



**The Corporation of the Township of Tay
Committee of all Council Meeting**

**March 14, 2018
10:00 a.m.**

**Municipal Office Council Chambers
Agenda**

1. Call to Order:

2. Adoption of the Agenda:

3. Disclosure of Interest:

4. Delegations

10:00 – Jason Honan – Re: Request to have Septic Re-inspection Program Fee Waived

10:15 – Tracy Roxborough, SSS – Re: Climate Change Action Project & Request to Join the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP) Program

5. Standing Committee Business:

A: Protection to Persons & Property

B: General Government & Finance

C: Public Works

D: Planning & Development

6. Closed Session:

6.1 Report – Municipal Law Enforcement Officer – Re: Personal matters about an identifiable individual, including municipal or local board employees (Various Property Standards Files)

6.2 Verbal – Fire Chief – Re: Litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board (Coldwater Road – Update)

7. Adjournment:

Note: Delegations will commence at the schedule time; however, commencement time for each Committee will be adjusted as the meeting takes place.

MEMORANDUM SSS-2018-01

To: Honourable Mayor Warnock, Members of Council, CAO Mr. Robert Lamb, Township staff

From: Sustainable Severn Sound (SSS); the Sustainability Committee (SC); and Ian McVey, Regional Climate Advisor, Federation of Canadian Municipalities (FCM)

Date: 14-Mar-2018

RE: 1. Update on SSS's Local Climate Change Action Plan (LCCAP) Project, and
2. Recommendation for the Township of Tay to Join the Federation of Canadian Municipalities (FCM) Partners for Climate Protection Program (PCP).

MEMORANDUM RECOMMENDATION

THAT Memorandum No.SSS-2018-01 dated 14-Mar-2018 updating the Township of Tay on SSS's Local Climate Change Action Plan (LCCAP) project be received for information, AND
THAT Council support the enclosed model resolution to join the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP) Program, recognizing SSS as their Associate Member, responsible for conditions of program membership.

LOCAL CLIMATE CHANGE ACTION PLAN PROJECT UPDATE

- Survey release and distribution (on-line, print media, newsletters and hard-copy at municipal offices), open until 31-Mar-2018. The survey was developed by SSS to assess climate change awareness and identify priority actions as part of the LCCAP.
- Media and education activities, including brand (Local Climate Change Action Plan-LCCAP) development, digital and print columns, social media posts and promotional video; per the LCCAP Communications Strategy.
- Greenhouse gas (GHG) data acquisition per Federation of Canadian Municipalities (FCM's) Partners for Climate Protection (PCP) methodology, with support from municipalities, service providers, outside agencies and partner organizations. Preliminary analysis of emissions data utilizing the PCP Tool has begun, to be completed by 13-Apr-2018.
- SSS speaker series event held on 22-Feb-2018, 2:30-4:30pm at the Midland Cultural Centre. This event was open to the public, with the information specifically tailored for Council members and municipal staff. Speakers included Dr. Dianne Saxe, the Environmental Commissioner of Ontario; Ian McVey, FCM's Regional Climate Change Advisor; and Victoria Ervick, SSS's Local Climate Change Action Plan Coordinator.
- Community climate change workshops (2) planned for early 2018.
- DRAFT Local Climate Change Action Plan (LCCAP) available June-2018.
- (2) of our (7) partner municipalities; the Township of Tiny and the Town of Penetanguishene, have already joined the Federation of Canadian Municipalities (FCM) Partners for Climate

Protection (PCP) Program, recognizing SSS as their Associate Member responsible for PCP program membership.

WHAT IS THE PARTNERS FOR CLIMATE PROTECTION (PCP) PROGRAM?

FCM'S PCP PROGRAM: OVERVIEW

- The PCP program is a national network of municipal governments working to address climate change. The PCP program was launched by the Federation of Municipalities in 1994 to provide a structured approach for Canadian municipalities to engage in GHG climate change action planning.
- Currently over 300 Canadian municipalities are PCP members, with close to 70 in Ontario, and 21 of those with populations under 15,000.
- PCP is a joint initiative between the Federation of Canadian Municipalities (FCM) and ICLEI – Local Governments for Sustainability. The PCP program rests on a 5-Milestone framework for reducing GHGs: (1) develop a community-wide greenhouse gas (GHG) inventory, (2) set a GHG reduction target, (3) develop an action plan, (4) implement said action plan, (5) and report on progress. The model is flexible, in that milestones can be completed in many different ways.
- Associate Members can represent a municipality in the PCP program and take on responsibilities for their partner municipality in meeting program requirements. An Associate Member is any individual or organization that works in the sustainability field, whose work relates and/or supports municipalities in their efforts towards action on climate change. SSS has been approved by the PCP program staff as an Associate Member.
- PCP members are expected to complete all five program milestones within 10 years. If at any time your municipality is not able to meet the PCP program requirements, municipalities can always leave the program and rejoin it at a later date.

FCM'S PCP PROGRAM: WHY SHOULD THE TOWNSHIP OF TAY JOIN THE PCP PROGRAM?

- No additional staff time, financial or in-kind contribution is required. The work being undertaken by SSS was designed to align with the PCP Program framework.
- PCP member municipalities and recognized Associate Members (in your case, SSS is your Associate Member) gain access to the PCP Hub, which is an online platform connecting PCP members coast-to-coast. Via the PCP Hub, members gain access to training opportunities, funding information, and peer-to-peer networking to share lessons learned.
- The PCP program offers a proven approach to reducing greenhouse gas (GHG) emissions, and the support you need to achieve success.
- Being actively engaged in the PCP program gives your municipality the chance to become a leader by taking systematic and organized action on climate change. By participating in the PCP program, you municipality and the SSS staff and Sustainability Committee gains access to the following tools and resources:
 - Support and guidance, through the PCP Milestone Framework, to reduce GHG emissions.

- Access to a network of 300 local governments across Canada that are taking action on climate change and can help your community succeed by offering their experience and examples.
- Technical support tools, including the PCP Milestone Tool and PCP Protocol.
- Information and access to funding opportunities, such as those offered by FCM's Green Municipal Fund.
- Capacity-building resources, including workshops, case studies and training opportunities.
- National awards and recognition for milestone achievements and for reported measures.

FCM'S PCP PROGRAM: HOW DOES YOUR MUNICIPALITY JOIN THE PCP PROGRAM?

- To join the PCP program, your municipality must pass the PCP joining resolution, (**Attachment A: PCP Model Resolution**) which commits them to undertaking a GHG inventory, target setting and action planning process to complete Milestones 1-3 of the PCP program framework. A reminder, SSS is completing this work, delivering on Milestones 1-3 as part of the Local Climate Change Action Plan (LCCAP), which was supported through a Council resolution on (**Attachment B: Committee of All Council Resolution, SSS's Local Climate Change Action Plan, 8-Nov-2018**).
- Joining municipalities are to appoint a staff and elected official to serve as a point of contact for SSS in order to share program information and updates. SSS would request that Councillor Catherine Root, your current Sustainability Committee member, remain as your Council representative, with the Township's staff contact recorded as Mr. Robert Lamb, CAO.
- No additional contribution beyond the standard participation of Councillor Root on the Sustainability Committee and the role as defined per the Sustainability Committee Terms of Reference is be requested (**Attachment C: Sustainable Severn Sound and the Sustainability Committee, Terms of Reference, 2018**).

