for one?)
2. What comments do you have with the draft Guidance?	
3. What additional Guidance is required?	
Themes	<ul style="list-style-type: none"> ▪ Need a template for a “water use plan” – this should be made available to municipalities ▪ Guidance on acceptable options for calculations of water use and population ▪ Provide clarification around consumptive use ▪ More detail on how to evaluate – currently subjective (need criteria for decisions) ▪ Need to update guidance, re. design criteria (currently based on historical use) ▪ Need clear guidance on what is expected to be in the “Water Use Plan” ▪ Need some harmonization, so that requirements are “all-in-one” instead of separate
General /context	<ul style="list-style-type: none"> ▪ Helpful to have examples and a flow-chart of how the process works ▪ Look at ultimate service area not a limited time period ▪ Update guidance because historical use might not be the best approach for projections ▪ Clarify “presentation of current use” – need to know what is expected and more details of what is required in the “presentation”. ▪ Provide a checklist outlining the scope, but should not be prescriptive ▪ Focuses on 20 year period or period of permit, but should consider “ultimate scenarios”
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ Who/what body reviews the water use plan? ▪ What assumptions might be used around servicing in the future? ▪ What’s expected to substantiate and support the projection? ▪ Some elements of Water Use Plan are in O.P., some in EA, some in Master plan – no current requirement for a Water Use Plan, need to know what is expected, how detailed (is this a plan that requires 2 weeks to pull together or 2 years?) ▪ Why a 20 year period?

4. Re. Water Conservation and Efficiency: How strong should the requirements be for the demonstration of water conservation for existing development?	
Themes	<ul style="list-style-type: none"> ▪ This is a building code issue – municipality can ask/require conservation but builder/developer can appeal, if conservation is in Building Code no debate. ▪ Put requirements into the Building Code ▪ Building code is province-wide but lowest standard, need to have stricter requirements for conservation ▪ Provincial oversight is needed in some areas, particularly Building Code ▪ Need a universal standard of energy and water conservation in the Building Code because [we] rely on it at the municipal level ▪ If no province-wide requirement for conservation, one municipality may have lower requirements, creating an un-level playing field (i.e., builder/developer goes to municipality with lower conservation requirements) ▪ If the approval requires a higher standard of conservation then municipality/MOE need the tools to enforce the requests made on builders ▪ Conservation for new development needs to be mandated at the provincial level ▪ If approved for intra-basin transfer, municipality should be given the authority from the province to enforce conservation standards ▪ Builder/developer can challenge if no provincial requirement
General / context	<ul style="list-style-type: none"> ▪ Item 5 on chart reads “most effective” should read “cost effective” (e.g., BAT that is economically feasible) ▪ Possible room for a higher standard for conservation when water transfers involved. ▪ Possibly 3 tiers for conservation requirements/standards (hierarchy of stds.) <ol style="list-style-type: none"> 1) Universal requirements (through improving building code requirements) 2) Return flow 3) Intra-basin transfer without return flow ▪ What a municipality puts into a development agreement is much stronger than a by-law. ▪ Should require conservation technology that is <u>cost effective</u> ▪ Not all new transfers are a reflection of new users or new building, therefore guidance needed (e.g. well users put on municipally supplied water)
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ Does the municipality have authority to enforce conservation through local by-laws?

Table 3: Efficient Use, Conservation of Existing Supplies

1. What additional definitions are required?	
Themes	No additional definitions beyond those indicated in Table 1 and Table 2
2. What comments do you have with the draft Guidance?	
3. What additional Guidance is required?	
Themes	No comments on draft Guidance/additional Guidance beyond those indicated in Table 1 and Table 2

Table 4: Feasible, Environmentally Sound, Cost-Effective Water Conservation Measures

1. <i>What additional definitions are required?</i>	
Themes	<ul style="list-style-type: none"> ▪ In Guidance document the definition of environmentally sound refers back to environmentally sound - need clarification as to what this means ▪ “Water use sectors” need defining ▪ Define the length of period on which to base demand ▪ Need to clarify, “has taken reasonable steps”?
2. <i>What comments do you have with the draft Guidance?</i>	
3. <i>What additional Guidance is required?</i>	
Themes	<ul style="list-style-type: none"> ▪ Conservation plan/measures should be rolled into a water use plan ▪ All Annex jurisdictions must be required to meet the same minimum
4. <i>Should a Conservation Plan be a requirement?</i>	
Themes	<ul style="list-style-type: none"> ▪ A conservation plan should be an absolute requirement ▪ The plan should be part of the “Water Use Plan” for transfers ▪ If there is a requirement for a conservation plan, there is a need to have provincial level requirements for conservation in the building code ▪ Municipalities should be given the authority to enforce the plan for municipal customers ▪ Should have Water Use Plan/conservation plan templates with different municipal scenarios (e.g. control end user/do not control end user) to help guide development of plan

Table 5: Intra–Basin Transfer of Sewage

1. In the light of the Agreement, how should sewage transfers of > 19 mld be dealt with?	
Themes	<ul style="list-style-type: none"> ▪ Grandfather or establish baselines for existing transfers ▪ Should be a similar process as applies to water takings ▪ Return flow is straight forward ▪ A transfer is a transfer whether it is water or wastewater and should meet the intent of the agreement for water in general (i.e., mitigate impact, look at options, etc.)
General	<ul style="list-style-type: none"> ▪ Should be a mass balance ▪ Possible there should be different requirements for different transfers (Upstream vs. downstream transfers)
2. To meet the requirements of the Agreement for sewage transfers, what conditions should be applied to:	
a) the water taking (e.g. efficient use and conservation)?	
Themes	<ul style="list-style-type: none"> ▪ In terms of the spirit of the Agreement, conservation should apply ▪ Should consider technology or system that minimizes transfer ▪ Human health issues should be considered (e.g., rural areas on groundwater and septics, may need to transfer sewage out to prevent contamination of groundwater) ▪ Requirement for the municipality to demonstrate that a sewage plan is in place
General / Context	<ul style="list-style-type: none"> ▪ The transfer may be the best environmental choice (e.g., may be better to transfer discharge from a high stress watershed to a low stress watershed) ▪ Requirements to reduce I&I in a sewage works approval
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ A challenge for two-tier systems – lower tier owns collection systems (e.g. dealing with I&I) – upper tier has no control
b) the sewage transfer (e.g. setting targets to reduce inflow and infiltration)?	
Themes	<ul style="list-style-type: none"> ▪ Planning/programming with possible initiatives such as downspout disconnects CSO reduction, sewage separation, etc. ▪ Higher level approach: consider impacts of discharge to local watershed versus transfer
General / Context	<ul style="list-style-type: none"> ▪ Establish best practices for I&I reduction
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ How regulated? – C of A? – some terms and conditions may be placed on municipality through PTTW (water transfer), some through Sewage Works Approval (sewage transfer)
3. In blended systems (i.e. include water from inside and outside the watershed), how would intra-basin transfers of sewage be distinguished from “return flow”?	
Themes	<ul style="list-style-type: none"> ▪ Not possible or practical
Other / Issues / Questions	<ul style="list-style-type: none"> ▪ Grandfather all existing

LIST OF PARTICIPANTS
Municipal Sector Working Group Meeting
January 15, 2009

REPRESENTATIVE	AFFILIATION / ORGANIZATION
Coombs, Adrian	Regional Municipality of York
Christie, Max	OMWA
D'Andrea, Michael	City of Toronto
Daniels, Courtney	Regional Municipality of York
Firman, Marcus	Municipality of Collingwood
Hatton, Janice	Regional Municipality of Peel
Henry, Andrew	City of London
Kelleher-MacLennan, Rosemary	Ontario Municipal Water Association (OMWA)
Kirk, Erin	City of London and Elgin Water System
Law, Pam	CH2M Hill
Lin, Lisa	Regional Municipality of York
Lotimer, Tim	American Water Works Association (AWWA)
Love, Sean	Regional Municipality of York
Maitre, Michele	Regional Municipality of York
Rang, Sarah	Great Lakes – St. Lawrence Cities Initiative (GLSLCI)
Reid, Craig	Ontario Municipal Association (OMA)
Westendorp, Nathan	County of Simcoe
Yajima, Kaoru	Regional Municipality of Waterloo



11

Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement

**Agreement Advisory Panel Intra-basin Transfer Subgroup
Teleconference January 21, 2009, 1-4 pm**

Meeting Notes

Teleconference Participants

Canadian Environmental Law Association: Ramani Nadarajah
Canadian Federation of University Women: Carolyn Day
Georgian Bay Association: Mary Muter
Ontario Power Generation: Rob Carson
Town of Collingwood: Marcus Firman
York Region: Sean Love, Courtney Daniels, Adrian Coombs, Lisa Lin
MNR: Paula Thompson, Jonathan Staples, Laura Kucey
MOE: Ann Marie Weselan, Steve Maude, Joanne Di Maio, Marta Soucek, Angela Homewood

Meeting materials sent on January 14, 2009:

- Presentation: MSWG Dec 10, 2008 Intra-Basin Transfer Exception Criteria-part 1
- Presentation: MSWG Jan 15, 2009 Intra-Basin Transfer Exception Criteria-part 2
- Meeting notes: Municipal Sector Working Group Dec 10, 2008
- Excerpts from the draft Agreement Procedures Manual

Meeting materials sent on January 21, 2009:

- Conference Call Agenda
- Presentation: MSWG Dec 10, 2008 Baseline
- Presentation: MSWG Jan 15, 2009 Sewage Transfers
- Draft Meeting notes: Municipal Sector Working Group Jan 15, 2009
- Baseline worksheet
- Exception criteria worksheet

Participants requested clarification on the confidentiality level of this information (i.e. could they share this information with Source Water Committees?).

MOE agreed to follow up with meeting participants on the level of confidentiality.

Comment [plt1]: Ann Marie – any update on this that we can include in the notes??

Meeting Discussion:

Highlights of Municipal Sector Meeting Discussion to Date:

October 23, 2008:

- Agreement Implementation Strategy (also presented to AAP)
- Consultation Strategy (also presented to AAP)
- Technical Bulletin (also presented to AAP)
- Baseline for “grandparenting” existing transfers

December 10, 2008:

- Baseline (continued)
- Exception Criteria (return flow, individual and cumulative impacts)
- Great Lake Watershed Mapping (also presented to AAP)

January 15, 2009:

- Exception Criteria (no feasible/environmentally sound/cost-effective alternatives, reasonable quantities, conservation of existing supplies, conservation measures)
- Transfer of Sewage

Intra-Basin Transfer Exception & Exception Criteria

- The OWRA provides authority to make regulations governing the interpretation of subsections 34.6 (2) and (3) (i.e. intra-basin transfer exception & exception criteria) and, for that purpose, defining words and expressions used in those subsections.

- The MSWG was provided with an overview of the intra-basin transfer exception and the exception criteria provisions of the OWRA, related definitions in the Agreement, and the draft Procedures Manual developed to support the Agreement during negotiations. While the manual was later removed prior to the signing of the Agreement, the draft manual was offered to generate discussion of the guidance that may be needed in Ontario to support the intra-basin transfer regulations.
- For each element of the exception criteria MSWG members commented on the definitions and guidance provided and discussed what additional definitions and guidance are required to support the criteria.
- Subgroup members were provided with an **Exception Criteria Worksheet** to document any additional comments that were not covered during this call. Worksheets were due by end of day, **January 28, 2009.**

Comment [plt2]: MOE – do we wish to allow comments from people not on the call or is this deadline hard and fast??

1. Return Flow to the Source Great Lake Watershed

Policy Considerations:

- Definition of connecting channels
 - St. Mary's R., Detroit R., St. Clair R., Niagara R., Lake St. Clair, Welland Canal (connecting channel or intra-basin transfer)? St. Lawrence R. (included as a GL watershed in SSOWA so likely not feasible)?
 - Watershed of connecting channels?
- If water is returned to a tributary of a connecting channel, does that meet the return flow requirement?
- How to implement in context of Agreement definition of "source watershed" (i.e. preference to return flow to tributary if taken from a tributary – no return flow location preference indicated if transfer is from a Great Lake)

Highlights of MSWG discussion:

- Need to clarify meaning of terminology: "naturally", "after use", "connecting channel", "water quality standards"
- Varying views expressed about "connecting channels" approach – some found the Agreement approach confusing and suggested identifying specific exemptions instead of overlapping watersheds (e.g. Kingston). Others highlighted the need to be consistent with the Agreement and the approach applied in other GL jurisdictions
- Discussed quality of return flow – need to acknowledge existing regulations/guidelines in place to regulate quality. Concern expressed about overlapping regulation, especially concerning sewer discharge

Subgroup discussion:

- Need to clarify terminology
- Need clarification about how to measure return flow – PTTW doesn't cover return flow or water quality
- If there are discrepancies between OWRA and the Clean Water Act, the Act that mandates higher protection will prevail
- Need to ensure that approvals are consistent with each other
- Estimation of consumptive use – preliminary results from study conducted by AquaResources were presented at the December AAP meeting – this topic will be the focus of a future presentation/discussion with the Information and Science subgroup and the MSWG and possibly this group
- Altered water levels and flow in tributaries due to water taking and return flow is a concern – additional guidance is required around impacts to tributaries
- Intra-basin transfers must deal with all aspects of the exception criteria
- Need to consider multiple water sources when trying to determine return flow / water balance / total volume / total consumptive use of an intra-basin transfer

2. No Significant Individual or Cumulative Impacts

Policy Considerations:

- Scale of impacts/analysis – local, tertiary watershed, Great Lakes Basin ecosystem
- Role of proponent vs. government in assessing cumulative impacts (e.g. impacts of individual proposal vs. broader cumulative effects)

- Use of existing tools (e.g. water budgets), Permit to Take Water program requirements (e.g. classification system, PTTW manual guidance)

Highlights of MSWG discussion:

- Scale of impacts need to be addressed (local, tertiary, watershed)
- Need to clarify/ flesh out the biological, chemical, physical criteria – some confusion regarding the scope of analysis – should it focus on water quantity impacts or is broader analysis required (e.g. water quality) – if so, are provincial quality standards sufficient (e.g. Sewage Works approvals, EA, Fisheries Act)?
- Suggestion made that there needs to be a provincial clearinghouse for cumulative impact information with expert support

Subgroup discussion:

- Water quantity and quality are interrelated – both should be included in cumulative impact assessment
 - Could partner with Source Water Committees for monitoring – water budget could also contribute
- 'Adverse impacts' needs to be defined – it should be defined broadly and consistent with other legislation – Ontario's *Environmental Protection Act* defines "adverse effect" as one or more of,
- (a) impairment of the quality of the natural environment for any use that can be made of it,
 - (b) injury or damage to property or to plant or animal life,
 - (c) harm or material discomfort to any person,
 - (d) an adverse effect on the health of any person,
 - (e) impairment of the safety of any person,
 - (f) rendering any property or plant or animal life unfit for human use,
 - (g) loss of enjoyment of normal use of property, and
 - (h) interference with the normal conduct of business;
- - How will watershed thresholds be determined? How will multiple takings be examined?
 - Need to determine the sustainable level of water taking and restrict takings once the threshold is reached – Water budgets could be used to determine sustainable level of taking – but there are many variables that may not be considered in a simplified threshold
 - Need consistent, reliable way to calculate cumulative impacts and need to examine impacts more frequently than the required 5 year span
 - Cumulative impacts can be evaluated at the request of 1 or more jurisdictions
 - Ontario needs to go above the other jurisdictions in calculating cumulative impacts
 - How will the many climate change initiatives be factored in? The regional level science strategy will be one way to look at broad climate change scenarios
 - Climate change needs to be incorporated in the cumulative impact assessment

3. No Feasible, Environmentally Sound or Cost Effective Alternatives, Including Conservation of Existing Water Supplies

Policy Considerations:

- Review of alternatives an existing part of the EA process
- Water conservation and efficiency (demonstration that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to the transfer)
 - Option: Applicant must show how improvements in water conservation and efficiency in existing development will be sustained

- Option: Establish performance indicators and/or benchmarks which must be met prior to any future transfer
 - e.g. British Columbia Living Water Smart Plan – By 2020, water use will be 33% more efficient and 50% of new municipal water needs will be acquired through conservation, residential water use per capita, water loss (International Leakage Index)
- Option: require the most effective water conservation and efficiency measures to already be implemented
 - e.g., 100% metering of all municipal customers, full cost recovery of water and sewer services, increasing block rates, aggressive leak detection and repair, lawn watering by-laws, demonstrated water efficiency at municipal facilities

Highlights of MSWG discussion:

- Need to define “cost effective”, “feasible” and “reasonable” – Agreement uses “reasonable”, SSOWA uses “feasible, environmentally sound or cost-effective”
- Suggestion made that the EA process be used to define what is feasible.
- Need government direction in other jurisdictions to help inform Ontario approach
- RE: conservation:
 - all municipalities should be required to have conservation programs
 - need to design a universal benchmark against which to measure conservation savings e.g. existing per capita water use
 - must not penalize municipalities with advanced programs when setting the benchmark and providing funding/incentives
 - suggest that guidance exists e.g. AWWA – these should be made available through electronic information hub or web site
 - must take into consideration cost-benefit
 - determining how effective individual elements of a program are is a challenge (e.g. conservation education)
 - need provincial oversight – municipalities need authority and guidance

Subgroup discussion:

- Need to define “feasible” and “reasonable”
- What will define the ‘environmentally sound’ and ‘cost effective’ balance?
- Need to provide more definition and priority (cost vs. environment) around the terms – want the subjectivity out of it
- Need to be prescriptive
- Alternatives should be linked to return flow – demonstrating that you’ve looked at the alternatives
- Higher bar should be set for those that can’t meet the return flow requirement
- The low water charges doesn’t mean ‘cost effective’ for using less water
- There will be increased infrastructure costs – fix leaks and new infrastructure
- Education needed for municipalities
- All municipalities should be required to have conservation programs

4. Conservation of Existing Water Supplies

Policy Considerations:

- Under the current PTTW program, PTTW Directors may require applicants to demonstrate conservation to reduce/avoid the need for an increased water taking.
- Water conservation and efficiency (linked to no reasonable alternatives including conservation of existing supplies, with similar options – see 3. above)

Subgroup discussion:

- Similar language to #3
- Aspects should be linked to the Conservation Strategy, but it will depend on how it develops
- Water plans – context, who has to prepare them and how they are implemented needs to be determined – regulatory vs. policy approaches will have options

- Regulations for intra-basin transfers need to be above and beyond the requirements in the Conservation Strategy
- If intra-basin transfer regulations are more stringent, transfer applications may decrease as proponents look to alternative options

5. Transfer Amount is Reasonable

Policy Considerations:

- Water conservation and efficiency
 - Option: Establish performance indicators and/or benchmarks for new development, with regular monitoring and reporting
 - e.g. residential water use per capita, water loss (International Leakage Index)
 - Option: Require the most effective water conservation and efficiency standards and measures for new development (and encourage other effective measures)
 - e.g., leading-edge water efficient technology and services such as LEED and WaterSense, rainwater harvesting, greywater reuse, water efficient landscape by-laws, rain sensors and ET controllers for automatic irrigation systems, and all measures for existing development (as applicable)

Highlights of MSWG discussion:

- Need to define terminology
- Need clear guidance on the taking vs. transfer approval
- Need to deal with the amount of the transfer being requested for the service area
- Need updated guidance re: design criteria (currently based on historical use)
- Need to clarify what is expected in a “water use plan” (template needed)-clarify time frame (why 20 years?)
- Need guidance on acceptable options for calculating water use and population
 - RE: Conservation:
 - Need changes to Building Code (universal minimum standard for energy, water conservation) plus additional requirements related to transfers
 - Need provincial oversight and the tools to enforce the requests made on builders- municipalities need the authority from the province to enforce conservation standards otherwise builders/developers can challenge
 - Should require conservation technology that is cost-effective
 - Noted that not all new transfers are a reflection of new users or new development therefore guidance needed

Subgroup discussion:

- Need to define “reasonable”, “consumptive use”
- Need to deal with the amount of the transfer being requested for the service area
- Should work backwards from cumulative impact threshold and set limits based on that threshold
- Need to look at permits just under the limit and if additional permits are requested just under the limit
 - the Agreement requires cumulative review of permits in a 10 year period

6. Implementation of Feasible, Environmentally Sound and Cost Effective Water Conservation Measures to Minimize the Taking of Water and Losses of Water through Consumptive Use

Policy Considerations:

- The existing PTTW application and review process requires that conservation be considered (schedule included in application to document current and anticipated conservation measures)
- Water conservation and efficiency
 - Option: Applicant must show how improvements in water conservation and efficiency in existing development will be sustained
 - Option: Establish performance indicators and/or benchmarks for new development, with regular monitoring and reporting
 - e.g. residential water use per capita, water loss (International Leakage Index)

- Option: Require the most effective water conservation and efficiency standards and measures for new development (and encourage other effective measures)
 - e.g., leading-edge water efficient technology and services such as LEED and WaterSense, rainwater harvesting, greywater reuse, water efficient landscape by-laws, rain sensors and ET controllers for automatic irrigation systems, and all measures for existing development (as applicable)

Highlights of MSWG discussion:

- Need to clarify what is meant by “environmentally sound” in Agreement definition, also “water use sectors”, “has taken reasonable steps” in guidance documents
- Need to define the length of time on which to base demand
- Conservation plan, measures should be rolled into a water use plan
- All GL jurisdictions should be required to meet the same minimum
- Municipal representatives agree that a conservation plan should be required
- Municipalities need authority to enforce the plan for municipal customers
- Need guidance, templates for conservation plan/water use plan

Subgroup discussion:

- Need to define “environmentally sound”, “cost effective”
- Should link conservation plan with sectoral best practices – share and use other jurisdictions as examples
- Conservation plan and measures should be rolled into a water use plan
- Should have different conservation measures based on where the water is coming from (e.g. a high use / highly stressed watershed)
- POLIS has a Municipal Water Conservation report coming out soon
- Municipalities need authority to enforce the plan for municipal customers
- Need guidance, templates for conservation plan/water use plan

Baseline for “Grandparenting” Existing Transfers

- An overview of Agreement provisions and Ontario Water Resources Act (OWRA) provisions related to the “grandparenting” of existing water transfers and the possible approaches for doing so (e.g. permit to take water volumes, infrastructure capacity volumes) was given to the MSWG and summarized for the subgroup
- PTTW tracks water taken as a reporting requirement, but intra-basin transfers are not tracked
- Approaches to determining the baseline and pros and cons associated with each approach are listed in the Baseline Worksheet and in the MSWG meeting notes of December 10, 2008.
- Subgroup members have been provided with a **Baseline Worksheet** to document any additional comments that were not covered during this call. Worksheets are due by end of day, **January 28, 2009**. Please add options F, G, and H from the PowerPoint presentation to the Worksheet – these were added by the MSWG as additional options.

Subgroup discussion:

- There will be a difference between small and large municipalities both in terms of water transfers and ability to pay for metering – need to look at relative capabilities of the municipalities
- Need a similar measurement / standard to ascertain how much water is being transferred
- Need an assessment – it is important to determine the actual volume being transferred – and if it is a significant amount
- Need to establish an actual baseline so that we can identify if there is an increased transfer, otherwise we would be estimating an baseline and then estimating the increase
- Is there a significant amount of water being transferred through intra-basin transfers? Need to identify all possibly transfers
- Monitoring and reporting baseline amounts are regional requirements
- How is this connected to the baseline of the resource and cumulative impacts of transfers? – This should be connected to low water response plans

- How significant are the technical challenges of metering each municipality?
- Should there be required metering for all high use watersheds with transfers?
- Certificate of Approval could be used as a way to regulate new transfers – capacity could be a way to measure the baseline – but it might be certified for a wider area that might now all be considered an intra-basin transfer
- Should look at billing – who, across the watershed boundary, is being billed, and where their supply is coming from
- How should municipalities estimate and account for growth? Done when applying for a new C of A?
- Meter municipal transmission mains as they cross the boundaries?
- The group requested a discussion on how many municipalities are affected by intrabasin transfers.
MOE agreed to respond to the group with an estimate of existing intrabasin transfers.

Municipal Directive & Technical Bulletin

- The proposed approach requires that projects involving a proposed intra-basin transfer be undertaken as a schedule "C" under the MEA Class EA (more rigorous requirements, including an environmental study report and consideration of alternatives) and require that the Agreement intra-basin transfer provisions, in particular the Exception Standard requirements, be met and documented in the environmental study report. Municipalities are asked to consult with MOE Land and Water Policy Branch and MNR Lands and Waters Branch for interim assistance (contacts provided in draft technical bulletin).
- The Technical Bulletin will be signed off on by both Ministers (MOE and MNR)

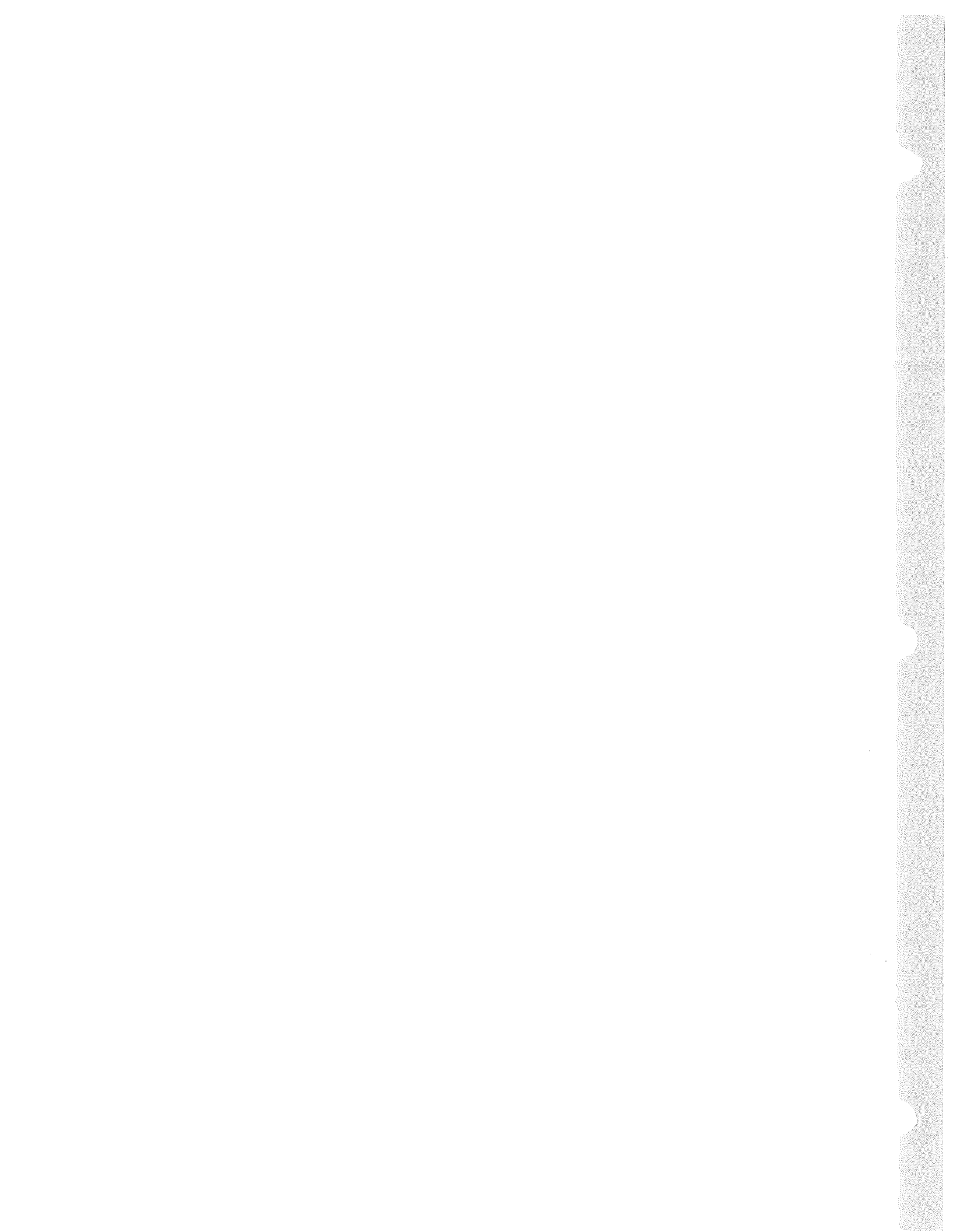
Transfer of Sewage

- Moved to Feb. 2nd call

Next call

- February 2nd, 2009, 1-4pm
- Discussion: Sewage, Related transferor, Master Planning, EA, January 28th MSWG meeting, additional discussion around topics covered (Exception Criteria, Baseline)





12

**Intra-Basin Water Transfers
Municipal Sector Working Group Consultation**

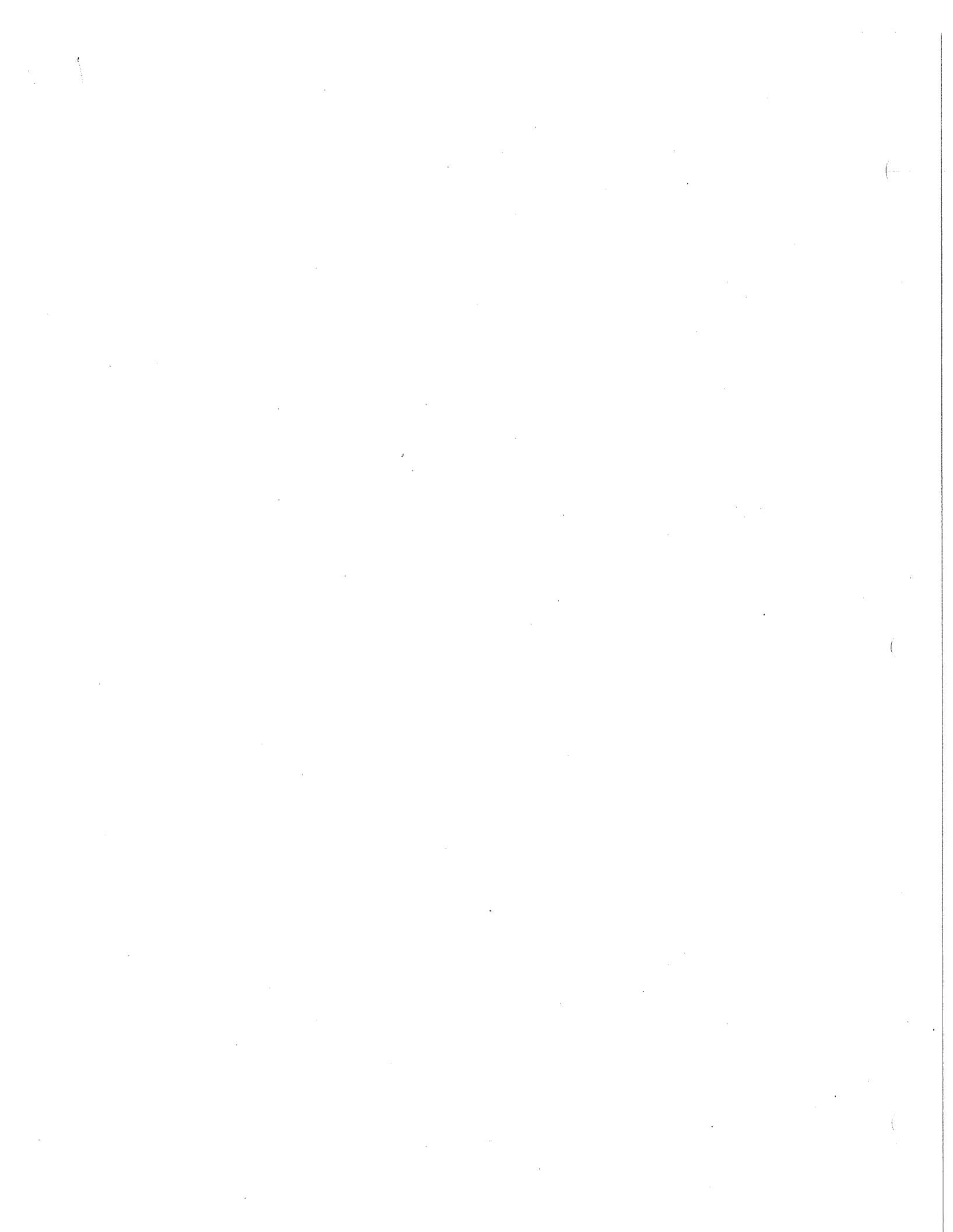
Date: January 28, 2009

**Location: Office of Regional Municipality of York
Training Room
100 Garfield Wright Boulevard
Sharon, Ontario
Map attached**

Please bring your binders from the last meeting to insert additional materials

AGENDA

- 9:30 AM Arrival and registration (continental breakfast provided)
- 10:00 AM Welcoming remarks and introductions
 Review of session agenda and format for the day – comments and questions
- 10:15 AM Presentation on Master Planning, MEA Class EA
 Exploration and discussion – key questions
- 12:00 PM Lunch (provided)
- 12:45 PM Presentation on Related Transferor
 Terms and Conditions
 Exploration and discussion – key questions
- 2:00 PM Group discussion
 Topics for the next meeting
- 2:30 PM Wrap-up and next steps







**Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement**

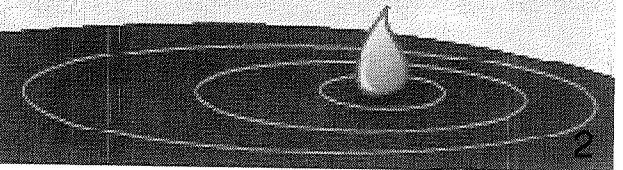
Presentation to
Municipal Sector Working Group
on
Master Plans

May 20, 2009



Purpose

- Overview of existing Policies & Programs related to Planning for Sewage & Water
- Benefits of Master Plans
- Discussion of gaps and opportunities in meeting requirements involving transfers which trigger the Agreement





Existing - Planning Act & Provincial Policy Statement

Provincial Policy Statement



Key PPS Policies

1.6.4 Sewage & Water Policies
Promote use of existing services

Provided in a manner that can be sustained by resources
Financially viable

2.2 Water Policies

Use watershed as ecologically meaningful scale for planning

Promote efficient & sustainable use of water resource, including water conservation

Tools Currently Available

- Official Plans – shall be consistent with PPS policies
- Servicing Studies
- Master Plans
- Municipal By-laws
- D-series Guidelines





Existing - EA Act & Municipal Class EA

Parent Municipal Class EA

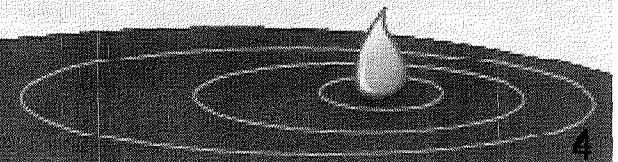


Key Municipal Class EA Provisions

- *A.2.7 Master Plan – at minimum address Phase 1 & 2 of Class EA*
- *A.2.9 Integrated provisions in Municipal Class EA for co-ordinating planning processes & approvals under the EA Act*

Tools Currently Available

- Master Plan through Municipal Class EA
- Municipal Class EA process for specific undertakings



Provincial Strategic Direction

Growth Plan - 25-year land-use and infrastructure framework for managing growth in the Greater Golden Horseshoe

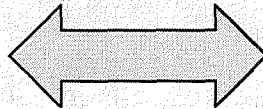
Provincial Plans - Greenbelt, Oak Ridges Moraine, Lake Simcoe Plan,

Clean Water Act - Source Protection Plans, Water Budget Analysis

Municipal Class EA

- Master Plans
- Specific Class EAs
- Possible Bump-up
- EnvironRT Decisions

Master Plans



Official Plans

- Servicing Studies
- Master Plans
- By-laws
- Council Decisions
- OMB Decisions

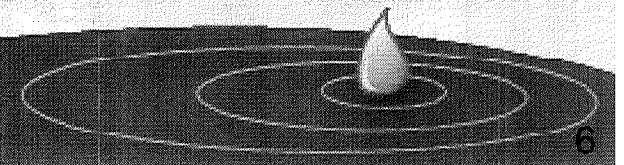
Ontario Water Resources Act - Certificate of Approvals for water & waste water work;
Permit to Take Water

Safe Drinking Water Act - Drinking Water Licences



Master Plan for proposals involving Proposal for Water & Sewage Transfers

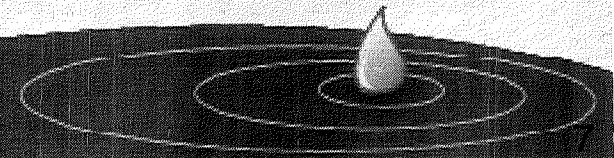
- Allows proponents, decision-making authorities and the public to comprehensively understand and identify broader infrastructure options.
- Consideration of criteria within a broader context and in a long range plan which integrates infrastructure requirements for existing and future land uses.





Components of Master Plans

- Master Plans examine an infrastructure of system(s) or group of related projects and outline a framework for planning subsequent projects and to address development needs.
- Master Plans include analysis of the system in order to outline a framework for future works and developments. Master plans are not usually undertaken to address a site –specific problem.
- Master Plans typically recommend a set of projects which are distributed geographically throughout the study area.
- Specific projects or works in the Master Plan are implemented over a period of time.





Possible New Tools for Master Plans

Provincial Policy Statement

- *New PPS Policies*
- *New Guidelines*
- *New Procedures*
- *Info Sheets/Education & Outreach for Municipalities, Ministries & Public*
- *Other*

Municipal Class EA

- *Amendments to Municipal Class EA Parent Document*
- *New Guidelines*
- *New Procedures*
- *Info Sheets/Education & Outreach for Municipalities, Ministries & Public*
- *Other*

Ontario Water Resource's Act

- *New Regulation requiring Master Plans*
- *New policies*
- *Info Sheets/Education & Outreach for Municipalities, Ministries & Public*
- *Other*

Other Innovative Tools

- Master Plan linked to OP*
- *Example used by some municipalities: municipal decisions must conform with the plan; by-laws must be consistent with the plan; Master plans must be consistent with the policies of the PPS.*
 - *Other*



Discussion

Gaps and opportunities of proposals involving transfers from one Great Lake to another for, for example:

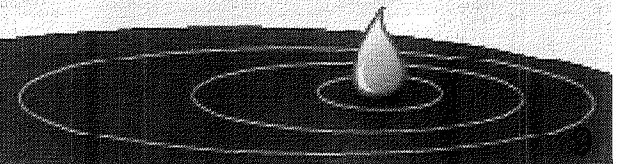
- Broader infrastructure options
- Long range plan which integrates infrastructure requirements for existing and future needs
- Consideration of Criteria (over 379,000 l/day)
- Referral for Regional Review (over 19 mld consumptive use)

Also regarding consideration of criteria

- When - At which stage in the process should the criteria be considered?
- Method - Under which process (e.g. Planning Act, Municipal Class EA or other) should the criteria be considered?
- How - Using which tool(s)?

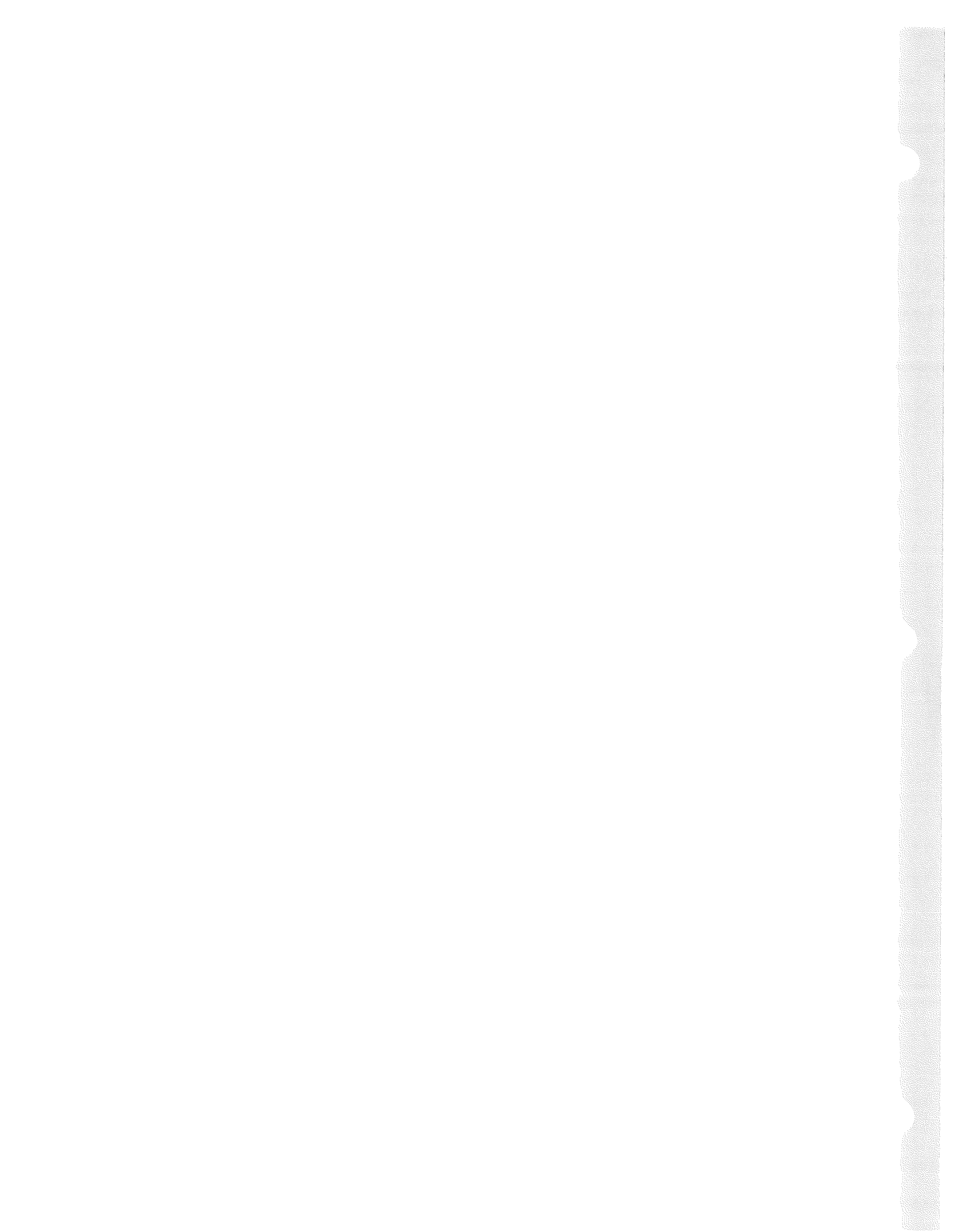
Considerations

- Could sufficient information be provided in Master Plans for consideration of criteria?
- At which stage should a proposals be referred for Regional Review?
- Concerns & Recommendations





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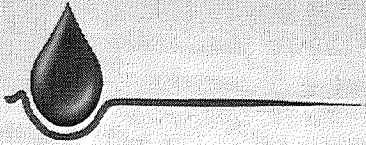




Great Lakes – St. Lawrence River Basin
Sustainable Water Resources Agreement
Related Transferor

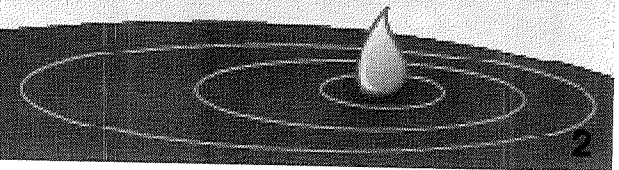
Municipal Sector Working Group

January 28, 2009



Outline of Presentation

- What is a “related transferor”?
- Permit to take water process and other approvals
- Terms and conditions imposed on related transferor
- Discussion

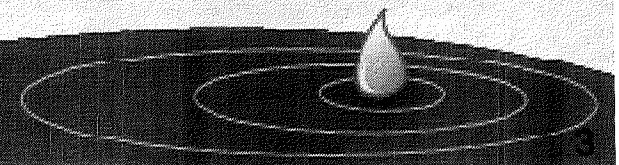
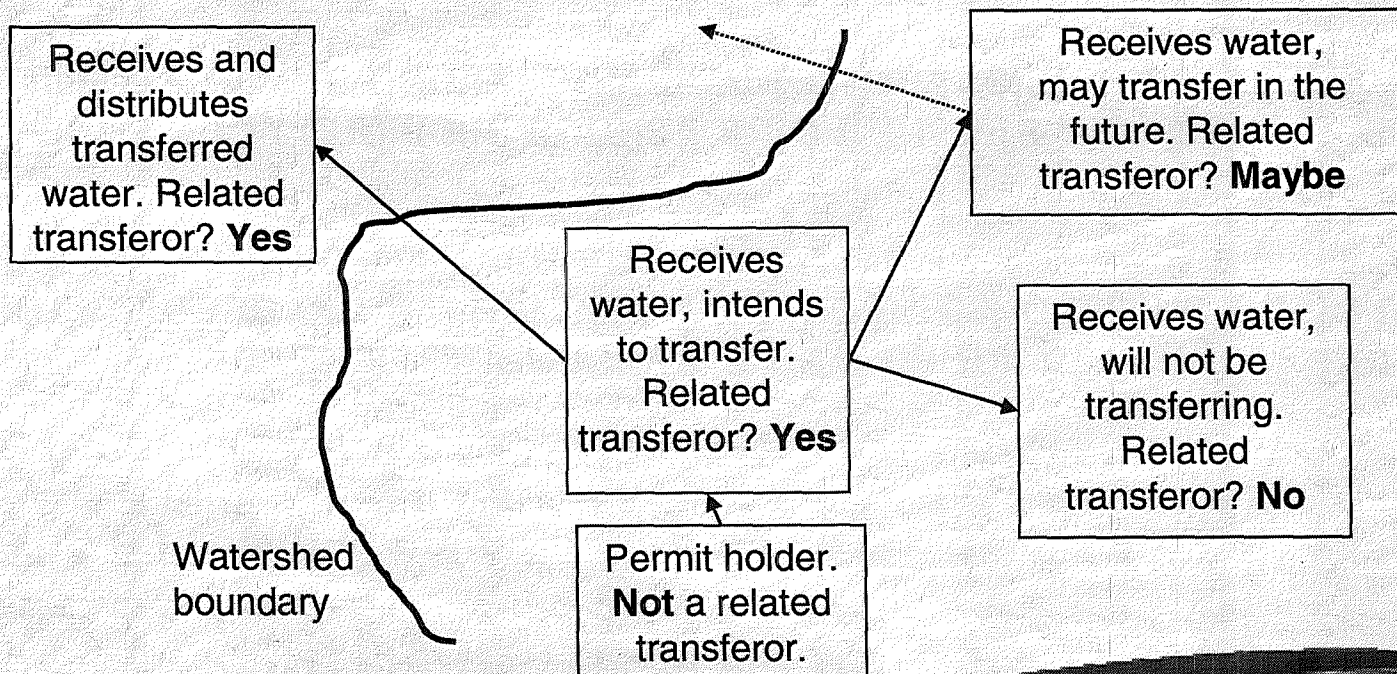




What is a “Related Transferor”?

- A person who does not take water under the permit but transfers water that has been taken under the permit or,
- A person who does not take water under the permit but distributes water that
 - has been taken under the permit, and
 - has been or will be transferred.

Identifying the related transferor: yes, no, maybe





Implications to the PTTW

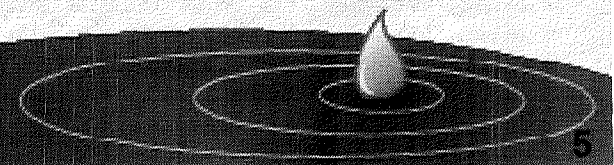
- The PTTW may have several parties named – the person taking water, plus related transferors.
- A permit must be amended or a new permit obtained if there will be an increase or new transfer over the threshold amount. In these cases, the exception criteria apply.
- Terms and conditions in relation to transfers may be imposed by the Director on the person taking water, any related transferor or both.
- Terms and conditions may be statutory, regulatory or specific to the PTTW.
- If a related transferor has terms and conditions imposed on them in the PTTW, the related transferor is entitled to make applications in relation to the PTTW.
- The related transferor may appeal terms and conditions imposed on them.

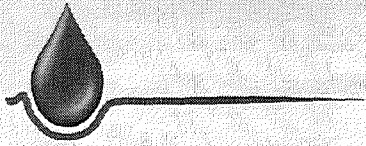




Implications to other approvals

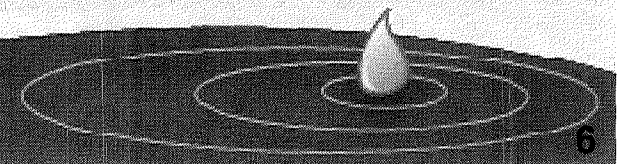
- The Director has authority to amend other types of approvals that may be relevant to the proposed new or increased transfer such as:
 - sewage works that return the transferred water after use,
 - approvals under Part V of the *Safe Drinking Water Act, 2002*, that relates to a drinking water system that transfers water between Great Lakes watersheds, or
 - other instrument that may be prescribed by regulation.
- Where there is a conflict between terms and conditions and other instruments, the term or condition that provides the greatest protection to the quality or quantity of water prevails.



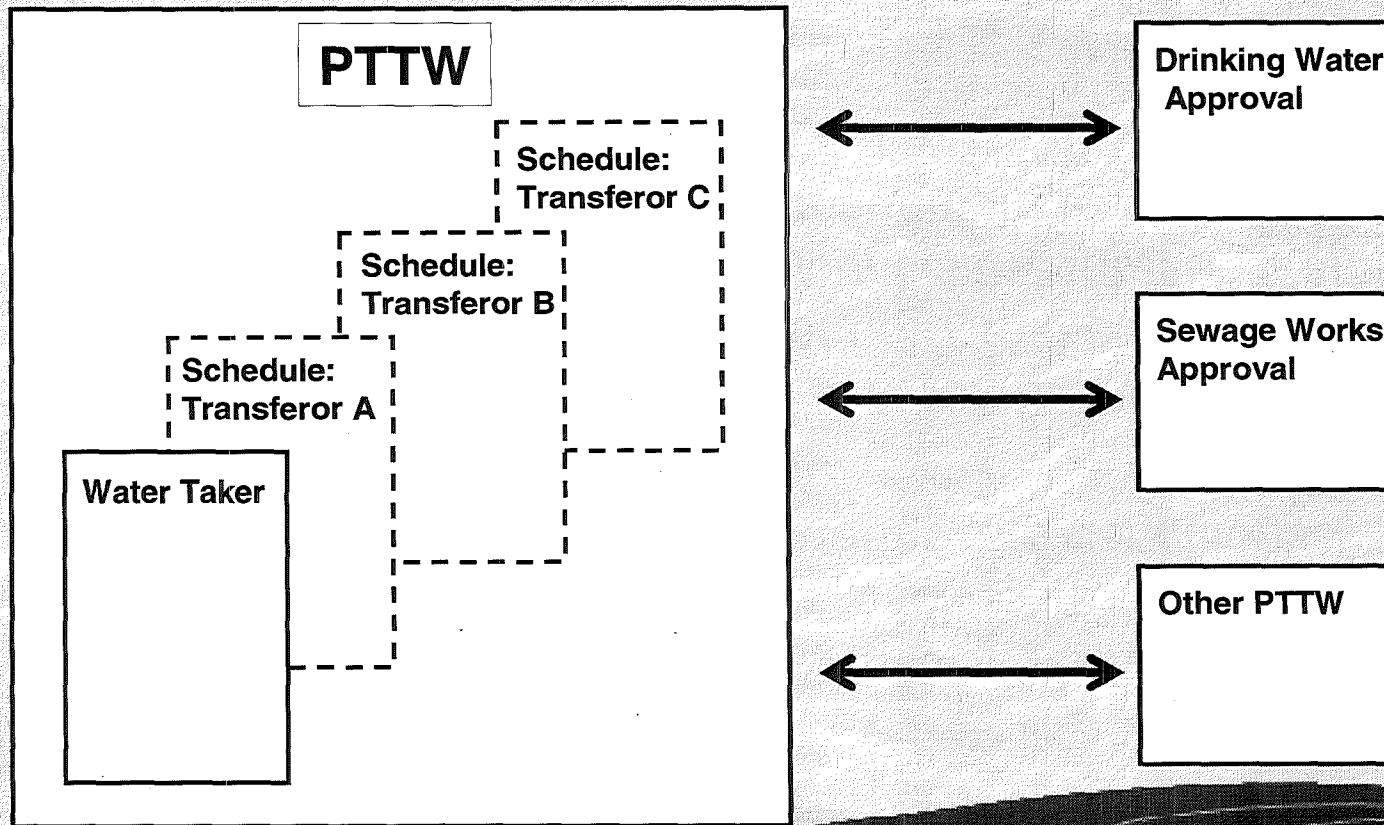
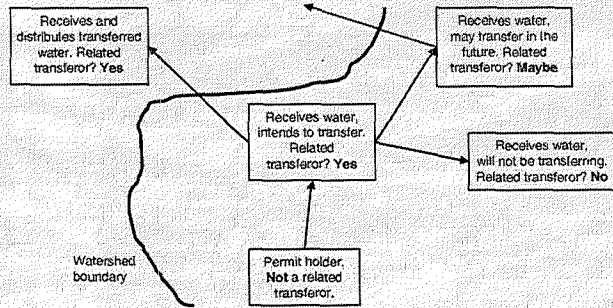


How might it work?

- PTTW could contain **different schedules**; each schedule could list terms and conditions applicable to a particular party.
- PTTW, Municipal Drinking Water Licences, Drinking Water Works Permits, sewage works approvals could all be **cross-referenced** to each other.
- Different **PTTW could also be cross-referenced to each other** for the purposes of defining baseline transfer amounts and keeping track of increases.
- Parties to a PTTW may need to **notify or consult with one another** on applications for amendments.



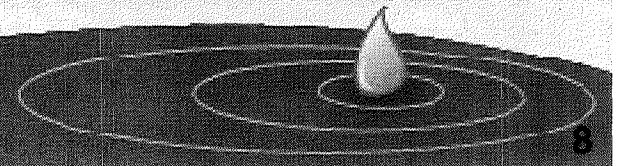
How might it work?





Statutory Terms & Conditions

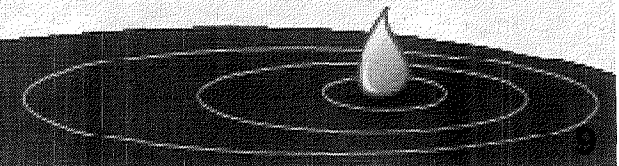
- Subsection 34.7 (1) states that “If a permit issued...authorizes the taking of water...and any of the water taken is transferred or is to be transferred, the permit is subject to...terms and conditions whether they are specified in the permit or not.
 - The person who takes water and **any related transferor** shall not cause or permit a new transfer or increased transfer where the new or increased transfer amount is the threshold amount, unless a holder first obtains an amendment to the permit or a new permit under section 34.1 to authorize the new transfer or increased transfer.





Terms and conditions on the PTTW

- Terms and conditions **regarding transfers** may deal with the following:
 - limiting the amount of water that may be transferred
 - governing return flow including the quality, the amount and the location
 - monitoring and reporting related to the transferred water (e.g. amount, rate, use and conservation, effects on water quantity and quality)
 - governing the use and conservation of transferred water, (e.g. requiring specified measures, water audits, water conservation plans).
- These are similar to the types of terms and conditions **applied to water takings**.

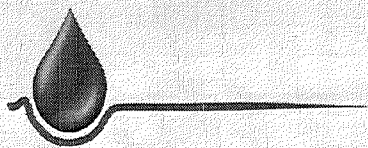




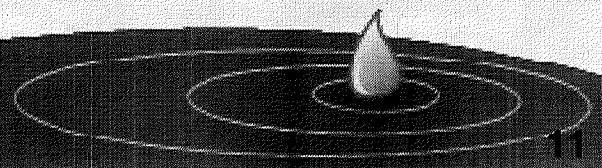
Discussion

1. Given the description of related transferor, who would be included and how might they be impacted?
2. Aside from using schedules in the PTTW, are there other ways of administering requirements on related transferors?
3. What guidance is needed regarding related transferors?





Appendix





Terms and conditions where water is being transferred

34.7 Terms and conditions in permit

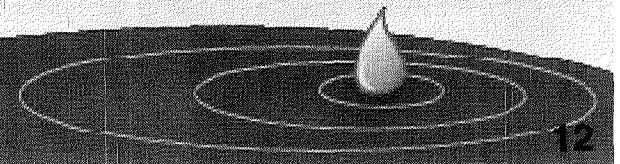
- (2) If a permit issued under section 34.1 authorizes the taking of water from a Great Lakes watershed and any of the water taken is transferred or is to be transferred, the Director may include terms and conditions in the permit,
- (a) governing the transfer of water, including limiting the amount of water that may be transferred;
 - (b) governing the return, after use, of transferred water, including,
 - (i) governing the manner in which the water may be returned,
 - (ii) governing the quality of the water that may be returned,
 - (iii) prescribing a minimum amount of water that must be returned,
 - (iv) governing the location or area to which the water may be returned, including restricting the amount of water that may be returned to a different location or area from the one where the water was taken;
 - (c) governing monitoring and reporting of,
 - (i) the amount of water that is transferred, including the amount that is returned after use,
 - (ii) the rate at which water is transferred,
 - (iii) the use and conservation of transferred water, and
 - (iv) the effects of water transfers, including their effects on water quantity and quality;
 - (d) requiring that reports described in clause (c) be made to the Director, to other persons or to both;
 - (e) governing the keeping of records with respect to the matters that are monitored and reported as described in clause (c);
 - (f) governing the use and conservation of transferred water, including requiring the holder,
 - (i) to implement specified measures to promote the efficient use of the water or reduce the loss of water through consumptive use,
 - (ii) to ensure that an audit is conducted by a specified person or body in order to evaluate whether the water is being used efficiently, and to provide the results of the audit to the Director, to other persons or both, or
 - (iii) to prepare a water conservation plan and submit it to the Director, to amend the plan if required by the Director, and to implement the plan; and
 - (g) governing any other matter as the Director considers appropriate to ensure that the transfer of water complies with this section or section 34.6. 2007, c. 12, s. 1 (12).

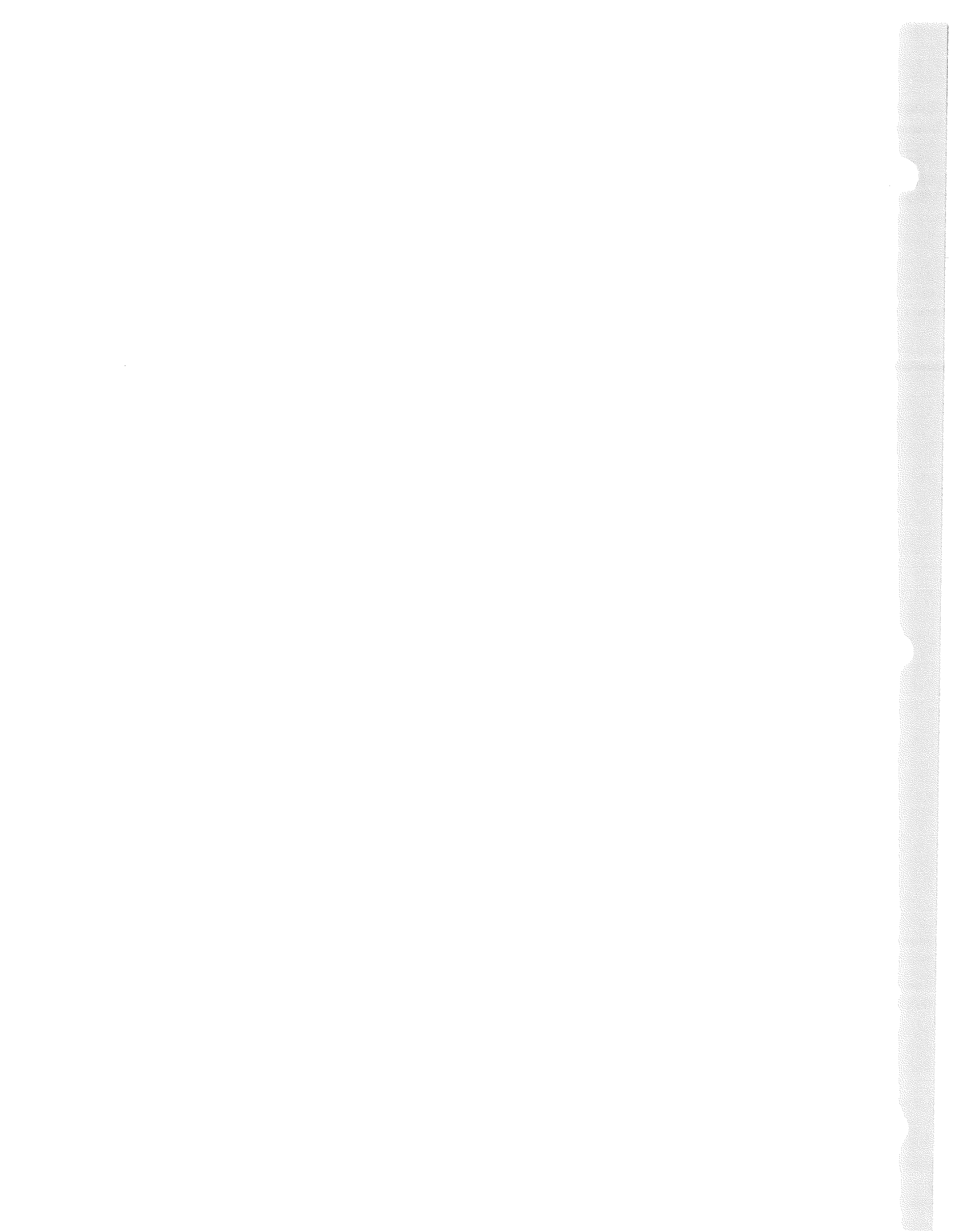
Same

- (3) A term or condition described in subsection (2) may be directed to the person taking the water, to any related transferor, or to both. 2007, c. 12, s. 1 (12).

Application of s. 34.1 re related transferors

- (4) When a term or condition described in subsection (2) and directed to a related transferor is included in a permit, the related transferor is entitled to make applications under section 34.1 in relation to the permit. 2007, c. 12, s. 1 (12).





Intra-Basin Water Transfers
Municipal Sector Working Group Consultation
January 28, 2009

A consultation meeting on the *Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement* took place in York Region on January 28, 2009. The meeting with the Municipal Sector Working Group was held to discuss intra-basin water transfers as they pertain to Master Planning and the Class EA (and other approval mechanisms), and to the “related transferor”. Eleven participants representing four municipalities and one engineering consultancy attended the meeting (see Attachment 1 for the list of participants).

The goal of the meeting was to present attendees with an overview of intra-basin transfer considerations for Master Planning, the EA Act and Municipal Class EA, the Planning Act and the “related transferor” under the Agreement (refer to Attachment 2 for a copy of the meeting Agenda).

The following is a summary of participants’ general comments and questions following the presentations:

- “Terms and conditions regarding transfers” – would MOE have two different specifications? – it’s reflected already in C of A; conditions could reside with Sewer Works”
- If MOE places different Sewage Works approval conditions on Plant 1 on Lake Ontario than other plants on the lake, creates an uneven playing field
- In reference to slide 6, currently the permit numbers change when there is a modification, how will approvals be cross-referenced? Perhaps better to relate to the facility or connected approvals.
- In reference to slide 3 and 4 (“Related Transferor), are lower tiers included?
- How is MOE going to capture municipalities that may have no need for change in their PTTW? Only if change in transfer amount?
- After the PTTW issued, who has the onus to police the transfer?
- How does MOE/municipality deal with the consumptive use? Does this relate back to the PTTW holder?
- Whose responsibility is it to determine the consumptive use?
- The use of co-efficients may be the most straight forward approach for measuring consumptive use for the PTTW holder
- Is there potential to approve a permit now and amend it later when the rules are in place?
- What is the status of the technical memorandum?

Key questions to guide the discussions with participants. Although there were numerous and varied responses to key questions, some common themes emerged from the meeting. Common themes are those issues and/or recommendations for which there was general agreement amongst session participants. The key questions, themes and proceedings from the consultation meeting are summarized in Table 1 and 2 of this report.

TABLE 1: Gaps in meeting requirements involving transfers

<p>1. Are there gaps using the existing process for developing Master Plans, Class EA, Planning Act?</p>	
<p>General / Context</p>	<ul style="list-style-type: none"> ▪ Municipalities may be receptive to a required Master Plan (MP) if there is an approval at the conclusion of the process ▪ MP should identify in “broad brush” terms what are the concepts and broad servicing solutions with agreement in principal provided by MOE, therefore cannot revisit the approved terms, approaches and concepts ▪ The details of the Master Plan would be addressed in the Class EA (Phase 1 and 2) ▪ Do <u>not</u> want to go into a level of detail beyond reasonable (e.g. geotechnical studies for multiple routes and alternative options for the next 20 or 30 years), for the MP, must instead deal with higher level concepts ▪ Provide time windows (i.e., MP cover 50 years/ class EA 20 years) ▪ MP approval from MOE would be an “approval” in principle or an acknowledgement ▪ MOE should provide a letter of “acknowledgement” once they accept the broad concepts set out in the MP ▪ Have general exception criteria standards that have to be met at the MP-level, with specific detail provided in the Class EA ▪ Two part process: Part A – context (e.g. need transfer, amount, rationale, etc.) and Part B – more detail ▪ MOE would provide preliminary approval or acknowledgement of part A ▪ For those municipalities that currently complete a MP and a strategic plan, they would also be required to do a Class EA under this revised approach, which is more work with associated costs/resources ▪ Many municipalities already do a Master Servicing Plan (MSP) which is really a budgetary process ▪ MSPs are done every year in some big municipalities / every 5 years in smaller municipalities ▪ Instead of mandating MPs under the OWRA, could be “incented” by getting a Director’s acknowledgement (approval) of exception criteria for the transfer on a preliminary basis in the Master Plan
<p>Questions/Issues</p>	<ul style="list-style-type: none"> ▪ Master Plan approach may not make sense for small northern municipalities with small systems ▪ Does this discussion of possible alterations or changes to Master Plans, Class EA, etc. pertain only to transfers or to all water takings? ▪ Whose responsibility is it (PTTW holder/ receiver) for exception standards? ▪ Municipality A process for PTTW may not match municipality B process for the transfer, therefore there is an administrative, co-ordination issue ▪ If considering mandating MP’s need to talk to Municipal Engineers Association ▪ Different municipalities may be at different stages – this can be a significant challenge in the planning and approvals process ▪ Use of the MP would be suitable to large and medium sized municipalities, unlikely suitable approach for small municipalities.

TABLE 1 (Cont'd.): Gaps in meeting requirements involving transfer

2. Are there any other considerations for other processes (e.g., Planning Act)?	
Themes	<ul style="list-style-type: none"> ▪ Need to harmonize related planning/approval processes (PTTW, MP, Class EA) ▪ Establish an MOE Project team office – all review and approval staff currently residing in different departments come under one umbrella for co-ordinated review and approvals ▪ Current problem – separate departments not necessarily talking to each other and approvals done sequentially not in parallel ▪ All the infrastructure for review and approval in place at MOE, just needs to be brought together ▪ One-stop-shop would benefit both MOE and Municipalities, ensuring informed and co-ordinated review and approval process and maximization of efficiencies
General / context	<ul style="list-style-type: none"> ▪ More and more municipalities are doing a Master Environmental Servicing Plan (MESP) – this may be another option for getting “approval in principle” instead of using the MP process. ▪ Should consider amending so that the transferor owns the PTTW or is required to have a separate approval. ▪ Planning Act would not be an appropriate vehicle – too high level
3. What are the gaps and opportunities for “Referral for Regional Review” (over 19 mld consumptive use)?	
Themes	<ul style="list-style-type: none"> ▪ Do not make municipalities do PNC and Regional Review – should be one process ▪ Municipalities need to be aware of how to prepare for the final Regional Review by MOE ▪ Needs to be a co-ordinated and harmonized process with MOE and MNR
4. At which stage should a proposal be referred to the Review Board?	
General / Context	<ul style="list-style-type: none"> ▪ Before MOE issues an acknowledgement, MNR would check in with Review Board to determine if there are any concerns with the exception criteria ▪ Co-ordinate through the EA process
5. Are there any other gaps or concerns?	
General / Context	<ul style="list-style-type: none"> ▪ There is a lack of clarity around terminology: <ul style="list-style-type: none"> ▪ “consumptive use” ▪ What is in a Master Plan? ▪ “Water transfer” – what is included? ▪ Is there any discussion between Regional Review Board and the MOE about harmonizing?

TABLE 2: Related Transferor and the PTTW process and other approvals

1. Given the description of related transferor, who would be included and how might they be impacted?	
Themes	<ul style="list-style-type: none"> ▪ Involving multiple municipalities (transferors) could be a very large “animal” to wrap the permitting approach around
General / context	<ul style="list-style-type: none"> ▪ A lot of the conservation measures would be the purview of lower tier municipalities ▪ Consideration of some harmonization of conservation initiatives
2. Aside from using schedules in the PTTW, are there other ways of administering requirements on related transferors?	
General/Context	<ul style="list-style-type: none"> ▪ Should be a different permit (transfers only) ▪ Separate schedules and permits (i.e. if the transferor makes a change, MOE deals with the transferor <u>not</u> the permit holder and provides notification to PTTW holder of the transferor’s change ▪ From an administrative point-of-view, how is the process involving multiple transferors going to be managed? ▪ The returned flow discharger is another party (possibly not a water user at all) who will require a permit ▪ Major cross-referencing concern/issue for MOE for PTTW and related schedules ▪ Need co-ordination at a technical level not at a permit/requirement level
3. What guidance is needed regarding related transferor?	
Themes	<ul style="list-style-type: none"> ▪ The onus is on the MOE to be co-ordinated ▪ Difficult process – multiple players and need for co-ordination of information/records (PTTW and schedules) ▪ Large education process for municipalities will be needed ▪ Need clarification/guidance from MOE/MNR about what to do in the interim period while developing rules
Questions/Issues	<ul style="list-style-type: none"> ▪ Other part of agreement deals with consumptive use; will the municipality have to get a PTTW for the consumptive use?

LIST OF PARTICIPANTS
Municipal Sector Working Group Meeting
January 28, 2009

REPRESENTATIVE	ORGANIZATION
Michele Maitre	Regional Municipality of York
Sean Love	Regional Municipality of York
Paul May	Regional Municipality of York
Courtney Daniels	Regional Municipality of York
Stephen Fung	Regional Municipality of York
Adrian Coombs	Regional Municipality of York
Lisa Lin	Regional Municipality of York
Marcus Firman	Municipality of Collingwood
Pam Law	CH2M Hill Consulting
Andrew Farr	Region of Peel
Debbie Korolnek	Town of Bradford West Gwillimbury

**Intra-Basin Water Transfers
Municipal Sector Working Group Consultation**

Date: January 28, 2009

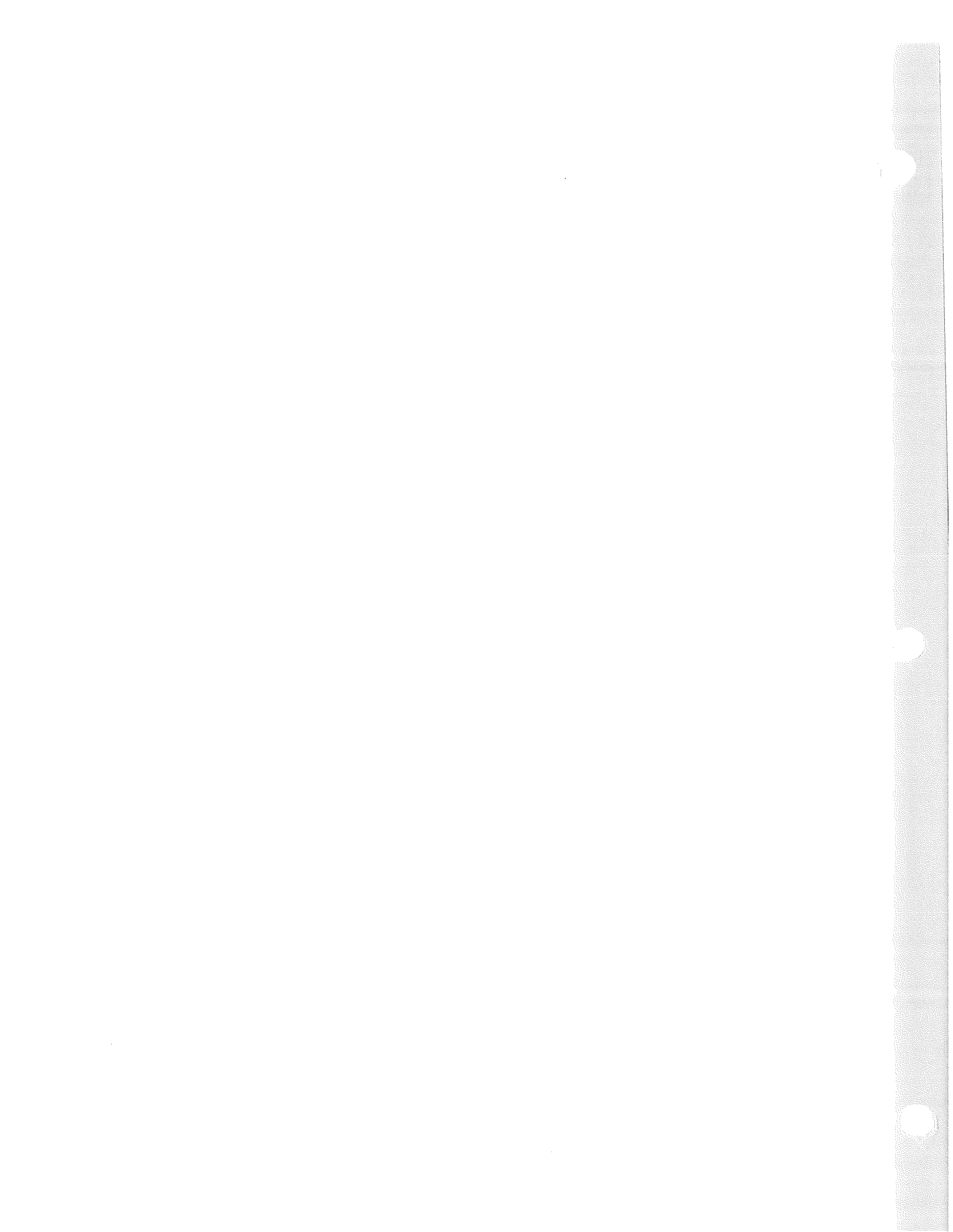
Location: Office of Regional Municipality of York
100 Garfield Wright Boulevard
Sharon, Ontario
2nd floor training room
Please sign in at reception.
Map attached

Please bring your binders from the last meeting to insert additional materials

AGENDA

- 9:30 AM Arrival and registration (continental breakfast provided)
- 10:00 AM Welcoming remarks and introductions
Review of session agenda and format for the day – comments and questions
- 10:15 AM Presentation on Master Planning, MEA Class EA
Exploration and discussion – key questions
- 12:00 PM Lunch (provided)
- 12:45 PM Presentation on Related Transferor
Terms and Conditions
Exploration and discussion – key questions
- 2:00 PM Group discussion
Topics for the next meeting
- 2:30 PM Wrap-up and next steps

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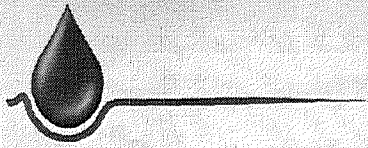


Great Lakes – St. Lawrence River Basin
Sustainable Water Resources Agreement

Proposed Permit to Take Water and EBR
Posting Changes

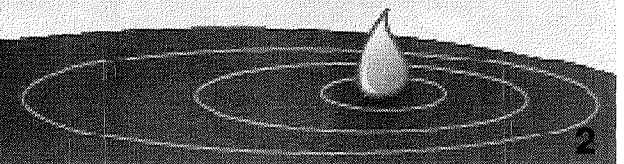
Agricultural Sector Meeting
University of Guelph

January 29, 2009



Purpose

- Discuss drivers for reviewing the provisions of the Permit to Take Water Program.
- Consult with the agricultural community early in the process.
- Further discussion and opportunities for consultation on next steps.





