

## MINUTES

### HALTON-HAMILTON SOURCE PROTECTION COMMITTEE

#### MEETING # 3-16

Brant Hills Community Centre, Burlington  
December 13, 2016 1:30 pm to 4:45 pm

SPC Attendees:			
Bob Edmondson	Judi Partridge	Adam Gilmore	Turlough Finan
Michael Kandravy	Gavin Smuk	Nick DiGirolamo	Glenn Powell
Dave Braden	David Rodgers		
Other Attendees:			
Scott Peck, HCA	Mary Wooding, MOECC Liaison	Carmen Vega, City of Hamilton	
Julia Wagner, City of Hamilton	Chris Wilson, City of Hamilton	Jen Crosswell, Niagara Region	
Angelo Capone, City of Burlington	Michelle Cuomo, Wellington County	Lisa De Angelis, Halton Region	
Kathy Menyes, CH (1:50pm)	Diane Bloomfield, HHSPR	Jenny Simons, CH	

ITEM	TOPIC/DISCUSSION	ACTION REQUIRED
1.	<b>Roll Call</b> Introduction of Mary Wooding, MOECC Liaison with a round table of introductions later in the meeting.	
2.	<b>Disclosures of Conflict of Interest</b> None	
3.	<b>Review of Agenda</b> <b>Acceptance of Agenda:</b> <b>HHSPC 16-10</b> <b>Moved by:</b> Glenn Powell <b>Seconded by:</b> Nick DiGirolamo <b>THAT</b> the agenda be accepted as revised. <p style="text-align: right;">Carried</p> The presentation on the Greensville Technical Work will be rescheduled for a meeting in 2017.	
4.	<b>Approval of Source Protection Committee Meeting Minutes of September 13, 2016</b> <b>HHSPC 16-11</b> <b>Moved by:</b> Judi Partridge <b>Seconded by:</b> Michael Kandravy <b>THAT</b> the Source Protection Committee meeting minutes of September 13, 2016 be approved as circulated. <p style="text-align: right;">Carried</p>	
5.	<b>Business Arising from the September 13, 2016 SPC meeting minutes</b> <b>Husky Oil Spill Investigation - Michael Kandravy</b> (slide deck attached) – Michael provided an overview of the investigation findings on why a Husky Oil pipeline released oil into the North Saskatchewan River in July 2016 <ul style="list-style-type: none"> <li>• pipeline break was caused by buckling of the pipeline due to the force of ground movement as a result of heavy rain, weak clay formations in the area, and land features that prevented adequate drainage</li> <li>• not the result of material defects, deficiencies or corrosion and Husky’s integrity management program did not predict the event</li> </ul> <p><i>Follow-up: The investigation report can be reviewed at the following link</i>  <a href="http://publications.gov.sk.ca/documents/310/95830-16TAN%20North%20Sask%20River%20Crossing%20-%20Geotechnical%20Investigation%20Report%20-%20Stantec%20-%20November%203,%202016.pdf">http://publications.gov.sk.ca/documents/310/95830-16TAN%20North%20Sask%20River%20Crossing%20-%20Geotechnical%20Investigation%20Report%20-%20Stantec%20-%20November%203,%202016.pdf</a></p> <b>Personal Landowner Information - Diane Bloomfield/Mary Wooding</b> <ul style="list-style-type: none"> <li>• There isn’t any special consideration that a risk management official must consider when preparing a risk management plan in order to protect personal information; however an official should only include personal information to the extent</li> </ul>	<p>Michael Kandravy to provide link to study conducted by Husky Energy</p> <p>Mary Wooding to confirm with OMAFRA the privacy of Nutrient</p>

ITEM	TOPIC/DISCUSSON	ACTION REQUIRED
	<p>necessary to develop the risk management plan and should not include any extraneous information that would not be relevant.</p> <ul style="list-style-type: none"> <li>• Discussion regarding the privacy of plans and strategies prepared under the Nutrient Management Act.</li> </ul> <p><b>City of Hamilton Meeting - Gavin Smuk/Judi Partridge</b> - Gavin provided the background to the issue of the survey required when development or building permit applications are applied for. Survey requests information about non-significant threat activities. Judi indicated that future communications with landowners would be looped back through Gavin to tap his knowledge and understanding.</p> <p>Judi provided some statistics on Hamilton's sewage system inspection program required by the Ontario Building Code. Some residents have complained about the fee charged by the City.</p> <ul style="list-style-type: none"> <li>- 79 households received a letter requiring compliance with the program</li> <li>- 80% are compliant</li> <li>- \$228 fee currently charged could change for the next round of inspections required in five years</li> </ul> <p>Additional discussion regarding Hamilton's planning policies and how they are linked to source water protection initiatives and the source protection plan policies.</p> <p><b>Great Lakes Public Forum - Adam Gilmore</b> – Adam provided an overview of the forum, which he attended October 4-6, 2016. The forum is a requirement of the Great Lakes Water Quality Agreement and the scope of the symposium was quite large. The Agreement has 10 Annexes or focused objectives to monitor and report on the quality of the Great Lakes, which cover topics such as chemical issues, nutrients, aquatic invasive species, climate change impacts, etc. The overall status of the Great Lakes is fair and unchanging, while the drinking water status is good and unchanging. Presentations/discussions were focused primarily on nutrients and algal blooms - particularly in western Lake Erie, invasive species and the degradation of habitat for native species, chemicals and microplastics, and the importance of groundwater inputs to the Great Lakes.</p>	<p>Management Plans and Strategies</p>
6.	<p><b>Correspondence Received – South Georgian Bay-Lake Simcoe Source Protection Committee Chair</b> - Bob Edmondson</p> <p>A copy of a letter sent to the MOECC and dated December 1, 2016 was received from the South Georgian Bay-Lake Simcoe Source Protection Committee Chair regarding a proposed regulation that would establish a moratorium on the issuance of new or increasing water taking permits for water bottling companies. It was brought forth that a new EBR posting existed also regarding water bottling companies.</p> <p><b>HHSPC 16-12</b>                      <b>Moved by:</b>      Adam Gilmore     <b>Seconded by:</b>      Turlough Finan</p> <p><b>THAT</b> the letter addressed to the MOECC from the South Georgian Bay-Lake Simcoe Source Protection Committee Chair be received for information.</p> <p style="text-align: right;">Carried</p>	<p>Scott Peck to send Bob Edmondson a Conservation Ontario package about the new EBR posting</p>

ITEM	TOPIC/DISCUSSION	ACTION REQUIRED
7.	<p><b>Carlisle Conservation Committee- Julia Wagner</b> (slide deck attached)  A liaison committee formed for consultation on a Class EA for new water infrastructure in Carlisle asked that the City look at a conservation program first. A local committee was formed to research and promote conservation and water efficiency in Carlisle for a minimum of three years.</p> <p>The water storage required for the community is based on the amount needed for fire fighting, equalization and emergencies and is directly related to maximum day water demand. A 57.5% reduction in maximum water demand is required to be able to use existing water infrastructure in Carlisle. In 2015 and 2016 the community continued to exceed the target. Irrigation of large properties with landscaping demands a lot of water.</p> <p>An awareness campaign using letters, a road sign, a website, youth designed water efficient gardens, monitoring of home use, certified irrigation contractors, etc. is ongoing.</p>	
8.	<p><b>Implementing Fuel Policies - City of Hamilton - Carmen Vega</b> (slide deck attached)</p> <ul style="list-style-type: none"> <li>• Fuel handling and storage significant threats – 12 properties in Halton-Hamilton and Grand River <ul style="list-style-type: none"> <li>– T-43-C - outreach and education policy</li> <li>– 2 year time frame for implementation</li> </ul> </li> <li>• Tools in effect in Hamilton include: <ul style="list-style-type: none"> <li>– Screening of development applications (S.58) and requirement for risk management plan (S.59)</li> <li>– Rural Official Plan amended in July 2015 to prohibit gas stations where they would be significant drinking water threats</li> <li>– Spill prevention and emergency response plans include IPZ and WHPA mapping</li> </ul> </li> <li>• Threat verification and communication with property owners <ul style="list-style-type: none"> <li>– Residential letters mailed provide information and requests a call back</li> <li>– Threat verification survey</li> </ul> </li> <li>• Results <ul style="list-style-type: none"> <li>▪ 4 properties confirmed to have no threats</li> <li>▪ 1 education and outreach site visit completed</li> <li>▪ 5 properties pending with only fuel as a threat</li> <li>▪ 2 properties pending with multiple threats including fuel</li> </ul> </li> <li>• Outreach Materials <ul style="list-style-type: none"> <li>– Spill response kits are provided to all homeowners when a site visit is completed. Kit is stored near the fuel tank and includes instructions on what to do in the event of a spill</li> <li>– Fuel tank and inspection record - to be signed by anyone working on the tank</li> <li>– Fuel tank tags and stickers- MOECC Spills Action Centre phone number</li> <li>– An assessment of fuel storage and handling at the municipal well systems has been completed and the threat exists at the Carlisle FDC03R/05 water treatment plant but mitigation measures are in place</li> </ul> </li> </ul>	

ITEM	TOPIC/DISCUSSON	ACTION REQUIRED
	<p><b>Discussion:</b></p> <ul style="list-style-type: none"> <li>• MOECC confirmed to Hamilton staff that if the pipe fittings are below grade then the fuel storage tank is considered below grade. The ongoing program review is looking at the circumstances for fuel significant threats and there may be changes to the circumstances for above and below grade tanks.</li> <li>• TSSA inspects residential fuel storage tanks every 10 years, whereas City of Hamilton is only educating homeowners about fuel spill procedures</li> </ul>	<p>Mary Wooding is to provide clarification on the significance of fuel threats based on the location of pipe fittings in relation to the ground surface</p>
9.	<p><b>Source Protection Authority Annual Reporting and Committee's Opinion - Diane Bloomfield</b> (slide deck attached)</p> <p>Diane provided an overview of the provincial documents for annual progress reporting on implementation of the source protection plan. The proposed timeline to prepare the annual progress report was discussed with the Halton-Hamilton Source Protection Committee providing their input to the Source Protection Authority's report at their February 28 meeting. In 2017 we will complete a trial run to prepare for the required first report due May 1, 2018.</p>	
10.	<p><b>Chairs Summary of the November 9-10 Chairs' Meeting - Bob Edmondson</b></p> <p>Bob provided an overview of the items presented/discussed at the Chairs' meeting as noted in his summary attached.</p>	<p>Bob Edmondson to send out his summary of the Chairs meeting</p>
11.	<p><b>MOECC Liaison Update- Mary Wooding</b></p> <ul style="list-style-type: none"> <li>• Stewardship - Joint Advisory Committee (JAC) presented findings from survey conducted on stewardship incentive programs to Sue Lo, ADM and were asked to come back in the spring with additional detail on key priorities of municipalities. MOECC is considering what JAC is bringing forward and the future of stewardship will be decided in the new year.</li> <li>• Auditor General Follow-up Report – Mary walked through the responses to the 10 recommendations made in the value for money audit report and will report back on OMAFRA's response to recommended changes to the <i>Nutrient Management Act</i>, once known</li> <li>• Technical Rules Changes - Phase 1 EBR comments received are being reviewed and should be ready in early 2017. Phase 2 changes are expected to be released in spring or early summer 2017.</li> <li>• First Nations drinking water protection – new provincial office working with communities to determine what the issues are and eliminate drinking water advisories. Planning will be rolled out in spring 2017 to get 15 communities to have source protection plans</li> </ul>	<p>Mary Wooding to report back on OMAFRA's response to recommended changes to the <i>Nutrient Management Act</i></p>
12.	<p><b>Source Protection News - Diane Bloomfield</b></p> <ul style="list-style-type: none"> <li>• Chief Drinking Water Inspector Annual Report 2015-16 released at <a href="https://www.ontario.ca/page/chief-drinking-water-inspector-annual-report-2015-2016">https://www.ontario.ca/page/chief-drinking-water-inspector-annual-report-2015-2016</a></li> <li>• International Joint Commission is moving ahead with Plan 2014, which requires a more natural fluctuation in water levels of the Great Lakes. It is not expected to have an impact on water intakes and wastewater discharges if currently operating well.</li> </ul>	

