Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-1	All Lake Ontario Threats	MOECC	~~JK~~	**Specify Action** (Spill Prevention/Contingency and Emergency Response) To protect drinking water sources from potential spills ~~where event based modelling has identified activities that are a significant drinking water threat (IPZ-3) and~~ along highways, shipping lanes and railways, the Ministry of the Environment and Climate Change shall: 1) in consultation with the Spills Action Centre and other appropriate bodies, update notification protocols for spills to ensure direct notification of all potentially affected water treatment plant operators and appropriate communication to the public and media; 2) in consultation with the Spills Action Centre and the affected municipalities, review the ~~reporting thresholds~~ notification protocol for significant threat activities and adjust the ~~reporting threshold~~ protocols as required to ensure that water plant operators are notified appropriately for a given magnitude of spill; 3) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water system owner and water system operating authority) who are responding to the spill; 4) in consultation with the owners and operators of municipal drinking water systems, require that a Contingency Plan is developed, reviewed and/or updated under the Drinking Water Quality Management Standard to ensure that significant drinking water threats identified in the Assessment Report are included and amend the municipal drinking water license, as required; 5) in consultation with the Office of the Fire Marshal and Emergency Management ~~Ontario~~ and other appropriate bodies, ensure that testing of the Contingency Plan is carried out within 3 years from the date the Source Water Protection Plan takes effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified; and 6) in consultation with appropriate bodies, promote spill prevention and share information about source protection with the public.	IPZ-3 See Map 4.1	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
~~**LO-G-2**~~	~~All Lake Ontario Threats~~	~~MOE~~	~~K~~	~~**Research** (Lake Ontario Circulation and Water Quality Monitoring, to support the Lake Ontario Collaborative Model)~~ ~~Where event based modelling has identified activities that are a significant drinking water threat (IPZ-3), the Ministry of the Environment, in collaboration with Environment Canada should:~~ ~~a) use the 3-D Hydrodynamic Circulation and Water Quality Simulation Model, or other models as appropriate, to run proactive simulation of potential spills in order to be able to predict the extent and duration of contamination and to help determine the parties to be notified in the event of a spill;~~ ~~b) install permanent instrumentation (e.g. continuous recording current meters, with wireless telephone link to Ministry of the Environment Monitoring and Reporting Branch) to provide real-time monitoring of current speed, direction and water chemistry for use with the 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies;~~ ~~c) ensure that the real-time data are available to municipalities and conservation authorities; and~~ ~~d) undertake Lake Ontario nearshore monitoring yearly; and make the data available to municipalities and conservation authorities.~~	~~IPZ-3 See Map 4.1~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-2	Significant/ Moderate/ Low Threats All Lake Ontario Threats	MOECC	K	**Specify Action** (Lake Ontario Collaborative Group) The Ministry of the Environment and Climate Change will work in partnership with Environment Canada and municipalities responsible for providing water from systems with intakes in the western basin of Lake Ontario to establish and chair a Lake Ontario Collaborative Group (LOCG) focused on the western basin to undertake actions to support the implementation of policies to protect this source of drinking water. Within one year of this plan coming into effect the LOCG should develop and approve Terms of Reference. The Terms of Reference should include but not be limited to defining roles, tasks, and responsibilities of the LOCG partners with respect to: 1) Sharing information about Lake Ontario circulation and water quality monitoring, and where technically feasible: a) install permanent instrumentation (e.g., continuous recording current meters, with wireless telephone link to MOECC Environment Monitoring and Reporting Branch and the LOCG members) to provide real-time monitoring of current speed, direction and temperature throughout the water column for use with a 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies; b) ensure that the real-time data are available to municipalities and conservation authorities; and c) undertake annual Lake Ontario nearshore water quality monitoring, and make the data available to municipalities and conservation authorities; 2) Maintaining and further developing a 3-D Hydrodynamic Circulation Model or more advanced models as appropriate, with particular focus to the nearshore of Lake Ontario to assess activities to determine their potential to be significant drinking water threats, including: a) maintaining specialized modelling expertise to undertake spills scenario modelling; and b) leading the development of typical lake circulation spill base cases to provide tools for quick assessments of spills, in real time, to provide early warning for emergency response and remedial action, including determining the parties to be notified in the event of a spill; (LO-G-2 continued on next page)	IPZ-3 See Map 4.1 IPZ-1, 2 See Map 4.2	See Policy	N/A	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-2 Cont'd				3) Using the model as a consistent approach to assess potential drinking water threats from: a) other existing activities which might be a drinking water threat to one or more municipal drinking water system; b) assessing newly proposed activities which may pose a threat to one or more municipal drinking water systems at the proposal stage; and c) assessing impacts of climate change; 4) In the event of a spill use the model to assess and respond to potential water quality impacts at municipal water treatment plant intakes; 5) Sharing environmental monitoring data and using modelling to inform research on topics such as, but not limited to: a) the effectiveness of risk management measures and spill contingency measures; b) cumulative impacts of point and non-point sources of contaminants on near shore water quality; and c) the effectiveness of source protection plan policies in reducing the risk related to pathogens (not limited to E. coli), including identifying the pathogens and the respective densities at different times; assessing the associated risk at intakes due to pathogens in non-disinfected wastewater and other known specific sources of these pathogens; and undertaking quantitative microbial risk assessments, using a structured research and development design (such as based on the protocols established by the US EPA) to assess the threat and adequacy of existing treatment on a plant-by-plant basis.				