Introduction: Great Lakes - St. Lawrence River Sustainable Water Resources Agreement

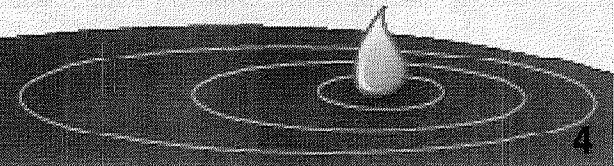
- On December 13, 2005, Premier McGuinty joined the Premier of Québec and the Governors of the eight Great Lakes states (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin) in signing the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement (Agreement).
- The Agreement details how the States and Provinces will manage, protect and conserve the waters of the Great Lakes - St. Lawrence River Basin and provide a framework to enact laws protecting the Basin in each of the Great Lakes provinces and states.
- One of the provisions of the Agreement requires that, at minimum, water takings of **379,000 litres per day or more** (threshold amount) be part of a management and regulation program in each jurisdiction.





Current Provisions Related to Watering of Livestock or Poultry

Under section 34 of the *Ontario Water Resources Act* (OWRA), livestock or poultry watering does not require a Permit To Take Water (PTTW) issued by the Ministry, as long as the water is not taken into storage.





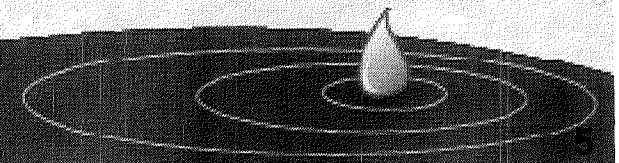
Changes to the Exceptions For Watering of Livestock or Poultry

In order to meet the commitments of prior notice and consultation contained in the Agreement, existing exceptions in the OWRA for the watering of livestock or poultry were amended.

The provisions (that will be in force at a date in the future) will require a PTTW for the watering of livestock or poultry if the water taking is 379,000 litres per day or more.

Water takings for watering of livestock or poultry (where the water is not taken into storage) would continue to be exempt as long as the water taken is always less than 379,000 litres per day.

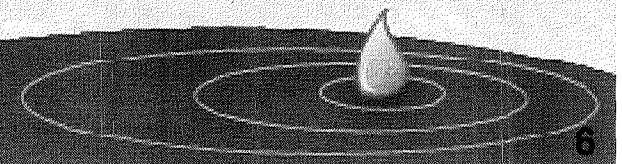
In Ontario, livestock watering operations are generally well below the 379,000 litres per day threshold.






Requirement to Post on the EBR

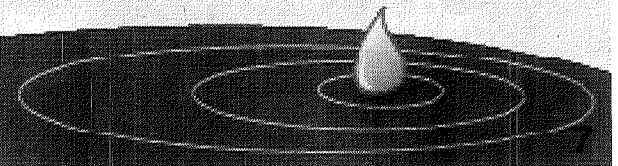
- Currently, under the *Environmental Bill of Rights Act*, 1993, the Ministry is required to post PTTW proposals, with some exceptions (irrigation of agricultural crops), on the Environmental Bill of Rights Registry (EBR) for at least 30 days before a decision is made whether or not to implement the proposal.
- Therefore, when the new provisions in the OWRA come into force, all proposals for a PTTW for the watering of livestock or poultry that are 379,000 litres per day or more (over a period of one year or more) would be required to be posted on the EBR, because there is no exemption.
- Similarly, PTTW proposals (with some exceptions) involving a transfer of water of 379,000 litres per day or more from one Great Lakes watershed to another (intra-basin transfer) would also be required to be posted on the EBR.





What Are the Implications of Posting on the EBR?

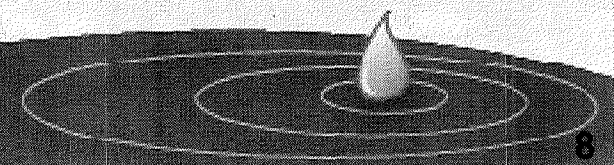
- PTTW proposals that are posted on the EBR could become the subject of a hearing before the Environmental Review Tribunal (ERT).
- If the ERT agrees to hold a hearing on the PTTW decision, the PTTW decision is put on hold until the outcome of the hearing is determined.
- If the ERT rules in favour of the permit, the ERT decision can be appealed to the Divisional Court.
- Re-application for a PTTW, EBR posting, and possibly ERT hearing could be repeated when the permit expires every 10 years or earlier, if required by the Director or the ERT.





Irrigation of Agricultural Crops

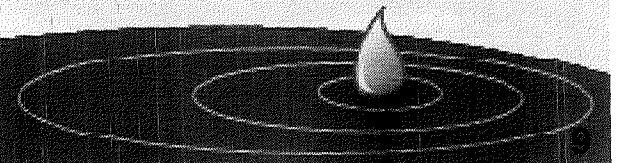
- Currently, proposals for a PTTW for the irrigation of agricultural crops are exempt from posting on the EBR.
- However, under the Agreement, for any new or increased intra-basin transfer proposals that trigger 'Notice to Parties' (between 379,000 L/day or greater and less than 19 million L/day consumptive use), Ontario is required to provide notice to the other Parties to the Agreement prior to making any decision with respect to the proposal.
- When an intra-basin transfer involves a consumptive use of 19 million L/day or greater, a 'Regional Review' is triggered. This means that the proposal is reviewed by the Regional Body.
- The Regional Body consists of the Parties of the Agreement (the 10 Great Lakes jurisdictions) established to oversee Agreement implementation.
- A Regional Review provides the Regional Body an opportunity to address concerns with respect to the proposal.
- In the case of a Regional Review, public consultation is also required.





Irrigation of Agricultural Crops

- To ensure consistency with the provisions of the Agreement, we are proposing to amend Regulation 681/94 (Classification of Proposals for Instruments) made under the *Environmental Bill of Rights Act, 1993* to require proposals to be posted on the EBR if:
 - The PTTW is for the irrigation of agricultural crops that involves an intra-basin transfer; and
 - 'Notice to Parties' or 'Regional Review' is triggered.
- The intent is to provide Ontarians with the same access to information as would be provided to other Great Lakes jurisdictions.

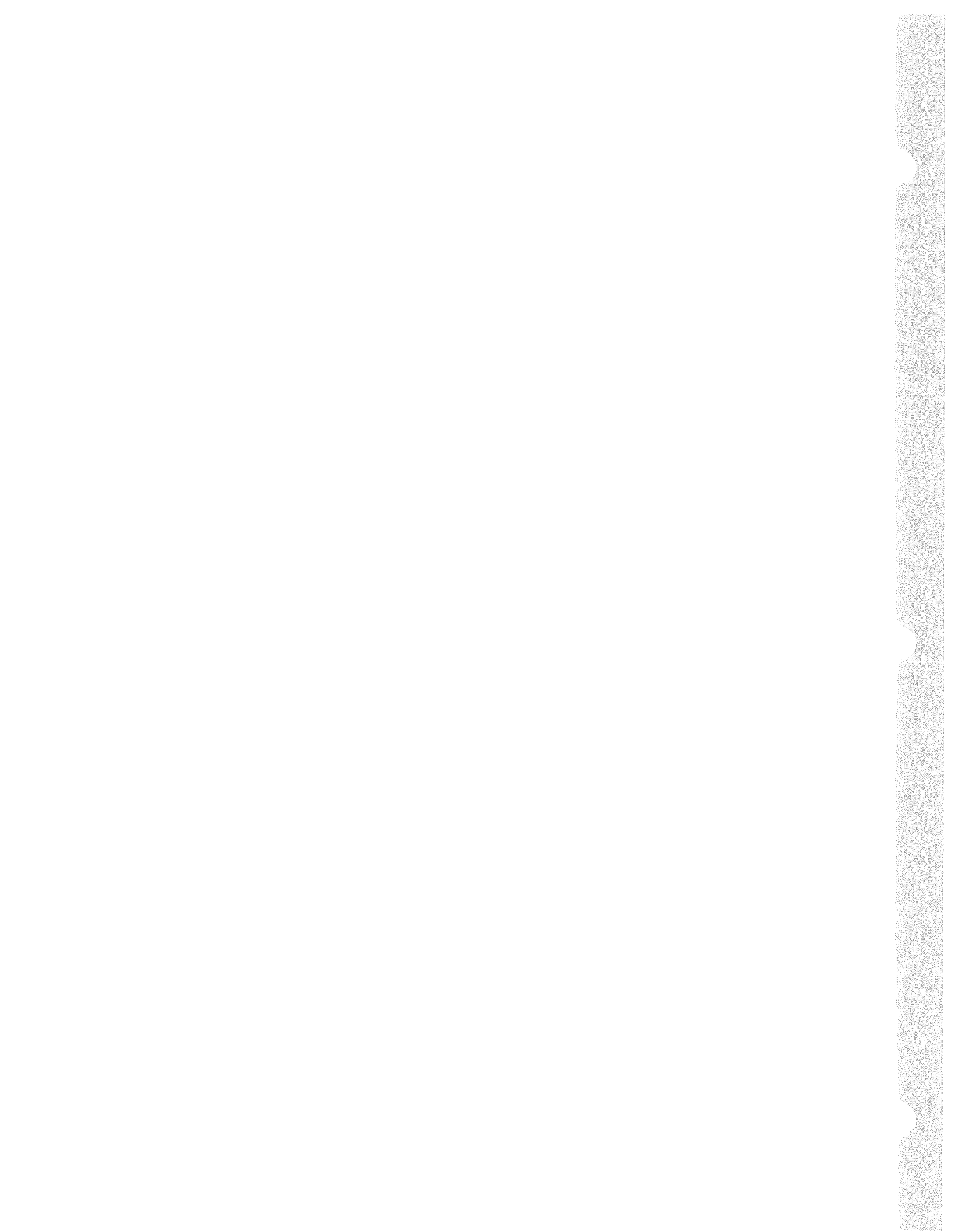




Discussion

1. In the OWRA, we can make a regulation to permit for the averaging of the 379,000 litres/day amount over 90 days or a fewer number of days. What concerns (if any) do you have with using an averaging amount of 90 days to calculate that? How many days should be used?
2. What concerns (if any) do you have with posting proposals for a PTTW for the irrigation of agricultural crops that involve an intra-basin transfer of 379,000 L/day or more on the Environmental Bill of Rights Registry?





Developing Ontario's Water Conservation and Efficiency Strategy
Changes in Notification of Agricultural Water Takings
Agricultural Sector Discussion
January 29, 2009 (draft)

Provincial staff met with representatives the agricultural sector (see Attachment 1 for a list of attendees and their respective organizations). The meeting was held at the University of Guelph on January 29, 2009, and the purpose of the meeting was to discuss the development of Ontario's water conservation and efficiency strategy and changes in notification of agricultural water takings (refer to Attachment 2 for a copy of the meeting Agenda).

A presentation was given to participants to provide some context and an overview of water conservation and efficiency. Subsequent to the presentation, the following general comments and questions were raised by participants:

- Target water conservation in high use watersheds
- Area on Water Use map showing high use in Norfolk is not accurate – shows a blanket high use which is not the case (based on monitoring results by agriculture) and has made it difficult to get or modify permits, map needs to be redrawn
- Problems with low level response – “we have been in a level 3, but no one has taken responsibility and acted on it”
- Agriculture irrigation uses both raw water and potable water/ how are you going to deal with this?
- Of the whole pie chart agriculture is only 0.1 % and hydro is a huge portion – “What is usage?” How is consumptive use and non-consumptive use defined?
- Who owns the water in the province?
- Allocations and use is the big underlying policy issue that affects water conservation, government is ignoring allocations policy, needs to solve allocations first Allocation of water is an issue – Who gets what? MOE needs to decide that sooner or later the government is going to have to, through law, decide how to distribute the water
- Economy/environment/social/cultural drivers that differ greatly – giving simple answers does not address the complexity of the issues

In the afternoon, a presentation of the Great Lakes Basin goals and objectives was given to participants and the following general comments and questions were raised:

- Should there be a performance measure/indicator for the government to meet in regards to the cost of consultation/studies
- Should the targets be set around the sustainability of water takings?
- The presentation of regional goals and objectives did not specifically address agriculture and others, was limited reference to funding/this is a concern
- Really hope that the agricultural concerns are brought up in the strongest way possible, usually our concerns get swept aside because we are such a small portion of Ontario
- Want this particular group reconvened before and finalization of policy/proposal
- This [trying to be heard and getting the issues across to all the different government agencies] is an emotionally exhausting endeavour

Key questions guided the discussion of conservation and efficiency and changes in notification of agricultural takings (see Attachment 3 for the list of questions).

Although there were numerous and varied responses to key questions, some common themes emerged from the meeting. Common themes are those issues and/or recommendations for which there was general agreement amongst session participants. These themes and the

proceedings from the consultation meeting are summarized in Table 1 and Table 2 of this report.

TABLE 1: Water Conservation and Efficiency – General

1. What is your sector currently doing in regards to water conservation and efficiency?	
Crops (Irrigation)	<ul style="list-style-type: none"> ▪ What drives the conservation is the cost (equipment, time required, etc.), therefore irrigation is only done on an “as needed basis” ▪ There are certain points in the cycle where watering crops is critical (need to consider timing, amounts of water, how applied, etc), for example, 4 hours on a hot without proper and sufficient irrigation equals plant loss which equals lost revenue for the year ▪ Must have water drainage to address evapotranspiration ▪ Wastage of water through irrigation is not true/irrigation is precisely managed ▪ Studies cost a fortune (e.g., recommendation from study to install variable pumps, did all the work to submit funding to Feds, but funding was denied) ▪ Equipment is costly (e.g., 750 K for dams that control flow) ▪ Biggest issue for irrigation is supply; the problem is getting water in a fair and equitable way ▪ A large scale system (pipe or open channel) is the only cost effective, sustainable way to meet supply in certain areas of the province ▪ Too many small systems in use in Ontario and this is a disaster ▪ Saskatchewan, Alberta and B.C. governments have invested millions of dollars into large scale supply systems which are both cost efficient and highly water efficient ▪ In other parts of the province large scale systems are not the best approach, drip irrigation is also highly efficient and used in some operations ▪ Support Irrigation Advisory Committees (IAC) – made up of local farmers – providing sufficient funding ▪ Have open channel system – Stantec did a study of the channel and found a high level of return flow from system and the pumps shut off during rainfall, therefore conserve water. ▪ Stantec recommended that the open channel system for Niagara-on-the-Lake would provide environmental benefits (not closed channel system) ▪ Normally do not have flow in the channel at Niagara-on-the-Lake, the flow is provided by the operation pumping in water, but the CA says that a 15% flow must be maintained for the fish (this is water that the farm is supplying) ▪ When B.C., Alberta talk about getting higher efficiencies, they refer to flood irrigation where there are huge savings to be secured, not an issue in Ontario where systems/processes more advanced therefore opportunities for savings would be significantly lower ▪ In California water is dammed for use downstream – send it down through channels to farmers and they pay for what they use ▪ Agricultural industry is encouraging framers/producers to get PTTWs ▪ Irrigation Advisory Committees (IACs) schedule drawing of water to ensure everyone is not drawing at the same time and provide oversight for use and to maintain water flows ▪ IACs also work to mitigate between farmer and property owner if issues arise IACs promote BMP’s for different operations ▪ IACs have projects to create deep wells, new ponds and more efficient systems – short term funding for these projects (such as Catfish Big Otter Water Supply Enhancement Program funded by Healthy Futures) was provided but expired after 2 years ▪ COWSEP (Canada-Ontario Water Supply Expansion Program): program allowed for the creation of water storage, ponds, efficiency initiatives, but may not be further funded, don’t know at this point in time ▪ Minimum or no tillage and plastic mulch

TABLE 1 (Cont'd.): Water Conservation and Efficiency – General

1 (Cont'd). What is your sector currently doing in regards to water conservation and efficiency	
Livestock	<ul style="list-style-type: none"> ▪ On a production unit basis, dairy livestock is the largest user of water in agriculture to meet the needs of the livestock (hygiene) and product (milk), but 60% of water is returned to the environment as fertilizer ▪ Rigorous demands for hygiene in livestock operations which require significant water use, but much of the water is captured (e.g., treatment of wastewater, reuse of water for calves, etc) ▪ In dairy and beef operations use nose pumps to water cattle, in hog operations use nose pumps to water livestock – both these systems are water efficient. ▪ Poultry operations very water efficient ▪ Most livestock operations use less than 50,000 l/day, therefore do not require a permit
Greenhouses	<ul style="list-style-type: none"> ▪ Some greenhouse businesses are almost 100% efficient with a very high level of water reuse – store water, allow it to settle and pump it back for use in the greenhouse (closed system) ▪ Closed systems in greenhouse operations are becoming standard practice ▪ 1 acre of greenhouse peppers produces 64 times more than 1 acre of field production ▪ Operators should get credit for the efficiency practices and systems they have put in place
2. What are the current Best Management Practices for water conservation and efficiency in your sector?	
Themes	<ul style="list-style-type: none"> ▪ All water conservation and efficiency initiatives as identified in question 1 above considered BMPs ▪ May employ a series of BMPs for a given crop (e.g., mulch, no till, and drip irrigation) to minimize water use
3. What should be key components of water efficiency (conservation) program for your sector?	
Themes	<ul style="list-style-type: none"> ▪ Funding (long-term and short-term); ‘shovel-ready projects’ and long-term projects ▪ Projects cost a large amount of money and need to be funded over the long term (20 to 40 years) ▪ Large supply systems versus small systems ▪ Agriculture should be at the top for priority for water supply ▪ Program Need to fit into vision of agriculture think about the future of agriculture: <ul style="list-style-type: none"> ▪ Need to consider the impact of climate change and long term implications for agriculture ▪ Need a comprehensive approach to address agriculture needs, do not deal with it on a piecemeal basis ▪ Source Water Protection: surface set backs need to be reasonable and site specific and should be determined in consultation with the agricultural community ▪ Decisions should be based on practical science ▪ Co-operation and harmonization between all different ministries, regulations, approvals (this includes, CAs, MOE, MNR, Feds and Municipalities) ▪ All levels of government must agree that agriculture is given priority access to water supply

TABLE 1 (Cont'd.): Water Conservation and Efficiency – General

3 (Cont'd). What should be key components of water efficiency (conservation) program for your sector	
General / Context	<ul style="list-style-type: none"> ▪ In some cases in Ontario, large scale water supply systems more efficient than a number of small ones ▪ Large water supply systems require significant funding ▪ Even if shovel-ready now, it would take 20 to 40 years to construct the large water supply system ▪ Two-levels for the water supply system, first a large system to get the water to the farm and a smaller system for use on the farm. ▪ Large systems would not work on some farms in Ontario – areas where large systems would not work, on-farm systems are necessary ▪ Some agricultural operations must do land drainage which has implications for water flows, stream conditions, etc. – Does this issue link into the MOE's conservation and efficiency initiative? ▪ Possible to have zero discharge from drainage using control tile (sub surface systems) that return the water to the environment, but they are extremely costly and if a priority for government, need to be paid for by government ▪ Use of control tiles provides an environmental benefit not a production benefit
4. Who should be required to prepare a water conservation plan and implementation program?	
Themes	<ul style="list-style-type: none"> ▪ "Required" is an inappropriate term ▪ "Who should participate" – do not use command and control approach, need to work co-operatively/collaboratively with agriculture ▪ Consider economic and operational realities of the agricultural operations ▪ Do not develop programs/initiatives without pre-consultation and input from agriculture ▪ At farm level the farmer should be required to do some kind of a Conservation Plan as a condition of funding (to cover conservation expenditures/investments); cost of plan should not fall on backs of farmers, funding made available ▪ The plan should not be complex – it should be similar to a basic farm plan but outlining conservation measures ▪ MOE must recognize past conservation practices/initiatives undertaken by farmers ▪ Keep the plan simple – no technical studies, similar to EFP with peer review, no consultants required ▪ Do not create new entity to fund and for conservation planning - use existing capacity (e.g. Environmental Farm Plan, PTTW) with funding goes through that entity
General / Context	<ul style="list-style-type: none"> ▪ If municipality required to do a Consv. Plan then there is concern that the cost of producing a plan is-passed on to the end user/farmer, the cost should not be passed onto the farmer ▪ If the Consv. Plans are required for municipalities then funding must be made to the municipality to cover the cost, so it is not passed onto farmers

TABLE 1 (Cont'd.): Water Conservation and Efficiency – General

5. What the barriers to the preparation and implementation of a plan would need to be overcome?	
Themes	<ul style="list-style-type: none"> ▪ Insufficient and short-term funding is a barrier, need long term funding which also addresses larger scale initiatives ▪ Farmers pick up the bulk of costs for projects, pay for studies, (e.g., \$3 M project for 140 growers, growers pay \$2M looking for \$1M from government) ▪ Get funding for a project than the funding program is stopped and the farmer is left with having to deal with the remaining costs ▪ Lack of co-operation, understanding and harmonization amongst relevant government agencies and process ▪ PTTW requirements so complicated some need consultants to fill out forms ▪ Language barrier between government and agricultural community ▪ Gov'ts use a one size fits all approach that does not work – different agricultural operations have different needs, processes, etc. ▪ Demographic profile of farmers shows that the farming population is aging, therefore not around in the long term so reticent to invest in long-term infrastructure, equipment, etc. so funding programs must address this reality Farm re-structuring is the ideal time for adjustments on water use and planning ▪ Contradictory government policies/regulations – need harmonization ▪ Currently large degree of mistrust with the MOE as a result of PTTW (i.e., Minister of Environment said there would be no PTTW fees to agriculture, then it was added but after agriculture community confronted the charge was later retracted) ▪ Mistrust creates a barrier for moving forward – need to rebuild the trust by working directly with farming community and at the farming level ▪ Lack or recognition of the importance of agriculture ▪ Funding stopped after study phase and before implementation – need a guarantee of the availability of long-term funding ▪ Penalizing pro-active players who provide data (e.g, in Norfolk whole community was put in high use area after providing data to MOE even though whole area not high use) ▪ No benchmarking , but if done farmers need to be given the information and have access to useful data ▪ Lack of centralized source of information so studies repeated unnecessarily ▪ Science not being appropriately applied: <ul style="list-style-type: none"> ▪ Return flow is not considered, all water taken is considered consumptive use ▪ Consumptive use co-efficients are not accurate for Ontario – developed in California ▪ Lack of transparency – has to be a transparent process

TABLE 1 (Cont'd.): Water Conservation and Efficiency – General

5 (Cont'd.) What the barriers to the preparation and implementation of a plan would need to be overcome?	
Strategies to address barriers	<ul style="list-style-type: none"> ▪ Process to get funding needs to be simple ▪ Before developing forms, applications, processes, etc. sit down with farm community and work directly with them in development ▪ Provide an agriculture-specific PTTW (develop in consultation with agriculture appropriate language as used by farming community) ▪ Recognize different agricultural sectors in the development of the conservation plans or PTTW's ▪ Need to work with different members of agricultural community to develop tools, processes, etc ▪ Need to consider where and when is it strategic for the farmer to invest. ▪ Have a pool of funding available long term so when the farmer decides to invest in his operation, he can complete a plan and take it to the funding entity and secure funding for a required period (i.e., may be a 5 or 10 year investment to replace on irrigation system with another more efficient system) ▪ Fit funding initiatives into existing business management practices of agricultural community ▪ In Europe there is co-management which is based on contracts between agriculture and government, including funding, technical assistance, etc. ▪ Obsolete co-efficients for consumptive use – based on old technology and do not reflect progress in the industry (new technologies) ▪ Approval process is daunting for the farmer need to simplify and streamline ▪ MOE needs to ensure good players rewarded and recognized for conservation and water efficiency work they have undertaken ▪ Who should keep the information? – should be a centralized accessible library of information/ studies so that all farmers can access and do not need to repeat studies that have already been done ▪ Better co-operation of regional MOE offices for the implementation of the Conservation Plan (consistency between MOE offices) ▪ There needs to be a higher level directive to regional offices on how the plan will be implemented for the agricultural sector and how to work with the farming community ▪ Whatever needs to be done should be done on a basin-wide basis to create level playing field with all the jurisdictions

TABLE 1 (Cont'd.): Water Conservation and Efficiency – General

6. What targets or performance measures should be set for Ontario's entire strategy and/or for each sector?	
Themes	<ul style="list-style-type: none"> ▪ What is the point of doing a plan for your farm if a generic, overall plan with set targets has been done – need individual farm level plans based on the specifics of the operation, location, production, etc. ▪ Targets are random numbers (e.g., how did GL-St. Lawrence Cities Initiative establish a 15% reduction target, what is the science behind 15%?) ▪ Numeric Targets in agriculture do not make sense for sector or sub-sector, 'sustainability of the system' makes more sense, having targets and plans is nonsensical, we need a process not a target ▪ Step away from the fixed formula – a process is needed with co-operation and participation by the agricultural community ▪ Agriculture is complex and diversified so no one plan fits all ▪ Needs to be a business plan that can be shown to the bank with funding entity providing the farmer with a letter of acknowledgment that the funding in place and guaranteed for the duration of the project. ▪ Funding pool must be set out in legislation so it is there for the long term and can not be rescinded with a change of government ▪ Water use reductions targets must consider crop changes or production changes and associated water needs (i.e., changing from a low water use crop to a high water use crop)
General / Context	<ul style="list-style-type: none"> ▪ Will Ontario targets have to be met by the other GL states in the agreement? ▪ Must have a level playing field ▪ Percentage reduction would not be appropriate for agriculture – consideration must be for meeting production and environmental needs ▪ Need to know the benchmark in the region and where Ontario falls in relation ▪ Benchmarks have to be determined locally (amount of water needed by cattle here is different than Texas) ▪ Has to be established longitudinally; cannot judge benchmark on a yearly basis – irrigation for crops weather dependent ▪ Agriculture is at a disadvantage because of the large land mass involved and more impacted by the vagaries of weather (e.g., wet years, dry years, period of drought, etc.) ▪ Need some mechanism to allow for the establishment of a benchmark ▪ Target for beef? Target for tobacco? Target for turf? – Setting separate targets is nonsensical ▪ If enough money is provided then the farmers will meet a target (pool funding ensure available for long term) ▪ If a percentage of water has to be allocated to maintaining fish in a channel that receives water from farmer pumping it, then farmer should be given credit if they have to allocate 15% of their pumped water to maintaining fish habitat in the channel

TABLE 2: Water Conservation and Efficiency – Goals, Objectives and Actions

<p>1. <i>What should be the goals and objectives for Ontario's water conservation and efficiency strategy?</i></p>	
<p>Themes</p>	<ul style="list-style-type: none"> ▪ There should be overarching goals and objectives for agriculture with initiatives/ approaches as previously discussed and recommended ▪ Funding must be included in the goals in order to meet objectives ▪ Specific targets should not be set ▪ What is expectation? What is "improvement", "restoring", "sustainability" and to what level ▪ "Sustainability" is the relationship between resiliency and risk – agriculture unsustainable without irrigation ▪ Have to deal with drought, priority has to be given to allocate water to agriculture ▪ Goals and objectives have to set a minimum threshold of water supply to ensure viability of agricultural operations at all times ▪ These thresholds must be time sensitive and consider seasonal needs ▪ Minimum level of supply at all times, mitigates risk to some degree ▪ Irrigation usually required at most critical times – high heat, dry periods ▪ Need to recognize that agriculture as having unique requirements ▪ Goals and objectives have to allow for individual differences of specific farm operations ▪ Goals and objectives have to recognize the market demands and the ability to meet those demands (competing globally and market has expectation of certain size, appearance, quality of product)
<p>2. <i>What actions and/or commitments should be included in the strategy to achieve the goals and objectives for: Technology-based measures / Behavioural or management practices / Educational initiatives / Regulatory initiatives / Financial incentives</i></p>	
<p>Themes</p>	<ul style="list-style-type: none"> ▪ Farmers support voluntary stewardship and co-operation, therefore there should be no regulatory requirements ▪ Already have too many regulations ▪ Agricultural industry already has many of these initiatives which were put in place through existing mechanism/programs (Environmental Farm Plan) – need to build and expand on these mechanism, do not create new ones. ▪ EFP gets reviewed every 3 years, process of building it and developing already in place and on-going ▪ EFP is now farm based, currently studying EFPs on a watershed basis ▪ Build on the Irrigation Advisory Committee and the EFP for watershed to deliver programs and initiatives ▪ EFPs cover: <ul style="list-style-type: none"> ▪ Technology-based measures? ▪ Behavioural or Management Practices? ▪ Education ▪ Financial ▪ Funding pool must be set out in legislation to ensure long term access to funding and the delivery of funding should be done through existing programs (EFP)

TABLE 3: Changes in Notification of Agricultural Water Takings – EBR posting of Permits to Take Water

Changes in Notification of Agricultural Water Takings - General	
Themes	<ul style="list-style-type: none"> ▪ If public notification monitoring and reporting in Ontario, must be a universal requirement for all jurisdictions to ensure a level playing field ▪ Put the public notification monitoring and reporting requirement for Ontario on hold until US states confirm they are ready and can move forward to meet the requirement. ▪ Need to recognize that there may be multiple users under one permit, therefore individual takings are far below 379,000 l/day ▪ Slide 4: “Under Section 34 of the Ontario Water Resources Act (OWRA), livestock or poultry watering does not require a PTTW issued by the ministry, as long as the water is not taken into storage” – this seems to contradict the intent of the conservation and efficiency goals of the Agreement – storage reduces peak demand during peak water use periods and adds to industries resiliency ▪ Should not be a discrepancy between the livestock or crops for consumptive use of water
General / Context	<ul style="list-style-type: none"> ▪ How do/will intra-basin transfers be identified in the US Agreement jurisdictions, since there is no monitoring and reporting requirement ▪ Niagara study (Stantec), found a means to address the large water takings that were divided amongst multiple users – MOE should consider this approach as a possible model
Questions / Issues	<ul style="list-style-type: none"> ▪ Are there any intra–basin water transfers that exceed the 379,000 L/day for the livestock? ▪ Would water taken out of the Niagara River and put into Lake Ontario be considered an intra-basin transfer? ▪ What happens in the US when they reach the trigger amount (19 M l/day consumptive use)? Does the Charter speak to the requirements? ▪ In reference to slide 4 – does livestock have priority over fruit crops?
1. Do you have any concerns with an averaging amount of 90 days?	
	<ul style="list-style-type: none"> ▪ Averaging over which 90 days? Agriculture use varies yearly, seasonally, daily, therefore need to focus on consumptive use ▪ Need to take into consideration the production requirements – plants may need large amount of water for 3 days and no water for the following 10 days
2. Do you have any concerns with amending Regulation 681/94 made under the Environmental Bill of Rights Act, 1993 to require proposals for a PTTW for the irrigation of agricultural crops if it involves an intra-basin transfer of water to be posted on the EBR if “Notice to Parties” or “Regional Review” is triggered?	
Themes	<ul style="list-style-type: none"> ▪ No EBR posting
Questions / Issues	<ul style="list-style-type: none"> ▪ Posting to the EBR allows individuals/groups with other agendas to go after agricultural operator ▪ Is there another way that agricultural use could be posted that is not the EBR? ▪ Concern that if posted to the EBR than there is the potential to go to the Environmental Review Tribunal ▪ If notification mandatory, then should go to an agricultural body (Farm, Food Practices Board <u>only</u>) ▪ The Environmental Review Tribunal has no idea about what is going on in agriculture ▪ Environmental groups constantly monitor the EBR and will cause constant headaches for the farmers, using it for their gain

ATTACHMENT 1

LIST OF PARTICIPANTS Broader Public Sector Institutions Consultation January 29, 2009

PARTICIPANT	ORGANIZATION
Richard Blyleven	AgCare
David Armitage	Ontario Federation of Agriculture
Len Troup	Ontario Fruit and Vegetable Growers Association/Ontario Tender Fruit Producers
John FitzGibbon	Ontario Farm Environmental Coalition
Cheryl Trueman	Ontario Greenhouse Vegetable Growers
Wade Morrison	Agriculture and Agri-Food Canada
Keith Currie	Ontario Federation of Agriculture
John Kirkby	Niagara on the Lake Irrigation Committee
Austin Kirkby	Niagara on the Lake Irrigation Committee
Mark Wales	Ontario Federation of Agriculture/Ontario Fruit and Vegetable Growers Association
Doug Mader	Turf Producers
Brian Gilroy	Ontario Fruit and Vegetable Growers Association/Ontario Apple Growers
Tina Schankula	Ontario Federation of Agriculture
Chantelle Leidl	University of Guelph/Industrial Water Conservation Project

**Developing Ontario's Water Conservation and Efficiency Strategy
Changes in Notification of Agricultural Water Takings
Agricultural Sector Discussion**

Date: January 29, 2009

Location: Room 442 University Centre,
University of Guelph
Use Parking Lot P31 (map attached)

AGENDA

- 8:30 AM Arrival and registration (continental breakfast provided)
- 9:00 AM Welcoming remarks and introductions
- 9:15 AM Review of session agenda and format for the day – comments and questions
- 9:30 AM Overview – Developing Ontario's Water Conservation and Efficiency Strategy:
- Summary of findings from initial multi-stakeholder consultation
- Water conservation and efficiency in other jurisdictions
- 10:00 AM Exploration and discussion – key questions
- 12:00 PM Lunch (provided)
- 1:00 PM Review of Great Lakes Basin-wide goals and objectives
- Examples from other jurisdictions
- 1:15 PM Exploration and discussion – key questions
- 2:00 PM Changes in Notification of Agricultural Water Takings – EBR posting of Permits to Take Water
- 2:30 PM Exploration and discussion – key questions
- 3:00 PM Wrap-up and next steps

**KEY QUESTIONS – WATER CONSERVATION AND EFFICIENCY SECTOR
CONSULTATIONS**

Water conservation and efficiency – general:

1. What is your sector currently doing in regard to water conservation and efficiency?
2. What are the current Best Management Practices for water conservation and efficiency in your sector?
3. What should be key components of a water conservation program for your sector?
4. Who should be required to prepare a water conservation plan and implementation program?
5. What barriers to the preparation and implementation of a plan would need to be overcome?
6. What targets or performance measures should be set for Ontario's entire strategy and/or for each sector?

Water conservation and efficiency – goals, objectives and actions:

1. What should be the goals and objectives for Ontario's water conservation and efficiency strategy?
2. What actions and/or commitments should be included in the strategy to achieve the goals and objectives for:
 - o Technology-based measures?
 - o Behavioural or management practices?
 - o Educational initiatives?
 - o Regulatory initiatives?
 - o Financial incentives?

Changes in Notification of Agricultural Water Takings

1. The averaging amount is 90 days. In the OWRA, we have a regulation-making authority to permit for the averaging of the 379,000 litres/day amount over a shorter period. Do you have any concerns with an averaging amount of 90 days?
2. Do you have any concerns with amending Regulation 681/94 made under the Environmental Bill of Rights Act, 1993 to require proposals for a PTTW for the irrigation of agricultural crops if it involves an intra-basin transfer of water to be posted on the EBR if 'Notice to Parties' or 'Regional Review' is triggered?



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Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement

**Agreement Advisory Panel Intra-basin Transfer Subgroup
Teleconference February 2, 2009, 1-4 pm**

Meeting Notes

Teleconference Participants

Canadian Environmental Law Association: Sarah Miller
Canadian Federation of University Women: Carolyn Day
Georgian Bay Association: Mary Muter
Great Lakes United: Brent Gibson
Town of Collingwood: Marcus Firman
Sierra Club: Lino Grima
York Region: Courtney Daniels, One additional member- didn't hear name??
Union of Ontario Indians – Women's Water Commission: Chief Isadora Bebamash, M'Chigeeng First Nation
MNR: Paula Thompson, Rob Messervey
MOE: Stephen Maude, Angela Homewood

Meeting materials sent on January 21, 2009:

- Presentation: MSWG Jan 15, 2009 Sewage Transfers

Meeting materials sent on Jan. 28, 2009:

- Conference Call Agenda
- Presentation: MSWG Jan 28, 2009 Related Transferor
- Presentation: MSWG Jan 28, 2009 Master Plans, Class EA

Meeting materials sent on Jan. 30, 2009:

- Presentation: Agricultural Sector Meeting Jan 29, 2009 EBR Posting
- Draft Meeting notes: Intra Basin Transfer Sub Group Call Jan 21, 2009

Meeting materials sent on Feb. 2, 2009:

- Draft Meeting notes: Municipal Sector Working Group Jan 28, 2009

Summary of Intra-Basin Transfer Discussion to Date:

Municipal Sector Meetings:

October 23, 2008:

- Agreement Implementation Strategy (also presented to AAP)
- Consultation Strategy (also presented to AAP)
- Technical Bulletin (also presented to AAP)
- Baseline for "grandparenting" existing transfers

December 10, 2008:

- Baseline (continued)
- Exception Criteria (return flow, individual and cumulative impacts)
- Great Lake Watershed Mapping (also presented to AAP)

January 15, 2009:

- Exception Criteria (no feasible/environmentally sound/cost-effective alternatives, reasonable quantities, conservation of existing supplies, conservation measures)
- Transfer of Sewage

January 28, 2009:

- Related Transferor
- Master Plans, Environmental Assessment

Agricultural Sector Meeting:

January 29, 2009:

- PTTW Exceptions, EBR Posting (presentation included at meeting focused on water conservation & water use efficiency)

AAP Intra-Basin Transfer Sub-Group Call:

January 21, 2009:

- Exception Criteria
- Baseline for "Grandparenting" Existing Transfers
- Municipal Directive & Technical Bulletin- Update

Meeting Discussion:

Introductions.

- Participants introduced themselves
- Stephen Maude, MOE, informed the group that, at the request of some environmental group members, **a face to face meeting is scheduled for this Thursday afternoon, February 5, 2009 at 55 St. Clair Ave. W., 2nd Floor. Sub-group members are invited to attend the meeting, which will focus on intra-basin transfers.**

1. Recap of Last Meeting, Worksheets (Baseline, Exception Criteria)

- A few subgroup members requested additional time to complete the worksheets provided at the last meeting. **ACTION: Members still wishing to complete the work sheets were asked to do so as quickly as possible so that their input may be considered in preparation for upcoming AAP meetings this month.**
- A follow-up comment on the Baseline theme discussed at the last meeting was provided suggesting that there is a need for the baseline to incorporate water conservation targets discussed in separate conservation meetings (e.g. 15% water use reduction target).

2. Permit to Take Water, EBR Postings for Agricultural Sector

- Angela Homewood, MOE, walked sub-group members through a presentation given at an agricultural sector meeting on Jan. 29, 2009
- Presently under the Ontario Water Resources Act (OWRA) a Permit to Take Water (PTTW) is not required for the watering of livestock or poultry unless the water is taken into storage.
- SSOWA amended the OWRA PTTW exception for the watering of livestock and poultry such that a permit would be required if the water taken is 379,000 litres per day or more. The amendment was made to ensure that key Agreement commitments are met (e.g. Prior Notice and Comment for large consumptive uses, and Prior Notice or Regional Review for intra-basin transfers)
- In Ontario, livestock watering operations are generally well below the 379,000 litres per day threshold.
- Presently under the Environmental Bill of Rights Act, PTTW proposals must be posted to the EBR Registry, with some exceptions, including the irrigation of agricultural crops.
- When the new provisions in the OWRA come into force, PTTW proposals for livestock watering that are 379,000 litres per day or more would be required to be posted to the EBR. Similarly, PTTW proposals involving an intra-basin transfer 379,000 litres per day or more would also be required to be posted to the EBR.
- To ensure consistency with the Agreement, an amendment to Regulation 681/94 under the EBR Act is being proposed to require proposals to be posted on the EBR Registry for:
 - PTTW for the irrigation of agricultural crops that involve an intra-basin transfer, and
 - Prior Notice to the Parties (379,000 litres per day) or Regional Review (19 MLD or more consumptive use) is triggered.
- The intent of this amendment is to provide Ontarians with the same access to information that other Great Lakes jurisdictions are afforded under the Agreement.

Key Policy Considerations:

- Agreement commits to a 90 day average for identifying when the 379,000 threshold for new or increased water uses has been reached. The PTTW program is based on maximum day use. Great Lakes Charter thresholds are based on a 30 day average.
- Should PTTW proposals for the irrigation of agricultural crops involving an intra-basin transfer of 379,000 litres/day be posted to the EBR Registry?

Highlights of Agricultural Sector Discussion:

- It was acknowledged that some key agricultural water users were not present at the meeting and would need to be consulted (i.e. dairy and hog producers)

- Strong concerns were raised about EBR posting for agricultural permits.
- Representatives requested information about whether other jurisdictions will do the same as there is a need for equitable treatment. **ACTION: MNR to seek clarification of practices in other Great Lakes jurisdictions.**

Sub-Group Discussion:

- Sub-group members asked whether any agricultural water transfers exist (e.g. are any agricultural users on the London pipeline?) – there are no known transfers, although research is required to confirm this.
- Members were also interested in whether any agricultural livestock operations exceed the 379,000 litres per day threshold (e.g. large hog farm operations) – confirmed by OMAFRA and by agricultural sector meeting participants that there are no known operations of that size.
- The 90 day average and seasonality of agricultural water use was discussed. It was asked whether agricultural uses are averaged over a year – the PTTW program regulates water use based on a maximum daily taking. Daily water use must now be reported on an annual basis.
- The reporting of return flow for transfers was identified as a possible challenge for the agricultural sector.
- Some members agreed that the suggested changes were a good idea.
- Consumptive use was discussed and members recognized that consumptive use would vary by the type of use (wash water versus livestock consumption) and practices (e.g. drip versus spray irrigation).
- The possible metering of agricultural use was discussed – some users meter to meet reporting requirements while others may calculate use based on pumping capacity and hours of pumping per day.
- Possible transfers of water for the trucking of water to fill farm ponds were discussed. This led to a discussion about bulk transfers for other uses such as bottling, dust suppression, filling of swimming pools etc. **ACTION: Research is needed to determine whether such uses trigger a PTTW and whether transfers across GL watershed boundaries are occurring.**

3. Master Plans, Class EA

- Caroline Cosco, MOE, walked sub-group members through a presentation given at the MSWG meeting on January 28, 2009.
- The presentation highlighted existing water infrastructure and water management policies of the Provincial Policy Statement (PPS) under the Planning Act (e.g. promoting the use of existing services, planning on a watershed scale and promotion of efficient and sustainable water use including water conservation).
- Planning tools available to meet these and other PPS requirements were highlighted, including Official Plans, Servicing Studies, Master Plans, Municipal By-Laws and other guidelines.
- The parent Municipal Engineers Association Class Environmental Assessment (MEA Class EA) recognizes the use of Master Plans for a variety of uses including broader planning or water and wastewater infrastructure. Master Plans may be undertaken under the Class EA and the MEA Class EA suggests that the Master Plan at a minimum, address phases 1 and 2 of the Class EA process. The remaining phases of the MEA Class EA would be applied to individual undertakings.
- Master Plans:
 - Examine a group of related projects and outline a framework for planning subsequent projects or works to be implemented over a period of time;
 - Include an analysis of the system as the basis for outlining a framework for future works;
 - Typically recommend a set of projects distributed geographically throughout the study area.
- SSOWA amended the OWRA to provide authority to make regulations requiring Master Plans

Key Policy Considerations:

- **Timing:** PTTW approvals come very late in the planning process. Master Plans could provide a way of incorporating GL Agreement requirements earlier in the planning process.
- **Scale:** Master Plans are undertaken at a broader scale than Class EAs for specific undertakings. The broader scale may provide a means of better addressing intra-basin transfers for the water and/or wastewater system as a whole rather than for specific undertakings

- **Acknowledgement/Approvals:** Master Plans are not mandatory and are not approved by the province – is there a way to acknowledge that GL Agreement provisions have been addressed in a Master Plan? Should the regulation-making authority of the OWRA be used to require a Master Plan where new or increased intra-basin water transfers are being considered?
- **Level of Detail:** Are Master Plans detailed enough to address Agreement intra-basin transfer requirements? Could the MEA Class EA be amended to provide guidance on how Agreement provisions should be addressed in a Master Plan?

Highlights of MSWG Discussion:

- MSWG members acknowledged that the completion of Master Plans that include how Agreement intra-basin transfer provisions will be met, undertaken under the MEA Class EA process is the “best fit”
- It was recognized that larger and smaller municipalities use Master Plans differently
- The issues of timing, scale, acknowledgement and level of detail (above) were discussed.
- A key challenge is the need for acknowledgement if Agreement provisions are satisfied in the Master Plan.
- A related concern was that the assessment of Agreement provisions may have to be re-visited for specific Class EA undertakings within the Master Plan, even if no significant changes were made.
- Members wanted to know when Regional Review, if triggered, would be undertaken (i.e. during the Master Plan, Class EAs for specific undertakings or when PTTW application is received)?
- The Municipal Engineers Association should be consulted.
- Coordination is required between planning approvals and PTTW approvals.

Sub-Group Discussion:

- Concerns expressed with the current Class EA process, e.g.:
 - Agreement alternatives not necessarily looked at (including water conservation) – provisions would need to be woven into the Master Plan
 - Large withdrawals/transfers may need to be bumped up to an individual EA where there are greater requirements, including the assessment of alternatives and evaluation of need – no “bump up” provisions for a Master Plan
 - Class EA’s too “piece meal”
- Members discussed possible need for a tiered approach
- The need to amend the MEA Class EA was highlighted – option of using regulation-making powers of SSOWA was identified.
- The question arose about who would oversee and deal with violations or adjudication if done through the OWRA rather than the Class EA? **ACTION: MOE to check with lawyers, Sarah to check with CELA lawyers.**
- In light of concerns raised, members were asked whether they supported the Class EA/ Master Plan approach, if modifications made to address need, alternatives, conservation, other elements of Agreement, or whether the EA process was considered not an appropriate vehicle. **ACTION: Members wanted additional time to think about this and discuss with others.**
- Comment raised that it would depend on the language used in the amended Class EA – e.g. words like “feasible” etc. are too subjective. Amendments need to be more prescriptive. It was acknowledged that the need for clear terminology was also received at the MSWG meeting.
- A question arose about grandfathering – i.e. if municipalities have a Master Plan or rush to complete one, is their use/transfer grandfathered? Are dates set for this? **MOE confirmed that baseline options are still being discussed and that further comments on the baseline were encouraged.** Some comments offered:
 - How are growth estimates tested as they may be wildly over-estimated?
 - There is a need to link the baseline with the Ontario Conservation Strategy – or does this just occur when they request more water?

4. Related Transferor

- Stephen Maude, MOE, walked sub-group members through a presentation provided to the MSWG on January 28, 2009.
- A “related transferor” is a person who doesn’t directly take water under a PTTW but who transfers water taken by another person who takes water under a PTTW (e.g. Toronto and Peel take water

and both provide water to York Region who would be identified as a “related transferor” under both Toronto and Peel’s PTTW)

- SSOWA amended the OWRA to allow for the naming on a PTTW both the water taker and the related transferor(s) and for imposing of terms and conditions on both the taker and on the related transferor(s) through separate schedules (e.g. return flow quality/quantity/location, monitoring & reporting, conservation and use).

Key Policy Considerations:

- There is a need for a strong cross-referencing and tracking system to other approvals e.g. Drinking Water approvals, Sewage Works approvals, other PTTW.
- Need for strong communications/consultation among parties named on a PTTW.

Highlights of MSWG Discussion:

- It was pointed out that Upper Tier and Lower Tier municipalities have different roles – specific terms and conditions may apply to one or the other (e.g. Lower Tier – distribution of water to customers, administration of water conservation programs)
- Parties named on a PTTW need to consult with one another prior to amendment of a PTTW (e.g. may be amended to address a proposed transfer increase even if the water taking remains the same – in this case, the “related transferor” would need to inform/consult with the water taker(s) before seeking an amendment to the PTTW.
- Concern expressed regarding the potential administrative complexity of the system, e.g. could have many parties (e.g. taker(s), related transferor(s) – including both upper tier and lower tier municipalities which serve different roles.

Sub-Group Discussion:

- It was identified that this situation could also apply to non-municipal situations – are other sectors being consulted? Identified as a next step.
- Members also identified that a “related transferor” could also be transferring sewage (e.g. York Region) – The Transfer of Sewage was identified as a separate topic of discussion (see topic 5 below).
- The group discussed how this would be applied in a water transfer rather than a sewage transfer situation.
- It was recognized that this provision was a great step forward.

5. Sewage Transfers

- Stephen Maude walked sub-group members through the presentation provided at the MSWG meeting on January 15, 2009
- While the discussion under the “related transferor” identified complex situations where transfers of both water and sewage were taking place (e.g. York), for ease of discussion Stephen focused on situations where there is just a transfer of sewage (e.g. a water taking from one GL watershed with a wastewater system that crosses into and discharges into another GL watershed)
- SSOWA amended the OWRA to grant authority to make regulations controlling the transfer of sewage and the prescribe terms and conditions.

Key Policy Considerations:

- Whether/how Agreement Exception Criteria can be met for transfers of sewage.

Highlights of MSWG Discussion:

- Bottom line – “a transfer is a transfer”, therefore transfers of sewage must be required to meet the intent of the Agreement as water and wastewater are all part of the water balance.
- MSWG members acknowledged that there may be different ways of meeting the Exception Criteria e.g. conservation through reduction of inflow and infiltration.

Sub-Group Discussion:

- The complex York Region situation was discussed where some water is return flow (i.e. water transferred from the Lake Ontario watershed to the Lake Huron watershed, then returned as wastewater back to the Lake Ontario watershed), the wastewater also represents a transfer itself

(i.e. some water taken from Lake Huron watershed, is then transferred as sewage to Lake Ontario watershed).

- Members highlighted that in this case each transfer must be addressed separately rather than as a “net transfer” or as a broader “balancing out” of the water balance.
- The challenges associated with sewage flow monitoring were identified. Others identified that there are ways to estimate return flow/wastewater transfers so this should not be used as an excuse not to consider these transfers independently.
- The discussion turned to the issue of cumulative impacts e.g. the scale of assessment under the Agreement (e.g. basin-wide versus local watershed). The need to consider both Basin wide and local impacts was highlighted.
- This led to a discussion of the thresholds for intra-basin transfer regulation. Some members suggested that Ontario should be more restrictive and apply lower thresholds. When asked what thresholds were recommended, members requested additional time for consideration.
- The discussion of cumulative impacts and thresholds led to a discussion of the need for linkages with the Ontario Low Water Response Program and Climate Change consideration.

6. Next Steps

- Stephen Maude, MOE, re-visited discussion of the face to face meeting to be held this Thursday afternoon, February 5, 2009 (55 St. Clair Ave. W, 2nd Floor, beginning at noon). He then canvassed sub-group members on topics they wanted to discuss at the meeting. Suggestions included:
 - Why is consumptive use used for the 19 MLD intra-basin transfer threshold?
 - Difficulties in measuring amounts from multiple sources in one plant
 - Water
 - Wastewater
 - Cumulative impacts
 - Need to factor in climate change impacts – how to relate to PTTW (e.g. Lake Michigan-Huron estimated to decline 1 metre by 2050)
 - Process for identifying a “ceiling” for cumulative impacts and what happens when that ceiling is reached?
 - Cumulative impact assessment process, scientific issues – how to measure?
 - Need to factor in linkage to Ontario Low Water Response Program (e.g. process to reduce PTTW takings under defined stages of low water)
 - Further discussion of pros and cons of using the Class EA rather than the OWRA – and how Class EA would need to be modified if it was used. Related issue – public involvement in Class EA – only Schedule C (or Individual EA) provides adequate involvement.
 - Further discussion of the Baseline/Grandfathering – and how to mandate water conservation within the baseline.
 - Water use reporting to the Regional Body – will Ontario continue to report uses over 50,000 litres per day?
- Chief Isadora Bebamash asked whether other First Nation communities surrounding the Great Lakes were providing input. Paula Thompson responded that yes a parallel effort is underway to involve Basin First Nations. ACTION: Karen Abrahams, MNR and Rhonda Gagnon, UOI to discuss with Chief Bebamash ongoing parallel effort, including upcoming meetings with First Nations in March.
- Stephen wrapped up the meeting by highlighting upcoming consultation opportunities:
 - AAP calls – Feb. 11, 12 (Report Backs on all meetings to date for all themes-i.e. water conservation/efficiency, water charges, intra-basin water transfers)
 - AAP face to face meeting – Feb. 18-19 (Options, recommendations on all themes)
 - Posting of Proposal Paper on EBR – Spring
 - Spring – Summer – further Consultation
 - Regulations - Fall

Intra-Basin Water Transfers Meeting

Date: February 5, 2009

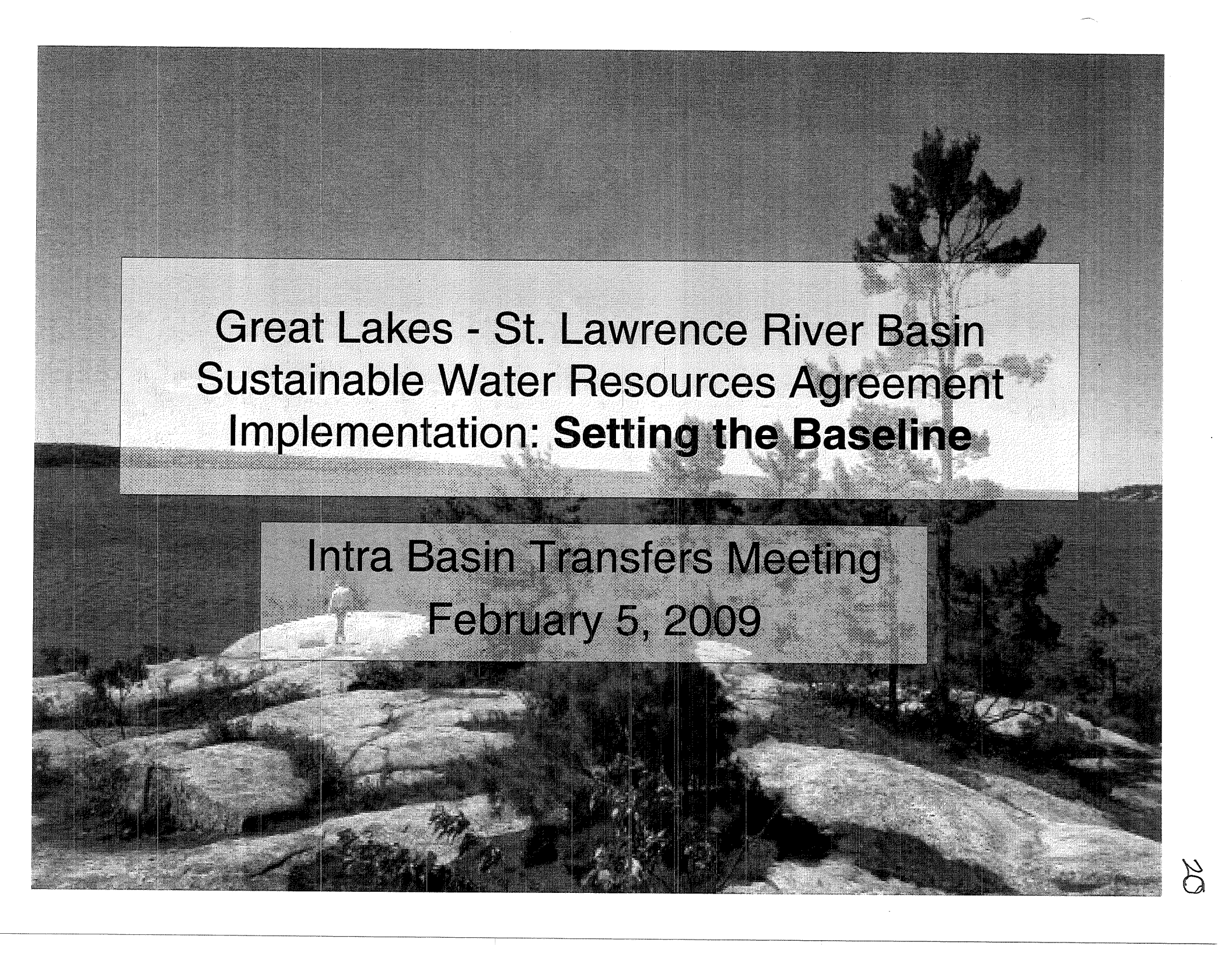
Location: 8th floor, Boardroom A/B, 55 St. Clair Avenue West, Toronto.

NOTICE: This location is scent-free. Please refrain from wearing perfume, cologne or other heavily scented products.

AGENDA

- 12:00 noon Arrival (lunch provided)
- 12:30 PM Welcoming remarks and introductions
 Review of session agenda and format for the meeting
- 12:45 PM Review – Agreement Commitments: *Setting the Baseline*
- 1:15 PM Exception Criteria: *Class EA or OWRA?*
 Exploration and discussion – key questions
- 2:15 PM Exception Criteria: *Cumulative Impacts*
 Exploration and discussion – key questions
- 3:15 PM Exception Criteria: *Water Conservation*
 Exploration and discussion – key questions
- 4:15 PM Wrap-up and next steps





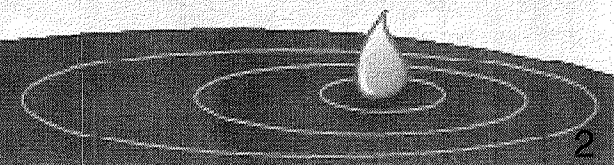
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: **Setting the Baseline**

Intra Basin Transfers Meeting
February 5, 2009



Outline of Presentation

- Review of Agreement commitments
- What is a withdrawal, consumptive use, transfer?
- Challenges in setting the baseline





Agreement Commitments: Establishing the Baseline

ARTICLE 207 – APPLICABILITY

Determining New or Increased Diversions, Consumptive Uses or Withdrawals

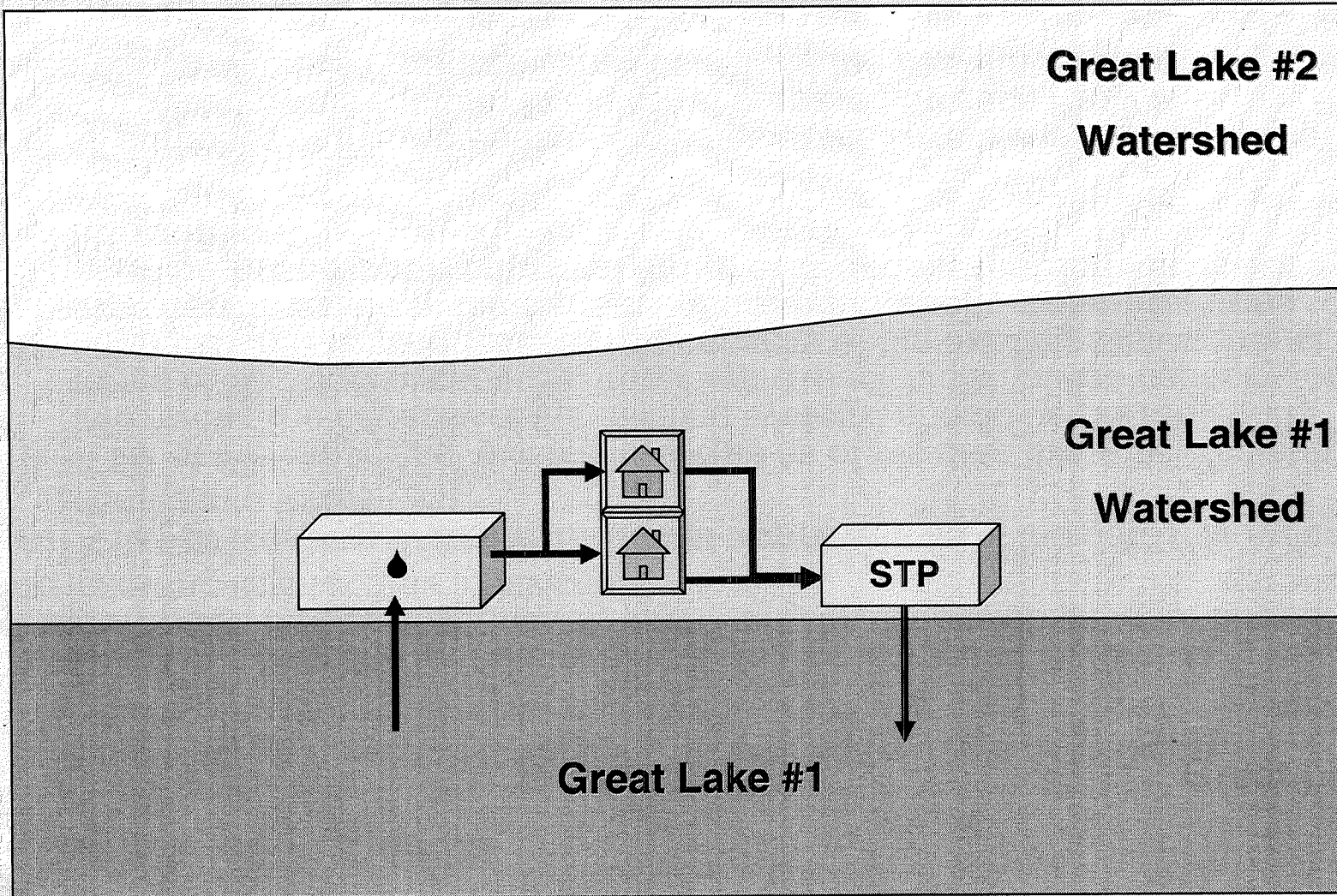
1. To establish a baseline for determining a New or Increased **Diversion, Consumptive Use or Withdrawal**, each Party shall develop either or both of the following lists for their jurisdiction:
 - a. **A list of existing Water Withdrawal approvals** as of the date this Article comes into force;
 - b. A list of the capacity of existing systems as of the date this Article comes into force. The capacity of the existing systems should be presented in terms of Withdrawal capacity, treatment capacity, distribution capacity, or other capacity limiting factors. The capacity of the existing systems must represent the state of the systems. **Existing capacity determinations shall be based upon approval limits or the most restrictive capacity information.**

For all purposes of this Agreement, volumes of the Diversions, Consumptive Uses or Withdrawals set forth in the list(s) prepared by each Party in accordance with this Paragraph shall constitute the **baseline volume**.

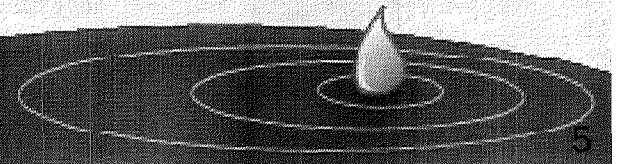
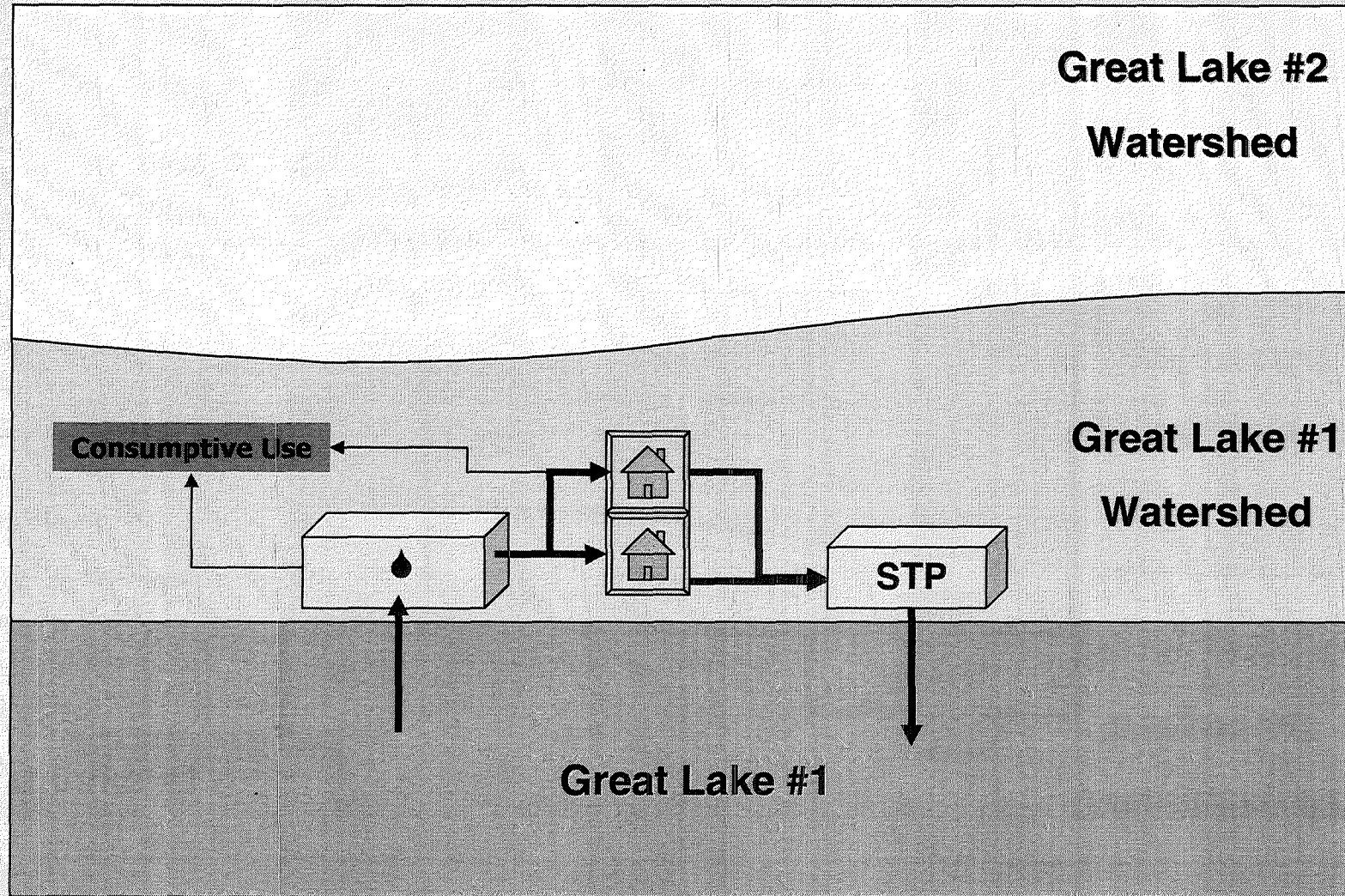
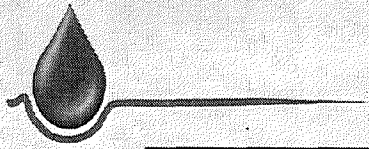
The list(s) shall be furnished to the Regional Body within 1 year of the date this Article comes into force.



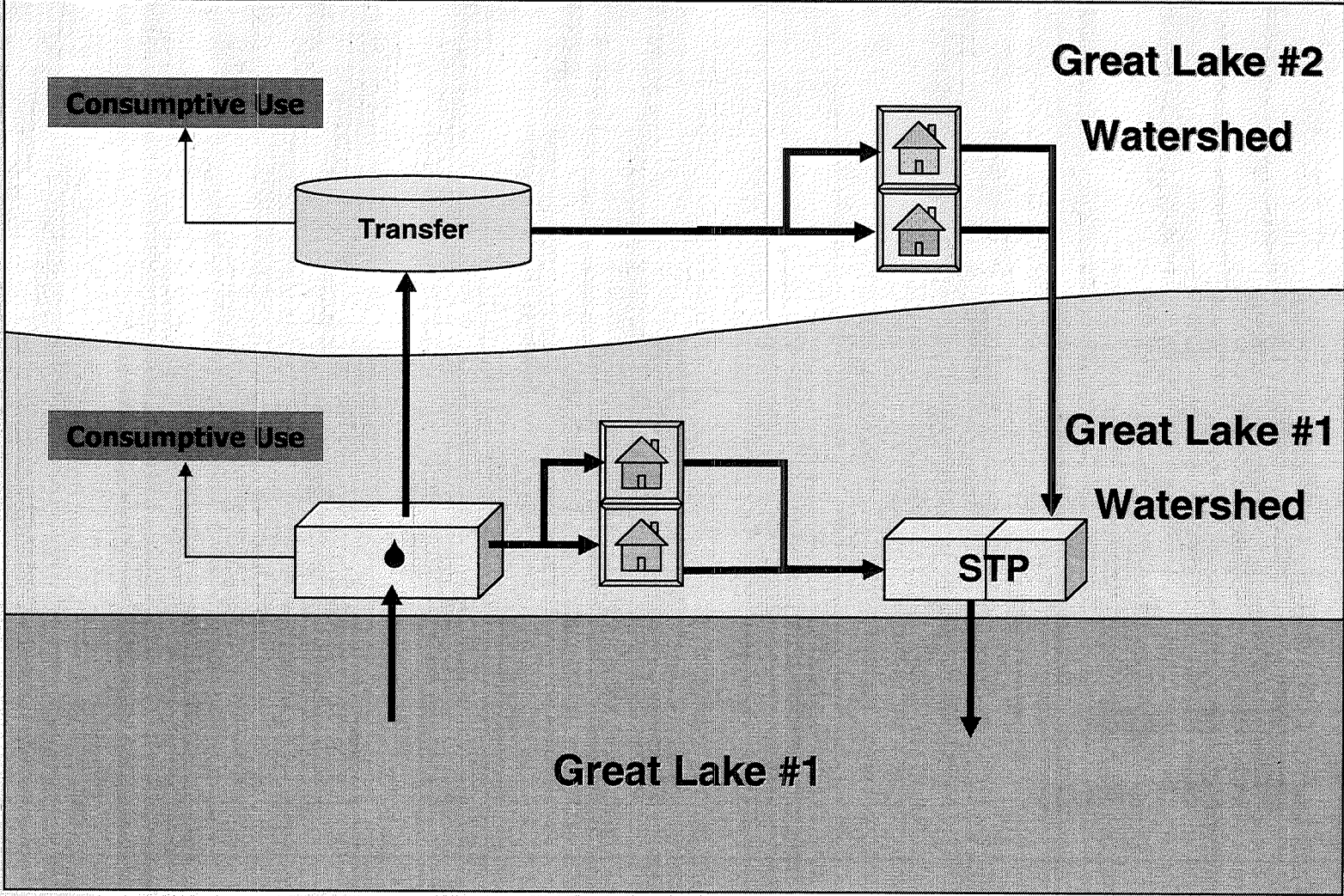
Withdrawal



Consumptive Use



Diversion (Transfer)





Baseline: Existing Information Sources

Water Withdrawal Approvals List

- The Permit to Take Water Database could be used to identify a list of existing water withdrawal approvals.

Capacity of Existing Systems

Withdrawals

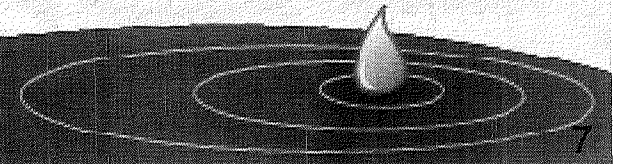
- Several “capacity” approval instruments in Ontario: Drinking Water Works Permit (C of A), Permit to Take Water, EA approval, Master Plan, Official Plan.

Consumptive Uses

- Consumptive use information could be gathered by applying coefficients by water use category. AquaResources has been retained by the MNR to develop a consumptive water use science synthesis and to develop a methodology for standardizing calculations to inform supporting regulations.

Transfers

- Ontario does not have an instrument that tracks the amount of water that is transferred from one Great Lakes watershed to another (an intra-basin transfer). This amount must be determined in order to develop the baseline.

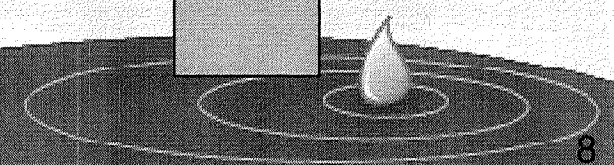
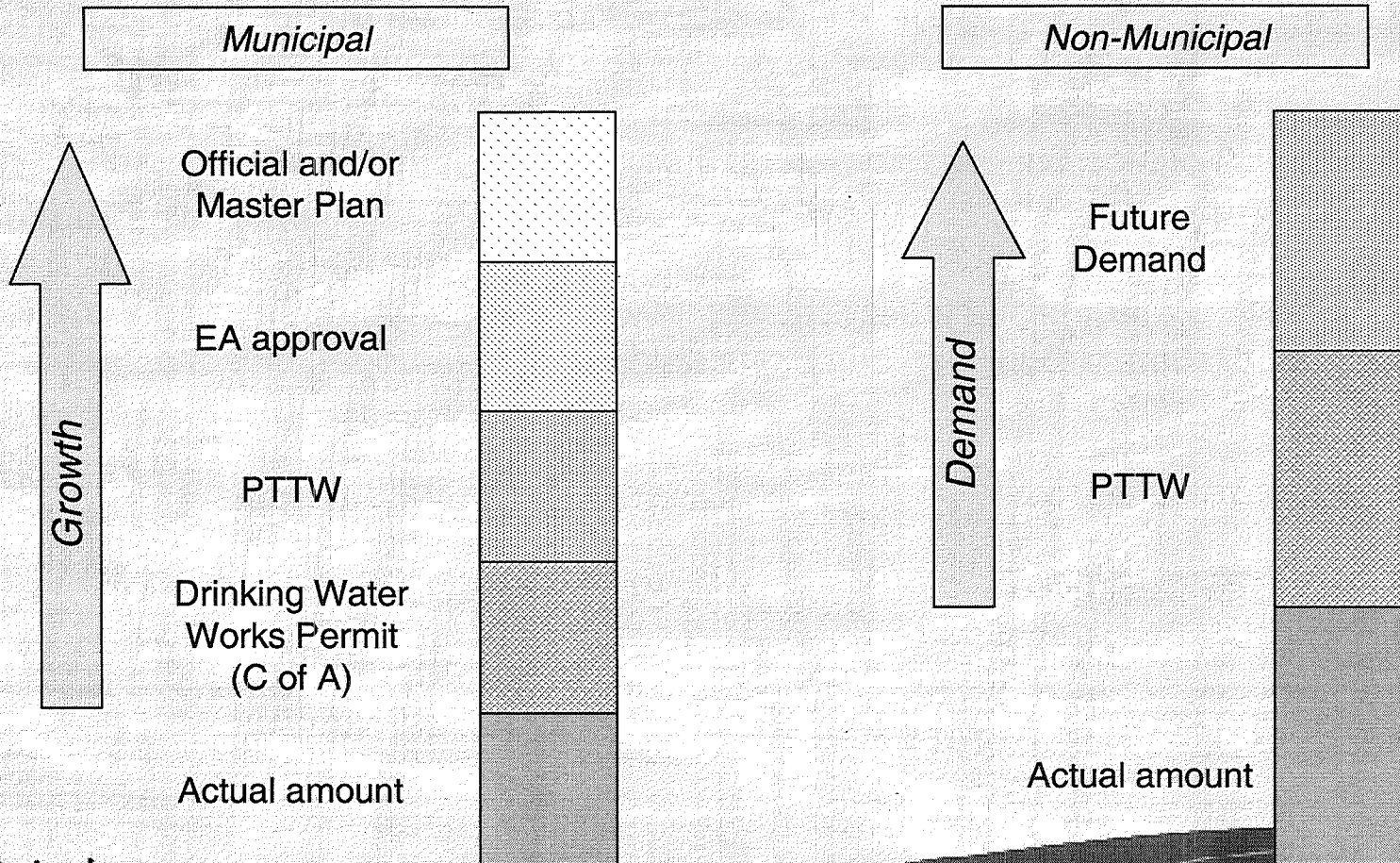


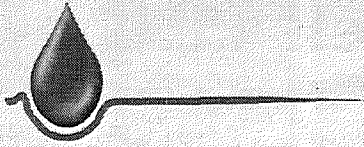


Baseline for Transfers: the Challenge

Various approaches could be used to determine the capacity of existing systems.