FCM's PCP PROGRAM: REVIEW OF ALIGNMENT WITH SSS INITIATIVES

- In November 2017, The Township of Tay supported the development of a corporate and community GHG inventory, the setting of a GHG target and the preparation of the Local Climate Change Action Plan (**see Attachment B**).
- As a result of this commitment and the work being completed by SSS, the Township of Tay is in a position to move rapidly to Milestone 3 of the PCP framework without additional resources and no additional financial or in-kind contributions by your municipality.
- A DRAFT Letter of Understanding between SSS and the Township of Tay has been prepared for review by Mr. Lamb. This will be discussed further with Mr. Lamb prior to any final approval (**Attachment D: DRAFT Letter of Understanding between Sustainable Severn Sound (SSS) and the Township of Tay Stating the Role of SSS in Representing the Township as their Associate Member in the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP) Program**).

BACKGROUND INFORMATION

PROVINCIAL POLICY SUPPORTING MUNICIPALITIES IN CLIMATE CHANGE ACTIONS

- [Climate Change Mitigation and Low-carbon Economy Act, 2016, S.O. 2016, c. 7](#)
 - [Planning Act, R.S.O. 1990, c. P.13](#)
 - Section 2 of the Planning Act was amended in 2017 to make the “mitigation of greenhouse gas emissions and adaptation to a changing climate” an enumerated matter of provincial interest providing grounds for planning matters.
 - On April 3, 2018, the day named by proclamation of the Lieutenant Governor, section 16 of the Act is amended by adding the following subsections: (See: 2017, c. 23, Sched. 3, s. 5 (2)), Climate change policies, (14) An official plan shall contain policies that identify goals, objectives and actions to mitigate greenhouse gas emissions and to provide for adaptation to a changing climate, including through increasing resiliency. 2017, c. 23, Sched. 3, s. 5 (2).
 - [Growth Plan for the Greater Golden Horseshoe, May 2017, 4.2.10 \(2\) Climate Change](#)
 - In planning to reduce greenhouse gas emissions and address the impacts of climate change, municipalities are encouraged to:
 - develop strategies to reduce greenhouse gas emissions and improve resilience through the identification of vulnerabilities to climate change, land use planning, planning for infrastructure, including transit and energy, green infrastructure, and low impact development, and the conservation objectives in policy 4.2.9.1;
 - develop greenhouse gas inventories for transportation, buildings, waste management and municipal operations; and
 - establish municipal interim and long-term greenhouse gas emission reduction targets that support provincial targets and reflect consideration of the goal of low-carbon communities and monitor and report on progress made towards the achievement of these targets.
 - [Modernizing Ontario's Municipal Legislation Act, 2017, S.O. 2017, c. 10 - Bill 68](#)
 - Changes included the addition of ‘respecting climate change’ to the Act
- Other Considerations**
- [Ontario's Municipal Infrastructure Strategy](#)
 - *Provincial regulation to support climate change considerations in municipal asset management (lifecycle, energy costs and green infrastructure first)*

Link: [Federation of Canadian Municipalities, Partners for Climate Change Program Information and Resources \(https://fcm.ca/home/programs/partners-for-climate-protection/how-to-join-pcp.htm\)](https://fcm.ca/home/programs/partners-for-climate-protection/how-to-join-pcp.htm)

- Attachment A:** **Joining Resolution:** This document contains the complete text of the resolution to be passed by your municipal council to join the PCP program (pages 6-8). This is to be returned to SSS for their records if your municipality approves the Township's membership in the FCM's PCP program.
- Attachment B:** **Resolution from the Township of Tay, 8-Nov-2017, Re: Local Climate Change Action Plan** (pages 9-10)
- Attachment C :** **Sustainable Severn Sound and the Sustainability Committee, Terms of Reference, 2018** (pages 11-14)
- Attachment D:** **DRAFT Letter of Understanding between Sustainable Severn Sound (SSS) and the Township of Tay:** Role of SSS in Representing the Township as their Associate Member in the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP) Program (page 15-17)

Cc: *Councillor Catherine Root, Township of Tay, Sustainability Committee representative*
Doug Luker, CAO, Township of Tiny, Sustainability Committee Chairperson

Sustainable Severn Sound (SSS) is a regional sustainability program supported by seven of the municipalities in the Severn Sound area (Towns of Midland and Penetanguishene, Townships of Georgian Bay, Severn, Oro-Medonte, Tiny and Tay). This project also receives in-kind support from the North Simcoe Community Futures Development Corporation (NSCFDC), the Severn Sound Environmental Association (SSEA), and the Simcoe-Muskoka District Health Unit (SMDHU). SSS works to (1) educate municipalities on best practices and connect them to resources, (2) encourage the adoption of practices/policies within their municipal operations to support sustainable communities, and (3) to advocate for sustainable environmental practices within our service area.

SSS is funded by our partner municipalities:



In-kind project supporters:



Council Resolution to Join the FCM–ICLEI (Local Governments for Sustainability) Partners for Climate Protection Program

WHEREAS it is well established that climate change is increasing the frequency of extreme weather events and posing other risks, such as drought, forest fires and rising sea levels, which present serious threats to our natural environment, our health, our jobs and our economy;

WHEREAS the 2016 Paris Agreement, signed by more than 190 countries, including Canada, committed to limit the global temperature increase to below two degrees Celsius and to pursue efforts to limit this increase to 1.5 degrees Celsius, in order to avoid the most severe climate change impacts;

WHEREAS local governments are essential to the successful implementation of the Paris Agreement;

WHEREAS Canada's cities and communities influence approximately 50 per cent of national greenhouse gas (GHG) emissions and can drive systemic low-carbon practices, including: building high-efficiency buildings, undertaking building retrofits and developing district heating; building active transit, electric vehicle infrastructure and electrified public transit; implementing near-zero GHG waste plans; and delivering high-efficiency water and wastewater services;

WHEREAS investments in these types of measures also reduce operating costs, help municipalities maintain and plan for future community services, protect public health, support sustainable community development, increase community resilience and reduce a community's vulnerability to environmental, economic and social stresses;

WHEREAS a number of government and international and national organizations have called for greater cooperation among all stakeholders to meet reduction targets, including Canada's Big City Mayors' Caucus, which supports binding GHG emission reduction targets at the international, national and city levels, action plans that cut emissions, identification of risks and mitigation solutions, and regular municipal GHG emissions reporting;

WHEREAS the Federation of Canadian Municipalities (FCM) and ICLEI–Local Governments for Sustainability have established the Partners for Climate Protection (PCP) program to provide a forum for municipal governments to share their knowledge and experience with other municipal governments on how to reduce GHG emissions;

WHEREAS over 300 municipal governments across Canada representing more than 65 per cent of the population have already committed to reducing corporate and community GHG emissions through the PCP program since its inception in 1994;

WHEREAS PCP members commit to adopt a community GHG reduction target of 30 per cent below 2005 levels by 2030, in line with the Government of Canada's target, and to adopt a corporate GHG reduction target that is similar or more ambitious, and to consider adopting a deeper community and corporate emissions reduction target of 80 per cent by 2050;

WHEREAS the PCP program is based on a five-milestone framework that involves completing a GHG inventory and forecast, setting a GHG reduction target, developing a local action plan, implementing the plan, and monitoring progress and reporting results;



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WHEREAS PCP members commit to carry out the five-milestone framework within 10 years of joining the program and to report on progress at least once every two years;

WHEREAS PCP members accept they can be suspended from the program — subject to prior notice in writing by the PCP Secretariat — in the event of non-submission of progress reports within the established deadlines;

BE IT RESOLVED that the municipality of _____ endorse the Government of Canada's commitment to the Paris Agreement to limit global temperature increase to below two degrees Celsius and to pursue efforts to limit the global temperature increase to 1.5 degrees Celsius; and

BE IT RESOLVED that the municipality of _____ review the guidelines on [PCP member benefits and responsibilities](#) and then communicate to FCM its participation in the PCP program and its commitment to achieving the milestones set out in the PCP five-milestone framework;

BE IT FURTHER RESOLVED that the municipality of _____ appoint the following:

- a) Corporate staff person (Name) _____
(Contact number) _____
(Email address) _____
- b) Elected official (Name) _____
(Contact number) _____
(Email address) _____

to oversee implementation of the PCP milestones and be the points of contact for the PCP program within the municipality.

