

DRINKING WATER SOURCE PROTECTION

Trent Conservation Coalition Source Protection Region

2019 Annual Progress Report Trent Source Protection Plan



“The first barrier to the contamination of drinking water involves protecting the sources of drinking water.”

Justice Dennis O'Connor

Prepared by: Trent Conservation Coalition Source Protection Region



LOWER TRENT
CONSERVATION



MESSAGE FROM THE CHAIR OF THE TRENT CONSERVATION COALITION SOURCE PROTECTION COMMITTEE



On behalf of the Trent Conservation Coalition Source Protection Region Committee, it is my pleasure to introduce the 2019 Annual Progress Report, on the implementation of the Trent and Ganaraska Source Protection Plans. We have now completed 5 years of implementation and it is encouraging to see significant advancement being made across our vast region.

With each passing year, we are seeing progress toward the ultimate goal of protecting sources of municipal drinking water. As we prepare this annual report, it gives us a chance to reflect on the accomplishments, as well as the challenges of continuing this important work.

As we approach the 20th anniversary of the Walkerton tragedy, it is a good time to remind ourselves of the tremendous change in the Province of Ontario brought about by the Walkerton Commission Inquiry and the resulting recommendations. The recognition that a multi-barrier approach to providing safe and abundant water was a key decision. The first barrier is protecting sources of drinking water so that municipalities are drawing the cleanest water possible. Effective implementation of the Source Protection Plan Policies is helping us achieve that desired outcome.

Risk Management Officials and those entities responsible for the implementation of the policies across our region have reported their progress throughout 2019. Our committee and those engaged in oversight, continue to monitor the results.

This is also a time for renewal on two fronts. Firstly, seven of our long-time Committee members are concluding their direct involvement on the committee as of the end of December, 2019. To those members, who have served at an exceptional level, relying on their extraordinary expertise, I thank you for your service. We have interviewed and selected seven new members who also have demonstrated a high degree of competence and knowledge and I look forward to welcoming these members and working with them in 2020. Secondly, our Committee is in the process of reviewing the effectiveness of our policies, identifying challenges and developing remedies when necessary.

I am proud of the work our Committee and staff have done and looking back at 2019 gives me a sense that we have moved the yardsticks down the field. It is my pleasure to continue to work with such a competent and committed group of people who share a sense of mission in protecting this our most precious natural resource, our water, and thereby, to protect the health and safety of our constituents. Having said that, our job is never done as we learn and evolve each year. We are charged with such an important responsibility and we can never lose sight of why we must soldier on. Safe drinking water is just that important. I hope you enjoy reviewing our report.

Jim Hunt, Chair of the Trent Conservation Coalition Source Protection Committee.

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1. INTRODUCTION

The Trent Conservation Coalition Source Protection Region’s third Annual Progress Report for the Trent Source Protection Plan (SPP) provides a status update for the first five years of implementation since the SPP came into effect on January 1st, 2015 through to December 31st, 2019.

This report is produced by the Trent Conservation Coalition (TCC) for:

- Residents and businesses within the watershed
- Trent Conservation Coalition Source Protection Committee (SPC), and
- Municipalities and other local stakeholders.

A separate Annual Progress Report for the Ganaraska Source Protection Plan is also available.

The format of this report is based on broad categories, identified by the Ministry of the Environment, Conservation and Parks (MECP), to facilitate legislative reporting and tracking of progress made towards the implementation of the Trent Source Protection Plan, and other source protection plans across the province.

1.1 CLEAN WATER ACT, 2006

In response to the *Report of the Walkerton Inquiry (The Honourable Dennis R. O’Connor, 2002)* and its recommendation for a multi-barrier approach to providing safe drinking water, the Ontario government passed the *Clean Water Act, 2006* (the *Act*). The purpose of the *Act* is to protect sources of municipal drinking water through collaborative, watershed-based source protection plans that are locally developed and based on science.