“Withdrawal capacity, treatment capacity, distribution capacity, or other capacity limiting factors”





Beyond the Baseline

*Baseline
amounts to be
identified*

*Managing **new or
increased takings**
beyond baseline*

Withdrawals

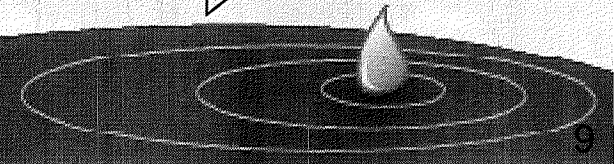
Decision Making Standard

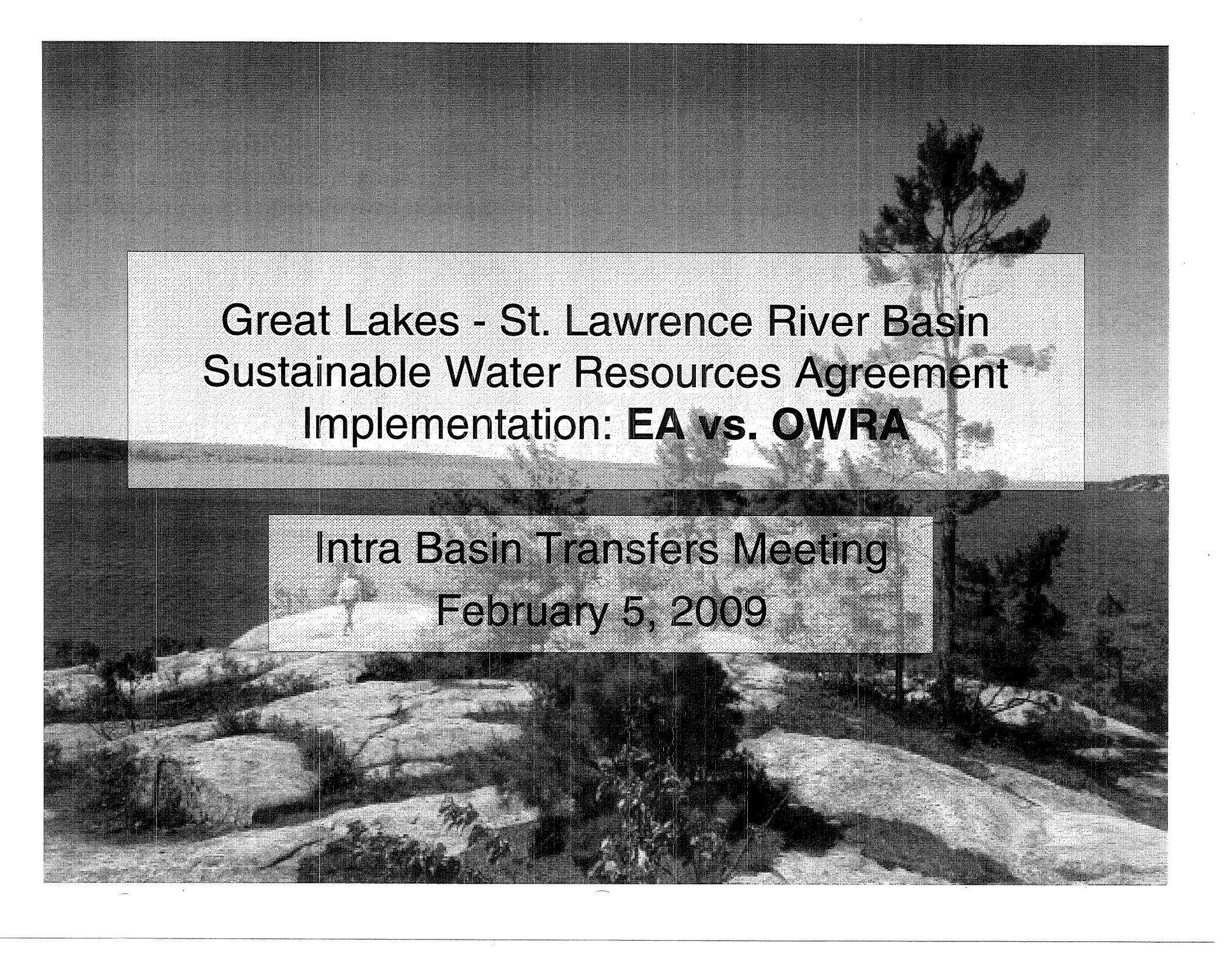
Consumptive Uses

Decision Making Standard

Diversions (Transfers)

Exception Criteria





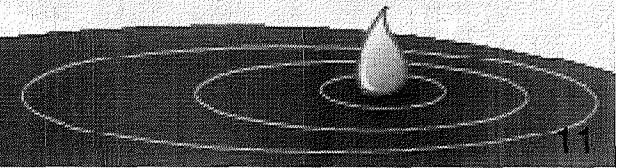
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: **EA vs. OWRA**

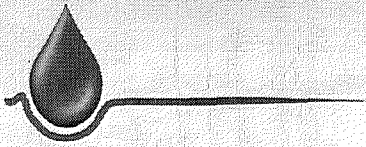
Intra Basin Transfers Meeting
February 5, 2009



Outline of Presentation

- Review of Exception Criteria
- Municipal Class EA
- Permits to Take Water (PTTW)
- Municipal Class EA vs. OWRA (PTTW)
- Exploration and Discussion

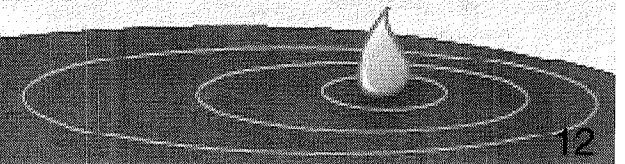




Agreement Provisions

Intra-Basin Transfer Exception Language:

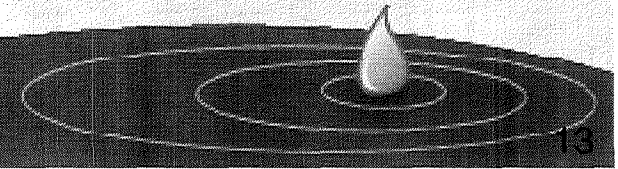
- “There are no other **feasible, environmentally sound and cost effective alternatives** to the transfer...”
- “It has been demonstrated that conservation of existing water supplies is not a **feasible, environmentally sound and cost effective alternative** to the transfer...”





Exception Criteria for New or Increased Transfers

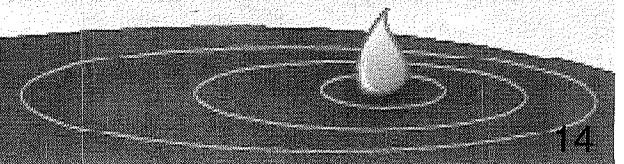
1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement





Municipal Class EA

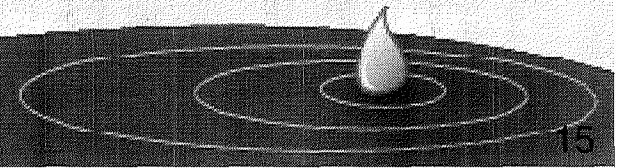
- The Municipal Class EA can be used by all municipalities within Ontario as it allows municipalities to plan, design and implement municipal water and wastewater projects without receiving individual *EA Act* approval.
- The Municipal Engineers Association (MEA) is a volunteer organization who is responsible for the review and administration of the Municipal Class EA.
- MOE approves the Municipal Class EA which is reviewed every 5 years.





Municipal Class EA

- The proponent, being a municipality or designated private sector activity or a private sector developer, is responsible for interpreting the Municipal Class EA and ensuring the process requirements are met.
- Onus is on the proponent to demonstrate compliance with the Municipal Class EA.
- MOE provides technical comments, advice, guidance and interpretation of the Municipal Class EA.
- Proponent is still required to obtain all necessary approval instruments (e.g. PTTW & CofA) and is required to follow the appropriate review process for each approval instrument (i.e. EA ≠ pre-approval for instruments)





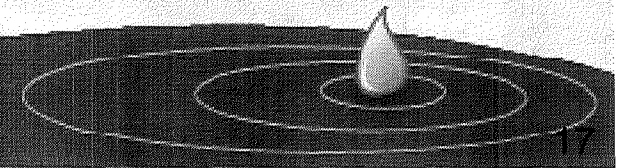
Municipal Class EA Five-Phase Planning Process

1. Identification & description of problem
2. Identification & evaluation of alternative solutions & identification of preferred solution
3. Alternative design concepts for preferred solution
4. Preparation of environmental study report (ESR)
5. Implementation of preferred solution



Permit To Take Water

- **Ontario Water Resources Act (1961)**
 - “No person shall take more than a total of 50,000 litres in a day...without at Permit.”
 - Some exceptions (e.g., emergency/firefighting, domestic use, watering of livestock).
- **Water Taking and Transfer Regulation (1999)**
 - Regulation in 1999 Ontario prohibited inter-basin transfer of water out of Ontario’s three basins (Great Lakes- St. Lawrence, Hudson Nelson basins)
- **Water Taking Regulation (Regulation 387/04)**
 - Includes requirements for monitoring, reporting, notice, restrictions, MOE responsibilities, etc.
- **Safeguarding and Sustaining Ontario’s Water Act (2007)**
 - In 2007 the inter-basin provisions from Reg. 387/04 were placed in legislation (OWRA, s. 34.3)
 - Provisions for implementation of the Agreement placed in legislation (OWRA)





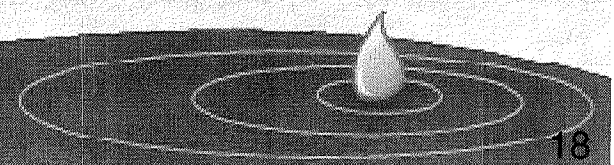
PTTW Program Purpose & Principles

Purpose of Permit to Take Water (PTTW) Program

- Fair sharing, conservation and sustainable use of the waters of the Province.
- Prevent water takings from causing unacceptable impacts to natural environment and existing water users.

Principles

- Use an ecosystem approach.
- Control water takings to prevent unacceptable interference.
- Employ adaptive management.
- Consider cumulative impacts.
- Incorporate risk management principles into the application and review process.
- Promote public and local agency involvement.

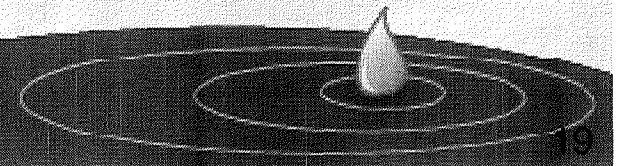




PTTW – Matters considered

Matters considered by MOE Director:

- The need to protect the natural functions of the ecosystem;
- Water availability – potential impact on water balance and on existing uses; low water conditions; high use or medium use watershed
- The use of water (e.g. water conservation);
- Other issues, including interests of other persons





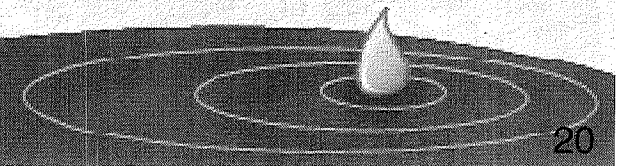
Municipal Class EA vs. PTTW

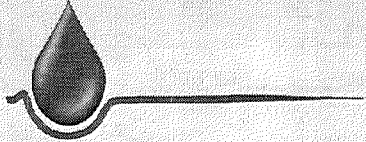
Municipal Class EA

- Proponent driven
- Forward looking
- Can use Master-planning approach
- Can be integrated with the *Planning Act*
- Considers social, economic, and environmental impacts
- Considers alternatives
- Can be appealed (i.e. Part 2 Order/Bump-up)
- Class EAs are sector specific (e.g. Municipal sector)

Permit To Take Water

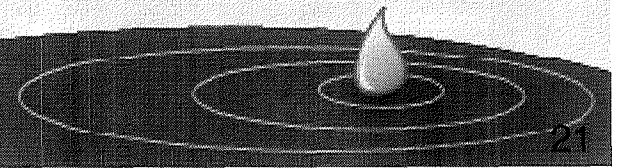
- Director approval
- Occurs late in planning
- Considers water availability, planned municipal use & ecosystem function
- Consider water conservation; cumulative impacts
- Does not consider alternatives
- Consistent approach with non-municipal Permit Holders






Questions for Discussion

1. What are the advantages and disadvantages of using the Class EA vs. the PTTW for applying the exception criteria?
2. Would a combined approach work? If yes, how?
3. Are there alternative approaches which should be considered? What would be the advantages and disadvantages?



A black and white photograph of a rocky landscape. In the foreground, there are several large, flat, light-colored rocks. In the background, there is a large, dark tree with a dense canopy. The sky is light and appears overcast. The overall scene is a natural, outdoor setting.

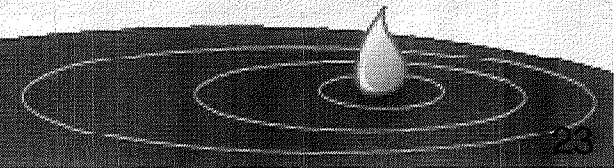
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: **Cumulative Impacts**

Intra-Basin Water Transfers Meeting
February 5, 2009



Outline of Presentation

- Definition of cumulative impacts
- Cumulative impacts and new or increased transfers
- Periodic assessments of cumulative impacts
- Ontario's current initiatives
- Moving forward
- Exploration and Discussion

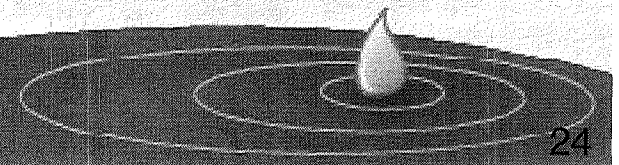




Definition of Cumulative Impacts

Agreement Definition:

- “**Cumulative impacts**” mean the impact on the Great Lakes – St. Lawrence River Basin Ecosystem that results from incremental effects of all aspects of a Withdrawal, Diversion or Consumptive Use in addition to other past, present and reasonably foreseeable future Withdrawals, Diversions and Consumptive Uses regardless of who undertakes the other Withdrawals, Diversions or Consumptive Uses. Cumulative Impacts can result from individually minor but collectively significant Withdrawals, Diversions and Consumptive Uses taking place over a period of time.





Exception Criteria for New or Increased Transfers

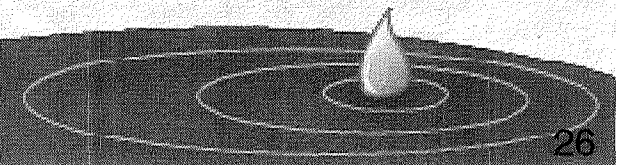
1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional **criteria may be added by regulation to implement findings of the cumulative impact assessment** provided under Article 209 of the Agreement

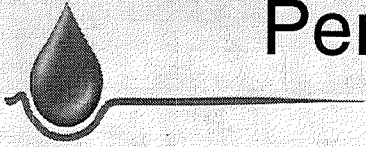


Periodic Assessments of Cumulative Impacts

Parties to Agreement committed to:

- Coordinating collection and application of scientific information to develop mechanisms to assess cumulative impacts.
- Collectively conducting periodic assessment of cumulative impacts. Assessment to be done the earlier of:
 - Every 5 years
 - Each time incremental losses to basin reach 190,000,000 litres per day average in any 90-day period in excess of quantity at time of last assessment
 - At the request of one or more of the Parties
- Developing collaborative science strategy.





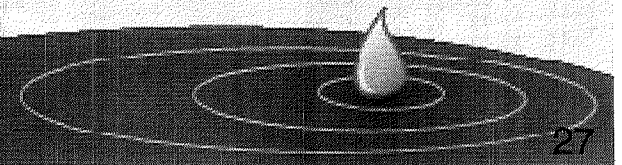
Periodic Assessments of Cumulative Impacts

Assessment shall:

- Form basis for review of the Standard and Exception Standard and their application.
- Consider climate change or other significant threats.
- Take into account current state of scientific knowledge or uncertainty and exercise caution in cases of uncertainty.
- Consider adaptive management principles and approaches.

Public comment:

- Minister will post assessment for public comment & after considering comments post statement of actions Ontario intends to take.

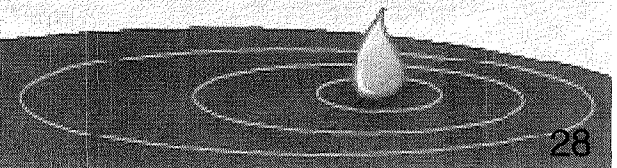


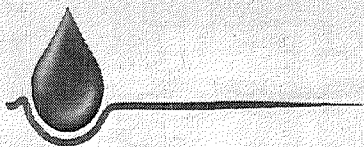


Current Ontario Initiatives

Permit to Take Water Program

- Consideration of cumulative impacts is one of the principles of the PTTW program.
- High and medium-use watersheds defined in regulation; provides preliminary appraisal of cumulative impacts on tertiary watershed scale.
- Director may initiate watershed scale or aquifer scale assessments and may engage water takers to collectively reduce burden on watershed and better manage demand for water.
- Water taking data submitted to the Water Taking Reporting System provide improved input to water budgets and evaluation of PTTW applications.
- Links to Ontario Low Water Response.

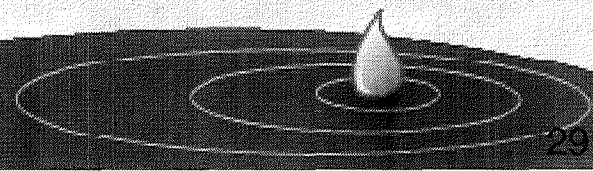




Current Ontario Initiatives

Ontario Low Water Response (OLWR)

- Uses precipitation and stream flow indicators to categorize low water levels in a watershed, including drought conditions, and recommends action.
- Community-based Water Response Teams comprising local water users, First Nations, and government agencies.
- Conditions built into PTTW require restrictions during low water conditions such that natural environment is protected and interferences with other uses do not occur.
- Outreach to water takers at declaration of Low Water Condition to obtain reductions in water takings.
- Historical frequency and degree of OLWR Levels are considered in review of PTTW applications.

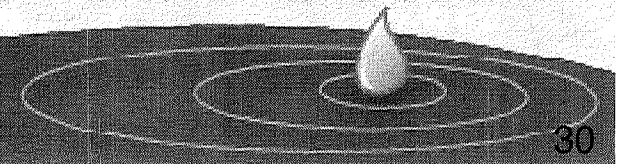




Current Ontario Initiatives

Source Protection: Water Budgets & Water Quantity Risk Assessment

- Water Quantity Risk Assessment Framework requires that all watersheds in source protection areas be evaluated with respect to their stress level based on a tiered approach.
- Requires consideration of climate change.
- Will help flag watersheds and, where required, subwatersheds where there may be concerns with taking of water related to PTTW.
- May inform the designation of high use watersheds and subwatersheds and evaluation of PTTW.
- Will contribute to better understanding of cumulative impacts and further enhance ability to assess and address cumulative impacts of water takings on a watershed scale.



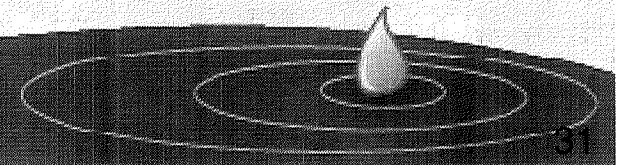


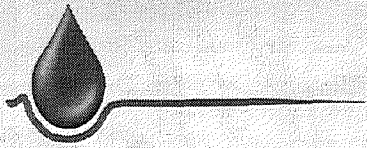
Moving Forward

Great Lakes partners are working collectively to address key *information* and *science* needs related to assessing cumulative impacts

Water Use Information Reporting

- Article 301 of the Agreement commits the Parties to take specific steps to improve water use information and how it is applied
- Council of Great Lakes Governors is facilitating the development of recommendations for water use reporting and data management through a Water Use Information Committee, co-chaired by Ontario and Minnesota
- Proposed guidelines are being developed by the Committee regarding
 - **Water User Reporting Protocols** – data elements, acceptable methods of measuring
 - **State/Provincial Reporting Protocols** – acceptable methods for consumptive use reporting (e.g., reporting vs. coefficients), geographic scale for reporting (e.g. GL watershed, sub-watershed, aquifer)
 - **Regional Data Base Management** – strengths & weaknesses of current GLC water use data base – will current database meet needs? Any changes to water use categories? Database funding, public access, how to address confidentiality concerns?
- Draft guidelines are being developed for public consultation; final water use reporting recommendations are scheduled for June 30, 2009





Moving Forward

Developing a Science Strategy

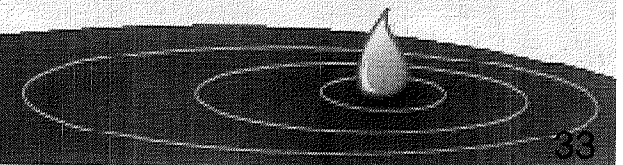
- Article 302 of the Agreement commits the Parties to provide leadership in developing a collaborative Strategy to strengthen the scientific basis for sound water management decision-making
- The Strategy will support:
 - **Improved understanding of the individual and cumulative impacts of withdrawals from various locations and water sources on the basin ecosystem**
 - **A mechanism by which cumulative impacts may be assessed**
 - **The periodic assessment of cumulative impacts on a Great Lake and St. Lawrence River watershed basis**
 - Improved scientific understanding of the waters of the basin
 - Improved understanding of the role of groundwater
 - Development, transfer and application of science, research related to water conservation and water use efficiency
- Council of Great Lakes Governors are developing a draft work plan to guide the states and provinces in meeting these commitments





Exploration and Discussion

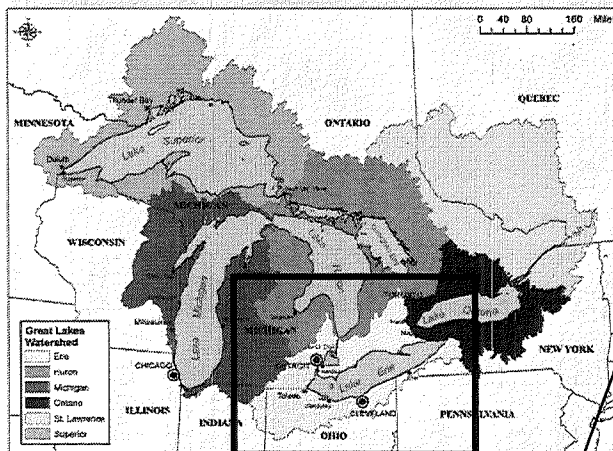
- Scale of impacts/analysis – local, tertiary watershed, Great Lakes Watershed, Great Lakes Basin ecosystem.
- Role of individual proponents vs. government in assessing and responding to cumulative impacts.
- Improving on existing information and programs (e.g. PTTW program requirements, water budgets) to better address cumulative impacts.



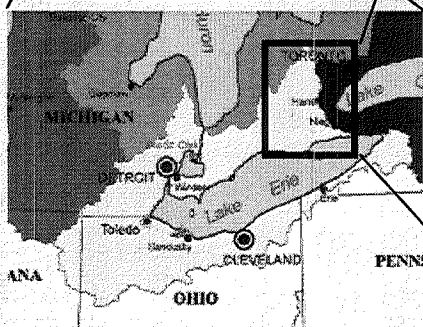


Scale Considerations

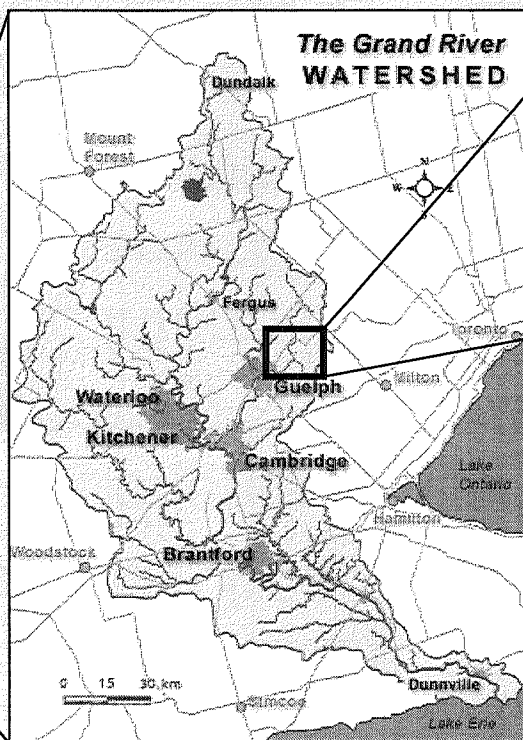
Great Lakes Basin



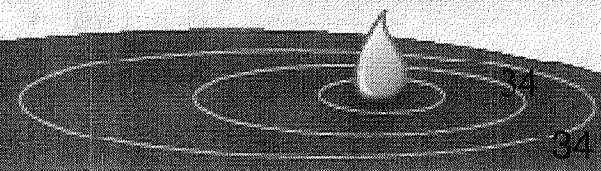
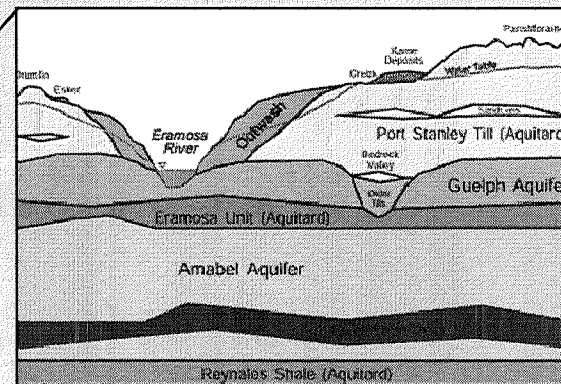
Great Lake Watershed

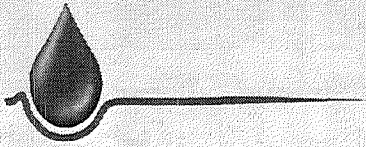


Watershed/Sub-Watershed



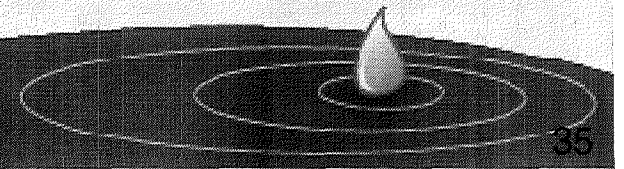
Aquifer





Questions for Discussion

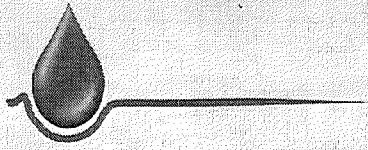
1. How should cumulative impacts be considered across various scales?
2. What should be the role of individual proponents versus the government in assessing and responding to cumulative impacts?
3. What improvements to existing information and programs are needed to better address cumulative impacts?





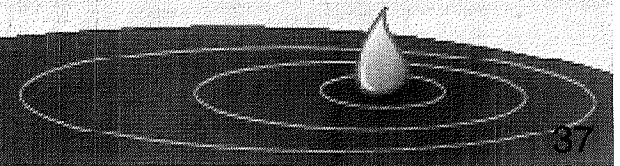
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: **Water Conservation**

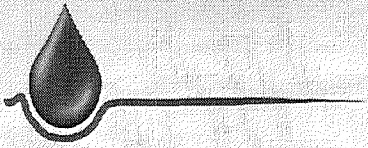
Intra Basin Transfers Meeting
February 5, 2009



Outline of Presentation

- Water conservation and new or increased transfers
- Existing conservation requirements
- Applying water conservation and efficiency to new or increased transfers
- Exploration and Discussion

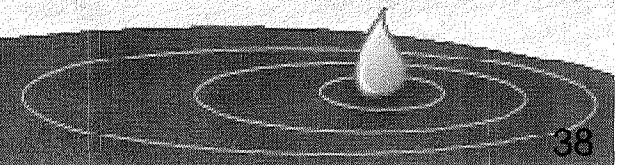




Agreement Provisions

Intra-Basin Transfer Exception Language:

- “There are no other **feasible, environmentally sound and cost effective alternatives** to the transfer...”
- “It has been demonstrated that conservation of existing water supplies is not a **feasible, environmentally sound and cost effective alternative** to the transfer...”





Exception Criteria for New or Increased Transfers

1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement



Existing Requirements

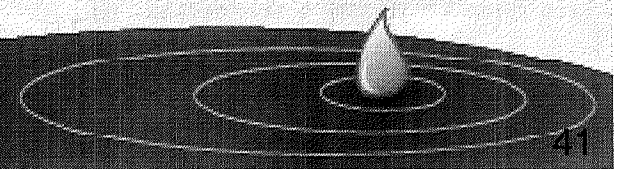
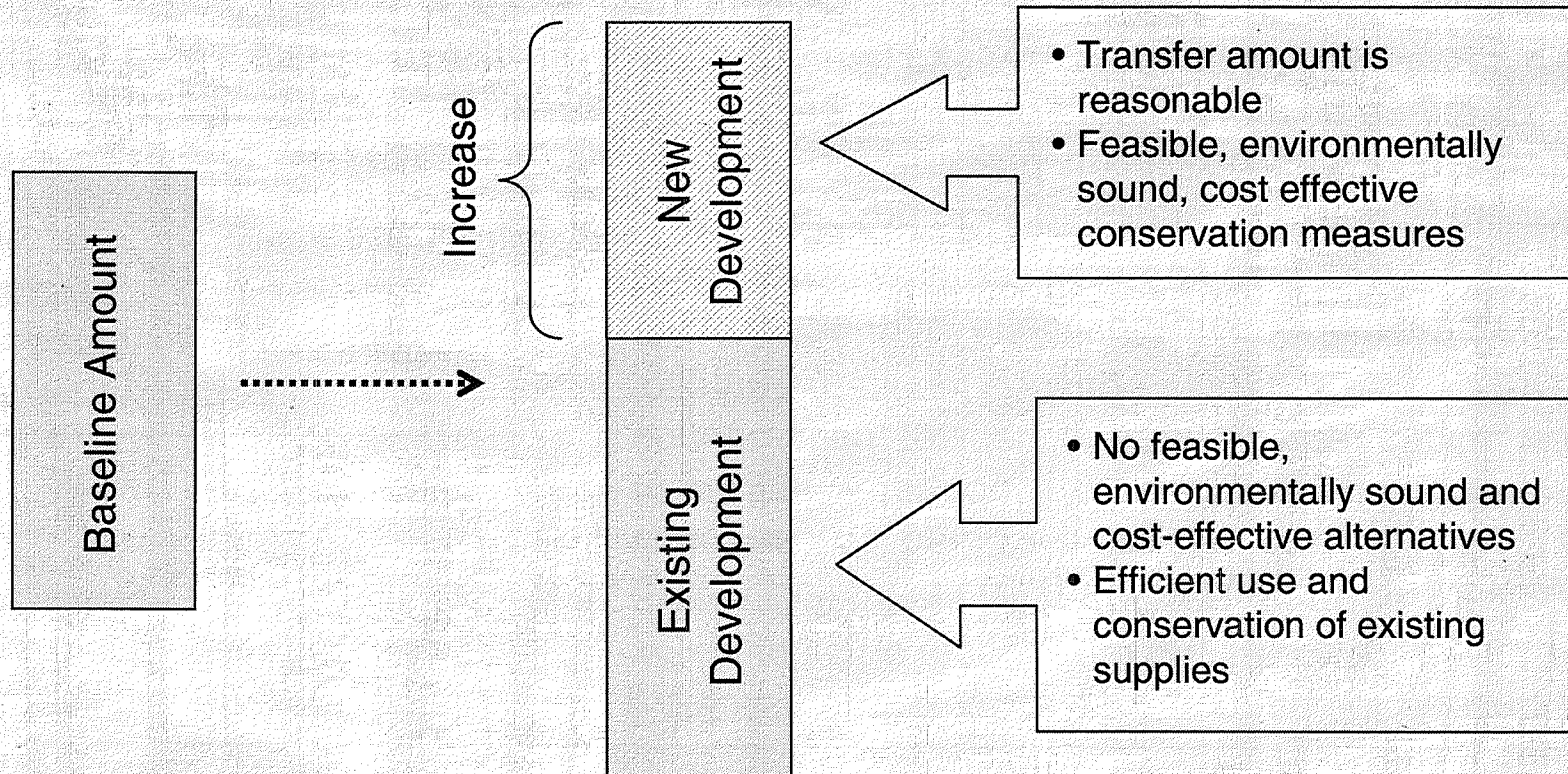
- Review of alternatives an existing part of the EA process.
- Under the current PTTW program, PTTW Directors may require applicants to demonstrate conservation to reduce/avoid the need for an increased water taking.
- The existing PTTW application and review process requires that conservation be considered (schedule included in application to document current and anticipated conservation measures).



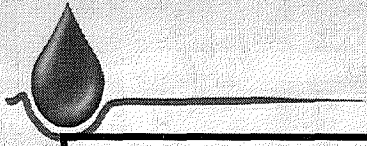


Where could Water Conservation and Efficiency Apply?

Scenario: After baseline has been established, a municipality is requesting an increase in their transfer.

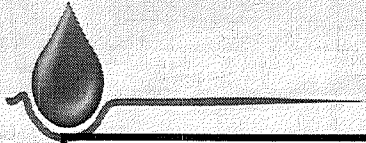


Existing Development



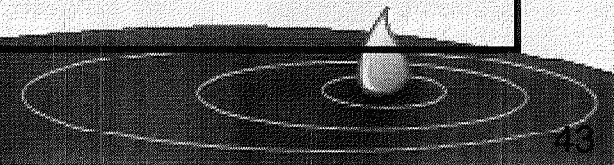
Exception Criteria	Policy Considerations/Options
No feasible, environmentally sound and cost-effective alternatives	<ol style="list-style-type: none">1. Establish performance indicators and/or benchmarks which must be met prior to any future transfer e.g., British Columbia Living Water Smart Plan - By 2020, water use will be 33% more efficient and 50% of new municipal water needs will be acquired through conservation, residential water use per capita, water loss (International Leakage Index)
Efficient use and conservation of existing supplies	<ol style="list-style-type: none">2. Require the most effective water conservation and efficiency measures to already be implemented e.g., 100% metering of all municipal customers, full cost recovery of water and sewer services, increasing block rates, aggressive leak detection and repair, lawn watering by-laws, demonstrated water efficiency at municipal facilities3. Applicant must show how improvements in water conservation and efficiency in existing development will be sustained.





New Development

Exception Criteria	Policy Considerations/Options
Transfer amount is reasonable	<ol style="list-style-type: none">1. Establish performance indicators and/or benchmarks for new development, with regular monitoring and reporting e.g., residential water use per capita, water loss (International Leakage Index)
Feasible, environmentally sound, cost effective conservation measures	<ol style="list-style-type: none">2. Require the most effective water conservation and efficiency standards and measures for new development e.g., leading-edge water efficient technology and services such as LEED and WaterSense, rainwater harvesting, greywater reuse, water efficient landscape by-laws, rain sensors and ET controllers for automatic irrigation systems, and all measures for existing development (as applicable)3. Encourage other effective water conservation and efficiency measures e.g., rebates, landscape consultations, industrial and commercial financial incentive programs, public education and awareness

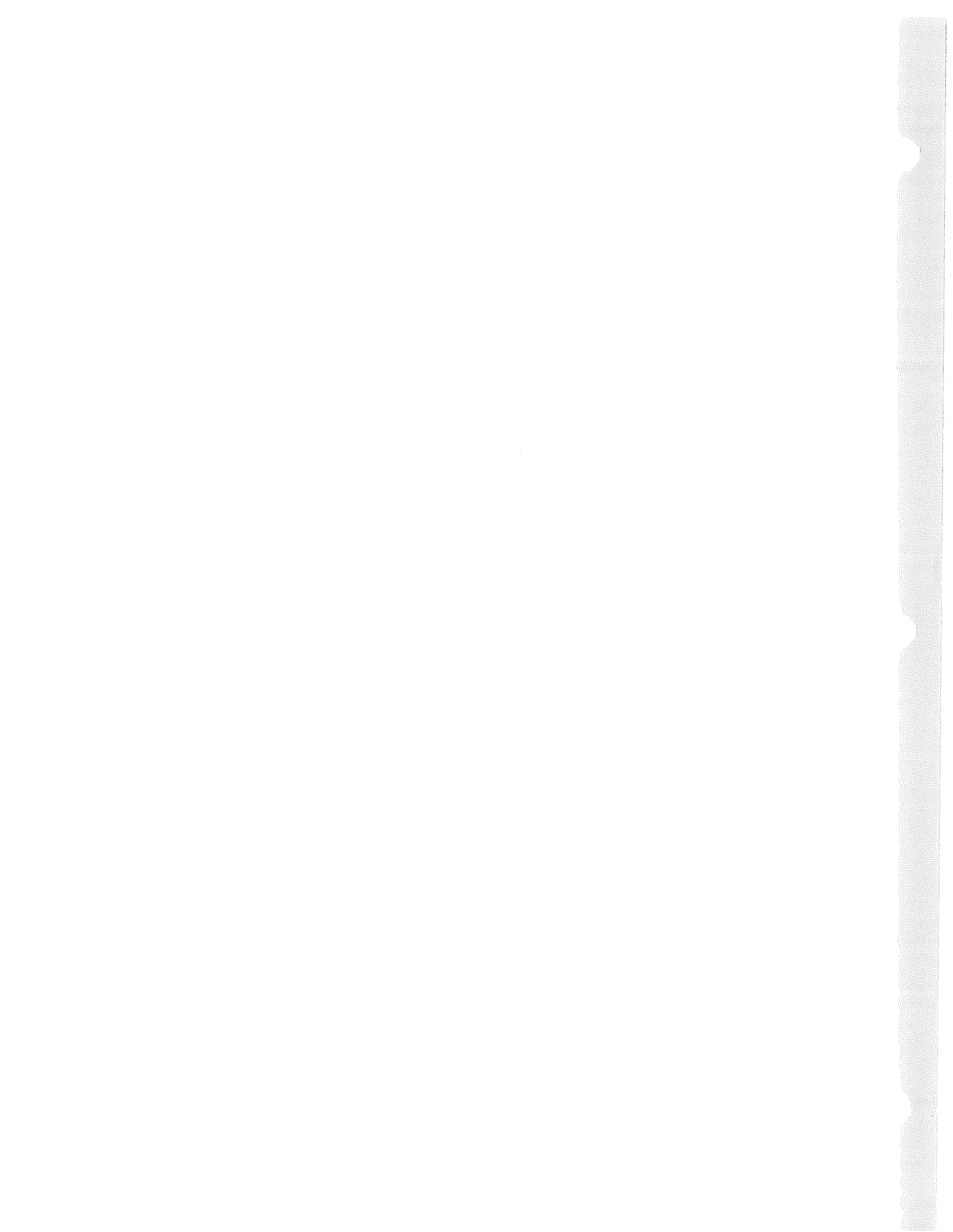




Questions for Discussion

1. Re: water conservation and efficiency, how strong should the requirements be for the demonstration of water conservation for existing development?
2. Re: water conservation and efficiency, how strong should the requirements be for the demonstration of efficient water use and conservation for new development?
3. How would the requirements for existing and new development be implemented?





**Intra-Basin Water Transfers Consultation
February 5, 2009**

A consultation meeting on the *Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement* took place in Toronto on February 5, 2009. The meeting was held to discuss some key questions/issues raised by stakeholders concerning intra-basin water transfers and water conservation and efficiency. Ten individuals participated in the meeting, representing environmental non-government organizations (ENGOS) and municipalities. (Refer to Attachment 1 for the list of participants).

The goal of the meeting was to present attendees with an overview of the

- Agreement Commitments: Setting the Baseline;
- Exception Criteria Considerations: Class EA or OWRA?
- Exception Criteria: Cumulative Impacts
- Exception Criteria: Water Conservation and Efficiency

For a copy of the meeting Agenda, refer to Attachment 2.

After the presentation on *Setting the Baseline*, the following *general* comments and questions were raised by participants:

- It would be helpful to know how much water is actually being used under a Permit – What is the unused portion? Concern that takers could store water for future use and also come back and ask to increase taking for future considerations when not using current capacity.
- How many PTTWs involve an intra-basin transfer?

Subsequent to the presentation on *Exception Criteria Considerations: Class EA or OWRA*, participants' *general* questions and comments were as follows:

- When does this process really start? If there is a political commitment before the EA how much scrutiny is there at the EA? Isn't the project rubber-stamped once the political commitment is made?
- With the new infrastructure funding program through MEI, concerned that some projects will have a green light that shouldn't (e.g., intra-basin transfer for City of London)
- If the EA is approved, do instruments have to be posted to the EBR? (response was "No")

Participants provided the following *general* comments and questions following the presentation on *Exception Criteria: Cumulative Impacts*:

- What is known about the cumulative impacts on the basin?
- No one has really examined what the cumulative impacts are in and around the Great Lakes.
- No individual taking is going to be the tipping point – need to know what the cumulative impacts are for the ecosystem as a whole

Subsequent to the presentation on *Exception Criteria: Water Conservation and Efficiency*, participants offered the following general comments and questions:

- Regional body should conduct research on BMPs from all jurisdictions for conservation/efficiency and serve as a clearinghouse for this information.
- There will be a capacity issue for municipalities that will impact on their ability to deliver water conservation/efficiency initiatives.
- Perhaps have a provincial fund available to municipalities to implement water efficiency, specifically when a transfer is involved.
- Province needs to provide municipalities with a list of effective efficiency initiatives that should be employed.
- Important to communicate energy savings resulting from water efficiency.
- Chicago is a good model for implementing of water efficiency.
- What does “reasonable” mean?
- Reasonable needs to be defined or guidelines need to be provided to determine reasonableness.
- The “affordable” argument will be employed at every turning point as a way out of improving conservation/efficiency methods.
- Why are swimming pools not included, should have a higher rate for residences with pools
- In Las Vegas there is a requirement for pool covers to reduce water loss through evaporation.

In addition, participants raised the some issues and questions concerning “Consumptive Use” which are summarized below:

- A transfer is a transfer regardless of consumptive use or not.
- The trigger should apply once the threshold is reached (19 M litres/day) regardless of whether it is a consumptive use or not.
- Instead of using a coefficient approach, should be required to “ground truth” through such mechanisms as audits, water balances, etc.
- Coefficients are too generic
- Coefficients are particularly inappropriate for measurement in industrial facilities because every facility is different

A discussion at the end of the session produced the following general feedback from participants:

- The province should not issue any new permits for transfers until an instrument is in place that forces public notice, intervener funding, and addresses the impact of the takings both at point of withdrawal and on a watershed basis.
- Address cumulative impacts on a whole-system basis – this needs to be a science-based approach and must address gaps in data to get an accurate picture of cumulative impacts
- Need to impose a ceiling/cap on impacts.
- Public/stakeholders need to know what transfers are out there (i.e., do not like reading about London’s water transfer plans in the paper)
- Is it always municipalities who are “transferors”? Are there private companies taking water with intra-basin transfers? (response was, no, municipalities are not the only transferors. There may also be non-municipal intra-basin transfers)

Key questions were asked to guide the discussions with participants. Although there were numerous and varied responses to key questions, some common themes emerged from the meeting. Common themes are those issues, and/or recommendations for which there was general agreement amongst session participants. The key questions, themes and proceedings from the consultation meeting are summarized in Table 1 and 3 of this report.

Lastly, a recommendation was made for the two day AAP committee meeting that, given the large amount of information that has been collected over the course of the consultation, participants be provided with the clauses in the agreement that pertain to the information being presented.

TABLE 1: Exception Criteria: Class EA or OWRA?

<p>1. <i>What are the advantages and disadvantages of using the Class EA versus the PTTW for applying the exception criteria?</i></p>	
<p>General / Context</p>	<ul style="list-style-type: none"> ▪ The EA does not allow access of the public to the decision making process – it allows for consultation but no appeal process, no direct input. ▪ Because the EA is proponent driven, no public access to decision making ▪ Need to have a special instrument under the OWRA to allow for public access ▪ When there is an intra-basin transfer there should be a requirement to post to the EBR ▪ Issue of timing: the Class EA comes first followed by the approval process for the exception criteria – needs to be earlier on in the process ▪ When would the public become involved? ▪ EA requires consultation but the EBR gives public mechanism to appeal a decision. ▪ There is a disparity between the access that the public in the US get in the process as compared with that in Ontario ▪ At what point does the weight of the science (i.e., is there enough water available?) enter into the process ▪ The Class EA does not give the public any rights – it gives them access, but because it is proponent driven, the public has no rights ▪ Have looked at projects pre- and post-EA and public/stakeholder input, they change very little or not at all. ▪ Posting to the EBR should be required ▪ Scoping might become a problem with a Class EA as it does not examine all the issues that should be considered ▪ Class EA is prescriptive and once done does not allow for revision

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TABLE 1 (Cont'd.): Exception Criteria: Class EA or OWRA?

<p>2. <i>Would a combined approach work? If yes, how?</i> 3. <i>Are there alternative approaches which should be considered? What would be the advantages and disadvantages?</i></p>	<ul style="list-style-type: none"> ▪ Not all Master Plans are amenable to a “bump up” – frustrating when 3 yrs have been spent on a project ▪ Once the Master Plan is done it’s used as a tacit approval ▪ The PTTW should be moved up in the process ▪ The Class EA schedule “C” needs to be as robust as possible ▪ The requirements for planning, etc., can be set out in the Class EA or under regulation in the OWRA. ▪ Another big issue is that court costs are not covered for interveners ▪ A lot of science and studies required and therefore need some mechanism for intervener funding to cover costs of studies and consultants. ▪ Very cost prohibitive for groups representing the public ▪ At some stage an intervener would apply for status and funding to a “Director” – intervener would have to demonstrate merit. ▪ The issue is about equitable access to the same options/rights/resources as the US public have ▪ Doing the PTTW before the EA is signed off would be helpful ▪ The Permit is taken to the ERT before there is approval, so the earlier it is done, the better. ▪ A special instrument for sewage “transfers” will be required ▪ Slide 6 – for diversions the accounting should not be done on a net basis, there are 2 diversions to a transfer. ▪ Need to deal with each individual transfer
<p>Questions</p>	<ul style="list-style-type: none"> ▪ Is there a reason why the PTTW cannot be completed before the EA? ▪ Can a PTTW be issued, conditional upon the completion of an EA? ▪ Does the PTTW capture all the situations where a transfer occurs? ▪ What will happen if there is a new instrument for transfers? How will this affect sewage transfers? ▪ What public access will there be to the process (e.g., Sewage Works Approval)?

TABLE 2: Exception Criteria – Cumulative Impacts

1. <i>How should cumulative impacts be considered across various scales?</i>	
Themes	<ul style="list-style-type: none"> ▪ Need to ensure that science informs the data collection ▪ The data does not give a clear picture of cumulative impacts at this point ▪ Need to have a minimum sustained ecological function (stream flow) that must be maintained and/or a time requirement for trigger
General / Context	<ul style="list-style-type: none"> ▪ Need to start recording local withdrawals ▪ Data should be used to protect the ecosystem – instead of a means of allocating water use to takers ▪ Need to look at cumulative impacts in a predictive way (e.g., Kitchener/ Waterloo) ▪ Unless cumulative impacts are integrated with provincial growth plans (e.g., “Places to Grow”) it is a recipe for disaster – setting up that the water must be taken to meet the growth. ▪ Need to define what a “significant cumulative impact” is. ▪ Should have a minimum flow requirement and when it is exceeded, would trigger a review of permits regardless of the provincial review period of 5 years (for cumulative impacts). ▪ Nottawasaga Conservation Authority triggered a Level 3 alert – ministry responded stating that economic hardship needs to be demonstrated, and not ecological impact. ▪ Need better understanding of how to prevent a crisis instead of the current reactive approach ▪ Need to plan for sustainable watersheds not just drinking water supply ▪ Need to take an ecosystem approach not an anthropocentric one ▪ Not confident that under the Clean Water Act will arrive at a water balance – the focus is on supplying municipality with water ▪ The cumulative impacts must be done at the smallest scale for the study ▪ Integrate across scales and mediums (i.e. ground water and surface water) ▪ Need to consider impact of climate change on the total cumulative impact ▪ Nebulous language (see slide 26). What is meant by “basin”? ▪ Agreement definition is open to a lot of interpretation ▪ Need to get down to the smallest level for evaluation of impacts but not to the exclusion of the whole watershed budget ▪ Cannot separate local scale (tributary) from the whole Great Lake system – must feed into the water balance on a larger scale
2. <i>What should be the role of individual proponents versus the government in assessing and responding to cumulative impacts?</i>	
Themes	<ul style="list-style-type: none"> ▪ Government should be responsible to assess the cumulative impacts ▪ Provincial government should be a clearing house or leader around the assessment of cumulative impacts

TABLE 2 (Cont'd.): Exception Criteria – Cumulative Impact

3. <i>What improvements to existing information and programs are needed to better address cumulative impacts?</i>	
General / Context	<ul style="list-style-type: none"> ▪ Develop a suite of indicators determining ecosystem health ▪ Need to know recharge rate - a whole water balance approach ▪ Assessment should not just be an observation tool but a preventative approach that looks at the capacity ▪ Some areas have a lot of data (Grand River) while a lot of dollars are being spent to get data in other areas (Nottawasaga) ▪ Build on Source Protection and have a committee tasked with securing data on the Great Lakes ▪ Hard to know what information the province actually has available ▪ Consider the US Geological Survey (GS) as a model for presenting the data for public use/access ▪ Expand on US GS and cover the critical issues (e.g., start with high use watersheds) and build on what exists such as Grand River (has been studied for 40 years)
Questions	<ul style="list-style-type: none"> ▪ How much of the process of water balance is an issue of collecting data that is currently available? ▪ What is the level of groundwater mapping? What data is available?

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TABLE 3: Exception Criteria – Water Conservation and Efficiency

<p>1. <i>Re: water conservation and efficiency, how strong should the requirements be for the demonstration of water conservation for existing development?</i></p>	
<p>Themes</p>	<ul style="list-style-type: none"> ▪ Building Code should be modified to make conservation/efficiency technology, appliances, etc mandatory ▪ Dollars earned from municipal water rates should go back into the water system with a set percentage allocated to water conservation ▪ Key component is to get people to have better water habits, change their behaviour and reduce their water use
<p>General/Context</p>	<ul style="list-style-type: none"> ▪ The question should be: what are the type of instruments/tools required? ▪ Declining block rate contrary to conservation ▪ With declining block rate the money is received first which is the incentive for municipalities to employ it. ▪ Full metering should be a requirement ▪ There is no incentive for conservation without metering ▪ Should make a list of known conservation initiatives/practices that should be used ▪ One policy option was more results based while the other was more means based and prescriptive – should be a combination of the two systems ▪ Who will determine if the municipality is meeting performance targets? ▪ Municipality should not be responsible for assessing whether or not it is meeting its performance targets, this should be done by an independent body ▪ There needs to be consistency in the way conservation/efficiency performance targets are measured. ▪ When dealing with existing development (e.g., apartments) need to address behavioural issues as opposed to retrofitting which can be prohibitively expensive. ▪ Key component is to get people to have better water habits and reduce their water use
<p>2. <i>Re., water conservation and efficiency, how strong should the requirements be for the demonstration of efficient water use and conservation for <u>new</u> development?</i></p>	
<p>Themes</p>	<ul style="list-style-type: none"> ▪ On a go forward basis, require sub-metering for new developments ▪ Stormwater management plans, porous hardscape etc. should also be included as a requirement in the design of new developments. ▪ Requirements should be as strong as possible for both new and existing development
<p>Questions/Issues</p>	<ul style="list-style-type: none"> ▪ Other part of agreement deals with consumptive use; will the municipality have to get a PTTW for the consumptive use?

TABLE 3 (Cont'd.): Exception Criteria – Cumulative Impact

3. How would the requirements for existing and new development be implemented?	
Themes	<ul style="list-style-type: none"> ▪ Use a combination of “carrots” and “sticks” ▪ Funding conditional upon implementation of water conservation/efficiency initiatives ▪ Regulations (e.g., stronger conservation/efficiency standards in Building Code) ▪ Conservation Plans should be required but with the proviso that they have rigor, timetable for implementation, budgets assigned to implement plan, and reporting requirements ▪ If golf courses are involved in intra-basin transfers must have stringent conservation/efficiency requirements ▪ Golf courses should have to have designs from the start that provide for conservation and efficiency (e.g., xeriscaping, rain water collection systems for irrigation, etc.)
General / Context	<ul style="list-style-type: none"> ▪ Stronger requirements and greater assistance to municipalities with a transfer – should have more stringent, robust requirements ▪ Perhaps consider prioritizing based on issues of concern (i.e., high stress watersheds where transfers are planned, etc) ▪ If municipalities needs to transfer water, perhaps development is happening in the wrong place ▪ Do not see parallel conservation/efficiency activity going on in the US jurisdictions

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LIST OF PARTICIPANTS
Intra-Basin Water Transfers Meeting
February 5, 2009

REPRESENTATIVE	ORGANIZATION
Courtney Daniels	Regional Municipality of York
Lisa Lin	Regional Municipality of York
Mary Muter	GBA Foundation
Bob Duncanson	GBA Foundation
Tim Morris	Gordon Duncan Foundation
Sarah Miller	Canadian Environmental Law Association
Lino Grima	Sierra Club of Canada
Brent Gibson	Great Lakes United
John Jackson	Great Lakes United
Adrian Coombs	Regional Municipality of York

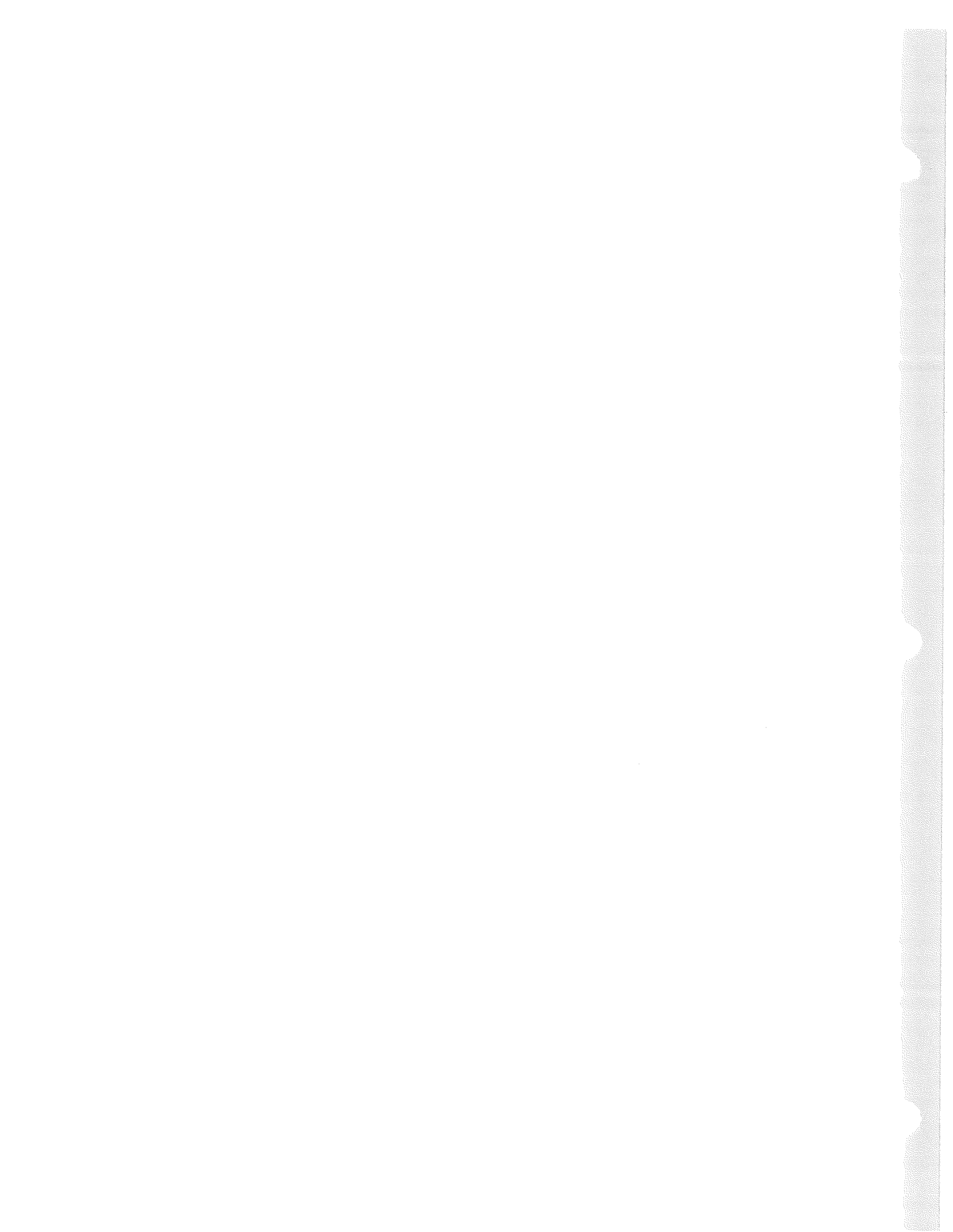
Intra-Basin Water Transfers Meeting

Date: February 5, 2009

Location: 8th floor, Boardroom A/B, 55 St. Clair Avenue West, Toronto.

AGENDA

- 12:00 noon Arrival (lunch provided)
- 12:30 PM Welcoming remarks and introductions
 Review of session agenda and format for the meeting
- 12:45 PM Review – Agreement Commitments: *Setting the Baseline*
- 1:15 PM Exception Criteria: *Class EA or OWRA?*
 Exploration and discussion – key questions
- 2:15 PM Exception Criteria: *Cumulative Impacts*
 Exploration and discussion – key questions
- 3:15 PM Exception Criteria: *Water Conservation*
 Exploration and discussion – key questions
- 4:15 PM Wrap-up and next steps



Agreement Advisory Panel Meeting Agreement Implementation

Date: February 12, 2009

Location: Webex meeting
Teleconference: 416-212-0400/1-866-355-2663, **passcode 6363#**
NOTE: the passcode is different for each day

AGENDA

- 12:30 Participants should start logging on to Webex

- 1:00 PM Welcoming remarks and introductions

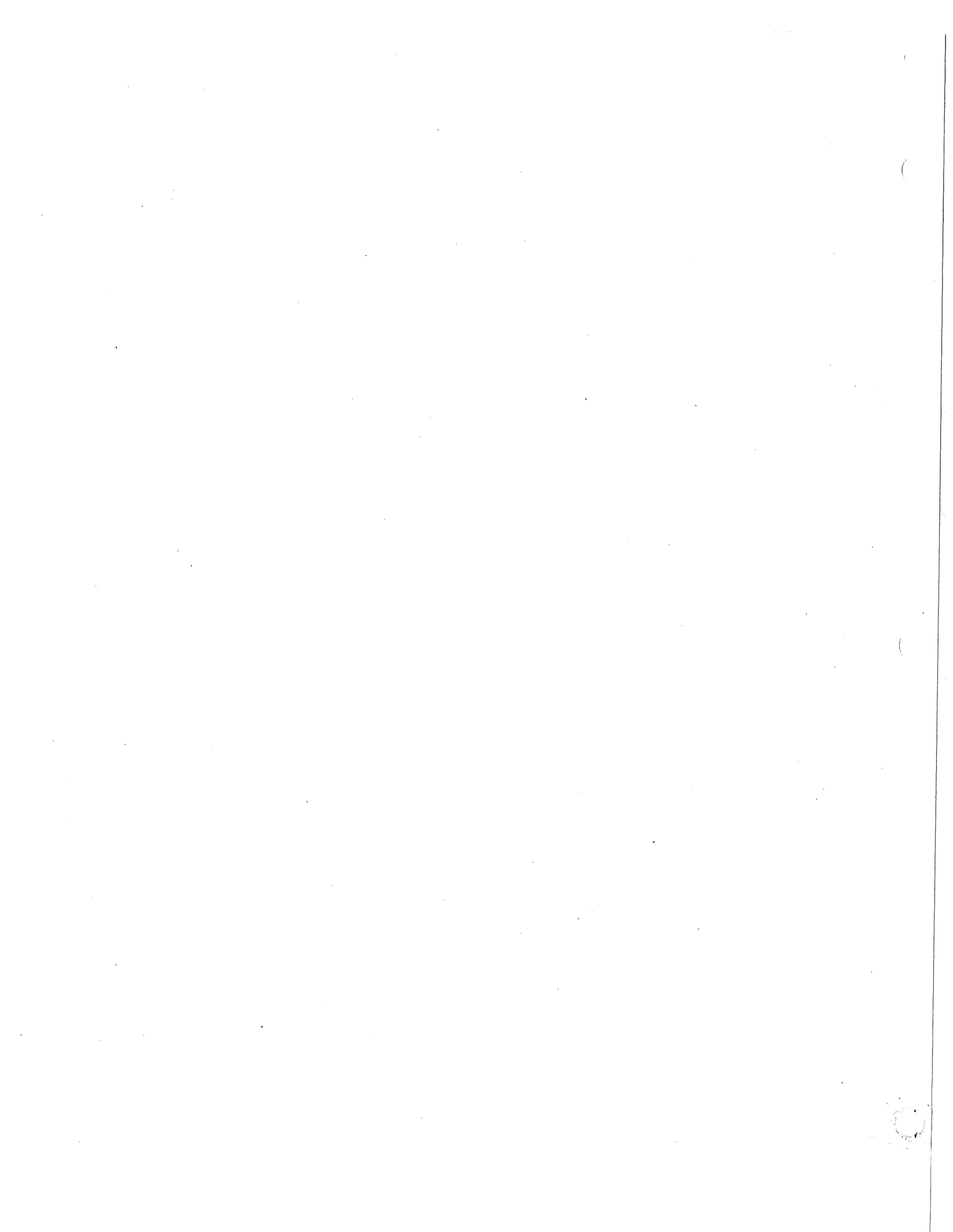
- 1:05 PM Verbal update of regional basin events

- 1:20 PM Presentation by Aqua Resources: draft report on consumptive use
Discussion

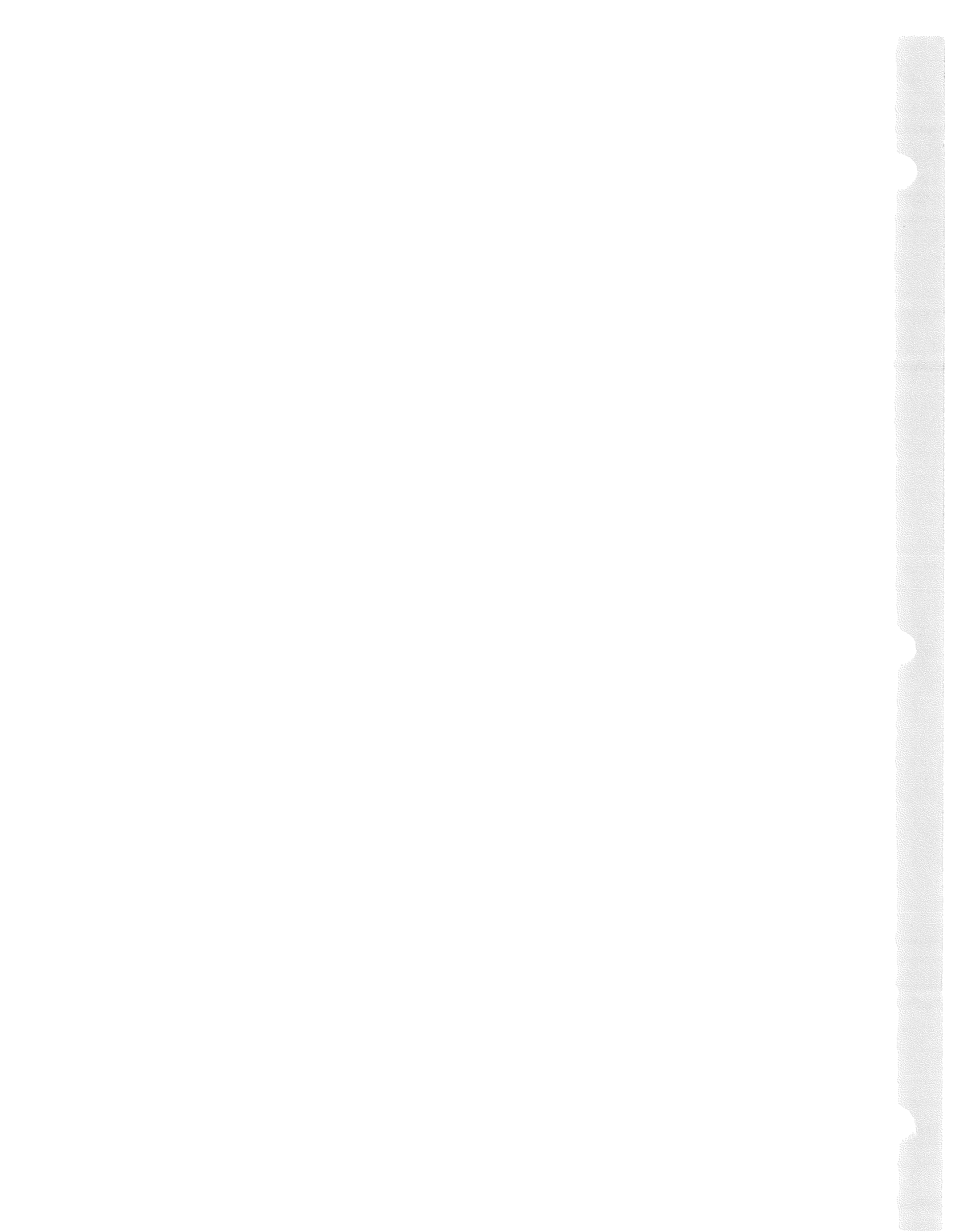
- 2:20 PM Intra-basin transfers: de-brief on sector meetings:
 - 1. Setting the Baseline
 - 2. Exception criteria
 - 3. EA / Master Planning
 - 4. EBR Posting agriculture PTTW,
 - 5. Possible municipal transfers

- 3:15 Information and science
 - Watershed boundaries & mapping
 - Consumptive use
 - Water use information reporting
 - Science strategy

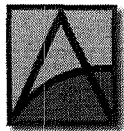
- 4:00 PM Wrap up, next steps







Development of a Standardized Methodology for Calculating Consumptive Water Demand within the Province of Ontario



AquaResource Inc. & J.Kinhead Consulting

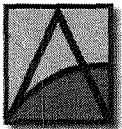


Project Goal

- Complete literature review of consumptive use coefficients.
- Develop methodology for identifying water taking proposals greater than 19 MLD of consumptive demand.

Consumptive use

"That portion of water withdrawn or withheld from the Great Lakes Basin and assumed to be lost or otherwise not returned to the Great Lakes Basin due to evaporation, incorporation into products, or other processes".



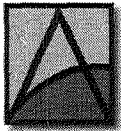
Literature Review

- Focused on previously reported consumptive coefficients for specific water use sectors
 - Aim was to assign “best estimate” coefficient to all PTTW categories
 - Priority was given to coefficients relevant to Ontario
- Wide ranges in coefficients found
- Where coefficient ranges were available, the median value was selected (municipal)
- A number of sectors only had one coefficient found (aquaculture, snowmaking)



Consumptive Use Coefficients

Great Lakes Commission Category	Sub-Category	NAICS Code	Types of Operations	Coefficient (%)	Range of Coefficients (25 th -75 th Percentile)	Refinement Considerations
1. Public Water Supply	None	2213	Municipal Water Supplies	12	10-15	<ul style="list-style-type: none"> Volumetric balance of distribution and sewage system Consider distribution system losses, sanitary sewer infiltration Outdoor water use practices Consumptive component of Commercial / Industrial uses connected to water supply
2. Self-Supply Domestic	Self-Supplied Residential	814	Private or Communal Residential Takings	15	10-15	
	Self-Supplied Institutional	61,62, 92, 712	Schools, Correctional facilities, hospitals other government buildings not on a municipal supply	10		<ul style="list-style-type: none"> Use of water (e.g. washing – low consumptive, vs lawn/garden watering – high consumptive) Location of discharge (e.g. septic system vs municipal sewer system)
	Self-Supplied Commercial	41, 44, 45, 72, 81	Motels, Restaurants, Office buildings, not on municipal supply	9		<ul style="list-style-type: none"> Use of water (e.g. washing – low consumptive, vs lawn/garden watering – high consumptive)
	Self-Supplied Snowmaking	71392	Ski hills	10		<ul style="list-style-type: none"> Evaporative losses from snow-making activity Sublimation losses from artificial snow
	Self-Supplied Recreational	7131, 7132, 71393, 71395,	Amusement parks, water parks	35	31-42	<ul style="list-style-type: none"> Estimate water used for supporting facilities (hotel, restaurant) vs evaporative losses from water features. Quantify wastewater discharges (filter backwash, sanitary discharge)
3. Self-Supply Irrigation	None	111, 7112, 71391, 71394	Irrigation of agricultural lands, golf course, parks/sports fields, tree nurseries	85 Based on OMAFRA suggestion	90-95	<ul style="list-style-type: none"> Type of irrigation delivery system (drip vs gun) <ul style="list-style-type: none"> Gun irrigation ~85% Drip irrigation ~90-95%



Consumptive Use Coefficients

Great Lakes Commission Category	Sub-Category	NAICS Code	Types of Operations	Coefficient (%)	Range of Coefficients (25 th -75 th Percentile)	Refinement Considerations
		71399, 1132				<ul style="list-style-type: none"> If a communal system, conveyance system losses (non-consumptive) should be considered.
4. Self-Supply Livestock	Livestock	112	Livestock watering/washing	62 Lower coefficient accounts for washing	80-90	
	Aquaculture	1125	Fish hatcheries	0.8		<ul style="list-style-type: none"> Potential evapotranspiration calculations Seasonality of operations
5. Self-Supply Industrial	<i>Generalized Industrial Sector</i>			10	7-14	
	Mining	2121, 2122	Metal Ore Mining	13	7-15	<ul style="list-style-type: none"> Determine specific processes (e.g dewatering vs processing) Volumetric balance of inflow/outflows Estimate groundwater infiltration into drainage system
	Heating & Cooling	22133	Heat Pumps	2		
			Cooling (Once through cooling)	2		
			Cooling (closed loop)	80		<ul style="list-style-type: none"> Determine volume of water required to maintain cooling system levels.
	Sand, Gravel Mining and Quarrying	21232	Aggregate wash operations	10		<ul style="list-style-type: none"> Potential evapotranspiration calculations to estimate losses from wash ponds Quantify water held in product as it is shipped offsite.
	Stone Mining and Quarrying	21231	Dewatering to access quarried materials	0.8		
	Food Manufacturing	311	Food processing, including dairy products, grain milling	20		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Is water for incorporation into product? Is water for used for wash purposes
Beverage Manufacturing	31212, 31214	Breweries, distillers	50		<ul style="list-style-type: none"> Determine portion of water used in washing vs water incorporated into product. 	

Consumptive Use Coefficients

Great Lakes Commission Category	Sub-Category	NAICS Code	Types of Operations	Coefficient (%)	Range of Coefficients (25 th -75 th Percentile)	Refinement Considerations
		31211 31213	Water bottlers, wineries, soft drinks	80		<ul style="list-style-type: none"> Determine portion of water used in washing vs water incorporated into product.
	Textile Mills	313	Fiber, Yarn, Thread and Fabric Mills, Textile and Fabric Finishing	16		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Textile Product Mills	314	Textile Furnishing Mills – Carpet, Curtain, Rope, Canvas Mills	14		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Wood Product Manufacturing	321	Sawmills, Engineered Wood Products, Millwork, Pallet, Prefab Building Panels	25		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Paper Manufacturing	322	Pulp, Paper, Paperboard Mills, Converted Paper Manufacturing	5		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Petroleum and Coal Products	324	Petroleum Refineries, Asphalt, Roofing Materials Manufacturing	12		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Chemical Manufacturing	325	Basic Chemicals, Resins, Synthetic Fibres, Pesticide / Herbicide / Fertilizer, Pharmaceuticals, Paints, Cleaning Products	28		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes Determine portion of water used in washing vs water incorporated into product.
	Plastics and Rubber Products	326	Plastic Pipe, Packaging, laminated plastic manufacturing, Tire, Rubber hose and belting Manufacturing	8 Rubber 9 Plastic		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes

Consumptive Use Coefficients

Great Lakes Commission Category	Sub-Category	NAICS Code	Types of Operations	Coefficient (%)	Range of Coefficients (25 th , 75 th Percentile)	Refinement Considerations
	Non-Metallic Mineral Product Manufacturing	327	Clay and Refractory Products, Glass Products,	12		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
		3273, 3274	Cement, Concrete, Lime and Gypsum Manufacturing	80		<ul style="list-style-type: none"> Estimate amount of water incorporated into product vs. volume used for washing equipment
	Primary Metal Manufacturing	331	Iron and Steel Mills, Alumina Production, Nonferrous Metal Production, Foundries	15		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Fabricated Metals	332	Forging and Stamping, Cutlery and Handtool Manufacturing, Architectural and Structure Metal Manufacturing, Hardware Manufacturing	6		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Transportation Equipment Manufacturing	333, 336	Motor Vehicle and Parts Manufacturing, Aerospace Manufacturing, Ship and Boat Building, Railroad Manufacturing	4		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Miscellaneous Manufacturing	All other manufacturing		13		<ul style="list-style-type: none"> Inflows/Outflow study Recognize processes/techniques specific to operation Water recycling processes
	Heavy and Civil Construction	237	Construction Dewatering, Utilities construction, Pipeline testing	0.8		
6. Self-Supply Thermoelectric Power (fossil fuel plants)	None	221112	Coal or natural gas power plants (Once through cooling)	2	1-2	
			Coal or natural gas power plants (closed loop cooling)	80	65-95	<ul style="list-style-type: none"> Determine volume of water required to maintain cooling system levels.