_____ Signature

_____ Date



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SCIENTIFIC BACKGROUND

The International Panel on Climate Change (IPCC) says in its 2014 *Fifth Assessment Report* that warming of the Earth's climate system is unequivocal and that "the IPCC is now 95 per cent certain that humans are the main cause of current global warming."

The IPCC concludes this warming is caused primarily by increased atmospheric concentrations of carbon dioxide, methane and nitrous oxide released from burning coal, oil and natural gas and from cutting trees and clearing land for agriculture and development.

The IPCC has a high degree of confidence that the following climate-related impacts are occurring or will occur over the next century in North America:

- More frequent hot and fewer cold temperature extremes, resulting in longer and more frequent heat waves.
- More frequent and intense extreme precipitation events.
- Thawing of permafrost, causing greater emissions of greenhouse gases and leading to disruptions to infrastructure and the traditional ways of life in northern communities.
- Melting of glaciers and polar ice, causing sea level rise in over 70 per cent of coastal communities.
- Increased risk of extinction for a large fraction of terrestrial, freshwater and marine species, undermining food security in many regions.
- In urban areas, increase risks for people, assets, economies and ecosystems including risks from heat stress, storms and extreme precipitation, flooding, landslides, air pollution, drought, water scarcity, sea level rise and storm surges.
- In rural areas, impacts on water availability and supply, food security, infrastructure, and agricultural incomes, including shifts in food production areas.

Under business-as-usual scenarios, the IPCC has high confidence that global surface temperature is likely to exceed two degrees Celsius by the end of the 21st Century.

The IPCC observes that warming resulting from human influences could lead to abrupt or irreversible impacts, depending on the rate and magnitude of climate change, and that the more human activities disrupt the climate, the greater the risks.

Under a stringent emission reduction scenario, the IPCC concludes that surface warming could be kept under two degrees Celsius, which would reduce the risks and impacts of climate change.

- D.2.1 We received Report No. PD-2017-50 from the Chief Building Official, under date of November 8, 2017 regarding Building Services Division Monthly Report – October 2017.

After discussion and consideration the following motion was moved by Deputy Mayor Ritchie and seconded by Councillor Crawford recommending the following to Council for consideration:

That Report No. PD-2017-50 regarding Building Services Division Monthly Update Report – October 2017 be received.

Carried.

- D.2.2 We received for information Report No. PD-2017-49 from the Director of Planning & Development, under date of November 8, 2017 regarding Directors Monthly Update – September & October 2017.

- D.2.3 We received Report No. PD-2017-44 from the Director of Planning & Development, under date of November 8, 2017 regarding 'Planning First' Philosophy and 'Complete Submission' Approach.

After discussion and consideration the following motion was moved by Councillor Crawford and seconded by Deputy Mayor Ritchie recommending the following to Council for consideration:

That Report Number PD-2017-44 regarding a Planning First Philosophy and Complete Submission approach for the processing of Building Permits be received;

That the Fees and Service Charges By-law be amended to add the Zoning Certificate Application in the amount of \$25;

And further that Council supports the permanent implementation of this Planning First Philosophy and Complete Submission Approach for Building Permits, effective immediately.

Carried.

- D.3 No Other Business Items were presented.

- D.4.1 We received for information correspondence from Sustainable Severn Sound regarding Local Climate Change Action Plan Overview and Resolution.

After discussion and consideration the following motion was moved by Mayor Warnock and seconded by Councillor LaChapelle recommending the following to Council for consideration:

WHEREAS it is in the interest of the Township of Tay to address climate change issues and to take action on climate change;

WHEREAS the Local Climate Change Action Plan project aims to provide the Township of Tay with a completed community-wide greenhouse gas emissions inventory and creation of a Local Climate Change Action Plan;

Cont'd...

WHEREAS the completed community-wide greenhouse gas emissions inventory will provide the Township of Tay with a baseline to measure and evaluate the success of future GHG reduction initiatives undertaken by the municipality and recommended within the Local Climate Change Action Plan;
BE IT RESOLVED that the Township of Tay commits to participating in the development of the LCCAP as member of the Sustainable Severn Sound (SSS) program;
BE IT FURTHER RESOLVED that the Township of Tay commits to creating a community-wide greenhouse gas emissions inventory as a member of the Sustainable Severn Sound (SSS) program, to be completed in 2018.

Carried.

D.4.2 We received for information correspondence from Sustainable Severn Sound regarding Summary of Sustainability Speaker Event.

6. CLOSED SESSION:

No Closed Session was held.

7. ADJOURNMENT:

Moved by Deputy Mayor Ritchie and seconded by Councillor LaChapelle.

That this Committee of All Council meeting adjourn at 2:39 p.m. and reconvene on December 13, 2017.

Carried.

Minutes Recorder: Alison Gray, Clerk



Sustainable Severn Sound

Sustainable Severn Sound (SSS) champions the integration of sustainability principles within our partner municipalities and their communities.

Sustainable Severn Sound (SSS) and the Sustainability Committee (SC)

Terms of Reference

Background

In 2008, local regional municipalities and their communities' first demonstrated sustainability leadership by adopting the regional Sustainability Plan. This action led to the creation of Sustainable Severn Sound (SSS) and the Sustainability Committee (SC) in 2011 to lead the implementation of that Plan. In 2015, SSS and the SC reviewed the Sustainability Plan to develop a Sustainability Action Plan. In 2016, the development of a local climate change action plan was identified within SSS's inaugural Municipal Sustainability Report Card as a priority action item for implementation by local municipalities. In 2017, SSS and the SC initiated the development of the local climate change action plan for their (7) member municipalities and communities.

Community

Beyond working with our (7) member municipalities, being the Towns of Midland and Penetanguishene, and the Townships of Georgian Bay, Oro-Medonte, Severn, Tay and Tiny, SSS also collaborates with the general public, including those which work, live and/or play in the South-eastern Georgian Bay area and located within SSS's area of service. This area has a population of 100,000 permanent residents, and expands to over 250,000 with the inclusion of seasonal residents.

SC Structure

Current representation on the SC include: Council and/or staff from each of SSS's member municipalities (Towns of Midland and Penetanguishene, and the Townships of Georgian Bay, Oro-Medonte, Severn, Tay and Tiny), the Simcoe Muskoka District Health Unit, the North Simcoe Community Futures Development Corporation, and the Severn Sound Environmental Association.

Role of SSS and the SC

The SC serves as an advisory committee to SSS by supporting the SSS objectives to: (1) educate municipalities on best practices and connect them to resources, (2) encourage the adoption of practices/policies within local municipal operations to support sustainable communities, and (3) to advocate for sustainable environmental, social and economic practices/policies within our service area.





