




**SPC Meeting – February 28, 2017**

## **Annual Plan Implementation Report**



Halton-Hamilton Source Protection Committee  
Diane Bloomfield, Project Manager

# Annual Reporting Process Followed

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- Customized Excel workbooks were compiled for each municipality (12) and the NEC
- Great feedback on the workbooks, municipalities like them
- 9 municipalities and the NEC completed and submitted the templates
- Mississauga and Grimsby did not submit a report – they rely on their upper tier municipalities for source protection planning and had no mandatory policies to implement or report on
- Peel Region submitted a Risk Management Official's report instead of the template and many questions were not answered
- Hamilton, Halton Region, Puslinch and Niagara submitted RMO reports
- SPPB distributed all provincial ministry worksheets
- Follow-up questions were asked and clarity provided, some outstanding questions

# Threat Tracking

Threat Type	Significant Threat Count in AR dated July 2015 <b>A</b>	Significant Threats Added Through Verification <b>B</b>	Significant Threats Removed Through Verification <b>C</b>	Significant Threats Addressed Through Policy Implementation <b>D</b>	Number of Existing Significant Threats <b>A+B-C-D</b>	Overall Progress Made <b>D/A+B-C</b>
Sewage	136	0	3	99	34	74
ASM application	3	0	0	0	3	0
ASM storage	3	0	0	0	3	0
Commercial fertilizer handling & storage	1	0	1	0	0	
Pesticide application	5	0	1	0	4	0
Road salt application	5	0	0	0	5	0
Fuel handling & storage	18	3	3	1	17	6
DNAPL handling & storage	1	1	0	0	2	0
Livestock land	7	0	0	0	7	0
Oil Pipelines	22	0	0	0	22	0
<b>Total</b>	<b>201</b>	<b>4</b>	<b>8</b>	<b>100</b>	<b>97</b>	<b>51</b>

# Source Protection Plan

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- Effective December 31, 2015
- Policy breakdown
  - Mandatory implementation to address significant threats – 80
  - Mandatory reporting – 64
  - Optional implementation – 18
- Implementing bodies – all municipalities (12), 2 CAs, provincial ministries – MOECC, MNRF, MTO, OMAFRA, MMA; NEC, Hamilton Port Authority, Agrichemical Warehousing Standards Association, de-icing contractors, oil handlers, Environment Canada, airport authorities, landowners

# Education and Outreach Policies

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Mandatory implementation to address the following significant threats:

- Hazardous waste disposal
- Proper use and maintenance of septic systems and holding tanks
- Application or handling and storage of agricultural source material
- Application or handling and storage of category 1 non-agricultural source material
- Application or handling and storage of commercial fertilizer
- Application or handling and storage of pesticide
- Application or handling and storage of road salt
- Handling and storage of fuel

# E&O Policy Implementation

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- Timeframe – 2 years from plan effective date
- Policies are either not started or in process
- Work scheduled for 2017
- Required reporting – document the nature of any new or continuing programs, the number of persons contacted, location of the participants
- Reporting detail varied – some monitoring policies in process rather than fully implemented
- Tools being used to implement policies:
  - Educational materials for general public
  - Educational materials for target audiences
  - In-person workshops
  - Site visits
  - Source protection content on municipal website
  - Collaboration with other bodies

# Incentive Policies

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1. Provincial funding for stewardship and the implementation of a program to address
  - Septic system upgrades, replacements, decommissioning, and holding tank replacements and decommissioning, and to assist with connection to municipal sewage works
  - Application and storage of ASM, and land used for livestock
2. Municipal financial assistance program for on-site sewage system repairs

# Incentive Policy Implementation

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- Timeframe – plan effective date
- Municipal septic incentive – not started
  - Halton landowner fiscal impact analysis to be completed in 2017
- Provincial incentive – not started because still requiring conservation authority members of the Joint Advisory Committee (JAC) to build a business case
- Implementation of stewardship program cannot occur if provincial funding program is not reinstated



# Prescribed Instrument Policies

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## MOECC

- Waste disposal sites
- Stormwater detention pond discharges
- Discharge of industrial effluent
- Sanitary sewers and pipes
- Large septic systems
- Sewage treatment plant discharges, bypasses and storage of sewage
- Sewage works
- Water taking

## OMAFRA

- Application or storage of ASM
- Application or handling and storage of category 2 and 3 NASM
- Application of commercial fertilizer
- Land used for livestock