ITEM	TOPIC/DISCUSSION	ACTION REQUIRED
	<ul style="list-style-type: none"> <li>• International Joint Commission recommend governments of Canada and United States adopt a strategy to address polybrominated diphenyl ethers (PBDEs) in the Great Lakes to reduce risks to human health and the environment.</li> <li>• The Research Coordination Committee of the International Joint Commission's Great Lakes Science Advisory Board released a report December 13 for consideration on how best to assess the health of the Great Lakes</li> <li>• California includes the recognition of source watersheds as integral components of water infrastructure in their <i>Water Code</i></li> </ul>	
13.	<p><b>Adjournment</b></p> <p><b>HHSPC 16-13</b> Moved by: Gavin Smuk</p> <p><b>THAT</b> the Source Protection Committee of December 13, 2016 be adjourned.</p> <p style="text-align: right;">Carried</p>	

Minutes prepared by: Jenn Simons

DRAFT

## Update on Husky Oil Spill

Halton-Hamilton Source Protection  
December 13, 2016



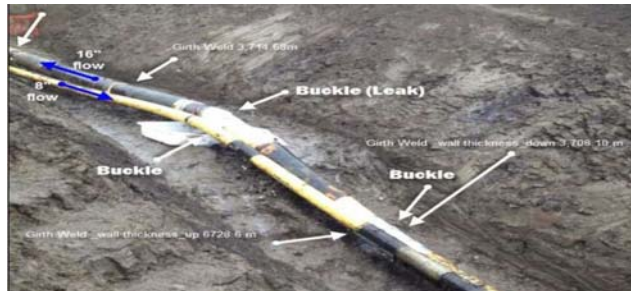
### Incident Background

- On July 21, 2016, Husky discovered a leak on the 19 year old 16TAN pipeline near Maidstone, Saskatchewan (57 km east of Lloydminster) where it crosses the North Saskatchewan River.
- An estimated 225,000 litres of crude oil blended with condensate (naphtha) was released from the pipeline, 40 percent of this volume entered the river contaminating the drinking water source of 70,00 people (Prince Albert and North Battleford). Cleanup recovered 210,000 litres.
- The break occurred on land, approximately 160 metres from the riverbank.



### Investigation Findings

- The pipeline break was caused by a sudden, one –time event in a section of pipe that had buckled due to the force of ground movement (“land creep” or minor movements over time rather than an out of control “landslide”). The ground movement was most likely caused by heavy rain, weak clay formations in the area and land features that prevented adequate drainage.
- The break was not the result of material defects, deficiencies or corrosion.



3

### Recommended Actions

- Ensure ground movement (geotechnical) risks are addressed and readdressed over the life of a pipeline. This includes route selection, design considerations for stress relief through excavation and additional monitoring technologies such as inclinometers (measuring soil displacement rates). In-situ monitoring can be supplemented through remote sensing (satellite) monitoring.
- Application of additional safety loading factors to locations susceptible to potential geotechnical risk.
- Review and consolidation of existing leak detection processes and procedures including a defined time period for diagnostic analysis before proceeding to a mandatory shutdown.
- Note the province of Saskatchewan is conducting its own investigation into the spill.



4



### Implications for Source Protection

- Pipeline leaked occurred in spite of a pipeline system integrity management program being in place that included inline inspection, monthly pigging, corrosion inhibition, fluid analysis, bacteria testing, aerial inspections, coatings and cathodic protection. The program and actions are aligned with recommendations in Source Protection Plans.
- Are pipelines in the Source Protection region susceptible to ground movement or geotechnical risk?

#### Next Steps:

- Follow-up on the release of the Provincial Government report.
- Follow-up on draft regulations arising from the amendment to the Pipelines Act (pending passage): modernization of penalties, enhanced auditing and inspection powers to government staff, phased-in licensing of flowlines (wellhead to storage tank).



## Carlisle Conservation Committee C3 Overview

### Halton-Hamilton Source Protection Committee

Brant Hills Community Centre

December 13, 2016

Julia Wagner

Sr. Project Manger – Outreach & Education

City of Hamilton



## Overview of the Carlisle Conservation Committee – C3

### 2014

Carlisle Water Supply Municipal Class EA study put on hold. Community Liaison Committee (CLC) for Class EA study concluded that a concentrated conservation program should be developed and implemented before any decision can be made on new infrastructure requirements.

### June 2015

First meeting of the Carlisle Conservation Committee C3 was held

- 16 members made up of local Carlisle residents, City employees, a consultant and Councillor Judi Partridge.
- The purpose of the Committee is to research and promote water conservation and water efficiency in Carlisle.

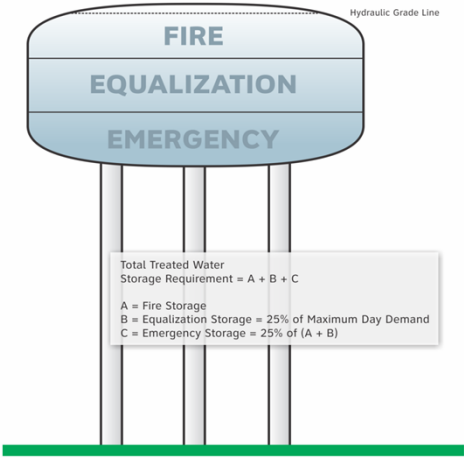
**C3 Committee will be assembled for a minimum of a 3-year period.**



## Overview

### Fundamental Allocation in Distribution Gravity Storage

Water tower storage is directly related to maximum day water demand. That is, conservation efforts that reduce community water demand has direct effect on the required water tower storage.



Total Treated Water Storage Requirement = A + B + C  
 A = Fire Storage  
 B = Equalization Storage = 25% of Maximum Day Demand  
 C = Emergency Storage = 25% of (A + B)

Hamilton

2

HAMILTON WATER

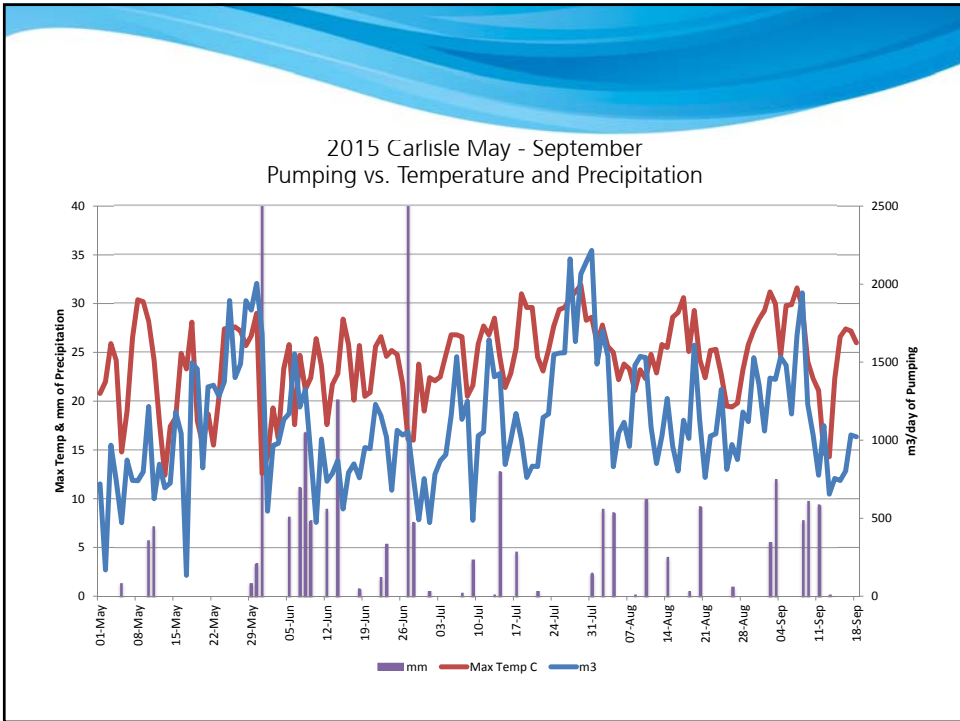
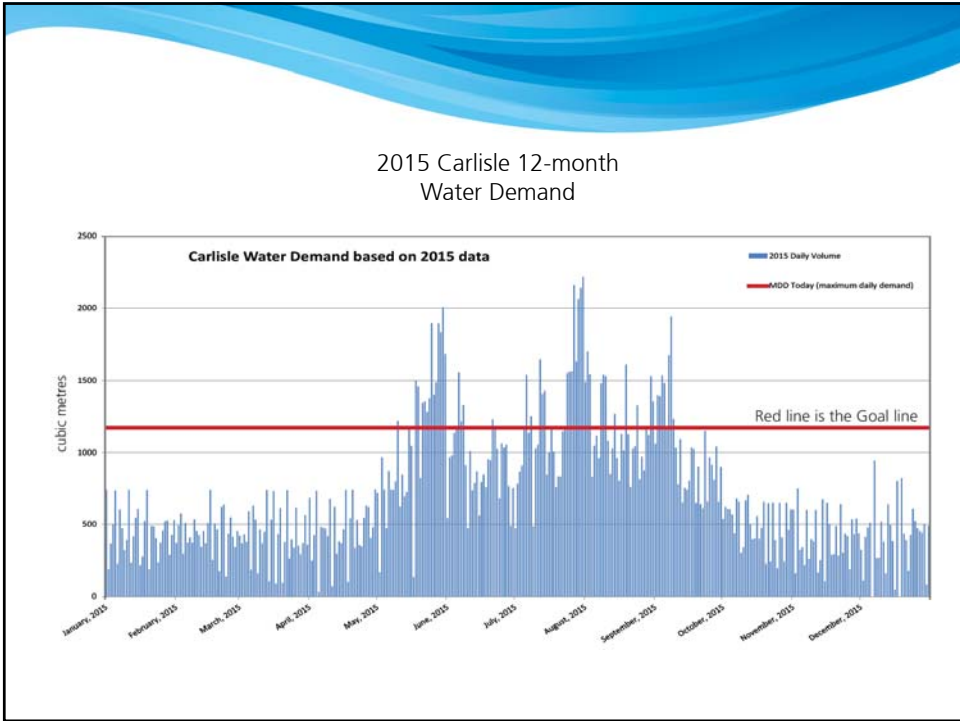
## Overview