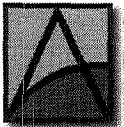
Consumptive Use Coefficients

Great Lakes Commission Category	Sub-Category	NAICS Code	Types of Operations	Coefficient (%)	Range of Coefficients (25 th -75 th Percentile)	Refinement Considerations
7. Self-Supply Thermoelectric Power (nuclear plants)	None	221113	Nuclear power plants (Once through cooling)	2	1-2	<ul style="list-style-type: none"> Determine volume of water required to maintain cooling system levels.
			Nuclear power plants (closed loop cooling)	80	65-95	
8. Self-Supply Hydroelectric Power	None	221111	Dams & Reservoirs generating hydro	0		
9. Self-Supply - Other	Environmental Needs	NA	Constructed wetlands, low flow augmentation, assimilative capacity, navigation purposes	0		
	Remediation	562	Groundwater Remediation, Leachate Collection	2		

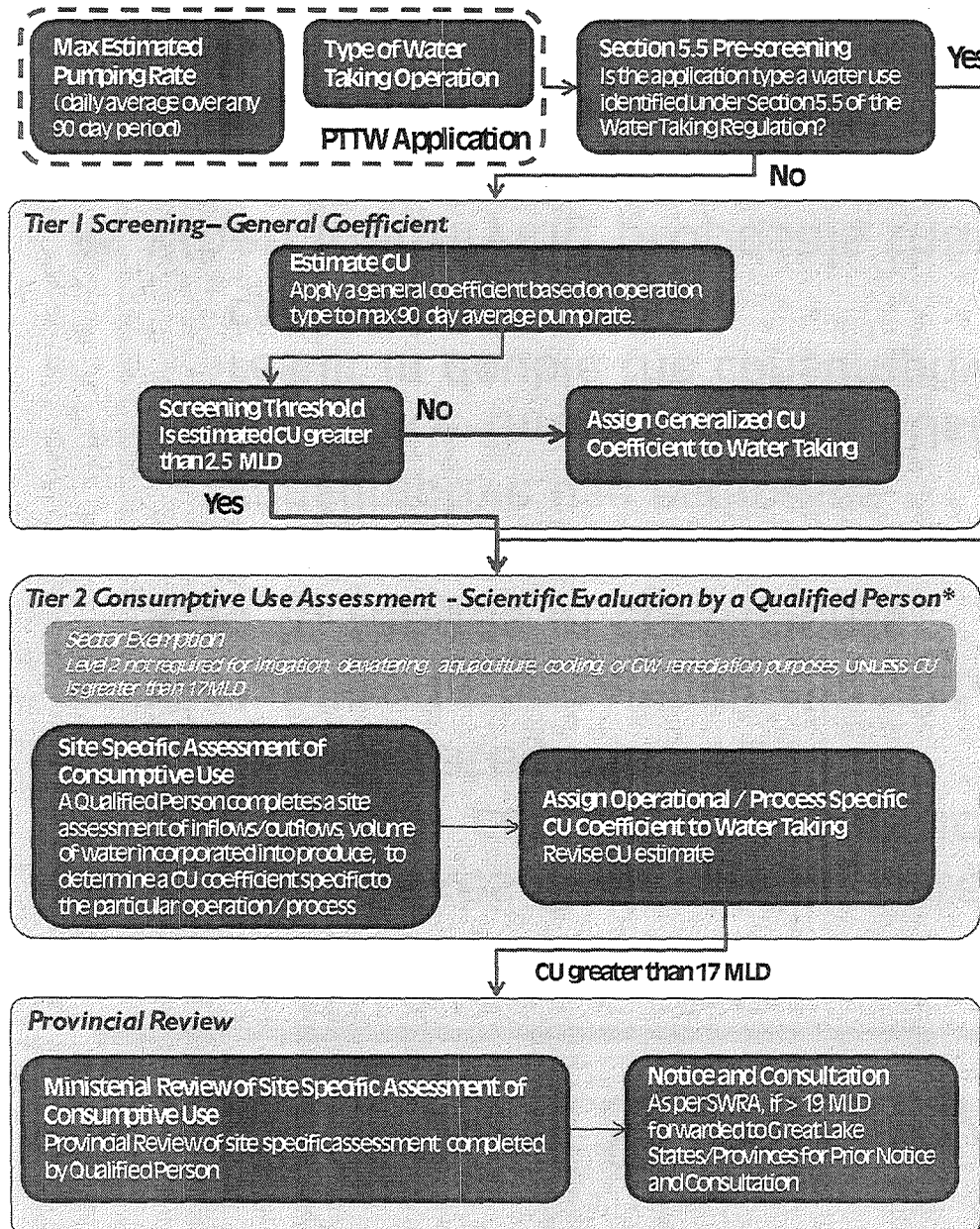


Coefficient Summary

- 9 Great Lakes Commission categories have been divided into 32 sub-categories. Coefficients have been assigned to each sub-category.
- Variability in water use characteristics within sub-categories lead to ranges in coefficients
 - Small range in coefficients can cause wide range of consumptive use estimates
 - E.g. Once-through cooling. Using a coefficient of 2% will result in double the consumptive use compared to a 1% coefficient.
- When identifying proposals that require Prior Notice & Comment, generalized coefficients should only be used as a screening-level assessment



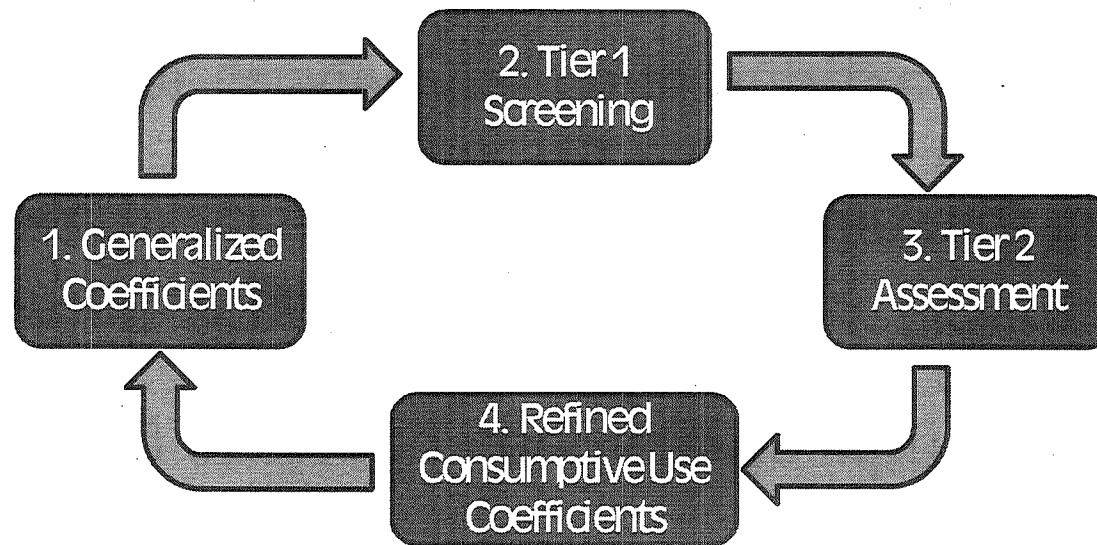
DRAFT Provincial Methodology for Estimating Consumptive Use



- A tiered process
 - Generalized coefficients identify large consumptive takers (>2.5 MLD) which proceed to Tier 2.
 - No additional burden for takers with CU below 2.5 MLD.
- Tier 2 calculation requires assessing inflows and outflows from the system to generate a specific CU estimate. *mass balance*
- Sectors whose CU occurs after discharge (e.g. cooling) are exempt from a Tier 2, unless estimated CU is 90% of the 19 MLD threshold.
- Following Tier 2, if proposals are greater than 90% of the 19 MLD threshold, the assessment undergoes Provincial Review to determine need for Prior Notice & Consultation circulation.

*Qualified Person as Currently Recognized under the PTTW Program

Continual Improvement Process



- Low level of scientific understanding with regard to CU introduces uncertainty into coefficients.
- Reduce uncertainty over time via a continual improvement process.
- Refined CU coefficients produced as part of Tier 2 studies can/should be used to revise generalized coefficients.



Consumptive Use Reporting

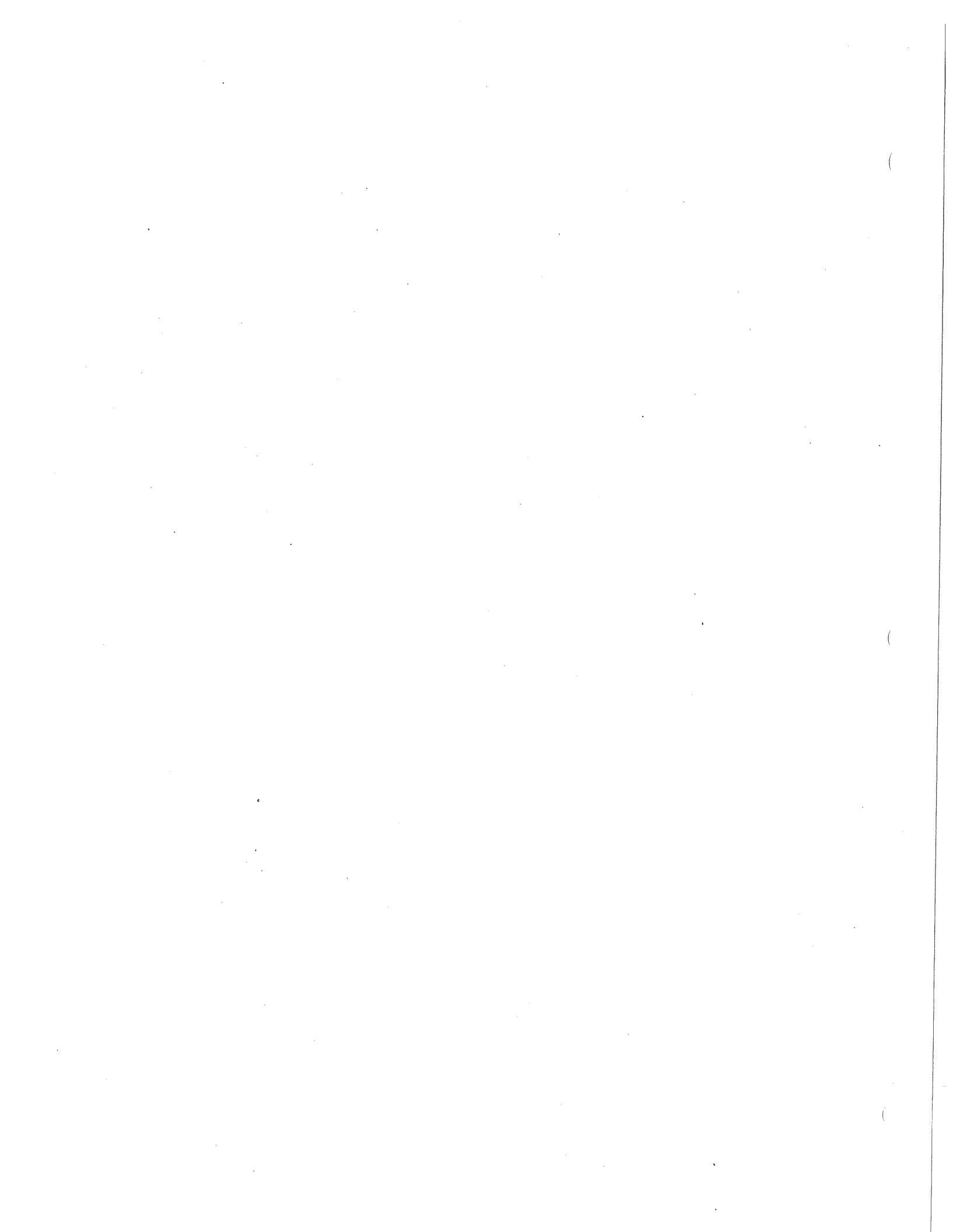
- Sufficient discretization exists within the 32 categories to assign coefficients to all PTTW categories
 - Coefficients should be assigned to all permits within the PTTW database
- Combining assigned coefficients with reported pumping rates will generate current estimates of consumptive use
- As more precise coefficients are developed as part of Tier 2, and assigned to individual PTTWs, the accuracy of Basin-wide consumptive use will increase



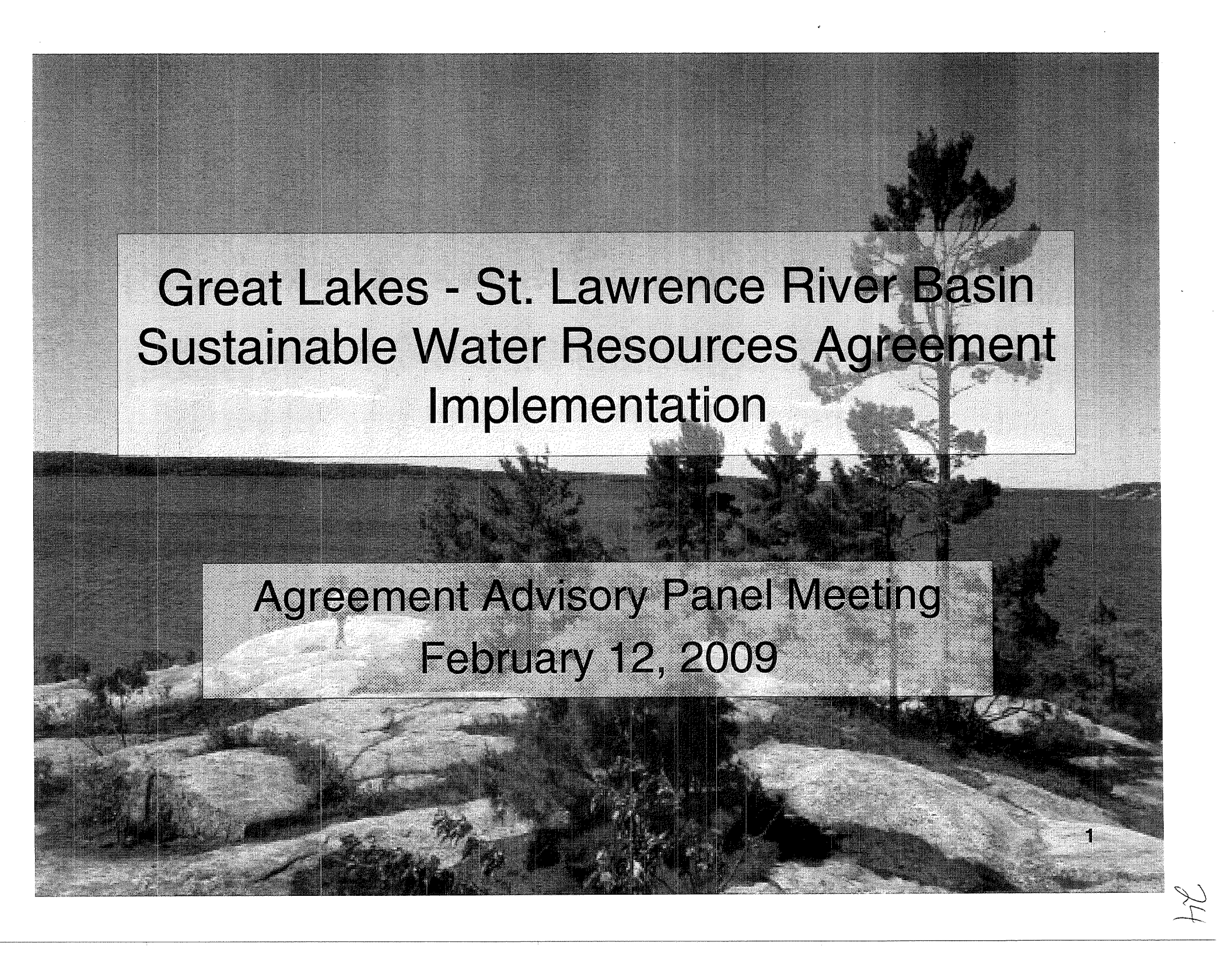
Summary

- Generalized coefficients have been assigned to 32 water use sectors.
- Coefficients are uncertain and should only be used as a screening-level assessment.
- Recommended Framework will require large takers to calculate CU based on site-specific processes.
- Tier 2 generated CU coefficients will increase the level of understanding wrt CU, and will provide a basis for revising generalized CU coefficients.
- Assigning generalized coefficients to PTTW database will assist in generating existing consumptive demand.
- Draft Report and Recommendations have been submitted to MNR.









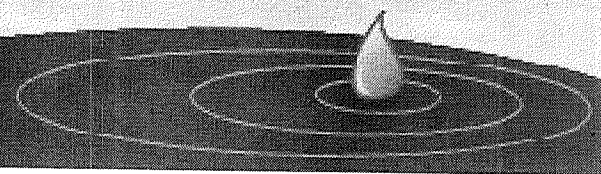
Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation

Agreement Advisory Panel Meeting
February 12, 2009



Consultation Summary

Over the past several months, MOE/MNR have consulted with stakeholders to seek feedback and input on the regulations and policies required to implement the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement and OWRA (2007) amendments on proposed regulations and policies to manage intra-basin transfers.





Consultations on Intra-basin Transfers

The following stakeholders were engaged in this process:

The Municipal Sector Work Group (MSWG) was expanded and meetings held on:

- October 23, 2008
- December 10, 2009
- January 15, 28, 2009

The Agreement Advisory Panel (AAP) was consulted on:

- November 6, 2008
- December 17, 2008

The agriculture sector including, AgCare, Ontario Federation of Agriculture, Ontario Fruit and Vegetable Growers Association, Ontario Tender Fruit Producers, Ontario Farm Environmental Coalition, Ontario Greenhouse Vegetable Growers, Agriculture and Agri-Food Canada, University of Guelph/Industrial Water Conservation Project, were consulted on:

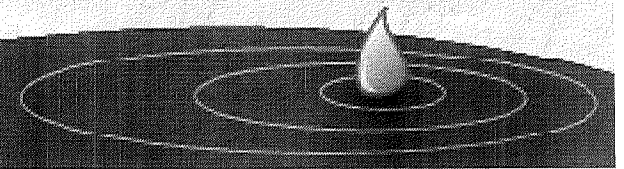
- January 29, 2009

The NGO's were consulted on:

- February 5, 2009

The AAP sub-group on intra-basin transfers was consulted on:

- January 21, 2009
- February 2, 2009

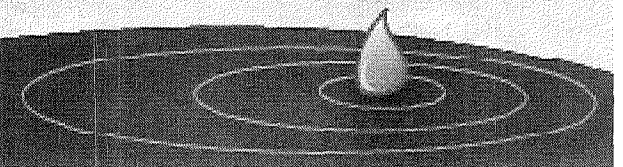




Consultations on Intra-basin Transfers

Discussions with stakeholders revolved around the following key themes on intra-basin transfers :

- Establishing baseline amounts for existing intra-basin transfers (“grandparenting”)
- Defining exception criteria including cumulative impact
- Where the exception criteria should be applied: MEA Class EA, Master Plans, PTTW
- EBR posting of Agricultural PTTW





Consultation Summary: Establishing the Baseline

Agreement Advisory Panel Meeting
February 12, 2009



Context: Establishing the Baseline

ARTICLE 207 – APPLICABILITY

Determining New or Increased Diversions, Consumptive Uses or Withdrawals

1. To establish a baseline for determining a New or Increased **Diversion, Consumptive Use or Withdrawal**, each Party shall develop either or both of the following lists for their jurisdiction:
 - a. **A list of existing Water Withdrawal approvals** as of the date this Article comes into force;
 - b. A list of the capacity of existing systems as of the date this Article comes into force. The capacity of the existing systems should be presented in terms of Withdrawal capacity, treatment capacity, distribution capacity, or other capacity limiting factors. The capacity of the existing systems must represent the state of the systems. **Existing capacity determinations shall be based upon approval limits or the most restrictive capacity information.**

For all purposes of this Agreement, volumes of the Diversions, Consumptive Uses or Withdrawals set forth in the list(s) prepared by each Party in accordance with this Paragraph shall constitute the **baseline volume**.

The list(s) shall be furnished to the Regional Body within 1 year of the date this Article comes into force.





Beyond the Baseline

*Baseline
amounts to be
identified*

*Managing new or
increased takings
beyond baseline*

A

Withdrawals

Decision Making Standard

B

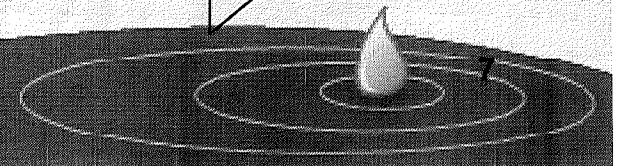
Consumptive Uses

Decision Making Standard

C

Diversions (Transfers)

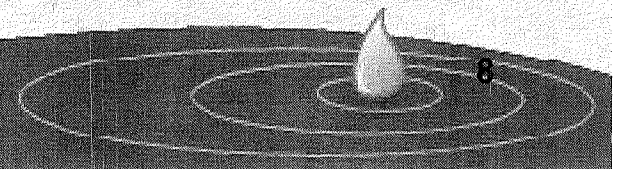
Exception Criteria





Discussion Topics

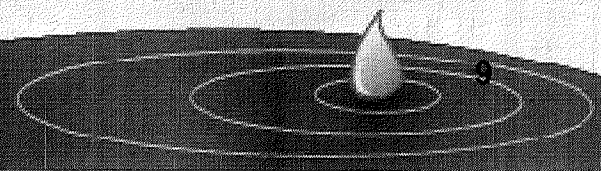
- Potential technical methods for determining baseline for municipal transfers were discussed with the MSWG and AAP Intra-Basin Sub-Group:
 - Meter actual amounts
 - Use approved PTTW amounts
 - Estimate based on population and per capita flows
 - Use rated pumping capacity
 - Estimate based on existing infrastructure
 - Use EA approved capacity
 - Use Official Plan projections
 - Use Master Plan projections

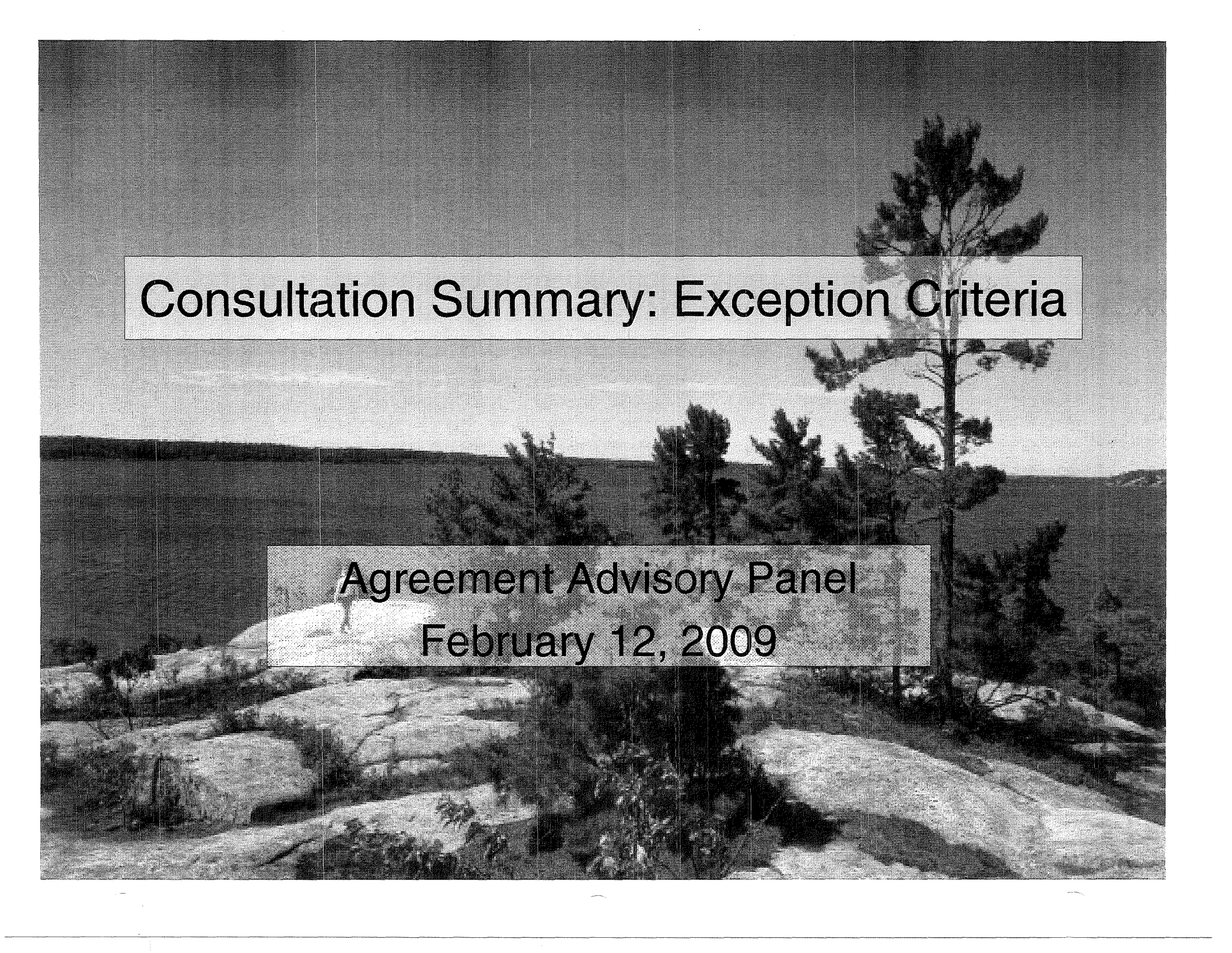




Overview Stakeholder Comments

- **Flexibility** is needed in determining transfer amount.
- No one approach will be applicable to every case, so a **combination of approaches** may be needed.
- Baseline should **include some approved/planned growth**.
- Baseline should account for **conservation**.
- Each transfer should be **considered on an individual basis**.
- Approach should be somewhat **prescriptive** for consistency and level playing field.
- Consider using a **water balance approach**.
- **Consider actual amounts** being transferred.
- **Permitted amount** is not a useful approach on a stand alone basis.
- **Estimates** are not most objective or accurate.
- **Pumping capacity** not a viable stand alone option.
- Estimated capacity of **existing infrastructure** already covered under EA.
- **EA** could be a good approach but may not include transfer amounts.
- **Master Plans** provide only general, subjective numbers (focus on estimates).
- **Official Plans** deal with population, areas of growth, available services, capacity to service and feasibility – not sufficient level of detail or type of information required to determine transfers.





Consultation Summary: Exception Criteria

Agreement Advisory Panel
February 12, 2009



The Agreement - Transfers and the Exception Standard

Ontario Water Resources Act (OWRA) adopts the Agreement's Exception Standard for transfers ("Criteria" in the OWRA)

Baseline amounts to be identified

*Managing **new or increased takings** beyond baseline*

Withdrawals

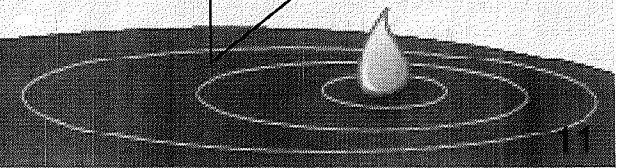
Decision Making Standard

Consumptive Uses

Decision Making Standard

Diversions (Transfers)

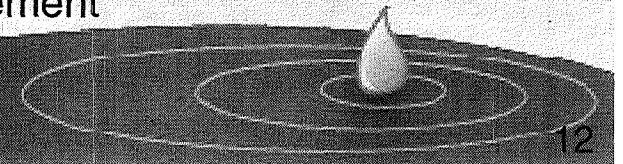
Exception Criteria





Exception Criteria for New or Increased Transfers

1. The **water transferred** is returned, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement





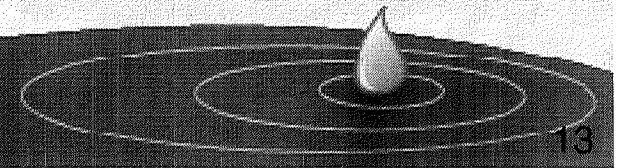
Overview Stakeholders Comments

General Comments - What's needed?

- Guidance and Clarification for Exception Criteria needed, e.g. how to determine reasonableness and when to consider Exception Criteria?
- Clarification of terms and process to determine how and when to meet Exception Criteria, e.g. what does "reasonable" mean? "Reasonable" and other terms need to be defined

Return Flow – related to Connecting Channels

- Some felt that Connecting Channels should only be part of the downstream Great Lakes watershed
- Others felt that Connecting Channels should be consistent with the Agreement, e.g. connecting channel should be considered part of both the upstream and downstream Great Lakes watershed (not only part of the downstream Great Lakes watershed)
- Only applicable to a few municipalities. Meetings should be held with those municipalities.

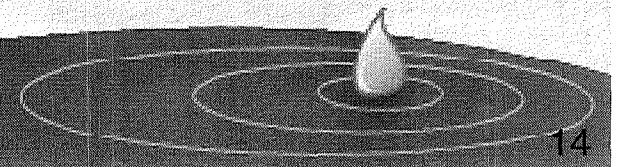




Overview Stakeholders Comments

Individual and Cumulative Impacts

- Need information on what is known about cumulative impacts in the Great Lakes basin
- Examine cumulative impacts in and around the Great Lakes
- Need to determine role of government in assessing and responding to cumulative impacts
- Consider clustering to assess impacts - no individual taking is going to be the tipping point
- Look at smallest scale but don't ignore regional scale (i.e. Great Lakes basin)
- Need to know what the cumulative impacts are for the ecosystem as a whole
- Look at impacts in a predictive way and integrate with planning

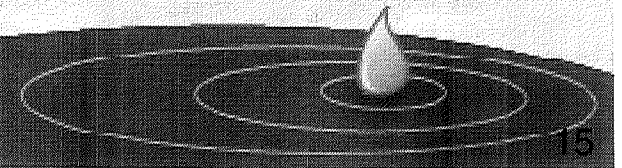




Overview Stakeholders Comments

Exception Criteria Consideration: Class EA or OWRA?

- Exception criteria need to be considered earlier on in the process
- Have preliminary Sign-off in Class EA process (e.g. Master Plan & Class EA projects)
- EA is proponent driven, concern regarding insufficient public access to decision making and insufficient rights of appeal
- Concern as to when the public would become involved
- Need to have a special instrument under the OWRA to allow for public access to comment
- When there is an intra-basin transfer there should be a requirement to post to the EBR
- Disparity between public access in the US process compared with Ontario
- EA requires consultation but the EBR gives public mechanism to appeal a decision
- Need to determine when to consider science in the process, e.g. is enough water available?

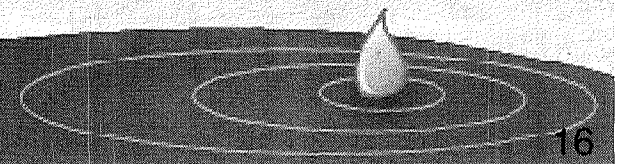




Overview Stakeholders Comments

Water Conservation and Efficiency in relation to transfers

- Requirements for transfers should be more rigorous than for non-transfers
- Concern that, unless clear definitions are provided, the “affordable” argument will be employed at every turning point as a way out of improving conservation/efficiency
- Demonstrate water conservation measures implemented for existing water supplies
- Demonstrate water efficiency and conservation for new or increased transfers
- Need to determine if targets should be set and/or should specific measures be required
- Recognize leaders in water conservation
- Consider Best Management Practices – from all jurisdictions for conservation/efficiency, e.g. a clearinghouse for this information; Chicago is a good model for implementing water efficiency
- Potential use of water conservation plans
- Need to consider who should substantiate water conservation information provided for Exception Criteria, e.g. applicant self-report, third party audit, other?
- Important to communicate energy savings resulting from water efficiency
- Capacity issue for municipalities in ability to deliver water conservation/efficiency
- Consider funding for municipalities to implement water efficiency, specifically when a transfer is involved





Consultation Summary: Class EA and Master Plans

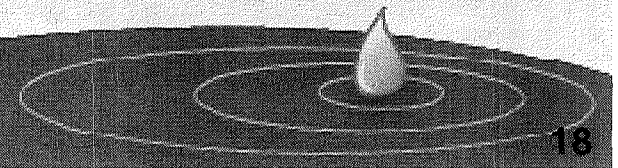
Agreement Advisory Panel
February 12, 2009



Agreement Provisions

Intra-Basin Transfer Exception Language:

- “There are no other **feasible, environmentally sound and cost effective alternatives** to the transfer...”
- “It has been demonstrated that conservation of existing water supplies is not a **feasible, environmentally sound and cost effective alternative** to the transfer...”





Exception Criteria for New or Increased Transfers

1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement



Provincial Legislation, Planning & Instruments

Provincial Strategic Direction

Growth Plan - 25-year land-use and infrastructure framework for managing growth in the Greater Golden Horseshoe

Provincial Plans - Greenbelt, Oak Ridges Moraine, Lake Simcoe Protection Plan

Clean Water Act - Source Protection Plans, Water Budget Analysis

Municipal Class EA

- Master Plans
- Specific Class EAs
- Possible Bump-up
- Environmental Review Tribunal Decisions

Master Plans



Official Plans

- Servicing Studies
- Master Plans
- By-laws
- Council Decisions
- OMB Decisions

Environmental Protection Act - Certificate of Approval for Water/Sewage Treatment Plant

Ontario Water Resources Act - Certificate of Approvals for water & waste water work;
Permit to Take Water

Safe Drinking Water Act - Drinking Water Licences



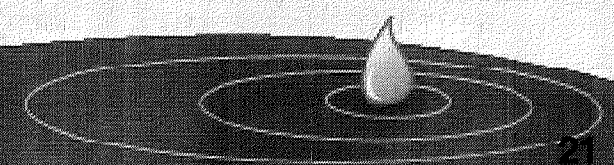
Summary of Municipal Class EA vs. PTTW (OWRA) requirements

Municipal Class EA

- Proponent driven
- Forward looking
- Can use Master-planning approach
- Can be integrated with the *Planning Act*
- Considers social, economic, and environmental impacts
- Considers alternatives
- Can be appealed (i.e. Part 2 Order/Bump-up)
- Class EAs are sector specific (e.g. Municipal sector)

Permit To Take Water

- Director approval
- Occurs late in planning
- Considers water availability, planned municipal use & ecosystem function
- Consider water conservation; cumulative impacts
- Does not consider alternatives
- Consistent approach with non-municipal Permit Holders





Overview Stakeholder Comments

Discussion topics:

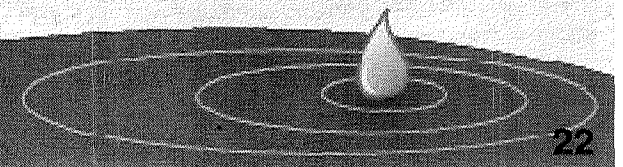
- When - At which stage in the process should the criteria be considered?
- Method - Under which process (e.g. Planning Act, Municipal Class EA or other) should the criteria be considered?
- How - Using which tool(s)?

Considerations

- Could sufficient information be provided in Master Plans for consideration of criteria?
- At which stage should a proposals be referred for Regional Review?
- Concerns & Recommendations

Comments:

- Class EAs are a good approach to consider intra-basin transfers since they use an already established process.
- Need to consider intra-basin transfers early in the process- i.e. during the Class EA process.
- Concern raised about the lack of ability for the public to influence the decision making during a Class EA.
- No one approach should be used, may need to use a combination which allows for more Ministry oversight.
- May need to require Master Planning to ensure that intra-basin transfers are considered in a holistic approach.
- More detailed scientific work needs to be done during the Class EA, rather than waiting until the application for a PTTW.
- Need to use to ensure that intra-basin transfers can be appealed to the ERT (also want them to be posted on the EBR).



A black and white photograph of a landscape. In the foreground, a dirt road or path winds through a field. Several tall, thin trees are scattered across the middle ground. In the background, there are rolling hills under a clear sky. The overall scene is rural and natural.

Consultation Summary: EBR Posting of Agriculture PTTW

Agreement Advisory Panel Meeting
February 12, 2009



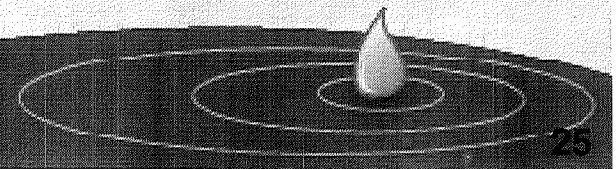
Context – Watering of Livestock or Poultry

- One of the provisions of the Agreement requires that, at minimum, water takings of **379,000 litres per day or more** (threshold amount) be part of a management and regulation program in each jurisdiction.
- Under section 34 of the *Ontario Water Resources Act* (OWRA), **livestock or poultry watering** does not require a Permit To Take Water (PTTW) issued by the Ministry, as long as the water is not taken into storage.
- In order to meet the commitments of prior notice and consultation contained in the Agreement, existing exceptions in the OWRA for the watering of livestock or poultry were amended.
- The provisions (that will be in force at a date in the future) will require a PTTW for the watering of livestock or poultry if the water taking is 379,000 litres per day or more.
- Currently, under the *Environmental Bill of Rights Act*, 1993, the Ministry is required to post PTTW proposals, with some exceptions (irrigation of agricultural crops), on the Environmental Bill of Rights Registry (EBR) for at least 30 days before a decision is made whether or not to implement the proposal.
- Therefore, when the new provisions in the OWRA come into force, all proposals for a PTTW for the watering of livestock or poultry that are 379,000 litres per day or more (over a period of one year or more) would be required to be posted on the EBR, because there is no exemption.



Context - Irrigation of Agricultural Crops

- Currently, proposals for a PTTW for the irrigation of agricultural crops are exempt from posting on the EBR.
- However, under the Agreement, for any new or increased intra-basin transfer proposals that trigger 'Notice to Parties' ($\geq 379,000$ L/day and less than 19 million L/day consumptive use), Ontario is required to provide notice to the other Parties to the Agreement prior to making any decision with respect to the proposal.
- When an intra-basin transfer involves a consumptive use of 19 million L/day or greater, a 'Regional Review' is triggered. A Regional Review provides the Regional Body an opportunity to address concerns with respect to the proposal.
- In the case of a Regional Review, public consultation is also required.



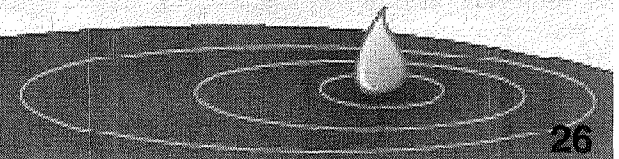


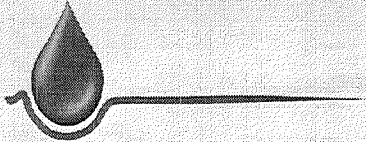
Discussion Question 1

In the OWRA, we can make a regulation to permit for the averaging of the 379,000 litres/day amount over 90 days or a fewer number of days. What concerns (if any) do you have with using an averaging amount of 90 days to calculate that? How many days should be used?

Stakeholder Feedback:

- Agriculture use varies yearly, seasonally, daily, therefore need to focus on consumptive use and take into consideration the production requirements of plants.
- Plants may need large amounts of water for the first 3 days and very little water for the following 10 days.



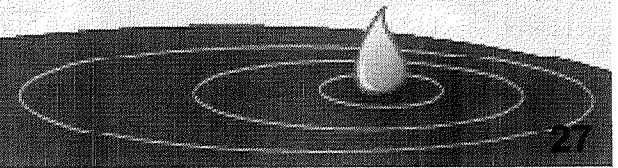


Discussion Question 2

What concerns do you have with posting proposals for a PTTW for the irrigation of agricultural crops that involve an intra-basin transfer of 379,000 L/day or more on the Environmental Bill of Rights Registry?

Stakeholder Feedback:

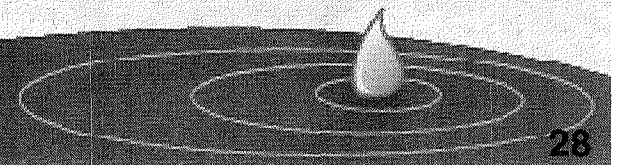
- Posting on the EBR allows individuals/groups with other agendas to go after agricultural operator which already go through several regulatory approvals and requirements.
- The PTTW approval process is rigorous and based on science.
- The potential to go to the Environmental Review Tribunal (ERT), on a leave to appeal, would be detrimental to operations that water crops and livestock.
- The ERT is not knowledgeable about farm practices, unlike the Farm and Food Practices Board.
- Look at other options other than posting these takings to the EBR.

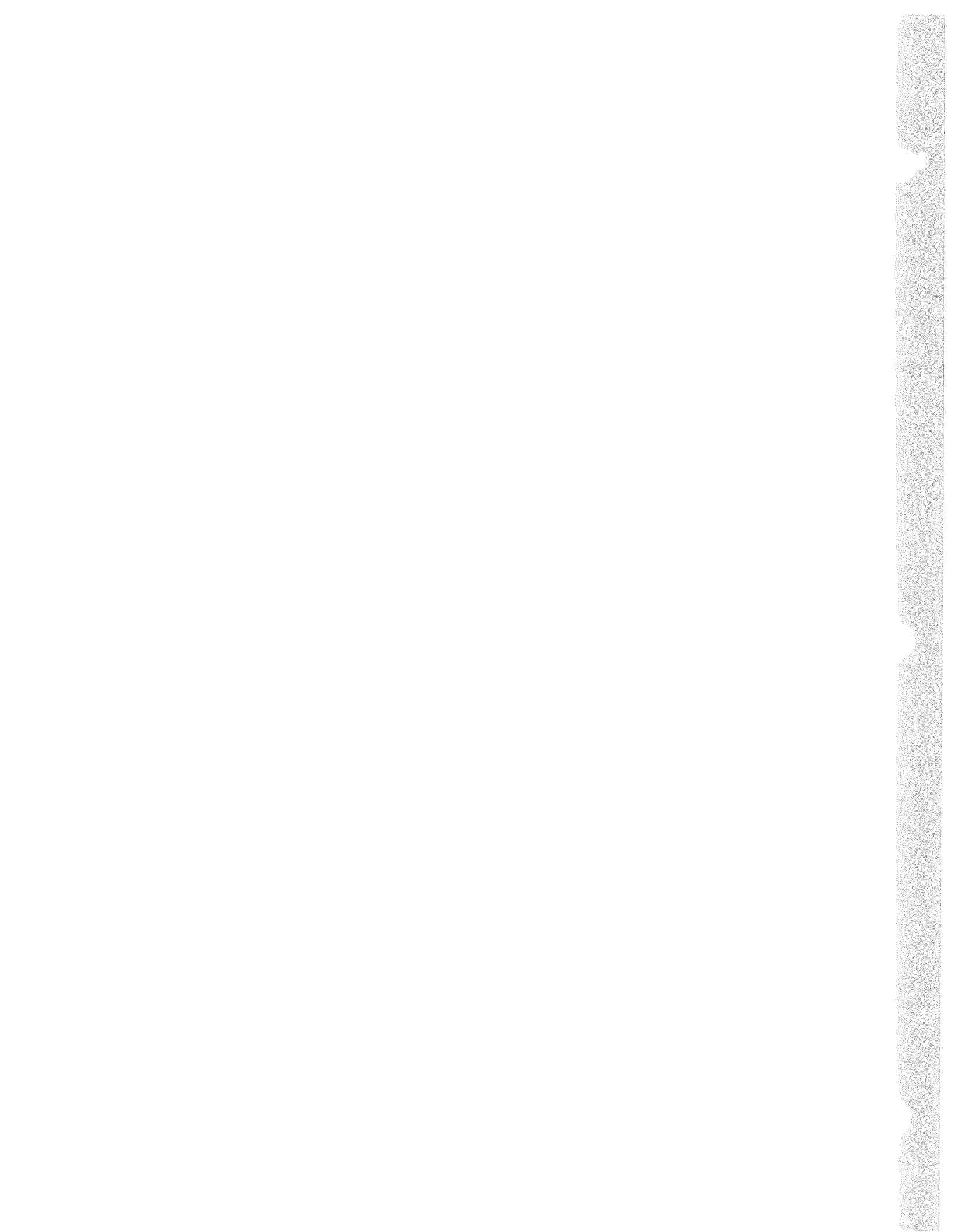




General Stakeholder Comments

- Concern about how intra-basin transfers are/will be identified in the U.S. jurisdictions, since there are no or minimal monitoring and reporting requirements.
- If public notification, monitoring and reporting is done in Ontario, it must be a universal requirement for all jurisdictions to ensure a level playing field.
- Put the public notification, monitoring and reporting requirement for Ontario on hold until US states confirm they are ready and can move forward to meet the requirement.
- Niagara study (Stantec) found a means to address the large water takings that were divided amongst multiple users – MOE should consider this approach as a possible model.
- Need to recognize that there may be multiple users under one permit, therefore individual takings are far below 379,000 l/day.
- “Under s. 34 of the OWRA, livestock or poultry watering does not require a PTTW issued by the ministry, as long as the water is not taken into storage” – this seems to contradict the intent of the conservation and efficiency goals of the Agreement – storage reduces peak demand during peak water use periods and adds to industries resiliency.
- Should not be a discrepancy between livestock or crops for consumptive use of water.







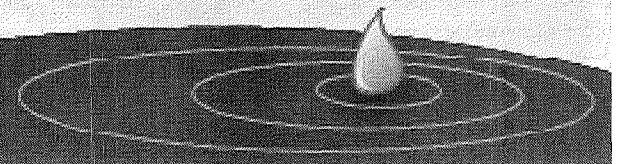
Appendix: Possible Municipal Transfers

Agreement Advisory Panel Meeting
February 12, 2009



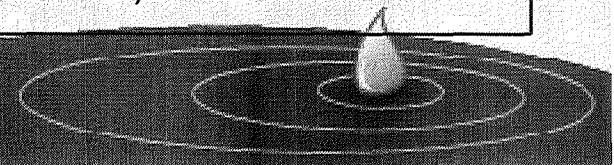
Municipal Situations

- Small number of municipalities with diversions (transfers) water across a GL watershed boundary.
- The following diversions (transfers) range in complexity and scale, but all include existing infrastructure.



Examples of Potential Existing Municipal Intra-Basin Diversions

Municipality	Existing Intra-basin Diversion (Transfer)
Regional Municipality of York	<ul style="list-style-type: none"> • Municipal water and wastewater service area in York Region straddles the Lake Ontario / Lake Huron watershed boundary.
City of Kingston	<ul style="list-style-type: none"> • Municipal water and wastewater service area in Kingston straddles watershed boundary between Lake Ontario and St. Lawrence River. • Water treatment intake (Lake Ontario), wastewater treatment discharge (St. Lawrence River)
City of London	<ul style="list-style-type: none"> • London, located in the Lake Erie watershed, obtains its water supply from Elgin Area (Lake Erie watershed) and Lake Huron • Treated wastewater for the City of London is discharged into the Thames River, tributary of Lake St. Clair (connecting channel) • Has not been determined as diversion (transfer), may depend on outcome of Interconnecting Channels outcome.
City of Hamilton	<ul style="list-style-type: none"> • Water for villages of Caledonia and Cayuga (Haldimand County) is supplied from Hamilton's Woodward WTP. Sewage discharge is to Grand River (Lake Erie watershed). • (Related Transferor)
City of North Bay	<ul style="list-style-type: none"> • Municipal water and wastewater service area in North Bay • Water is taken from Trout Lake (St. Lawrence River watershed) and sewage is discharged to Lake Nipissing (Lake Huron watershed)



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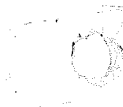
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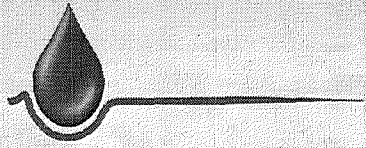
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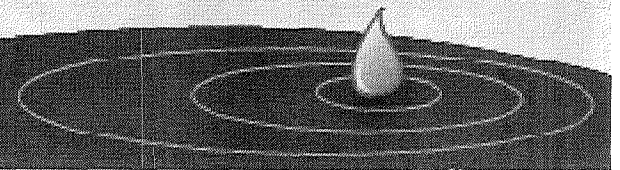
Appendix:
Possible Municipal Transfers

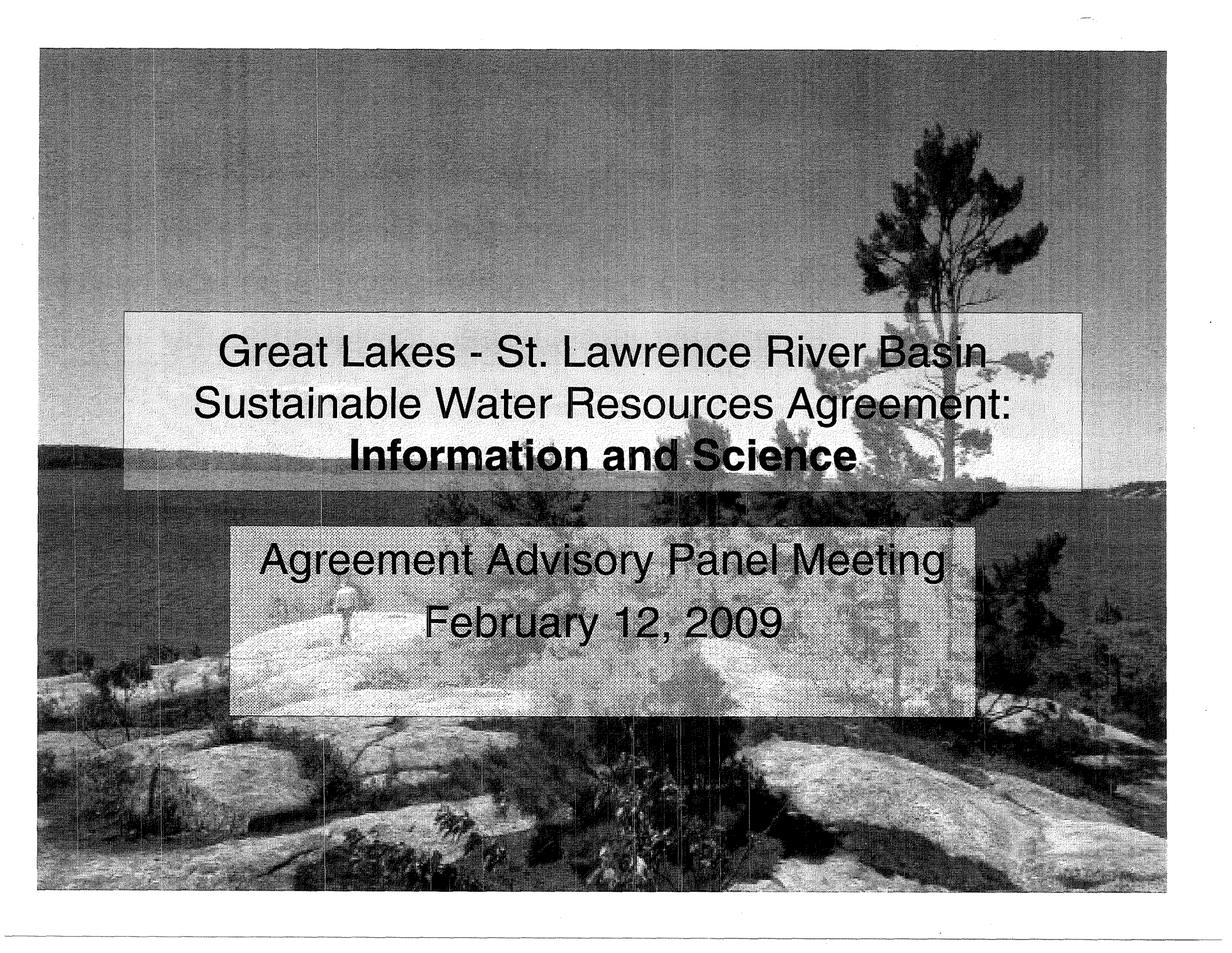
Agreement Advisory Panel Meeting
February 12, 2009



Municipal Situations

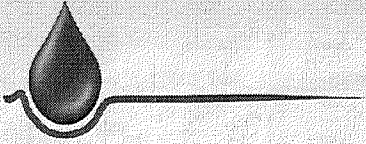
- Small number of municipalities with diversions (transfers) water across a GL watershed boundary.
- The following diversions (transfers) range in complexity and scale, but all include existing infrastructure.



A black and white photograph of a rocky landscape. In the foreground, there are large, flat, light-colored rock slabs. In the background, a large, dark evergreen tree stands prominently against a lighter sky. The overall scene is a natural, outdoor setting.

Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement:
Information and Science

Agreement Advisory Panel Meeting
February 12, 2009

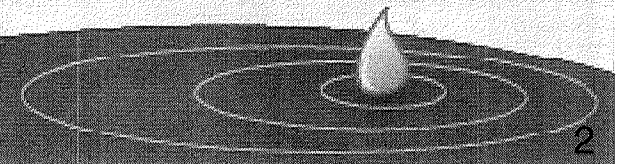


Overview

- Overview of Regional Initiatives
- Overview of Provincial Initiatives
- Information & Science Sub-Group – Feb.6, 2008
- Key Upcoming Timelines

Appendices:

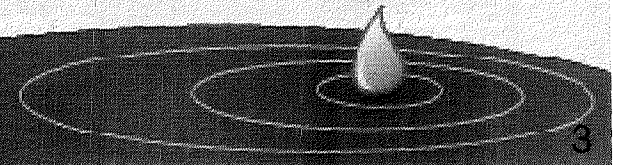
- Agreement Information Commitments
- Agreement Science Commitments
- IAGLR Session Abstracts
- Sample Great Lake Watershed Map- London





Overview of Regional Initiatives (among 10 Great Lakes Jurisdictions)

- Regional Water Use Information Initiative (WUII)- developing draft Water use Reporting Protocols:
 - **Water User Reporting Protocols** – data elements, acceptable methods of measuring, reporting of diversions/return flow, efficiency of reporting
 - **State/Provincial Reporting Protocols** – acceptable methods for consumptive use reporting (reporting vs. coefficients), improvements to coefficients, methods for measuring diversions, possible reporting standards/timeframes, geographic scale for reporting (e.g. GL watershed, sub-watershed, aquifer)
 - **Regional Data Base Management** – strengths & weaknesses of current GLC water use data base – will current database meet commitments-are changes needed?, any changes to water use categories? Database funding, public access, how to address confidentiality concerns
 - **Baseline Water Use Reporting Protocol** – to be developed
- Regional Science Strategy
 - Council of Great Lakes Governors has developed a draft work plan to guide the states and provinces in meeting these commitments – pursuing funding
- International Association for Great Lakes Research (IAGLR, 2009)
 - Session is being co-chaired by Ontario and Ohio – **‘Building Toward a Science Strategy for the Great Lakes Basin under the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement’**; 14 abstracts submitted (e.g. cumulative impact assessment, groundwater, First Nations Traditional knowledge). See www.IAGLR.org





Overview of Ontario Initiatives

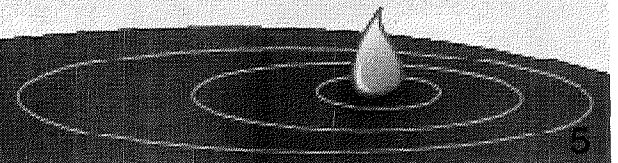
- Consumptive Use Study (AquaResource Inc.) proposed coefficient table, tiered framework
 - A detailed update and discussion of the AquaResource Inc. consumptive use study is provided at today's session
- Great Lakes-St. Lawrence R. Watershed Mapping
 - Several comments have been received on first draft related to the base data layers
 - Draft Great Lake watershed and primary watershed boundaries have been developed
 - Samples of revised draft mapping are being reviewed; additions include contours, tertiary watersheds, Great Lakes watershed boundaries, source protection mapping symbology





AAP Information & Science Sub-Group

- First call- Feb. 6, 2008 – overview of regional, provincial initiatives
- Preliminary discussion of draft regional Water Use Reporting Protocols, existing Great Lakes Water Use Data Base
 - Protocol does not appear to move far beyond status quo
 - Current data base too aggregated to be useful
 - Advancements needed to adequately support Agreement commitments, e.g. cumulative impact assessment – in particular, data required at a tertiary watershed scale
- Brief discussion of subgroup role/scope
 - It is expected that consultation on information and science themes and initiatives will be on-going
 - Interest in identifying gaps in science
 - Would like to see Science Strategy initiative underway – much work to be done, commitments vague.
 - Draft terms of reference for the subgroup to be developed
- Next meeting to be scheduled following February AAP Sessions





Key Timelines

- **Consumptive Use Study**
 - draft report, AAP presentation -Feb. 12, 2009
- **Water Use Information Initiative**
 - Draft Water Use Reporting Protocols released to regional Advisory Panel, FN/Tribes-Feb. 4, 2009
 - Next Meeting of WUII Committee to discuss comments-Feb. 25, 2009
 - Revised draft for public comment– Late March
 - Final draft to Regional Body-Summer 2009



Appendices





Water Use Information Commitments

- Article 301 of the Agreement commits the Parties to take specific steps to improve water use information and how it is applied:
 1. The Parties shall annually gather and share accurate and comparable information on all withdrawals in excess of 100,000 gallons per day (379,000 litres per day) - including consumptive uses and all diversions.
 2. The Parties shall report this information to a regional water use data base repository and aggregated information shall be available to the public, consistent with the confidentiality requirements in Article 704.
 3. Each Party shall require users to report their monthly withdrawals, consumptive uses and diversions on an annual basis.
 4. Information gathered shall be used to improve scientific understanding of the waters of the Basin, the impacts of withdrawals from various locations and water sources on the basin ecosystem, understanding of the role of groundwater, and to clarify what groundwater forms part of the Waters of the Basin.



Science Strategy Commitments

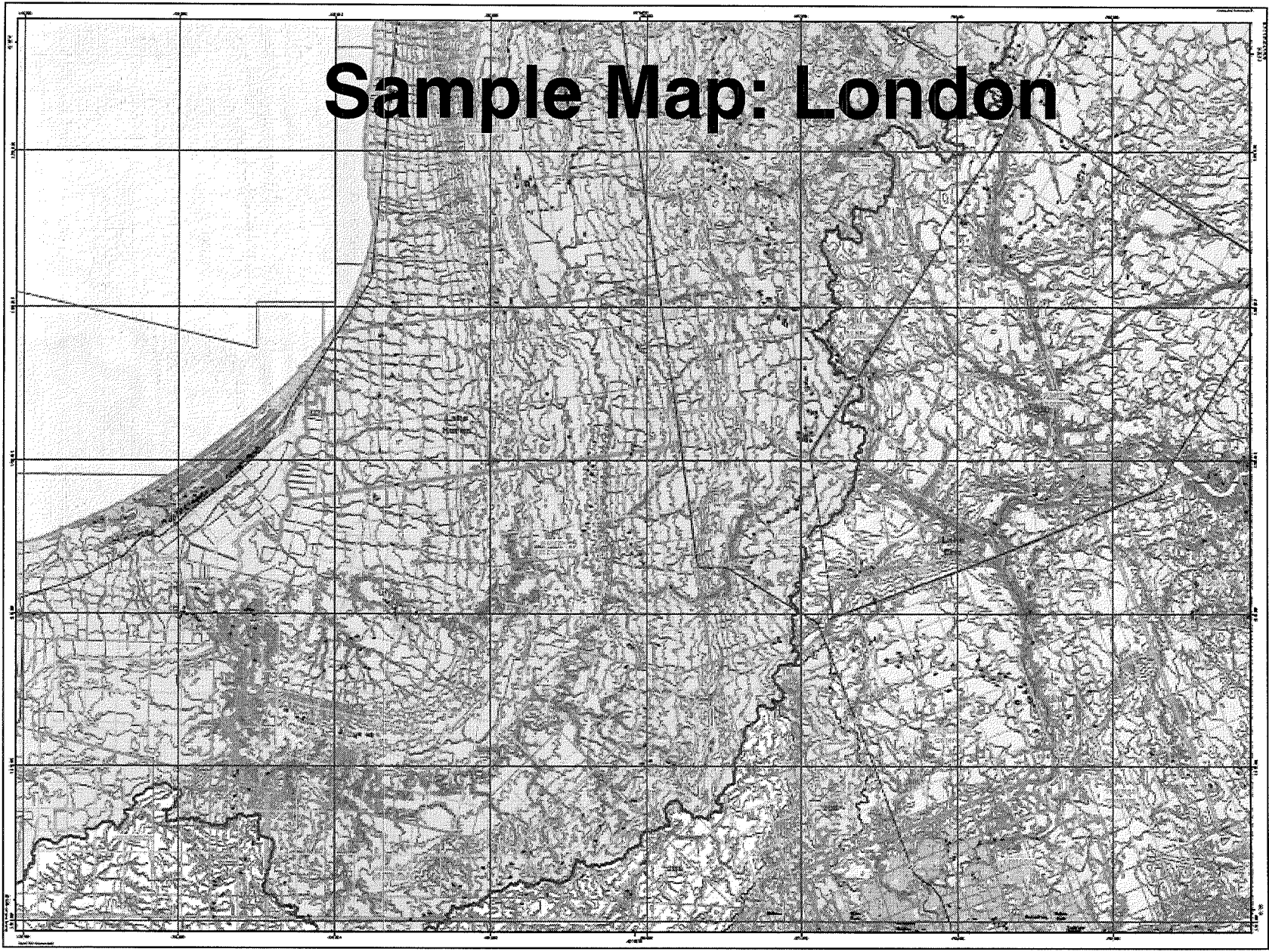
- Article 302 of the Agreement commits the Parties to provide leadership in developing a collaborative Strategy to strengthen the scientific basis for sound water management decision-making.
- The Strategy will support:
 - Improved understanding of the individual and cumulative impacts of withdrawals from various locations and water sources on the basin ecosystem
 - A mechanism by which cumulative impacts may be assessed
 - The periodic assessment of cumulative impacts on a Great Lake and St. Lawrence River watershed basis;
 - Improved scientific understanding of the waters of the basin;
 - Improved understanding of the role of groundwater; and
 - Development, transfer and application of science, research related to water conservation and water use efficiency.(Article 209 commits to review the standard & exception standard based on periodic cumulative impact assessments)
- Council of Great Lakes Governors has developed a draft work plan to guide the states and provinces in meeting these commitments.



IAGLR Session Abstracts

Title	Presenter
The Ontario Geological Survey's Surficial Aquifer 3-D Mapping Program	Kelly, R.I.
The Ottawa-Gatineau Watershed Atlas	Tonto, J.F.
Water Balance Quantification in the Trent River Watershed: Validation of Ungauged Tributaries and Impact of Storage Variables	Boston, T.J.
A map to change the world: enabling environmentally based water management across the Great Lakes region	Seelbach, P.W.
Ontario's Groundwater Mapping Program	Baker, C.L.
The Canadian Water Availability Indicators Initiative: Great Lakes Pilot	Villeneuve, M.J.
Development of a Methodology for Calculating Consumptive Water Use within the Province of Ontario	Martin, P.J.
Water Quantity Risk Assessments in Ontario: A Great Lakes Headwaters Pilot Project	Van Vliet, D.J.
A Community Tie – the Connection of the Anishnaabek of Aamjiwnaang with the St Clair River	Plain, R.
Anishinabek Traditional Knowledge and the Implementation of the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement	Jones, A.
Update on Modeling and analyzing the use, efficiency, value, and governance of water in the Great Lakes region through an integrated approach	Mayer, A.S.
Great Lakes-SWRA - Information and Science Provisions and Related Initiatives	Messervey, R.W.
System Dynamics Modeling of Water Resources	Fugate, E.J.
Quantifying the Effects of Climate Change on Sustainable Water Resources in Gauged and Ungauged Watersheds.	

Sample Map: London



Ontario

PROVINCIAL MAP SERIES

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LONDON



1:75,000



Year	Scale	Series
1980	1:75,000	820430
1985	1:75,000	820430
1990	1:75,000	820430

Map of Ontario of the Province of Ontario

1980

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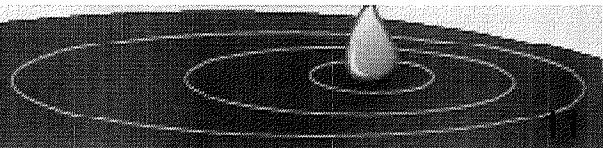
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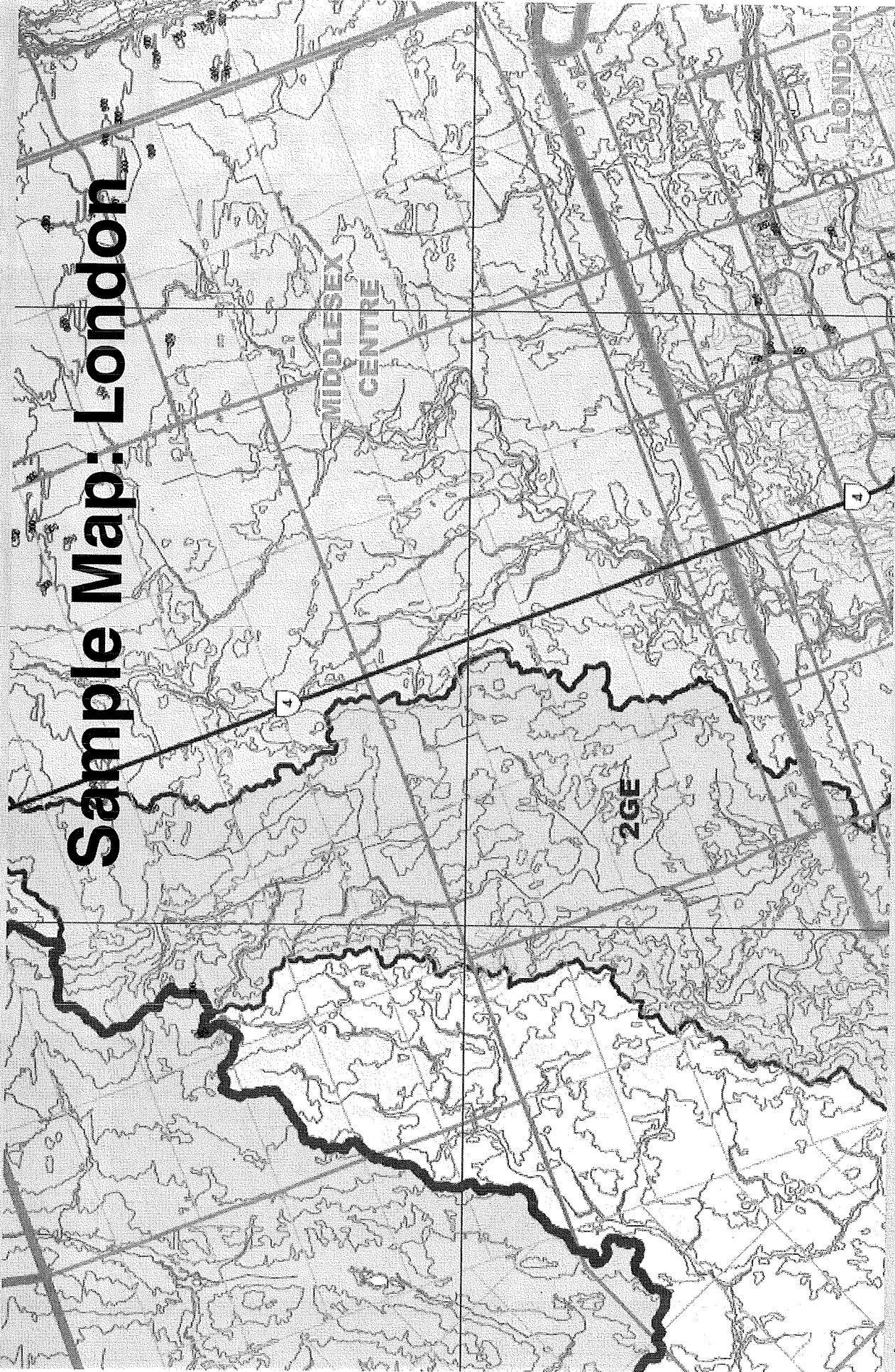
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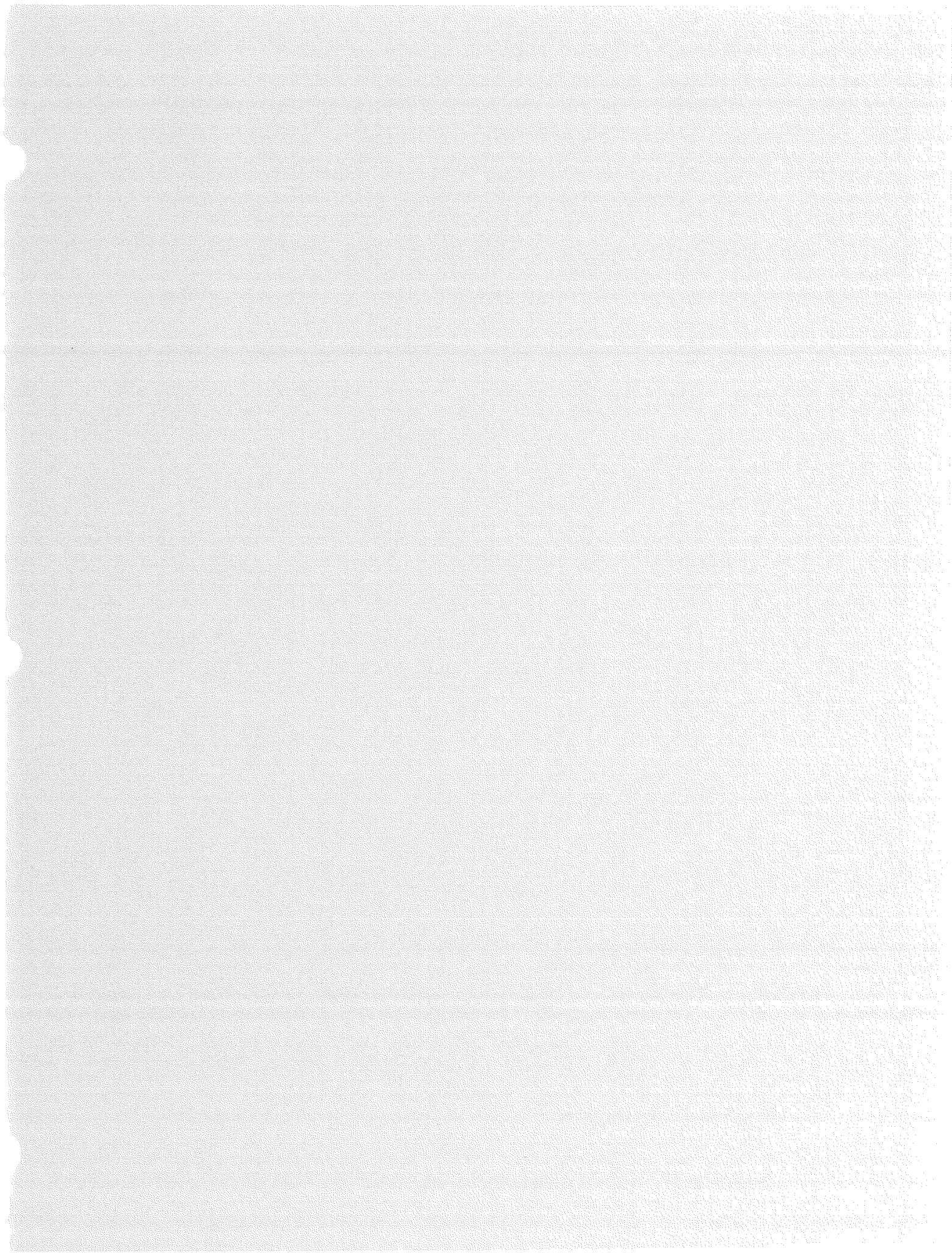
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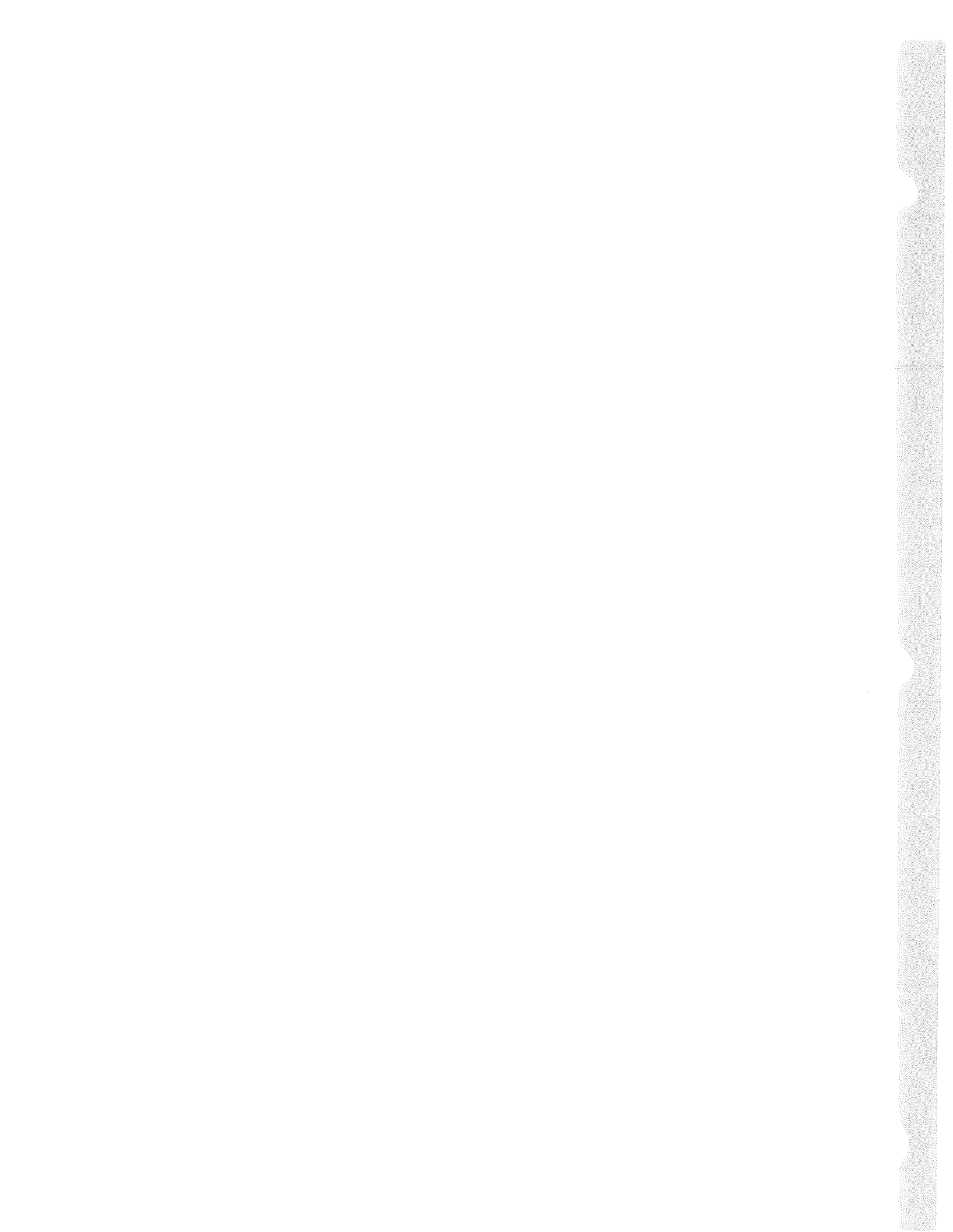
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Sample Map: London







**Great Lakes Agreement Advisory Panel Meeting
IMPLEMENTING THE GREAT LAKES - ST. LAWRENCE RIVER BASIN
SUSTAINABLE WATER RESOURCES AGREEMENT**

Date: February 19, 2009

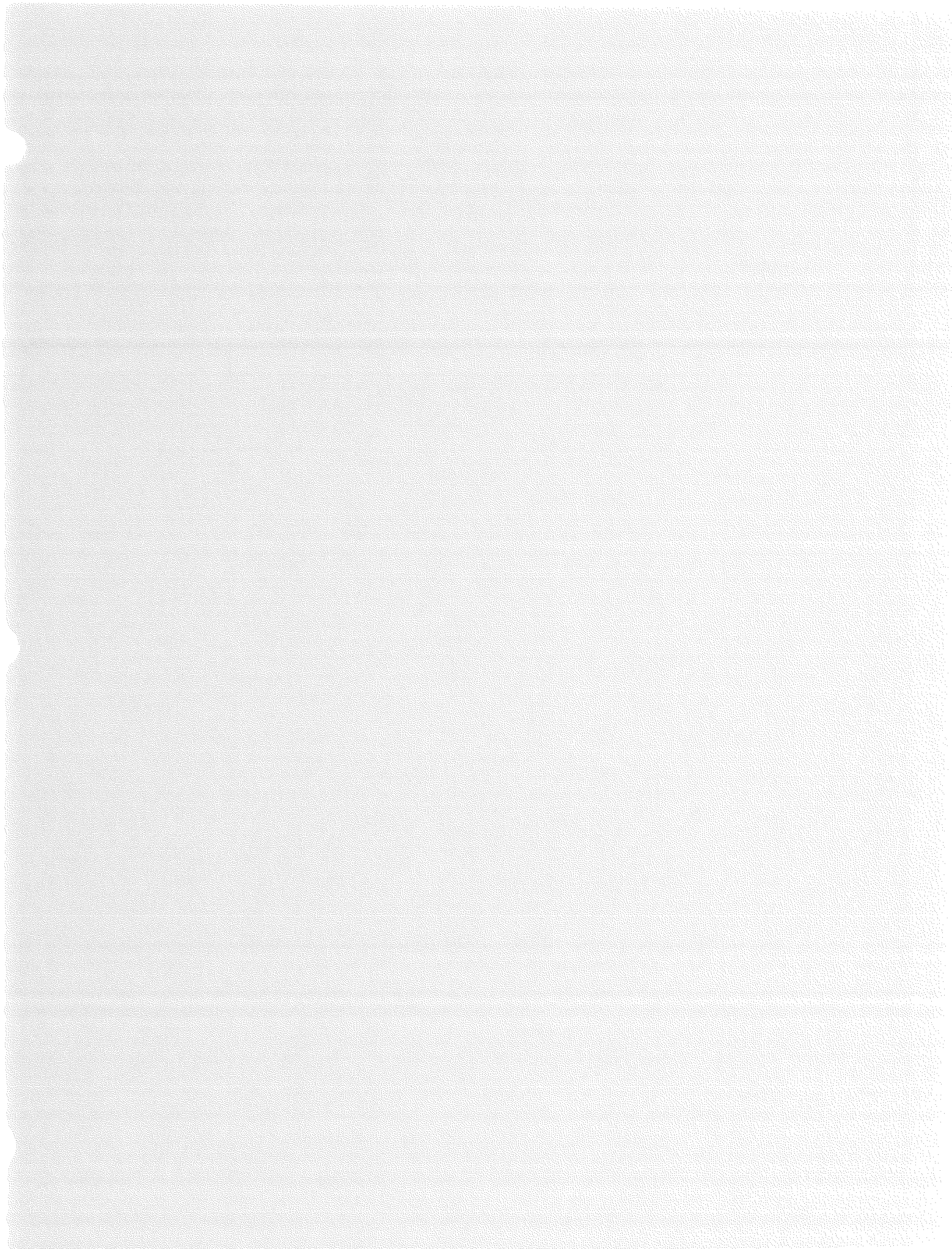
Location: 8th floor, Boardroom A/B, 55 St. Clair Avenue West, Toronto.