# PI Policy Implementation

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- Timeframe – 3 years from plan effective date
- Many policies for future threats are implemented as screening processes and standard operating practices are in place
- Policies for existing threats are typically in process
- Various levels of reporting from MOECC and OMAFRA
- Some HH monitoring policies require specific details be reported

## Challenges

- Some details were not reported
- Sewage works prescribed instruments reported as one number
  - Separate HH policies for stormwater, industrial effluent discharges, sanitary sewers and pipes, large septic systems, sewage treatment plant discharges, bypasses and storage
- Inspections of agricultural properties and review of nutrient management plans and strategies and NASM plans – reported for 2015/16 fiscal year and per MOECC district office (Hamilton and Halton-Peel) – unusable information unless numbers are zero

## PI Policy Implementation Summary – Future Threats

Ministry	Threat Type	Policy	Actions Taken on Incoming Applications	Number of Applications/NMPs / NMSs/NASM Plans PTTW Reviewed	Number of Approvals / PTTW Decisions	Locations of Applications Received	Copies Received of Any Issued Approvals
MOECC	waste	T-1-C b.	Screen applications and follow standard operating procedures	2	0	unknown	none issued
MOECC	stormwater	T-4-C b.					
MOECC	industrial effluent discharges	T-5-C b.					
MOECC	sanitary sewers & pipes	T-6-C b.					
MOECC	large septic systems	T-7-C b.					
MOECC	STP discharges, bypasses, storage	T-8-C b.					
OMAFRA	ASM	T-21-C b. NMPs and NMSs	Screen new applications for NMSs and add conditions if needed. Existing threats review will begin in 2017. <b>NMPs not reviewed.</b>	0	0	0	
OMAFRA	NASM	T-24-C b. NASM plans	Screen new applications and add conditions if needed	0	0	0	
OMAFRA	commercial fertilizer	T-26-C b. NMPs	<b>NMPs not reviewed, therefore, policy not implementable</b>				
OMAFRA	land used for livestock	T-48-C b.	<b>"OMAFRA does not track this information"</b>	not reported	not reported	not reported	
MOECC	PTTW	T-55-C c.	new and increased takings	0	0	WHPA-Q1	none issued

# PI Policy Implementation Summary – Existing Threats

Ministry	Threat Type	Policy	Actions Taken on Incoming Applications	Number of previously issued instruments completed detailed review	Number of instruments with no significant threat	Locations of Applications Received	Comment
MOECC	Waste – future only	T-1-C b.	Follow standard operating procedures	4	4	not reported	no existing threats in AR
MOECC	large septic systems	T-7-C b.	Follow standard operating procedures	8	0	unknown	Don't know if the 8 ECAs reviewed are consistent with the threats identified as existing
MOECC	STP discharges, bypasses, storage	T-8-C b.	Follow standard operating procedures				
MOECC	sewage works	T-52-C b.	Follow standard operating procedures				
OMAFRA	ASM	T-21-C b. NMPs and NMSs	Screen new applications for NMSs and add conditions if needed. Existing threats review will begin in 2017. <b>NMPs not reviewed.</b>	0	0	0	
OMAFRA	land used for livestock	T-48-C b.	<b>"OMAFRA does not track this information"</b>	not reported	not reported	not reported	
MOECC	PTTW	T-55-C c.	new and increased takings	0	0	WHPA-Q1	

# Spills Action Centre

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- Policy T-52-C d. MOECC reporting requirements regarding spills within IPZ-3s
  - Number
  - Type
  - Location
  - Adjusted thresholds
  - Changes to spill reporting system – posted on EBR
- Details not reported

# Agricultural PIs - Inspections

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- ASM Proactive Inspection Program
  - 4,655 phased-in farms were risk ranked and assigned priority risk scores
    - 83 were identified as having potential significant threats
    - 136 inspections were completed in 2015/16
    - Of these, 20 inspections were on farms where significant threats were possible
    - 12 moderate, 66 low, and 38 not a drinking water threat
    - Of the 20 significant threat farms inspected, 7 were in full compliance, 8 had minor administrative violations, 5 other violations but none identified any evidence of actual or anticipated human health or environmental impairment
    - 3 of the 5 violations have completed abatement actions
    - 2 have abatement activities ongoing – 1 in Hamilton District and 1 in Guelph District