1.2 SOURCE WATER PROTECTION PROGRAM

The *Clean Water Act* led to the creation of the Drinking Water Source Protection (DWSP) program, which established 19 source protection regions and 38 source protection areas in Ontario. The DWSP program protects current and future municipal residential drinking water sources from contamination and overuse by developing collaborative watershed-based source protection plans. A source protection plan is the first barrier in a multi-barrier approach.

The Trent Source Protection Plan includes mandatory and strategic policies that have been developed by the Trent Conservation Coalition Source Protection Committee in consultation with provincial ministries, municipalities, businesses, landowners and other stakeholders. The plan identifies the party that is responsible for implementing a policy (implementing bodies). The implementing bodies are required by the *Clean Water Act* and its regulations to report on the implementation progress of policies in the Plan.

1.3 OUR WATERSHED: THE TRENT CONSERVATION COALITION SOURCE PROTECTION REGION

The Trent Conservation Coalition (TCC) Source Protection Region is comprised of five source protection areas. The Trent Source Protection Plan (SPP) applies to the source protection areas, identified below, that are within the Trent River Watershed. The Ganaraska Source Protection Plan is a separate plan for the Ganaraska Source Protection Area. This report was prepared based on annual reporting information submitted by implementing bodies for the Trent Source Protection Plan.

- Kawartha-Haliburton Source Protection Authority;
- Otonabee-Peterborough Source Protection Authority;
- Crowe Valley Source Protection Authority;
- Lower Trent Source Protection Authority.



Trent Conservation Coalition (TCC) Source Protection Region (SPR) Quick Facts

- Population in the TCC: 400,000
- Area: TCC = 14,500 km²
- Area: Trent River Watershed= 12,900 km²
- Number of drinking water systems in the TCC SPR: 53 (includes one planned groundwater system)
- Number of drinking water systems in the Trent River Watershed: 47 (includes one planned groundwater system)
- Number of surface water systems in the TCC SPR: 18
- Number of surface water systems in the Trent River Watershed: 15
- Number of groundwater systems in the TCC SPR: 35 (includes one planned system)
- Number of groundwater systems in the Trent River Watershed: 32 (includes one planned system)
- Population serviced by municipal residential drinking water systems in the Trent River Watershed: more than 150,000
- Number of municipalities in the TCC SPR with residential drinking water systems: 24 (22 lower tier, 5 upper tier)
- Number of municipalities in the TCC SPR with at least part of a vulnerable area in their jurisdiction: 43 (38 lower tier, 5 upper tier)
- Number of policies in the Trent Source Protection Plan: 138
- Number of Issue Contributing Areas in the Trent Source Protection Plan: 1 (Stirling system)
- Effective date of the Trent Source Protection Plan: January 1, 2015

To learn more about the Trent Conservation Coalition Source Protection Region, please refer to the Trent Assessment Report and Source Protection Plan available at <http://trentsourceprotection.on.ca/resources/reports-legislation>.

Otonabee-Peterborough Source Protection Area

The Otonabee-Peterborough Source Protection Area (O-P SPA) has an approximate population of 129,300 and includes portions of twelve (12) municipalities and three (3) First Nations Reserves. It covers approximately 3,365 km² and is comprised of the Otonabee Region Watershed (1,915 km²) and areas to the north (1,365 km²) which include portions of Haliburton and Peterborough Counties.

Approximately 67% of the population, or 86,579 people, obtain drinking water from eleven (11) municipal residential drinking water systems in the O-P SPA. Three (3) municipal drinking water systems, Lakefield, Peterborough and Hastings, draw from surface water sources (the latter extends into the Municipality of Trent Hills in the Lower Trent Source Protection Area). Eight (8) residential drinking water systems draw on groundwater to serve approximately 4% of the population, or 4,929 people, in the communities of Alpine Village/Pirates Glen, Birch Point Estates, Buckhorn Lake Estates, Crystal Springs Subdivision, Keene Heights Subdivision, Millbrook, Norwood, and Pinewood.