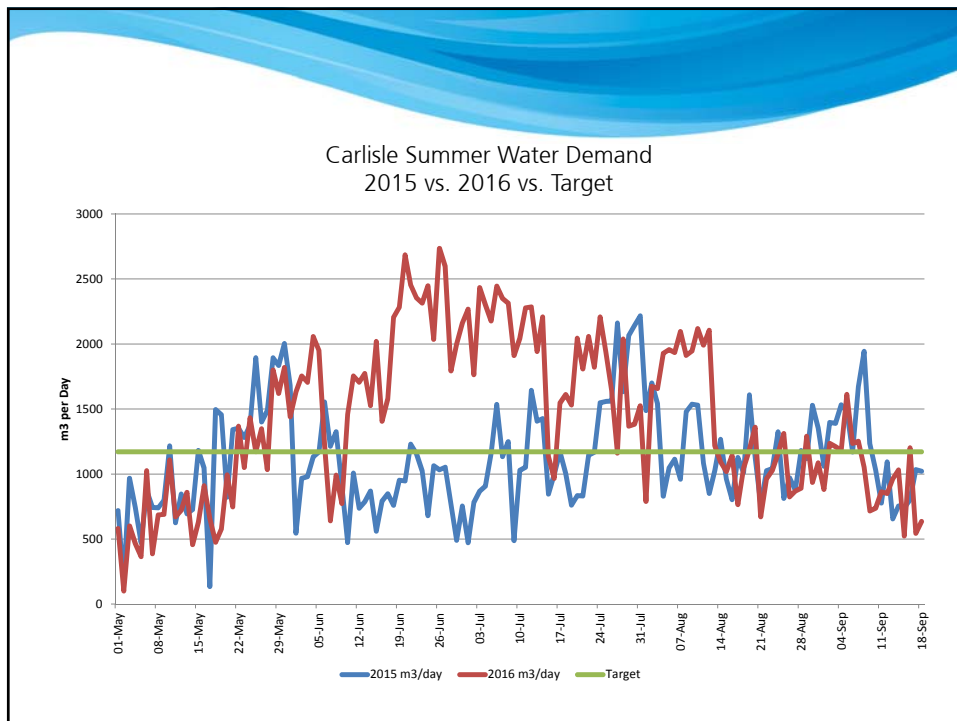
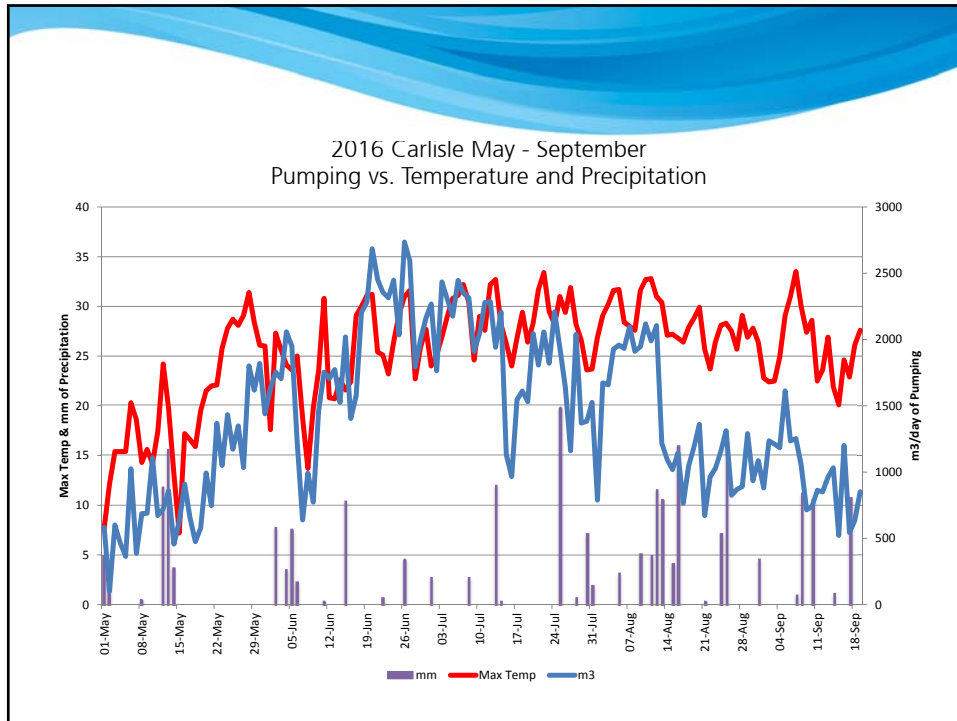
Existing Population	1839 Capita
Existing Average Day Demand	9.0 l/s or 422 l/c/d (based on 2012 flow data)
Existing Maximum Day Demand	32.1 l/s or 1508 l/c/d (based on 2012 flow data)
Full Build-out Population	2660 Capita
Required Maximum Day Demand	19.7 l/s or 640 l/c/d
<b>Required Conservation Reduction Target</b>	<b>57.5 %</b>
<b>Daily Maximum Volume for the Community</b>	<b>1,170,000L</b>

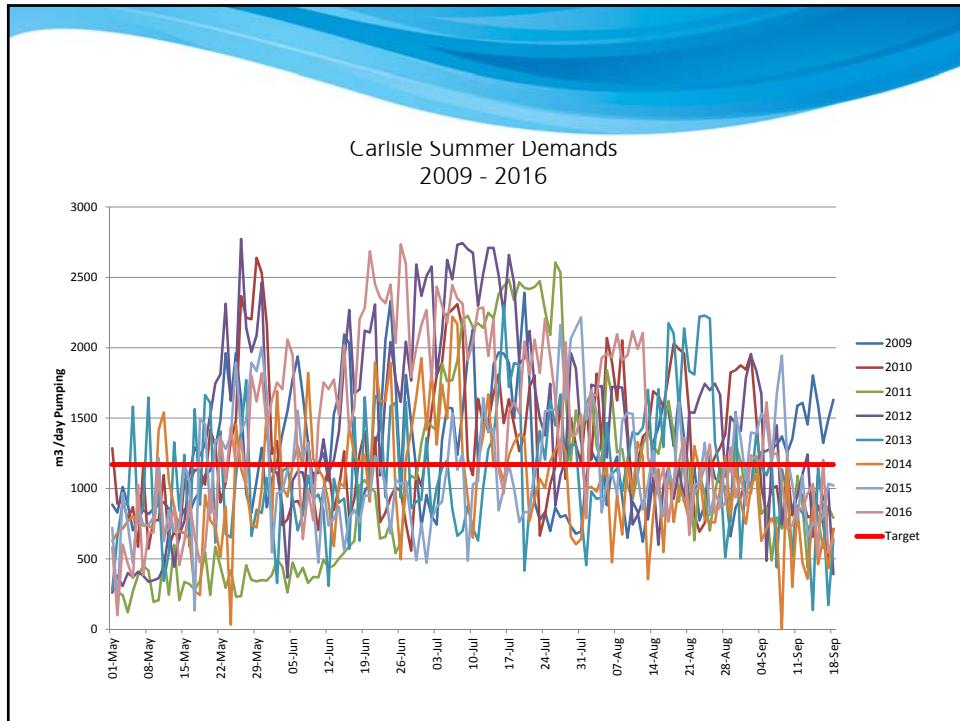
Hamilton

3

HAMILTON WATER







## Awareness Campaign

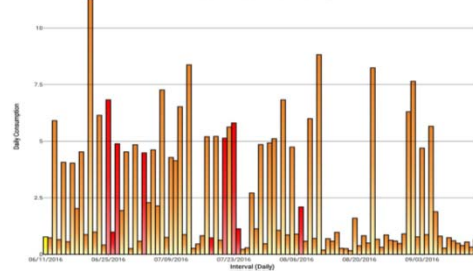
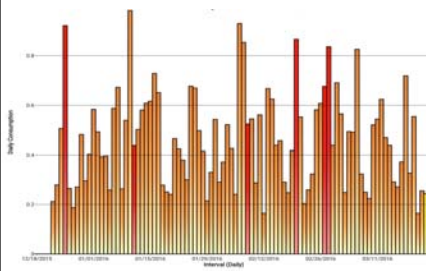
A 3D white figure holding a large green checkmark, symbolizing success or approval.

# Data Loggers

Home #2  
Dec. – Mar. = 464 L/day

Home #2  
Summer = 2,603 L/day



**Carlisle** [hamilton.ca/CS](http://hamilton.ca/CS)

**Dear Carlisle Resident:**

Every resident of Carlisle relies on the aquifer for well water, whether it comes from a municipal well or a private well. Water storage is important to well-based communities for many reasons, including its ability to fight fires. Currently, the need to increase water storage in Carlisle has become an issue within the community. This will affect everyone in the community and we ask that you read the following letter for more information.

**Our Aquifer**  
Water usage during the summer months in Carlisle is very high. Many communities average a 20% to 30% increase in water usage during the summer months. However in Carlisle the summer water demand increases by over 500%. The increased demand compromises our community's fire water storage. In 2015, there were 57 fires in the summer when we did not meet the City adopted standard for fire flow. It is based on the fire departments having the additional storage facility will need to be built until the summer water usage can be reduced to an adequate level.

**The Goal**  
We need to maintain adequate fire water storage in Carlisle based on the adopted standard for fire flow. We store each year. We achieve this goal through the use of the 8000 tonnes per the municipal water system need to reduce their daily water usage to stay below the community level of 5,170,000 litres (11,700,000 gal) per day (see the red line on the graph below).

**Historical Water Usage**  
The graph below illustrates the 2015 historical water use in Carlisle. The blue bars on the graph indicate the amount of water used and the red line represents Carlisle's 2015 target. Everything above the red line represents a quantity where our community exceeded the adopted standard for fire flow 57 times in 2015. This happens primarily during the summer months and is a result of a rapid increase in water usage. In our goal to help reduce the red line.

**The City is made up of local Carlisle residents. City employees, a consultant and Councilor also participate. The objective of the Committee is to reduce and promote water conservation and water efficiency in Carlisle. As a community we feel that we can manage this issue and are looking for community based solutions. To building a truly new water storage facility using this water will also have a positive impact on our aquifer.**

**Our Invitation - Help us reduce our water usage!**  
Through water efficiency and conservation efforts, you have the power to help reduce the need for additional water storage and expansion for protection. You can also contribute to reducing water usage by:

- Taking time to complete your summer garden system efficiency audit of records.
- Getting a WSP (Water Saving) or regular Professional certified automatic sprinkler system check-up.
- Replacing water inefficient shower heads with low flow shower heads.
- Making a concerted effort to reduce your water use. • Using a water faucet to 10 points.
- Using more energy efficient appliances when available. • Taking part in conservation efforts.