LO-G-3	**Significant/ Moderate/ Low Threats** All Lake Ontario Threats	Municipality (Peel, Toronto, Durham)	E	**Specify Action** (Lake Ontario Collaborative Group) The municipalities of Peel, Toronto and Durham shall participate as members of the Lake Ontario Collaborative Group (LOCG) and shall undertake tasks (including funding portions) as agreed to in the Terms of Reference established by the LOCG.	IPZ-3 See Map 4.1 IPZ-1, 2 See Map 4.2	See Policy	N/A	MON-1

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
~~LO-G-3~~	~~All Lake Ontario Threats~~	~~MOE~~	~~K~~	~~**Research** (Lake Ontario 3-D Hydrodynamic Circulation and Water Quality Simulation Model)~~ ~~Where event based modelling has identified activities that are a significant drinking water threat (IPZ-3), the Ministry of the Environment should, in consultation with responsible parties:~~ ~~a) maintain and further develop the 3-D Hydrodynamic Circulation Model with particular focus to the nearshore of Lake Ontario for future forecasting of activities to determine their potential to be significant drinking water threats;~~ ~~b) maintain specialized modelling expertise to undertake spills scenario modelling;~~ ~~c) lead the development of typical lake circulation spill base cases to provide tools for quick assessments of spills to provide early warning impact assessment; and~~ ~~d) use this model as a consistent approach for assessing potential impact from new/ proposed/ changed discharges, including spill scenario assessment and to assess actual spills.~~	~~IPZ-3 See Map 4.1~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~
~~LO-G-4~~	~~All Lake Ontario Threats~~	~~MOE~~	~~K~~	~~**Research** (Undertake Additional Spill Scenario Modelling)~~ ~~Where event based modelling has identified activities that are a significant drinking water threat (IPZ-3), the Ministry of the Environment, in consultation with responsible parties for the significant threat activities and applicable lead Source Protection Authority, should fund additional scenario modelling, to:~~ ~~a) undertake additional spill scenarios to assess other potential threats (locations, spill quantities, activities, contaminants), for example, pumping station overflow; and~~ ~~b) assess the effectiveness of Source Protection Plan policies relying on risk management measures and spill contingency measures to reduce the risk.~~	~~IPZ-3 See Map 4.1~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~
~~LO-G-5~~	~~All Lake Ontario Threats~~	~~MOE~~	~~K~~	~~**Research** (Inspect Stream Crossings)~~ ~~Where event based modelling has identified activities that are a significant drinking water threat (IPZ-3), the Ministry of the Environment should, with information provided by facility owners, compile an inventory of all pipe facilities which cross tributaries that drain into Lake Ontario to further understand risks associated with pipe break scenarios and to update respective Assessment Reports. Inventory should be shared with the Source Protection Authority and is intended to include:~~ ~~a) the state of the infrastructure (e.g., age, diameter, design life, quantity and type of products transported) to assess the potential threats;~~ ~~b) a map of the location of each crossing to produce a composite map;~~ ~~c) a prioritized list of facilities to be inspected/ maintained based on potential risk to drinking water; and~~ ~~d)~~a) ~~all petroleum pipeline system failure (spill) sensing and shut down measures and policies.~~	~~IPZ-3 See Map 4.1~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-G-4 ~~6~~	**Significant/ Moderate/ Low Threats** All Lake Ontario Threats	MOECC	J ~~K~~	**Education and Outreach** ~~Where event based modelling has identified activities that are significant drinking water threats (IPZ-3) or where the *Tables of Drinking Water Threats* (Ontario Regulation 287/07 under the *Clean Water Act, 2006*) identifies moderate or low drinking water threats (IPZ-2, IPZ-1),~~ The Ministry of the Environment and Climate Change is requested to establish an outreach program to discuss the findings and policies arising from the source water protection program with the National Energy Board, Ontario Energy Board, Environment Canada, Health Canada, New York State and US government agencies in order to: a) encourage collaboration on protecting our shared drinking water sources; and ~~b) assess emerging threats to drinking water (e.g. discharge of fracking waste water through sewage treatment plants, climate change, etc.);~~ ~~c)~~b) raise profile of the importance of Lake Ontario as a source of drinking water for Ontario.~~;~~ ~~and~~ ~~d)~~c) ~~assess the threats to the near shore water quality from the cumulative impacts of point and non-point sources of contaminants.