There are two (2) populated First Nation Reserves in the O-P SPA, Curve Lake and Hiawatha, with a combined population of approximately 1,543 that is primarily served by private wells.

Kawartha-Haliburton Source Protection Area

The Kawartha-Haliburton Source Protection Area (K-H SPA) is comprised of watersheds that represent the jurisdiction of Kawartha Conservation, and an additional watershed area to the North primarily within Haliburton County.

The K-H SPA covers an area of 5,406 km² and is located within the southcentral region of Ontario, fringing on the Greater Toronto Area to the south and Algonquin Park to the north. There are 11 municipalities within or partially within the Source Protection Area. Approximately 45% of the population, or 35,050 people, obtain their drinking water from 22 municipal residential drinking water systems in the K-H SPA.

There are six existing municipal residential drinking water systems in the source protection area that obtain their water from surface water sources. These systems serve about 22,350 people in the communities of Bobcaygeon, Fenelon Falls, Kinmount, Lindsay, Norland and Southview Estates.

There are 16 existing municipal residential drinking water systems in the source protection area that obtain their water from groundwater sources. These systems serve about 15,700 people in the communities of Blackstock, Canadiana Shores, Greenbank, Janetville, Kings Bay, Lutterworth Pines, Manorview, Mariposa Estates, Minden, Pleasant Point, Port Perry, Sonya, Victoria Glen, Victoria Place, Woodfield, and Woods of Manilla.

The Mississaugas of Scugog Island First Nation is located within the Source Protection Area.

Crowe Valley Source Protection Area

The Crowe Valley Source Protection Area covers an area of approximately 2,006 km² and includes the entire Crowe River watershed. There are 11 municipalities located within or partially within the Crowe Valley Source Protection Area. The total population of these municipalities is 41,441 (Statistics Canada, 2006), and about 10,490 of them are located within the source protection area boundary.

Drinking water systems in the Crowe Valley Source Protection Area include municipal and non-municipal systems of various sizes that draw raw water from both groundwater and surface water sources.

About 35% of the population in the Crowe Valley Source Protection Area (approximately 3,700 people) obtains their drinking water from four municipal residential drinking water systems.

There is one existing municipal residential surface water supply system in the source protection area that obtains water from a surface water source. This system serves about 1,300 people in the community of Marmora.

There are three existing municipal residential groundwater supply systems in the source protection area that obtain their water from groundwater sources. These systems serve about 2,400 people.

There are two municipal residential drinking water systems in the source protection area (Cardiff and Havelock) that are considered to be Groundwater Under the Direct Influence (GUDI) of surface water. The Cardiff well is considered GUDI because it is constructed in an overburden aquifer that is located within 90 m of a surface waterbody (Mink Creek) (Morrison Environmental Ltd., 2004). There are three wells in the Havelock system under the influence of surface water. In situ filtration removes particulate matter at two of these wells (Genivar Consultants, 2010).

Lower Trent Source Protection Area

The Lower Trent Source Protection Area includes the area under the jurisdiction of the Lower Trent Region Conservation Authority (2070 km²) and the area outside of Conservation Authority jurisdiction between the Lower Trent, Otonabee, and Crowe Valley watersheds (45 km²). The Lower Trent Source Protection Area is bordered on the south by Lake Ontario and the Bay of Quinte. Rice Lake forms the northwestern boundary of the region. Several tributary streams including Cold, Rawdon, Salt, Squires (Hoards), Percy, Burnley (Mill), Trout, and Mayhew Creeks empty into the Trent River. Shelter Valley, Barnum House, Lakeport/Colborne and Butler Creeks empty into Lake Ontario while DND and Meyers Creeks empty into the Bay of Quinte.

There are nine municipalities located within or partially within the Lower Trent Source Protection Area. The total population of these municipalities is 109,972 (Statistics Canada, 2006) and more than 78,000 of them are located within the source protection area boundary.

Approximately 60% of the source protection area population (over 48,400 people) in the Lower Trent Source Protection Area obtains their drinking water from 10 municipal residential drinking water systems.