Sustainable Severn Sound

Sustainable Severn Sound (SSS) champions the integration of sustainability principles within our partner municipalities and their communities.

Sustainable Severn Sound (SSS) and the Sustainability Committee (SC) Terms of Reference

Responsibilities of SSS and the SC will include:

- Continuously promote, communicate, and educate municipalities and the community about SSS's role and the initiation of the local climate change action plan;
- Develop on-going partnerships with community organizations, champions and leaders;
- Collaborate with municipalities and the community to create and implement sustainable initiatives;
- Seek funding opportunities, prepare applications and administer grants to fund sustainable municipal and community projects;
- Provide research and information as requested by member municipalities;
- Assist and/or lead with the organization of workshops, conferences, annual events, and presentations.

Membership

SSS staff will be accountable to the SC, and supervised by the Chair. Core responsibilities are outlined in the annual contract per employee.

Budget

The SSS budget will be a component of North Simcoe Community Futures Development Corporation's annual operating budget, maintained and communicated to the SC by SSS staff.

Accountability and Reporting

All approved SC meeting minutes shall be posted on the SSS website and provided to each SC member. SSS staff shall ensure the approved minutes and reports are sent to each member municipality Council, as directed by the SC. SSS staff shall present to Mayors and Councils at a minimum of once per year. Additional reporting may be required as deemed necessary per the SC.





Sustainable Severn Sound (SSS) and the Sustainability Committee (SC) Terms of Reference

Meetings

Frequency

SC meetings shall be held monthly on the first, or second, Thursday of each month. Additional meetings may be scheduled as necessary at the call of the Chair.

Agenda

SSS staff shall set the agenda through input from the SC. This will be sent to members a minimum of (3) business days prior to the meeting.

Quorum and Decision-Making

A quorum will consist of 50% of members (5 of 10) to put forth any recommendation. Tasks will be assigned by consensus. Formal motions will be utilized as deemed necessary by the Chair. If at any time more than one representative per municipality or organization is in attendance at a scheduled SC, and a vote is called by the Chair, only one vote per each municipality or organization shall be recorded.

Conduct of Meeting

As above, all eligible committee members shall hold one vote; resolutions or decisions must be moved, seconded, and voted on by the SC in accordance with Robert's Rules.

Minutes

SSS staff shall minute the proceedings, actions and resolutions of all SC meetings and any required Working Group meetings, including the names of those in attendance.

Working Groups and Ad Hoc Sub-Committees

SSS and the SC may establish Working Groups to advance their work. They shall subsequently report on the activities of their respective group to the SC as a whole.





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Sustainable Severn Sound (SSS) and the Sustainability Committee (SC) Terms of Reference

Approval Date: 8-Feb-2018

Chair, Signature:

Doug Luker

Chair, Sustainability Committee (SC)

CAO, Township of Tiny representative to the SC



Tiny





Tracy Roxborough, Sustainability Coordinator
 Sustainable Severn Sound (SSS)
 105 Fourth Street
 Midland, ON
 L4R 4K6

March 14, 2018

Mr. Robert Lamb, CAO
 450 Park Street
 Victoria Harbour, ON
 L0K 2A0

**RE: Letter of Understanding between Sustainable Severn Sound (SSS) and the Township of
 Tay: Role of SSS in Representing the Town as their Associate Member in the Federation of
 Canadian Municipalities (FCM) Partners for Climate Protection (PCP) Program**

Mr. Lamb,

On <insert date>, Council approved a model resolution to join the FCM's PCP Program, appointing Councillor Catherine Root and yourself as Council and staff point-of-contacts, respectively, for the PCP program.

The PCP program is a national network of municipal governments working to address climate change. PCP is a joint initiative between the Federation of Canadian Municipalities (FCM) and ICLEI – Local Governments for Sustainability. The PCP program is a five-milestone performance-based model for reducing greenhouse gas emissions (GHGs). The model is flexible, in that milestones can be completed in many different ways. PCP members are expected to complete all five program milestones within 10 years. If at any time your municipality is not able to meet the PCP program requirements, municipalities can always leave the program and rejoin it at a later date.

SSS has set out below a description of the services that will be provided to the Township by SSS in meeting the requirements of membership in the PCP program. The following services will be delivered by Dec-2018:

1. Completion of a community-wide greenhouse gas (GHG) inventory (municipal and community),
2. Setting of corporate and community GHG reduction targets,
3. Preparation of a Local Climate Change Action Plan with a goal to reduce GHG reductions.

The Township has already supported the development of a joint GHG inventory, GHG target setting and action planning process through a 2017 Council resolution of support for the SSS's project. By virtue of this commitment, the Township of Tay is in a position to move rapidly to Milestone 3 of the PCP framework without additional resources and no additional financial contribution.

After completion of the services 1-3, SSS will provide the additional services of:

4. Submission of a formal report every two years to the PCP program Secretariat, on behalf of the Township to fulfill the membership requirements,
5. Submission of reports to the PCP program Secretariat to track achievements and provide recognition as the Township progresses through the milestones,
6. Completion of the annual PCP Members Survey, which will provide the FCM with information that can be used to recognize the Township's achievements in the yearly National Measures Report.

SSS will provide monthly updates on this provided service to the Sustainability Committee. Annual updates will be provided to your municipality through Council delegations regarding the status and progress of the Township as members of the PCP Program, including recommendations to further advance the municipality through the PCP Program milestone framework.

If you agree that the foregoing clearly sets out your understanding of our mutual responsibilities in response to Council's support for the Township of Tay to join the PCP program, please sign a copy of this letter in the space indicated below, and return it to SSS and the Sustainability Committee at tracy@sustainablesevernsound.ca



Sustainable Severn Sound

Sustainable Severn Sound (SSS) champions the integration of sustainability principles within our partner municipalities and their communities.



Yours sincerely,

Tracy Roxborough
Sustainability Coordinator
Sustainable Severn Sound (SSS)

Agreed and Accepted:

Robert Lamb, CAO, Township of Tay

Date

Attachment A: Approved Resolution by the Township of Tay to Join the PCP Program

Supporting Information/Links

[Partners for Climate Protection Information](#)

[Partners for Climate Protection \(PCP\) Program FAQ](#)

Sustainable Severn Sound (SSS) is a regional sustainability program supported by seven of the municipalities in the Severn Sound area (Towns of Midland and Penetanguishene, Townships of Georgian Bay, Severn, Oro-Medonte, Tiny and Tay). This project also receives in-kind support from the North Simcoe Community Futures Development Corporation (NSCFDC), the Severn Sound Environmental Association (SSEA), and the Simcoe-Muskoka District Health Unit (SMDHU). SSS works to (1) educate municipalities on best practices and connect them to resources, (2) encourage the adoption of practices/policies within their municipal operations to support sustainable communities, and (3) to advocate for sustainable environmental practices within our service area.

Supporting Municipalities in Local Climate Change Action



Sustainable Severn Sound

Sustainable Severn Sound (SSS) champions the integration of sustainability principles within our partner municipalities and their communities.



Tracy Roxborough, Sustainability Coordinator
Sustainable Severn Sound (SSS)
105 Fourth Street, Midland
March 14, 2018

About Us: Who Are We?

Sustainability Committee Members & Funders



Sustainability Committee Members & In-Kind Supporters



The Rationale

- 1. A municipal climate change action plan is an important tool for engaging communities in the work of reducing GHG emissions & adapting to unavoidable local impacts of climate change.**
- 2. Provincial policy is moving in the direction of integrating GHG inventories, GHG targets, & climate change action plans & considerations into municipal operations. SSS will assist you in these requirements.**

So...What's the Value For Your Municipality?