~~	IPZ-3 See Map 4.1 IPZ-1, 2 See Map 4.2 ~~Chapter 5 of the respective Assessment Reports~~	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-NGS-1	Spill of Tritium From NGS	MOECC	K	**Specify Action** (Risk Mitigation/Reduction Plans) Where event based modelling has shown that a spill from a nuclear generating station would cause the storage and/or use of tritium contaminated heavy water to be a significant drinking water threat (IPZ-3), the Ministry of the Environment and Climate Change should, in consultation with the appropriate authorities: a) update spill notification protocols jointly with Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; b) review the reporting thresholds jointly with affected municipalities, including consideration to lowering of the spill notification threshold to municipalities for significant threat activities and adjust the reporting threshold as required; c) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; d) investigate and evaluate existing Risk Mitigation Plan/Risk Reduction Plan/Risk Contingency Plans make modifications where necessary with priority on reducing the likelihood of spills (such as potential additional design and operational best management practices and operational procedures), which would impair drinking water sources; and e) work with the Office of the Fire Marshal and Emergency Management ~~Ontario~~ to ensure that testing of the Risk Mitigation/Risk Reduction/Risk Contingency Plan is carried out within 3 years of the Source Water Protection Plan coming into effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.~~;~~ ~~f) use the 3-D Hydrodynamic Circulation and Water Quality Simulation Model, or other models as appropriate, to run proactive simulation of potential spills in order to be able to predict the extent and duration of contamination and to help determine the parties to be notified in the event of a spill;~~ ~~g) install permanent instrumentation (e.g. continuous recording current meters, with wireless telephone link to Ministry of the Environment Monitoring and Reporting Branch) to provide~~	IPZ-3 See Map 4.1	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
				~~real–time monitoring of current speed and direction for use with the 3-D Hydrodynamic Circulation Model or other models as appropriate, for future forecasting of spills impact assessments and assessing spill prevention strategies; and~~ ~~h)~~f) ~~ensure that the real-time lake current speed and direction data are available to municipalities and conservation authorities.~~				

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-SEW-1	The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	MOECC	C	**Prescribed Instrument** (Review and Enhancement of Spill Prevention and Contingency Plans) Where event based modelling has shown that a disinfection interruption at a waste water treatment plant would cause a sewage treatment plant by-pass discharge to surface water or sewage treatment plant effluent to be a significant drinking water threat (IPZ-3), the Ministry of the Environment and Climate Change should: a) review and amend Environmental Compliance Approvals to ensure they contain terms and conditions that ensure that the threats cease to be significant. Terms and conditions shall include a spill prevention and contingency plan.~~,~~ C~~c~~onsideration should also be given to the need for a year-round disinfection system and sufficient redundancy in the disinfection system to minimize the length of time that the disinfection system would not be working; b) update spill notification protocols jointly with Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; c) review the notification protocols ~~reporting thresholds~~ for significant threat activities and adjust the reporting protocols ~~threshold~~ as required to ensure the water plant operators are notified appropriately for a given magnitude of spill; d) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; and e) work with the Office of the Fire Marshal and Emergency Management ~~Ontario~~ to ensure that testing of the Contingency Plan is carried out within 3 years of the Source Water Protection Plan coming into effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.~~;~~ ~~f) use the 3-D Hydrodynamic Circulation and Water Quality Simulation Model, or other models as appropriate, to run proactive simulation of potential spills in order to be able to predict the extent and duration of contamination and to help determine the~~	IPZ-3 See Map 4.1	Existing: 3 years (T-1) Future: Immediately (T-3)	GEN-~~3~~5	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
				parties to be notified in the event of a spill; g)f) install permanent instrumentation (e.g., continuous recording current meters, with wireless telephone link to Ministry of the Environment Monitoring and Reporting Branch) to provide real–time monitoring of current speed, direction and water chemistry for use with the 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies; and h)g) ensure that the real-time data are available to municipalities and conservation authorities.				