There are six existing municipal residential surface water supply systems in the source protection area that serve about 36,600 people in the communities of Bayside, Campbellford, Frankford, Hastings, Trenton and Warkworth.

There are four existing municipal residential groundwater supply systems in the source protection area that obtain their water from groundwater sources. These systems serve about 11,800 people in the communities of Brighton, Colborne, Grafton and Stirling. The Stirling residential drinking water system draws water from a total of four wells that are considered to be Groundwater Under the Direct Influence (GUDI) of surface water.

The Alderville First Nation, located south of Rice Lake, is the only First Nation in the Lower Trent Source Protection Area. The reserve has a population of approximately 575 and a population density of 50 people/km² with most residents of Alderville First Nation being serviced by private wells.


1.4 OUR WATERSHED: LOCATION OF MUNICIPAL WELLS AND INTAKES SUBJECT TO THE CLEAN WATER ACT



2. A MESSAGE FROM YOUR SOURCE PROTECTION COMMITTEE

The scoring system below is used to assess the progress achieved from January 1st, 2015 to December 31st, 2019 related to implementing policies in the Trent Source Protection Plan.

Our progress score on achieving source protection plan objectives in this reporting period is as follows:

	P: Progressing well / on target: Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.
	S: Satisfactory: Some of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.
	L: Limited progress made: A few source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

The rationale for the Source Protection Committee (SPC) to select the “progress score” is as follows: The SPC arrived at this consensus based on a summary of information provided by Source Protection Authorities through the Annual Progress Report templates and a draft Annual Progress Report presented on March 31, 2020 at a TCC Source Protection Committee meeting. The SPC reviewed the sections in the below report, including a review of the scoring proposed by each Source Protection Authority. The SPC then assessed the progress score by applying the criteria above. The committee settled on the progress score of **Progressing well / on target** because implementation of the Trent Source Protection Plan policies are mostly complete across all four SPAs.

2.1 METHOD OF EVALUATION

Implementation of the Trent Source Protection Plan is an important element of a multi-barrier approach to protecting municipal residential drinking water sources. To evaluate implementation effectiveness, a monitoring component is included for each policy. The Ministry of the Environment, Conservation and Parks (MECP) has identified a reporting process for the monitoring component that includes the preparation of an Annual Progress Report. In order to report on implementation progress to the MECP, the implementing bodies submit information on their progress through use of a standardized template to the Source Protection Authorities and the Region. This information is then used to develop this Annual Progress Report.

3. AT A GLANCE: PROGRESS ON SOURCE PROTECTION PLAN IMPLEMENTATION

3.1 SOURCE PROTECTION PLAN POLICIES

Across the Trent Conservation Coalition Source Protection Region, all policies that address significant drinking water threats are implemented, in progress or have been evaluated and determined to require no further action(s).

The percentage of policy progress across the Trent Source Protection Plan was determined through the following information:

Source Protection Area	Percent Policies Implemented, In progress or evaluated as no further action required	Progress Score Assigned by SPA
Otonabee-Peterborough	100%	P: Progressing well / on target
Kawartha-Haliburton	100%	P: Progressing well / on target
Crowe Valley	100%	P: Progressing well / on target
Lower Trent	100%	P: Progressing well / on target

Our overall progress score across the Trent Source Protection Plan on achieving source protection plan objectives in this reporting period is as follows:



P: Progressing well / on target: Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

3.2 MUNICIPAL PROGRESS – ADDRESSING RISKS ON THE GROUND

Municipalities and approval authorities under the *Planning Act* are the Implementing Bodies for 56 policies in the Trent Source Protection Plan. The jurisdictions of 43 municipalities lies within the Trent Conservation Coalition Source Protection Region, however of those, 27 municipalities (22 lower tier and 5 upper tier) contain vulnerable areas where Source Protection Plan polices apply.