For more information and conservation tips visit [hamilton.ca/CS](http://hamilton.ca/CS). Please note that our site is still developing with new content and updates are being added regularly.

Sincerely,  
Your Carlisle Conservation Committee

**WHAT WILL YOU DO**  
To Help Carlisle Remain a Safe?

# Introduction Letter



## WSIP – Check-up

**DO YOUR PART**  
get a sprinkler system check-up

Ensure that your system is working efficiently and not wasting Carlsile water and your money.

This is a \$300 value service being provided at no charge to Carlsile residents that have an automatic sprinkler system and are on the municipal water system.



**WHAT WILL YOU DO**  
To help Carlsile conserve water?



**DO YOUR PART**  
get a sprinkler system check-up

For more information about the free automatic sprinkler check-up please visit: [hamilton.ca/CI](http://hamilton.ca/CI)

**WHAT WILL YOU DO**  
To help Carlsile conserve water?



**Why should I get a sprinkler system check-up?**  
A sprinkler system check-up will ensure that your system is operating efficiently to reduce water waste, which will save you money, Carlsile water and help us reach our goal to avoid additional water storage.

**What is a Water Smart Irrigation Professional and what do they do?**  
This program provides select irrigation companies with specialized training and certification to provide "Water Smart" sprinkler system efficiency and maintenance services. They can determine how much water your system is using and the right amount of water to maintain a healthy landscape.

**Contact a certified irrigation contractor for an assessment and get:**

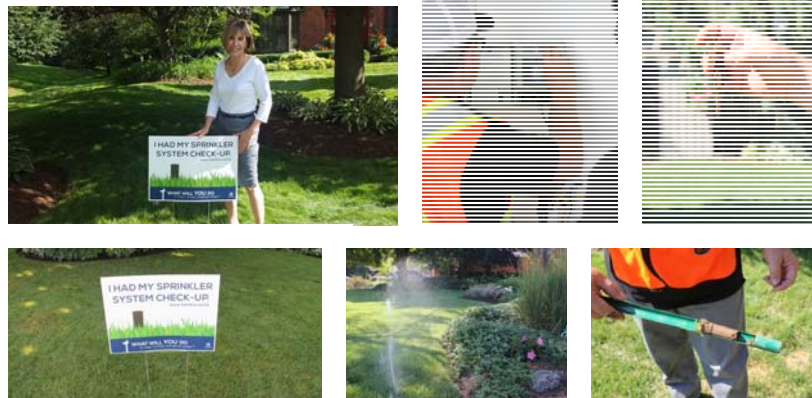
- a report with efficiency recommendations
- a customized watering schedule tailored to your specific landscape

**Make sure that your irrigation contractor is WSIP certified**  
Only certified irrigation contractors can provide a WSIP check-up. Below is a list of WSIP certified contractors that can provide this free service in Carlsile. Call them directly to make your appointment.

- Angus Irrigation
- Galbreath Landscape Services
- Rainree Irrigation & Outdoor Systems
- more contractors to come

for more information on WSIP and other water saving tips please visit: [hamilton.ca/CI](http://hamilton.ca/CI)

## WSIP Check-ups





## WSIP – Check-up

Findings from 2016 Check-ups:

#	Current m3	Current \$	Savings m3 - Schedule Changes	Savings \$ - Schedule Changes	Area m2	% Savings	Est. Annual Water Savings m3 with Smart Controller	Est. Annual Resident \$ Savings with Smart Controller	Overall Water Savings Opportunity	Overall Reduction Opportunity
1	868	\$1,197.90	293.37	\$404.85	2848.72	33.80%	114.94	\$158.62	408.31	47.0%
2	272	\$375.90	23.06	\$31.82	2256.18	8.48%	49.87	\$68.82	72.93	26.8%
3	596	\$822.47	198.66	\$274.16	1742.62	33.33%	79.47	\$109.66	278.13	46.7%
4	575	\$794.01	86.94	\$119.98	1994	15.12%	97.69	\$134.81	184.63	32.1%
5	251	\$346.31	12.09	\$16.69	2088.7	4.82%	47.77	\$65.92	59.86	23.8%
6	465	\$642.08	0	0	2801.7	0.00%	93.05	\$128.41	93.05	20.0%
7	710	\$979.76	\$168.72	\$232.83	2175.9	23.76%	108.25	\$149.39	276.97	39.0%

2016 - Very busy irrigation season for contractors

WSIP Certification - Contractor Loyalty

## Central Irrigation Controllers

Adjust irrigation application rates based on day-to-day weather

- More irrigation if dry
- Less (or no) irrigation if wet

No action required by homeowner

Not designed to reduce peak/max day demand

### Existing Schedule

Zone	Landscape	Area m2	Days/Wk	Cycles /Day	Min. /Cycle	Min/Wk
4	Turf	520	1.0	1	120	120
6	Turf	289	1.0	1	120	120
1	Turf	520	1.0	1	120	120
2	Turf	520	1.0	1	120	120
8	Turf	266	1.0	1	75	75
9	Turf	260	1.0	1	120	120
10	Turf	92	1.0	1	60	60
11	Perennials	132	1.0	1	30	30
3	Perennials	35	7.0	2	3	42
5	Perennials	109	7.0	2	3	42
7	Perennials	107	7.0	2	3	42

### Adjusted Schedule

Zone	Landscape	Area m2	Days/Wk	Cycles /Day	Min. /Cycle	Min/Wk
4	Turf	520	3.0	3	10	90
6	Turf	289	3.0	3	10	90
1	Turf	520	3.0	3	10	90
2	Turf	520	3.0	3	10	90
8	Turf	266	3.0	2	10	60
9	Turf	260	3.0	3	10	90
10	Turf	92	3.0	2	10	60
11	Perennials	132	2.0	2	10	40
3	Perennials	35	2.0	2	2	8
5	Perennials	109	2.0	2	2	8
7	Perennials	107	2.0	2	2	8

## Outdoor Water Restriction

Outdoor Water Restriction	BE MINDFUL OF YOUR OUTDOOR WATER USE	CUT OUTDOOR WATERING BY 50%	NO OUTDOOR WATERING
Effective Dates	April to October	Only as Required	Only as Required
Watering Frequency & Times	Every Other Day Even # Houses – Even # Days Odd # Houses – Odd # Days Between 7am to 11am or 7pm to 11pm	50% Reduction Required	Not Permitted
Hand Watering or Drip Irrigation	Anytime	50% Reduction Required	Between 7am to 11am or 7pm to 11pm
Washing vehicles	Anytime	50% Reduction Required	Not Permitted
Filling pools, hot tubs or fountains	Anytime	50% Reduction Required	Not Permitted
Pressure washing walkways, driveways or siding	Anytime	50% Reduction Required	Not Permitted

Vegetable gardens and fruit trees are exempt from all watering restrictions.

## Roadside Sign

*Carlisle*

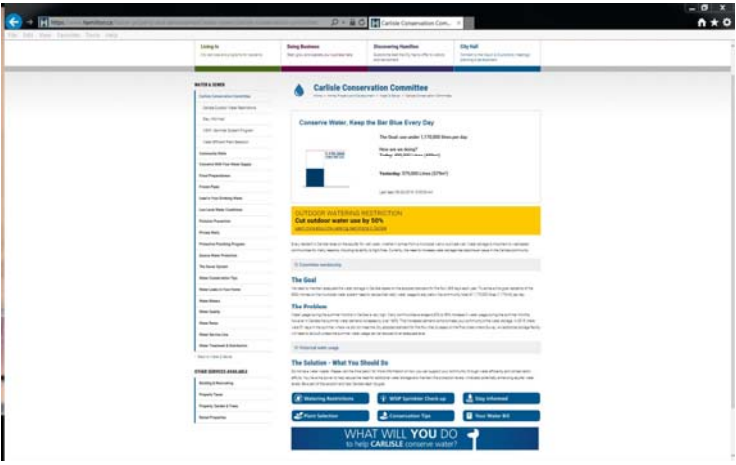
Current watering  
**RESTRICTIONS**

WHAT WILL YOU DO  
to help Carlisle conserve water?

**BE MINDFUL  
OF YOUR  
OUTDOOR  
WATER USE**

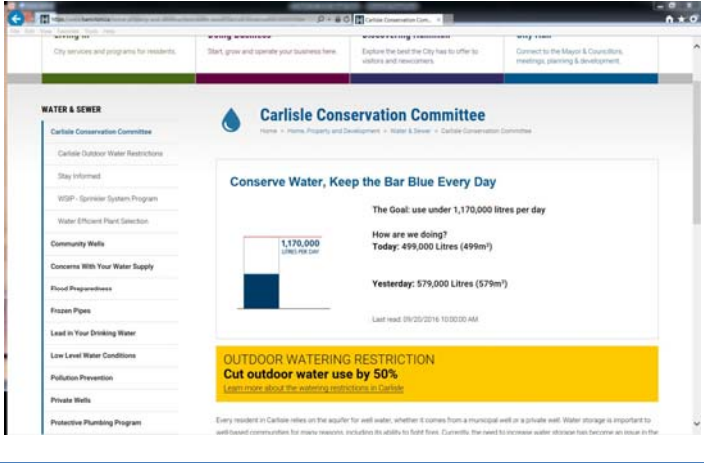
For more information visit  
[www.hamilton.ca/C3](http://www.hamilton.ca/C3)

## Website – hamilton.ca/C3



The screenshot shows a web browser window displaying the Hamilton website. The main content area features a section for the Carlisle Conservation Committee with the heading "Conserve Water, Keep the Bar Blue Every Day". A bar chart shows water usage: "The Goal: use under 1,170,000 litres per day", "How are we doing? Today: 499,000 Litres (499m³)", and "Yesterday: 579,000 Litres (579m³)". A yellow banner below the chart reads "OUTDOOR WATERING RESTRICTION Cut outdoor water use by 50%". The page includes a sidebar with navigation links and a footer with the Hamilton logo and "HAMILTON WATER" branding.

## Website – hamilton.ca/C3



This screenshot is a more detailed view of the same Carlisle Conservation Committee page. It features a bar chart with the following data: "The Goal: use under 1,170,000 litres per day", "How are we doing? Today: 499,000 Litres (499m³)", and "Yesterday: 579,000 Litres (579m³)". A yellow banner below the chart reads "OUTDOOR WATERING RESTRICTION Cut outdoor water use by 50%". The page includes a sidebar with navigation links and a footer with the Hamilton logo and "HAMILTON WATER" branding.

## Awareness Campaign

### Carlisle Community Centre Retrofit

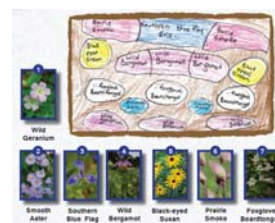
- Replacing 15 old inefficient toilets with new 6L fixtures
- Created posters to give residents information regarding the retrofit
- Keeping conservation top of mind during the winter months (arena's busiest time)



## Awareness Campaign

### Youth Education

- Garden area cleared
- Article in Flamborough Review – link is on the C3 webpage
- Planting will take place in spring of 2017 for the main garden and 4 student designed gardens
- In-school presentations
- Art installation in the planning stage



## Next Steps

- Continue to promote WSIP Check-up (should have more contractors certified)
- Need to build strong word of mouth campaign
- Water Restrictions (Roadside Signs, Web)
- Website updates – WSIP testimonials
- Fixture rebate program
- Automatic Meter Reading and Advanced Meter Infrastructure



## Next Steps

- Comparison letter (winter vs summer usage for 2015/2016)
- Information pieces regarding spring lawn maintenance (stressing the lawn for better root system, grass cycling, keeping the grass longer, using a pool cover)
- Smart irrigation controller rebate program
- Drive more traffic to the webpages so residents can stay informed
- Focus on “What will you do to help Carlisle conserve water?”