- 1. Cost savings.**
- 2. Enhanced access to funding & application support from FCM & SSS.**
- 3. Delivery on your municipal plans.**
- 4. Alignment with new legislation, GHG emissions reduction planning guidelines, & new provincial policy direction.**

Cost Savings

The comparative municipal investment in Ontario to develop a Local Climate Change Action Plan = \$65,000.

Cost Savings

Your Contribution to SSS = \$10,000

Your Estimated Savings = \$55,000*

Total Contribution by 7 SSS Partners = \$70,000

- 7 municipal partners x \$10,000

Total Value of the LCCAP = \$455,000

- 7 x \$65,000 (per comparative municipal cost in Ontario)

**Cost savings does not include the staff time the Township saves by supporting the local climate change action plan project. SSS also continues to offer funding assistance, communications support & information services to your municipality.*

Comparative Municipal Investments

GHG INVENTORY, GHG REDUCTION TARGET & LOCAL CLIMATE CHANGE ACTION PLAN

Criteria	Municipality of Bayham, ON	Prescott, ON	Peterborough, ON	Town of Perth, ON	Township of Tay, ON
Description	Climate Change Action Plan (Greenhouse Gas Inventory, Targets & Climate Action Plan)	Energy Conservation & Greenhouse Gas Emissions Reduction Plan (not community-wide)	Local Climate Change Action Plan - Community-wide GHG Inventory, Target & Action Plan, Milestones 1, 2 & 3) for a GROUP of (11) municipalities	Local Climate Change Action Plan (Community-wide GHG Inventory, Target & Action Plan Milestones 1, 2 & 3)	Local Climate Change Action Plan (Community-wide GHG Inventory, Target & Action Plan, Milestones 1, 2 & 3*)
Population	6,989	4,284	81,277	5,840	10,033
Total Project Value	\$32,000	\$46,640	\$444,500	\$55,000	\$65,000 (total of \$455,000 for 7 muni's)
Grant	\$15,500	\$23,320	\$175,000	\$27,500	\$10,000 (Township contribution)
Start	2016	2013	2014 – On-going	2016	2017
Status	In-Progress	In-Progress	In-Progress	Complete	In-Progress
Lead Organization	Bayham staff	Prescott staff	Sustainable Peterborough	Perth staff	Sustainable Severn Sound

Access To Funding

The Townships' involvement in this project will enhance your eligibility to external grant programs. SSS is also working to support our partners in identifying & preparing these applications.

Examples: Annual [GHG Challenge Fund](#), OTF, [FCM staff grants](#) & [SNAP](#) funding.

GHG Reduction Project Examples Funded Through External Grants

1. Summary of (72) Municipal Projects, Federation of Canadian Municipalities MCIP Fund

- *Asset Management Plan Program, Road (Pavement) Data Collection Programs, Corporate & Community Renewable Energy & Demand Management Study, Healthy Environment Plan, etc.*

2. Workplace Electric Vehicle Charging Incentive Program

- *The Workplace Electric Vehicle Charging Incentive Program will provide 80 % of the capital costs to install level 2 chargers, up to \$7,500 per charging space.*

3. Green Commercial Vehicle Program (open to municipalities)

- *New Electric: 60% of the incremental purchase cost compared to an equivalent conventional fuel vehicle, up to a cap of \$75,000 per vehicle.*
- *Fuel-saving, anti-idling devices incentive amount of 30-50% of the purchase & installation cost.*

4. Municipal GHG Challenge Fund (reopens mid-2018)

- *Municipal projects that are eligible for funding would aim to reduce GHGs in any sector, including in buildings, energy supply, water, transportation, vehicles waste & organics. Projects that are currently underway are eligible if they were initiated after June 1, 2016.*

5. FCC Agrispirit Fund

- *\$5,000 to \$25,000 donation available to small municipalities to support fire services (i.e., tanker truck replacement), building upgrades such as heating & cooling systems in a community building, installing new windows in a rec centre, rink or arena (energy conservation).*

Alignment with Your Objectives & New Policy Direction

Draft Official Plan Document, March 2016

- ‘To promote awareness of & mitigate against natural & human-made hazards & consider the potential impacts of development as it relates to climate change (pg.12).’

Energy Management Plan (update required in 2019)

- SSS is reviewing municipal CDMs & other local plans as part of the development of the Local Climate Change Action Plan (LCCAP).
- SSS will provide support for integration of the community greenhouse gas (GHG) inventory, GHG targets & viable recommendations from the LCCAP into your CDM.

Growth Plan for the Greater Golden Horseshoe, May 2017, 4.2.10 (2) Climate Change

- Municipalities are now encouraged to prepare community-wide GHG inventories, identify targets & develop action plans .
- Demonstration of leadership by the Township - proactive decision-making in regards to climate change.
- SSS will work to align the LCCAP with the expected County Climate Change Strategy.

Asset Management Plan, 2015

- Ontario’s Municipal Infrastructure Strategy update is likely to contain further requirements to support climate change considerations in municipal asset management (lifecycle, GHG emissions & energy costs, & green-infrastructure-first).

Memorandum Recommendation

THAT Memorandum No.SSS-2018-01 dated 14-Mar-2018 updating the Township of Tay on SSS's Local Climate Change Action Plan (LCCAP) project be received for information, **AND**

THAT Council support the enclosed model resolution to join the Federation of Canadian Municipalities (FCM) Partners for Climate Protection (PCP) Program, recognizing SSS as their Associate Member, responsible for conditions of program membership.

WHAT IS THE LOCAL CLIMATE CHANGE ACTION PLAN?

Key Outcomes

- Complete Milestones 1, 2 & 3 of Federation of Canadian Municipalities Partners Framework for Climate Protection (PCP) Program Program



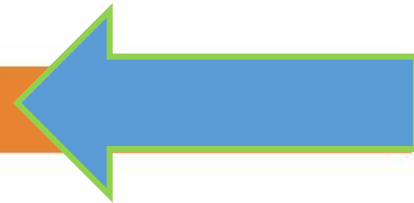
1. Create a GHG inventory and forecast



2. Set an emissions reduction target



3. Develop a local action plan



4. Implement the plan



5. Monitor progress and report results



Partners for Climate Protection

- National program delivered by the Federation of Canadian Municipalities to provide a structured approach for GHG climate change action planning.
- Currently over 300 Canadian municipalities are PCP members, with close to 70 in Ontario, & 21 of those with populations under 15,000.
- PCP rests on a 5-Milestone framework for reducing GHGs.



FEDERATION
OF CANADIAN
MUNICIPALITIES

FÉDÉRATION
CANADIENNE DES
MUNICIPALITÉS



ONTARIO
CLIMATE CONSORTIUM

Why Should Your Municipality Join the PCP Program?

- No additional staff time, financial or in-kind contribution by the Township is required. The work being undertaken by SSS was designed to align with the PCP Program framework.
- PCP member municipalities & recognized Associate Members (in your case, SSS is your Associate Member) gain access to the PCP Hub, which is an online platform connecting PCP members coast-to-coast.
- Be recognized as leaders in climate change actions.

What are the Benefits of PCP Program Membership?

By participating in the PCP program, your municipality, SSS staff & the Sustainability Committee gain access to the following tools & resources:

- Support & guidance, through the PCP Milestone Framework, to reduce GHG emissions.
- Technical support tools, including the PCP Milestone Tool & PCP Protocol.
- Information & access to funding opportunities.
- Capacity-building resources as requested, including workshops, case studies & training opportunities.
- National awards & recognition for milestone achievements & for reported measures.