For the Trent Source Protection Plan, a summary of key information and progress scores is as follows:

Source Protection Area	% Official Plan and Zoning By-Law Policies Implemented	% Emergency Management Policies Implemented	Progress Score assigned by SPA
Otonabee-Peterborough	63%	100%	P: Progressing well / on target
Kawartha-Haliburton	60%	100%	P: Progressing well / on target
Crowe Valley	100%	100%	P: Progressing well / on target
Lower Trent	75%	95%	P: Progressing well / on target

For the above table, it is important to note that although some work is in progress, zero municipalities report they have not started.

Under the category ‘% Official Plan and Zoning By-Law Policies Implemented’ all of the municipalities are in process. The majority of municipalities have amended their Official Plans, and are waiting for municipal council approval of these amendments. Regarding emergency management policy implementation, Lower Trent Source Protection Authority continues to assist the remaining municipality with incorporating source protection in municipal emergency plans. All municipalities have begun the process.

Our overall progress score on achieving source protection plan objectives in this reporting period is as follows:



P: Progressing well / on target: Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

3.3 SEPTIC INSPECTIONS

While outside the scope of the *Clean Water Act*, The Ontario Building Code (OBC) requires that septic systems identified in the Assessment Report as threats be subject to a mandatory inspection program. Based on the location of individual septic systems, the responsibility to undertake these inspections may be that of the local Health Unit/department, municipality, or Conservation Authority depending on which the municipality has identified as the *principal authority*.

Compliance dates for mandatory inspections are set out under 1.10.2.4 (2)(a)(i)(A) of O. Reg. 315/10: BUILDING CODE as follows:

- 1) five years after the date the notice of the approval of the Assessment Report is published on the environmental registry (EBR Registry 012-2699 posted Nov 3, 2014) for a septic system constructed before the date of publication;
- 2) five years after the construction of the septic system, if it was constructed on or after the publication date;
- 3) five years after the approval of an updated Assessment Report is published which has new areas where septic system threats exist; and,
- 4) thereafter, every five years after the most recent inspection of a given septic system.

The progress of septic inspections for the Trent Source Protection Authorities is as follows:

Source Protection Area	Principal Authority	# Inspections (for 5 year compliance period)	Mandatory inspections completed %	Inspections conducted in 2019 #	Systems Requiring Maintenance # (%)	2 nd 5-yr Cycle Inspections Conducted %
		<i>Within 1st 5 year cycle ending November 3, 2019</i>				
Otonabee-Peterborough	<ul style="list-style-type: none"> ● Peterborough Public Health ● Township of Douro-Dummer 	140	100	8	0 (0%)	7%
Kawartha-Haliburton	<ul style="list-style-type: none"> ● Municipal Building Inspectors 	373	100	19	11 (3%)	0%
Crowe Valley	<ul style="list-style-type: none"> ● Municipal Building Inspectors ● Peterborough Public Health (Havelock) 	47	100	4	2 (50%)	17%
Lower Trent	<ul style="list-style-type: none"> ● Municipal Building Officials & Septic Inspectors 	138	97	11	5 (13%)	0%

Overall, 99.5% of existing septic threats have been inspected in the first 5 year cycle in accordance with the Ontario Building Code, of which 10% required maintenance, and 90% were functioning as required. For the first cycle, all but one municipality in the Lower Trent Source Protection Area, have completed their mandatory inspections, with 4 inspections still required. The second cycle inspections have begun in the Otonabee-Peterborough and Crowe Valley Source Protection Areas.

Source Protection Area	Standard Operating Procedures in place for future threats?
Otonabee-Peterborough	100%
Kawartha-Haliburton	100%
Crowe Valley	100%
Lower Trent	100%

All municipalities and/or health units have standard operating procedures to ensure OBC compliance and thus ensure that future septic systems do not become significant threats.

Our progress score on achieving source protection plan objectives in this reporting period is as follows:



P: Progressing well / on target: Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

3.4 RISK MANAGEMENT PLANS

Risk Management Officials (RMOs) are the Implementing Body for 39 policies in the Trent Source Protection Plan, and utilize the following tools which were established under Part IV of the *Act*, to manage threats: Prohibition (s.57); Risk Management Plans (s.58); and, Restricted Land Uses (s.59).