NOTE: This location is scent-free. Please refrain from wearing perfume, cologne or other heavily scented products.

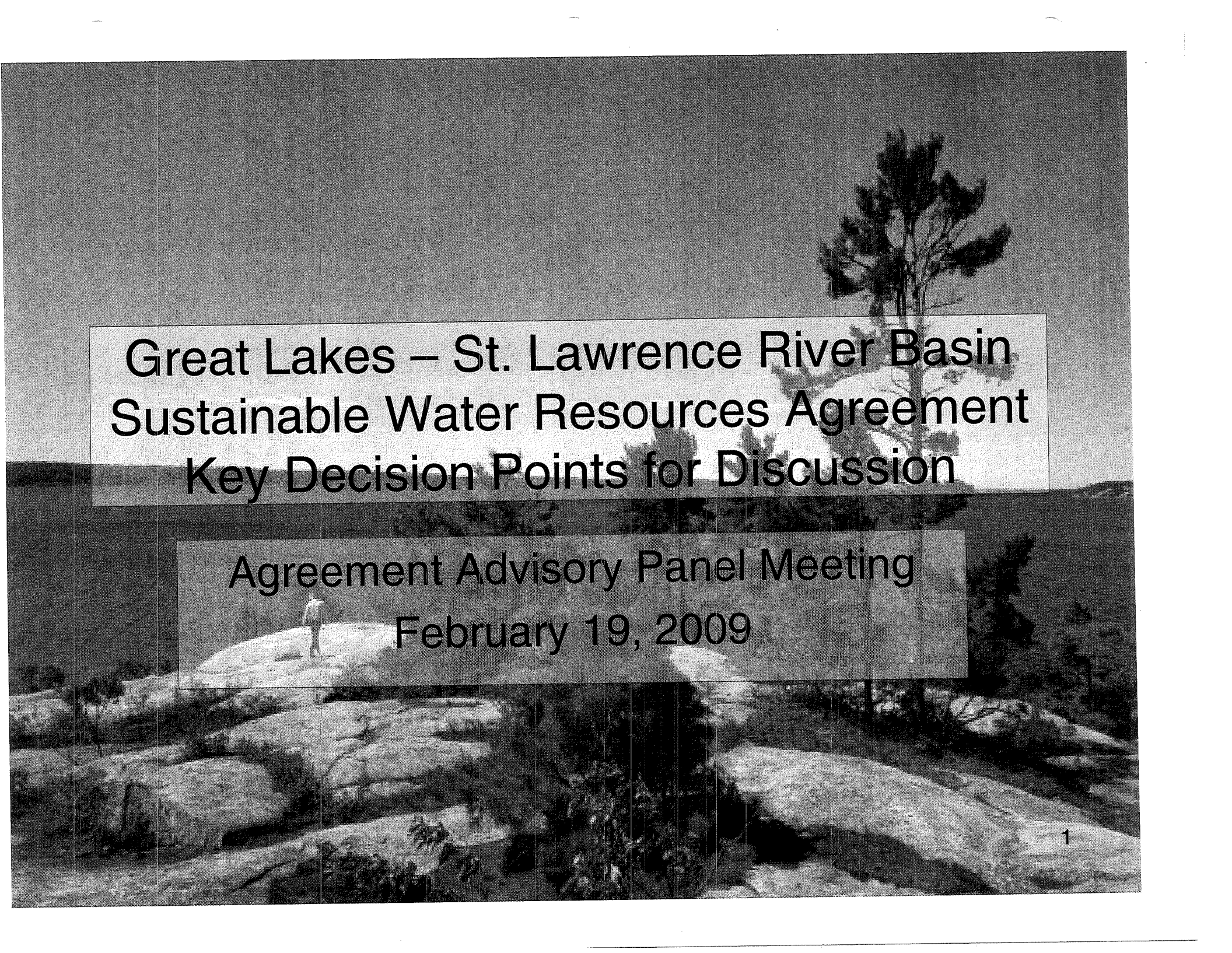
AGENDA

- 8:30 AM Arrival (continental breakfast provided)
- 9:00 AM Welcoming remarks, Rob Messervey, MNR
- 9:15 AM Key Decision Points for Discussion, Ann Marie Weselan, MOE
- 9:30 AM Intra-basin Transfers
- Establishing the Baseline, Joanne Di Maio, MOE
 - Discussion
 - Connecting Channels, Lori Byers, MOE
 - Discussion
 - Technical Bulletin, Lori Byers, MOE
- 11:15 AM Regulating New and Increased Transfers
- Regional Review Process, Paula Thompson, MNR
- Discussion
- 11:45 AM Regulating New and Increased Transfers,
Paula Thompson, MNR; Caroline Cosco, MOE
- How to Apply the Exception Criteria
- 12:30 PM LUNCH (provided)
- 1:00 PM Regulating New and Increased Transfers (continued)
- How to Apply the Exception Criteria
- Discussion
- 3:30 PM Regulating New and Increased Transfers, Lori Byers, MOE
- When to Apply the Exception Criteria
- Discussion
- 4:30 PM Ensuring adequate public notification of applications
- Prior Notice - EBR Posting of Permits to Take Water
Angela Homewood, MOE
- Discussion
- 4:55 PM Wrap-up and Next Steps
Rob Messervey, MNR

5:00 PM Meeting ends



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A black and white photograph of a rocky landscape. In the foreground, there are large, flat rock slabs. A person is standing on a rock in the middle ground. In the background, there are trees and a clear sky. The image has a halftone or dithered texture.

Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement Key Decision Points for Discussion

Agreement Advisory Panel Meeting
February 19, 2009



Key Decision Points for Discussion


1. What is an intra-basin transfer and where does a transfer occur?
 - Define the watershed boundaries;
 - Determine how to define and handle connecting channels
 - Consider transfers of sewage

2. Establish baselines
 - Water withdrawals
 - Consumptive use
 - Transfers

3. Regional Review Process
 - Minister's permit threshold

4. If there is a new or increased transfer above the threshold amount, how will the exception criteria be applied
 - Return flow
 - Cumulative impacts
 - No feasible, environmentally sound cost effective alternative
 - Efficient use of existing supplies
 - Water conservation





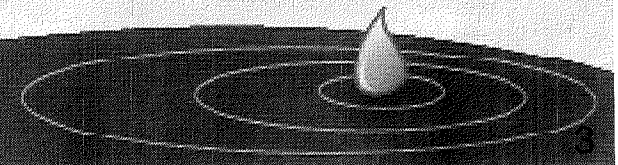
Key Decision Points for Discussion

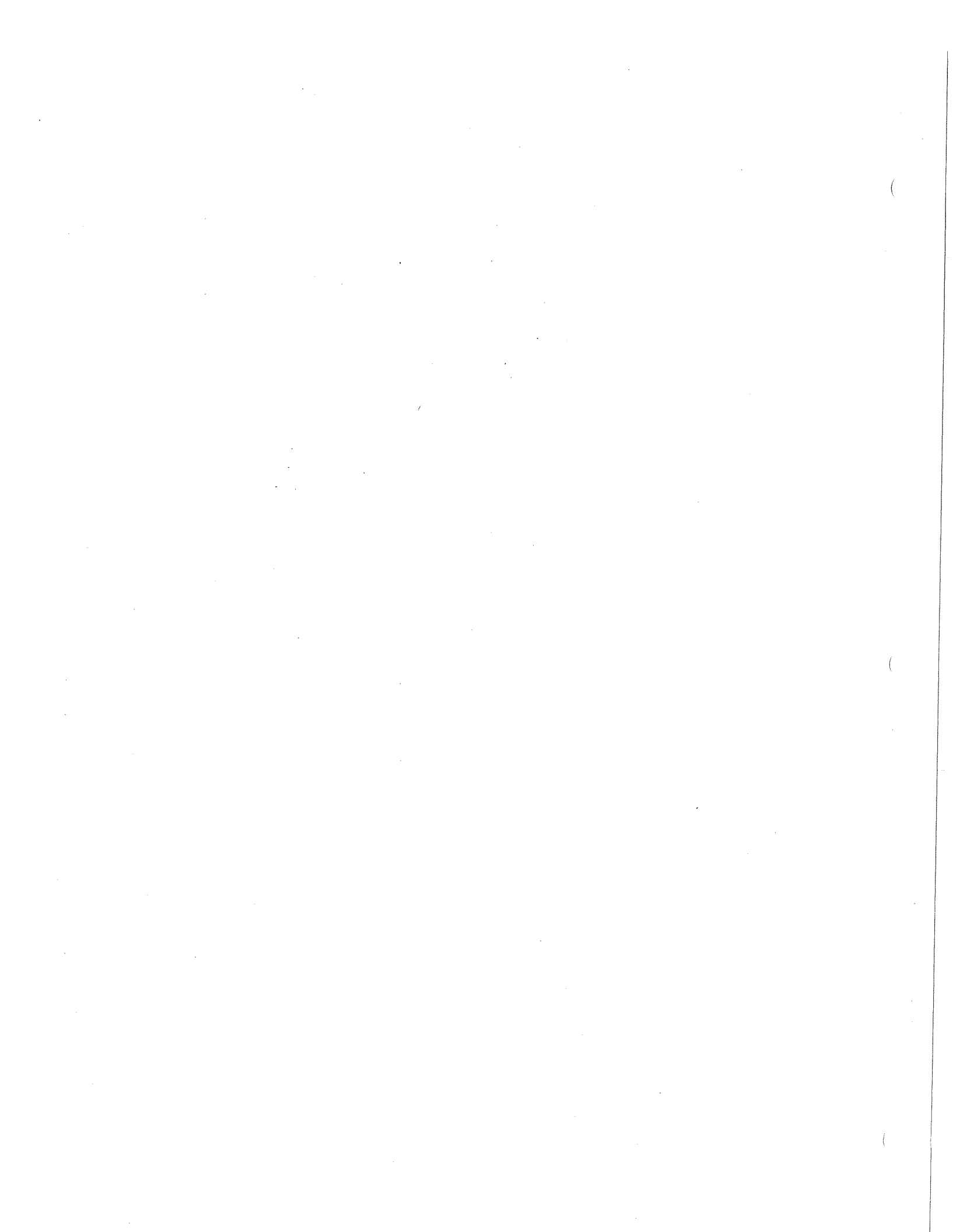
5. When should the exception criteria be applied?

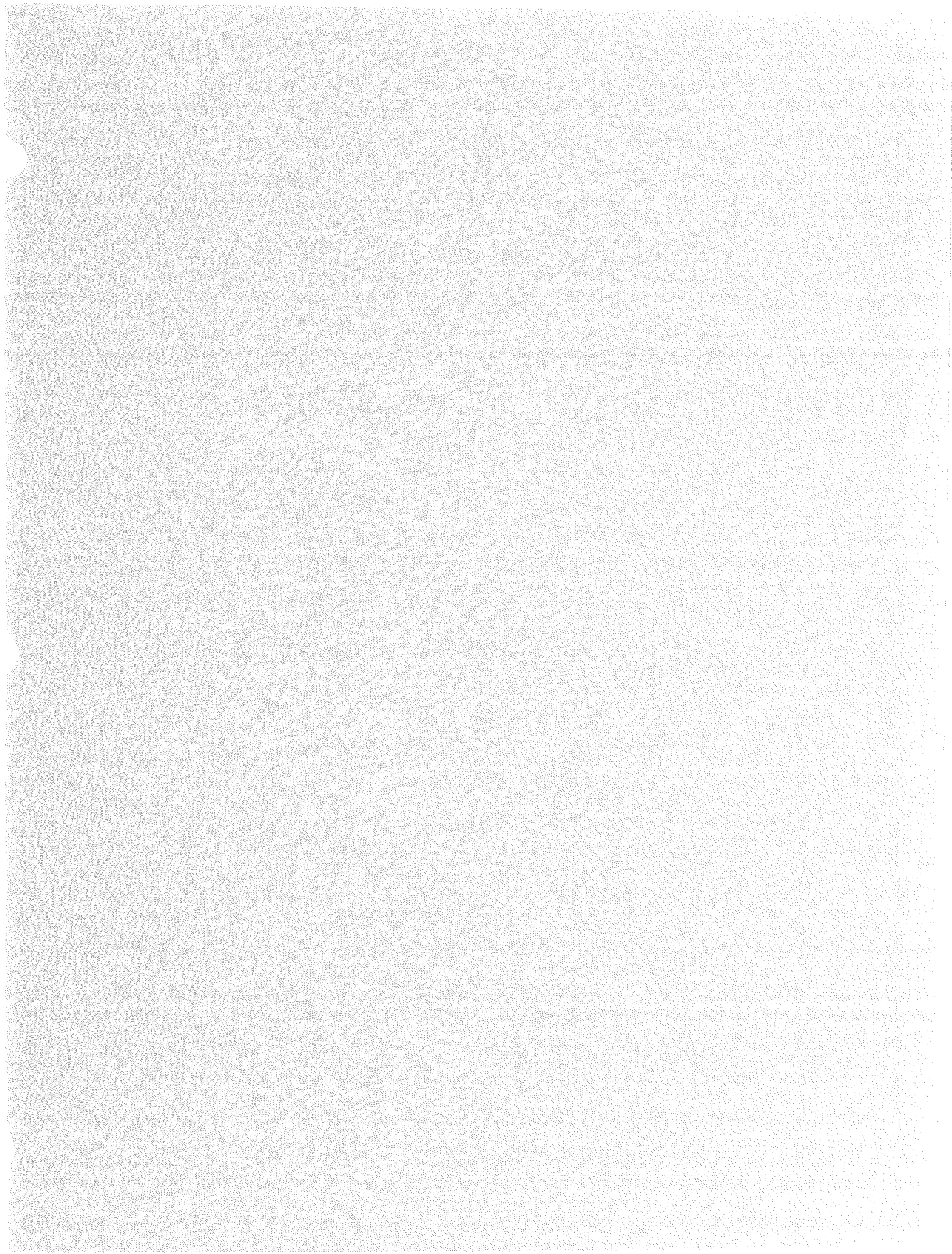
- Early in the infrastructure planning process or at multiple points in the process
 - Municipal (MEA Class EA, Master Plans, PTTW)
 - Non municipal

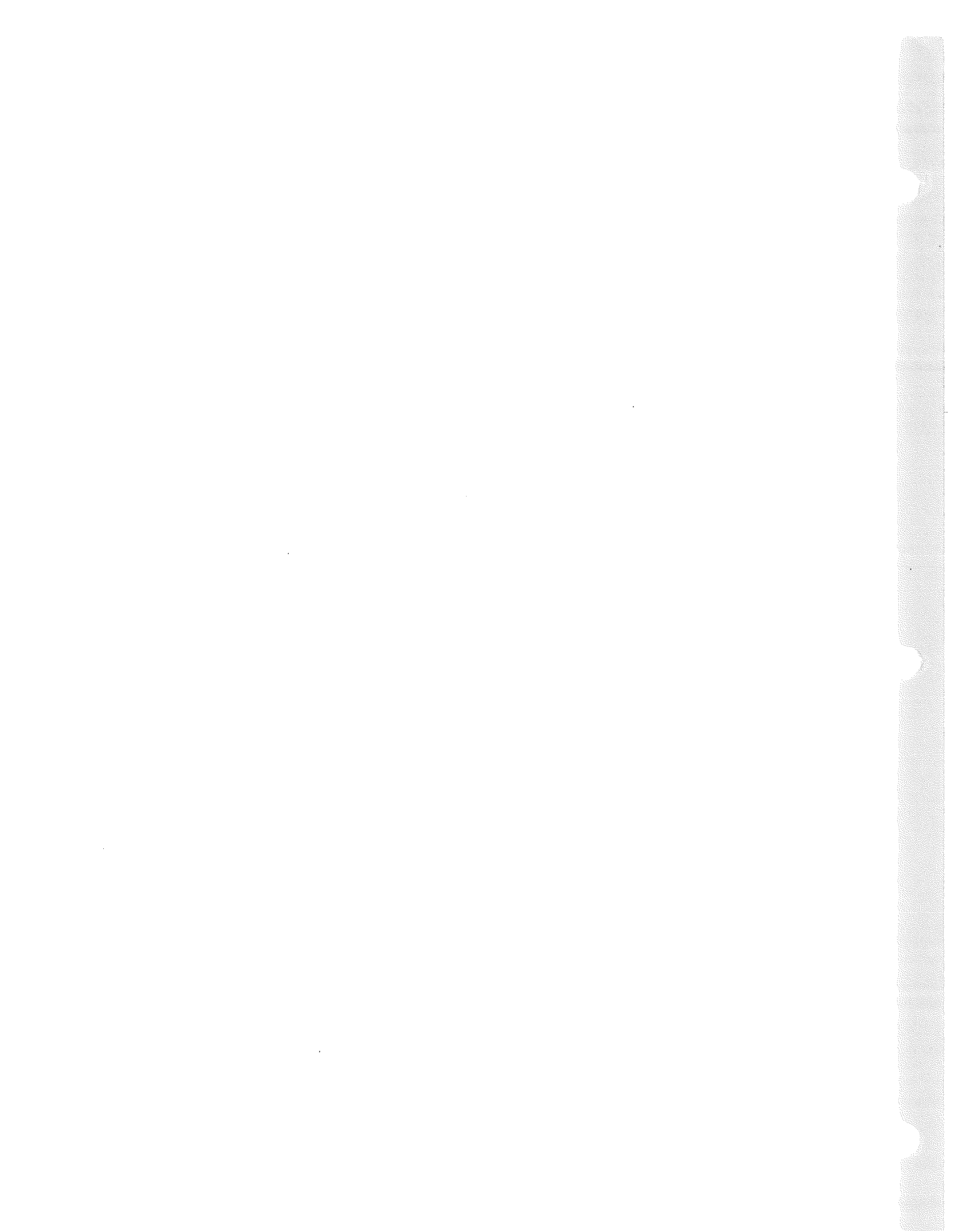
6. Ensuring adequate public notification of applications

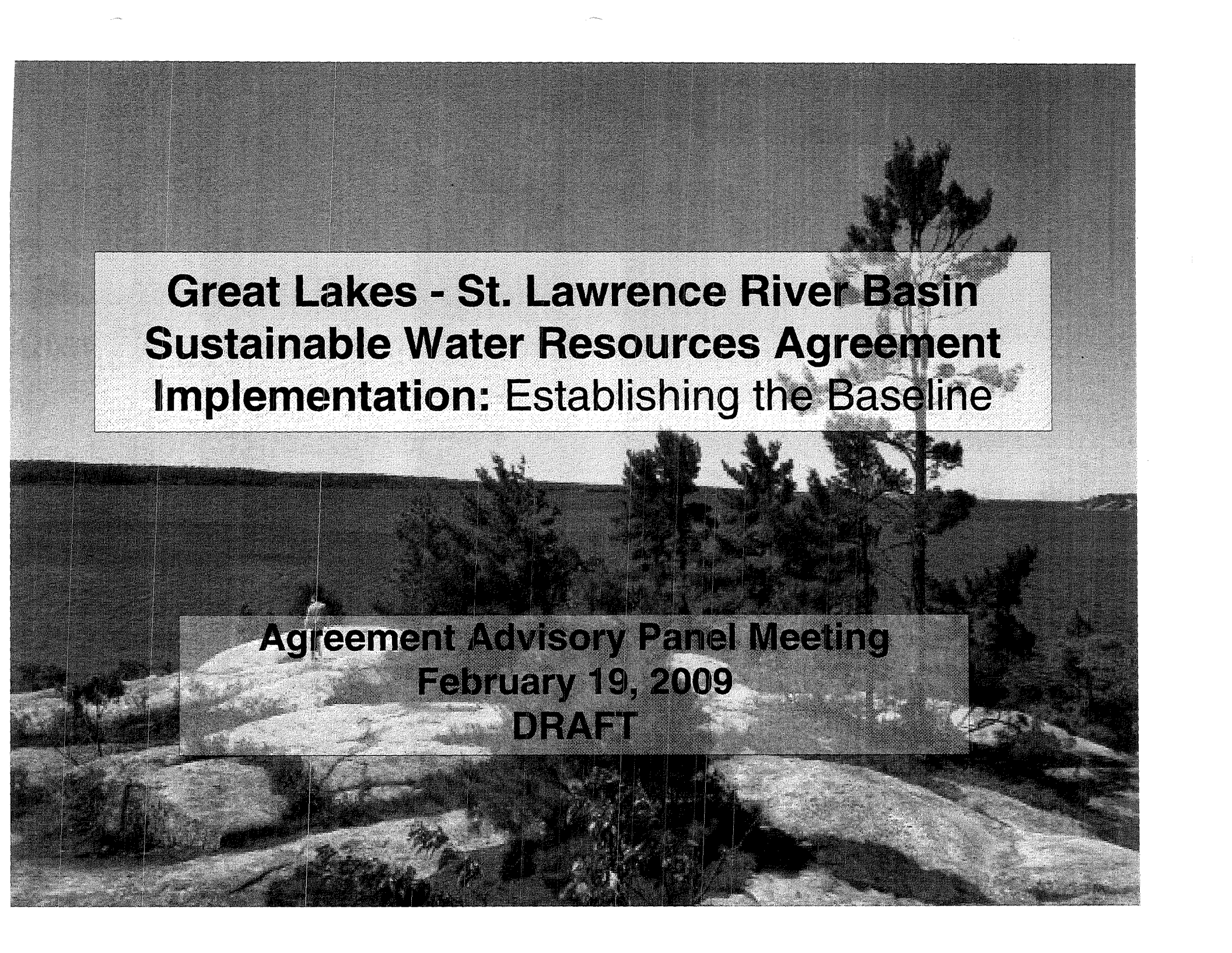
- Posting of PTTW applications on EBR











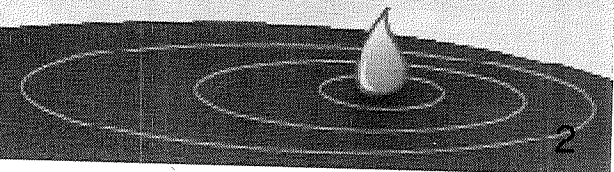
**Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: Establishing the Baseline**

**Agreement Advisory Panel Meeting
February 19, 2009
DRAFT**



Outline

- Context – Agreement provisions.
- What is a withdrawal, consumptive use, diversion (transfer)?
- Examples of potential intra-basin transfers.
- Establishing the baseline for municipal and non-municipal withdrawals, transfers, consumptive uses.
- Related transferor.





Purpose of Presentation

- Seek feedback on:
 - options for setting the baseline for municipal takings
 - options for setting the baseline for non-municipal takings
 - an approach for calculating the transfer amount
 - an approach to implementing related transferor.





Context: Establishing the Baseline

ARTICLE 207 – APPLICABILITY

Determining New or Increased Diversions, Consumptive Uses or Withdrawals

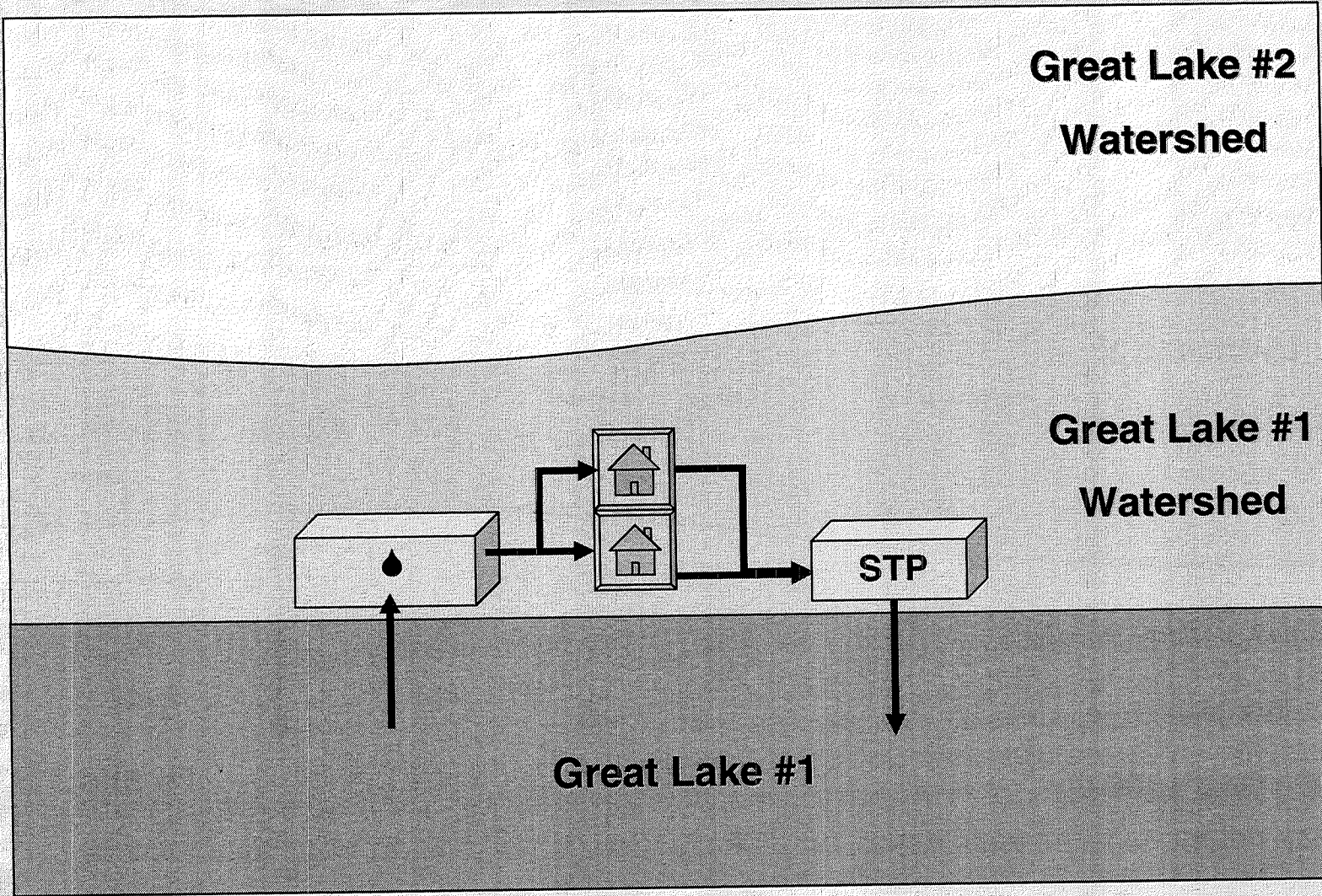
1. To establish a baseline for determining a New or Increased **Diversion, Consumptive Use or Withdrawal**, each Party shall develop either or both of the following lists for their jurisdiction:
 - a. **A list of existing Water Withdrawal approvals** as of the date this Article comes into force;
 - b. A list of the capacity of existing systems as of the date this Article comes into force. The capacity of the existing systems should be presented in terms of Withdrawal capacity, treatment capacity, distribution capacity, or other capacity limiting factors. The capacity of the existing systems must represent the state of the systems. **Existing capacity determinations shall be based upon approval limits or the most restrictive capacity information.**

For all purposes of this Agreement, volumes of the Diversions, Consumptive Uses or Withdrawals set forth in the list(s) prepared by each Party in accordance with this Paragraph shall constitute the **baseline volume**.

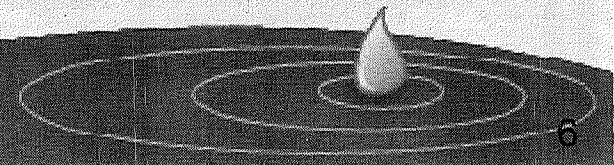
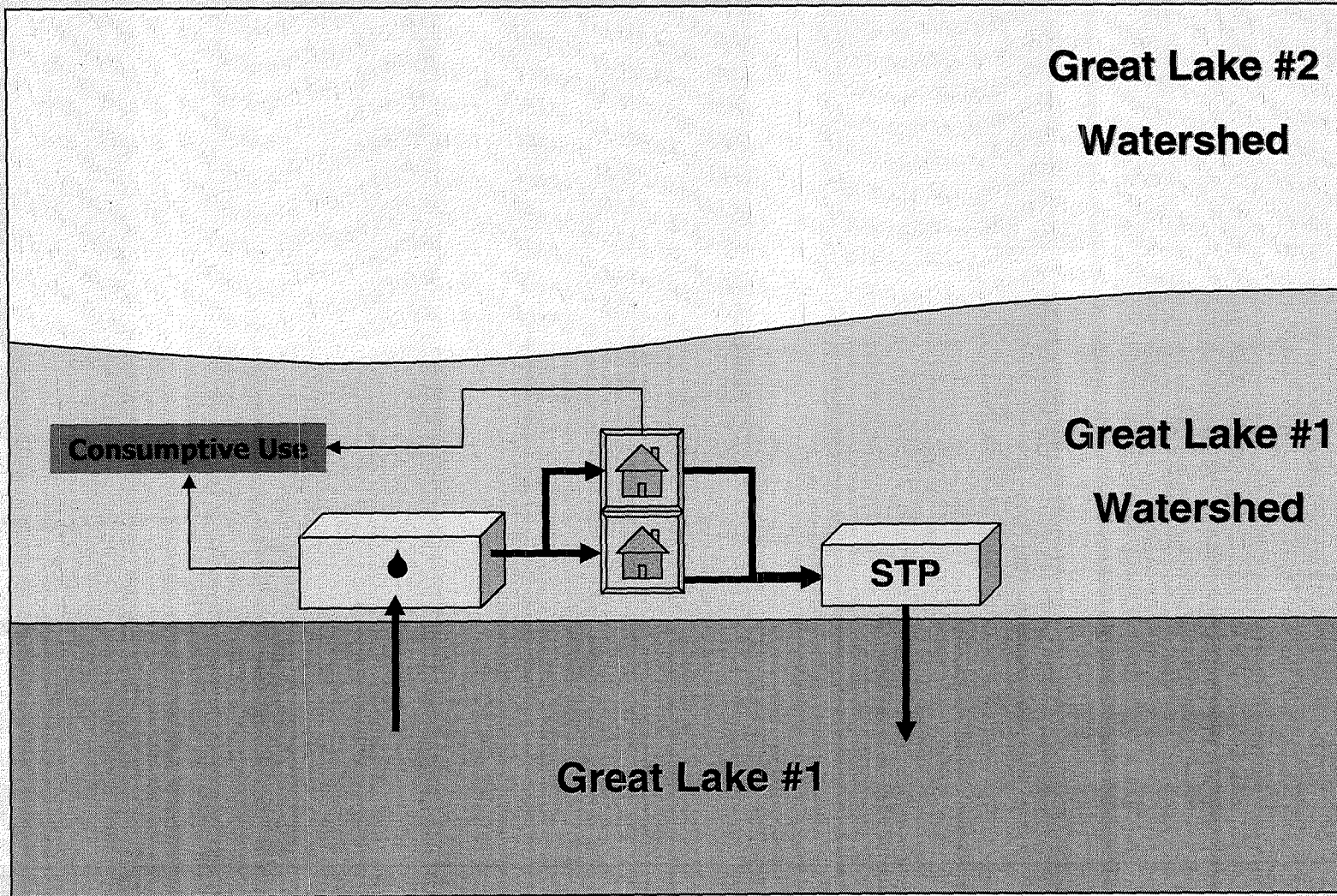
The list(s) shall be furnished to the Regional Body within 1 year of the date this Article comes into force.



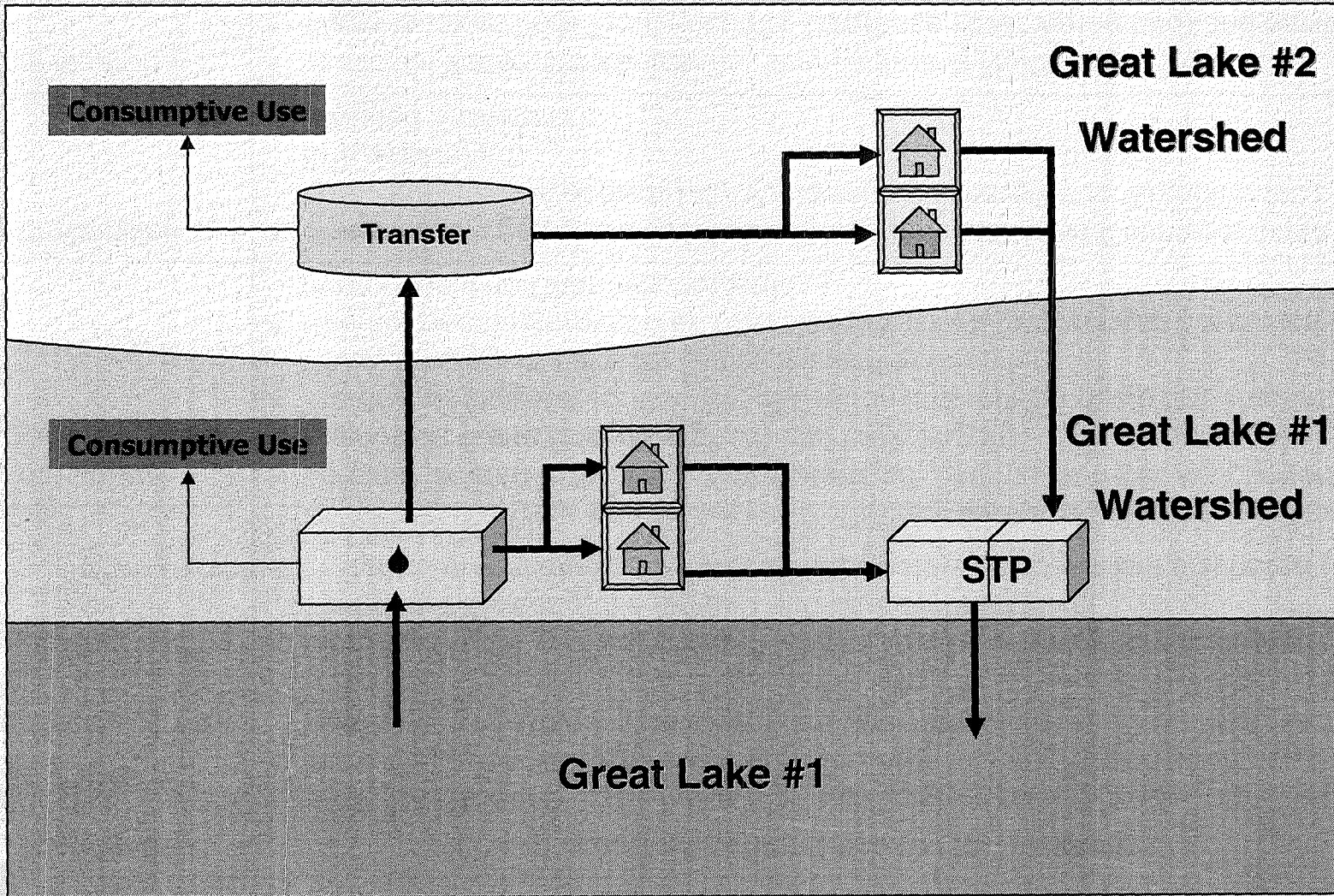
Withdrawal



Consumptive Use



Diversion (Transfer)



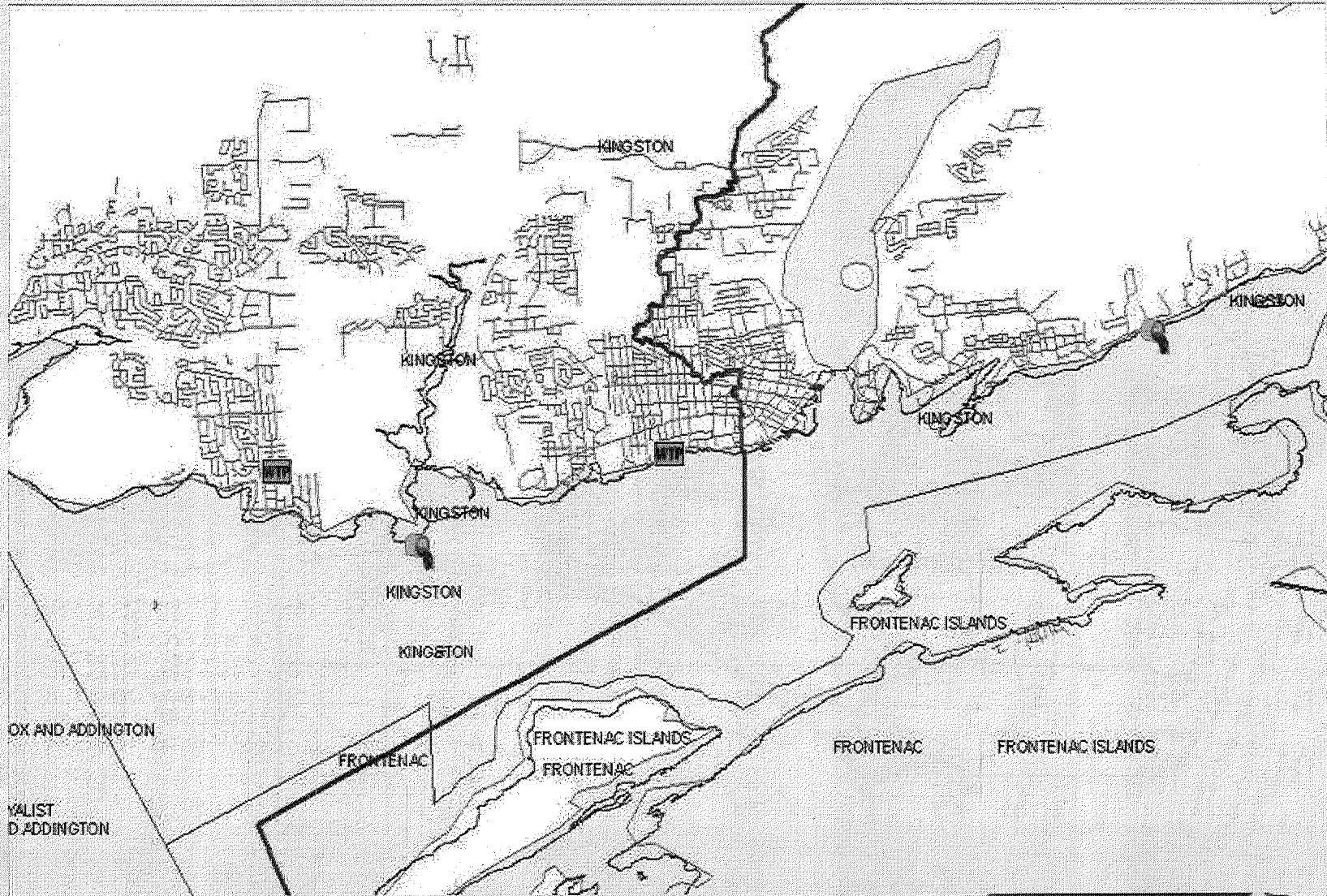


Examples of Potential Existing Municipal Intra-Basin Transfers

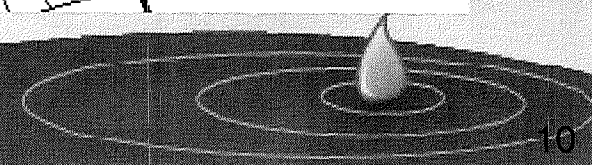
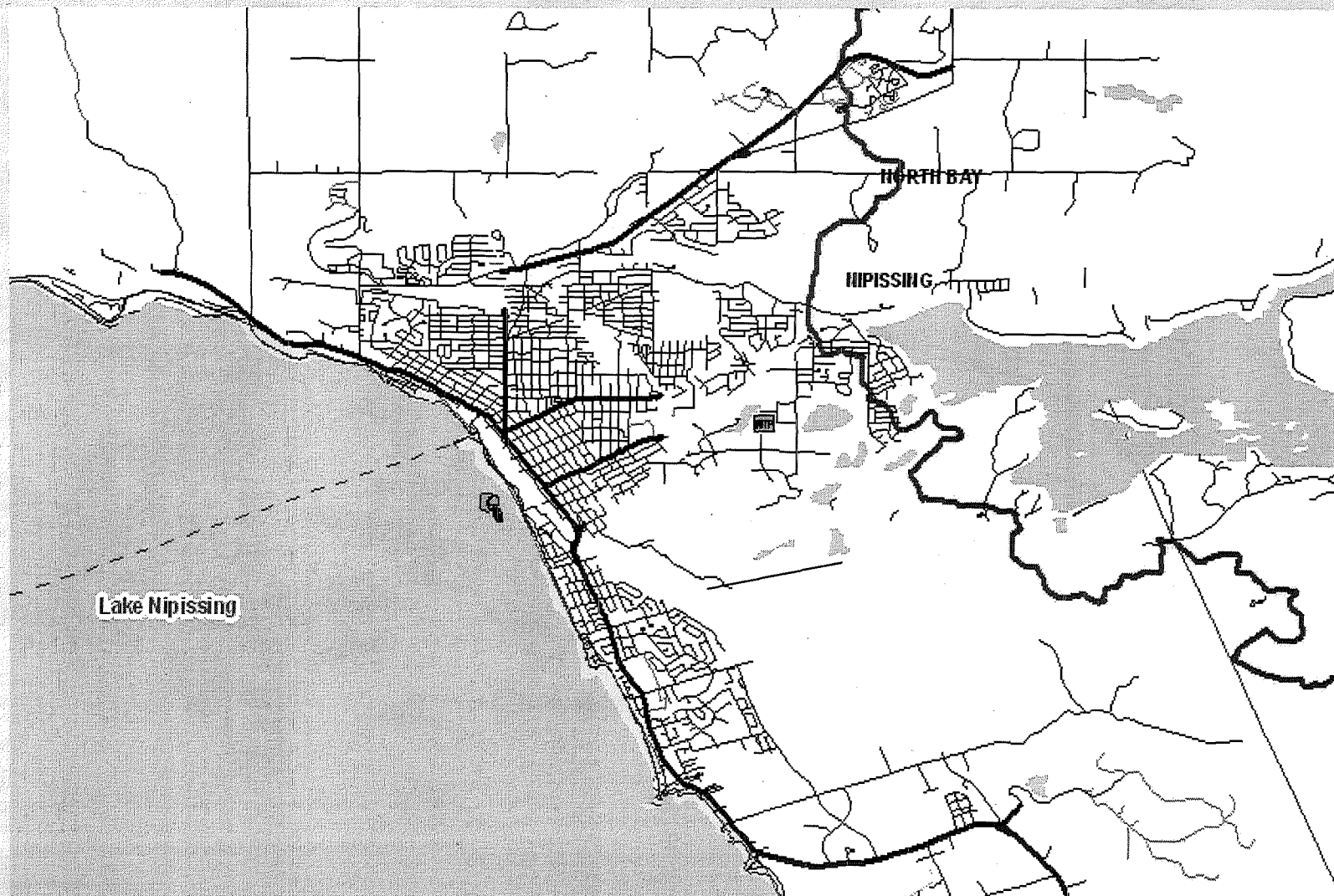
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Regional Municipality of York	<ul style="list-style-type: none">• Municipal water and wastewater service area in York Region straddles the Lake Ontario / Lake Huron watershed boundary.
City of Kingston	<ul style="list-style-type: none">• Municipal water and wastewater service area in Kingston straddles watershed boundary between Lake Ontario and St. Lawrence River.• Water treatment intake (Lake Ontario), wastewater treatment discharge (St. Lawrence River).
City of London	<ul style="list-style-type: none">• London, located in the Lake Erie watershed, obtains its water supply from Elgin Area (Lake Erie watershed) and Lake Huron.• Treated wastewater for the City of London is discharged into the Thames River, tributary of Lake St. Clair (connecting channel).• Has not been determined as diversion (transfer), may depend on outcome of Interconnecting Channels outcome.
City of Hamilton	<ul style="list-style-type: none">• Water for villages of Caledonia and Cayuga (Haldimand County) is supplied from Hamilton's Woodward WTP. Sewage discharge is to Grand River (Lake Erie watershed).• (Related Transferor).
City of North Bay	<ul style="list-style-type: none">• Municipal water and wastewater service area in North Bay.• Water is taken from Trout Lake (St. Lawrence River watershed) and sewage is discharged to Lake Nipissing (Lake Huron watershed).



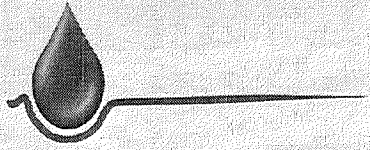
City of Kingston



City of North Bay



Beyond the Baseline



*Baseline
amounts to be
identified*

*Managing new or
increased takings
beyond baseline*

Withdrawals

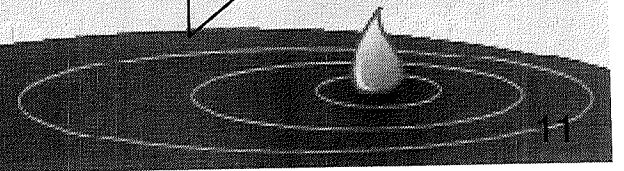
Decision Making Standard

Consumptive Uses

Decision Making Standard

Diversions (Transfers)

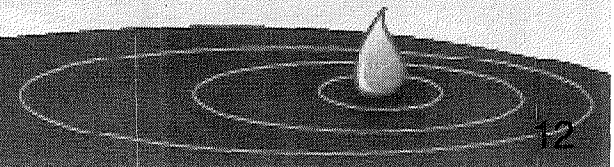
Exception Criteria





Establishing the Baseline

- Need to establish baseline for determining new or increased **diversion (transfer), consumptive use, or withdrawal.**
- Onus is on the water taker to request that a transfer baseline be established.
- Acceptable methods for establishing the baseline need to be determined.
- Administrative process needs to be established.





Baseline: Existing Information Sources

Water Withdrawal Approvals List

- The Permit to Take Water Database could be used to identify a list of existing water withdrawal approvals.

Capacity of Existing Systems

Withdrawals

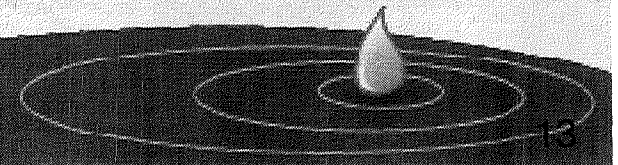
- Several “capacity” approval instruments in Ontario: Drinking Water Works Permit (C of A), Permit to Take Water, EA approval, Master Plan, Official Plan.

Consumptive Uses

- Consumptive use information could be gathered by applying coefficients by water use category. AquaResources was retained by the MNR to develop a consumptive water use science synthesis and to develop a methodology for standardizing calculations to inform supporting regulations.

Transfers

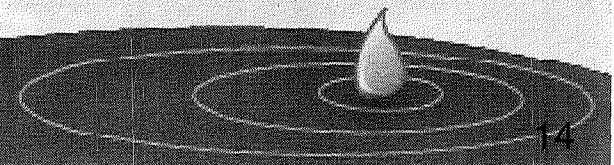
- Ontario does not have an instrument that tracks the amount of water that is transferred from one Great Lakes watershed to another (an intra-basin transfer). This amount must be determined in order to develop the baseline.

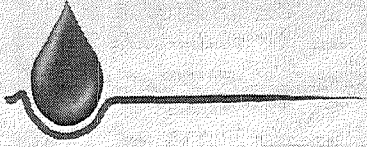




Using Actual Amounts vs. System Capacity

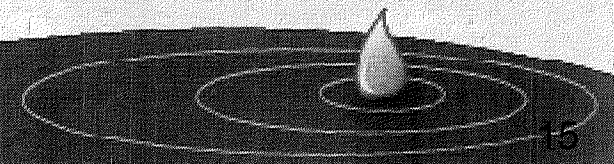
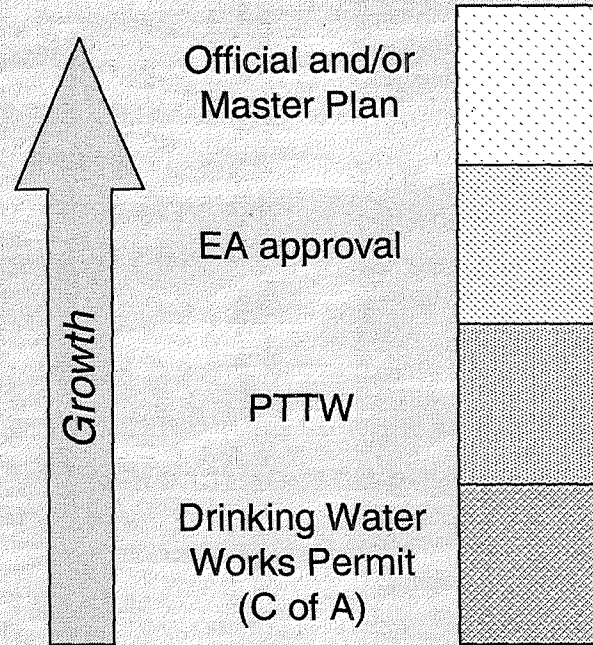
- Agreement commits jurisdictions to develop baseline based on **capacity** of existing systems.
- Actual amounts of water used are less than approved amounts and **do not usually reflect system capacity**.
- If the baseline is measured using actual amounts:
 - Fails to recognize existing approvals (e.g., newly built housing development not yet connected to water supply).
 - Difficult to determine what the actual amount is (e.g., accounting for seasonal/annual variability).
 - Does not credit municipalities for water conservation initiatives already implemented.





Baseline for Municipal Takings

What approval instrument should be used to determine the baseline for municipal withdrawals? For transfers?





Municipal “Capacity” Approval Instruments

- **Drinking Water Works Permit (C of A) (approval horizon 5 years)**
 - Sets limits around capacity of system to distribute water.
 - Approved by MOE.
- **Permit to Take Water (PTTW) (approval horizon 5-10 years)**
 - Reflects maximum allowable taking (per day; annually).
 - Addresses environmental implications of taking.
 - Approved by MOE.
- **Environmental Assessment (EA) Approval (approval horizon 10 years)**
 - Contains information on capacity of existing infrastructure.
 - Considers environmental implications of options.
 - Proponent driven.
- **Master Plan (planning horizon 20-50 years)**
 - Outlines a framework for future works and developments.
 - Typically recommends a set of projects within a study area.
 - Provides only general, subjective numbers (focus on estimates).
 - Not reviewed by MOE.
- **Official Plan (planning horizon 20-50 years)**
 - Deals with population, areas of growth, available services, capacity to service and feasibility.
 - Reviewed by MOE (for sewer and water capacity).



What approval instrument should be used to determine the baseline for municipal withdrawals? For transfers?

Two options that include some allowance for approved growth are considered below.

Option 1: PTTW Amount

Considerations:

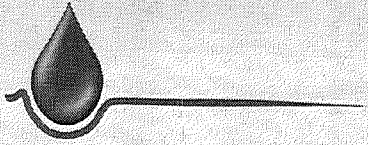
- Reflects maximum allowable taking (per day; annually).
- For municipalities, includes some allowance for growth.
- Does not account for existing approved plans and investments.
- Does not work for transfers for all municipalities because PTTW is not at the transfer point.

Option 2: Approved EA capacity

Considerations:

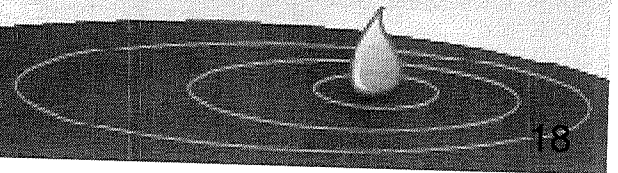
- EA contains information on capacity of existing infrastructure.
- Environmental implications of options have been considered.
- Consistent with Municipal Directive and Technical Bulletin.
- Would account for existing infrastructure investments.
- The basis upon which subsequent MOE approvals are issued (PTTW, Drinking Water Works Permit).
- Would be within the baseline definition contemplated by the Agreement.





Questions

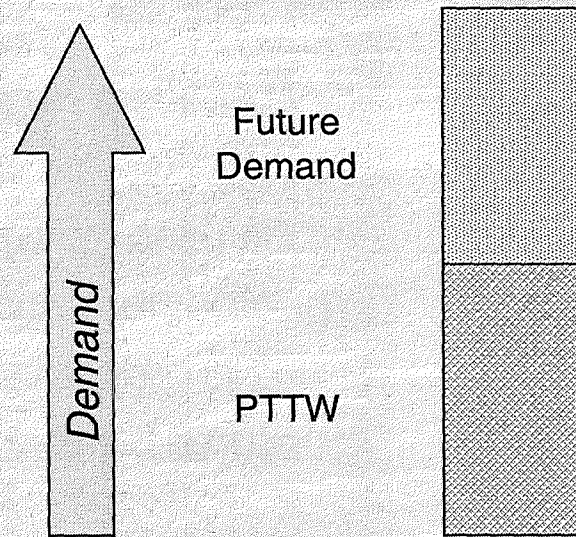
1. What option would you recommend for setting the municipal baseline for withdrawals? For transfers? Why?





Baseline for Non-Municipal Takings

1. What approval instrument should be used as the starting point for non-municipal withdrawals? For transfers?





Non-Municipal “Capacity” Approval Instruments

- **Permit to Take Water (PTTW) (approval horizon 5-10 years)**
 - Reflects maximum allowable taking (per day; annually).
 - Approved by MOE.
- **Other Capacity Approval Instrument?**
 - EA approval (if applicable)
 - Water taking capacity (equipment)
 - Planning approval (e.g., building permit)
 - Other provincial permit
 - Operational plan (e.g., discharge rules for conservation or hydro dams).



What approval instrument should be used to determine the baseline for non-municipal withdrawals? For transfers?

- With some exceptions (i.e., waterpower), there is no approval equivalent to an EA for non-municipal takings.
- In most cases, some future demand is reflected in the PTTW.
- Two options that include some allowance for approved future demand are considered below.

Option 1: PTTW amount

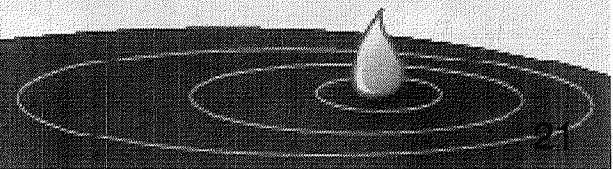
Considerations:

- Reflects maximum allowable taking (per day; annually).
- Includes some allowance for growth.
- Does not account for existing approved plans and investments.

Option 2: Other capacity approval amount

Considerations:

- Other approved capacities (are there any?)



Questions

2. Is PTTW the best option for setting the non-municipal baseline for withdrawals? For transfers? What other options could there be?



Baseline for Consumptive Use

How should consumptive use amount be determined?

- AquaResources has been retained by the MNR to develop a consumptive water use science synthesis and to develop a methodology and refined coefficients to inform supporting regulations.
 - It is suggested that the consumptive use coefficients proposed by AquaResources (once finalized) could be applied to existing water withdrawal approval limits (e.g., PTTW).
 - Where a site specific consumptive use assessment has been completed the resulting modified coefficient could be applied.
 - Note that the Regional Water Use Information Committee is considering a baseline reporting protocol. Among the topics for discussion is whether a consumptive use baseline is required.



How should the transfer amount be determined?

- Where a transfer is not 100% of a withdrawal, methods are needed to estimate an amount for the transfer.
- Stakeholders have indicated that flexibility is needed in determining transfer amount.
- Ministry could identify various methods that proponents could use to estimate the transfer amount.
 - E.g., based on population, per capita flows, area serviced, water balance methods, other method acceptable to Director.
 - Guidance could be provided on acceptable methods.
- In making a decision around approving the baseline amount, the Director could be required to consider specific factors (e.g., whether estimates of per capita water use are reasonable).

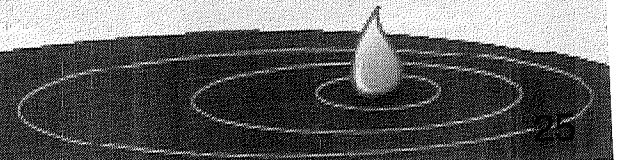
Possible approach:

- Proponent would estimate the transfer baseline using one of an approved list of methods. MOE Director would review and make decision on transfer baseline amount using specified criteria.

Question



3. Do you have any comments on the possible approach to calculating the transfer amount?

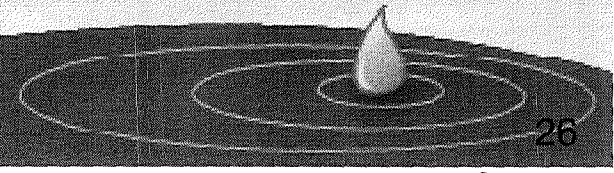
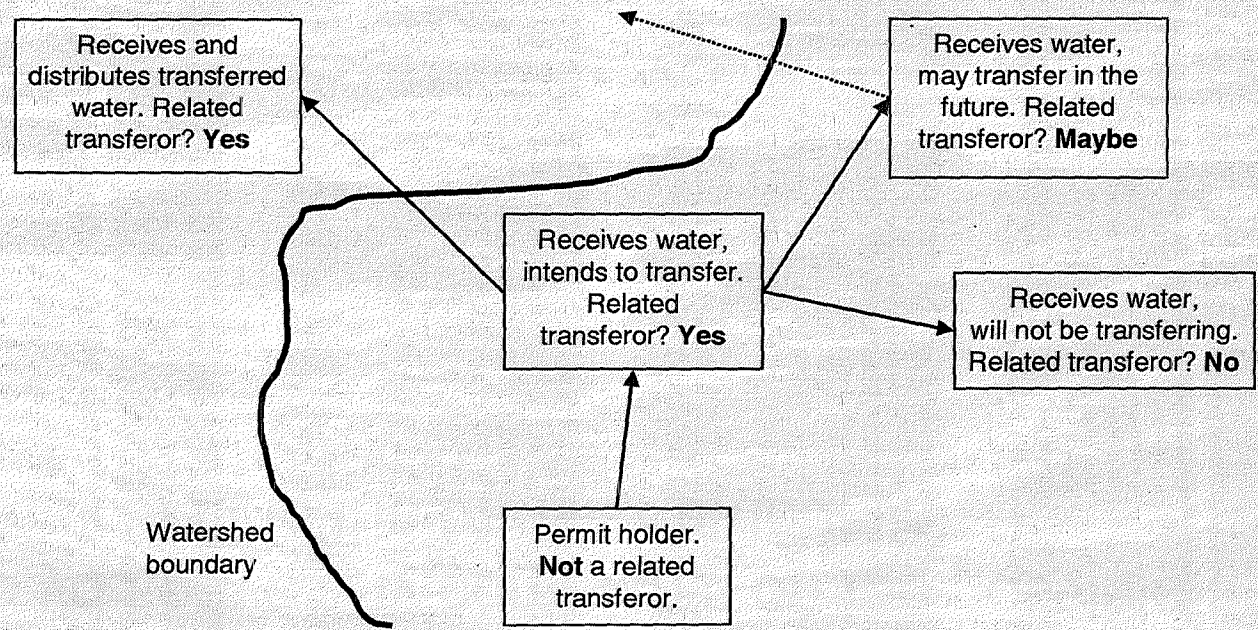




What is a “Related Transferor”?

- The OWRA was amended to include a provision for defining a related transferor.
- The amendment authorizes the PTTW program to regulate persons who are involved in intra-basin transfers.

Identifying the related transferor: yes, no, maybe

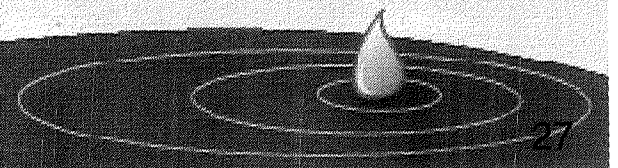




Related Transferor Implementation

Possible approach:

- Amend the PTTW program to include each related transferor as a holder to the PTTW. Use a system of schedules for each holder to list applicable terms and conditions to each holder.
- PTTW would in addition to water takers name related transferors (all parties that either transfer water or distribute water that has been or will be transferred).
- The related transferors could include upper-tier and lower-tier municipalities as well as non-municipal water takers.
- Terms and conditions in relation to transfers may be imposed by the Director on the person taking water, any related transferor, or both.
- The related transferor may appeal terms and conditions imposed on them.
- A permit must be amended or a new permit obtained if there will be an increase or new transfer over the threshold amount. In these cases, the exception criteria apply.
- The Director has authority to amend other types of approvals that may be relevant to the proposed new or increased transfer (e.g., sewage works).
 - Where there is a conflict between terms and conditions and other instruments, the term or condition that provides the greatest protection to the quality or quantity of water prevails.



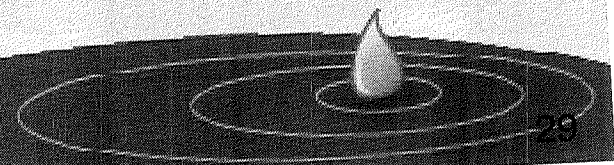


Question

4. Do you have any comments on the possible approach to related transferor implementation?



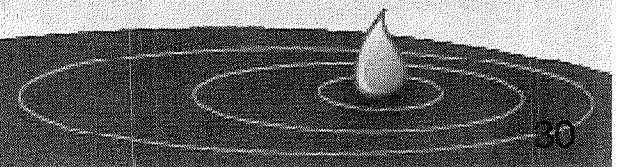
Appendix





Overview Stakeholder Comments

- **Flexibility** is needed in determining transfer amount.
- No one approach will be applicable to every case, so a **combination of approaches** may be needed.
- Baseline should **include some approved/planned growth**.
- Baseline should account for **conservation**.
- Each transfer should be **considered on an individual basis**.
- Approach should be somewhat **prescriptive** for consistency and level playing field.
- Consider using a **water balance approach**.
- **Consider actual amounts** being transferred.
- **Permitted amount** is not a useful approach on a stand alone basis.
- **Estimates** are not most objective or accurate.
- **Pumping capacity** not a viable stand alone option.
- Estimated capacity of **existing infrastructure** already covered under EA.
- **EA** could be a good approach but may not include transfer amounts.
- **Master Plans** provide only general, subjective numbers (focus on estimates).
- **Official Plans** deal with population, areas of growth, available services, capacity to service and feasibility – not sufficient level of detail or type of information required to determine transfers.



5





**Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement**

Connecting Channels

Agreement Advisory Panel Meeting
February 19, 2009



Outline

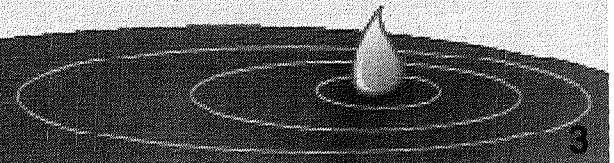
- Review of Agreement commitments
- Types of connecting channels
 - What should be considered a connecting channel?
- Connecting channels as part of the Great Lakes Watersheds
 - To confirm how connecting channels should be defined in the OWRA regulations.
- Tributaries of connecting channels
 - How should they be addressed?





Purpose of Presentation

- Seek feedback on how a connecting channel should be defined as per the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement, 2005.

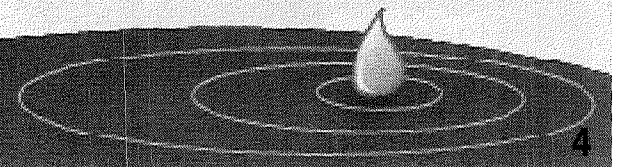




Context: Connecting Channels

ARTICLE 103- GENERAL DEFINITIONS

- “**Diversion**” means a transfer of Water from the Basin into another watershed, or from the watershed of one of the Great Lakes into that of another by any means of transfer, including but not limited to a pipeline, canal, tunnel, aqueduct, channel, modification of the direction of a watercourse, a tanker ship, tanker truck or rail tanker but does not apply to Water that is used in the Basin or Great Lakes watershed to manufacture or produce a Product that is then transferred out of the Basin or watershed. “**Divert**” has a corresponding meaning.
- “**Intra-basin Transfer**” means the transfer of Water from the watershed of one of the Great Lakes into the watershed of another Great Lake.





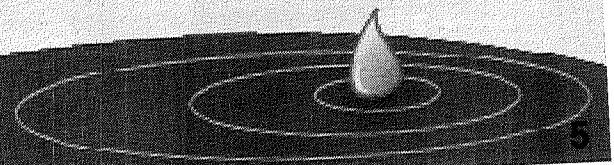
Context: Connecting Channels

ARTICLE 207 – APPLICABILITY

Determining New or Increased Diversions, Consumptive Uses or Withdrawals

6. Connecting Channels

- The watershed of each Great Lake shall include its upstream and downstream connecting channels.





Exception Criteria for New or Increased Transfers outlined in the Agreement

1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement





Types of Connecting Channels

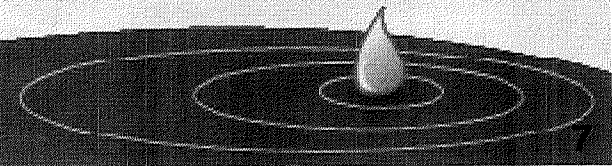
Should the following be considered connecting channels?

1. St. Clair River, Lake St. Clair and Detroit River (the St. Clair-Detroit River system)
 - System which connects Lake Huron and Lake Erie.

2. St. Marys River
 - Located by Sault Ste. Marie. Connects Lake Superior and Lake Huron (via North Channel).

3. Niagara River
 - Connects Lake Erie to Lake Ontario.

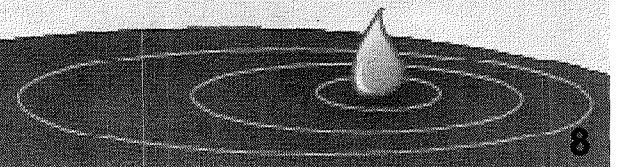
4. St. Lawrence River
 - Currently the OWRA defines the St. Lawrence River Watershed as a Great Lakes watershed.





Federal Diversions

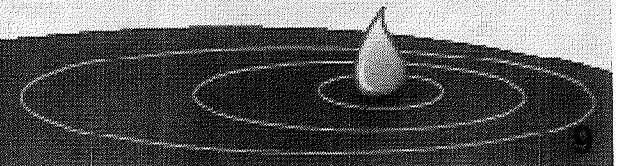
- Welland Canal
- Trent-Severn Waterway
 - Navigational diversions
 - Fits within the definition of “diversion” under the Agreement
 - Due to constitutional reasons, OWRA PTTW provisions do not apply to these diversions
 - OWRA PTTW provisions do apply to water takings from these bodies of water
 - Watershed maps will delineate which watersheds these diversions are situated in
- Note that these are not being considered as connecting channels






Questions

1. Which of the identified 'waterways' should be considered as a connecting channel?
2. If the St. Lawrence River cannot be considered a connecting channel, then how should Kingston's water taking be addressed?
(Kingston takes water from Lake Ontario and returns it downstream into the St. Lawrence River)



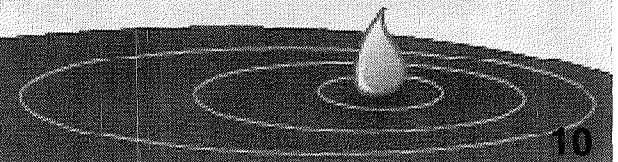


Confirming how a Connecting Channel can be part of a Great Lake watershed

Option #1: Connecting Channels are included in both upstream and downstream Great Lake Watersheds.

Considerations:

- Status quo- confirms the provisions currently outlined in the Agreement and in SSOWA (OWRA).
- Allows for some flexibility in determining which Great Lake watershed includes the connecting channel.
- Difficult to map and potentially implement
- For example: This would mean that the St. Clair- Detroit River System would be part of both the Lake Huron and Lake Erie watersheds.
- May minimize the potential for transfers.



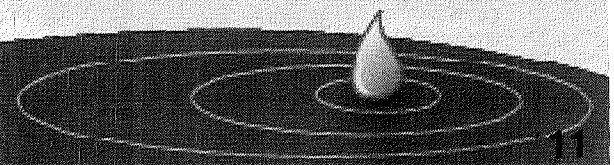


Confirming how a connecting channel can be part of a Great Lake watershed

Option #2: Only including upstream connecting channels in each Great Lake watershed.

Considerations:

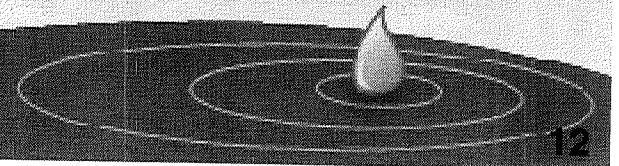
- Easier to map and define an intra-basin transfer.
- Based on the hydrological flow of the water between the Great Lakes.
- Consistent with advice given to us by some members of the MSWG AAP Intra-Basin Transfer Subgroup.
- Not consistent with what is outlined in the Agreement and in SSOWA (OWRA). However, it wouldn't require an amendment to the OWRA since it is identified as an either/ or approach.
- For example: This would mean that the St. Clair- Detroit River system would be solely part of the Lake Erie Watershed. An intra-basin transfer would occur for all servicing systems which drain into this connecting channel.






Questions

1. What option would you recommend and why?
2. Are there other options which should be considered? If so, please explain.





How should a return to a tributary that flows into a connecting channel be addressed?

Option #1: Exempt intra-basin transfers from legislation if water is returned to watershed of an upstream and downstream of the connecting channel.

Considerations:

- This approach is consistent with that taken by the State of Michigan and potentially New York State.
- Not consistent with advice given to MNR by the council of Great Lakes Governors legal staff (secretariat to Regional Body).
- Legal advises that such an approach is inconsistent with the provisions of the SSOWA of how the boundary of the watersheds can be drawn- in particular subsection 75 (1.4) of the OWRA.
- Tributaries which drain into the connecting channel would be considered part of the connecting channel and included in both the upstream and downstream Great Lake watersheds.
- Need to consider transfer of sewage.





How should a return to a tributary that flows into a connecting channel be addressed?

Option #1 cont'd

Considerations cont'd

- Transfer would be exempt from having to meet the Exception Criteria.
- Lake Huron pipeline to the City of London would not be considered an intra-basin transfer as their wastewater is discharged into the Thames River which would be considered part of the St. Clair -Detroit River connecting channel between Lake Huron and Erie.



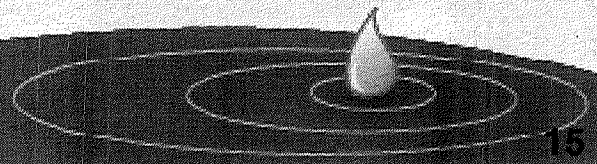
How should a return to a tributary that flows into a connecting channel be addressed?

Option #2: Tributaries which flow into a connecting channel should be considered as naturally returning the flow to the source watershed*

* if connecting channels are included in both the upstream and downstream Great Lake watersheds

Considerations:

- Would be considered to meet requirement for return flow (first criterion in the exception criteria) to the source watershed.
- Would need to meet all other aspects of the exception criteria (not just return flow in the first criterion).
- May meet legal requirements but could have significant concerns with respect to water management (i.e. water levels of the tributary) and precedent setting.
- May not meet regional review criteria (procedural manual) developed by Regional Body.



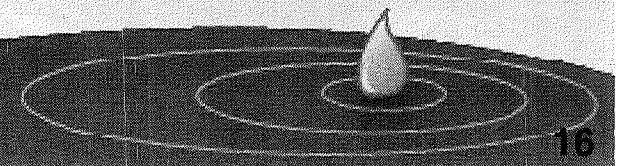


How should a return to a tributary that flows into a connecting channel be addressed?

Option #2 cont'd

Considerations cont'd

- Is a different approach taken from other Great Lake jurisdictions.
- May be perceived as permitting an intra-basin transfer.
- May need to consider transfer of sewage.
- Would need to provide a definition for 'naturally', which may not be consistent with its original intent (i.e. return flow that is not piped to a receiving water body- e.g. agricultural irrigation)
- Example: the City of London would be considered to meet the return flow exception criterion by "naturally" returning water to Lake Huron- the source watershed via the Thames River (provided that the connecting channels are considered in both the Lake Huron and Lake Erie watersheds, and if it has been demonstrated that there are no significant impacts, or feasible alternatives).



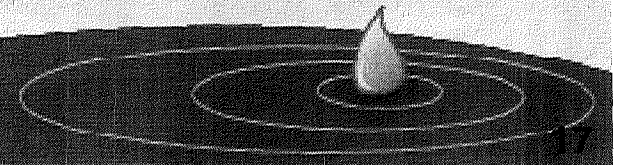


How should a return to a tributary that flows into a connecting channel be addressed?

Option #3: Tributaries which flow into a connecting channel do not meet the requirement of return flow to the source watershed (Exception Criterion 1)

Considerations:

- New or increased intra-basin transfers above threshold amount (379 K) that involve less than 19 ML/D consumptive use would be required to meet additional criteria:
 - Demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to new or increased intra-basin transfer
 - No other feasible, environmentally sound and cost effective alternatives to the new or increased intra-basin transfer
 - It is not feasible, environmentally sound or cost effective to return to the source watershed



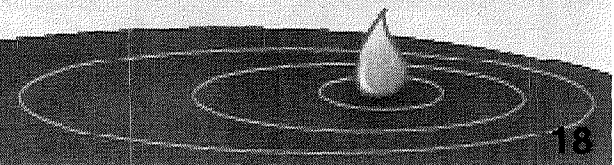


How do you address a return to a tributary that flows into a connecting channel?

Option 3 cont'd

Considerations cont'd

- New or increased intra-basin transfers that involve at least 19 ML/D consumptive use would be required to return to source watershed (i.e. Not tributary to a connecting channel)
- Implications for future municipal infrastructure planning decisions (i.e. Where sewage is currently returned would not comply with this interpretation of Exception Criterion)
- Interpretation of Exception Criterion would be inconsistent with interpretations taken by other Great Lake jurisdictions (ie. Michigan)

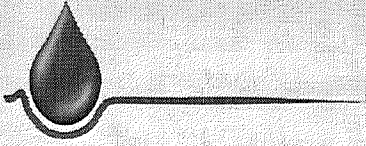




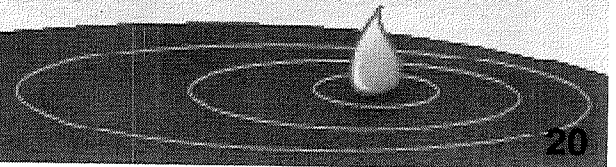
Questions

1. What option would you recommend and why?
2. Are there other options which should be considered? If so, please explain.





Appendix





Consultation on Connecting Channels

- Municipal Sector Working Group Meeting (December 10, 2008)
 - Discussion held in conjunction with exception criteria. Discussed return flow criteria and the current provision in the Agreement on connecting channels.

- AAP Intra-Basin Transfer Sub-Group (January 21, 2008)
 - Discussion held in conjunction with exception criteria

- Feedback received:
 - Some felt that we should consider connecting channels to be only part of the downstream Great Lake watershed, other supported consistency with the Agreement.
 - Not really applicable to all municipalities- only a select few. Meetings should be held with those municipalities.