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-SEW-2	Sanitary Trunk Sewer Spill (STS)	MOECC	C	**Prescribed Instrument** (Spill Prevention and Contingency Plan) Where event based modelling has shown that a spill from a sanitary trunk sewer would be a significant drinking water threat (IPZ-3), the Ministry of the Environment and Climate Change shall~~should~~: a) review and amend Environmental Compliance Approvals to ensure that the threat ceases to be significant. Terms and conditions should include a spill prevention and contingency plan incorporating a requirement for assessment of erosion and flooding risks in tributaries which could jeopardize the integrity of the sanitary sewer systems identified as a significant threat. Re-inspections shall also be required with the frequency commensurate with the level of risk identified during the initial inspection; b) update spill notification protocols jointly with Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; c) review the notification protocols~~reporting thresholds~~ for significant threat activities and adjust the reporting ~~threshold~~ protocol as required to ensure that water plant operators are notified appropriately for a given magnitude of spill; d) ensure that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; e) work with the Office of the Fire Marshal Emergency Management ~~Ontario~~ to ensure that testing of the Contingency Plan is carried out within 3 years of the Source Water Protection Plan coming into effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified; and f) direct the responsible municipality to undertake a review and report on the depth of ground cover over the pipeline at each crossing including an assessment of erosion, flood risk and the integrity of their infrastructure. MOECC shall consider this information in determining the risk mitigation measures required to ensure that the drinking water threat ceases to be or does not become significant. The inspection report should be shared with the Source Protection Authority.	IPZ-3 See Map 4.1	Existing: 3 years (T-1) Future: Immediately (T-3)	GEN-~~3~~5	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
				~~a) use the 3-D Hydrodynamic Circulation and Water Quality Simulation Model, or other models as appropriate, to run proactive simulation of potential spills in order to be able to predict the extent and duration of contamination and to help determine the parties to be notified in the event of a spill;~~ g) ~~install permanent instrumentation (e.g., continuous recording current meters, with wireless telephone link to Ministry of the Environment Monitoring and Reporting Branch)to provide real-time monitoring of current speed, direction and water chemistry for use with the 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies; and~~ h) ~~ensure that the real-time data are available to municipalities and conservation authorities.~~				

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-SEW-3	~~**Significant/**~~ **Moderate/ Low Threats** All Threats that are Linked to Storm Sewers	MOECC	J K	**Specify Action** (Storm Sewers) Where a spill from a facility could reach an off-site storm sewer such that it would be a significant drinking water threat (IPZ-3), or moderate or low drinking water threat (IPZ-2, IPZ-1) as identified in the *Tables of Drinking Water Threats* ~~(Ontario Regulation 287/07 under the *Clean Water Act, 2006* in IPZ-2, IPZ-1)~~, the Ministry of the Environment and Climate Change should enact the necessary ~~legislation/~~regulation and/or instrument to require such facility owners to be subject to provincial approvals for spill prevention/ mitigation plans.	IPZ-3 See Map 4.1 IPZ-1, 2 See Map 4.2 ~~See Chapter 5 of the respective Assessment Reports~~	Future: Consider within 2 years (T-15)	N/A	MON-4
~~**LO-SEW-4**~~	~~**Significant/ Moderate/ Low Threats**~~ ~~All Pathogen Threats~~	~~MOE~~ ~~Health Canada~~	~~J~~ ~~K~~	~~**Specify Action** (Development of Pathogen Risk Assessment)~~ ~~Where event based modelling has identified activities that are significant pathogen drinking water threats (IPZ-3) or where the *Tables of Drinking Water Threats* (Ontario Regulation 287/07 under the *Clean Water Act, 2006*) identifies moderate or low pathogen drinking water threats (IPZ-2, IPZ-1), the Ministry of the Environment and Health Canada should provide technical and financial support to the Lake Ontario Collaborative member municipalities to undertake the development of a pathogen (not limited to *E. coli*) risk assessment, including:~~ ~~a) identifying the pathogens and the respective densities at different times;~~ ~~b) assessing the associated risk at intakes due to pathogens in non-disinfected wastewater and other known specific sources of these pathogens; and~~ ~~c)~~a) ~~undertaking quantitative microbial risk assessments, using a structured research and development design (such as based on the protocols established by the US EPA) to assess the threat and adequacy of existing treatment on a plant-by-plant basis.~~	~~IPZ-3~~ ~~See Map 4.1~~ ~~IPZ-1, 2~~ ~~See Chapter 5 of the respective Assessment Reports~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~