Compliance Date Summary	
Existing	5 years from plan taking effect (January 1, 2020)
Future	When the plan takes effect (January 1, 2015)

Existing threats have a 5-year compliance date. Future threat policies are effective when the plan takes effect. As of the end of 2019 there are still Risk Management Plans that need to be completed. Some of these are be delayed because of pending guidance from the province. Others are in various stages of negotiation. The Committee is in the process of adapting the compliance date in the Source Protection Plan to allow for this situation.

Source Protection Area	# RMP's Established in Reporting Period	# Significant Threats Managed	# of Threats remaining to be managed	# Inspections
Otonabee-Peterborough	4	4	32	2
Kawartha-Haliburton	15	14	32	16
Crowe Valley	1	1	12	0
Lower Trent	8	16	44	5 (plus 1 follow up)

Twenty-eight (28) Risk Management Plans have been established for this reporting period. These 28 plans collectively manage a total of 35 significant drinking water threats. Risk Management Officials report an ongoing effort to refine the number of significant drinking water threats based on information gathered from site visits, direct contacts and other means.

The total number of inspections carried out by a Risk Management Official was 23 with 1 follow up visit. The compliance rate with the Risk Management Plans established is 100%.

Risk Management Officials operating within the Trent SPP jurisdiction issued a total of 667 Section 59 notices for the first four years of implementation from the effective date (January 1st, 2015) to December 31st, 2018. A total of 158 Section 59 notices were issued for this reporting period. The processes to screen development applications is reported to be working well and some municipalities continue to fine tune their screening processes to improve efficiencies.

The contact details for the Risk Management Officials can found on the Trent Conservation Coalition website: <http://trentsourceprotection.on.ca/risk-management/contact-your-risk-management-official-inspector>.

Our progress score on achieving source protection plan objectives in this reporting period is as follows:

- ✓ **P: Progressing well / on target:** Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

3.5 PROVINCIAL PROGRESS: ADDRESSING RISKS ON THE GROUND

Four provincial ministries reported on progress of 27 policies in our Source Protection Plan.

Compliance Date Summary	
Existing	5 years from plan taking effect (January 1, 2020)
Future	When the plan takes effect (January 1, 2015)

The ministries listed below have implemented 87% of the TCC policies. The remaining 13% are reported to be in progress. The table below summarizes the progress achieved for policy implementation as reported by each ministry:

Implementing Body	Policy Implementation Complete (%)	Policy Implementation in Progress (%)	Policy Implementation Not Started (%)
Ministry of Agriculture, Food, and Rural Affairs (OMAFRA)	7 (100%)		
Ministry of the Environment, Conservation and Parks (MECP)	35 (90%)	4 (10%)	
Ministry of Natural Resources and Forestry (MNRF)	2 (100%)		
Ministry of Transportation (MTO)	3 (60%)	2 (40%)	
Ministry of Municipal Affairs and Housing (MMAH)		1 (100%)	

For existing threats, Ontario ministries listed above are reviewing previously issued provincial approvals (i.e., prescribed instruments, such as environmental compliance approvals under the Environmental Protection Act) where they have been identified as a tool in the Trent Source Protection Plan to address existing activities that pose a significant risk to sources of drinking water. The provincial approvals are being amended or revoked where necessary to conform with the Trent Source Protection Plan policies. Our policies set out a timeline of 5 years to complete the review and make any necessary changes.

The Ministry of the Environment, Conservation and Parks reports that the percent progress made on prescribed instruments (PI) review is 100% for the following categories:

- Waste disposal sites – landfilling and storage
- Sewage Works/Wastewater
- Municipal Drinking Water Licences & Drinking Water Works Permits

The Ontario Ministry of Agriculture, Food and Rural Affairs reports that the percent progress made on prescribed instruments (PI) review is 100% for the following categories:

- Nutrient Management Strategies (NMS)
- Non-Agricultural Source Material (NASM) Plans

For future threats, Ministries reported that 100% are implemented, with standard operating procedures in place where applications are reviewed to ensure the proposed activities conform to our policies.