# Agricultural Pls - Inspections

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- NASM Proactive Inspections
  - 2,773 NASM Plan sites were risk ranked and assigned priority risk scores
    - 30 significant threats were identified
  - Two types of inspections undertaken
    1. NASM Site Assessment - quality of NASM plan - 31 inspections
    2. Land application - compliance - 108 inspections
  
- 1. NASM Site Assessment Inspections – 3 significant threat sites inspected in Ontario in 2015/16
  - 2 of the 3 sites were in full compliance and 1 required the sketch to be updated
  - Halton-Peel - 2 sites with low drinking water threats inspected
  - Hamilton – 3 sites with low and 2 sites with no drinking water threats inspected

# Agricultural Pls - Inspections

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2. NASM Land Application Inspections – 6 significant threat sites inspected in Ontario in 2015/16
  - 4 of the 6 sites were in full compliance and 2 required abatement measures
  - Of the 2 sites, 1 has abatement measures still ongoing
  - Halton-Peel - 2 sites with low drinking water threats inspected
  - Hamilton – 1 site with moderate threat, 7 sites with low, and 9 sites with no drinking water threats inspected
  
- As an extra – MOECC reported that in the Hamilton District, 1 site was inspected for hauled sewage and found to not have a drinking water threat



# PI Policy Implementation Summary – Inspections

Threat Type	Policy	Number of Inspections	Not a Threat	Number of Low Threats	Number of Moderate Threats	Number of Significant Threats	Number of Inspections Compliant	Number of Inspections Non-compliant	Location of Inspections
ASM	T-22-S b. ASM	6	0	4	1	1	unknown	unknown	Hamilton DO
NASM	T-22-S b. NASM	5	2	3	0	0	unknown	unknown	Hamilton DO
		2	0	2	0	Halton-Peel DO			
		17 2	9 0	7 2	1 0	0 0			Hamilton DO Halton-Peel DO
Commercial fertilizer	T-22-S b.	<b>No report</b>							
Livestock lands	T-22-S b.	<b>No report</b>							

# Land Use Planning Policies

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## **Policies address:**

- Prohibition of the establishment of waste disposal sites
- Stormwater pond discharges
- Septic system locations and lot sizes
- Prohibition of road salt storage facilities
- Prohibition of snow storage facilities
- Prohibition of gas stations
- Requirement for disclosure reports
- Final development approval after MOECC determines that a permit to take water will not be a significant drinking water threat
- Settlement area and urban area expansions after it has been demonstrated that reduction in recharge will not create a significant drinking water threat
- Planning applications must demonstrate that all attempts have been made to achieve a pre-development recharge condition

# Land Use Planning Policy Implementation

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- Timeframe –
  - Official plan amendments by next 5-year review
  - Zoning by-law conformity in accordance with the *Planning Act*
- Official plan amendments complete
  - County of Wellington
  - City of Hamilton
- Official plan amendment in process – Halton Region
- Zoning by-laws updated
  - City of Hamilton
  - Township of Puslinch - currently being reviewed
- Halton Hills comment – “Planning & Eng. are aware of the Policy and will be following the direction even without the Town's OP and ZB being updated.”

# Land Use Planning Implementation

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- Disclosure reports –
  - Requirement in Hamilton and Wellington County's Official Plans
  - 1 received in Hamilton
  - Halton Region requesting that applicants provide disclosure reports to assist in assessing potential significant threats – not formalized yet.
- The location of 1 stormwater pond in Halton Hills under review for location outside of a WHPA
- NEC indicates their 4 policies are implemented
  1. Lot sizes to accommodate septic systems
  2. Prohibition of road salt storage facilities
  3. Prohibition of snow storage facilities
  4. Prohibition of gas stations

## Part IV Policies

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- Screening *Planning Act* and building permit applications for significant threats – 8 policies that look for:
  - Establishment of waste disposal sites
  - Application or storage of agricultural source material
  - Application or handling and storage of commercial fertilizer
  - Handling and storage of pesticide
  - Handling and storage of fuel
  - Handling and storage of DNAPLs
  - Handling and storage of organic solvents
  - Use of land by livestock
- 1 policy requires prohibition of future waste disposal sites that don't require environmental compliance approvals
- 8 policies require negotiation of risk management plans (including small road salt facilities)