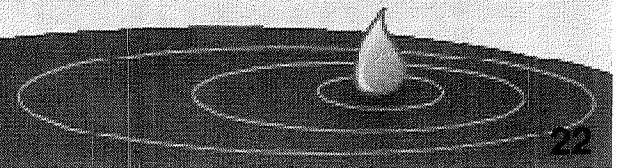
Background on Connecting Channels

City of London

- Currently Lake Huron System services the City of London by taking water from Lake Huron and discharging wastewater into the Thames River, which then flows into Lake St. Clair which is a connecting channel.
- This could result in an intra-basin transfer depending on how connecting channels are defined.
- **The City of London does not believe this is an intra-basin transfer of water. They also think that Ontario's approach should be consistent with the State of Michigan.**

City of Kingston

- The City of Kingston takes water from the Lake Ontario Basin and discharges wastewater into the St. Lawrence River Basin.
- This is resulting in an intra-basin transfer of wastewater, and may be an issue with connecting channels (depending on how they are defined).





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Information Notice:

Title:

Technical Bulletin- Environmental Assessment Direction for Municipal Water and Wastewater Projects Proposing an Intra- Basin Transfer

EBR Registry Number: 010-6002

Ministry:

Ministry of the Environment

Date Information Notice

loaded to the Registry:

March 16, 2009

Keyword(s): Water

This notice is for your information. The Environmental Bill of Rights does not require this notice to be placed on the Environmental Registry, however, section 6 of the Act does allow the Environmental Registry to be used to share information about the environment with the public.

Rationale for Exemption to Public Comment:

The Ministry of the Environment (MOE), in conjunction with the Ministry of Natural Resources (MNR) is posting this Information Notice on the Environmental Registry for the purpose of informing the public about the Technical Bulletin- Environmental Assessment Direction for Municipal Water and Wastewater Projects Proposing an Intra-Basin Transfer.

The Technical Bulletin provides interim guidance on how the Ministry of the Environment will comment on Municipal Class Environmental Assessment water and wastewater projects until the regulations supporting the Great Lakes- St. Lawrence River Sustainable Water Resources Agreement (2005) (the "Agreement") under the *Ontario Water Resources Act* (OWRA) are in place. The Technical Bulletin also provides direction to municipalities to ensure the Province's commitments on prior notice and consultation under the Great Lakes Charter (1985) are satisfied. The Charter remains in force until the 2005 Agreement's prior notice and consultation provisions come into effect.

Description:

Municipal water and wastewater servicing proposals (such as expansions of water and sewage infrastructure i.e. pipes, treatment plants etc.) are generally planned and designed under the Municipal Engineers Association Municipal Class Environmental Assessment (MEA Class EA).

When undertaking municipal water or wastewater projects where one of the alternatives will result in a new or increased intra-basin transfer of 379,000 litres per day or more, the technical bulletin asks proponents to consider treating the undertaking as a Schedule C undertaking under the MEA Class EA.

Schedule C undertakings proceed under the full planning and document procedures (Phase 1-5) as specified in the MEA Class EA. The five phases of the MEA Class EA require greater analysis of the preferred solution and additional public consultation. The Schedule C process includes identification of the problem or opportunity (Phase 1); identification of alternative solutions (Phase 2); identification of alternative design concepts for preferred solution (Phase 3); documentation of the rationale, planning, design and consultation process of the project in an Environmental Study Report (Phase 4); and implementation (Phase 5). In comparison, Schedule B undertakings only require fulfillment of Phase 1 and 2 of the MEA Class EA process only.

Contact:

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M4V 1P5
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Additional Information:

The documents linked below are provided for the purposes of enhancing public consultation.

All links will open in a new window

1. [Technical Bulletin - Environmental Assessment Direction](#)

The contents of the Environmental Study Report (ESR) are outlined in Section A.4.2 of the MEA Class EA. In the Environmental Study Report, the proponent (with the assistance of the MOE and MNR) should demonstrate how intra-basin transfer provisions outlined in Section 34.6(1)-(3) of the OWRA (Schedule 1) have been met. The ESR should also show that the principles of the Agreement have been considered.

Proponents who adhere to the Technical Bulletin and demonstrate that a proposed intra-basin transfer meets the criteria outlined in subsections 34.6 (1) to (3) of the OWRA to the satisfaction of the MOE and the MNR may be able to use this work to demonstrate compliance with the intra-basin regulations currently under development.

Purpose of this Notice:

To inform the public that the Ontario government is working with local government to ensure that intra-basin transfers are not undertaken in a manner that is inconsistent with the provisions of the Great-Lakes- St. Lawrence River Basin Sustainable Water Resources Agreement until supporting regulations are in place.

Background:

On December 13, 2005, the premiers of Québec and Ontario, and the governors of the eight Great Lakes states signed the Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement (Agreement) to protect and conserve the waters of the Great Lakes- St. Lawrence River Basin. The Agreement committed the parties to a ban on water diversions (or transfers), with strictly regulated exceptions, strengthened water conservation and common environmental standards for regulating the use of surface or groundwater resources of the Great Lakes – St. Lawrence River Basin.

The *Safeguarding and Sustaining Ontario's Water Act, 2007* (SSOWA), implements the Agreement by amending the *Ontario Water Resources Act* (OWRA) and making minor complementary amendments to the *Safe Drinking Water Act*. While the OWRA was amended to incorporate the provisions of the Agreement in 2007, supporting regulations are required before these provisions can be proclaimed. The MOE and MNR are working collaboratively to develop regulations to manage intra-basin transfers (transfers of water between the five Great Lake watersheds).

Until OWRA regulations are made and the other Great Lakes jurisdictions bring provisions of the Agreement into law, the Great Lakes Charter, 1985 (Charter) remains in force. The Charter commits Ontario to Prior Notice and Consultation with the eight Great Lakes States and Québec before approving any new or increased water diversion (transfer out of the Great Lakes Basin or from the watershed of one Great Lake to another) over 19 million litres per day. The Charter also requires *Prior Notice and Consultation for any new or increased consumptive use of water over 19 million litres per day*.

Other Information:

The Agreement Advisory Panel (AAP) is a stakeholder advisory committee, comprised of representatives from municipal, environmental, agricultural, and industrial organizations, First Nations, academic experts. The AAP was engaged during the Agreement Negotiations and is currently providing advice to the government on how regulations supporting the Great Lakes- St. Lawrence River Sustainable Water Resources Agreement should be developed.

Drafts of the Technical Bulletin have been shared previously with the Municipal Sector Working Group (a group of municipalities, some of which sit on the AAP) as well as the AAP. Written comments and feedback received from these two groups has been incorporated into the Technical Bulletin.

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March 16, 2009

MEMORANDUM

TO: All Heads of Council

RE: Implementation of the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement

We are pleased to provide you with an update on recent developments to protect the waters of the Great Lakes through the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement (Agreement). We trust that we have your commitment to do your part to ensure the principles of this Agreement are met.

As you know, on December 13, 2005, the Great Lakes premiers and governors signed the Agreement to achieve stronger protection and conservation of the Great Lakes Basin waters. Through the Agreement, the parties have agreed to:

- Ban diversions of water out of the Great Lakes-St. Lawrence River Basin and prohibit new or increased transfers of water from one Great Lake Watershed to another unless strictly regulated criteria are met;
- Strengthen water conservation through programs in each province and state;
- Establish a stronger new basin-wide environmental standard for regulating water uses across provinces and all states;
- Build the information and science needed to support sound decision-making;
- Formally recognize the authority of the federal governments and the International Joint Commission under the Boundary Waters Treaty, which remains unchanged;
- Provide a stronger voice for Ontario, its citizens and First Nations in the regional review of water use proposals by other jurisdictions for exceptions to the prohibition against diversions; and
- Build regional collaboration, for example, in the review of water management and conservation programs.

In the United States, the Agreement is supported by a binding inter-state Compact Agreement among the eight Great Lakes States, which was signed by U.S. President George W. Bush on October 3, 2008. This signed Compact Agreement came into effect on December 8, 2008.

Here at home, Ontario has already made significant progress in implementing the Agreement. On June 4, 2007, the *Safeguarding and Sustaining Ontario's Water Act* received Royal Assent, enabling implementation of the Agreement in Ontario through amendments to the *Ontario Water Resources Act* (OWRA). The Province is currently developing supporting regulations to proclaim new sections of the OWRA to fully implement the Agreement.

The Great Lakes Charter, 1985 (Charter) remains in force until supporting regulations are in place. The Charter commits Ontario to "Prior Notice and Consultation" (PNC) with Québec and the eight Great Lakes States before approving any new or increased water diversion (transfer out of the Great Lakes Basin or from the watershed of one Great Lake to another) over 19 million litres per day. The Charter also requires PNC for any new or increased consumptive use of water over 19 million litres of water per day. The Ministry of Natural Resources (MNR) administers the Charter in Ontario.

In addition to the requirements of the Charter, the Ministry of the Environment (MOE) and the MNR will work closely with municipalities proposing water or wastewater servicing projects which trigger the Agreement to ensure they meet the spirit of the Agreement while supporting regulations are developed. Municipal water and wastewater projects which involve a new or increased transfer of water or sewage of 379,000 litres per day or more from one Great Lake Watershed to another will trigger the Agreement.

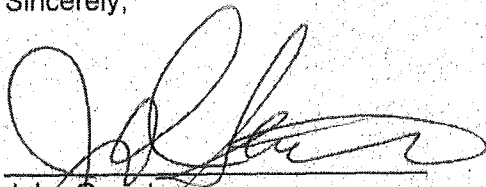
The MOE has developed a Technical Bulletin for Intra-Basin Transfers for water and wastewater proposals which trigger the Agreement (enclosed). The Technical Bulletin applies to undertakings under the Municipal Engineers Association Municipal Class Environmental Assessment (MEA Class EA) and has been developed for MOE Regional Offices as they are a mandatory review agency of Schedule B and C projects. Regional Offices will encourage proponents to treat undertakings which will involve a new or increased intra-basin transfer of 379,000 litres per day or more as a Schedule C project under the MEA Class EA.

This measure will help municipalities undertake projects with a view that supporting regulations under the OWRA may be in effect when applying for a Permit to Take Water following the completion of an environmental assessment. As such, provisions under the Agreement should be considered early in the planning process.

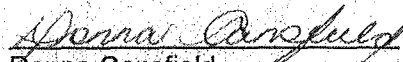
Over the coming months, the Province will be undertaking consultation on the regulatory framework to implement the intra-basin transfer provisions of the Agreement in Ontario. If your municipality would like to actively participate in the development of the regulatory framework as a member of the Municipal Sector Working Group, please contact Rheanna Leckie at 705-755-5404. The Province looks forward to working with municipalities on the development of these regulations to fully implement the Agreement.

We thank you for your cooperation and your continued commitment to protecting the environment and the waters of the Great Lakes Basin.

Sincerely,



John Gerretsen
Minister of the Environment



Donna Cansfield
Minister of Natural Resources

Enclosure

Technical Bulletin

Environmental Assessment Direction for Municipal Water and Wastewater Projects Proposing an Intra-Basin Transfer

PURPOSE

The purpose of this Technical Bulletin is to provide interim direction to municipalities planning water and wastewater projects to ensure that intra-basin transfers are not undertaken in a manner that is inconsistent with the provisions of the **Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement** until supporting regulations are in place. The Technical Bulletin also provides direction to municipalities on requirements under the Great Lakes Charter which currently remains in force.

BACKGROUND

In June 2007, the *Safeguarding and Sustaining Ontario's Water Act* (SSOWA) received Royal Assent, amending the *Ontario Water Resources Act* (OWRA). These changes to the OWRA help implement the commitments Ontario made in signing the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement, 2005 (Agreement) with Quebec and the eight Great Lakes States (parties of the Agreement). The Agreement committed the parties to a ban on water diversions (or transfers), with strictly regulated exceptions; strengthened water conservation and common environmental standards for regulating the use of surface or groundwater resources of the Great Lakes – St. Lawrence River Basin.

Among the amendments made to the OWRA through SSOWA is the *prohibition of a new or increased transfer of 379,000 litres of water per day or greater from one Great Lakes Watershed to another subject to strict exceptions*. While the OWRA was amended to incorporate the provisions of the Agreement in 2007, supporting regulations are required to fully implement the Agreement before these provisions can be proclaimed. The Ministries of Environment (MOE) and Natural Resources (MNR) are working collaboratively to develop regulations to manage intra-basin transfers.

Until regulations are completed and the other Great Lakes jurisdictions bring provisions of the Agreement into law, the Great Lakes Charter, 1985 (Charter) remains in force. The Charter commits Ontario to Prior Notice and Consultation with the eight Great Lakes States and Québec before approving any new or increased water diversion (transfer out of the Great Lakes Basin or from the watershed of one Great Lake to another) over 19 million litres per day¹. The Charter also requires *Prior Notice and Consultation for any new or increased consumptive use of water over 19 million litres per day*.

ENVIRONMENTAL ASSESSMENT

Municipal water and wastewater servicing proposals (such as expansions of water and sewage infrastructure i.e. pipes, treatment plants etc.) are generally planned and designed under the Municipal Engineers Association Municipal Class Environmental Assessment (MEA Class EA). MOE Regional Offices, specifically Environmental Resources Planner/Environmental Assessment Coordinators are mandatory points of contact where a proposed undertaking (i.e. projects, activities etc.) is classified as Schedule B or C in the MEA Class EA.

¹ The Ontario Water Resources Act (OWRA) prohibits the transfer of water out Ontario's three major water basins including the Great Lakes Basin – see section 34.3 of the OWRA. A prohibition against transfers out of the Great Lakes Basin has been in place under the OWRA since 1999.

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The MEA Class EA, Section A.2.10 identifies the Agreement, the OWRA and SSOWA as key provincial legislation to consider while undertaking the Class EA process. Additionally, Section A.2.10.2 recommends that technical consultation with the MOE is undertaken for all complex projects involving the construction of water supply and treatment as well as sewage treatment and disposal systems. Projects resulting in an intra-basin transfer subject to the Agreement or consumptive uses that trigger the Prior Notice and Consultation provisions of the Charter are considered complex projects.

While this Technical Bulletin is geared to projects under the MEA Class EA, proponents undertaking an individual EA should also consider the principles of the Charter, the Agreement and the direction outlined below.

DIRECTION TO ENSURE COMMITMENTS UNDER THE GREAT LAKES CHARTER ARE SATISFIED IN RELATION TO CONSUMPTIVE USE AND WATER DIVERSION.

There are two triggers under the Charter for Prior Notice and Consultation that are relevant to an Ontario water taking, one in relation to intra-basin transfers and one in relation to the consumptive use portion of a water withdrawal (or taking).

Consumptive use is defined as that portion of water withdrawn or withheld from the Basin that is lost or otherwise not returned to the basin due to evaporation, incorporation into products or other processes.² For municipal water use, the consumptive portion of the withdrawal has been estimated to be 10-15% of the new or increased withdrawal volume.³ Under the Charter, Prior Notice and Consultation is required for proposed withdrawals that involve a new or increased consumptive use of water of 19 million litres per day or more averaged over any 30-day period.

All undertakings for municipal water projects which will result in a new or increased water diversion (transfer of water between Great Lake watersheds) of 19 million litres per day or more averaged over any 30-day period will also trigger the Charter.

The proponent should contact the Lands and Waters Branch, MNR (administrator of the Charter) (contact information below) to confirm the consumptive use and/or water diversion, identify what supporting information is required and coordinate Prior Notice and Consultation if required.

DIRECTION TO ENSURE COMMITMENTS UNDER THE GREAT LAKES- ST. LAWRENCE RIVER SUSTAINABLE WATER RESOURCES AGREEMENT ARE SATISFIED IN RELATION TO INTRA-BASIN TRANSFERS

Proponents of undertakings for municipal water or wastewater projects where one of the alternatives will result in a new or increased intra-basin transfer of 379,000 litres per day or more should consider treating the undertaking as a Schedule C undertaking under the MEA Class EA.

Schedule C undertakings proceed under the full planning and document procedures (Phase 1-5) as specified in the MEA Class EA. The five phases of the MEA Class EA require greater analysis of the preferred solution and additional public consultation. The Schedule C process includes identification of the problem or opportunity (Phase 1);

² This definition comes from the Agreement. A slightly differently worded definition appears in the Charter. Subsection 1 (6) of the OWRA also provides a definition of consumptive use that draws on these definitions.

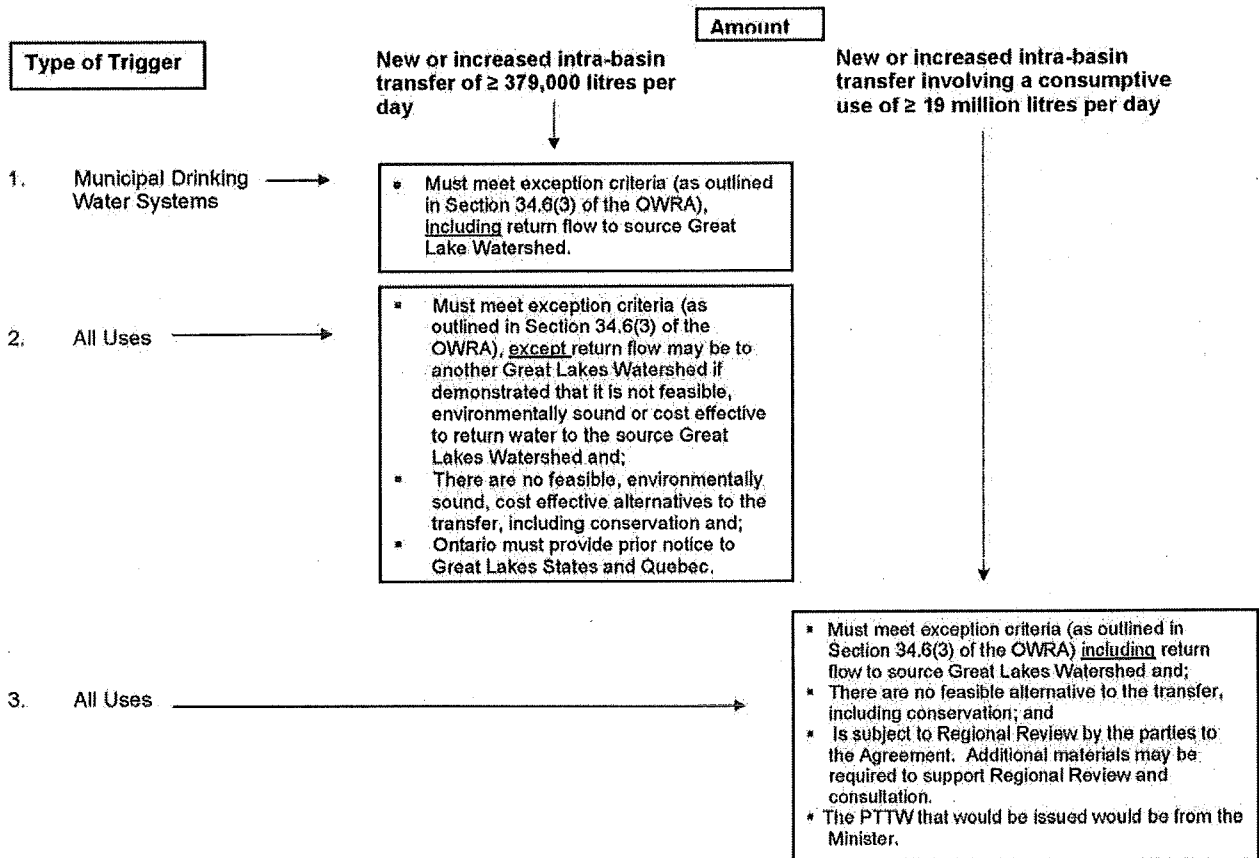
³ The Ministries are consulting on what approach to take in relation to calculating the amount of consumptive use as part of its consultation on the SSOWA regulations.

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identification of alternative solutions (Phase 2); identification of alternative design concepts for preferred solution (Phase 3); documentation of the rationale, planning, design and consultation process of the project in an Environmental Study Report (Phase 4); and implementation (Phase 5). In comparison, Schedule B undertakings only require fulfillment of Phase 1 and 2 of the MEA Class EA process only.

The contents of the Environmental Study Report are outlined in Section A.4.2 of the MEA Class EA. In the Environmental Study Report, the proponent (with the assistance of the MOE and MNR) should demonstrate how intra-basin transfer provisions outlined in Section 34.6(1)-(3) of the OWRA (Schedule 1) have been met. The ESR should also show that the principles of the Agreement have been considered. Below is a summary of the intra-basin transfer provisions as outlined in Section 34.6(1)-(3) of the OWRA.

Agreement Intra- Basin Transfer Provisions



Note: 1. 379,000 l/d and 19 million l/d are both amount referenced in SSOWA and the Agreement.
 2. Consumptive use has in the past been calculated using a co-efficient – for municipal takings, 10-15% is the co-efficient that has been used.
 Consumptive use = water that is lost through evaporation, incorporation into a product or any other process where water is not returned to the basin.

Consultation requirements for Schedule C projects as outlined in Section A.3.4 of the MEA Class EA, require three mandatory points of contact. At the third point, the Environmental Study Report is placed on the public record for at least 30 calendar days and the Notice of Completion of the Environmental Study Report shall advise the public and review agencies of their rights with regard to requesting a Part II Order (“Bump-up”) request (section 16 of the *Environmental Assessment Act*). The appeal process of the MEA Class EA is outlined in Section A.2.8 of the MEA Class EA.

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If the proponent is unwilling to voluntarily treat its proposed undertaking as a Schedule C undertaking, the Ministry may consider making a recommendation to the Minister of the Environment under ss. 16(3) of the *Environmental Assessment Act*, requesting that he/she order that the project be assessed as a Schedule C undertaking under the MEA Class EA. Additionally, the Ministry may consider making a recommendation for a ss.16 (3) order for additional requirements such as specific monitoring and reporting.

Furthermore, the MOE (in consultation with a proponent) may determine that an undertaking should be assessed as an individual EA if the size of the proposed undertaking or complexity warrants such analysis (e.g. if Regional Review is required) and recommend that the Minister of the Environment make an order under ss. 16(1) of the *Environmental Assessment Act*.

Proponents who adhere to the Technical Bulletin and demonstrate that a proposed intra-basin transfer meets the criteria outlined in subsections 34.6 (1) to (3) of the OWRA to the satisfaction of the MOE and the MNR may be able to use this work to demonstrate compliance with the intra-basin regulations currently under development.

MASTER PLANS

Section A.2.7 of the MEA Class EA identifies that municipalities may consider a group of related projects under a Master Planning process. There are a variety of basic approaches to Master Planning as described in the MEA Class EA, all of which at a minimum, address Phases 1 and 2 of the MEA Class EA process. When preparing a Master Plan, proponents are encouraged to consider the Agreement and how it applies to specific projects identified by the Master Plan at this stage in the planning process. If a project identified in a Master Plan considers an alternative that will result in a new or increased intra-basin transfer of 379,000 litres per day or more, proponents should consider treating the specific project as a Schedule C undertaking under the MEA Class EA.

For more information, please contact:

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Schedule 1: Exceptions and Criteria for Intra-Basin Transfers

Water transfers: Great Lakes watersheds

- 34.6 (1) A permit shall not be issued or amended under section 34.1 so as to authorize the taking of water from a Great Lakes watershed if,
- a. any of the water would be transferred; and
 - b. the new or increased transfer amount would be the threshold amount. 2007,
 - c. 12, s. 1 (12).

Exceptions

(2) Subsection (1) does not apply to the following transfers:

1. A transfer that satisfies the following criteria:

- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - a. is always less than 19 million litres, or the lower amount prescribed by the regulations, per day, or
 - b. if a regulation is made prescribing the manner of calculating average amounts of water, is less than an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. The water is taken by the operating authority of a municipal drinking water system within the meaning of the Safe Drinking Water Act, 2002 and the system serves a major residential development within the meaning of that Act.
- iii. The criteria described in paragraphs 1 to 7 of subsection (3) are satisfied.

2. A transfer that satisfies the following criteria:

- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - a. is always less than 19 million litres, or the lower amount prescribed by the regulations, per day, or
 - b. if a regulation is made prescribing the manner of calculating average amounts of water, is less than an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. The water is taken by the operating authority of a municipal drinking water system within the meaning of the Safe Drinking Water Act, 2002 or by any other person.
- iii. It has been demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
- iv. There are no other feasible, environmentally sound and cost effective alternatives to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
- v. The criterion described in paragraph 1 of subsection (3) is satisfied, or it is not feasible, environmentally sound or cost effective to satisfy that criterion.
- vi. The criteria described in paragraphs 2 to 7 of subsection (3) are satisfied.
- vii. Notice of the application for the permit or amendment has been given to the Province of Quebec, the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio and Wisconsin and the Commonwealth of Pennsylvania in accordance with the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement of 2005.

3. A transfer that satisfies the following criteria:

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- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - a. is at least 19 million litres, or the lower amount prescribed by the regulations, on any day, or
 - b. if a regulation is made prescribing the manner of calculating average amounts of water, is at least an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. It has been demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
- iii. There are no other feasible, environmentally sound and cost effective alternatives to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
- iv. The criteria described in paragraphs 1 to 7 of subsection (3) are satisfied.
- v. The requirements of subsection 34.1 (14) have been complied with. 2007, c. 12, s. 1 (12).

Criteria

- (3) The criteria referred to in subparagraphs 1 iii, 2 v and vi and 3 iv of subsection (2) are:
- 1. The new or increased transfer amount is returned, either naturally or after use, to the same Great Lakes watershed from which it was taken, except for an amount prescribed by the regulations that may be lost through consumptive use.
 - 2. The efficient use and conservation of existing water supplies cannot reasonably avoid,
 - i. the transfer, in the case of a new transfer, or
 - ii. the transfer of the additional amount, in the case of an increased transfer.
 - 3. The new or increased transfer amount is reasonable, given the purposes for which,
 - i. the transfer is done, in the case of a new transfer, or
 - ii. the transfer of the additional amount is done, in the case of an increased transfer.
 - 4. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to ensure that it does not result in any significant individual or cumulative adverse impacts on the quantity or quality of the waters, or the water-dependent natural resources, of the Great Lakes-St. Lawrence River Basin, considering the potential cumulative impacts of any precedent-setting consequences associated with the transfer or the transfer of the additional amount, as the case may be.
 - 5. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to incorporate feasible, environmentally sound and cost effective water conservation measures to minimize the taking of water and losses of water through consumptive use.
 - 6. The transfer is implemented so as to ensure that it complies with,
 - i. the Boundary Waters Treaty of 1909,
 - ii. the International Boundary Waters Treaty Act (Canada), and
 - iii. any other treaty, agreement or law that is prescribed by the regulations.
 - 7. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to ensure that it complies with any other criteria that are prescribed by the regulations for the purpose of implementing Article 209 (Amendments to the Standard and Exception Standard and Periodic Assessment of Cumulative Impacts) of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement of 2005, including criteria relating to

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climate change or other significant threats to the Great Lakes-St. Lawrence River Basin. 2007, c. 12, s. 1

MARCH 16, 2009



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Technical Bulletin

Environmental Assessment Direction for Municipal Water and Wastewater Projects Proposing an Intra-Basin Transfer

PURPOSE

The purpose of this Technical Bulletin is to provide interim direction to municipalities planning water and wastewater projects to ensure that intra-basin transfers are not undertaken in a manner that is inconsistent with the provisions of the **Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement** until supporting regulations are in place. The Technical Bulletin also provides direction to municipalities on requirements under the Great Lakes Charter which currently remains in force.

BACKGROUND

In June 2007, *the Safeguarding and Sustaining Ontario's Water Act* (SSOWA) received Royal Assent, amending the *Ontario Water Resources Act* (OWRA). These changes to the OWRA help implement the commitments Ontario made in signing the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement, 2005 (Agreement) with Quebec and the eight Great Lakes States (parties of the Agreement). The Agreement committed the parties to a ban on water diversions (or transfers), with strictly regulated exceptions, strengthened water conservation and common environmental standards for regulating the use of surface or groundwater resources of the Great Lakes – St. Lawrence River Basin.

Among the amendments made to the OWRA through SSOWA is the *prohibition of a new or increased transfer of 379,000 litres of water per day or greater from one Great Lakes Watershed to another subject to strict exceptions*. While the OWRA was amended to incorporate the provisions of the Agreement in 2007, supporting regulations are required to fully implement the Agreement before these provisions can be proclaimed. The Ministries of Environment (MOE) and Natural Resources (MNR) are working collaboratively to develop regulations to manage intra-basin transfers.

Until regulations are completed and the other Great Lakes jurisdictions bring provisions of the Agreement into law, the Great Lakes Charter, 1985 (Charter) remains in force. The Charter commits Ontario to Prior Notice and Consultation with the eight Great Lakes States and Québec before approving any new or increased water diversion (transfer out of the Great Lakes Basin or from the watershed of one Great Lake to another) over 19 million litres per day¹. The Charter also requires *Prior Notice and Consultation for any new or increased consumptive use of water over 19 million litres per day*.

ENVIRONMENTAL ASSESSMENT

Municipal water and wastewater servicing proposals (such as expansions of water and sewage infrastructure i.e. pipes, treatment plants etc.) are generally planned and designed under the Municipal Engineers Association Municipal Class Environmental Assessment (MEA Class EA). MOE Regional Offices, specifically Environmental Resources Planner/Environmental Assessment Coordinators are mandatory points of contact where a proposed undertaking (i.e. projects, activities etc.) is classified as Schedule B or C in the MEA Class EA.

¹ The Ontario Water Resources Act (OWRA) prohibits the transfer of water out Ontario's three major water basins including the Great Lakes Basin – see section 34.3 of the OWRA. A prohibition against transfers out of the Great Lakes Basin has been in place under the OWRA since 1999.

The MEA Class EA, Section A.2.10 identifies the Agreement, the OWRA and SSOWA as key provincial legislation to consider while undertaking the Class EA process. Additionally, Section A.2.10.2 recommends that technical consultation with the MOE is undertaken for all complex projects involving the construction of water supply and treatment as well as sewage treatment and disposal systems. Projects resulting in an intra-basin transfer subject to the Agreement or consumptive uses that trigger the Prior Notice and Consultation provisions of the Charter are considered complex projects.

While this Technical Bulletin is geared to projects under the MEA Class EA, proponents undertaking an individual EA should also consider the principles of the Charter, the Agreement and the direction outlined below.

DIRECTION TO ENSURE COMMITMENTS UNDER THE GREAT LAKES CHARTER ARE SATISFIED IN RELATION TO CONSUMPTIVE USE AND WATER DIVERSION.

There are two triggers under the Charter for Prior Notice and Consultation that are relevant to an Ontario water taking, one in relation to intra-basin transfers and one in relation to the consumptive use portion of a water withdrawal (or taking).

Consumptive use is defined as that portion of water withdrawn or withheld from the Basin that is lost or otherwise not returned to the basin due to evaporation, incorporation into products or other processes.² For municipal water use, the consumptive portion of the withdrawal has been estimated to be 10-15% of the new or increased withdrawal volume.³ Under the Charter, Prior Notice and Consultation is required for proposed withdrawals that involve a new or increased consumptive use of water of 19 million litres per day or more averaged over any 30-day period.

All undertakings for municipal water projects which will result in a new or increased water diversion (transfer of water between Great Lake watersheds) of 19 million litres per day or more averaged over any 30-day period will also trigger the Charter.

The proponent should contact the Lands and Waters Branch, MNR (administrator of the Charter) (contact information below) to confirm the consumptive use and/or water diversion, identify what supporting information is required and coordinate Prior Notice and Consultation if required.

DIRECTION TO ENSURE COMMITMENTS UNDER THE GREAT LAKES- ST. LAWRENCE RIVER SUSTAINABLE WATER RESOURCES AGREEMENT ARE SATISFIED IN RELATION TO INTRA-BASIN TRANSFERS

Proponents of undertakings for municipal water or wastewater projects where one of the alternatives will result in a new or increased intra-basin transfer of 379,000 litres per day or more should consider treating the undertaking as a Schedule C undertaking under the MEA Class EA.

Schedule C undertakings proceed under the full planning and document procedures (Phase 1-5) as specified in the MEA Class EA. The five phases of the MEA Class EA require greater analysis of the preferred solution and additional public consultation. The Schedule C process includes identification of the problem or opportunity (Phase 1);

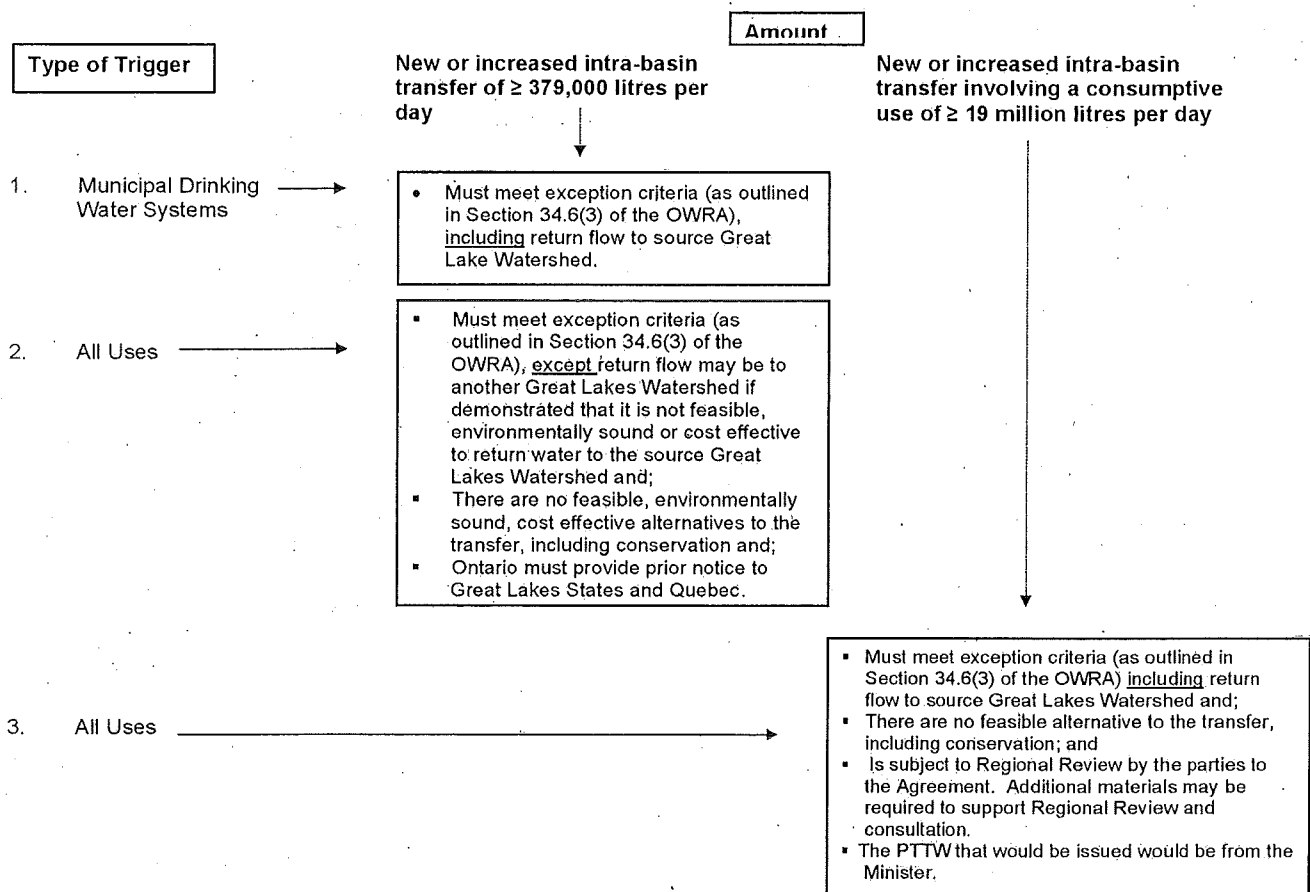
² This definition comes from the Agreement. A slightly differently worded definition appears in the Charter. Subsection 1 (6) of the OWRA also provides a definition of consumptive use that draws on these definitions.

³ The Ministries are consulting on what approach to take in relation to calculating the amount of consumptive use as part of its consultation on the SSOWA regulations.

identification of alternative solutions (Phase 2); identification of alternative design concepts for preferred solution (Phase 3); documentation of the rationale, planning, design and consultation process of the project in an Environmental Study Report (Phase 4); and implementation (Phase 5). In comparison, Schedule B undertakings only require fulfillment of Phase 1 and 2 of the MEA Class EA process only.

The contents of the Environmental Study Report are outlined in Section A.4.2 of the MEA Class EA. In the Environmental Study Report, the proponent (with the assistance of the MOE and MNR) should demonstrate how intra-basin transfer provisions outlined in Section 34.6(1)-(3) of the OWRA (Schedule 1) have been met. The ESR should also show that the principles of the Agreement have been considered. Below is a summary of the intra-basin transfer provisions as outlined in Section 34.6(1)-(3) of the OWRA.

Agreement Intra- Basin Transfer Provisions



Note: 1. 379,000 l/d and 19 million l/d are both amount referenced in SSOWA and the Agreement.
 2. Consumptive use has in the past been calculated using a co-efficient – for municipal takings, 10-15% is the co-efficient that has been used.
 Consumptive use = water that is lost through evaporation, incorporation into a product or any other process where water is not returned to the basin.

Consultation requirements for Schedule C projects as outlined in Section A.3.4 of the MEA Class EA, require three mandatory points of contact. At the third point, the Environmental Study Report is placed on the public record for at least 30 calendar days and the Notice of Completion of the Environmental Study Report shall advise the public and review agencies of their rights with regard to requesting a Part II Order (“Bump-up”) request (section 16 of the *Environmental Assessment Act*). The appeal process of the MEA Class EA is outlined in Section A.2.8 of the MEA Class EA.

If the proponent is unwilling to voluntarily treat its proposed undertaking as a Schedule C undertaking, the Ministry may consider making a recommendation to the Minister of the Environment under ss. 16(3) of the *Environmental Assessment Act*, requesting that he/she order that the project be assessed as a Schedule C undertaking under the MEA Class EA. Additionally, the Ministry may consider making a recommendation for a ss.16 (3) order for additional requirements such as specific monitoring and reporting.

Furthermore, the MOE (in consultation with a proponent) may determine that an undertaking should be assessed as an individual EA if the size of the proposed undertaking or complexity warrants such analysis (e.g. if Regional Review is required) and recommend that the Minister of the Environment make an order under ss. 16(1) of the *Environmental Assessment Act*.

Proponents who adhere to the Technical Bulletin and demonstrate that a proposed intra-basin transfer meets the criteria outlined in subsections 34.6 (1) to (3) of the OWRA to the satisfaction of the MOE and the MNR may be able to use this work to demonstrate compliance with the intra-basin regulations currently under development.

MASTER PLANS

Section A.2.7 of the MEA Class EA identifies that municipalities may consider a group of related projects under a Master Planning process. There are a variety of basic approaches to Master Planning as described in the MEA Class EA, all of which at a minimum, address Phases 1 and 2 of the MEA Class EA process. When preparing a Master Plan, proponents are encouraged to consider the Agreement and how it applies to specific projects identified by the Master Plan at this stage in the planning process. If a project identified in a Master Plan considers an alternative that will result in a new or increased intra-basin transfer of 379,000 litres per day or more, proponents should consider treating the specific project as a Schedule C undertaking under the MEA Class EA.

For more information, please contact:

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Schedule 1: Exceptions and Criteria for Intra-Basin Transfers

Water transfers: Great Lakes watersheds

34.6 (1) A permit shall not be issued or amended under section 34.1 so as to authorize the taking of water from a Great Lakes watershed if,

- a. any of the water would be transferred; and
- b. the new or increased transfer amount would be the threshold amount. 2007, c. 12, s. 1 (12).

Exceptions

(2) Subsection (1) does not apply to the following transfers:

1. A transfer that satisfies the following criteria:

- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - a. is always less than 19 million litres, or the lower amount prescribed by the regulations, per day, or
 - b. if a regulation is made prescribing the manner of calculating average amounts of water, is less than an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. The water is taken by the operating authority of a municipal drinking water system within the meaning of the Safe Drinking Water Act, 2002 and the system serves a major residential development within the meaning of that Act.
- iii. The criteria described in paragraphs 1 to 7 of subsection (3) are satisfied.

2. A transfer that satisfies the following criteria:

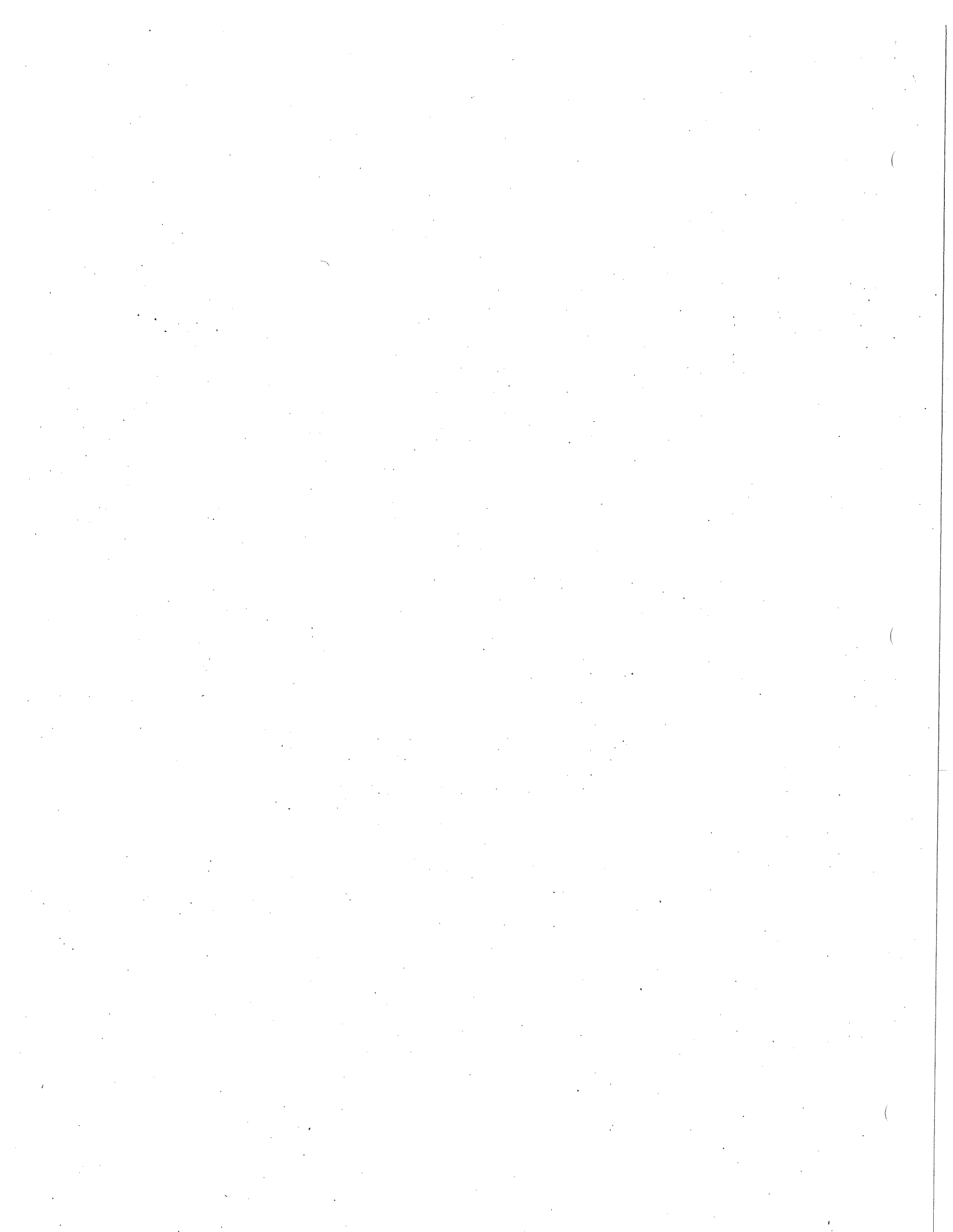
- i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - a. is always less than 19 million litres, or the lower amount prescribed by the regulations, per day, or
 - b. if a regulation is made prescribing the manner of calculating average amounts of water, is less than an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
- ii. The water is taken by the operating authority of a municipal drinking water system within the meaning of the Safe Drinking Water Act, 2002 or by any other person.
- iii. It has been demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
- iv. There are no other feasible, environmentally sound and cost effective alternatives to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
- v. The criterion described in paragraph 1 of subsection (3) is satisfied, or it is not feasible, environmentally sound or cost effective to satisfy that criterion.
- vi. The criteria described in paragraphs 2 to 7 of subsection (3) are satisfied.
- vii. Notice of the application for the permit or amendment has been given to the Province of Quebec, the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio and Wisconsin and the Commonwealth of Pennsylvania in accordance with the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement of 2005.

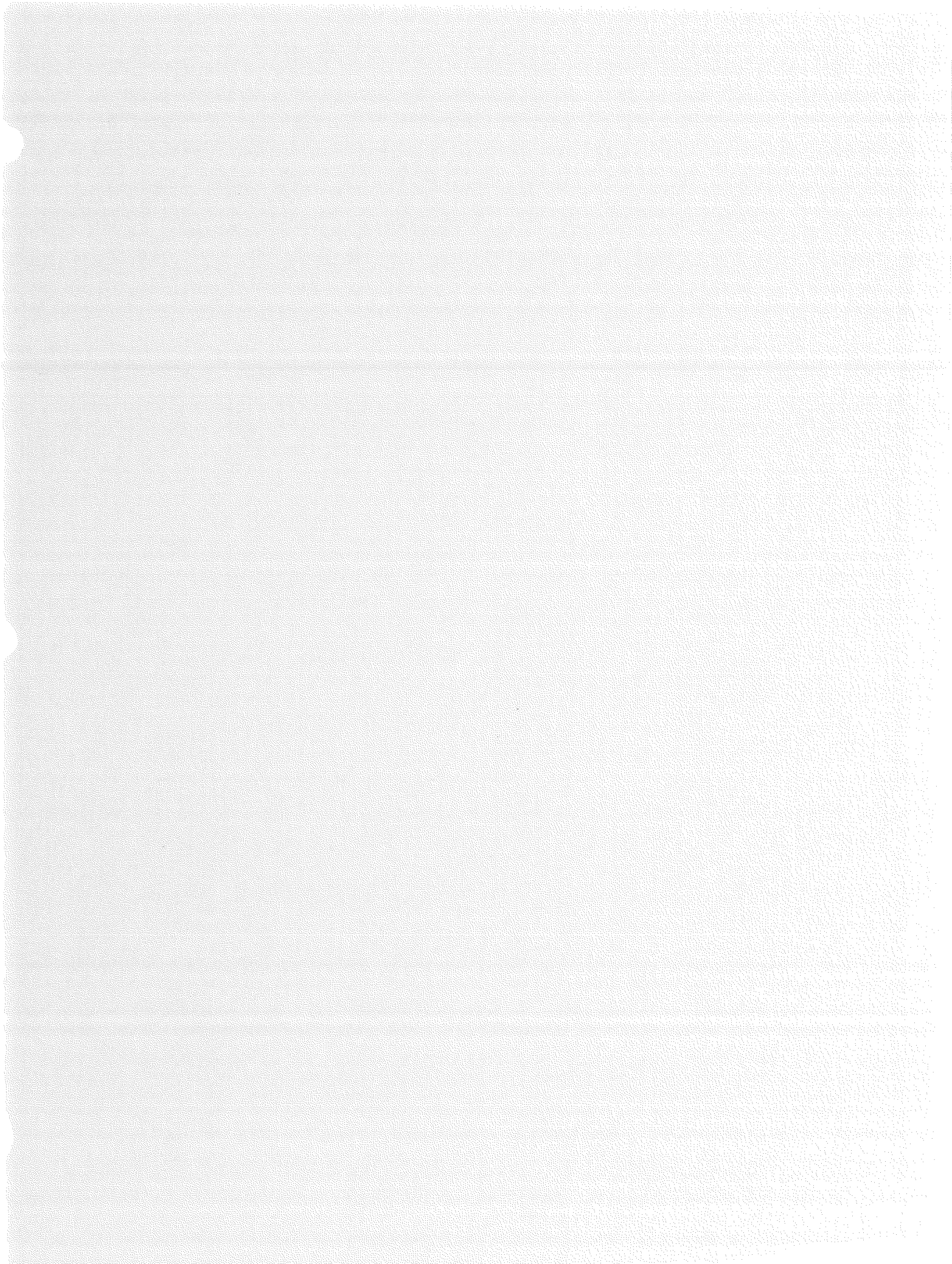
3. A transfer that satisfies the following criteria:
 - i. The portion of the new or increased transfer amount that is lost through consumptive use,
 - a. is at least 19 million litres, or the lower amount prescribed by the regulations, on any day, or
 - b. if a regulation is made prescribing the manner of calculating average amounts of water, is at least an average of 19 million litres, or the lower amount prescribed by the regulations, per day.
 - ii. It has been demonstrated that conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
 - iii. There are no other feasible, environmentally sound and cost effective alternatives to,
 - a. the transfer, in the case of a new transfer, or
 - b. the transfer of the additional amount, in the case of an increased transfer.
 - iv. The criteria described in paragraphs 1 to 7 of subsection (3) are satisfied.
 - v. The requirements of subsection 34.1 (14) have been complied with. 2007, c. 12, s. 1 (12).

Criteria

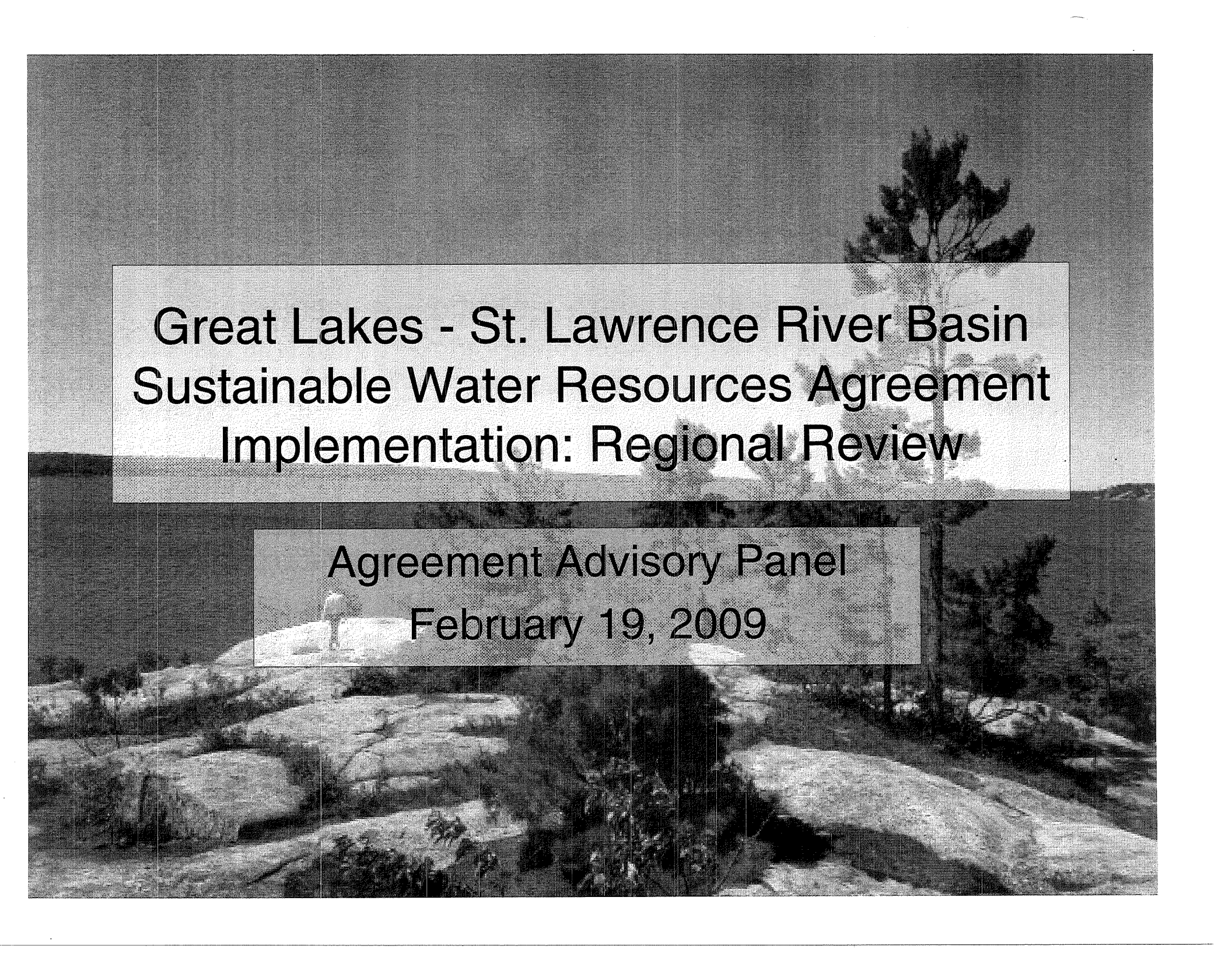
- (3) The criteria referred to in subparagraphs 1 iii, 2 v and vi and 3 iv of subsection (2) are:
 1. The new or increased transfer amount is returned, either naturally or after use, to the same Great Lakes watershed from which it was taken, except for an amount prescribed by the regulations that may be lost through consumptive use.
 2. The efficient use and conservation of existing water supplies cannot reasonably avoid,
 - i. the transfer, in the case of a new transfer, or
 - ii. the transfer of the additional amount, in the case of an increased transfer.
 3. The new or increased transfer amount is reasonable, given the purposes for which,
 - i. the transfer is done, in the case of a new transfer, or
 - ii. the transfer of the additional amount is done, in the case of an increased transfer.
 4. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to ensure that it does not result in any significant individual or cumulative adverse impacts on the quantity or quality of the waters, or the water-dependent natural resources, of the Great Lakes-St. Lawrence River Basin, considering the potential cumulative impacts of any precedent-setting consequences associated with the transfer or the transfer of the additional amount, as the case may be.
 5. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to incorporate feasible, environmentally sound and cost effective water conservation measures to minimize the taking of water and losses of water through consumptive use.
 6. The transfer is implemented so as to ensure that it complies with,
 - i. the Boundary Waters Treaty of 1909,
 - ii. the International Boundary Waters Treaty Act (Canada), and
 - iii. any other treaty, agreement or law that is prescribed by the regulations.
 7. The transfer, in the case of a new transfer, or the transfer of the additional amount, in the case of an increased transfer, is implemented so as to ensure that it complies with any other criteria that are prescribed by the regulations for the purpose of implementing Article 209 (Amendments to the Standard and Exception Standard and

Periodic Assessment of Cumulative Impacts) of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement of 2005, including criteria relating to climate change or other significant threats to the Great Lakes-St. Lawrence River Basin. 2007, c. 12, s. 1





2

A black and white photograph of a rocky landscape. In the foreground, there are large, flat, light-colored rock slabs. In the background, a large, dark evergreen tree stands prominently against a lighter sky. The overall scene is a natural, outdoor setting.

Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: Regional Review

Agreement Advisory Panel
February 19, 2009



Overview

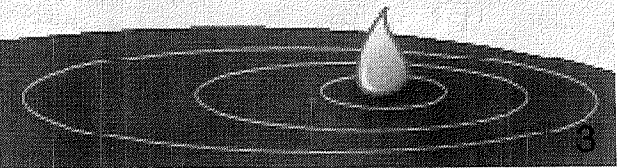
- Agreement Review Commitments:
 - Regional Review, Prior Notice, Prior Notice and Comment on Proposals (A. 201, A. 205)
 - What does Regional Review Involve? (Chapter 5)
 - Regional Review of Water Management, Conservation Programs (A. 300)
- SSOWA-OWRA Requirements
 - Minister's Permit (s. 34.1, par.12-14)
- December 8, 2008 Regional Body Resolutions:
 - Resolution 8: Regional Review Entry into Force
 - Resolution 9: Regional Review Procedures Committee
- Proposed Standing Advisory Committee
- Discussion Questions





Agreement Proposal Review Commitments

- **Regional Review** required for:
 - New or increased diversion to a straddling community involving a consumptive use 19 MLD or more (A. 201, par. 1)
 - New or increased intra-basin transfer involving a consumptive use 19 MLD or more (A. 201, par. 2)
 - ALL new or increased diversions to a community in a straddling county (A. 201 par 3)
- **Prior Notice** to Parties required for new or increased intra-basin transfers resulting from a withdrawal 379,000 litres/day or more (consumptive use less than 19 MLD) (A. 201, par 2)
- **Prior Notice and Comment** by Parties required for new or increased consumptive uses 19 MLD or more (A. 205)



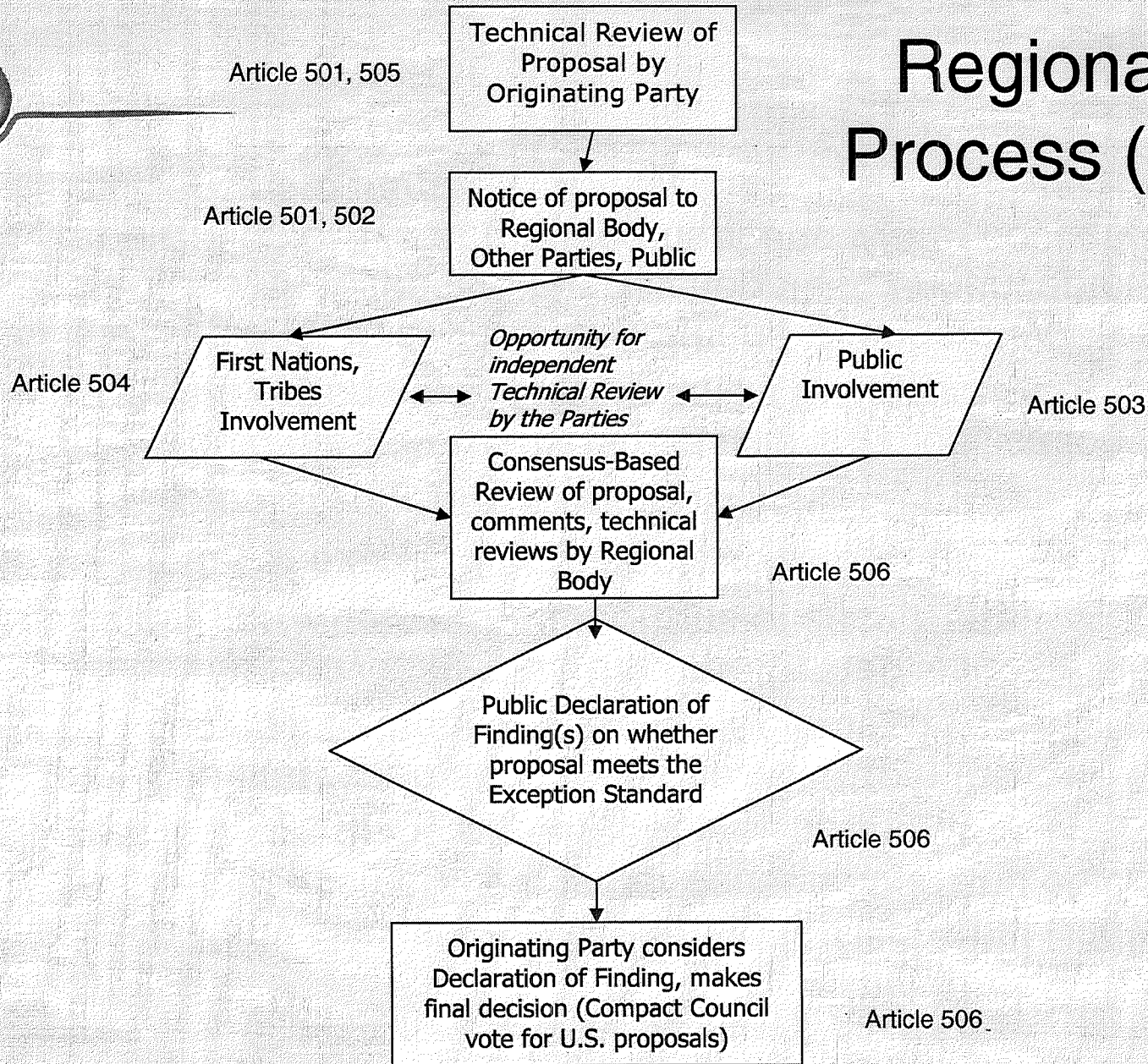


SSOWA Intra-Basin Transfer Provisions

<p>Transfer involving a consumptive use of 19 MLD or more (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none"> •Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed) •No feasible, environmentally sound and cost effective alternatives to transfer, including conservation •Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision 	
<p>Transfer resulting from a withdrawal 379,000 litres/day or more (with consumptive use less than 19 MLD)</p>	<p>Municipal Drinking Water Systems:</p> <ul style="list-style-type: none"> •Meets exception criteria, including return flow to source GL watershed 	<p>All Uses (including <i>Municipal Drinking Water Systems</i> if return flow to source watershed cannot be met):</p> <ul style="list-style-type: none"> •Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed •No feasible, environmentally sound, cost effective alternatives to transfer, including conservation •Ont. gives Prior Notice to other GL jurisdictions
<p>Transfer 50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none"> •Subject to PTTW water taking requirements, not prohibited 	



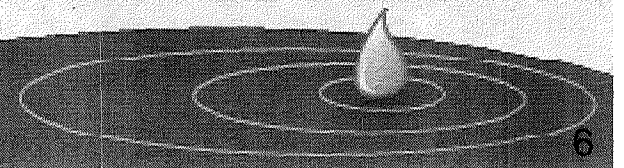
Regional Review Process (Chapter 5)





Regional Review of Water Management, Conservation Programs (Article 300)

- Each Party shall submit a report to the Regional Body, detailing the water management and water conservation and efficiency programs that implement the Agreement
 - The first report submitted one year from the date that Article 300 comes into force and thereafter every 5 years.
- Regional Body considers the reports then issues a Declaration of Finding on whether the programs of each Party
 - meet or exceed Agreement provisions
 - Do not meet Agreement provisions
 - Would meet Agreement provisions if modifications were made – what options may exist to assist the jurisdiction
- the Regional Body may recommend a range of approaches to the Parties with respect to the development, enhancement and application of Water management and Water conservation and efficiency programs

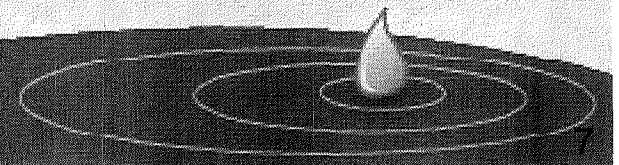




Compact, ~~Agreement~~ Timelines

ONLY

<u>Compact</u> Timeline	<u>Agreement</u> Timeline	Key Commitments
December 8, 2008	No "Effective Date"	"Effective Date" of Compact
December 8, 2008	60 days after last Party notifies others that measures in place	<ul style="list-style-type: none">-Ban on diversions, regulation of exceptions, regional review, comes into force-Baseline set for existing withdrawals, diversions, consumptive uses
December 8, 2009	No later than 1 year after diversion ban	<ul style="list-style-type: none">- Parties submit first report on water management & conservation programs for regional review (every 5 years thereafter)- Parties submit baseline information
December 8, 2010	No later than 2 years after diversion ban	<ul style="list-style-type: none">- Parties establish water conservation goals, objectives, programs (annual program assessments)
December 8, 2013	No later than 5 years after diversion ban above OR 60 days after last party notifies others that measures in place	<ul style="list-style-type: none">- Programs in place for management, regulation of withdrawals, consumptive uses, including PNC- Regional Body reviews conservation objectives- Parties annually submit water use information- Parties conduct cumulative impact assessment (at least every 5 years)





SSOWA- OWRA Amendments

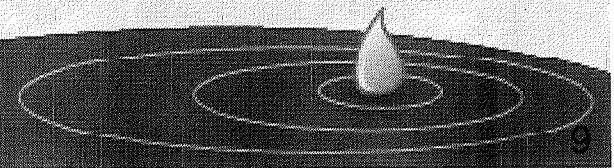
- Intra-basin transfers involving a consumptive use 19 MLD or more shall be referred to the Minister for a decision (s. 34.1, par.12-14). The Minister shall:
 - Give notice to the Regional Body;
 - Allow time for Regional Review; and
 - Consider the Declaration of Finding before making a decision
- Authority to make regulations lowering thresholds for minister's PTTW –(34.6(2))





Regional Body Resolutions

- At Dec. 8 '08 meeting of the Regional Body, resolutions were passed:
 - Resolution 8 - Brought the Regional Review process (Chapter 5) into force for proposed diversions in Great Lake states
 - Resolution 9 – Established a Procedures Committee to develop Regional Review procedures
- Compact Council also passed resolutions, including the establishment of a Rules Committee, to develop rules for Regional Review and Compact voting for proposals (Rules and Procedures Committees to work together)





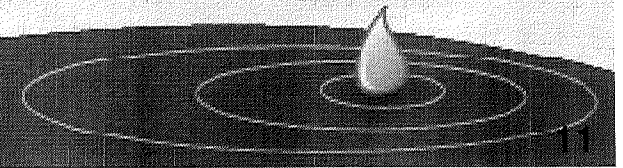
Regional Body Resolution 8: Regional Review

- Regional Body brought Regional Review process into force for proposed GL state diversions.
- Great Lakes Charter Prior Notice and Consultation process remains in force for all other proposals (e.g. consumptive uses, provincial transfer proposals).
- The Regional Body shall be used for all PNC activities under the Charter where they apply.
- Regional Review shall replace Charter PNC in Ontario and Quebec once each province has notified the other Parties that they have completed the measures needed to implement the ban on diversions.



Regional Body Resolution 9: Procedures Committee (Draft Work Plan)

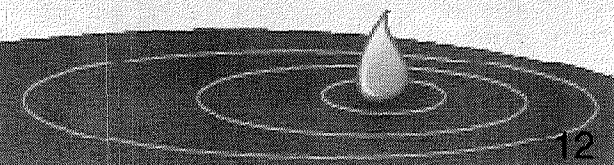
- Review of Diversion Proposals (Regional Review):
 - Application procedure
 - Contents of an application (application form)
 - Rules on application of standards and criteria
 - Notice procedures
 - Procedures for hearings, public & FN involvement
 - Timeframes for review and decision making
 - Process for completing Declarations of Finding
 - Contents of Declaration of Finding
- Other Procedural Issues:
 - Regional Review of State and Provincial programs for water management, as well as programs for conservation and efficiency
 - Cumulative impact assessment procedures
 - “Prior Notice & Opportunity to Comment” procedures (large consumptive uses)





Next Steps

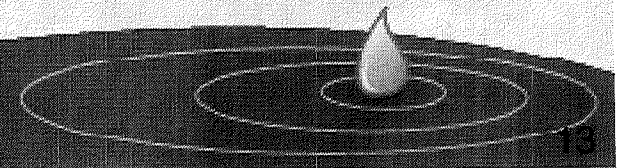
- CGLG to engage regional Advisory Panel, Resource Group, Observers and Basin First Nations and Tribes as work of Regional Body Procedures Committee proceeds
- Ontario to engage AAP
- Information exchange with First Nations communities re: FN involvement in the Regional Review of diversion proposals
 - topic of a First Nations Water Network Pilot Project
 - proposed topic for upcoming First Nation community meetings (March/April)
- Target for draft Regional Procedures, Compact Rules by summer, followed by public review
- Target for adoption by the Regional Body December 2009





Regional Body Standing Advisory Committee

- Regional Body members considering the establishment of a standing Advisory Committee via resolution at the next Regional Body meeting
- Membership of the existing Advisory Panel, Resource Group and Observers is being reviewed in this context
- Proposed Role – to advise the Regional Body, Compact Council during all phases of work:
 - Participating in a representative capacity on behalf of their organizations.
 - Serving as a liaison to respective memberships and partner organizations.
 - Providing scientific/technical/legal expertise as needed.
 - Participating in Regional Body and Compact Council committee meetings and conference calls to receive updates, provide input and comments.
 - In addition to regular public comment opportunities to be invited to provide written submissions, briefings and other input to the Regional Body and Compact Council from time to time.





Proposed Advisory Committee Members

ADVISORY COMMITTEE

Agriculture

- American Farm Bureau Federation
- Ontario Federation of Agriculture
- Union des Producteurs Agricoles

Energy Utilities

- Consumers Energy Company
- Hydro Québec
- New York Power Authority
- Ontario Power Generation

Environmental and Conservation

- Alliance for the Great Lakes
- Canadian Environmental Law Association
- Ducks Unlimited
- Great Lakes United
- National Wildlife Federation
- The Nature Conservancy
- Nature Québec

Industry

- Alliance of Automobile Manufacturers
- American Chemistry Council
- American Forest and Paper Association
- Council of Great Lakes Industries
- Great Lakes Manufacturing Council
- Mittal Steel
- National Association of Manufacturers
- US Steel

ADVISORY COMMITTEE

Shipping

- Lake Carriers Association
- Canadian Shipowners Association

Water Utilities

- Association of Clean Water Agencies
- American Water Works Association

RESOURCE GROUP AND OBSERVERS

Federal Governments

- Canadian Department of Foreign Affairs and International Trade
- Congressional Great Lakes Task Force
- Environment Canada
- National Oceanic and Atmospheric Administration
- U.S. Army Corps of Engineers
- U.S. EPA Great Lakes National Program Office
- U. S. Geological Survey
- U.S. State Department

Local Government

- Great Lakes and St. Lawrence Cities Initiative

Observer

- International Joint Commission

FIRST NATIONS, TRIBES

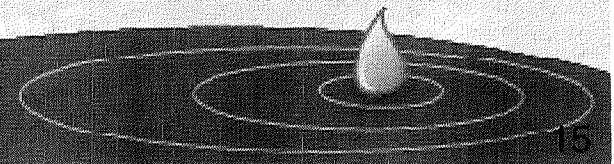
- Separate dialogue





Questions for Discussion

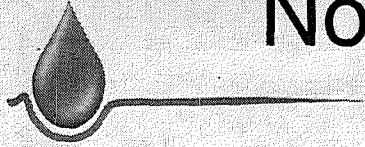
1. What are the most immediate and most critical priorities for the regional Procedures Committee?
2. How should representation on a Standing Advisory Committee to the Regional Body be determined & what are your comments on the proposed membership list? Some considerations:
 - Sector representation
 - Jurisdictional representation
 - Role of First Nations and Tribes – e.g. on Advisory Committee &/or through parallel dialogue &/or through a parallel Committee (possible discussion at Fall Traditional Water Forum?)
 - Linkage between Ontario's AAP and members of the regional Advisory Committee





Appendices – Draft Procedures Manual





No Feasible, Environmentally Sound, Cost-Effective Alternatives

Draft Procedures Manual Guidance:

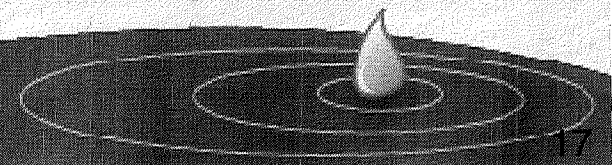
Intent: to ensure that there are no feasible alternatives available that would eliminate or diminish the need for a transfer

Application Requirements:

- narrative description of need,
- analysis of the efficiency of current use including the application of water conservation measures,
- analysis of water supply alternatives addressing quality (treatability) & quantity of alternative sources,
- alternatives must include conservation & efficient use of current water supplies
- rationale for preferred alternative

Review Criteria:

- conservation alternative must be applied first to minimize or eliminate the need for the transfer;
- clear demonstration and analysis of alternatives considered;
- must be a showing that no feasible alternatives to the transfer exist, considering resource and ecosystem protection, technology and cost factors





Return Flow

Draft Procedures Manual Guidance:

Intent:


- to ensure all water is returned to the source watershed, naturally or after use, less an allowance for consumptive use, to support the ecological health of the system.
- that consumptive use will be reasonable and return of water will be maximized, at a quality that meets all applicable requirements.

Application requirements:

- description of return flow volume, location, quality,
- agreements between water taker and the entity discharging the return flow (if entity returning water is different from the applicant- i.e. “related transferor”),
- estimate of consumptive use (coefficients or engineering design plans)

Review Criteria: clarity and completeness of descriptions, verification/justification of consumptive use, meets applicable quality standards





No Significant Individual, Cumulative Impacts

Draft Procedures Manual Guidance:

Intent: to ensure proposal results in no significant adverse impacts. Provision central to the Agreement's commitment to resource protection and management.

Application Requirements:

- source/location of withdrawal and return flow,
- description of baseline conditions regarding hydrologic flow, water quality, habitat,
- projected water use including peak demand,
- anticipated changes to water quality and water dependent natural resources,
- description of mitigation measures,
- statement of how proposal would relate to other existing uses;
- where watershed plans exist, applicants shall discuss impacts in context of these plans

Review Criteria: completeness of baseline information; location, type, extent & scale of physical, chemical or biological impacts; mitigation measures proposed



Efficient Use, Conservation of Existing Supplies

Exception Criterion:

- The efficient use and conservation of existing water supplies **cannot reasonably avoid** the transfer;

Related Agreement Definitions: N/A

Draft Procedures Manual Guidance:

Intent: to ensure that the need for water cannot be reasonably avoided through efficient use and conservation of existing supplies.

Application Requirements: description of need, analysis of the efficiency of current water use including the application of conservation measures.