## Conclusion

## Source Protection Implementation City of Hamilton

### Implementing Fuel Policies

Carmen Vega - Senior Project Manager, Hamilton Water

Source Protection Committee Meeting

Tuesday December 13th, 2016

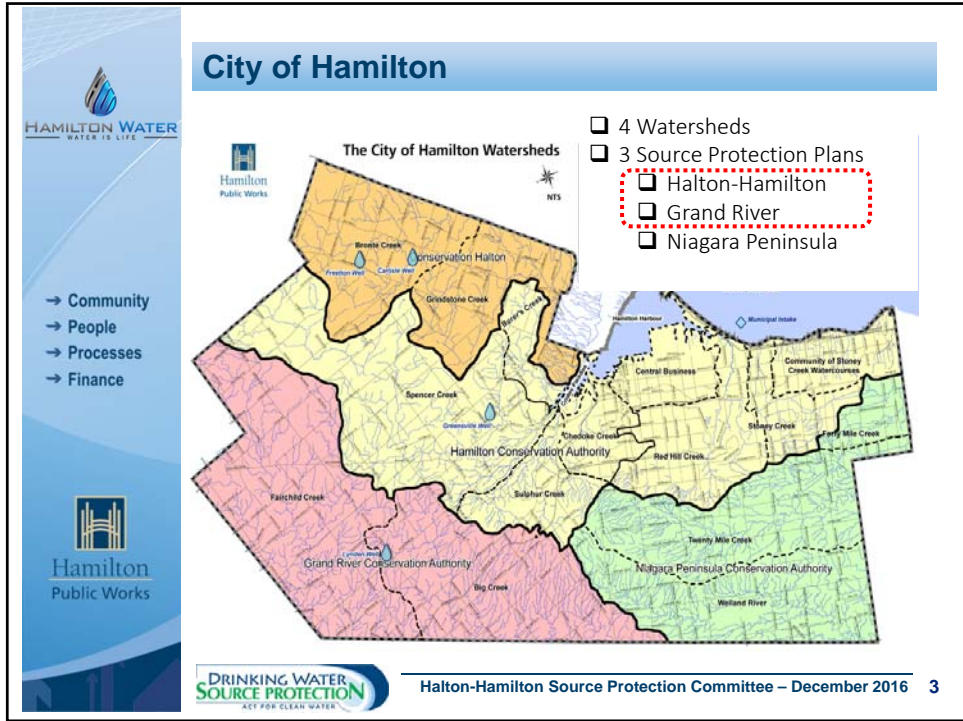
*Providing services that bring our City to life!*

### Outline

- Fuel Storage & Handling policies and tools
- Threat Verification & communication with property owners
- Outreach Materials
- Future priorities and actions








### Existing Drinking Water Threats in Hamilton

Threat	Number of Activities
Sewage System – Residential Septic Systems	81
Handling and Storage of Fuel	12
Pesticide Application	7
Commercial Fertilizer - Storage	1
Land associated with livestock	5
Agricultural Source Material (ASM) – Application	6
Agricultural Source Material (ASM) – Storage	1
Non-Agricultural Source Material (NASM) - Application	4
Handling and Storage of Dense Non Aqueous Phase Liquids (DNAPL)	1
<b>Total Number of Activities</b>	<b>118</b>
<b>Total Number of Properties</b>	<b>91</b>

**DRINKING WATER SOURCE PROTECTION**  
KEY FOR CLEAN WATER


Halton-Hamilton Source Protection Committee – December 2016 4





HAMILTON WATER  
WATER IS LIFE


→ Community  
→ People  
→ Processes  
→ Finance




Hamilton  
Public Works

## Fuel threat - Plan Policies with policy tools

Policy #	Drinking Water Threat Activity
<input type="checkbox"/> T-40-C	<input type="checkbox"/> Existing/Future handling & storage – <b>Part IV RMP</b>
<input type="checkbox"/> T-41-C	<input type="checkbox"/> Future handling & storage – <b>Land Use Planning (prohibit)</b>
<input type="checkbox"/> T43-C	<input type="checkbox"/> Existing/Future handling & storage – <b>Education &amp; Outreach</b>
<input type="checkbox"/> T-52-C	<input type="checkbox"/> Handling & Storage – ECA approvals for sewage works - MOECC
<input type="checkbox"/> T-53-C a	<input type="checkbox"/> Handling & Storage – Disclosure for planning applications
<input type="checkbox"/> CH-CW-10.1	<input type="checkbox"/> Existing/Future handling & storage – <b>Part IV RMP</b>
<input type="checkbox"/> CH-MC-10.2	<input type="checkbox"/> Future handling & storage – <b>Land Use Planning (prohibit)</b>
<input type="checkbox"/> CM-CW-10.3	<input type="checkbox"/> Existing/Future handling & storage – <b>Education &amp; Outreach</b>




Halton-Hamilton Source Protection Committee – December 2016 5



HAMILTON WATER  
WATER IS LIFE


→ Community  
→ People  
→ Processes  
→ Finance





Hamilton  
Public Works

## Activities related to Fuel Storage/Handling – Table of circumstances

- Physical position:
  - At or above grade
  - Below grade
  - Partially below grade storage
  
- The types of facilities to be considered:
  - Facility as defined in Ontario Regulation 213/01 (Fuel Oil) or Ontario Regulation 217/01 (Liquid Fuels); but not a bulk plant and
  - a bulk plant as defined in Ontario Regulation 217/01 (Liquid Fuels) or facility that manufacturers or refines fuel
  
- Quantity of fuel stored/handled in litres:
  - not more than 25 litres
  - more than 25 litres but not more than 250 litres
  - more than 250 litres, but not more than 2,500 litres
  - More than 2500L




Halton-Hamilton Source Protection Committee – December 2016 6



→ Community  
→ People  
→ Processes  
→ Finance

## Policy actions currently in effect

- Restricted Land Use – Section 59
  - Screening of development applications
  - Part IV Risk Management Plans (RMP)
- Rural Official Plan amendment – prohibit gas station
  - Source Protection Plan policies included in the amendment (July 2015)
- Spill prevention & Emergency response plans
  - Plans updated to include IPZs and WHPAs

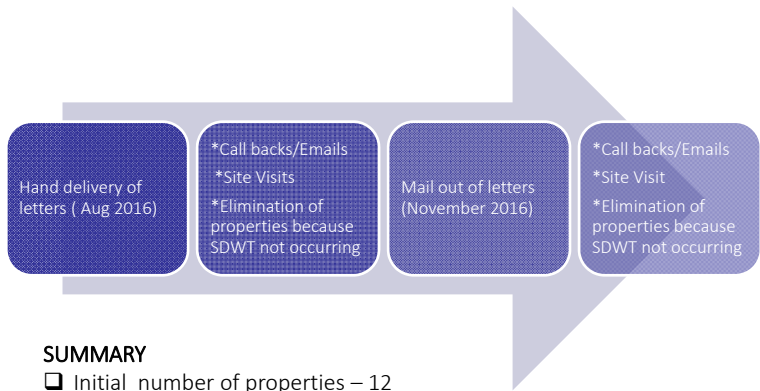


Halton-Hamilton Source Protection Committee – December 2016 7

→ Community  
→ People  
→ Processes  
→ Finance

## Communication with Property Owners (Fuel)



Hand delivery of letters ( Aug 2016)

\*Call backs/Emails  
\*Site Visits  
\*Elimination of properties because SDWT not occurring

Mail out of letters (November 2016)


\*Call backs/Emails  
\*Site Visit  
\*Elimination of properties because SDWT not occurring

### SUMMARY


- Initial number of properties – 12
- Confirmed that threat does not occur – 4
- Number of site visits **where E & O** has been performed – 1

Remaining:

- Number of pending properties with only Fuel as a threat – 5
- Number of Properties with multiple threats including Fuel - 2




Halton-Hamilton Source Protection Committee – December 2016 8



HAMILTON WATER  
WATER IS LIFE




- Community
- People
- Processes
- Finance



HAMILTON  
Public Works

## Residential Mail out - Fuel

Letter – Information and requesting a call back

Risk Management Office  
Source Protection Planning – Hamilton Water  
Public Works, City of Hamilton  
77 James Street North, Suite 400  
Hamilton, ON, L8R 2K3

**\* ACTION REQUIRED\***

Monday, December 09, 2016

XXX:

**We need your help to further protect your community's drinking water.**

You may have previously received communication from the Halton-Hamilton Source Protection Committee and the City of Hamilton's Risk Management Office about the protection of municipal drinking water sources in our City. The Ontario Ministry of the Environment & Climate Change (MEECC) has prescribed a number of drinking water threat activities that, if not properly managed, may present a risk to the groundwater used by municipal drinking water systems. In order to meet the requirements of the Clean Water Act, 2006, the Committee developed a source protection plan to reduce the possibility that these activities will affect the quality and quantity of drinking water supplies.

You are receiving this letter because your property at XXX is within the protection area of the Preston municipal well field. The handling and storage of fuel on your property has been identified as drinking water threat to the source water of this well field. Handling and storing fuel may result in spills and leaks which pose a serious threat to human health and environmental quality. The Source Protection Plan policy for home fuel oil is an education and outreach program or the inspection of a Risk Management Plan, which are to be implemented by the City of Hamilton's Risk Management Office.


We would like to work with you.

City of Hamilton staff would like to talk with you so as to better understand the quantities of fuel used and stored on your property and determine the significance of this threat. We would also like to share with you some tips and actions that can be undertaken such as spill response and the maintenance of oil heating systems with the goal of protecting your municipal drinking water supply.


We also fully recognize that fuel use and storage may not actually be occurring on your property and a quick phone call and/or short site visit with you will ensure we have up-to-date and accurate information.

Please contact me at your earliest convenience to discuss this letter and if needed, make arrangements for a site visit to discuss activities associated with fuel storage and handling. You can reach me by phoning (905) 546-2424 ext. 4018 or by emailing [marthabaker@hamilton.ca](mailto:marthabaker@hamilton.ca). We greatly appreciate your time and feedback into this drinking water source protection initiative.