LO-PIPE-1	Pipelines Transporting Petroleum Product (Containing Benzene) Crossing Tributaries of Lake Ontario	MOECC	K	**Specify Action** (Spill Prevention/Contingency and Emergency Response) Where event based modelling has shown that a spill from a petroleum pipeline system reaching a tributary would be a significant drinking water threat (IPZ-3), the Ministry of the Environment and Climate Change should~~:~~ work with facility owners and provincial and federal regulators to develop, review and recommend necessary improvements to existing spill prevention, spill management, risk reduction, and contingency plans to ensure the following: 1) plans are based on the depth of ground cover at surface water crossings; 2) spill response time frames are established; 3) responsibilities of first responders are established to ensure a prompt unified regulatory command structure to manage the spill response; 4) notification protocols are established jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media; 5) notification protocols~~reporting thresholds~~ are established for significant threat activities to ensure the water plant operators are notified appropriately for a given magnitude of spill; 6) that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill; 7) that there are appropriate spills response plans for each crossing; 8) that appropriate pipeline system failure and shut down measures and policies are included; 9) a review is undertaken on the depth of ground cover over the pipeline at each crossing, including an assessment of erosion and flood risk; ~~10) that an assessment of condition of the pipe system is provided;~~ 10) that the facility owner provides assurance concerning the integrity of their infrastructure to prevent spills where these could be a significant drinking water threat; 11) that a report on the inspection of the pipeline crossings at each tributary is provided to the Source Protection Authority; ~~11)~~12) that the pipeline design and operational best management practices are in place (including potential additional design and operational best management practices);~~ and~~ ~~12)~~13) that any new or expansions or pipeline replacements are constructed to meet current best design criteria; and ~~13)~~14) a provision is included in the contingency plan that the facility owner work with the Office of the Fire Marshal and Emergency Management~~ Ontario~~ to ensure that testing of the contingency plan is carried out within 3 years of the Source Protection Plan coming into effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.~~;~~	IPZ-3 See Map 4.1	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

~~LO-PIPE-1 (Con't)~~	~~Pipelines Transporting Petroleum Product (Containing Benzene) Crossing Tributaries of Lake Ontario~~	~~MOE~~	~~K~~	~~b) in collaboration with Environment Canada: i) use the 3-D Hydrodynamic Circulation and Water Quality Simulation Model, or other models as appropriate, to run proactive simulation of potential spills in order to be able to predict the extent and duration of contamination and to help determine the parties to be notified in the event of a spill; ii) install permanent instrumentation (e.g., continuous recording current meters, with wireless telephone link to Ministry of the Environment Monitoring and Reporting Branch) to provide real-time monitoring of current speed, direction and water chemistry for use with the 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies; ii) ensure that the real-time data are available to municipalities and conservation authorities; and v) undertake Lake Ontario nearshore monitoring yearly; and make the data available to municipalities and conservation authorities.~~	~~IPZ-3 See Map 4.1~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