Review Criteria: must be an alternative pursued first to minimize or eliminate the need for additional water





Transfer Amount is Reasonable

Exception Criterion:

- The transfer amount is **reasonable**, given the purposes for which the transfer is done;

Related Agreement Definitions: N/A

Draft Procedures Manual Guidance:

Intent: to ensure that amounts are considered realistic to meet the intended use

Application Requirements: estimate of highest 90 day average use over approval period; water use plan (municipal: service area, water use and population projections, annual average use, capacity of withdrawal, treatment, distribution portions of the system, assessment of water use savings of current & proposed conservation programs)

Decision Criteria: how realistic the proposed quantity is to meet intended purpose, to be reviewed in concert with review of proposed conservation measures





Feasible, Environmentally Sound, Cost Effective Water Conservation Measures

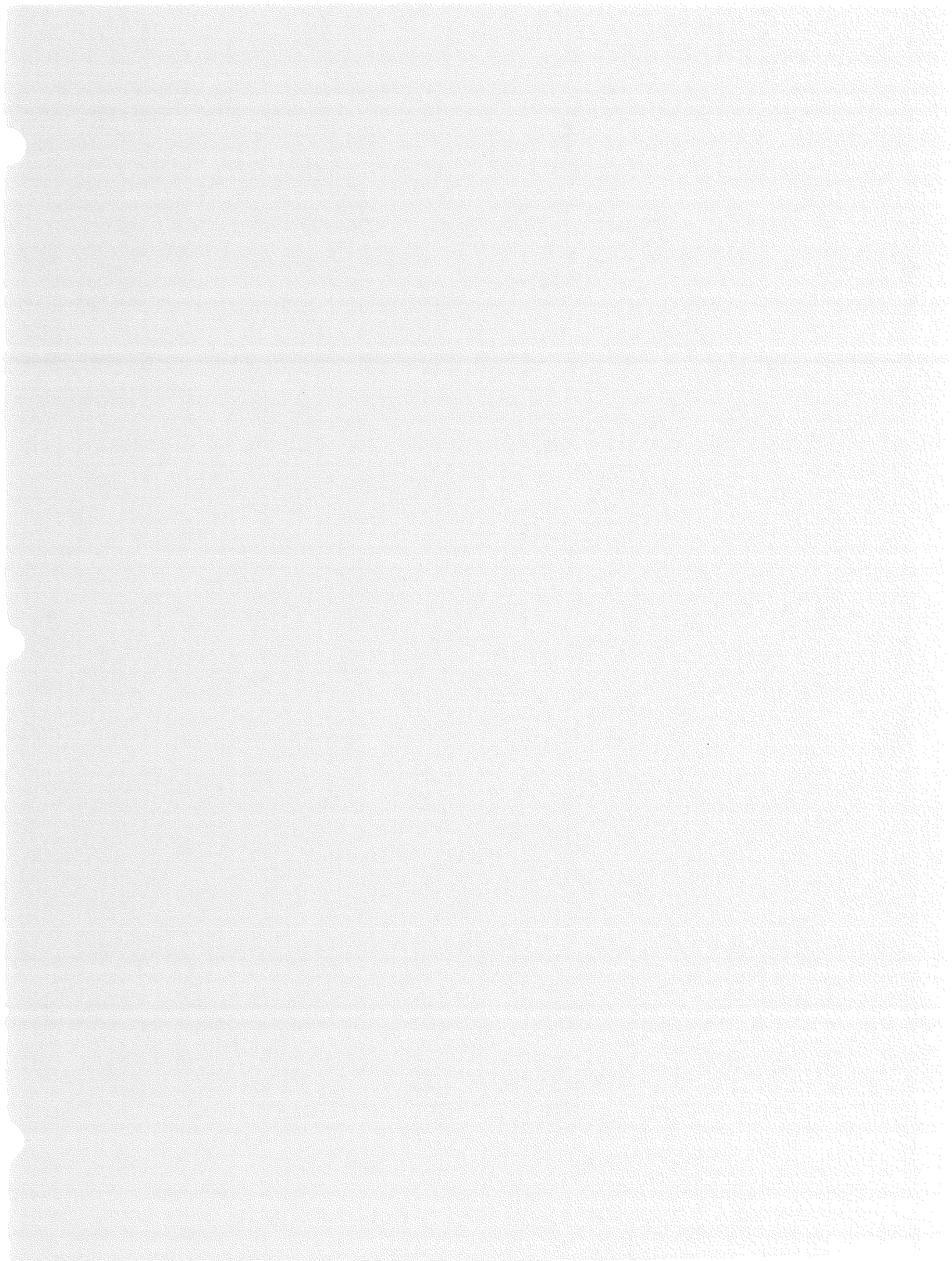
Draft Procedures Manual Guidance:

Intent: to encourage efficient use through demand reduction and supply-side conservation measures (hardware/technology, behaviour/management practices) and incentives (education, financial, regulatory)

Application Requirements: detailed description of measures that will be employed in the project. Manual includes guidance on the development of a conservation plan (not required but encouraged)

Review Criteria: adequacy of conservation measures to be implemented - must be conservation goals, description of how water use/savings will be measured, forecast of anticipated use and demand, analysis of alternative methods and practices, and an implementation/evaluation strategy





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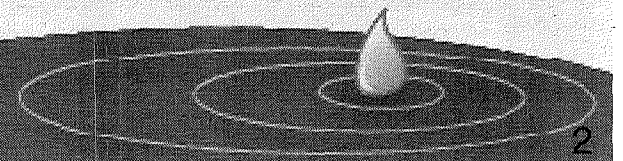
**Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
How to Apply the Exception Criteria**

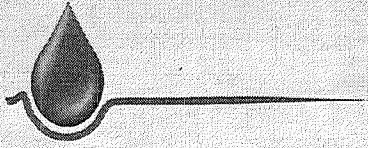
**Agreement Advisory Panel Meeting
February 19, 2009**

Outline



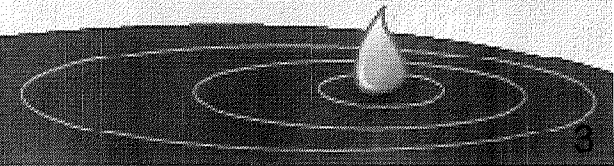
- Purpose
- Context – Provisions of Agreement & OWRA
- How to Apply the Exception Criteria
 - The Exception Criteria
 - Existing Requirements
 - Considerations on How to Apply the Criteria
 - Discussion Questions





Purpose of Presentation

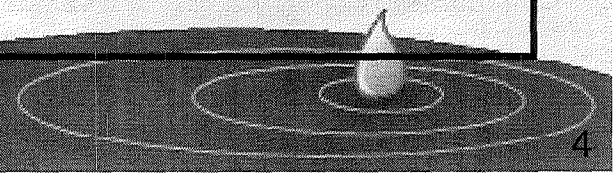
- To receive feedback on how the Exception Criteria should be applied to new or increased intra-basin transfers.





OWRA Intra-Basin Transfer Provisions (s. 34.6(2))

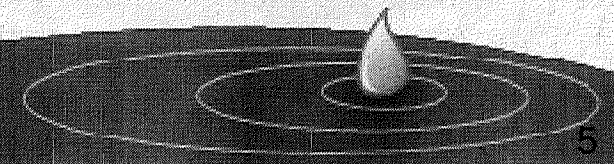
<p>New or increased intra-basin transfer involving a consumptive use of \geq 19 million L/Day</p>	<ul style="list-style-type: none"> •No feasible, environmentally sound and cost effective alternatives to transfer, including conservation •Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed) •Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision 	
<p>New or increased intra-basin transfer resulting from a withdrawal \geq 379,000 L/Day</p>	<p>Municipal Drinking Water Systems:</p> <ul style="list-style-type: none"> •Meets exception criteria, including return flow to source GL watershed 	<p>All Uses (including <i>Municipal Drinking Water Systems</i> if <i>return flow to source watershed cannot be met</i>):</p> <ul style="list-style-type: none"> •Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed •No feasible, environmentally sound, cost effective alternatives to transfer, including conservation •Ontario gives prior notice to other GL jurisdictions
<p>New or increased intra-basin transfer resulting from a withdrawal over 50,000 L/Day but less than 379,000 L/Day</p>	<ul style="list-style-type: none"> •Subject to PTTW water taking requirements, not prohibited 	



Context: Exception Criteria for New or Increased Transfers



1. **The water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional **criteria may be added by regulation to implement findings of the cumulative impact assessment** provided under Article 209 of the Agreement





Intra-Basin Transfer Exception: **No Feasible, Environmentally Sound, Cost-Effective Alternatives**

Intra-Basin Transfer Exception Language (OWRA s. 34.6(2)):

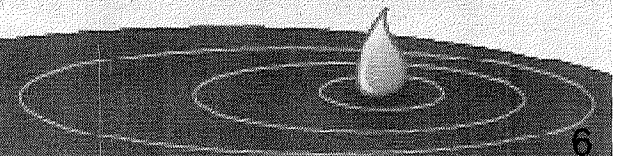
- There are no other **feasible, environmentally sound and cost effective alternatives** to the transfer (applied to new or increased transfers 19 ML/d consumptive use or more or where water not being returned to source watershed)

Existing Requirements:

- Review of alternatives part of the EA process (e.g. municipal proposals)
- Review of alternatives not presently required under PTTW

Considerations:

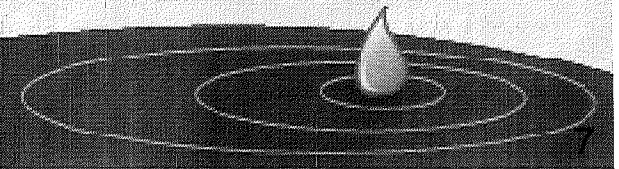
- Need to clarify terminology
- EA process should be used to define what is feasible
- Need for guidance to ensure an objective review of alternatives and a balancing of environmental vs cost considerations
- Need to consider what other GL jurisdictions are requiring
- Need to require review of return flow options





Exception Criterion #1: **Return Flow to Source Watershed**

- **The water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use.
- Other work underway related to location of Return Flow to Source Watershed:
 - Connecting Channels Presentation – Options on defining Connecting Channels.
 - Consumptive Use – proposed tiered methodology.
 - Completion of Great Lakes Watershed boundary map.





Exception Criterion: **Return Flow to Source Watershed**

Agreement Definition:

- **"Source Watershed"** – “the watershed from which a withdrawal originates. If water is withdrawn directly from a Great Lake or from the St. Lawrence River, then the source watershed shall be considered to be the watershed of that Great Lake or the watershed of the St. Lawrence River...If the water is withdrawn from the watershed of a stream that is a direct tributary to a Great Lake or a direct tributary to the St. Lawrence River then the source watershed shall be considered to be the watershed of that Great Lake or the watershed of the St. Lawrence River respectively, with a preference to the direct tributary stream watershed from which it was withdrawn.”

Existing Requirements:

- Return flow not regulated under existing PTTW program.
- Sewage discharge location and quality regulated under sewage works program.



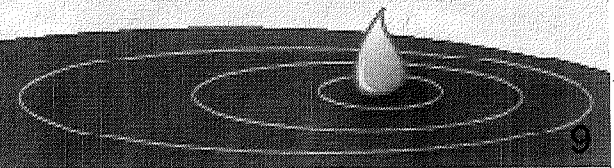


Exception Criteria #2 & 7: Individual or Cumulative Impacts

- There will be **no significant individual or cumulative adverse impacts** on the **quantity or quality** of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences.
- Additional **criteria may be added by regulation to implement findings of the cumulative impact assessment** provided under Article 209 of the Agreement.

Agreement Definitions:

- **“Cumulative impacts”** – “the impact on the Great Lakes-St. Lawrence River Basin ecosystem that results from incremental effects of all aspects of a withdrawal, diversion or consumptive use in addition to other past, present and reasonably foreseeable future uses regardless of who undertakes them. Cumulative impacts can result from individually minor but collectively significant withdrawals, diversions and consumptive uses taking place over a period of time.”
- **“Water dependent natural resources”** – “the interacting components of land, water and living organisms affected by the waters of the basin.”





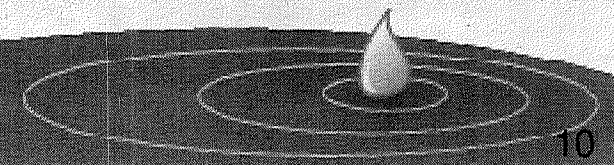
Individual Impacts – Existing Requirements

Permit to Take Water (PTTW)

- PTTW Manual and Technical Guidance Documents define scope and content of required impact analysis.
- Level of analysis commensurate with environmental risk associated with water taking.
- Water quantity – impact of water taking on other users and ecosystem.
- Water quality – impact of water taking on water quality.

Certificate of Approval (C of A)

- MOE Water Management Policy “Blue Book” and “Green Book” technical guidance define scope and content of required impact analysis.
- Treated waste water; impact of effluent discharge on water quality and ecosystem.





Cumulative Impacts – Existing Requirements

PTTW

- Consideration of cumulative impacts a principle of PTTW program.
- High and medium-use watersheds designated in regulation; provides preliminary appraisal of cumulative impacts on tertiary watershed scale.
- Director may initiate watershed-scale or aquifer-scale assessments in areas under water quantity stress.
- Director may engage water takers to collectively reduce burden on water sources and better manage demand for water.


Ontario Low Water Response

- Uses precipitation and stream flow indicators to categorize low water levels in a watershed, including drought conditions, and recommends action.
- Links to review and conditions built into PTTW.

Source Protection: Water Budgets & Water Quantity Risk Assessment

- Water Quantity Risk Assessment Framework requires that all watersheds in source protection areas be evaluated with respect to their stress level based on a tiered approach; reflects cumulative impacts of takings.





Cumulative Impacts – Assessments by Parties to Agreement

Step 1. Parties conduct Cumulative Impact Assessments. Assessments shall (Article 209) :

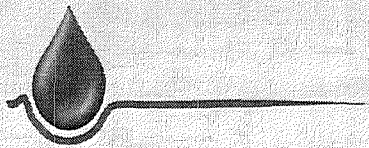
- Be undertaken the earlier of:
 - Every 5 years
 - Each time incremental losses to basin reach 190,000,000 litres per day average in any 90-day period in excess of quantity at time of last assessment
 - At the request of one or more of the Parties.
- Form basis for review of the Standard and Exception Standard and their application.
- Consider climate change or other significant threats.
- Take into account current state of scientific knowledge or uncertainty and exercise caution in cases of uncertainty.
- Consider adaptive management principles and approaches.

Step 2. Minister will post assessment for public comment.

- *Ontario Water Resources Act – Assessment & Public Comment*

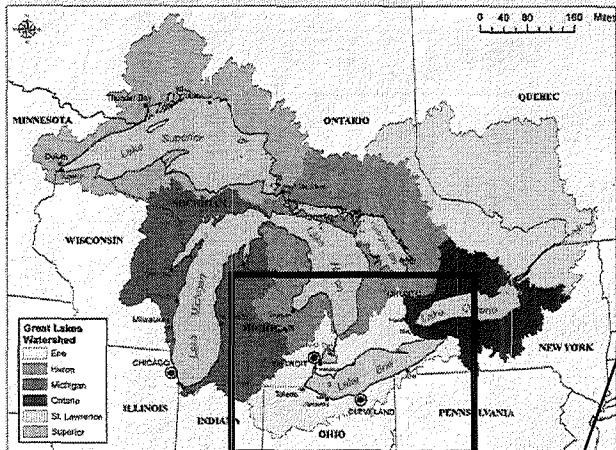
Step 3. After considering comments, Minister will post statement of actions Ontario intends to take.

- Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement.

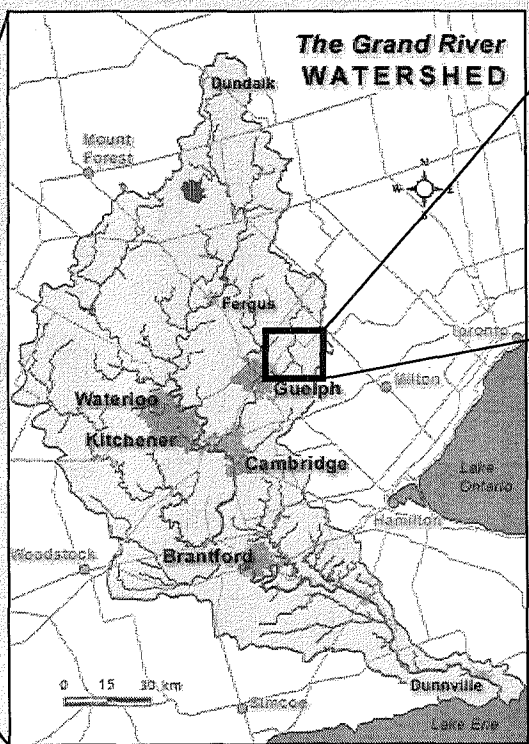


Impacts – Scale Considerations

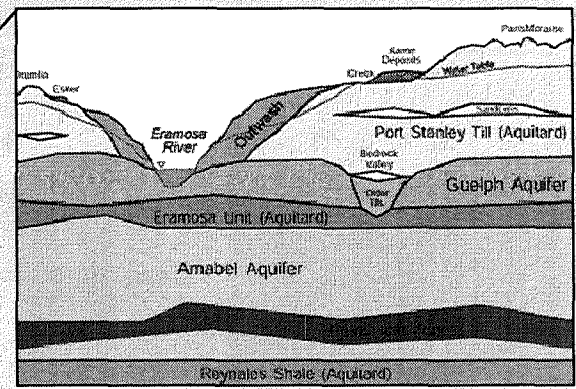
Great Lakes Basin



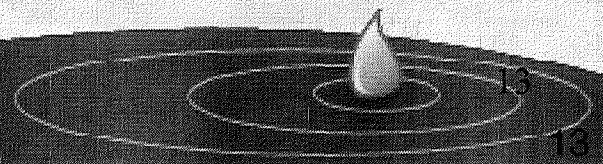
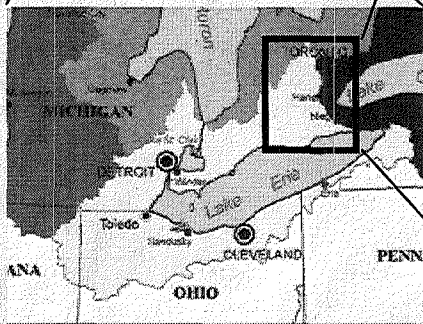
Watershed/Sub-Watershed



Aquifer



Great Lake Watershed



Impacts – Scales and Roles

Provincial Government	Individual Proponent
<u>Local Scale</u> PTTW review & compliance	<u>Local Scale</u> PTTW application & conditions Reporting of water taking
<u>Tertiary Watershed</u> Water Budgets PTTW data, assessments & watershed designations	<u>Tertiary Watershed</u> Municipalities undertake watershed plans
<u>Great Lake Watershed</u> Data management Regional Review criteria Partner in Regional assessment	<u>Great Lake Watershed</u> ??
<u>Great Lake Basin</u> Data management Regional Review criteria Partner in Regional assessment	<u>Great Lake Basin</u> ??



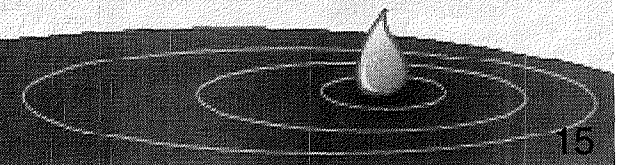
Individual Impacts – Options

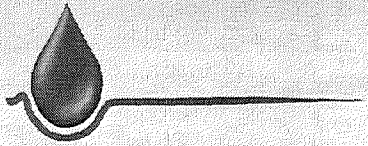
Option 1:

- Continue with existing requirements and roles. Incorporate evaluation criteria developed by Regional Body for proposals that trigger regional review.

Option 2:

- Establish additional requirements for proponents of transfers depending on scale of proposal, e.g.,
 - require additional impact analysis (e.g., through PTTW, C of A, Class Environmental Assessment, other Plans and/or Approvals);
 - require additional monitoring and reporting through PTTW and/or Certificate of Approval.





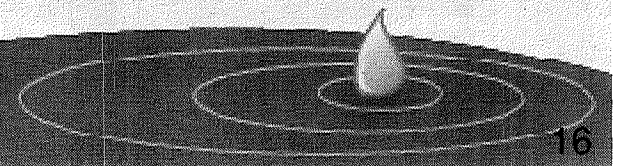
Cumulative Impacts – Options

Option 1:

- Continue with existing requirements and roles; may be modified in future based on periodic cumulative impact assessment by Parties to Agreement. Incorporate evaluation criteria developed by Regional Body for proposals that trigger regional review.

Option 2:

- Establish additional requirements (e.g., analysis, monitoring) for proponents of transfers depending on scale of proposal.
 - Need to consider costs of, and availability of information for, cumulative impact assessment.





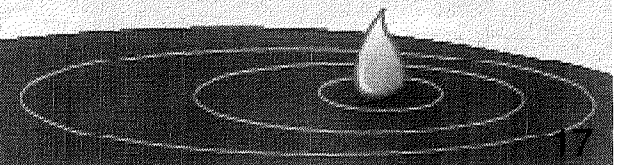
Questions

Individual Impacts

1. Which option would you recommend?
2. What additional requirements, if any, should be established to meet the Exception Criteria for individual impacts?

Cumulative Impacts

3. Which option would you recommend?
4. What additional requirements, if any, should be established to meet the Exception Criteria for cumulative impacts?
5. What should be the role of individual proponents, if any, in the provincially-led assessments of cumulative impacts?



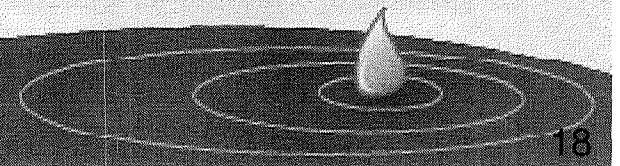


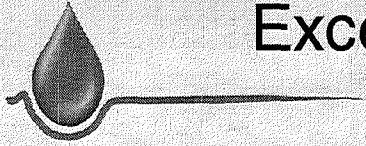
Efficient Use & Conservation

It has been demonstrated that **conservation of existing water supplies is not a feasible, environmentally sound and cost effective alternative** to the transfer.

Exception Criteria #3, 4 & 5:

- The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer.
- The **transfer amount is reasonable**, given the purposes for which the transfer is done.
- The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use.



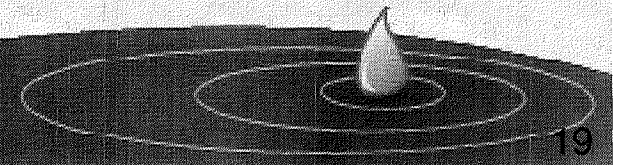


Exception Criteria: **Efficient Use & Conservation**

Agreement Definition:

“Environmentally sound and economically feasible water conservation measures” – “those measures, methods, technologies or practices for efficient water use and for reduction of water loss and waste or for reducing a withdrawal, consumptive use or diversion that

- are environmentally sound,
- reflect best practices applicable to the water use sector,
- are technically feasible and available,
- are economically feasible and cost effective based on an analysis that considers direct and avoided economic and environmental costs, and
- consider the particular facilities and processes involved, taking into account the environmental impact, age of equipment and facilities involved, the processes employed, energy impacts and other appropriate factors.”





Water Conservation – Existing Requirements

Environmental Assessment (EA)

- Review of alternatives an existing part of the EA process.
- May include alternative of using water conservation to avoid or minimize a transfer.

Permit to Take Water (PTTW)

- Director considers water conservation in review of PTTW applications, including best water management standards and practices for the relevant sector.
- PTTW Applicant required to document water conservation measures implemented or planned.

Provincial Policy Statement

- Sewage & Water Policies – promote efficient use of existing services; provide servicing in a manner that can be sustained by resources and that is financially viable.
- Water Policies – use watershed as ecologically meaningful scale for planning; promote efficient & sustainable use of water resource, including water conservation.

Oak Ridges Moraine Conservation Plan

- Water Conservation Plans required.

Draft Lake Simcoe Protection Plan

- Municipalities to prepare Water Conservation Plans.



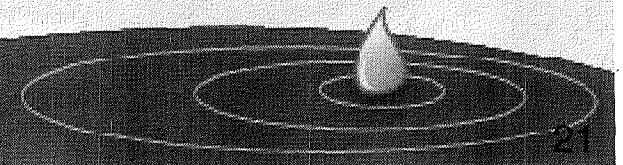


Water Conservation – New Initiatives

- Proposed Ontario Water Conservation and Efficiency Strategy under development.

Proposed Principle for New or Increased Transfers:

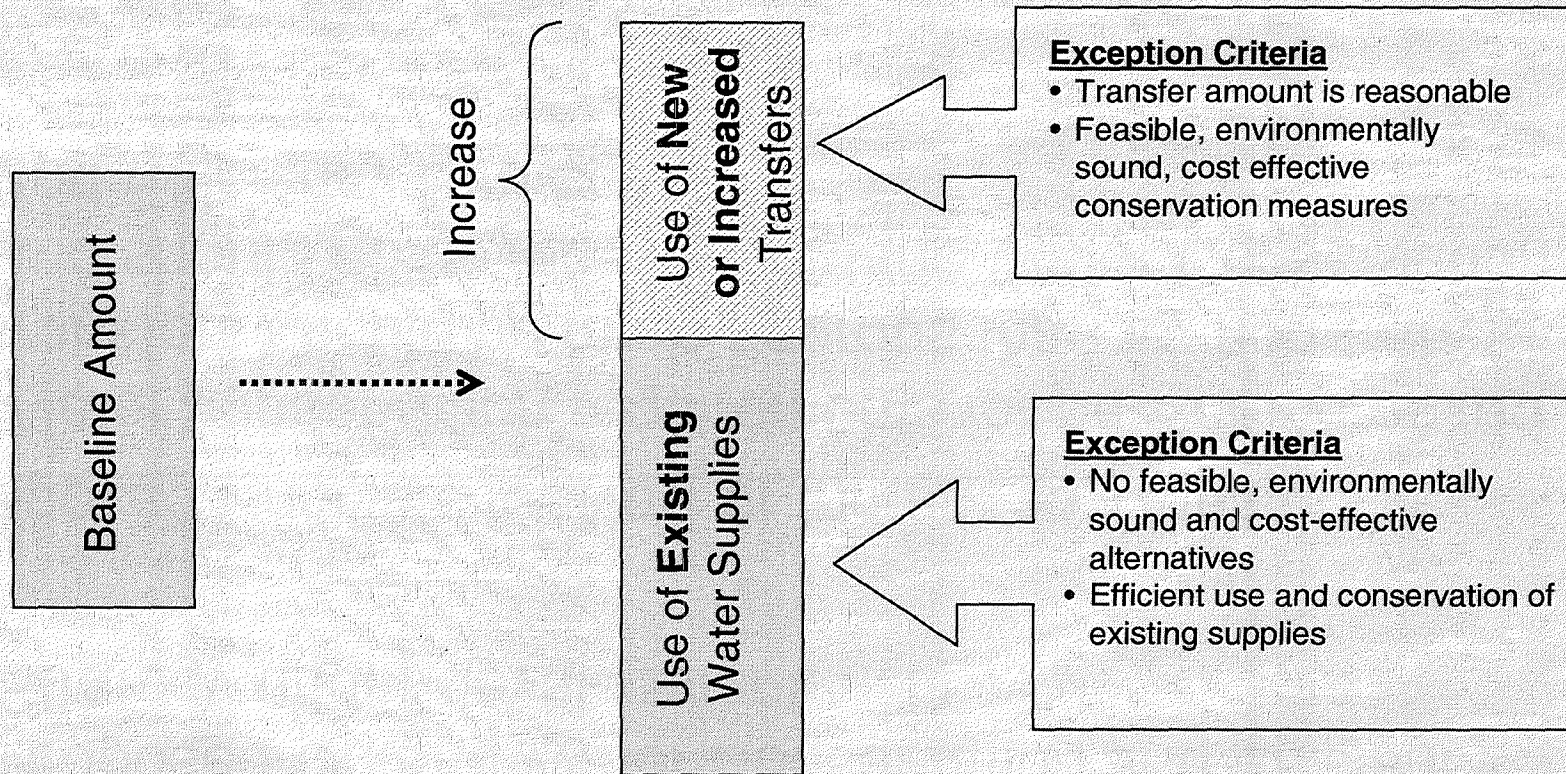
- Water conservation requirements for new or increased transfers should be more rigorous than for non-transfers and should go beyond the Ontario Water Conservation and Efficiency Strategy.





Water Conservation – Applying the Exception Criteria

Scenario: After baseline has been established, a proponent is requesting an increase in their transfer.



Requirements Beyond Provincial Strategy

Existing Water Supplies

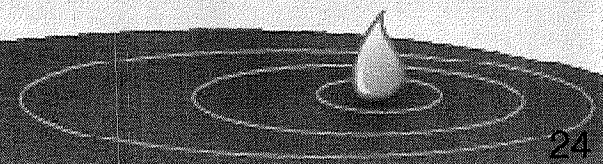
Exception Criteria	Options
No feasible, environmentally sound and cost-effective alternatives, including conservation	<ol style="list-style-type: none"><li>1. Establish performance indicators and/or benchmarks which must be met prior to any future transfer.<li>2. Require the most effective water conservation and efficiency measures to have been implemented.
Efficient use and conservation of existing supplies	<ol style="list-style-type: none"><li>3. Require Water Conservation Plans.<li>4. Applicant must show how improvements in water conservation and efficiency in existing development will be sustained. <p>Note that the Options are not mutually exclusive; they may be used in combination.</p>

Requirements Beyond Provincial Strategy

New or Increased Transfers



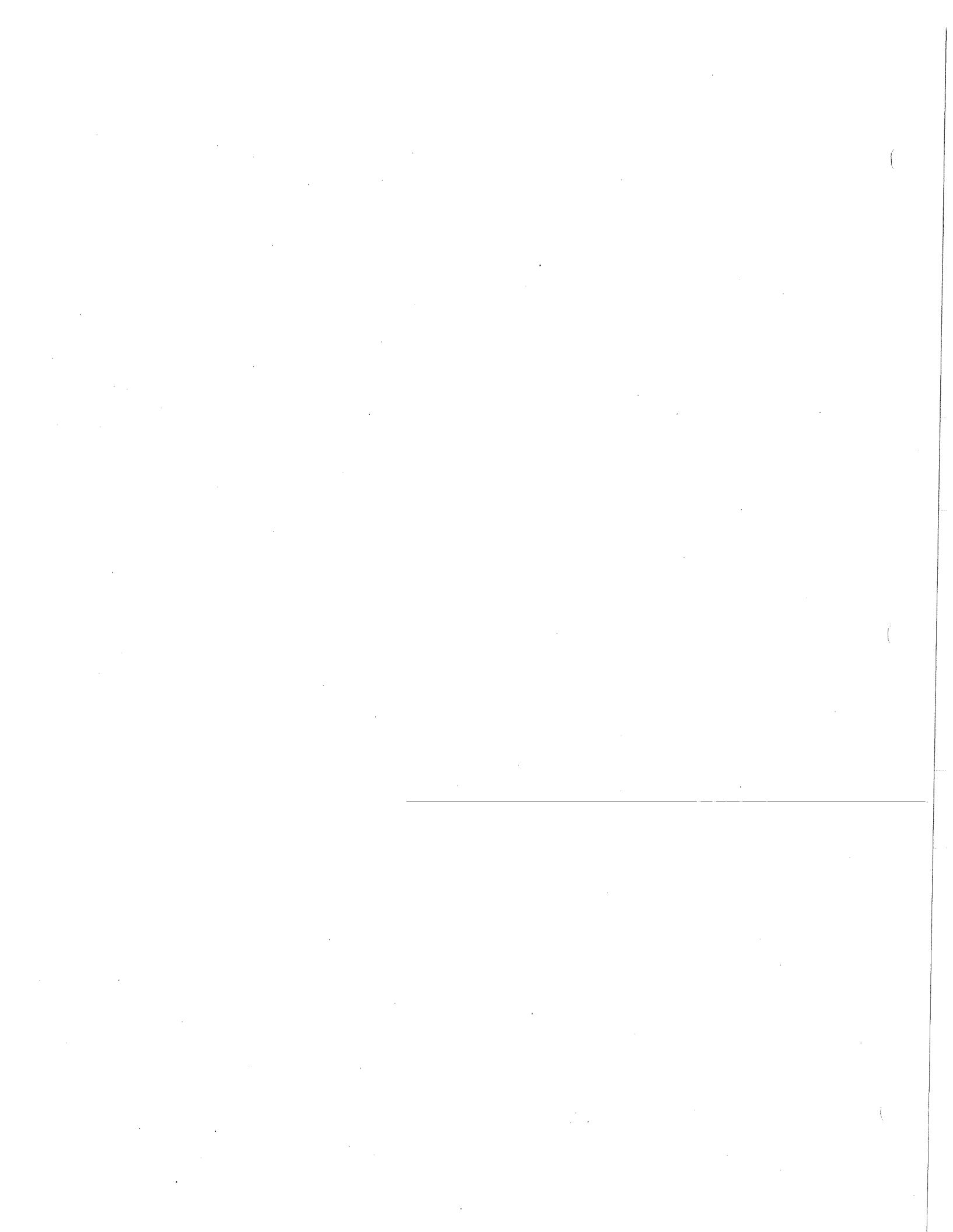
Exception Criteria	Options
Transfer amount is reasonable	<ol style="list-style-type: none">1. Establish performance indicators and set benchmarks for new or increased transfers, with regular monitoring and reporting.2. Require the most effective water conservation and efficiency standards and measures to be implemented for new or increased transfers.3. Encourage other effective water conservation and efficiency measures.4. Require Water Conservation Plans. <p>Note that the Options are not mutually exclusive; they may be used in combination.</p>
Feasible, environmentally sound, cost effective conservation measures	

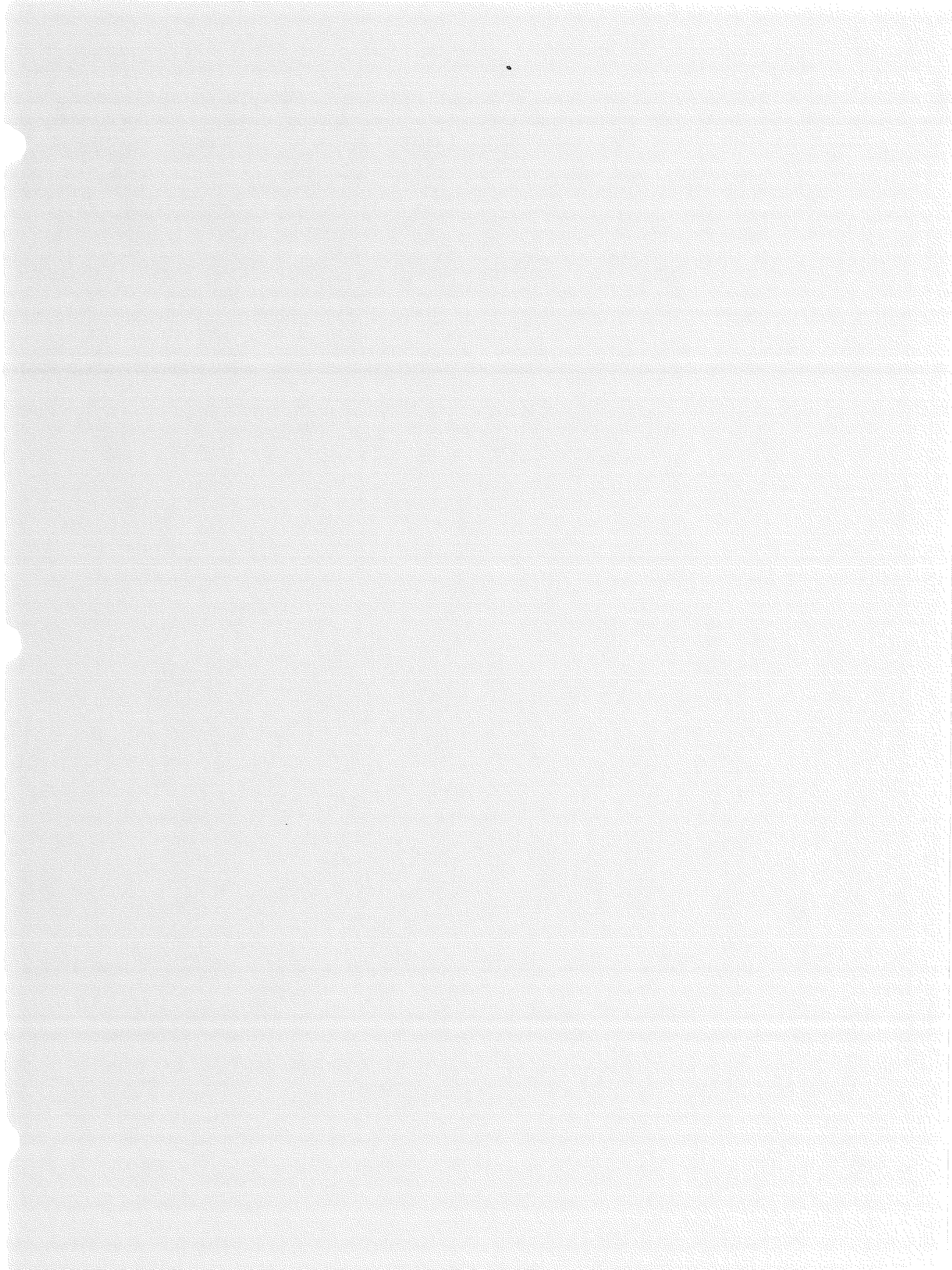




Questions

1. Do you agree with the proposed principle that water conservation requirements for new or increased transfers should go beyond the Ontario Water Conservation and Efficiency Strategy?
2. Which option or combination of options would you recommend for demonstrating the efficient use and conservation of existing water supplies?
3. Which option or combination of options would you recommend for demonstrating that environmentally sound and economically feasible conservation measures are in place for a new or increased transfer?





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**Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement**

When to Apply the Exception Criteria

Agreement Advisory Panel Meeting
February 19, 2009



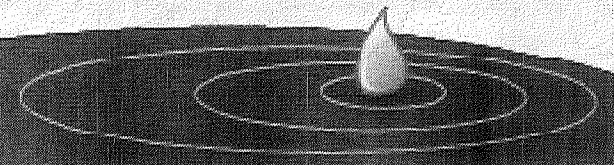
Outline

- Overview of Agreement Provisions
- Municipal Applications
 - Summary of Existing Municipal Class EA and PTTW (OWRA) provisions
 - Planning Processes - Current
 - Options
 - Questions
- Non-Municipal Applications
 - Summary of the Process Currently Used
 - Questions



Purpose of Presentation

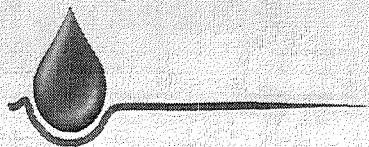
- Seek feedback on when the exception criteria should be addressed in the planning process for both municipal and non-municipal applications.





Context: Exception Criteria for New or Increased Transfers

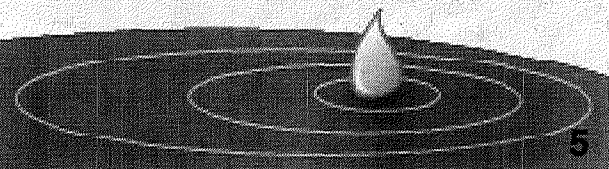
1. The **water transferred is returned**, either naturally or after use, to the same Great Lakes watershed from which it was taken (source watershed), except for an amount prescribed by the regulations that may be lost through consumptive use;
2. There will be **no significant individual or cumulative adverse impacts** on the quantity or quality of the waters or water-dependent natural resources of the Basin, considering the potential cumulative impacts of any precedent-setting consequences;
3. The **efficient use and conservation of existing water supplies** cannot reasonably avoid the transfer;
4. The **transfer amount is reasonable**, given the purposes for which the transfer is done;
5. The transfer is implemented so as to incorporate **feasible, environmentally sound and cost-effective water conservation measures** to minimize the taking of water and losses of water through consumptive use;
6. The transfer is implemented to ensure that it complies with applicable laws and agreements including the Boundary Waters Treaty of 1909;
7. Additional criteria may be added by regulation to implement findings of the cumulative impact assessment provided under Article 209 of the Agreement



Additional Criteria

Before Exception Criteria applied to a new or increased transfer, if transferred water is not being returned to the source watershed, or if new or increased transfer is 19 Ml/d or more, the applicant must show that:

- There are no other **feasible, environmentally sound and cost effective alternatives** to the new or increased transfer...
- It has been demonstrated that conservation of existing water supplies is not a **feasible, environmentally sound and cost effective alternative** to the new or increased transfer...





Provincial Legislation, Planning & Instruments

Provincial Strategic Direction

Growth Plan - 25-year land-use and infrastructure framework for managing growth in the Greater Golden Horseshoe

Provincial Plans - Greenbelt, Oak Ridges Moraine, Lake Simcoe Protection Plan

Clean Water Act - Source Protection Plans, Water Budget Analysis

Municipal Class EA

- Master Plans
- Specific Class EAs
- Possible Bump-up
- Environmental Review Tribunal Decisions

Master Plans



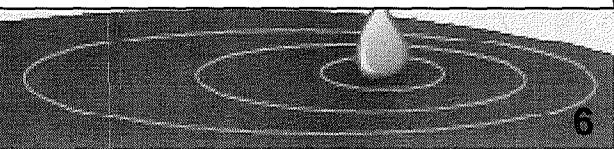
Official Plans

- Servicing Studies
- Master Plans
- By-laws
- Council Decisions
- OMB Decisions

Environmental Protection Act - Certificate of Approval for Water/Sewage Treatment Plant

Ontario Water Resources Act - Certificate of Approvals for water & waste water work;
Permit to Take Water

Safe Drinking Water Act - Drinking Water Licences





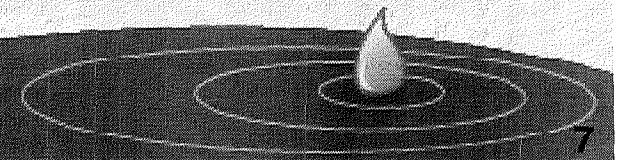
Summary of Existing Municipal Class EA and PTTW (OWRA) requirements

Existing Municipal Class EA

- Proponent driven
- Forward looking
- Can use Master-planning approach
- Can be integrated with the *Planning Act*
- Considers social, economic, and environmental impacts
- Considers alternatives
- Request for Bump-up to individual EA (i.e. Part 2 Order/Bump-up)
- Class EAs are sector specific (e.g. Municipal sector)

Existing Permit To Take Water

- Director approval
- Occurs late in planning
- Considers water availability, planned municipal use & ecosystem function
- Consider water conservation; cumulative impacts
- Does not consider alternatives
- Consistent approach with non-municipal Permit Holders
- Can be appealed by permit holders
- Municipal and irrigation PTTWs exempt from EBR





Municipal Class EA

Five-Phase Planning Process

1. Identification & description of problem
 2. Identification & evaluation of alternative solutions & identification of preferred solution
 - Required point of review agencies and public consultation
 3. Alternative design concepts for preferred solution
 - Required point of review agencies and public consultation
 4. Preparation of environmental study report (ESR)
 - Notice of Completion Issued to review agencies and public
 - ESR completed and on public record
 5. Implementation of preferred solution
- Schedule B projects-issued Notice of Completion to review agencies and the public
- Schedule C projects end at this point



Current Planning Process

Municipal Class EA- Master Plan outlining projects (Step 1)

Class EA Project (Schedule A, A+, B or C) (Step 4)

PTTW Application for Class EA Project (if required) (Step 5)

A Master Plan may result in multiple Class EA projects – each of which may require it's own PTTW application



Class EA Project (Schedule A, A+, B or C) (Step 2)

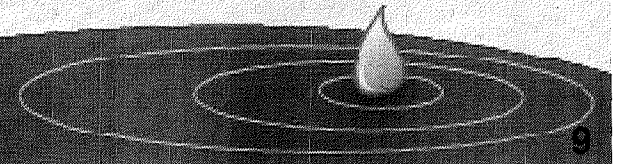
PTTW Application for Class EA Project (if required) (Step 3)

Class EA Project (Schedule A, A+, B or C) (Step 6)

PTTW Application for Class EA Project (if required) (Step 7)



All Class EA Projects outlined in the Master Plan must be completed within a 10 year period



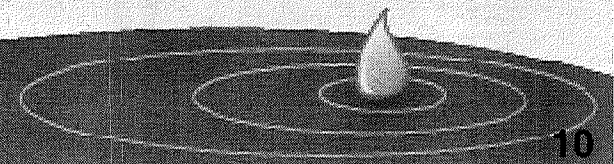
Options



Two options are considered below:

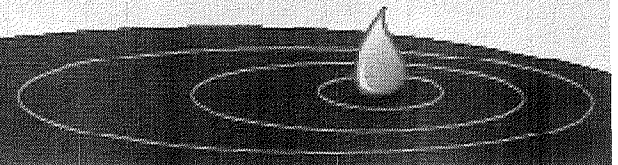
Option 1: the proponent submits a formal PTTW application for new or increased transfers after the Class EA is considered 'complete'.

Option 2: explores having a formal PTTW application for a new or increased transfers submitted before the Class EA is 'complete'.

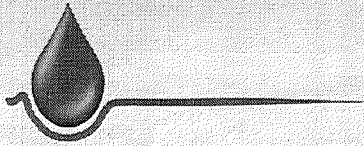


Considerations

- Notices of Completion for Schedule C Municipal Class EA Projects are issued at the end of Phase 4. Both the Review Agencies (i.e. MOE and other specified ministries) and the public receive the Notice.
- The Class EA is considered 'complete' 30 days after the Notice of Completion is issued (subject to no Part II Order requests, etc..)
- Currently once the Class EA is completed the proponent usually applies for a PTTW at that time (if required).
- Currently, section 32 of EBR exempts requirement to post municipal PTTWs, if permit is step toward implementing an EA undertaking.
- Depending on how Class EA and PTTW process is integrated, subjecting municipal PTTWs to Part II of EBR may require regulatory or statutory change.



Option 1



Municipal Class EA Master Plan with Class EA Projects that identify any new or increased transfers

Provides an outline for how exception criteria will be addressed (Step 1)

Class EA Project (Schedule C-mandatory)

Final ESR submitted provides in-depth analysis on how the exception criteria has been satisfied (Step 5)

Circulate Class EA projects to MNR for review/comment on how exception criteria has been satisfied (Step 6)

PTTW Issued – Sign off and Approval from OWRA Director or Minister (if 19M/Cu permit is required) (Step 9)

Proposed Process

Circulate Master Plan to MNR for review/comment on how the exception criteria has been addressed (Step 2)

Regional Body feedback on initial proposal (if required re: 19 M l/d) (Step 3)

Preliminary acknowledgment given from OWRA Director on the exception criteria only (Step 4)

PTTW Application for Class EA Project which demonstrates how the exception criteria has been satisfied (Step 7)

Regional Body -Review of Project (if required: re 19 M C/u) And/ or Prior Notice and Consultation (Step 8)

All Class EAs outlined in the Master Plan with an intra-basin transfer would follow the same process Steps 5- 9 outlined above



Option 2



Municipal Class EA Master Plan with Class EA Projects that identify any new or increased transfers

Provides an outline for how exception criteria will be addressed (Step 1)

Class EA Project (Schedule C-mandatory) Require that a Draft ESR be submitted to the OWRA Director (Step 5)

Circulate to MNR for review/ comment on how the exception criteria has been addressed (Step 7)

PTTW Issued – Sign off and Approval from OWRA Director or Minister (if 19M/Cu permit is required) (Step 10)

Proposed Process

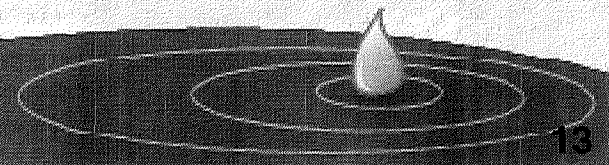
Steps 2-4 Circulating to MNR; Regional Body input on initial proposal; and preliminary acknowledgement from OWRA Director remains the same as in Option 1

Draft PTTW Application for Class EA Project submitted to OWRA Director which demonstrates how exception criteria has been met (Step 6)

Final ESR Submitted for Class EA project; provides in-depth analysis on how the exception criteria has been satisfied (Step 8)

Regional Body -Review of Project (if required) And/ or Prior Notice and Consultation (Step 9)

All Class EAs outlined in the Master Plan with an intra-basin transfer would follow the same process Steps 5- 10 outlined above





Questions

1. What option would you recommend and why?
2. For both options, is the Regional Body Review located appropriately in the process? If not, where and when should it occur?
3. Are there other options which should be considered? If so, please explain.



Municipal Versus Non-Municipal Water Users

Municipal and Non-Municipal water users follow different approval process(es) when planning for new or increased water uses

Municipal (current process simplified)

Class EA/
Master Plan
process

Class EA Project

New PTTW

Other approvals-
i.e. OWRA CofAs,
Drinking Water
Licenses

Approval Process for New or Increased Transfers

Plans or
Approvals
(varies by
sector)

Plan for
Future
Need

C of A (varies)
MISA Regulations
(If required- will
depend on sector)

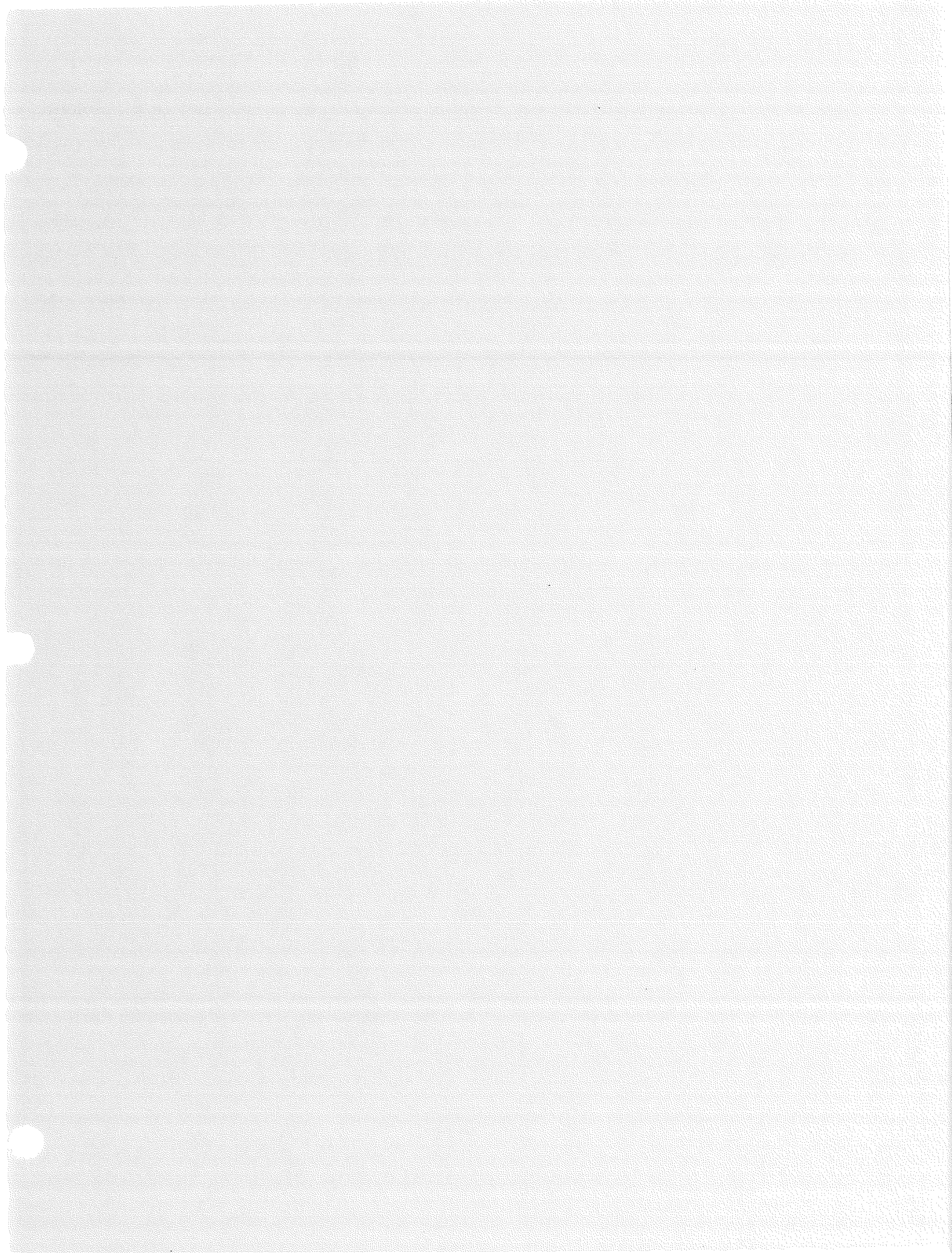
New PTTW

Non-Municipal



Questions

- For Non-Municipal transfers are there other Plans or Approvals when the Exception Criteria should be met, e.g. PTTW Pre-submission consultation, Other Licences and/or Plans?
- Are there other considerations for when and how to meet the Exception Criteria, e.g. like a combined approach (i.e. PTTW and Other Plans)?



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**Agreement Advisory Panel
Consultation on Agreement Implementation**

February 19, 2009

1.0 Establishing the Baseline

General – Baseline

- Does the province treat the non-consumptive baseline the same as the consumptive baseline?
- What constitutes the baseline amount when there are temporary takings? (e.g. 1 year, construction/dewatering)
- If coming off of ground water supply and onto the municipal water system, must be required to connect to municipal sewage system

What option would you recommend for setting the municipal baseline for withdrawals? For transfers? Why?

- Need to recognize that if the existing infrastructure is old, it may not have been approved through an EA process. Therefore, may need to use a mix of methods for establishing baseline.
- Need to consider on a case by case basis
- When talking capacity is it a rated capacity or actual capacity?
- PTTW is more than the rated capacity of an existing system but less than the actual capacity
- There should be a menu of options which the proponent would choose from to make determinations and then the province would review and accept or not
- Various approval options give different numbers
- Where does conservation fit into this baseline? – conservation should be applied at the baseline
- Consider a phased approach, the municipality would have to demonstrate conservation and best practices
- Conservation needs to be included in the chosen option
- Anything put into place cannot penalize proactive players who have demonstrated conservation/efficiency initiatives – need to recognize past water conservation efforts
- How formulaic is the determination of the baseline?
- There has to be rigor in the assessment for approval of the PTTW in cases with sustained excess capacity
- Municipalities have onerous approval processes to deal with so they plan long term for water needs and therefore capacity requirements are based on growth and need projections
- This process is suppose to protect groundwater therefore this process must address it so no over allocation
- Need to have a level playing field
- If have a lower baseline then less flexibility

**Is PTTW the best option for setting the non-municipal baseline for withdrawals?
For transfers? What other options could there be?**

- The choice of instruments is about public access – need to have an appeal or intervener process for the instrument selected.
- Currently, the PTTW allows for greater public access and provides for appeals; this is not the case with the Class EA
- The Lake and Rivers Improvement Act (e.g. operating plans) would be another approval tool that could be used to set the baseline amount for hydro power (section 23)
- Power industry would not want baseline to be established at “actual” water use because it is so variable, especially for the fossil-fuel and hydropower sectors.
- In power industry must look at other instruments for the baseline, at least PTTW or capacity (many OPG facilities pre-date EA requirements). Niagara facilities are subject to international treaties.
- Power industry has a bar under which they must operate (Lake and Rivers Approvals Act)
- Sector-specific delineation should be an option for setting the baseline

Do you have any comments on the possible approach to calculating the transfer amount?

- If there is return flow the baseline should be set differently than if there is no return flow
- Transfer portions should be established through sub-metering
- Is this going to capture diversions via sewage?
- Should establish a baseline for sewage diversions
- Need to use the word, “diversion”, it is way too confusing to use the word “transfer”
- The word, “diversion” is used in other legislation and has a different meaning
- Must identify that where there is a sewage transfer it is a consumptive use
- How does this approach and definition get at the issue of ecological harm?
- Right now, in the PTTW, there is no room to look at ecological harm and the possible consequences
- Estimates or methods of calculations must be the same (i.e. if sub-metering for municipality A then sub-metering for municipality B)
- As long as the user and the province are satisfied that the taking is a reasonable amount, then the method should not matter
- A menu of calculation options could be used
- Perhaps could specify different acceptable methods depending on the size of the transfer.
- If a menu of options, need to provide sufficient guidance to assist proponent in selecting/using calculation option or options.
- The Director should have the authority/discretion to require sub-metering
- Sub-metering may be very onerous – e.g. in some cases (e.g. Kingston), it may involve hundreds of pipes crossing the watershed boundary and thousands of buildings straddling the boundary.
- There is a price to accuracy, how far down is it worth driving for accuracy?
- Somehow the transfer amount has to relate back to levels of flows for ecosystem health

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Do you have any comments on the possible approach to related transferor implementation?

- Clarify that the user of the distributed transferred water becomes a “transferor” only if they distribute the water, not if they simply “use” it (e.g. Ducks Unlimited)

2.0 Connecting Channels

Which of the identified “waterways” should be considered as a connecting channel?

- Not discussed - however there seemed to be some agreement that the most (at least the first three) of the listed channels should be considered a connecting channel.
-

If the St Lawrence cannot be considered a connecting channel, then how should Kingston’s water taking be addressed? (Kingston takes water from Lake Ontario and returns it downstream into the St. Lawrence)

- Not discussed

3.0 Transfers Options 1 and 2

What option would you recommend and why?

- Must be consistent with other jurisdictions otherwise setting up for an Appeal?
- Absolutely adopt “option 2”
- If just use upstream, “option 2”, will capture more transfers
- If just upstream, is it not less than the Agreement?
- If just upstream then Sarnia would be caught as a “transfer” even though the return point is only a few hundred meters away
- Either option will affect some takers differently
- Is it possible to apply Exception Criteria when the transfer is a short distance (e.g., Sarnia)
- Above approach (applying Exception Criteria to a set distance) is subjective
- “Option 1” seems to avoid many of the “one out” cases
- When choosing “option 1”, overlapping watersheds are created
- Start with the hydrology and develop policy from there
- Which option protects the water quantity and ecosystem health in the Upper Lakes from the standpoint of climate change?
- Hydrologically must address the way water flows, therefore must be option 2
- If “option 2”, exception criteria would not apply because same watershed
- In the decision making process, look at the transfers on a “channel” by “channel” basis
- Need a task force to review each case and provide a decision
- Task force should have representation from all jurisdictions

Are there other options which should be considered? If so, please explain.

- No suggestions at this time

3.1 Return to a Tributary Options 1, 2 and 3

What option would you recommend and why?

- Option 2 – “naturally” – must consider the natural flows
- Which one of these options leads to more re-plumbing of the Great Lakes?
- All three options hinge on the location of the application
- Has Ontario done any analysis on the implications of straddling counties
- The implications of straddling counties is worthy of rigorous analysis
- Should also examine the implications of intra-basin transfers
- How does this work for the communal irrigation system in the Niagara region? (i.e. water taken from the welland channel?)

Are there other options that should be considered? If so, please explain.

- No suggestions were made for other options

3.2 How to Apply the Exception Criteria

3.2.1 Individual Impacts:

Which option would you recommend?

- “Option2”, however, what are the “additional requirements”?
- Need range of additional requirements. Need to inform decision-making
- Currently requirements are quite onerous for municipalities
- Partial requirements, more information on return flow should be required
- Will need to review individual proposals and determine information requirements
- Speaks to the need for the province to set a ceiling on cumulative impacts
- Something similar to the Low Water Response Plan but on a Great Lakes scale
- Requirement for the proponent to determine individual impacts
- The proponent may not have the data or it is not available
- For individual impacts there needs to be a sharing of information, so that each individual does not have to start from ground zero when assessing impacts.
- Database or clearinghouse of available and current data on hydrology, ecology, return-flow (water budget), etc.

What additional requirements, if any, should be established to meet the Exception Criteria for individual impacts?

- Should be a requirement to state the consumptive use
- Water not returned, considered a potential impact to the source watershed (similar to water budgets, e.g. in flow and out flows)
- Return flow needs to be considered, if not returned then it is being consumed (e.g. water budget)

3.2.2 Cumulative Impacts:

Which option would you recommend?

- Option 2 because it would enable better understanding/integration of cumulative impacts

What additional requirements, if any, should be established to meet the Exception Criteria for cumulative impacts?

- No suggestions
- Water budgets – more information will be available. (will go beyond the Agreement)
- What the Regional body's approach, e.g. Regional committee's procedures for Regional review – how Exception Criteria are met?

What should be the role of individual proponents, if any, in the provincially-led assessments of cumulative impacts?

- Proponent might not have sufficient data to undertake a cumulative impact assessment
- Individual's assessment needs to be put in the context of the cumulative impact
- Needs to be a sharing of data and information between province and all involved proponents
- Whatever ceiling is set by the province for cumulative impacts the individual assessments must be done in context of this ceiling
- Prioritization of who gets to take water has to fit with the reality of what water nature has to provide – the integrity of the ecosystem must be the priority
- Application of precautionary principle has to prevail
- Gap - needs a Tier 1 committee to deal with and share data on a Great Lakes watershed basis including consideration of climate change impacts

4.0 Exception Criteria: Conservation and Efficiency

General comments:

- When addressing conservation need to go beyond "point of use" conservation
- Grey water use for fire control (California, Colorado)
- Bench mark – transfer use must be close to benchmark
- Sector set benchmark or standards

Do you agree with the proposed principle that water conservation requirements for new or increased transfers should go beyond the Ontario Water Conservation and Efficiency Strategy?

- Yes, should go beyond
- Whatever conservation plan developed for Ontario should be enshrined in legislation
 - Incorporate regional elements and additional elements developed specifically for Ontario
- The strategy should be adequate and should be updated for "Best Practices"
- The Strategy sets the bar high but should be set higher for transfers
- Ontario's strategy should be stronger than the rest of GL Region
- Design the proper strategy & follow it (one for all takers and one for transfers)

- Mandatory requirements for transfers (e.g. must have low-flush toilets in residences)
- Slide 23 , Bullet 4 – should read “have been achieved and will be sustained”
- Consider conservation options in addition to end users, e.g. unplanned/emergency uses such as firefighting use of cisterns/water not treated.

Which options or combination of options would you recommend for demonstrating the efficient use and conservation of existing water supplies?

- No suggestions at this time

Which option or combination of options would you recommend for demonstrating that environmentally sound and economically feasible conservation measures are in place for a new or increased transfer?

- No suggestions at this time

5.0 Exception Criteria for New or Increased Transfers

General Comments and Questions:

- Schedule 1: Exceptions and Criteria for Intra-Basin Transfers, concern that Exception 2 - ii is a broad exception for the municipalities
- Are there going to be amendments to the Class EA process? – currently there are insufficient requirements and exploration in Class EA
- Alternatives are not really fully considered in a Class EA
- If Class EA – can Notice of Completion go on EBR?
- At what point can any of this be appealed?
- Option 2 – when and where would it be posted?
- Option 2 – subject to the EBR?
- Posting on the EBR of Information Notice at time of notice commencement (suggested change to the option)
- If the PTTW application is submitted, could be some issues about quantities – would not yet know the amount – means more revisions in process
- There is going to have to be a large re-education package – Class EA's deal with small scale not Great Lakes scale?
- Engineers approaching a Class EA are not considering ecosystem protection
- For municipalities, ecosystem considerations must be stated and addressed in the development of the Class EA by knowledgeable individuals (hydrologists, biologists, etc.)
- MOE and MNR need to provide a Table of Contents of environmental and ecological studies/requirements for a Class EA and present to the AAP committee to determine if sufficient or if additions are required
- Definition of the project should consider all aspects of an intra-basin transfer in “one” project

What option would you recommend and why?

- Modified option 1- Post the Notice of Commencement for Class EA projects as information posting on the EBR. Allows for public input into the process on a

Great Lakes Watershed/ Basin level rather local level (usually done for Class EA projects).

- Require pre-consultation on the PTTW applications at the time the ESR is submitted. Still have the PTTW application completed after the Class EA.

For both options, is the Regional Body Review located appropriately in the process? If not, where and when should it occur?

- Yes, comfortable with the placement

Are there other options which should be considered? If so, please explain.

- No - just a modified option.

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For Non-Municipal transfers are there other Plans or Approvals when the Exception Criteria should be met, e.g. PTTW Pre-submission consultation, Other Licences and/or Plans?

- The proponent will trigger what requirements need to be reviewed
- Yes there are other plans or approvals, need to consider and will respond later

Are there other considerations for when and how to meet the Exception Criteria, e.g. like combined approach (i.e. PTTW and Other Plans)?

- Yes there are other considerations and will respond later

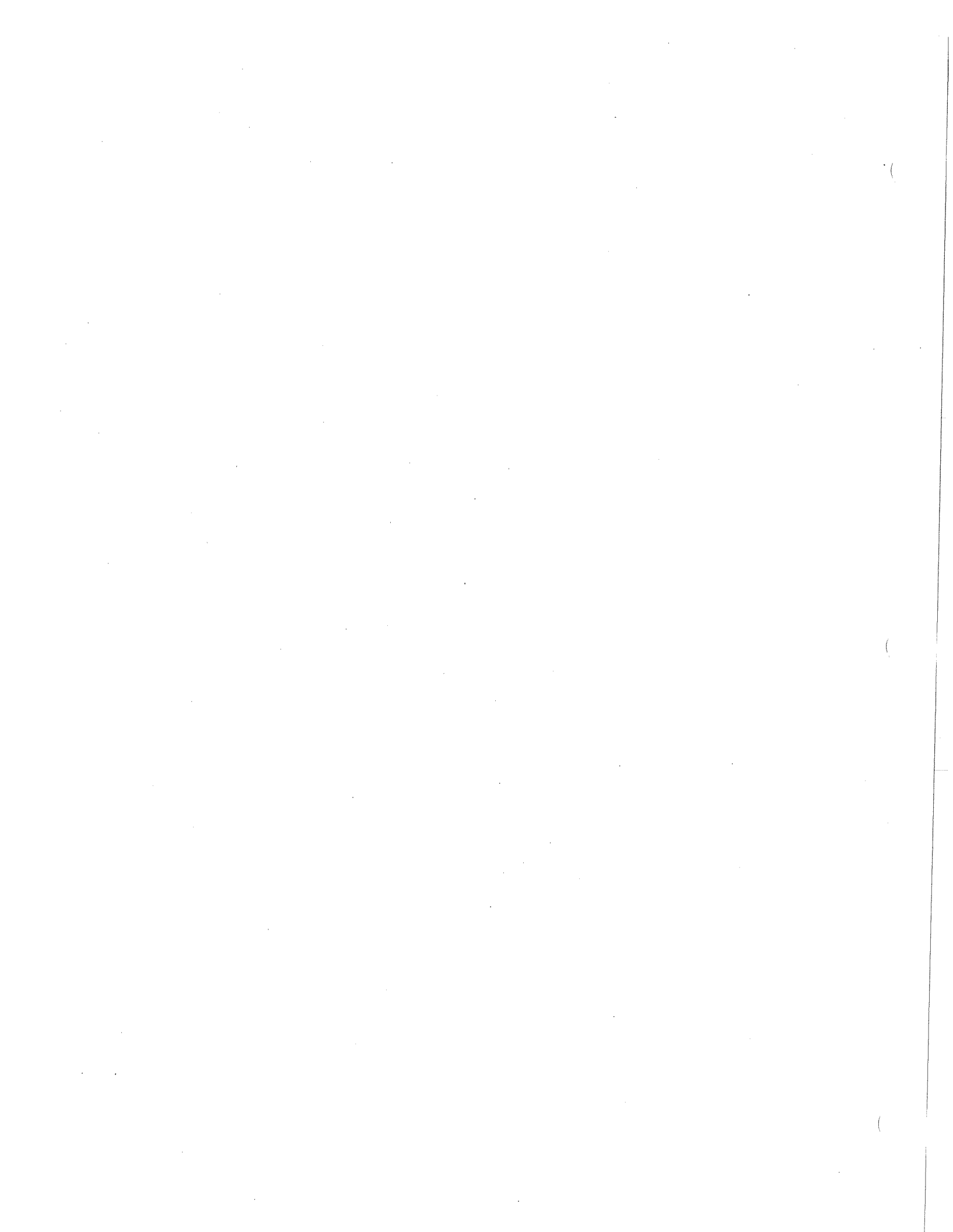
Final General Comments and Questions – Exception Criteria to New and Increased Transfers:

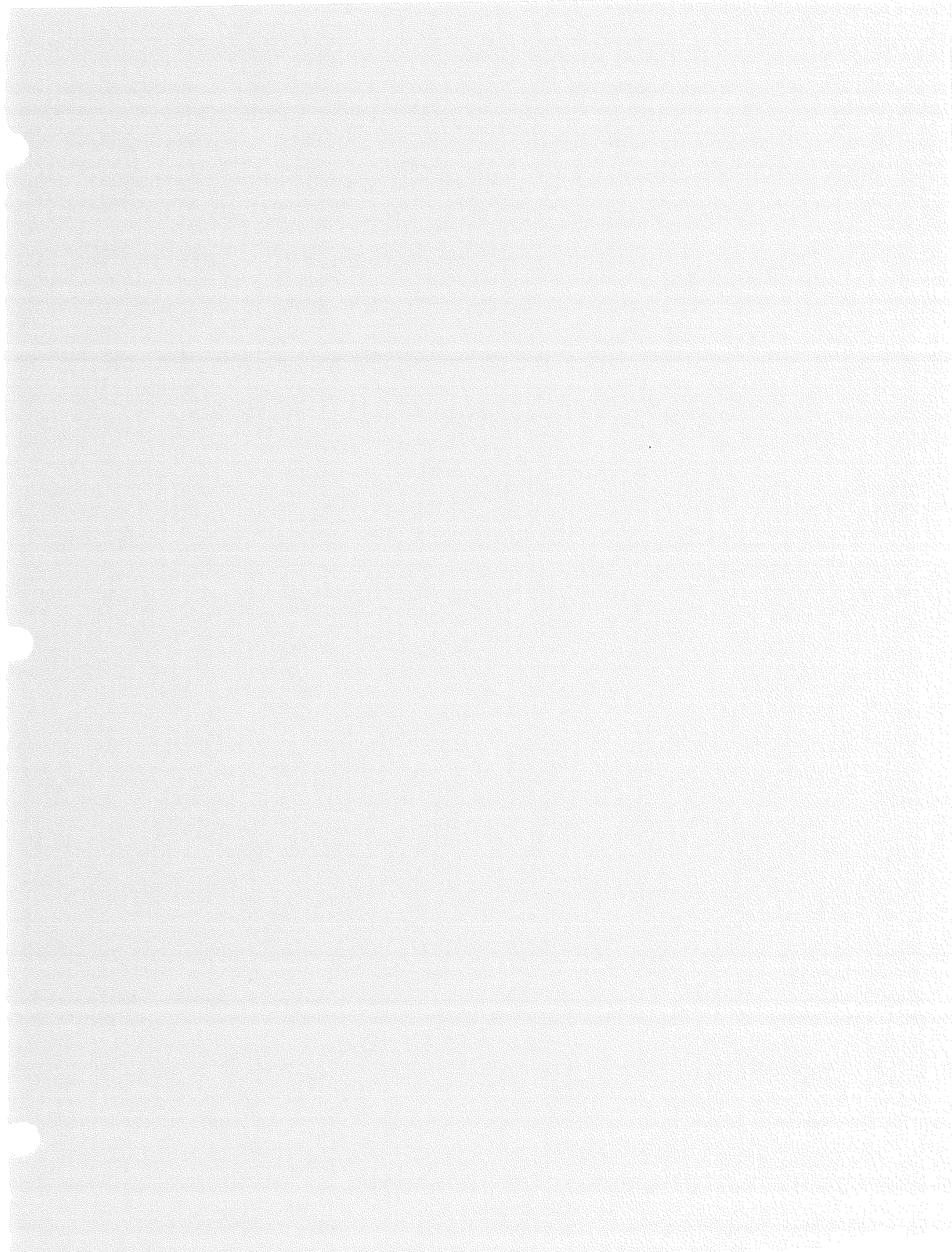
- How rigorous is the PTTW review in terms of approval to take water based on the capacity of the watershed?
- How then, do we have regions where the withdrawals are greater than the capacity of the watershed?
- Do the approval instruments follow any particular sequence?
- There is a hierarchy for municipalities
- The Official Plan and the Master Plan are not Approval mechanisms, they are planning instruments
- When looking at watershed capacity it is different when withdrawing water for hydro power versus a water bottler. Does this point figure into the decision for the PTTW?
- Common sense has to prevail at some point because over takings from the watershed are not going to be sustainable forever

6.0 Wrap-up – Final Remarks

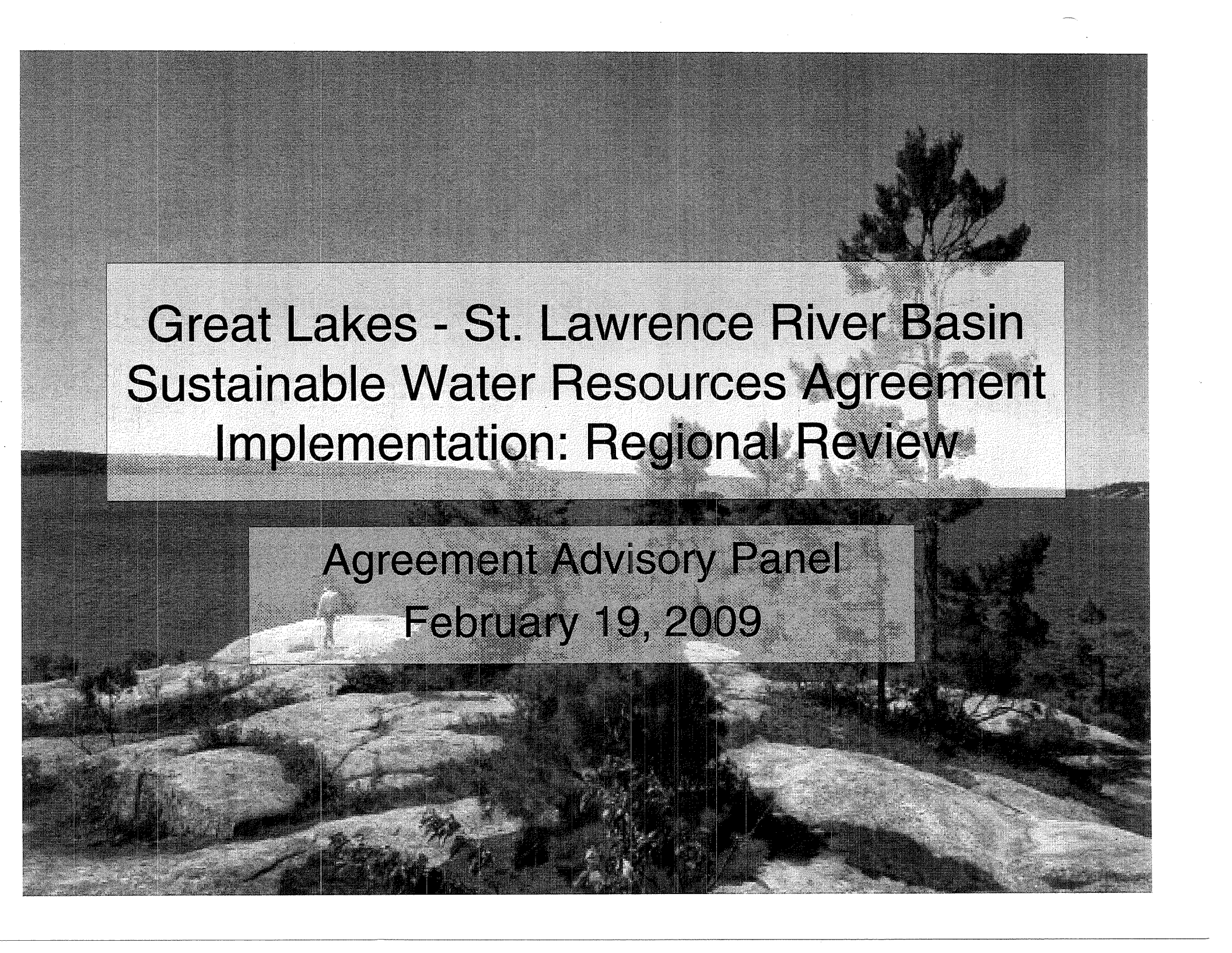
General comments and Questions:

- Have a slide to demonstrate what is meant by straddling counties in the U.S.
- Have a review discussion of why we have the Exception Criteria that would show some examples of Non-municipal water use transfers so the committee members have a clearer picture of some of the situations that exist and could better comment on real options and/or solutions
- Is there a chart comparing state regulations (Council Office)
- There seems like pages and pages of Exception Criteria which appear to be a bunch of loop holes to allow for approval
- What kind of project would not get approved?
- Do not see any criteria “stoppers” that say the application is not acceptable
- Would be worthwhile to do a walk-through of Wakeshaw
- Ontario needs to be looking at the “Big Picture” to provide a review of where we are headed and it should include climate change, Navigable Water Act etc.