Sincerely,




Halton-Hamilton Source Protection Committee – December 2016 9



HAMILTON WATER  
WATER IS LIFE




- Community
- People
- Processes
- Finance



HAMILTON  
Public Works

## Residential Mail out - Fuel

Survey – Data collection

**\*Survey to be completed with City staff\***

### THREAT VERIFICATION SURVEY - FUEL


*City of Hamilton – Source Water Protection, Risk Management Office*

Information is collected pursuant to the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. M.56 and the *Clean Water Act*, 2006, S.O. 2006, c. 22 for the administration and enforcement of the *Clean Water Act*. Please note that **business identity information is not considered personal information pursuant to the *Municipal Freedom of Information and Protection of Privacy Act*.**


For any inquiries about the collection of this information, please contact the Risk Management Office, The City of Hamilton, Source Protection Planning – Hamilton Water, 77 James Street North Suite 400, Hamilton, ON, L8R 2K3, (905) 546-2424 extension 4018

Completed By:  With:

Date:




Halton-Hamilton Source Protection Committee – December 2016 10



HAMILTON WATER  
WATER IS LIFE


- Community
- People
- Processes
- Finance



Hamilton  
Public Works

## Education & Outreach Activities - Fuel

**Spill response plan** – We purchased spill kits that will be given to every property we visit. This document will be taped on to the kit or close to the fuel storage tank as a guide on what to do in the event that a spill happens



**HOME HEATING OIL SPILL RESPONSE INFORMATION**

IF THE SPILL CANNOT BE SAFELY CONTAINED-USING THE SPILL KIT OR IF THE SPILL IS CAUSING A THREAT TO LIFE, EVACUATE THE BUILDING AND CONTACT FIRE AND EMERGENCY SERVICES AT 911

**IF YOU'RE LUCKY WITH A LEAK OR AN OIL SPILL, FOLLOW THESE STEPS:**

1. Eliminate all sources of ignition (Turn off the power to furnaces, baseboard heaters, fireplaces, etc.)
2. Stop the flow of oil at its source. If the spill is in the airline, turn off the shut-off valve at the tank outlet.
3. Plug the hole, if it is safe to do so.
4. Place a container under the oil leak and monitor the fuel level in it.
5. Wash for floor drains and outdoors. Prevent fuel from entering the natural environment using contents of the spill kit.
6. Contain spill of using contents of the spill kit. Use absorbent material to mop up the spill.
7. Furnace from spill kit use absorbent material placed in very dangerous - be aware.
8. Call the 24-hour Ontario Spills Action Centre 1-800-268-6060.
9. Call your heating oil supplier for transferring remaining oil from the leaking tank.
10. Contact your insurance company if needed.
11. Take pictures of the spill and record details.

**ATTENTION!**  
NEVER FEEL SAFE TO DO  
**1-800-268-6060**

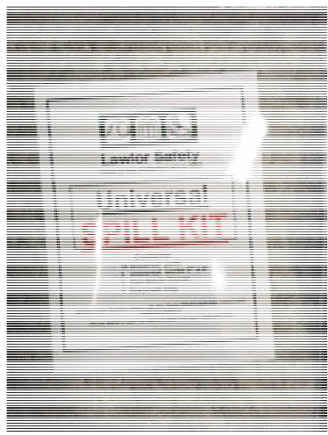
**REMEMBER:**

Never flush oil or contaminated materials down the drain or sewer.


Never use a shop vacuum to clean contaminated fuel material—the electric motor will spark and cause ignition of the vapors.

These actions will minimize the impact of the spill on the environment, your property and your neighbour's property.


**NOT REPORTING A SPILL IS AN UNLAWFUL ACT!**



Universal  
SPILL KIT




Halton-Hamilton Source Protection Committee – December 2016 11



HAMILTON WATER  
WATER IS LIFE




- Community
- People
- Processes
- Finance



Hamilton  
Public Works

## Education & Outreach Activities - Fuel

**Fuel Tank and Inspection Record** - This document will be placed near the tank to be filled out by anyone that does work on the tank






**FUEL OIL TANK AND FURNACE INSPECTION RECORD**

Date Inspected	Certified Oil Burner Technician Full Name, Company & TSSAP	Notes After fuel fill, Summer Inspection, Annual Inspection (insert copy of service in the plastic sleeve), Service Call, Action Required, Other	Signature

Please send a photocopy of this completed form and copy of other documents to: Risk Management Office – City of Hamilton, 77 James Street North Suite 400, Hamilton, ON, L8N 2K3 or email: [sourcewater@hamilton.ca](mailto:sourcewater@hamilton.ca)

**Please keep this form in the plastic sleeve on the Fuel Tank**



Halton-Hamilton Source Protection Committee – December 2016 12

6



HAMILTON WATER  
WATER IS LIFE

- Community
- People
- Processes
- Finance



Hamilton  
Public Works

## Education & Outreach Activities - Fuel

- Fuel Tags and Stickers** to be placed on the tank and fill pipes with Spills Action Centre number to call in the event of a spill

***ATTENTION!***

**REPORT FUEL SPILLS TO**

**1-800-268-6060**


(Ontario Spills Action Centre)

**AND YOUR FUEL SUPPLIER**

**This location is within the vulnerable area of a municipal drinking water source.**




Halton-Hamilton Source Protection Committee – December 2016 13



HAMILTON WATER  
WATER IS LIFE


- Community
- People
- Processes
- Finance



Hamilton  
Public Works

## Other Fuel related Activities

- Review of Fuel Storage & Handling at the Municipal Well systems
  - RMIs inspected all four municipal well system to identify the existence of Fuel storage/handling as a Significant Drinking Water Threat (SDWT)
  - SDWT identified in Carlisle (FDCO3R/FDCO5 treatment plant) and Lynden (FDL01 Treatment Plant)
  - Risk Mitigation Measures currently in place include:
    - All storage tanks are in compliance with the requirements of the *Technical Standards and Safety Act, 2000*
    - Regular tank inspection/maintenance
    - Spill/leak detection systems
    - Spill response procedures
    - Availability of spill kits on site
    - Training of staff on spill clean-up



Halton-Hamilton Source Protection Committee – December 2016 14



Hamilton  
Public Works



# Questions

## Implementing Fuel Policies

**Carmen Vega** - Senior Project Manager, Hamilton Water  
**Source Protection Committee Meeting**

*Providing services that bring our City to life !*

## SPC Meeting – December 13, 2016

Halton-Hamilton Source Protection Committee  
Diane Bloomfield, Project Manager

### Follow-Up Report on Confidentiality of Landowner Personal Information

**Q: Given that Risk Management Plans are public documents (as per subsection 54 (3) of the CWA and subsection 53 (3) of Regulation 287/07), are any special considerations required when preparing a Risk Management Plan in order to protect personal information, consistent with the requirements in the Freedom of Information and Privacy Protection Act?**

**A: Part III of FOIPPA, which addresses the protection of individual privacy, does not apply to personal information that is maintained for the purpose of creating a record that is available to the general public – this is made clear in section 37 of that Act.**

Based on subsection 54 (3) of the CWA (read in combination with subsection 53 (3) of Regulation 287/07) – the enforcement body (i.e., the Part IV municipality or delegated authority) **is required to make RMPs available to the public. Given that there is a clear statutory requirement to make the RMP public as per ss. 54 (3), therefore PART III of the FOIPPA, which sets out the provisions governing the protection of personal information, does not apply.**

As such, **there are no required specific considerations that a Risk Management Official must consider when preparing a RMP.** The RMP will be directed at a person (or persons who may be subsequently engaged in an activity) and therefore names, addresses, and so forth are going to be part of the RMP. Given that the RMP is a public document, there is no reason why this information cannot be shared publicly.

**However, an official should only include personal information to the extent necessary to develop the risk management plan, and should not include any extraneous information that would not be relevant.**

---

# Source Protection Authority Annual Progress Report

---

## Clean Water Act Requirement

Section 46 of the Clean Water Act states:

(1) The source protection authority shall annually prepare and submit to the Director and the source protection committee in accordance with the regulations a report that,

- (a) describes the measures that have been taken to implement the source protection plan, including measures taken to ensure that activities cease to be significant drinking water threats and measures taken to ensure that activities do not become significant drinking water threats;
- (b) describes the results of any monitoring program conducted pursuant to section 45;
- (c) describes the extent to which the objectives set out in the source protection plan are being achieved; and
- (d) contains such other information as is prescribed by the regulations.



## SPC Opinion

### Submitting report to source protection committee

- (2) At least 30 days before submitting the report to the Director under subsection (1), a source protection authority shall submit the report to the source protection committee.

### Review by source protection committee

- (3) After receiving the report from the source protection authority, the source protection committee shall review the report and provide written comments to the source protection authority about the extent to which, in the opinion of the committee, the objectives set out in the source protection plan are being achieved by the measures described in the report.

### Including comments of source protection committee

- (4) If the source protection committee provides comments to the source protection authority under subsection (3) before the report is submitted to the Director under subsection (1), the source protection authority shall include a copy of the comments in the report.

## Ontario Regulation 287/07

52. (1) The following information is prescribed for the purposes of clause 46 (1) (d) of the Act:

1. If the source protection plan sets out a policy that specifies a date by which a particular action shall be taken by a person or body, and the person or body fails to take that action by that date, a description of the failure and the reasons for the failure.
2. A description of any steps taken during the reporting period to address any deficiencies in the information that was used in developing the assessment report set out in the source protection plan.
3. A summary of the report prepared and submitted by the risk management official under section 81 of the Act for the same calendar year to which the report under section 46 of the Act applies.
4. Any other information that the source protection authority considers advisable.

## Supplemental Form for Source Protection

- Prepared by SPA based on annual reports submitted by implementing bodies and risk management official annual reports
- Submitted to the Director with the Annual Progress Report
- Allows for the collection of key information about progress made across all source protection areas in a reliable, consistent and standardized manner

Reporting Frequencies	Count
One-time	14
Limited time (i.e., first few years, until policy implemented)	12
Annually (but only when needed, applicable)	14
Ongoing (annually)	33
<b>TOTAL</b>	<b>73</b>

- Out of the 73 reportables, 11 are optional
- Each reportable has a performance measure, a target/trend (ultimate goal) and is classed as having a short-term, medium-term or long-term outcome
- SPPB will use the responses to the reportables to analyze the achievements of the program and whether the program is successful

## Supplemental Form for Source Protection

- SPA will ensure that the Supplemental Form tracks the requirements of the source protection plan policies, specifically the monitoring policies that require reporting back by February 1 each year
- SPPB has developed customized forms for collection of various provincial ministry reports
  - Prescribed instrument form
  - Non-prescribed instrument form

Body(ies) Responsible for Compiling Information	Number of Reportables
SPA	46
SPPB	15
SPPB and/or SPA	12
<b>TOTAL</b>	<b>73</b>

## Reportable Themes

Theme	Includes / Source of Information	Number of Reportables
Monitoring policy implementation	Were all required reports submitted	2
Implementation status of plan policies	Are all policies implemented	2
Part IV	Risk management official's report	25
Prescribed Instruments - inspections and compliance	Integration of source protection in ministry work	3
Land use planning	Municipal Affairs actions, official plan amendments	4
Education and outreach	What was used, what topics were covered	4
Signage	Number of signs installed	3
Source protection knowledge and action	Did the SPA conduct any surveys	2
Incentives	What incentives offered, were they required to have policy implemented	2

## Reportable Themes

Theme	Includes / Source of Information	Number of Reportables
Provincial ministry integration of source protection (beyond prescribed instruments)	What other provincial programs integrate source protection considerations	1
Sewage System Inspections – Ontario Building Code	Number of inspections and requirements for maintenance	3
Environmental monitoring for drinking water issues	Trends	1
Drinking water surveillance environmental monitoring	Changes in concentrations or loadings	1 (optional)
Transport Pathways	Number of notices and actions taken	3
Positive impact examples for each of the following policy tools or topics	Successful examples	1 (optional)
Municipal integration of source protection	Integration of source protection considerations into municipal business processes	4
Municipal use of tools/resources	What provincial/Conservation Ontario resources are being used by municipalities	2

## Reportable Themes

Theme	Includes / Source of Information	Number of Reportables
Funding for Source Protection Implementation	Number of municipalities that recover costs or allocate staff for source protection	1
Examples of successful municipal actions to protect source water	If municipalities report anything	1 (optional)
Examples of successful residential or business actions to protect source water	If implementing bodies/ SPC members report anything	1 (optional)
Enumerated threats: Progress made in addressing significant threats engaged in at time of SPP approval	Running tally of significant threats Originally identified + additional – not verified - addressed	2
Assessment report information gaps	Steps taken to implement work plans when data lacking for water budget, WHPA-E F, issue contributing area	1
Other reporting items	Any other items	1
Source protection outcomes	Positive outcomes from policy implementation	1

## SPC Opinion – final two reportables

- In the opinion of the SPC, to what extent have the objectives of the SPP been achieved in this reporting period?
- Please provide comments to explain how the SPC arrived at its opinion, including if there was no clear consensus reached.