# Part IV Policy Implementation

Threat Type	Policy ID	Municipality	Estimated number of RMPs required to address significant drinking water threats
ASM	T-20-C b.	Halton Region	1
		Hamilton	3
Commercial Fertilizer	T-25-C b.	Halton Region	0
		Hamilton	0
Pesticide	T-29-C b.	Halton Region	0
		Hamilton	4
Road Salt	T-32-C b.	Halton Region	0
Fuel	T-40-C b.	Halton Region	1
		Hamilton	1
DNAPL	T-44-C b.	Halton Region	0
		Puslinch	Potentially 1
		Hamilton	1
Organic Solvent	T-45-C b.	Halton Region	0
		Hamilton	0
Livestock Lands	T-47-C b.	Halton Region	1
		Hamilton	4

# Strategic Policies

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- Timeframe – plan effective date
- Strategic policies include those not using tools described previously to address specific threat types and those policies applied more broadly
- Some policies are mandatory and some are for consideration
- This group of policies address:
  - Discharge of combined sewer effluent
  - Connection to municipal services
  - On-site sewage system inspection program
  - Disconnection of stormwater sources from sanitary sewers
  - Encourage golf course operators to obtain Audubon Certification
  - Review of Agrichemical Warehousing Standards
  - Amendment of salt management plans
  - Road salt initiatives with MTO and de-icing contractors

# Strategic Policies continued

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- This group of policies also address:
  - Airport de-icing design standards
  - Update emergency response plans in IPZ-3s
  - Strengthening watermain leak detection programs
  - Enhancement of water conservation plans
  - Enhance and enforce outdoor water use programs
  - Inline pipeline integrity testing and visual inspections of oil pipelines
  - Oil pipeline applications include measures to protect drinking water



# Strategic Policy Implementation – sewage inspection program

	Number of Properties Requiring Sewage System Inspections	Number of Inspections Completed/ Reports and Certificates Submitted to Municipality	Number of Sewage Systems Requiring Minor Maintenance Work	Number of Sewage Systems Requiring Major Maintenance Work	Percentage of Required Maintenance Work Projects Completed	Next Steps to Complete All Required Inspections and Maintenance Work
Hamilton	76	67	0	0	NA	Orders have been issued to properties that have not complied, requiring the work to be done. The Building Division is currently deciding on their future steps in regards to the remaining properties  3 outstanding in Freelton and 6 in Greenville
Milton	37	32	37 all systems required to be pumped	1 - tank replacement and repair to bed	100	4 outstanding properties in Campbellville which the Manager of inspections is dealing with directly  1 property removed

# Strategic Policy Implementation

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- Timeframe – plan effective date
- Strategic policies rely on a variety of implementing bodies
- Some policies are not started, some in process, and some implemented

**Emergency Plan Update** – some complete, some in process, some not started

- Hamilton Water Emergency Plan procedure as well as Spill Procedure include up-to-date maps. Hamilton Water's Spill Response Notification, Coordination & Corrective Actions document (associated document of the Emergency plan), details the protocol to ensure sufficient corrective actions in the event of a spill. This document details actions to be taken should an incident occur. Future action is to include source protection in a future emergency preparedness exercise

# Strategic Policy Implementation – Road Salt

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- Policies apply to areas where low, moderate and significant threats are possible
- Municipal salt management plans in process of being updated
- Staff have not yet reached out to de-icing contractors
- Contractors working on the provincial highway network are required to conform to the Salt Management Plan. Training is provided annually before the start of the winter season to all of MTO's maintenance contractors.
- MTO continues to evaluate new products and technologies to minimize the impact of winter maintenance on the environment including reducing salt applications rates when pre-wetting or pre-treating the salt.
- No response received to follow-up question about study at Hwys 401 and 6

# Strategic Policy Implementation

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- Sanitary sewer disconnection program to reduce by-passes – Hamilton offers incentive program
  - By-passes in 2016 – Halton Region – 7, Hamilton – 10
- Municipal services connections – Halton Region - To be evaluated if/ when municipal sewage mains are extended into previously unserved areas
- Letter sent to Agrichemical Warehousing Association with no reply to date
- Oil pipeline companies provided integrity testing schedules as reported previously – not 3 years but use multiple tools
- Suncor provided excerpt from emergency plan – follow-up required

# Optional Policies – Transport Pathways

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- Not mandatory for implementation
- No timeframe