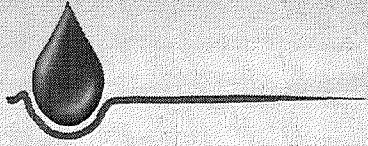


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Great Lakes - St. Lawrence River Basin
Sustainable Water Resources Agreement
Implementation: Regional Review

Agreement Advisory Panel
February 19, 2009



Overview

- Agreement Review Commitments:
 - Regional Review, Prior Notice, Prior Notice and Comment on Proposals (A. 201, A. 205)
 - What does Regional Review Involve? (Chapter 5)
 - Regional Review of Water Management, Conservation Programs (A. 300)
- SSOWA-OWRA Requirements
 - Minister's Permit (s. 34.1, par.12-14)
- December 8, 2008 Regional Body Resolutions:
 - Resolution 8: Regional Review Entry into Force
 - Resolution 9: Regional Review Procedures Committee
- Proposed Standing Advisory Committee
- Discussion Questions





Agreement Proposal Review Commitments

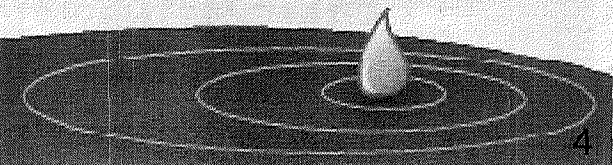
- **Regional Review** required for:
 - New or increased diversion to a straddling community involving a consumptive use 19 MLD or more (A. 201, par. 1)
 - New or increased intra-basin transfer involving a consumptive use 19 MLD or more (A. 201, par. 2)
 - ALL new or increased diversions to a community in a straddling county (A. 201 par 3)
- **Prior Notice** to Parties required for new or increased intra-basin transfers resulting from a withdrawal 379,000 litres/day or more (consumptive use less than 19 MLD) (A. 201, par 2)
- **Prior Notice and Comment** by Parties required for new or increased consumptive uses 19 MLD or more (A. 205)





SSOWA Intra-Basin Transfer Provisions

<p>Transfer involving a consumptive use of 19 MLD or more (note: threshold may be reduced by regulation)</p>	<ul style="list-style-type: none"> •Meets exception criteria, including return flow to the GL watershed it was taken from (source watershed) •No feasible, environmentally sound and cost effective alternatives to transfer, including conservation •Proposal undergoes Regional Review & the Minister considers the Declaration of Finding by Regional Body before making a decision 	
<p>Transfer resulting from a withdrawal 379,000 litres/day or more (with consumptive use <u>less than</u> 19 MLD)</p>	<p>Municipal Drinking Water Systems:</p> <ul style="list-style-type: none"> •Meets exception criteria, including return flow to source GL watershed 	<p>All Uses (including <i>Municipal Drinking Water Systems</i> if <i>return flow to source watershed cannot be met</i>):</p> <ul style="list-style-type: none"> •Meets exception criteria, except return flow may be to another GL watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source GL watershed •No feasible, environmentally sound, cost effective alternatives to transfer, including conservation •Ont. gives Prior Notice to other GL jurisdictions
<p>Transfer 50,000 L/Day to 379,000 L/Day</p>	<ul style="list-style-type: none"> •Subject to PTTW water taking requirements, not prohibited 	





Regional Review Process (Chapter 5)

working with proponent

Technical Review of Proposal by Originating Party

Article 501, 505

Ontario Public?

Notice of proposal to Regional Body, Other Parties, Public

Article 501, 502

pre-consultation panel

First Nations, Tribes Involvement

Article 504

Opportunity for independent Technical Review by the Parties

Public Involvement

Ontario Public?

Article 503

Regional Body procedure

Consensus-Based Review of proposal, comments, technical reviews by Regional Body

Article 506

*public meeting in jurisdiction of origin
provisions for dispute in arbitration
technical*

Public Declaration of Finding(s) on whether proposal meets the Exception Standard

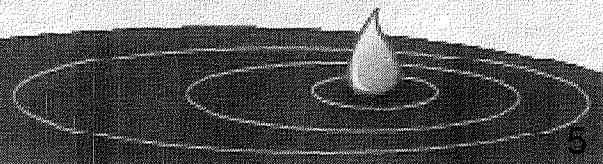
Article 506

*no consensus
may form one
declaration of findings*

Originating Party considers Declaration of Finding, makes final decision (Compact Council vote for U.S. proposals)

*Does not meet agreement
Does not meet as meet with
meet & order from S.*

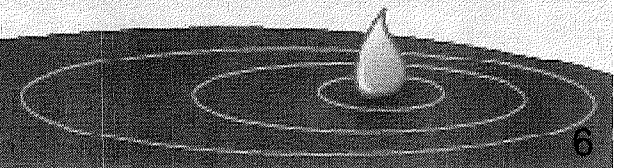
Article 506





Regional Review of Water Management, Conservation Programs (Article 300)

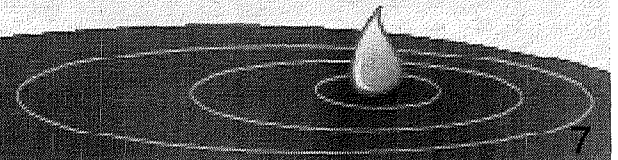
- Each Party shall submit a report to the Regional Body, detailing the water management and water conservation and efficiency programs that implement the Agreement
 - The first report submitted one year from the date that Article 300 comes into force and thereafter every 5 years.
- Regional Body considers the reports then issues a Declaration of Finding on whether the programs of each Party
 - meet or exceed Agreement provisions
 - Do not meet Agreement provisions
 - Would meet Agreement provisions if modifications were made – what options may exist to assist the jurisdiction
- the Regional Body may recommend a range of approaches to the Parties with respect to the development, enhancement and application of Water management and Water conservation and efficiency programs





Compact, Agreement Timelines

Compact Timeline	Agreement Timeline	Key Commitments
December 8, 2008	No "Effective Date"	"Effective Date" of Compact
December 8, 2008	60 days after last Party notifies others that measures in place	<ul style="list-style-type: none">-Ban on diversions, regulation of exceptions, regional review, comes into force-Baseline set for existing withdrawals, diversions, consumptive uses
December 8, 2009	No later than 1 year after diversion ban	<ul style="list-style-type: none">- Parties submit first report on water management & conservation programs for regional review (every 5 years thereafter)- Parties submit baseline information
December 8, 2010	No later than 2 years after diversion ban	<ul style="list-style-type: none">- Parties establish water conservation goals, objectives, programs (annual program assessments)
December 8, 2013	No later than 5 years after diversion ban above OR 60 days after last party notifies others that measures in place	<ul style="list-style-type: none">- Programs in place for management, regulation of withdrawals, consumptive uses, including PNC- Regional Body reviews conservation objectives- Parties annually submit water use information- Parties conduct cumulative impact assessment (at least every 5 years)





SSOWA- OWRA Amendments

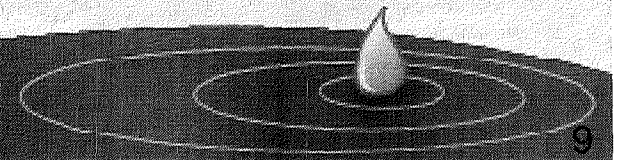
- Intra-basin transfers involving a consumptive use 19 MLD or more shall be referred to the Minister for a decision (s. 34.1, par.12-14). The Minister shall:
 - Give notice to the Regional Body;
 - Allow time for Regional Review; and
 - Consider the Declaration of Finding before making a decision
- Authority to make regulations lowering thresholds for minister's PTTW –(34.6(2))





Regional Body Resolutions

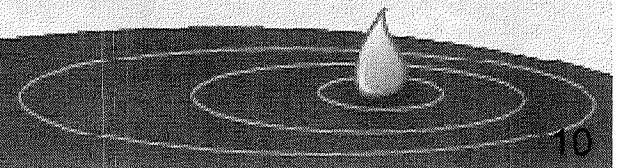
- At Dec. 8 '08 meeting of the Regional Body, resolutions were passed:
 - Resolution 8 - Brought the Regional Review process (Chapter 5) into force for proposed diversions in Great Lake states
 - Resolution 9 – Established a Procedures Committee to develop Regional Review procedures
- Compact Council also passed resolutions, including the establishment of a Rules Committee, to develop rules for Regional Review and Compact voting for proposals (Rules and Procedures Committees to work together)





Regional Body Resolution 8: Regional Review

- Regional Body brought Regional Review process into force for proposed GL state diversions.
- Great Lakes Charter Prior Notice and Consultation process remains in force for all other proposals (e.g. consumptive uses, provincial transfer proposals).
- The Regional Body shall be used for all PNC activities under the Charter where they apply.
- Regional Review shall replace Charter PNC in Ontario and Quebec once each province has notified the other Parties that they have completed the measures needed to implement the ban on diversions.

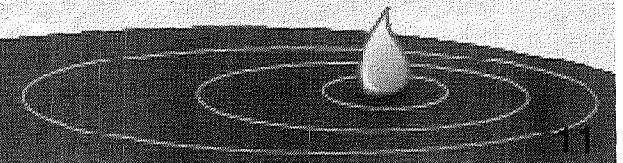




Regional Body Resolution 9: Procedures Committee (Draft Work Plan)

- Review of Diversion Proposals (Regional Review):
 - Application procedure
 - Contents of an application (application form)
 - Rules on application of standards and criteria ← *the old procedures manual or not?*
 - Notice procedures
 - Procedures for hearings, public & FN involvement
 - Timeframes for review and decision making
 - Process for completing Declarations of Finding
 - Contents of Declaration of Finding
- *obligations* Other Procedural Issues: *article # 506*
 - Regional Review of State and Provincial programs for water management, as well as programs for conservation and efficiency
 - Cumulative impact assessment procedures
 - “Prior Notice & Opportunity to Comment” procedures (large consumptive uses)

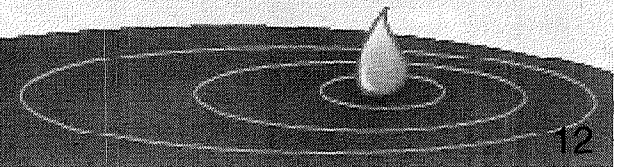
environmental impacts





Next Steps

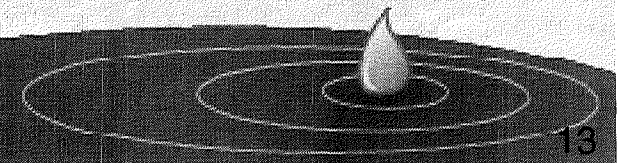
- CGLG to engage regional Advisory Panel, Resource Group, Observers and Basin First Nations and Tribes as work of Regional Body Procedures Committee proceeds
- Ontario to engage AAP
- Information exchange with First Nations communities re: FN involvement in the Regional Review of diversion proposals
 - topic of a First Nations Water Network Pilot Project
 - proposed topic for upcoming First Nation community meetings (March/April)
- Target for draft Regional Procedures, Compact Rules by summer, followed by public review
- Target for adoption by the Regional Body December 2009





Regional Body Standing Advisory Committee

- Regional Body members considering the establishment of a standing Advisory Committee via resolution at the next Regional Body meeting *when June 2009*
- Membership of the existing Advisory Panel, Resource Group and Observers is being reviewed in this context
- Proposed Role – to advise the Regional Body, Compact Council during all phases of work:
 - Participating in a representative capacity on behalf of their organizations.
 - Serving as a liaison to respective memberships and partner organizations.
 - Providing scientific/technical/legal expertise as needed.
 - Participating in Regional Body and Compact Council committee meetings and conference calls to receive updates, provide input and comments.
 - In addition to regular public comment opportunities to be invited to provide written submissions, briefings and other input to the Regional Body and Compact Council from time to time.





Proposed Advisory Committee Members

ADVISORY COMMITTEE

Agriculture

- American Farm Bureau Federation
- Ontario Federation of Agriculture
- Union des Producteurs Agricoles

Energy Utilities

- Consumers Energy Company
- Hydro Québec
- New York Power Authority
- Ontario Power Generation

Environmental and Conservation

- Alliance for the Great Lakes
- Canadian Environmental Law Association
- Ducks Unlimited
- Great Lakes United
- National Wildlife Federation
- The Nature Conservancy
- Nature Québec

Industry

- Alliance of Automobile Manufacturers
- American Chemistry Council
- American Forest and Paper Association
- Council of Great Lakes Industries
- Great Lakes Manufacturing Council
- Mittal Steel
- National Association of Manufacturers
- US Steel

ADVISORY COMMITTEE

Shipping

- Lake Carriers Association
- Canadian Shipowners Association

Water Utilities

- Association of Clean Water Agencies
- American Water Works Association

RESOURCE GROUP AND OBSERVERS

Federal Governments

- Canadian Department of Foreign Affairs and International Trade
- Congressional Great Lakes Task Force
- Environment Canada
- National Oceanic and Atmospheric Administration
- U.S. Army Corps of Engineers
- U.S. EPA Great Lakes National Program Office
- U. S. Geological Survey
- U.S. State Department

Local Government

- Great Lakes and St. Lawrence Cities Initiative

Observer

- International Joint Commission

FIRST NATIONS, TRIBES

- Separate dialogue

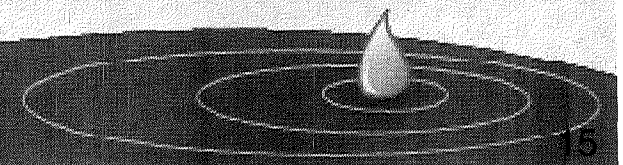




Questions for Discussion

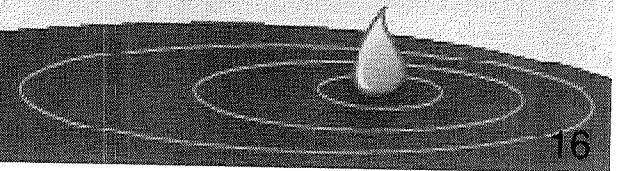
1. What are the most immediate and most critical priorities for the regional Procedures Committee?
2. How should representation on a Standing Advisory Committee to the Regional Body be determined & what are your comments on the proposed membership list? Some considerations:
 - Sector representation
 - Jurisdictional representation
 - Role of First Nations and Tribes – e.g. on Advisory Committee &/or through parallel dialogue &/or through a parallel Committee (possible discussion at Fall Traditional Water Forum?)
 - Linkage between Ontario's AAP and members of the regional Advisory Committee

confidential + validity ??





Appendices – Draft Procedures Manual





No Feasible, Environmentally Sound, Cost-Effective Alternatives

Draft Procedures Manual Guidance:

Intent: to ensure that there are no feasible alternatives available that would eliminate or diminish the need for a transfer

Application Requirements:

- narrative description of need,
- analysis of the efficiency of current use including the application of water conservation measures,
- analysis of water supply alternatives addressing quality (treatability) & quantity of alternative sources,
- alternatives must include conservation & efficient use of current water supplies
- rationale for preferred alternative

Review Criteria:

- conservation alternative must be applied first to minimize or eliminate the need for the transfer;
- clear demonstration and analysis of alternatives considered;
- must be a showing that no feasible alternatives to the transfer exist, considering resource and ecosystem protection, technology and cost factors





Return Flow

Draft Procedures Manual Guidance:

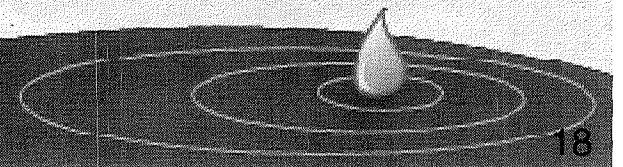
Intent:


- to ensure all water is returned to the source watershed, naturally or after use, less an allowance for consumptive use, to support the ecological health of the system.
- that consumptive use will be reasonable and return of water will be maximized, at a quality that meets all applicable requirements.

Application requirements:

- description of return flow volume, location, quality,
- agreements between water taker and the entity discharging the return flow (if entity returning water is different from the applicant- i.e. “related transferor”),
- estimate of consumptive use (coefficients or engineering design plans)

Review Criteria: clarity and completeness of descriptions, verification/justification of consumptive use, meets applicable quality standards





No Significant Individual, Cumulative Impacts

Draft Procedures Manual Guidance:

Intent: to ensure proposal results in no significant adverse impacts. Provision central to the Agreement's commitment to resource protection and management.

Application Requirements:

- source/location of withdrawal and return flow,
- description of baseline conditions regarding hydrologic flow, water quality, habitat,
- projected water use including peak demand,
- anticipated changes to water quality and water dependent natural resources,
- description of mitigation measures,
- statement of how proposal would relate to other existing uses;
- where watershed plans exist, applicants shall discuss impacts in context of these plans

Review Criteria: completeness of baseline information; location, type, extent & scale of physical, chemical or biological impacts; mitigation measures proposed



Efficient Use, Conservation of Existing Supplies

Exception Criterion:

- The efficient use and conservation of existing water supplies **cannot reasonably avoid** the transfer;

Related Agreement Definitions: N/A


Draft Procedures Manual Guidance:

Intent: to ensure that the need for water cannot be reasonably avoided through efficient use and conservation of existing supplies.

Application Requirements: description of need, analysis of the efficiency of current water use including the application of conservation measures.

Review Criteria: must be an alternative pursued first to minimize or eliminate the need for additional water





Transfer Amount is Reasonable

Exception Criterion:

- The transfer amount is **reasonable**, given the purposes for which the transfer is done;

Related Agreement Definitions: N/A

Draft Procedures Manual Guidance:

Intent: to ensure that amounts are considered realistic to meet the intended use

Application Requirements: estimate of highest 90 day average use over approval period; water use plan (municipal: service area, water use and population projections, annual average use, capacity of withdrawal, treatment, distribution portions of the system, assessment of water use savings of current & proposed conservation programs)

Decision Criteria: how realistic the proposed quantity is to meet intended purpose, to be reviewed in concert with review of proposed conservation measures





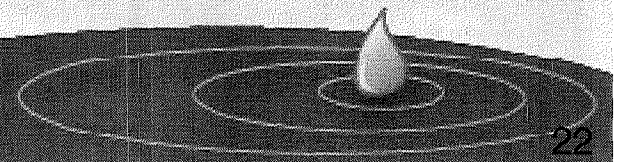
Feasible, Environmentally Sound, Cost Effective Water Conservation Measures

Draft Procedures Manual Guidance:

Intent: to encourage efficient use through demand reduction and supply-side conservation measures (hardware/technology, behaviour/management practices) and incentives (education, financial, regulatory)

Application Requirements: detailed description of measures that will be employed in the project. Manual includes guidance on the development of a conservation plan (not required but encouraged)

Review Criteria: adequacy of conservation measures to be implemented - must be conservation goals, description of how water use/savings will be measured, forecast of anticipated use and demand, analysis of alternative methods and practices, and an implementation/evaluation strategy

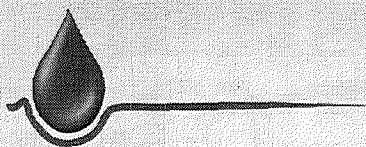




Great Lakes – St. Lawrence River Basin
Sustainable Water Resources Agreement

Prior Notice –
EBR Posting of Permits to Take Water

February 19, 2009
Agreement Advisory Panel Meeting



Outline

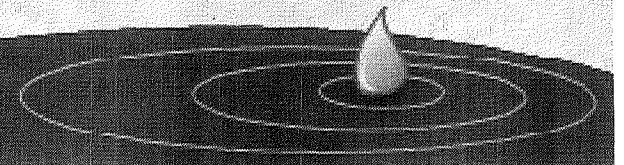
- Permit To Take Water Process
- Posting PTTW Proposals on the EBR
- Prior Notice and Consultation Provisions in the Agreement
- Proposed Changes in EBR Posting Requirements for Agricultural Water Takings
- Options
- Questions





Purpose of Presentation

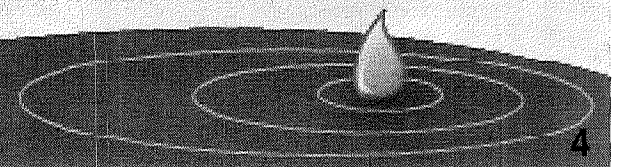
- To obtain feedback on whether there should be an opportunity to appeal a PTTW decision regarding a proposed agricultural water taking that has been posted on the Environmental Bill of Rights (EBR) Registry.





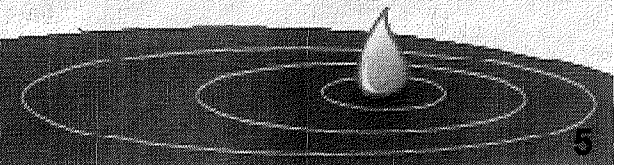
Context: Permit To Take Water Process

- Water takings in Ontario are governed by the *Ontario Water Resources Act* (OWRA) and the Water Taking Regulation (Reg. 387/04).
- Anyone who withdraws more than 50,000 L/day of water requires a Permit to Take Water (PTTW), with some exemptions.
- The PTTW program is critical for ensuring the conservation, protection and wise use and management of Ontario's waters.
- Agricultural water takers are required to obtain a PTTW for the **irrigation of agricultural crops**.
- Agricultural water takers are exempt from obtaining a PTTW for the **watering of livestock or poultry**, as long as the water is not taken into storage.
- In order to meet the commitments in the Agreement, existing exceptions in the OWRA for the watering of livestock or poultry were amended in 2007 to require a PTTW if the water taking is 379,000 litres per day or more.



Context: Posting PTTW Proposals on the EBR

- Currently, all PTTW proposals are required to be posted on the EBR Registry for at least 30 days, with the exception of water takings for the irrigation of agricultural crops.
- When the provisions of the Agreement come into force, all PTTW proposals for the watering of livestock or poultry would be posted on the EBR Registry.





Context: Prior Notice and Consultation Provisions in the Agreement

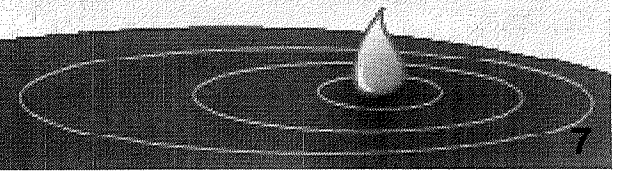
- Article 303 of the Agreement states that:
 - Each Party shall seek to make publicly available all Applications it receives that are subject to management and regulation under this Agreement (water takings of 379,000 litres per day or more)
 - Each Party shall seek to make publicly available the record of decision including comments, objections and responses.
- Article 201 of the Agreement states that for any new or increased intra-basin transfer proposals that trigger 'Notice to Parties' (between 379,000 L/day or greater and less than 19 million L/day consumptive use), Ontario is required to provide notice to the other Parties to the Agreement prior to making any decision on the proposal.
- In addition, as per Article 201, when an intra-basin transfer involves a consumptive use of 19 million L/day or greater, a 'Regional Review' is triggered which provides the Regional Body an opportunity to address concerns on the proposal.





Context: Proposed Changes in EBR Posting Requirements for Agricultural Water Takings

- To meet the commitments of prior notice and consultation and Regional Review the Province is considering whether there should be an opportunity for parties to be able to appeal a PTTW decision regarding a proposed agricultural water taking that has been posted on the EBR Registry.
- Five years from now, when the decision-making standard for management of withdrawals and consumptive uses (Article 203) comes into force, the Province would need to update the EBR posting requirements to be consistent with Article 303.





Option 1

Option 1: The MOE posts PTTW applications for watering of livestock or poultry and irrigation of agricultural crops that are 379,000 litres per day or greater on the EBR for public review and comment.

Considerations:

- The public can provide comments to the MOE and track the outcome of a PTTW application.
- The MOE conducts a technical/scientific review of the PTTW application.
- The Province would be able to meet its commitment under Article 303 of the Agreement.
- If a PTTW is appealed to the Environmental Review Tribunal (ERT), it may interfere with business operations since the PTTW is put on hold during the hearing.



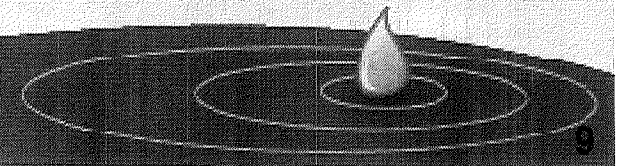


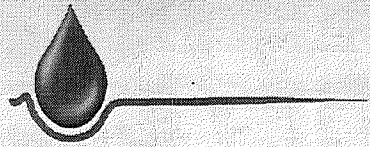
Option 2

Option 2: The MOE posts PTTW applications for watering of livestock or poultry and irrigation of agricultural crops that are 379,000 litres per day or greater on the EBR for public review and comment; however, there would be no opportunity to appeal the permit decision to the ERT.

Considerations:

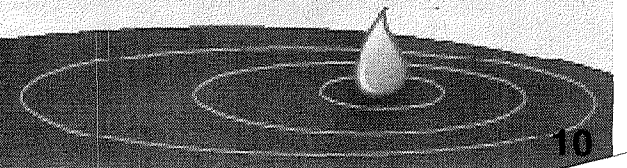
- The public can provide comments to the MOE and track the outcome of a PTTW application.
- The MOE conducts a technical/scientific review of the PTTW application.
- The Province would be able to meet its commitment under Article 303 of the Agreement.
- It takes away the ability for parties to be able to appeal the PTTW decision.





Questions

1. What option would you recommend and why?
2. Are there other options which should be considered? If so, please explain.





CANADIAN ENVIRONMENTAL LAW ASSOCIATION
L'ASSOCIATION CANADIENNE DU DROIT DE L'ENVIRONNEMENT

March 12, 2009

To the Great Lakes Team
and the Annex Advisory Panel

**Submissions Regarding Consultation on the Implementation by Ontario of the
Great Lakes, St. Lawrence River Basin Sustainable Water Resources Agreement
from the Canadian Environmental Law Association**

I would like to thank the Great Lakes team who has worked so hard to determine the best path forward for Ontario in its implementation of the *Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement* (the Agreement). You have done an exceptional job of framing the scope, complexity and interrelationship of issues that Ontario needs to resolve for its own implementation of the Agreement. This consultation will also assist Ontario with its contributions as a member of the Regional Body that will adjudicate these matters in the future.

The Canadian Environmental Law Association (CELA) has tried to strengthen the protection of the waters of the Great Lakes since the original Great Lakes Charter in 1985. As one of the Ontario members of the Advisory Panel to the Council of Great Lakes Governors during the negotiation of this Agreement we have gained an appreciation of the issues basin-wide as well as in Ontario. We have approached this consultation with two priorities with regards to how Ontario can best improve our own water protection and entrench a culture of conservation in our Province, and how we can continue to show leadership in the Region through the best practices, programs and in our regime for water allocation.

In our view the final Agreement and its companion US agreement, the *Great Lakes St. Lawrence River Basin Water Resources Compact* (the Compact) were substantially weakened by the last minute extension of access to Great Lakes water to all residents of straddling counties in the US. This political expediency has blurred the geographical surface water boundaries and made it considerably more difficult to protect and manage the Great Lakes as an ecosystem and from a watershed perspective. In times of stress that are predicted as climate change impacts the region, it will be more difficult operate with the dualities this has created.

We recognise that geography has given each of the Great Lakes jurisdictions unique perspectives on the resource. No jurisdiction has as many challenges in implementation as Ontario because four Great Lake watersheds penetrate this Province as well as all four connecting channels. Regrettably the different points of

view have led to diverse approaches to implementation of these agreements that have perpetuated the very uneven playing field among jurisdictions in the Region. While this works against an ecosystem approach it does offer opportunities for progressive jurisdictions like Ontario to act to improve upon the Agreement. We appreciate the effort that has been taken in Ontario to address the complexities and to seek made in Ontario solutions that may be stronger than the Agreement.

Our Approach to Conservation

This view of the process and the Agreement has strengthened our resolve to have Ontario do its best to achieve the original intent and purpose of the Agreement. In our response to options that you have put before us in this consultation we have largely selected options that will;

- expedite a conservation culture in Ontario,
- **prevent** future water wastage,
- use existing instruments where possible,
- encourage the best public access and participation in programs,
- improve our understanding of water use and sustainability by generating sound science, data on actual use and return flows and establish baselines for all portions of the system including groundwater, and
- allow for flexibility to make future adjustments for ecosystem and human health.

CELA and many others in Ontario were involved in a previous extensive consultation on “A Water Efficiency Strategy for Ontario” carried out by the Ministry of Natural Resources when David Peterson was Premier. To learn from the past, we suggest that some review be done of the barriers that prevented this strategy from being implemented to ensure we are successful in securing a conservation plan.

Our Approach to Intra-Basin Diversions

While it is a necessity to focus on intra-basin diversion issues in Ontario, we would hope that Ontario will not be the source of many future applications for exceptions to the Agreement. It is in everyone’s best interest to set strong precedents under the Agreement and exhaust all alternatives by finding ways first to live within our watersheds. CELA is concerned that we do not yet have adequate scientific information to make sound and sustainable decisions in regard to long-term impacts of intra-basin diversions. We have favoured options that support the advancement of sound science as soon as possible. This consultation has identified that determination of water availability is not occurring early enough in the planning and development process. Since Permit-to-Take Water (PTTW) data is not yet aggregated on a watershed or sub-watershed basis, we cannot be confident of the cumulative impacts. These concerns need to be addressed, before new intra-basin diversions and transfers are considered.

No single instrument available to us can adequately address Agreement Implementation and ensure the broadest public notice and access to the decision-making process. We favour combinations of instruments that will guarantee the public

timely notice of applications, encourage their involvement in decision-making, give them resources in to be involved in the decision making and give them rights of appeal. This will likely mean that changes will be needed to all of the processes involved for effective implementation of the Agreement. There will likely lead to new scope for instruments and new sequencing of approvals for public and private applicants.

Our Approach to Information, Science and Data needs (when in doubt err on the side of more information)

In 1997 CELA and Great Lakes United published a report examining the outcomes of the original 1985 Great Lakes Charter. That report, *The Fate of the Great Lakes ~ Sustaining or Draining the Sweetwater Seas?*, reviewed the problems with the current database on water use in the Great Lakes and found that the database was not current. Today there still is a five year lag. The data was aggregated so much it was not adequate to identify trends or attribute them to causes. There were gaps in reporting as each jurisdiction collected information for some but not all sectors of users and some jurisdictions based reporting on estimates rather than actual volumes used leading to variations in accuracy. Jurisdictions were unable to report to the database as data gathering had not been a historical priority and cuts to water management resources further undermined their capacity to report and gather data.

It has been a point of pride that Ontario and Minnesota have had the most detailed information on actual use because they have been collecting information on much lower trigger levels than are still required by the Agreement (50,000 litres in Ontario). This means that these two jurisdictions will have much more accurate information about actual cumulative and consumptive use by sector. Because we have such a knowledge deficit of our use and of the sustainability of our surface waters, Great Lakes tributaries and ground water, we should encourage reporting of **all** the data we have above and below the trigger level as this will help drive and build a basin-wide understanding of our use of the resource and the value of collecting better data at lower thresholds.

Because each jurisdiction has different implementing legislation rather than harmonised legislation implementing the key provisions of the Compact and Agreement, some of the problems with the unevenness of the information and data reported under the Charter will likely persist. CELA concurs that more precision can be created by, for instance, using more precise consumptive use coefficients for more sectors as Ontario is suggesting. This leads to the question: Are we collecting data on enough aspects of the system to help us fill science gaps we have on groundwater influence on the Great Lakes, groundwater recharge baselines, indicators of climate change and ecological impacts of water withdrawals? Consideration needs to be given to expanding the data we are gathering to fill these gaps in anticipation of new stressors on water supply such as population growth in the Basin, as well as in the straddling counties.

Ontario's efforts to refine mapping of their Great Lakes Watersheds down to the sub-watershed level are very valuable and will be useful in communicating to the public and other water users locations of withdrawals, return flow and intra-basin diversion information. Once Ontario generates water budget information from their source protection plans this information can be integrated into the maps and consideration should be given to communicating it basin-wide to deepen understanding of ground and surface water interfaces.

Responses to the questions posed in your consultations on February 18th and 19th, 2009

Now that we have outlined our preferred approaches to these three issues, CELA will endeavour to go through each of the slide decks in the order they are set out on your agendas for the February 18 and 19, 2009 Annex Advisory Panel meetings and attempt to give answers to questions we feel are key to the best implementation of the Agreement in Ontario.

February 18th Consultation on Conservation

Possible Options for Inclusion in an Ontario Water Conservation and Efficiency Strategy

Slide 4 A. Context

CELA is concerned that the Regional Water Conservation and Efficiency Objectives are not rigorous or specific enough to result in strong actions in each jurisdiction.

There is not yet clarity on the relationship between each of the jurisdictions' programmes and the conservation yardstick that will be used by the Regional Body to determine if applicants pass the conservation test. Will Ontario be able to assess the adequacy of conservation based on their own program or on the Regional Water Conservation and Efficiency Objectives?

The definitions and interpretations of "Environmentally Sound" and "Economically Feasible" will determine the rigour of this conservation test. Ontario's conservation strategy should endeavour to give these terms more precise meaning and rigour. CELA maintains that conservation and efficiency efforts will have economic benefits over time for each sector and cumulatively for the region in avoided water use and consumption. Conservation can create more resiliencies for the ecosystem.

Slide 5 B. Principles

CELA feels that the guiding principles need to be more grounded in a problem statement whether it be put in a **mission statement** and/or added within this section. We need to strongly debunk the myth of abundance. We also need to take the blame and acknowledge that the Great Lakes Region and North Americans lead the world as the largest wasters of water. Our per capita use of water exceeds by 1/3 to 1/2 the use in other developed countries. I would include here the need to save water for future generations to come (in perpetuity) as well as for the health and well being of

all creatures dependent on these waters. Some of the climate change predictions and other stressors on water supply like pollution should be included in this rationale.

We would add a principle that reads:

Drafting conservation plans will ensure that all responsible sectors understand the contribution and benefits they can contribute.

Questions

1. The strategy needs guiding principles as well as a strong mission statement grounded in the problems.
2. Add “Drafting conservation plans will ensure that all responsible sectors understand the contribution and benefits they can contribute.”

Slide 7 & 8 Mission statement

Questions

1. Yes a mission statement is important for reasons stated above.
2. Option 1 is the best as it acknowledges our responsibility to future generations, links quality and quantity and speaks to health as well as to the environment and the economy. Target statements would help.

Slides 9 to 14 Discussions of Targets

There is a role for multiple nested targets. Targets give us something to measure against. Each option is a driver of programs and progress in different ways.

- Province-wide targets so jurisdictions can compare themselves to others in the Great Lakes (important to the one and five year reviews of conservation plans mandated in the Agreement) and to others in the world.
- Sector-wide targets can serve as a yardstick for best practices and,
- Individual user targets will yield site specific information and allow users to cost out options and benefits unique to them and the local watershed.

We can acknowledge that targets will be crude at the beginning but that they are none the less valuable as statements of intent. Targets need to be flexible as our knowledge of actual baselines and use grow over time. We will need to be adjusting and refining targets, particularly in times of shortage and stress.

Targets can be set as the outcome of water audits and the preparation of water conservation and efficiency plans for both water uses in the environment as well as in the pipe. We feel that **all PTTW users** (presuming this would catch all high volume users as well as most industrial, commercial and institutional sectors) should be **required** to do plans. Templates for what a plan should include for each sector should be developed with input from each sector. **Both** conservation and efficiency need to be components of all plans. Considerable savings can be gained from **prevention of further wastage**. CELA assumes that every sector can reduce their overall water use and this should not just be considered in times of drought but as an essential goal of each conservation plan. In PTTW reviews, new allocations should be based on conservation savings and amounts actually used. Shorter review periods (5 years)

would be preferable in this time of implementation so we can seek efficiency gains from all the permit holders.

In the interest of sound science it would be ideal to set watershed based targets for the whole province for ground and surface waters as long as conservative margins are left for the ecological needs and the needs of future generations in each sub watershed. Ontario should not encourage that 100% of any watershed be allocated as some have been in the US.

Slides 15 & 16 Timeframe of Strategy

Creating a conservation culture is not a short term endeavour and should be adopted as a long-term strategy by the Province. As our knowledge and understanding grow, new ways to use water wisely should too. Stressors on the Great Lakes - St. Lawrence River ecosystem are also likely to grow. New stressors are likely to emerge that we have not anticipated. This effort should be a continuous effort and not time limited.

Slides 18 - 24 Water Conservation and Efficiency Objectives

CELA concurs that a made-in-Ontario Conservation Strategy needs to build on the Regional Strategy to ensure that ecosystem needs are addressed. We congratulate you on your commitment to this in your suggested language changes in your consultation for Objective 1.

CELA agrees that conservation benefits and savings are compounded by linking and integrating water conservation programs and savings with parallel energy conservation efforts in Objective 1d. This linkage will compound the savings and build the case for conservation. We are gratified to see that the government has already begun this in their Green Energy Act Bill 150 released on February 23, 2009.

We strongly support the need to integrate conservation with climate change impacts. Considerable research has been done on climate change impacts on the Great Lakes and adaptation strategies. Conservation should be positioned as one of those adaptive strategies. Indicators should be developed as sentinels of climate change with a goal of reporting to the regional database on these indicators. CELA recommends that the Province work with the Great Lakes-St. Lawrence Environmental Adaptation Research Group Environment Canada Atmospheric Service housed at the Faculty of Environmental Studies at the University of Waterloo to develop indicators. Linda Mortsch is the contact there (519) 888-4567 ex 5495 linda.mortsch@ec.gc.ca.

Actions and Commitments

Objective

1. Guide programs toward long-term sustainable water-use including taking ecosystem needs for water into account

CELA endorses the need for a permanent entity to oversee Ontario's Water Conservation Strategy. We would like to extract some lessons from our past involvement in Provincial approaches to conservation policy. We do not recommend that a model such as a secretariat that primarily relies on one person because this approach was taken as a follow-up on the Water Efficiency Strategy, a previous consultation on water conservation undertaken in the early 1990s by the Province. Following on that consultation, renowned champion of wise water use Jim MacLaren was appointed as the Province's Water Secretariat and while he had a conservation mandate, he was also given the mandate to make water and wastewater services financially self-sustaining. This additional mandate overwhelmed the conservation mission and his mission got bogged down by a debate on public versus private funding and control of these services. The Ontario Water Secretariat was replaced by the Ontario Clean Water Agency (OCWA) a Provincial Agency whose main role was to manage and run some of the smaller vulnerable systems in the Province but also had conservation mandate.

The only remaining legacies of that original Ontario Water Efficiency effort is the goal to have the Ontario Public Service keep their consumption at 1991 levels until 2011 (see Ontario Green tips <http://www.ene.gov.on.ca/cons/3783-e.htm>). OCWA still has a conservation mandate for the dwindling number of facilities they manage. CELA prefers a model that is multi-stakeholder such as your **Option D** that centralises conservation in the Province in a way that works with an advisory council that is made up of those who are expected to implement the strategy. This would lead to solutions that best fit each individual sector's diverse needs and to more quickly capturing best practices. Part of the mandate of that office should be a requirement to couple water conservation with energy conservation policy.

In selecting options for preparation of Water Conservation & Efficiency Plans (including water audits) we prefer the preparation of plans be **mandatory for all municipalities and all private and public PTTW holders**. We observe that there has been a deluge of educational materials on the benefits of water conservation from all levels of government for decades and this voluntary approach has only resulted in a patchwork of isolated successful conservation implementation, usually where it has been necessary because of shortages in supply. Making plans necessary and conditional on the granting of permits and infrastructure funding will get long overdue results.

Timetables for completion of plans should be within the next five years. Reporting on progress on implementing plans can have a longer timeframe.

3. Adopt and implement supply and demand management

Provincial regulatory measures

1. PTTW program enhancements -

The permit system has to not only report takings but also return flows so more precise information becomes available on consumptive use and the benefits of conservation become apparent to those holding permits.

The PTTW will need refining to be used as an instrument to drive conservation. Prevention of wastage needs to become central to permit examinations. For instance there could be requirements for golf course and subdivision landscape design that captures storm water and keeps it on site to recharge aquifers rather than sending it off site.

There will need to be training for those reviewing PTTW to maximize conservation in each application as well as education of applicants.

Funds raised by charges from the PTTW program should be used for these program enhancements not only for government approvals and reporting but to assist applicants to meet new criteria.

2. Provincial water efficiency standards and labelling

CELA agrees with the need for standards and labelling for efficiency in the recommendations in this section but we feel the Province could go further. **Ontario should create blue/green jobs in carrying out water conservation as they have committed to in their Green Energy Act for energy conservation.** While water efficiency was acknowledged as an additional benefit in this Act, a rigorous analysis of how many new jobs could come from water conservation was not done. The Ontario government should encourage innovation, research and development of new jobs in the manufacturing of water efficient devices, water meters, rain sensors, and Canadian low flush toilets. Jobs should also be created in carrying out water audits for all sectors, training water conservation experts, retrofits not only of single family dwellings but of multi-unit buildings, zeroscaping and storm water management and replacement of lead distribution systems with safer alternatives. Priority should be given to leak detection and repair in municipal infrastructure grants and planning. All of this could mean a significant number of jobs could be created in Ontario as the result of a strong water conservation commitment.

3. Municipal

CELA agrees that waste minimization, metering, municipal rate structures, leak detection and repair are essential for municipalities. Procurement and the use of energy in water treatment and delivery are areas where municipal improvements should be sought. We would recommend strong measures that would make declining block rates illegal. A level playing field will be created if all sectors are required to pay the true cost of their water and wastewater services.

That said **one solution does not fit all Ontarians.** There are exceptional circumstances in the municipal sector that must be acknowledged and addressed.

CELA has been active in a coalition, the Low-Income Energy Network in order to provide our low-income clients with **affordable services and equitable access to conservation programs**. What follows are excerpts from a report we did in 2003 *DSM for Low Income Consumers in Ontario*.

“In 2001, the lowest income quintile of Ontarians were paying 9.9% of their average income on water, fuel and electricity while high income Ontarians were paying 2%. They tend to have inefficient appliances over 10 years old and they are more likely to be heating water with electricity (the most expensive option).” In cities a large percentage of low-income residents are in rental units and over 90% of them have their utilities included in their rents and are consequently unaware of their individual energy use and are buffered from reaping the benefits of conservation. They have little incentive or power to reduce their water use. Low income home owners have little ability to be able to replace water heaters or upgrade to more efficient appliances and to pay for energy audits. These people are the most vulnerable and will need special consideration in a water conservation scheme.

Consideration should be given to affordable block rates for the amount of water needed in these households for health and safety. Programs need to be considered that create incentives for landlords to retrofit buildings with water efficient appliances, toilets and delivery systems as well as the most efficient water heating devices. Conservation savings need to be passed on to tenants. By-laws could achieve this.

Ontario's *Safe Drinking Water Act* now requires steps for municipalities to plan measures so that water systems pay for themselves. However, many municipalities in Ontario are moving from ground to surface water supplies in Ontario. This has potential to cause hardship because many smaller and more remote communities do not have a population base that can bear the full costs of new infrastructure. CELA receives calls all the time from distraught seniors and others who fear they will lose their homes because their municipal councils are trying to pass on all of these costs to them. **Water conservation and efficiency programs have to work for Ontario's most vulnerable**. Consideration should also be given to having high users pay more and their fees used to assist low-income users.

Many municipalities have huge historic infrastructure deficits that will never be able to be addressed from their tax base and will require grants from the Federal and Provincial governments for improvements. These grants must be tied to improving human health, such as providing First Nations with safe and sustainable water supplies and replacing lead pipes throughout the Province, and to efficiency measures like eliminating leakage.

In summation we would answer yes to all questions 1 to 6 posed on this guideline.

Objective 3.

Improve monitoring and standardize data reporting among state and provincial water conservation and efficiency programs

CELA agrees that base reporting among the States and Provinces should be consistent and comparable. We are concerned as we have said in our general discussion (pages 2-3) that in past reporting the data is so aggregated as to be of little value in improving understanding, detecting trends and supporting decision-making. Data should move to being based on actual rather than estimated use as fast as possible. Projections of future use more often than not are inflated to fulfill the desire for growth in the Region. There needs to be a way to ground truth projections with official plans etc.

New data generation needs to be considered in order to fulfill the science and information needs articulated in the Agreement for more understanding of groundwater in the Basin and of climate change.

Questions

1. Yes, conservation and efficiency indicators should be established and tracked. Climate change indicators and perhaps indicators of groundwater aquifer stress should also be developed.
2. More information on consumption should be made available to all sectors and compared with best practices. We support Ontario's plan to develop new consumptive use targets for more sectors than suggested by the Agreement and hope these can be reported to the regional database.

Objective 4. Develop Science, technology and research priorities

Groundwater

We have found that this consultation has been light on discussions of closing the knowledge gaps on the groundwater portions of the watershed and its interactions with the surface water. Gaps that need to be filled, monitored and reported are:

- Identifying groundwater aquifers under stress now and concurrently which aquifers are healthy,
- Map these aquifers where possible,
- Determine the amount of rainfall needed to ensure recharge of these aquifers,
- Determine threats from pollution and overuse to these aquifers,
- Determine which tributaries to the Great Lakes are under the influence of groundwater, and
- Do conservation planning to protect groundwater that would include identifying best practices in groundwater protection.

Source Protection plans and water budgets should yield part of this information which should be publicly accessible in a web site. This will start to fill the gap in our understanding of the role of groundwater in the health of the largest source of drinking water for Canadians, the Great Lakes.

Climate Change

See paragraph 3 page 6.

Objective 5. Develop education programs and information sharing for all water users

CELA supports all of the proposals for the development of education and information sharing for all users. As we have learned there is no shortage of ideas on ways to conserve water being generated from all sectors that have been consulted. Where the work is needed is to create the political will to do it even in these hard times. Building the case for conservation is extremely important to debunk the myth of abundance. We should use tangible Ontario examples where conflicts are already developing among users, municipalities are scrambling to stake claims for water to feed potential future growth and there are real shortages to build the case. Our obligations to future generations, uncertainties of climate change and our unnecessary, profligate use compared to most of the rest of the world should be stressed in this re-education effort.

We should ensure that we have trained conservation specialists within each sector involved in PTTW reviews, and in the built environment for retrofits and designing for conservation. Key decision-making bodies that will be expected to implement conservation objectives such as the Municipal Engineers Association who directs the Class EA Process will need to fully understand the new conservation component of their work. Special educational programs will need to be directed to low-income Ontarians as well as their landlords on accessing the benefits of water conservation.

The new mapping contemplated offers an effective tool to communicate the complexities of water use decisions as they impact local sub-watersheds, regional watersheds, the connecting channels, each Great Lake and cumulatively on the whole system.

THE FINAL QUESTIONS ON TIMETABLES AND FUNDING

What should be the timetable of the Strategy?

Timetables can be yardsticks and drivers of progress. As we stated on page 5 a series of nested timetables - short term objectives to meet Agreement obligations, medium term (five years) to see if the basic program is yielding results and longer term to track progress - would be ideal. Timetables can differ for Provincial as well as individual sectors. Provincial targets will allow us to measure how Ontario is doing compared to other Great Lakes jurisdictions and other countries. Sector timetables will be beneficial to capture wise use levels with best practices. Flexibility should be anticipated so that as we learn more about what is achievable we can lower our thresholds to continuously work toward deeper conservation. Per capita information is also useful for individuals to compare their conservation culture with others.

How should the strategy be funded?

Funding should come from multiple sources. One obvious source of funding is the pool of funds created by the charges raised from the PTTW. Full cost pricing can include

funding conservation efforts. However as we discussed above in the municipal section special measures need to be taken to ensure essential access to water and equitable access for low-income Ontarians to water conservation benefits. There is a role for all levels of government to fund this transition to conservation and to provide incentives for participation in these programs as well as disincentives for wasteful practices or practices that reward overuse and wastage.

Supporting Information and Science

- **Watershed boundaries and mapping**

Mapping the watershed from macro to micro will assist the public and decision-makers to understand the issues from Basin-wide to local perspectives. The government cartographers should not presume that people understand the meaning of primary and tertiary and include these definitions on the maps. For example, the Provincial Tertiary Watershed Boundary 2008 map is confusing as it includes five distinguishing colours which are indications of the data sources rather than the three primary watershed boundaries, the Nelson, James Bay and Great Lakes St. Lawrence River Basin. If the intent is to promote understanding of the watersheds then too much extraneous detail confuses. Landmarks that allow people to orient themselves are important.

In the future CELA hopes to see mapping of groundwater aquifers in the basin, and mapping of tributaries to the Great Lakes that are under the influence of groundwater. As well, threats and stressors to ground and surface water could be mapped. Once source protection data on threats and information from water budgets is available, this information should be incorporated into both the data bases and into mapping being done for Agreement implementation. Even though source protection's focus is on drinking water supplies, once it is reviewed through the lens of Agreement priorities this data could reveal a lot about cumulative impacts and impacts on the ecosystem. CELA and other groups have been calling for more integration and focus on Great Lake watersheds early on in source protection planning process so that this integration will occur.

- **Water Use Reporting Protocol**

Questions

1. CELA supports submission of data at a finer tertiary watershed level because this will facilitate knowledge about local impacts of withdrawals over time. It will also help us anticipate and protect watersheds under stress sooner. Local area trends will be more apparent as will ecological impacts on water dependent species. A more local focus will allow those responsible to understand their role and when they may need to take remedial action.
2. Consumptive use information reporting is important in our understanding of permanent losses to the Basin. While the method of applying one coefficient to each sector may be necessary initially, it is a crude approach. Requirements to start to report return flow by permit holders should start to generate more actual data over time. Perhaps Ontario should grant permits over shorter periods of time and require review of historical permits soon so actual data can

- be generated quickly. Refined data should start to be reported as soon as possible.
3. CELA supports having more sectors reporting in Ontario and would hope we could report these refinements to the Regional data base. It should be recognized that there may be unique and diverse sectors within individual jurisdictions.
 4. It is extremely important for Ontario to report information generated from our PTTW system to the Regional database. Over time the benefits of more information to sound decision-making will be demonstrated to the other jurisdictions. Ontario will likely be able to demonstrate more knowledge on cumulative impacts, groundwater, impacts of climate change and ecological impacts of withdrawals because they will have more information. This could result in earlier identification of trends and stressors for the rest of the Basin.
 5. All water users should be required to report water diversions/transfers because they all will have increased risks of harm to the parts of the system deprived of those flows.

- **Consumptive Use**

- **Questions**

1. CELA supports the tiered framework because it encourages large users to conduct a site assessment of their consumptive use. This assessment could lead to better understanding of local circumstances and act as an incentive for conservation.
2. a) CELA supports that all highly consumptive water uses defined in S.5 (5) of the Water Taking Regulation undertake a site specific assessment.
b) A site specific assessment should be required in all stressed watersheds and for all diversions and transfers and for all other withdrawals over a threshold. The Province should have the powers to require site assessments of sectors they need more information from and sectors reluctant to implement conservation.

Additional Questions

CELA supports adding categories of users to generate more specific information. A blend of a sector specific approach and user specific in instances where individual operations seem to fall outside of sector estimates would be preferable. If a user does better than the sector average they should be studied to add to the understanding of best practices and if they fall below they should have conditions imposed to see they achieve the average.

1. Trained experts should review consumptive use with Provincial oversight. The Province should provide this additional capacity particularly when they will be relying on the outcomes to build, shape and promote policy and programs.

- **Averaging amounts**

- **Question**

CELA prefers Option 3. We think that reporting on maximum daily use is the best and most meaningful way to continue to communicate use to the public. Given the choices we prefer to see data generated at more regular, smaller periods of time.

February 19th and 26th Meetings

Intra-basin Transfers (Diversions)

- Establishing the baseline -
Municipal Approvals Instruments

The options for establishing municipal baselines are all process based rather than science based. CELA is reticent to wholeheartedly endorse a system that has not first established the “carrying capacity” and sustainability of aquifers, tributaries and lakes. We recognize that the science is not yet there and that predictability due to seasonality and climate will be variable. However we need to begin to establish water budgets for these portions of the bigger Great Lakes watersheds to have confidence that allocations we are making today will not be depriving future generations of users and water dependent creatures of water. Municipalities as well as non municipal users should have some yardstick for determining future demand not only for their own growth needs but for the needs of other users they share their water supply with. We are not confident that the official and/or master planning process now adequately does this. The scope of the considerations is up to the proponent and there is not necessarily planning that is carried out on a watershed or ecosystem basis, and allowances are not made for future needs for all who share waters.

We presume that all current instruments Master Planning, Official Plans, Places to Grow, Sewer Use and Water C of As, the *Safe Drinking Water Act*, EA and Class EA, PTTW, Provincial Plans for the Oak Ridges Moraine, Green Belt, and Lake Simcoe, and the *Clean Water Act* will all need revisions to comply and be consistent with the Agreement. Because the *Ontario Water Resources Act* and the Permits-to-take-Water are water focused instruments they should be the primary instruments used for Agreement implementation. The *Clean Water Act* (CWA) also offers a number of important provisions which could assist in determinations of future water supply. The threats assessments required in the CWA are to include threats to quality and quantity. If threats are found there are powers to impose further protective measures.

1. CELA recommends that the science and data strategy being developed for the Agreement integrate the water budgets from the Source Protection Plans and be integrated as soon as possible into decisions establishing baselines. These baselines for Great Lakes watershed sources should then become the primary consideration for both municipal as well as non-municipal takings.
2. There should also be a continuing requirement for Municipalities to secure C of A for operational standards and PTTW. We strongly agree that the assessment of the adequacy and security of the long term water availability should be made much earlier in the process and should be based on sound science. The

issuing of the PTTW should also happen earlier in the process depending on adequate supplies being available. The PTTW system offers the most thorough approvals system for water allocation.

3. As we have said, the current Municipal Class EA process for Water and Wastewater is inadequate to examine large withdrawals, transfers and consumptive uses from a basin-wide, ecosystem or regional perspective. An undertaking the scale of the current York Region projects or other regional scales are not guaranteed to be bumped up to a full EA where scoping could result in a full examination of need and alternatives. There is a continuing risk in the class EA process that small scale projects are evaluated on local impacts even though those projects are part of a larger delivery system. The full cumulative impacts of the project escape assessment.
4. CELA has voiced our concerns during these consultations that the recommended way forward allows the greatest access by the public to Ontario decisions regarding large withdrawals, transfers and consumptive uses. The public notice for water and sewer EA projects is most commonly through advertising in local newspapers rather than on the Environmental Registry. Large takings will likely be of interest to the whole Great Lakes communities and they may well want to be involved in early comment on large Ontario transfers. Allowances will need to be made for Basin-wide notice.
5. Even when there is a full EA it is not guaranteed that public hearings will be held or that the public would necessarily become a Party to those hearings. Even though the public has an expectation that an EA involves a hearing, there has not been a full EA hearing in twenty years in Ontario.
6. Ontarians should have parity in practice to appeal decisions on large water takings in Ontario on par with the enforcement rights that US public has under the compact. The existing tribunal with the expertise to review these matters is the Environmental Review Tribunal. We would be concerned if these matters were considered to be primarily planning matters and would be directed to the Ontario Municipal Board.
7. CELA is concerned that the Municipal Engineers Association has not participated in this consultation and will not have an appreciation of the context and need to reform their processes to allow for Agreement implementation.
8. During consultations, MOE staff were concerned that there are now sequences of approvals that need to be in place prior to the issuance of a PTTW. The sequencing of those approvals will need to be reviewed in light of Agreement implementation and the recognized need to make determinations about water availability earlier in the planning process.
9. Most of the questions on process hinge on sequencing and what approval comes first. A hierarchy will need to be determined and the first determination needs to be based on baseline watershed or sub-watershed budgets for all current and future uses. We need to begin to assess whether all demands for growth can be met.

Non-Municipal Approval Instruments

CELA agrees that non-municipal approvals should be done under the PTTW process. However, there could be surprise requests in the future for new uses that we have not anticipated today, just as the NOVA proposal was not anticipated at the time. Consideration should be given to granting the Minister the powers to request more in-depth assessments of projects of this nature under the OWRA.

Baseline for Consumptive Use

Overall, CELA recommends that Ontario evaluate lowering the threshold in their Act for consumptive uses to offer a greater level of protection. This option is allowed by the Agreement.

CELA agrees that the refined coefficients developed for Ontario to inform decision-making on regulations are improvements as they will provide more detailed data on current uses in the Province. We agree that the use of coefficients should be blended with science and site specific information as we attempt to move from estimates to actual data. We should encourage modification of coefficients when real data becomes available. We need to be confident that amounts assigned to related transferors are as accurate as possible and should use multiple approaches if necessary to determine these amounts. We expect that as we assign these amounts, lessons will be learned about Best Practices. We will need flexibility to adopt these as they emerge.

Related Transferor

The work that has been done on the related transferor issues are particularly important in Ontario where so many of the Great Lake watersheds are in close proximity, there is more opportunity for diversions and transfers of return flows and wastewater. CELA agrees that the PTTW should be amended to capture and assign responsibilities to related transferors. This will go a long way to assist the primary withdrawer in understanding the fate of the water they are distributing as well as assign responsibility to the actual user. We would recommend that the related user be required to report to both the MOE as well as to the original transferor. The increased understanding this will foster might greatly assist municipalities in capturing the costs of their services to actual users. Reporting of return flows should be a key part of the reporting required. We agree that the Director should have the authority to amend approvals related to the new or increased transfer and where there is a conflict provide the most protective term and condition. A blended but prescriptive approach focusing on a water balance will be necessary. However as we have already recommended growth allowances should not be assumed until it can be demonstrated that they are sustainable.

- **Connecting Channels**

CELA has considered the identification of connecting channels for the purposes of evaluating intra-Basin transfers and have concluded that the St. Lawrence River should be included in the considerations as a connecting channel because there is potential to take water from Lake Ontario and return it to a downstream portion of the River. This approach would not exclude the downstream users in Ontario and

Quebec from seeking the same remedies as others downstream from significant takings. This would not override the recognition that the River is also a watershed within the Basin.

We would expect that the Welland Canal and the Trent-Severn waterways must not become vectors for increased transfers between watersheds because the IJC has raised concerns about the impacts of diversions on the Great Lakes watersheds and favours a watershed approach for water management in the Great Lakes protection. At present there is public concern about the potential weakening of provisions of the federal *Navigable Waters Act* for environmental assessment of projects. The Federal Government has prohibited bulk water exports in their *Boundary Waters Treaty Act*. Discussions should be held with the Federal government as to the potential for Intra-Basin diversions, transfers or consumptive uses in federal waters of the Great Lakes-St. Lawrence River Basin. The recent exemption from posting their PTTW on the EBR given to Detroit for a historic withdrawal granted by the Federal Government from Canadian waters illustrates this potential.

Ontario's decision on how to handle connecting channels has the potential to show leadership on a significant issue that negotiators of the Agreement and Compact may not have understood or anticipated. Ontario's examination has determined several intra-basin transfers that already exist. In our opinion all new and increased intra-basin diversion and transfer requests should be considered and scrutinised as **diversions** for their potential to cause equivalent harm to the parts of the system deprived of the flows diverted. We presume that the degree, nature and potential for harm will increase as the distance between the withdrawal and discharge locations increases. This makes it prudent to assure that we start to build a process that will prevent these diversions between basins, mandate return flow close to the source of the intake and study impacts of existing and new proposals to move water between Basins. It would be a mistake to exempt upcoming proposals for intra-basin diversions/transfers from the full scrutiny of the Regional Body. CELA hopes that the requirement of return flow so fundamental to the protection of the Great Lakes ecosystem is pursued rigorously in Ontario at the outset. We are dismayed to discover that achieving this rests on an interpretation of and acceptance of the definition of connecting channels.

1. CELA strongly recommends that Ontario refine the definition of connecting channel for the purposes of evaluating proposals for new or increased diversions, consumptive uses or withdrawals in Ontario. This definition should be based on hydrology and flows through the ecosystem. Priority should be given to options that maintain rather than detract from those flows. For this reason we favour **Option 2 Only including upstream connecting channels in each Great Lake Watershed.**
2. Additionally CELA recommends that Ontario make representations to the Regional Body and to States that might have enshrined another approach in their legislation to refine their definitions in formal amendments to the Compact and the Agreement to State and Provincial legislation so that we can

have a consistent approach Basin-wide. Ontario should be congratulated for identifying and publicly discussing stricter protections for proposals that are most likely to originate within their boundaries.

3. The issue of return flow to a tributary that flows to a connecting channel is a challenge. To determine our position we considered how we would want to see the current London diversion evaluated. We would want the cumulative impacts of their two withdrawals from Erie and Huron to be evaluated with the needs to return the flows as close as possible to the point of withdrawal to avoid impacts of loss of flows to the system. More likely than not these return flows will be waste water and will have greater impacts on tributaries than on larger connecting channels and individual Lake watersheds. For these reasons we prefer the third option which discourages return flow to a tributary to a watershed of a connecting channel.
4. Travel time from the point of taking to the point of return should be a factor in deciding the degree of harm that could occur.
5. Ontario should make special representation to Michigan and other States who might discover they have similar transfer opportunities to consider closing the loophole caused by the definition of connecting channels in the Agreement and Compact that would result no review of intra basin transfers.

- **Technical Bulletin**

CELA has made previous submissions on our preference for a short moratorium on any Ontario proposals for intra-basin transfers and diversions in this interim period to allow for the full development of new regulations to implement the *Great Lakes St. Lawrence River Basin Sustainable Water Resources Agreement*. We feel that the full scope of the Agreement including Ontario's new conservation strategy should be operable before all large withdrawals, diversions and consumptive use proposals over trigger levels are considered. The delay of a few years should not be that significant. In this interval these municipalities could get started on extending supplies through conservation practices. We appreciate that this Technical Bulletin informs Municipalities of the current expectations under the Great Lakes Charter as well as the process under development in regards to the Agreement. It has sparked interest in this consultation from areas where such proposals are under consideration like London, Collingwood and Kitchener-Waterloo. While the York Region proposal's Environmental Assessment is already well underway, we have all benefited from their participation in the Annex Advisory Panel dialogue and they are making efforts to comply with the spirit of the Agreement.

We were glad to see that the Ontario Government is already seizing opportunities to insert Agreement implementation into new legislation in their recent Bill 150 *Green Energy Act* by prohibiting energy projects from transferring water from the three watersheds in the Province.

Regulating new and increased transfers

- **Regional Review Process**

During Annex negotiations, CELA was on an Advisory Panel to the Council of Great Lakes Governors and in that capacity was involved in a number of discussions on the Regional Review Process. As well, we worked closely on submissions with our US counterparts and gained an appreciation of the differences in our systems that led to there being two separate documents the Agreement and the Compact. One thing we hope for is that despite our different systems that there will be equitable public access to decision-making. We have concluded that the opportunities for public involvement may come at different junctures in the process for Ontarians. Our primary opportunity for input in the process outlined in the diagram on page 5 is at the time that Ontario does its Technical Review of applications that originate in Ontario.

It is less clear if and how Ontarians could be involved in Ontario applications once they go to the Regional Body and after the Regional Body makes its Declaration of Findings.

It is also unclear how effectively Ontarians can be involved in decision-making on applications originating in other Great Lakes jurisdictions. This was made abundantly clear when Ontario negotiators sought to have more influence over the most prominent diversion in the Great Lakes, the Chicago Diversion. This diversion has been exempted from both Agreements because it is regulated by the US Supreme Court. It is unlikely that the US Supreme Court would give Ontario standing in future matters considering this diversion. The outcome of the discussions of Ontario's role was inconclusive. US members of the Regional Body did state they would endeavour to represent Ontario's interests in US courts.

Conversely, Ontario will need to consider how other Great Lakes jurisdictions and the public from other jurisdictions can be involved in Ontario's process at an appropriate time to make submissions on proposals that will go to review. How and when others will be given notice of these projects will be important.

Once a project goes to Regional Review public written comments will be considered in that review. The other avenue for input from the Ontario public to that review would be to continue to involve the Province's Annex Advisory Panel (AAP). The Panel could work through positions that Ontario takes on the Regional Review of those projects prior to each review. This forum was very effective during the negotiation of these Agreements. However, the Regional Body has chosen a consensus building process for decision making on applications. This means that their review of projects will involve negotiations. This may make it difficult for the Ontario representatives to use their AAP once they have commenced those review sessions. It is still unclear what timetables will be set for regional review and how this could influence public participation.

Under the US compact any person has the right to appeal a Compact Council decision or to ask for judicial review in US District Courts. There are not parallel powers in the Agreement to seek legal remedies on a decision made by the Regional Body. It is also

unpredictable whether Ontario would ever be granted standing in US courts if they were to voice similar objections.

All of these matters of access of the government and of the public in the Great Lakes to the full application review and Regional Review decision-making are critical. Those participating in the drafting of Regional Review Procedures should try to give as broad access at all stages of consideration when possible.

Questions

Immediate and Critical Priorities

Coming into Effect

CELA raised the concern during the consultation that we do not yet know the timetables for implementation of key commitments set out on page 7 of your Regional Review presentation. The dates that various commitments come into effect commence “after the last Party notifies others that measures are in place.” Quebec’s legislation has been delayed and needs to be reintroduced because of their election. That legislation is omnibus legislation and includes other water measures other than implementation of the Agreement. Not knowing their legislative schedule is making it difficult to work to Agreement timetables for regulations. Ontario agreed to make efforts to determine when this might occur. We are concerned that we might lose momentum if there is too much delay.

Regional Procedures

The Regional Procedures Committee needs to map the stages where the public can have access to review of proposals within their jurisdictions and in decisions in other jurisdictions. They need to scope their own procedures and timetables for Regional Review and the mechanisms they will utilise to resolve disputes and reach consensus. They will need to determine procedures if they do not reach consensus. Good educational materials will be needed to inform applicants, governments and the public of key opportunities to access decision-making.

Standing Advisory Committee to the Regional Body

CELA supports that this Committee be renewed. It will be important to continue to engage sectors involved in the previous Advisory Committee for continuity. However, we would like to see some more balance of interests reflected on this Committee. It is difficult to balance Canadian and American interests because there are 8 States and 2 Provinces. That has meant that there is a concentration of large US industrial associations on the Advisory Committee. We would hope to see at least one equivalent Canadian representative. Much of the Agreement and Compact implementation falls on municipalities. For that reason CELA would like to see municipal leaders have a place on this committee. This could be accomplished if the Great Lakes Cities Initiative moved from being observers to participants.

The Tribes and First Nations should determine how they wish to be engaged. We have always asked that they be part of the Regional Advisory Committee from the onset of

negotiations of these Agreements and would certainly welcome their voice around the table. Perhaps they could continue to have a parallel process and participate here as well. Now that we are enshrining practices and proposals which will impact generations to come, their wisdom is needed.

We think that the Ontario representatives on the Regional Advisory Committee should report back to their Annex Advisory Panel and in turn take the Panel's advice back to the Regional Advisory Committee where possible.

Draft Procedural Manual

CELA regrets that the Draft Procedural Manual was not carried forward with the Agreements after they were released. The Manual was a part of the package released with the first draft of the Agreement. This manual was drafted and based on a considerable amount of work that was done by the Great Lakes Commission (GLC) and by other studies sponsored by the Great Lakes Protection Fund to support decision-making. CELA was involved in some of that work with the GLC and found that the detail and specificity of this work was very helpful in framing the next steps to implement the Agreement and Compact recommendations in practical programs. CELA recommends that Ontario encourage the Regional Body to use this manual in their implementation process and evaluation of proposals. This might result in a more harmonised system basin-wide.

- **How to apply the exception criteria**

No one existing process in Ontario is adequate to address the full scope, alternatives to and the individual and cumulative impacts of exception proposals at the appropriate scale. The process selected will need to be as thorough and transparent as possible and allow for full public participation. Timing, scoping, proposal scale, and public participation all have to be factors in determining how to apply the exception criteria.

Questions

Process Options for Individual and Cumulative Impacts

CELA recommends OPTION 2 for both individual and cumulative impacts because it allows us to improve existing instruments to address new requirements in ways that will improve Ontario's water management regime and our own understanding of water use.

Additional Requirements

A means to determine and evaluate return flow applicability to proponents that request an exception should be developed in the PTTW. The cost recovery for return flow infrastructure will become more feasible if it is projected over a longer timeframe.

Cumulative impact assessments should be required on a sub-watershed, watershed and basin scale.

Conservation Options

Questions

1. CELA supports the principle that water conservation requirements for new or increased transfers should go beyond the Ontario Conservation and Efficiency Strategy.
2. While it is difficult to determine now if Ontario's pending Conservation Strategy will have adequate measures for existing transfers, CELA recommends that these users be asked to demonstrate how their historic transfers measure up to the current tests for new transfers. This should include requirements to carry out conservation planning, measure actual return flow, environmental harm and economic feasibility not only of infrastructure cost but of harm as well. Some cumulative assessments should be done to combine historical with increased requests for transfers. Proponents should be asked to determine economic feasibility over a longer timeframe so they can determine if their infrastructure investments are sustainable.
3. All options suggested should be used in combination.

- **When to apply the exception criteria**

Options page 10

CELA prefers Option 2, requiring the PTTW application for new or increased applications before the Class EA. We would suggest that all permit applications for municipal and other takings over Agreement thresholds be subject to all Part II requirements of the EBR.

Options page 14

CELA prefers Option 2 because the water evaluations under the PTTW evaluation occur earlier in the process. An early notification is given to the Regional Body. There also needs to be a way to broadly notify others in the Great Lakes that might want to have input on a proposal in Ontario early on in the consideration process.

Ensuring adequate public notification of applications

Prior notice EBR Posting of Permits to Take Water for Agriculture

CELA has found the issues pertaining to agriculture in the Agreement and the Compact very challenging because they do not easily fit into solutions and requirements for other sectors. Agricultural use for irrigation is seasonal and confined to 90 days of the growing season in the Great Lakes. Approvals threaten delays that could result in the loss of whole growing seasons with serious economic consequences for farmers.

Many of the stresses and perceived continental threats to the Great Lakes come from presumptions that we can always move water to grow crops in more arid areas. If logic prevailed, this assumption would be derailed and food would be grown closer to water supplies. This shift could lead to growth in food production and the agricultural economy in the Great Lakes. Many consumers are now also endeavouring to buy their

food locally so Great Lakes farmers will likely be serving more local markets. These trends are both more sustainable. Few individual agricultural proposals in Ontario would trigger Agreement thresholds. However, in the interest of efficiency and conservation some farm operations are banding together to create cooperative irrigation systems that could draw water volumes larger than Agreement thresholds. One such system in the tender fruit lands of the Niagara Region endeavoured to respond to the expectations of the Agreement by responding to all of the criteria with costly technical studies. The time it took to do these studies led to delays that meant this cooperative lost funding from the Federal Government to assist in the construction of their system. This was a regrettable outcome since their efforts were being made to achieve conservation.

CELA recommends that all of the provisions of the Agreement and other recent water requirements arising from Source Protection and other water management environmental requirements for farms be integrated in a way that makes water management requirements transparent and achievable for farmers. Not having to report on these requirements piecemeal but in one report would be one way there could be integration and time savings for farmers.

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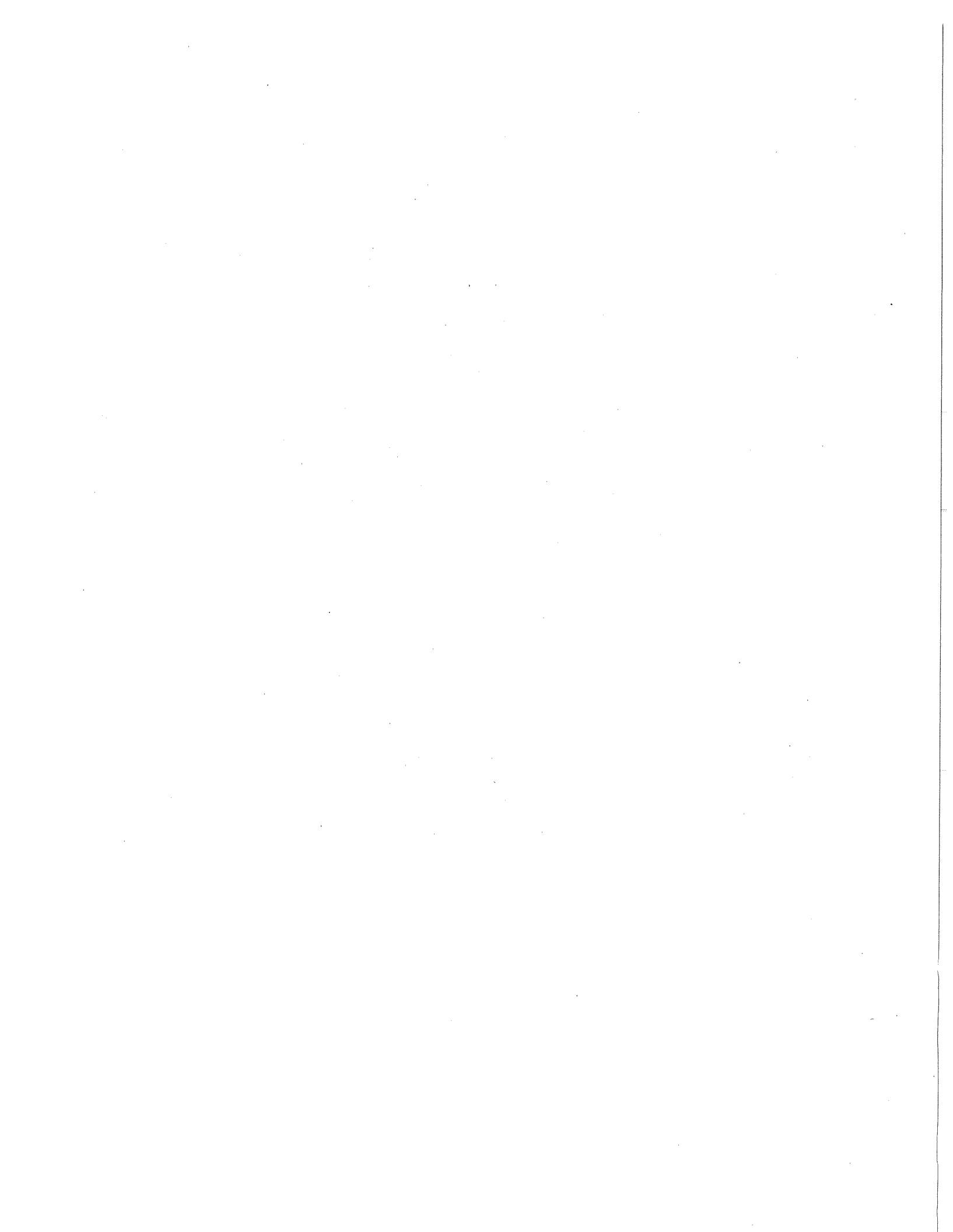
While we are uncomfortable in giving one sector exemption from appeal, we do think steps should be taken to ensure that agricultural permits are submitted well in advance of growing seasons so that all approvals including appeals are dealt with prior to the growing season. Perhaps a special timeframe for Agricultural permit applications, postings to the EBR and response deadlines and appeals could be set out. Some means should be considered to ensure that there are the resources to meet deadlines for agriculture.

Please feel free to contact us if any of our comments need clarification. Thank you for the opportunity to be part of this consultation.

Yours truly,
Canadian Environmental Law Association

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Implementation of the Great Lakes St. Lawrence River Basin Sustainable Water Resources Agreement

Questions regarding how Intra-Basin Transfers would be dealt with in Ontario -Some last minute thoughts from CELA

During negotiations about the Agreement the Parties preferred that each of the Parties would:

- Notify other parties of applications for large withdrawals within their boundaries,
- Would carry out the evaluations of those projects within each State or Province within a reasonable timeframe, and then pass on their findings to the Regional Body for their endorsement.

It is my understanding that our best chance as concerned public is to influence the outcome at the Provincial level. The US Compact has provisions for the US public to seek redress in the courts on a Regional Body Decision (Section 7.3 Enforcement) based on previous precedents and well established legal rights there. The Agreement does **not** have similar provisions leaving it unclear if the Ontario and Quebec public will have a role to play once something reaches the Regional Body level see the public participation section of the Agreement (Article 503) which allows public comment on Regional Body decisions but not guaranteed access to courts.

This makes it hugely important to ensure we direct the decisions on intra-basin as well as large withdrawals applications originating in Ontario to the process that will result in the best opportunities for public participation. To be frank the odds are not great right now with any of the options.

The Class Environmental Assessment (EA) for Water and Sewers is administered by the Municipal Engineers Association. Approvals are sought by municipalities for sections of water and sewer infrastructure or for regional systems. The process does **not** address need or alternatives and the only way the public can get adequate involvement is by requesting a bump-up to a full EA. Bump-ups are rarely granted and if they are full EAs can last for years which the other Parties to the Agreement would not likely be satisfied with. Full EAs do not guarantee the public of a hearing and the scoping of the issues in a full EA can be lacking. This has been a system for routine approvals and has meant that the PTTW will follow and be a fait accompli. Project notices are not required to be posted on the EBR. It is rare for a project to be turned down. The Class EA process only now covers public projects.

The other route being suggested would be to add new provisions to the Ontario Water Resources Act for intra-basin and large requests over Agreement trigger levels to require a more rigorous process. This would mean that applications would be posted on the EBR. The public would have the opportunity to ask for a leave to Appeal to the Environmental Review Tribunal. However the record right now only has 1/3 of the appeal requests going forward.

Under this option a new instrument would need to be created under the OWRA that would apply to the large withdrawal requests and for the requests for intra-basin diversions. This new instrument could specify appeals to the ERT, public notice as well as requirements for compliance with Source Protection Plans under the Clean Water Act. One other advantage of this option is that it would capture both public and private proposals.

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