How Does Your Municipality Join the PCP Program?

1. To join the PCP program, your municipality must pass the PCP joining resolution, (Memo Attachment A: PCP Model Resolution). You will join the Township of Tiny & the Town of Penetanguishene as new PCP members.
2. Joining municipalities are to appoint a staff & elected official to serve as a point of contact for SSS to share program information & updates. SSS would request that Councillor C. Root, your current Sustainability Committee member, remain as your Council representative, with the Township's staff contact recorded as Mr. Robert Lamb, CAO.
3. A DRAFT Letter of Understanding between SSS & the Township of Tay has been prepared for review by Mr. Lamb (Memo Attachment D).



Thank you. Questions?



[SustainableSevernSound](#)
[@sustainsevsound](#)

Tracy Roxborough
Sustainable Severn Sound (SSS)
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Sustainable Severn Sound

Sustainable Severn Sound (SSS) champions the integration of sustainability principles within our partner municipalities and their communities.



[#BeAClimateChanger](#)

BE A CLIMATE CHANGER.

We Want Your Ideas for Climate Change Actions.



Q: How do you think our local municipalities & communities should respond to climate change?

TAKE OUR CLIMATE CHANGE ACTION PLAN SURVEY.

- Help SSS identify climate change actions.
- Share your climate change stories.

We want to hear from you. Take our survey for your chance to win an eco-minded incentive!

CLICK HERE TO RESPOND TO THE LOCAL CLIMATE CHANGE ACTION PLAN SURVEY.



What does the phrase 'a community resilient to climate change' mean to you?

Which of the following climate change impacts are of highest concern to you?

Which actions do you think are important actions to be undertaken by our municipalities and the community in response to climate change?

<https://www.surveymonkey.com/r/SSS-LocalClimateChangeActionPlan>

Your voice matters!

Climate change is global, yet we can take action locally to reduce GHG's (mitigate) & better prepare (adapt) for climate impacts.

Join Sustainable Severn Sound in Climate Action!

Your feedback is requested. Please take our survey & vote for your priority actions!

SHARE THIS SURVEY:

<https://www.surveymonkey.com/r/SSS-LocalClimateChangeActionPlan>



**Protection to Persons & Property Committee
March 14, 2018**

Agenda

1. Call to Order:

2. Reports of Municipal Officials:

- 2.1 Report from the O.P.P.
Re: 2017 OPP Year End Report
- 2.2 Report from the Fire Chief
Report No. PPP-2018-17
Re: Fire Chief Monthly Report – February 2018
- 2.3 Report from the Fire Chief
Report No. PPP-2018-20
Re: Auto Extrication Equipment Purchase
- 2.4 Report from the Deputy Fire Chief/FPO
Report No. PPP-2018-18
Re: Deputy Fire Chief/Fire Prevention Officer Monthly Activity
Report - February
- 2.5 Report from the Municipal Law Enforcement Officer
Report No. PPP-2018-16
Re: By-law Activity Report February 2018
- 2.6 Report from the Municipal Law Enforcement Officer
Report No. PPP-2018-19
Re: MLEO/Canine Activity Report – February 2018

3. OTHER BUSINESS:

3.1

4. ITEMS FOR INFORMATION:

An abstract graphic featuring three blue circles of varying sizes and three thin blue lines that intersect them. One line runs diagonally from the top left towards the center. Another line runs diagonally from the top left towards the bottom right. A third line runs diagonally from the top right towards the bottom right. The circles are positioned at the intersections of these lines: a large circle at the top center, a medium circle below it and to the right, and a large circle at the bottom right.

2017 OPP Year End Report

Tay Township

Presented by Inspector Andrew Ferguson

**SOUTHERN GEORGIAN BAY DETACHMENT
CORPORATE & EMERGENCY SERVICES
REPORT**



**Southern Georgian Bay OPP
2017 Annual Report
Tay Township Council**

As Detachment Commander for the Southern Georgian Bay Detachment, it gives me great pleasure and pride to present our 2017 Year End Report. Through detachment action planning, local analytics and regular reporting mechanisms, we hold ourselves accountable to our communities, partners, elected officials and our police services boards.

2017 marked the first year of the 2017-2019 SG Bay OPP Action Plan. The plan is operationally focused, responding to unique local community safety concerns and policing needs throughout the SG Bay Detachment area.

Locally, Ontario's Mobilization and Engagement Model of Community Policing has been embraced and was implemented on numerous occasions throughout the last year. We continue to utilize an analytical approach in reviewing both traffic and crime related information and trends. In 2017 we completed 13 Focused Patrols throughout the detachment area that resulted in 340 hours of dedicated patrol and 210 charges being laid. This analysis, coupled with resulting intelligence, continues to better position us to strategically deploy our resources and maximize our impact and efficiencies

In 2017 we continued to participate at the North Simcoe Situational Table assisting individuals and families who were dealing with elevated risk. A victim response support strategy was launched to provide investigative excellence involving all sexual assault related occurrences. Project Beacon (a multi-agency working group) was launched to assist victims of Human Trafficking and all members of SG Bay received training in the administering of Naloxone to assist individuals in medical distress.

2017 also saw continued reinvestment locally that further benefits the communities we serve. SG Bay participated in a pilot project with Barrie & Area Victim Crisis Assistance & Referral Service (VCARS), through a formal memorandum of understanding. Both groups met on a weekly basis to review victims that were or could have been referred to VCARS. The pilot resulted in referrals out of SG Bay tripling over the 12-month period. This information and the results of the pilot project are now being shared with other OPP detachments here in Central Region.

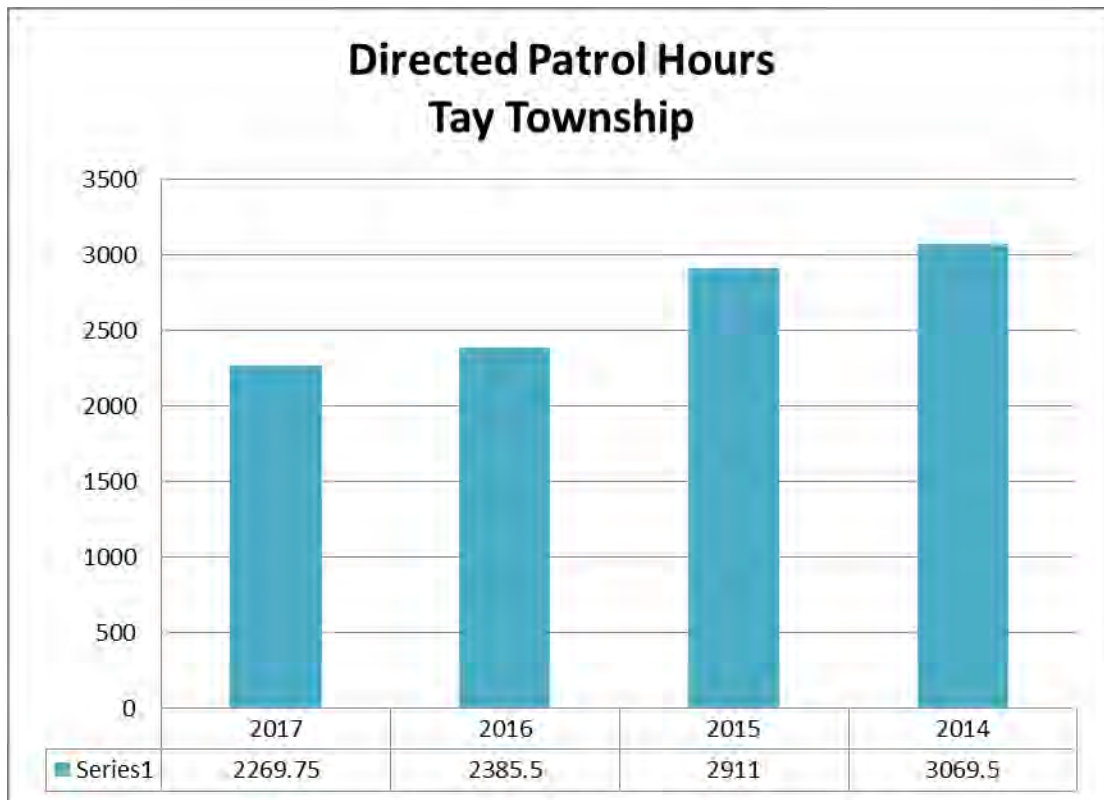
We continue to recognize and celebrate our members. In 2017 SG Bay celebrated six local retirements. Several of our members were nominated for provincial, federal and international policing awards for their outstanding police work and contributions. SG Bay Detachment is growing and we will continue to highlight the accomplishments and actions of our members who provide an invaluable service to the communities we serve.