LO-FUEL-1	Handling and Storage of Fuel (Spill from Petroleum Tank Farm)	MOECC	K	**Specify Action** (Spill Prevention/Contingency Plan) Where event based modelling of a spill from a petroleum tank farm has shown that it would be a significant drinking water threat (IPZ-3), the Ministry of the Environment and Climate Change ~~shall require~~ will ~~a risk reduction plan for the tank farm. Ministry of the Environment~~work with~~, in consultation with the~~ applicable regulating authorities (e.g., Ministry of Government and Consumer Services and Technical Standards and Safety Authority)~~ should~~ to ensure consideration is given to the following actions related to spill prevention contingency measures: a) investigate and evaluate existing Spills Prevention Plans/Spill Contingency Plans; b) recommend additional measures to reduce the likelihood that a spill from a storage facility would impair drinking water source quality; c) incorporate all applicable provisions of Ontario Regulations 213/01 and 217/01 and their codes as well as other measures to ensure the protection of drinking water sources into a Risk Management Plan for the facility, which may include but not be limited to: i. best management practices ii. site characterization as necessary iii. proof of ability to pay for clean-up of potential contamination iv. the appropriate frequency of inspections d) review existing Environmental Compliance Approvals for discharges to surface water at the identified sites to determine if there are adequate safeguards to protect drinking water sources; e) determine if additional works or procedures are required to reduce the likelihood of contaminants discharging to Lake Ontario in the event of a spill or equipment failure/malfunction; f) ensure provisions for spill notification protocols are established jointly with Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media;	IPZ-3 See Map 4.1	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4

				g) establish notification protocols~~reporting thresholds~~ for significant threat activities to ensure that water plant operators are notified appropriately for a given magnitude of spill; h) ensure that information is communicated to all (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) responsible parties who are responding to the spill; and i) include a provision that the facility owner work with the Office of the Fire Marshal and Emergency Management ~~Ontario~~ to ensure that testing of the Contingency Plan is carried out within 3 years of the Source Water Protection Plan coming into effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified.~~;~~ ~~j) use the 3D Hydrodynamic Circulation and Water Quality Simulation Model, or other models as appropriate, to run proactive simulation of potential spills in order to be able to predict the extent and duration of contamination and to help determine the parties to be notified in the event of a spill;~~ ~~k) install permanent instrumentation (e.g., continuous recording current meters, with wireless telephone link to Ministry of the Environment Monitoring and Reporting Branch) to provide real-time monitoring of current speed, direction and water chemistry for use with the 3-D Hydrodynamic Circulation Model for future forecasting of spills impact assessments and assessing spill prevention strategies; and~~ ~~l) ensure that the real-time data is available to municipalities and conservation authorities.~~				

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
~~LO-FUEL-2~~	~~Handling and Storage of Fuel~~ ~~(Spill from Petroleum Tank Farm)~~	~~MOE~~	~~K~~	~~**Specify Action** (Storm Sewers)~~ ~~Where event based modelling of a spill from a facility has shown that it could reach an off-site storm sewer such that it would be a significant drinking water threat (IPZ-3), the Ministry of the Environment should enact the necessary legislation/regulation to require such facility owners to be subject to provincial approvals for spill prevention/mitigation plans.~~	~~IPZ-3 See Map 4.1~~	~~2 years (T-15)~~	~~N/A~~	~~MON-4~~
LO-FUEL-2~~3~~	**Significant/ Moderate/ Low Threats** Handling and Storage of Fuel (Spill from Petroleum Storage Tanks)	MOECC	J K	**Education and Outreach** (Fuel Tank Farms) Where event based modelling has identified activities that are significant drinking water threats (IPZ-3) or where the *Tables of Drinking Water Threats* (Ontario Regulation 287/07 under the *Clean Water Act, 2006*) identifies moderate or low drinking water threats (IPZ-2, IPZ-1), the Ministry of the Environment and Climate Change shall, in consultation with appropriate authorities, work with the facility owner to: a) support the investigation and evaluation of existing Spills Prevention Plans/ Spill Contingency Plans; and b) identify the need for potential additional design and operational best management practices which would reduce the likelihood that a spill from a storage facility would impair drinking water source quality for tanks located on federal lands.	IPZ-3 See Map 4.1 IPZ-1, 2 See Map 4.2 ~~Chapter 5 of the respective Assessment Reports~~	Existing & Future: Consider within 2 years (T-15)	N/A	MON-4