# Optional Policies – Transport Pathways

Policy	Policy Intent	Implementing Body	Reported Comments
O-1-S a.	Use best management practices during the installation of new municipal infrastructure in proximity to municipal wells	municipalities	municipalities will but no infrastructure planned
O-1-S b.	Incorporate conditions of approval for development applications to ensure wells are abandoned in accordance with Ontario Regulation 903	municipalities	many municipalities already have this in place
O-1-S c.	Provide funding for decommissioning of wells and E&O about decommissioning of wells	MOECC and municipalities	Hamilton and Halton Region have existing programs. Niagara implements through NPCA. MOECC is having the CAs justify stewardship funds
O-1-S d.	If funding is provided, stewardship program to decommission wells	CA stewardship teams	CA stewardship teams and Hamilton and Halton Region implementing well decommissioning programs
O-1-S e.	Develop a program to facilitate the connection to municipal water services of current private well users within the urban area	municipalities	Halton Region and Hamilton have programs in place
O-1-S f.	Prohibit the construction of new wells and septic systems within the urban area where municipal water and wastewater services are available	municipalities	Milton, Halton Region, Hamilton policies in place
O-1-S h.	Refer notice of transport pathway to staff	SPA, SPC	Process not yet in place to receive notification.

## Other Policy – Collection of Climate Data

Policy	Policy Intent	Implementing Body	Reported Comments
O-2-S a.	Collect and/or interpret the hydrogeological, hydrological, and climate data and share the data in a timely manner	municipalities, CAs, MOECC, MNRF, EC	Data is collected, no new data due to SP, will work on sharing the data better in 2017
O-2-S b.	Install practical instrumentation to provide monitoring in Lake Ontario	MOECC	Not implemented
O-2-S c.	Review monitoring network for climate	EC	No report received. Will follow up with EC.
O-2-S d.	Review monitoring network for groundwater and surface water	MOECC	No report received. Will follow up with MOECC

# Other Policy – Disposal of Imported Fill

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- Develop and implement an education and outreach program for importation of fill
- Conservation Halton and Hamilton CA have prepared new guidance documents
- Municipalities have not started implementation



# Other Policy – Spill Prevention, etc.

Policy	Policy Intent	Implementing Body	Reported Comments
O-5-S a.	Location of WHPAs and IPZs incorporated into emergency response plans with a focus on spills along highways, rail lines or in shipping lanes	municipalities	some have incorporated the maps into emergency response plans
O-5-S b.	Provide mapping of vulnerable areas to Spills Action Centre	MOECC	SAC has GIS layers and updated procedures
O-5-S c.	Implement an E&O program to encourage transportation businesses to prepare spill prevention plans	municipalities	Oakville and Halton Hills indicate that they have this in place
O-6-S	Advise vessel operators and companies that lease space on port lands that drinking water intakes are near the Burlington Canal	Hamilton Port Authority	Has agreed to implement policy

## Other Policy – Lake Ontario Outreach

Policy	Policy Intent	Implementing Body	Reported Comments
O-7-S	Reach out to Ontario Region of EC to share information about water resources obtained through source protection planning process - aim to update Environmental Sensitivity Atlas for Lake Ontario's Canadian Shoreline	SPPB	Not specifically reported on
O-8-S	Reach out to EC, NY State, US government agencies to discuss the findings and policies arising from source protection planning	MOECC	MOECC sits on committees, LaMP, Water Quality Agreement

# MOECC Reporting Forms - handouts

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- Supplemental Form
  - High level overview of the program implementation results within our watershed
  - Emphasis on integration of source protection program into municipal decision making
- 2016 Source Protection Authority Report
  - Rankings – all satisfactory

# Integration

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- Many questions in the supplemental form are on how source protection has been integrated into municipal programs and decision making
- Goes beyond policy implementation
- Most municipalities are integrating source protection into some programs and decision making
- Burlington and Oakville only have IPZ-3 significant threats so only have one mandatory policy to implement – request disclosure report
- In Halton Region, the lower tier municipalities are waiting for Halton Region to complete their Official Plan amendment so they can start theirs, and will implement policies and update procedures at that time
- Township of Puslinch and County of Wellington have not integrated source protection knowledge into their program activities

# Cedarvale Well Field Issue

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- Cedarvale well water quality is impaired due to rising chloride concentrations
- MOECC asked if a change has been noticed since plan approval
- Halton Region indicated that there has been no change in the concentration/trend