## Source Protection Annual Progress Report

### I. Introduction

This annual progress report outlines the progress made in implementing our source protection plan(s) for the **[insert the names of all source protection areas that this report applies to - one report per unique source protection plan]**, as required by the Clean Water Act and regulations.

OPTIONAL CONTENT (not a regulatory requirement):  
You may add additional brief introductory remarks.

(100 words)

## SPC Progress Score

### II. A message from your local Source Protection Committee

Our progress score on achieving source protection plan objectives this reporting period:

- **P : Progressing Well/On Target** – The majority of the source protection plan policies have been implemented and/or are progressing in accordance with the timelines specified in the source protection plan.
- **S : Satisfactory** – Some of the source protection plan policies have been implemented and/or are progressing in accordance with the timelines specified in the source protection plan.
- **L : Limited progress** – A few of source protection plan policies have been implemented and/or are progressing in accordance with the timelines specified in the source protection plan.

Please check ONE of the three options above and explain how the source protection committee arrived at its opinion. \*This response should be derived from the response in the Annual Progress Reporting Supplemental Form - ID#49a and ID#49b. (200 words)

## Our Watershed

III. Our Watershed - OPTIONAL CONTENT (not a regulatory requirement): Provide a brief summary of your source protection region/area including a summary of the drinking water systems. You may wish to reflect what is described in your watershed characterization section of your assessment report(s). (750 words)

## At a Glance

IV. At a Glance: Progress on Source Protection Plan Implementation

1. Source Protection Plan Policies (100 words)
2. Municipal Progress: Addressing Risks on the Ground (150 words)
3. Septic Inspections (100 words)
4. Risk Management Plans (100 words)
5. Provincial Progress: Addressing Risks on the Ground (130 words)
6. Source Protection Awareness and Change in Behaviour (225 words)
7. Source Protection Plan Policies: Summary of Delays (500 words)
8. Source Water Quality: Monitoring and Actions (500 words)
9. Science-based Assessment Reports: Work Plans (150 words)
10. More from the Watershed (150 words)

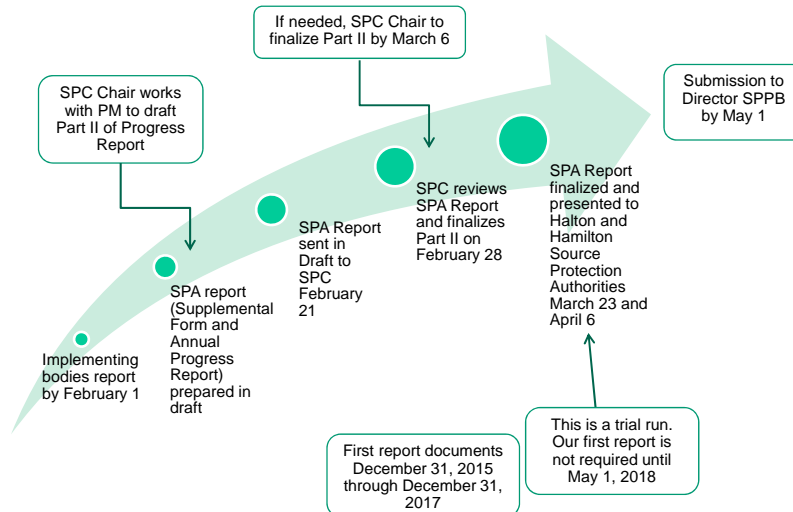
There are 92 words on this slide

## Clean Water Act Requirements for Report

S. 46

- (5) Subject to subsection (6), the source protection authority shall ensure that the report is available to the public as soon as reasonably possible after it is submitted to the Director. (*O.Reg. 287/07 specifies May 1 as the date the report is due to the Director*)
- (6) When a report is made available to the public under subsection (5), the source protection authority shall ensure that it does not contain any personal information that is maintained for the purpose of creating a record that is not available to the public.
- (7) The Minister shall include a summary of the reports submitted by source protection authorities under this section in the annual report prepared by the Minister under subsection 3 (4) of the *Safe Drinking Water Act, 2002*.

## Annual Reporting Process



---

## Source Protection News

---

## Source Protection News

- Auditor General of Ontario – Follow-up Report on Value for Money Audit
  - Initial audit completed in 2014 - 10 Recommendations made
  - Follow-up assessment in 2016
    - Actions on each recommendation characterized as:
      - fully implemented - 41%
      - in process – 41%
      - little or no progress – 18%
      - will not be implemented – 0%



## Source Protection News

- Chief Drinking Water Inspector Annual Report 2015-16 released
  - <https://www.ontario.ca/page/chief-drinking-water-inspector-annual-report-2015-2016>
  - All 22 source protection plans are approved and are in effect
  - All 663 municipal systems were inspected with 74% receiving perfect scores of 100, 99.5% have scores greater than 80
  - Focus on what municipalities are doing to address elevated lead concentrations
    - Hamilton's Lynden Drinking Water System specifically mentioned – long-term drinking water advisory since 2012-13, lead concentrations are below the water quality standard, waiting for concentrations to stabilize, offer residents on-tap filters to remove lead in water, searching for an alternative water source
  - Non-municipal year-round residential drinking water systems (residences with 6 or more units; apartment buildings, mobile home parks)
    - 95 of the 458 registered systems inspected – 12 contraventions and 1 preventative measure order were issued to 13 systems
  - Local services boards (northern communities without municipal government structures) – all 8 systems inspected – 1 preventative measure order was issued

## Source Protection News

- Systems serving designated facilities (children's camps, schools, day nurseries, health care centres) – 218 of 1,460 registered systems inspected – 2 contravention orders were issued to two systems
- Schools and day nurseries (municipal and private services) – flushing and sampling requirements for lead in drinking water - 166 inspections and 113 compliance audits of the 11,171 registered facilities – no orders; immediate corrective action required when there are adverse test results
- A report by the Chief Medical Officer of health is also included for the small drinking water systems program
  - About 10,000 small systems (rural – restaurants, places of worship, community centres, resorts, rental cabins, motels, lodges, bed and breakfasts, campgrounds, etc.)
  - As of March 31, 2016, 16,804 risk assessments completed
  - Over 87% categorized as low/moderate risk and are subject to re-inspection every 4 years
  - About 13% categorized as high risk and are subject to re-inspection every two years

## Source Protection News

---

- International Joint Commission moves ahead with Plan 2014
- New plan for managing water levels and flows in Lake Ontario and the St. Lawrence River
- Balance of diverse interests - consideration of ecosystem needs
- Allows more natural water levels and minimizes impacts to other interests – only 6 cm increase in maximum lake level under new plan
- Helps restore plant diversity and habitat for fish and wildlife
- Expected additional coastal damage
- **Not expected to affect municipal and industrial water and wastewater use if currently good**
- In typical years ships would have increased available depth and could carry larger loads more frequently
- Slight increase in energy production at power plants

## Source Protection News

---

- The International Joint Commission (IJC) released a report recommending the governments of Canada and the United States adopt a strategy to address polybrominated diphenyl ethers (PBDEs) in the Great Lakes, to reduce risks to human health and the environment.
  - PBDEs are a class of flame retardants widely used since the 1970s in commercial and consumer products such as electronic devices, appliances, carpets, mattresses and furniture
  - They are persistent, bioaccumulative and toxic to humans and the environment
  - **They are found in the Great Lakes at levels that could be harmful to human health**
  - Health effects in humans relate primarily to thyroid disorders, reproductive health, cancers and neurobehavioral and developmental disorders
  - Production of PBDEs is either banned or being phased out but residuals are still present throughout the Great Lakes basin
  - PBDEs are a Chemical of Mutual Concern (May 2016) under Annex 3 of the Great Lakes Water Quality Agreement

## Source Protection News

---

- The Research Coordination Committee of the IJC's Great Lakes Science Advisory Board released a report today for consideration by the IJC and Parties – "Future Improvements to Great Lakes Indicators"
- Looks at how we assess the health of the Great Lakes
- A Few of the Recommendations:
  - Using source water instead of treated drinking water for the human health sub-indicators to measure the health of the Great Lakes as a source of drinking water.
  - Standardizing assessment methods and data sources used to increase consistency in assessing long-term trends and detecting changes in lake health status.
  - Overhauling data management and sharing by collating data used in past assessments of progress in a centralized, publicly accessible location.

## Source Protection News

---

- California includes the recognition of source watersheds as integral components of water infrastructure in Water Code
  - Source watersheds are recognized and defined as integral components of California's water infrastructure
  - The importance to maintaining the reliability, quantity, timing, and quality of California's environmental, drinking, and agricultural water supply is highlighted
  - The critical role of source watersheds in enhancing water supply reliability, the maintenance and repair of source watersheds is eligible for the same forms of financing as other water collection and treatment infrastructure
  - Funding is restricted to certain forest ecosystem restoration and conservation activities

## Source Protection News

---

- The first Ballast Water Management System (BWMS) Type Approval Certificate issued December 2, 2016 by U.S. Coast Guard marine Safety Center
- To Norwegian manufacturer Optimarin AS
  - Uses filtration and ultraviolet system to treat ballast water before discharge
- Addresses the threat posed by invasive species
  - Dreissenid mussels – zebra and quagga
  - These alter the food web, alter the ecosystem, can result in bioaccumulation of organic pollutants

**Source Water Protection Program  
Chairs' Meeting  
November 9/10 2016  
Toronto, Ontario**

**Wednesday November 9th**

**1. Chairs Appointments**

August 2016 terms expired for all 19 Chairs

11 advised they would stay on; now re-appointed

8 vacancies (Ausable/Bayfield Maitland; CTC; Lake Erie; Mississippi, Rideau; Raisin, South Nation; Saugeen, Grey Bruce, North Bruce Peninsula; Sault Saint Marie; Thames-Sydenham and Region)

At time of meeting the Minister's decision on the replacements had not come through.