The OPP delivers all of these services while remaining very cognizant of the economic environment it is operating in. We are committed in providing municipalities with cost-effective and professional police services. The continued dedication of all our members, both civilian and uniform, together with the support and governance of our local police service boards and municipalities are integral for our continued success in keeping our communities safe and Ontarians secure.

Andrew Ferguson
Inspector
Detachment Commander
Southern Georgian Bay Detachment

Directed Patrol:

Source: BI Cube 02 March 2018



Crime Statistics – 4 year trend Tay Township

Source: BI Cube 02 March 2018

	Break & Enter	Theft of M/V	Theft from MV	Assault	Mischief	Alarms	911 Calls	Impaired C & C	Calls for Service
2017	40	17	36	51	46	86	138	10	2111
2016	17	7	18	36	36	103	154	8	2091
2015	38	15	15	31	49	118	206	7	2204
2014	29	9	27	40	42	109	228	9	2345

Crime Clearance Rates – TAY TOWNSHIP

	2017	2016	2015	2014
Violent Crime	86.1%	80.9%	92.9%	90.9%
Property Crime	18.5%	20.5%	13.9%	13.6%
Drugs	93.7%	100%	83.3%	90.0%

Crime Clearance Rates – SGB Detachment

	2017	2016	2015	2014
Violent Crime	90%	93.8%	87.4%	90.6%
Property Crime	26.3%	25.7%	16.3%	17.3%
Drugs	76.9%	93.3%	91.7%	85.2%

YEAR IN REVIEW – Violations – Arrests – Checks - Hours

SOUTHERN GEORGIAN BAY DETACHMENT OFFICER ACTIVITY SUMMARY REPORT			
2017			
CHARGES			
	2017	2016	% Change
Seatbelt	141	180	-21.7%
Speeding	2273	2343	-3.0%
Distracted Driving HTA78, 78.1	134	189	-29.1%
Impaired	87	91	-4.4%
Total Big 4 Charges	2635	2803	-6%
Other HTA	1170	1372	-14.7%
Other CC	663	724	-8.4%
Other (i.e. CDSA, CAIA, etc.)	573	810	-29.3%
Total Violations	5041	5709	-11.7%
	2017	2016	% Change
Arrests	510	526	-3/0%
Warn Range Suspensions	46	54	-14.8%
Traffic Stops	5045	6118	-17.5%
Patrol Hours	12051.5	14892	-19.1%
Court Hours	1662.25	2066.5	-19.6%

MVC Statistics: (including Motorized Snow Vehicle)

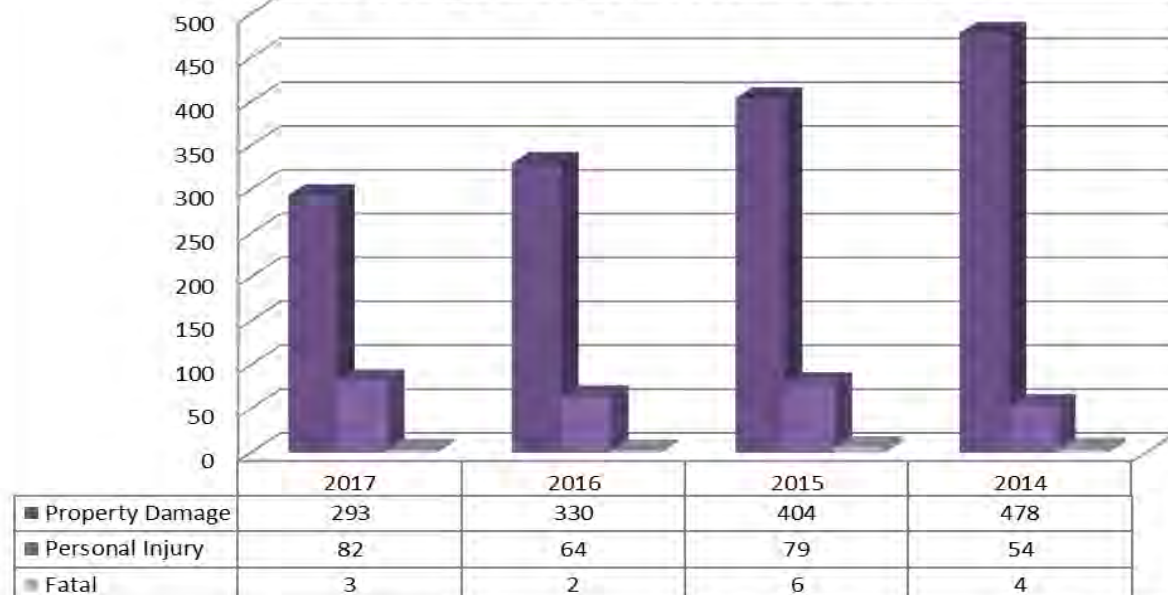
Source – Collision summary Report (14 Feb 2017)

Tay Township				Southern Georgian Bay Detachment Area		
Year	Property Damage	Personal Injury	Fatal	Property Damage	Personal Injury	Fatal
2017	102	21	0	293	82	3
2016	96	22	0	330	64	2 (snowmobile)
2015	85	29	0	404	79	6
2014	119	20	1	478	54	4

Tay Township MVC'S



Southern Georgian Bay Detachment MVC'S





Auxiliary Program:

Mission Statement: *“To provide fully trained volunteer Auxiliary Members to perform police duties in special circumstances including emergencies”*

Southern Georgian Bay Detachment has 11 auxiliary members.

Auxiliary members provide a valuable service to our communities and in 2017 they provided an average of 142 volunteer hours per month for a total of 1,697 for 2017. Locally, our members assisted with many community events including parades, concerts and Winterama weekend events. As well, each year Auxiliary members must attend mandatory firearms and use of force training.

They may assist OPP officers with the following:

- Community policing initiatives and projects,
- Regular patrol,
- Crime and disaster scenes,
- Large gatherings or parades for crowd and traffic control, and
- Motor Vehicle Collisions.

Of special mention is that two Auxiliary members, Brian Millar and John Iversen received their 10 year service awards and Shawn Aymer received his 5 year service award. Congratulations to all three and thank you for your service. More congratulations to John Iversen on being promoted from Auxiliary Constable to Auxiliary Sergeant.