Our progress score on achieving source protection plan objectives in this reporting period is as follows:



P: Progressing well / on target: Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

3.6 AWARENESS AND CHANGES IN BEHAVIOUR – EDUCATION & OUTREACH

Ten (10) policies in the Trent Source Protection Plan utilize the education and outreach (E & O) tool to influence behavior and encourage the voluntary adoption of practices to better protect sources of municipal drinking water.

Road signage was identified as an effective E & O tool to raise awareness of the Drinking Water Source Protection Program (DWSP) and the importance of protecting sources of municipal drinking water. Drinking Water Protection Zone signs have been installed in vulnerable areas across the Trent Conservation Source Protection Region. To date, all required Drinking Water Protection Zone signs have been installed in the four Source Protection Authorities, including 246 under the Trent Source Protection Plan.

A summary of other education and outreach activities for 2019 include:

Otonabee-Peterborough Source Protection Authority:

- The Ontario Ministry of Transportation (MTO) has installed Drinking Water Protection Zone signage along provincial highways
- Municipalities have replaced the Drinking Water Protection Zone signage in vulnerable areas as required by the SPP with the same standardized version as used by MTO for consistent messaging
- Displays and information related to the DWSP at local events including Discovery Days, and farmer's markets throughout the O-P SPA
- Distribution of information to affected stakeholders including landowners and tenants
- Updates to the DWSP information and links to resources on the Otonabee Conservation website and social media platforms
- Updates to DWSP communications products including factsheets and brochures
- Resources provided to municipalities and local First Nations



Kawartha-Haliburton Source Protection Authority:

- 23 additional signs have been installed by Municipalities on county and municipal roads in the reporting period
- Several municipalities have replaced existing signage with the provincially designed DWSP signs before 2018
- Attendance at special events such as water festivals and country living shows
- Provided two guest lectures for two programs at Fleming College – to the Advanced Water System Operations and Management program, and the Applied Planning post-graduate diploma program
- DWSP displays and information at local events
- Door to door visits
- Landowner contact via direct mail
- Website updates e.g. factsheets
- Advertisements in community guides



Crowe Valley Source Protection Authority:

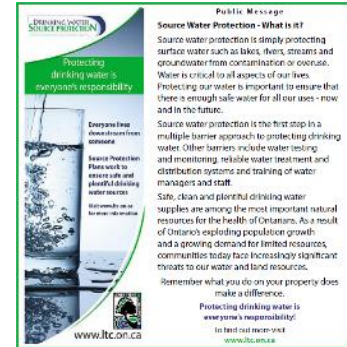
- Signs were installed by the Ministry of Transportation along provincial highways in 2016
- Additional road signs have been installed by Municipalities on county and main municipal roads
- Most municipalities have replaced existing signage with the provincially designed DWSP signs (one municipality did so in early 2018)



- Learning opportunities directed at special events such as water festivals
- DWSP displays and information at local events
- Landowner contact via direct mail
- Website updates e.g. infographics and factsheets
- Municipal newsletters
- Advertisements in community guides

Lower Trent Source Protection Authority:

- 4 signs were installed by the Ministry of Transportation along provincial highways in 2016
- 94 signs have been installed by Municipalities on county and municipal roads
- Acquired an Augmented Reality Sandbox to demonstrate watershed properties and the effects of climate change
- Learning opportunities directed at special events such as water festivals
- DWSP displays and information at local events
- Door to door visits
- Landowner contact via direct mail
- Website updates e.g. factsheets
- Municipal newsletters
- Advertisements in community guides



Our progress score for each Source Protection Authority on achieving source protection plan objectives in this reporting period is as follows:

Otonabee-Peterborough	P: Progressing well / on target
Kawartha-Haliburton	P: Progressing well / on target
Crowe Valley	P: Progressing well / on target
Lower Trent	P: Progressing well / on target

Our overall progress score on achieving source protection plan objectives in this reporting period is as follows:

- ✓ **P: Progressing well / on target:** Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

3.7 SOURCE PROTECTION PLAN POLICIES: SUMMARY OF DELAYS

The Trent Conservation Coalition Source Protection Region, not including Ganaraska, reports no significant delays in policy implementation. However, policy implementation challenges are being addressed through our Workplan, and policy wording can always be improved to assist in overall Trent Source Protection Plan implementation.