**2. Ministry of the Environment & Climate Change Updates**

**a) Amendments relating to SP Plans**

Section 34      SPA process              expanded systems; completion of technical works

Section 35      Minister's Order              discretion; e.g. cannot get municipal support

Section 36      Mandatory Review              new policies, new technical information

Section 51      SPA Discretion              administrative errors, typos etc.

Stressed: early engagement with MOECC and municipalities; need for municipal resolutions by affected municipalities for Sec. 34 amendments

Also need for public consultation.

**b) Audit Update**

Diane had sent out Audit to SPC members earlier; relates to the Auditor General value for money audit from December 2014; the Audit will be discussed at the meeting.

**c) EBR Postings**

**Aggregate Resources Act:** need to consider drinking water sources when making decisions for new licences and wayside pit permits:

**Proposed Changes to the ARA - Water**

•Protection of water resources is a key area of focus for the review. Proposed water related changes include:

•strengthening the requirements around hydrogeological studies,

•rehabilitation planning and mitigative measures within the 2-year time of travel from municipal wells,

•notifying source water protection authorities of new applications,

- requiring existing above-water extraction sites to follow the new application process if they wish to change operation to below-water extraction, and
- new provisions for MNR to establish conditions on existing aggregate sites related to source water protection plans

### **Drinking Water Standards & Other Regulations**

These were sent out following our September meeting; dealt with regulations relating to Drinking Water Testing; Lead in School and Day Nurseries; Operator Certification

### **Technical Rule Amendments**

We had looked at these changes at the March meeting; if recall need identified by Auditors Report, discussions with conservation authorities, ministries, municipalities etc. and from the various SP Plans.

Identified two phases for changes to the Director's Technical Rules first being Phase 1 where there were not significant revisions to the source protection science and regulations and Phase 2 where more significant revisions are required.

For Phase 1, Diane had provided a spread sheet that included such things as clarifying definitions (e.g. high water mark); intent of the rules (contaminated sites in IPZs) and removed overlapping rules (significant ground water recharge area scoring)

Some of specific changes include:

- Allowing vulnerability scoring to drinking water systems in large water bodies like Great Lakes;
- Flexibility to allow higher vulnerability scores for the IPZ of Great Lakes systems that may be more vulnerable to contamination in or near shore environments;
- Remove septic systems for source of sodium and chloride.

Noted that the original package included new methodologies for assessing risk associated with road salt application; this was deferred to Phase 2 to allow MTO to provide better input.

Plan is to post the updated rules by end of 2016

### **Proposed Water Bottling Regulation**

In September 2016 a new mandate letter was given to the Minister with an added focus on water resource sustainability and management of undertakings for water bottling.

On October 17 2016, a proposed regulation was released establishing a moratorium on the issuance of new or increasing permits to take ground water for water bottling.

During moratorium, they will be looking at water pricing and other tools; water taking rules (regulatory and policy framework); also the advancing knowledge of water resources and improving understanding of ground water in Ontario; effects of climate change and population growth on ground water.

Considering building on water budgets developed by the SP program.

Buys time to review this information; looking at developing science working groups noting the importance of water budgets and understanding where to incorporate climate change.

Assess where additional Tier 3 water budgets are needed; also looking at how ecological functions need to be better integrated.

They recognized the need to engage conservation authorities e.g. where additional studies needed; assessing the current information.

### **d) New Threats Tool**

Table of Drinking Water Threats is the official document as part of the Directors Technical Rules; 440 pages long with numerous combinations of circumstances and vulnerability scores; are 76 summary tables posted on Ontario.ca.

Developing new on-line tool that eliminates the 76 summary tables of circumstances and allows the user a quick convenient way to search the tables. Search by vulnerable area, threat (chemical etc); can reference various possible variations of threats and circumstances with SP vulnerable areas and scores.

It will be continually updated. It is in the final stage of testing; site is <http://swipp.ca/Threats>.

#### **e) Q& A Improvements**

Branch is updating the Q&A knowledge database. Goal is to keep Q&As up-to-date and ensure stakeholders are aware of new questions as they become answered ( SPC chairs, PMs, RMO etc). Ensure consistency in messaging. Developed a protocol for answering; makes sure most qualified person answers; questions include: RMO related, technical rules, mapping, and policy implementation.

Looking at response being no later than 2 weeks.

### **3. Annual Reporting**

Lengthy session. We will also discuss later. A framework has been developed for the public document and while we are not due until 2018; some SP areas need to report by May of 2017,

### **4. MOECC Implementation**

#### **a) Use of Prescribe Instruments**

Such as for waste disposal sites and sewage works; how they reviewed proposals in relation to their location and vulnerability scores. Whether is a SDWT; if it is, refer to the respective SPP and its policies. Use a Standard Operating Procedure. Looking also at existing sites and where Environmental Compliance Approvals have been issued. Working with municipalities in helping to identify all such sites.

#### **b) End of Life Vehicles (ELV) Sites**

Have developed new regulatory requirements for SDWT at ELV sites. Have typically not required EPA and waste disposal approvals to operate. Potential threats include lead, mercury, automobile fluids.

2004 looked at 65 auto wrecker sites; 97% had environmental concerns. Found numerous events of spills of fluids, fires, surface water discharges;

Brought in Ontario Regulation 347. Looks at larger sites (e.g. not small or agricultural situations). Requires either registering on the Environmental Activity and Sector Registry (EASR) or needs an Environmental Compliance Approval. Example, if in a vulnerable area would require the ECA. The Regulation was passed in March and all operations must either have registered on the EASR or obtain an ECA by September 30<sup>th</sup> of this year.

#### **c) Non-Legally Binding Policy Review (NLB)**

Are about 235 NLB policies from SP plans that are directed at MOECC; they have implemented changes for spill responses; prioritization of inspections for evaluating compliances with instruments under various acts, e.g. NMA, Pesticides, EPA; creating catalogues of resource materials that can aid in addressing SDWT and improve public knowledge.

Are reviewing remainder that fall into "have implemented", "will implement" and "will not implement". Will complete their analysis and report to senior management by end of this year. A report is to be made available to the SPAs by February 1<sup>st</sup> 2017.

#### **e) Implementation of Source Protection Science and Policy in Great Lakes Programs**

Working with Environment Canada and municipalities establishing a Lake Ontario Collaborative Group to support implementation of policies to protect drinking water at intakes; they are currently developing Terms of Reference.

Also, have looked at outreach programs to discuss policies and findings from SP plans with National Energy Board, Ontario Energy Board, Environment Canada, Health Canada, New York State, and US agencies. Goal is to raise profile of Great Lakes as drinking water source. Also improve capacity for joint spills/emergency response for intakes. Are looking at working with SPAs and SPPB on this. Are looking at using MOECC leads in the bi-national Lake Wide Action and Management Plans (LAMPS) to share SP information. This group has EC, US-EPA, New York State, US Corp of Engineers, MOECC, CAs (TRCA), First Nations and others.

Once scope is determined and SP Great Lakes information packages developed, additional outreach can be built into other Great Lakes forums.

Spill Actions Centre (SAC) staff has piloted updated source protection spills procedures; used SP mapping to screen tool to screen all spills reported to the SAC. Have also hosted an incident response and stakeholder forum with provincial and federal agencies.

#### **4. Conservation Ontario Update**

Kim Gavin, CEO of Conservation Ontario, provided an update regarding Conservation Ontario's involvement in the Source Protection Program as well as an update of proposed changes to the *Conservation Authorities Act*.

**Thursday November 10th**

#### **5. SPMIF Analysis**

Source Protection Municipal Implementation Fund. For qualifying municipalities, fund of \$13.5m was established. There have been challenges with implementing the fund such as eligible projects, approval timing, pooling of monies, extensions etc. As of October 2016 52% or \$7m spent and an extension has been provided to March 5, 2017 in order to allow municipalities to spend the remaining \$6.5m.

#### **6. Presentations**

There were presentations from various parties dealing with challenges during implementation of the Source Protection Plan and challenges as a RMO. Kyle Davis dealt with the RMO presentation.

#### **7. Program Review and Program Design**

This was a major topic that looked at the Program, Policy and Technical frameworks; how to increase efficiencies and effectiveness and ensure the long-term sustainability of the program.

##### **a) Program Framework:**

Issues identified with Municipal Class EAs for expansions or changes to drinking water systems. They have not been coordinated with the SP program process in that assessment reports and policy development are looked at after the planned system. The intent is to ensure these are coordinated. Suggestions are better compliance, training and potentially regulations under the Safe Drinking Water Act.



Plan Amendments were also discussed; generally expect changes to areas where similar policies apply; changes to existing policies or new policies. Suggestions are more local involvement and oversight and maybe greater SPC involvement especially in Sec 34 amendments, further support to policy implementation (e.g. promoting compliance) and possibly having an ambassador role in the community for the program. Also delegation of approvals from Minister down to Director and maybe for S36 amendments.

### **b) Policy Framework**

Raised possibility of risk of spills along transportation corridors becoming an actual prescribed drinking water threat rather than just being identified as a local threat.

Looked at possible policies for highly unlikely threat activities. Now require a policy as a SDWT regardless of the likelihood of it occurring. An example might be de-icing of aircraft. It would require a regulation amendment to exempt SPCs from writing policies where the SPA or SPC are satisfied that there is no likelihood of activity occurring in the future.

S. 61 RMP Exemptions. Amending S. 61 to limit RMP exemptions to only those NMA instruments approved by OMAFRA; addresses a lack of oversight where some instruments under the NMA do not require approval from OMAFRA. Where plan policies address threats with RMP tool, RMPs would be required for any activities that are not OMAFRA approved (e.g. NMPs).

Non-legal Binding Policies: meant for municipalities, local boards and SPAs; not provincial ministries. Recall noted that there are 240 such policies directed at ministries. Future plan amendment may limit ministries to Provincial Instruments and Planning Act requirements. Request for provincial action beyond these tools would be presented as a recommendation to the particular ministry. MOECC noted they have problems calling these policies.

### **c) Technical Framework**

Work has started on Phase 2: includes significant changes to the science that may require research and amendments to the regulations

Both phase 1 and 2 require consultation with stakeholders and the public

For example looking at delineation and risk assessment for surface water and groundwater vulnerability and drinking water threats and circumstances. For water quantity; looking at water budget risk assessment. Working groups were established and workshops held that resulted in a number of recommendations. The MOECC is looking at putting the final recommendations out at the end of the year. *This will be a subject at a future SPC meeting.*

There was also discussion on systems outside of the CWA, e.g. non municipal drinking water supplies and working with First Nations with Source Water Protection.

### **d) First Nations Strategy**

Beth Forrest and Mary Wooding provided an update on the strategy being developed to deal with drinking water conditions on First Nation Reserves.