3.8 SOURCE WATER QUALITY: MONITORING AND ACTIONS

Compliance Date Summary	
Existing / Future	When the plan takes effect (January 1, 2015)

A water quality issue, as identified by the Source Protection Committee, is where a contaminant is present at a level of concern or showing an upward trend and threatens the municipal drinking water source. The issue contributing area (ICA) is an area of land or water where activities are contributing to the water quality issue. These activities are classified as significant threats to drinking water.

Stirling Water System

Stirling wells were identified as having an E. coli issue in the raw untreated water. In response to the issue, the municipality engaged in the following activities:

- Reported annually by February 1st to the Lower Trent Source Protection Authority
- Municipality engaged in bringing a new less vulnerable well on line in 2019 which will reduce risk of e. Coli. A section 34 amendment to the Trent SPP and Assessment Report is undergoing approval from the ministry as a result of the new well. RMPs continue to be developed to reduce the amount of E. coli entering Rawdon Creek
- Monitored the identified issue through data as provided in the Stirling-Rawdon annual water report. The report also identified the municipality continues to track Total Coliform (TC) hits
- Undertook hydrological studies showing the wells are Groundwater Under the Direct Influence (GUDI) of surface water and there is in situ filtration.
- Completed all septic inspections in the Stirling Issue Contributing Area
- Completed 19 RMPs managing 35 prescribed threats (on the basis of subcategories listed in the Table of Drinking Water Threats)
- Completed Education & Outreach activities including advertorials in local newspaper, attendance at local events, updated factsheets and door-to-door visits in the Issue Contributing Area
- Several major expenses were incurred to install, repair or replace required equipment
- Not enough data/information is available to determine changes in concentration/trend

3.9 SCIENCE-BASED ASSESSMENT REPORTS: WORK PLANS

Water Budget - Technical Rule #30.1 for Stirling-Rawdon a Tier 3 water budget was included in the 2018 Section 36 work plan, however requires MECP support and funding to proceed. Stirling-Rawdon is bringing a new well on-line in 2020.

4. MORE FROM THE WATERSHED

Find out more information about DWSP and what’s happening in the TCC SPR at trentsourceprotection.on.ca including details on:

- The *Clean Water Act*
- The Trent Conservation Coalition Source Protection Region
- The four Source Protection Authorities that make up the Trent Source Protection Plan
- Publications and resources such as the source protection plans and assessment reports
- Am I affected? / policy mapping tool

Alternatively, for more information, please contact your local Source Protection Authority:

	<p>Meredith Carter Manager, Watershed Management Program Otonabee Region Conservation Authority 705-745-5791 x223 mcarter@otonabeeconservation.com</p>
	<p>Terri Cox Risk Management Official and Inspector Otonabee-Peterborough Source Protection Authority (705)745-5791 x 219 tcx@otonabeeconservation.com</p>
	<p>Jenna Stephens Risk Management Official /Source Protection Technician Kawartha-Haliburton Source Protection Authority (705) 328-2271 x 224 jstephens@kawarthaconservation.com</p>
	<p>Andrew McIntyre Crowe Valley Source Protection Authority Risk Management Official / Source Water Protection Specialist (613) 472-3137 andrew.mcintyre@crowevalley.com</p>
	<p>Anne Anderson Special Project Coordinator Lower Trent Source Protection Authority (613) 394-4829 x 219 anne.anderson@ltc.on.ca</p>