Policing our Waterways

The Southern Georgian Bay Detachment of the Ontario Provincial Police is responsible for policing 1,200 square kilometers of water, including the southern portion of Georgian Bay, a section of the Trent Severn system and several inland lakes.

The detachment provides marine policing services to the waterways in our area from mid-April to December. Our dedicated unit is comprised of 10 marine trained officers and assisted by 2 summer students. The detachment has 5 vessels ranging in size from 14 to 32 feet in length.

The Southern Georgian Bay O.P.P. Marine Unit enforces a number of relevant pieces of legislation including: the Criminal Code of Canada, the Canada Shipping Act (2001), the Small Vessels Regulations, the Vessel Operation Restriction Regulations, the Trespass to Property Act and the Liquor License Act. Our officers are experienced marine operators who know the issues of concern to cottagers and boaters within our area.

The Southern Georgian Bay marine unit works closely with many other specialized units including: OPP Underwater Search and Recovery Unit (USRU); OPP Emergency Response Team (ERT); Canadian Coast Guard; Provincial and Federal Wardens and other Municipal Policing agencies.

In 2017 our Marine Unit responded to 174 Calls for Service. We conducted 1288 Vessel Inspections and laid 86 charges under various acts. We conducted 1,567 Marine Patrol Hours. Public Service hours totaled 45 and Cottage Checks totaled 169.



2016-2017 Snow Machine Summary:

The Southern Georgian Bay Detachment of the Ontario Provincial Police is responsible for policing approximately 200 kilometers of groomed OFSC snow vehicle trails as well as responding to issues on the frozen waters of Georgian Bay, Six Mile Lake and several other inland lakes. There were 487 snow machines checked resulting in 34 charges and many educational warnings. The Southern Georgian Bay OPP snow machines were involved in 14 occurrences and patrolled 1050 kilometres. Sadly, we investigated one fatality.



STAFF REPORT

Department/Function: Protection to Persons and Property

Chair: Councillor Sandy Talbot

Meeting Date: March 14, 2018

Report No.: **PPP-2018-17**

Report Title: Fire Chief Monthly Report: February 2018

RECOMMENDATION:

That Staff Report No. PPP-2018-17 regarding the Fire Chief's Monthly Report: February 2018 be received for information;

The Chief Attended	1	MVC Call
	1	False Alarms
	2	Fire Calls

Highway Traffic Control and Apparatus positioning at MVC's training was completed by all Officers. This was a pilot course put on by PSHSA a provincially approved company for municipal employee health and safety. There were departments from Tay, Georgian Bay, Oro Medonte and Clearview in attendance.

There were a number of minor fire calls this month with the most serious being a renovated shed made for residential use in a backyard. The one resident got out safely, however he did suffer smoke inhalation but was released from hospital that same evening.

The majority of this month was spent between resupplying fire halls with inventory and working on Bylaw related issues more so in the zoning and property standards areas.

Recruitment:

Training continues to go well with the recruits going to Tiny Township for the latest classes.

Monthly Training:

Staff completed training on Search and Rescue, Accountability and Entry Control. Entry Control not only lets command know how many are doing interior firefighting tasks, but it tracks how long they have been inside and aids monitoring their air supply.

Tay Fire & Emergency Services were dispatched to 16 emergency calls during the month of February.

Year to Date Totals:

2018	45
2017	47
2016	38
2015	39
2014	49

Dispatches This Month:

Here is a partial breakdown of calls dispatched:

Call Type	Month	YTD
Fire	8	13
Medical	1	7
Motor Vehicle Collision	3	13
False Alarms	2	6
Carbon Monoxide	0	1
Hazardous Material	0	2

By-law:

Officer Kennedy has met all his criteria for probation and is moving forward with his contract obligations.

Officer Kennedy and myself attended a two day seminar on the upcoming Property Standards changes. After attending this seminar it was evident that a number of changes are required to our existing bylaw, and a number of staff are required to be appointed as Property Standards Officers, as well as proper identification supplied.

Canine Control:

Kennel Inspections and Dog tag sales continue to go well, Officer Dyer and some staff assisted the Humane Society in selling Cupcakes at the Township Office.

Prepared By:

Date: March 6, 2018

Brian Thomas
Fire Chief/CEMC

Recommended By:

Date: March 6, 2018

Brian Thomas
Fire Chief

Reviewed By:

Date: March 6, 2018

Robert J. Lamb, CEcD, Ec.D.
Chief Administrative Officer



STAFF REPORT

Department/Function: Protection to Persons and Property Committee

Chair: Councillor Sandy Talbot

Meeting Date: February 14, 2018

Report No.: **PPP-2018-20**

Report Title: Auto Extrication Equipment Purchase

RECOMMENDATION:

That Staff Report No. PPP-2018-20 regarding the Auto Extrication Equipment purchase be received and;

That Council grants an exception for the sole source procurement provision of the Township of Tay Purchasing Policy and;

That the necessary By-law be presented to Council to authorize the Fire Chief to enter into an Agreement of Purchase with Code 4 Fire & Rescue Inc., in the amount of \$40,800 to provide Auto Extrication Equipment for Tay Fire & Emergency Services to replace existing equipment that has come to the end of its useful life and has been budgeted for.

INTRODUCTION/BACKGROUND:

The Township of Tay currently has a set of Auto Extrication tools that it uses during Auto Extrication calls, as well as times when a cutter or spreader is needed at any other emergency call. The life of this equipment is approximately 15 years, depending on type and amount of use. Currently, some pieces of our equipment are at the age where there are no longer parts being made for it.

ANALYSIS:

For the past nine months Tay has participated with other municipalities in the evaluation of the latest styles of equipment provided by the major companies that make extrication equipment. During the latest testing, the demonstration and reviews all indicated that for the diverse use that Tay Fire & Emergency Services will be using the equipment that the Hurst eDRAULICS style of equipment is the way to go.

Items such as battery life, ergonomics, speed, cutting, and spreading pressures all were rated best with the Hurst equipment. By going to battery style compared to strictly hydraulics, one less major component (hydraulic pump) would not have to be purchased.

With no hydraulic pump running, difficulties on scene with tripping over hoses, re-positioning pump and hoses, and talking to the patient over the noise of the running hydraulic pump would be eliminated.

Hurst Extrication Equipment is an American Company who has one distributor in Ontario, New York State and the Maritime Provinces, and that is Code 4 Fire & Rescue Inc. As such an exception to the Township of Tay purchasing by-law would be required for a sole source provider.

FINANCIAL/BUDGET IMPACT:

The approved 2018 long term plan equipment budget does cover the total amount required to purchase all of the needed equipment.

CONCLUSION:

Staff is recommending that Council authorizes the Fire Chief to enter into a purchase agreement with Code 4 Fire & Rescue Inc.

Prepared By:

Date: March 6, 2018

Brian Thomas, Fire Chief/CEMC

Recommended By:

Date: March 6, 2018

Brian Thomas
Fire Chief/CEMC

Reviewed By:

Date: March 6, 2018

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer



STAFF REPORT

Department/Function: Protection to Persons and Property Committee

Chair: Councillor Sandy Talbot

Meeting Date: March 14, 2018

Report No.: **PPP-2018-18**

Report Title: Deputy Fire Chief/Fire Prevention Officer
Monthly Activity Report - February

RECOMMENDATION:

That Staff Report No. PPP-2018-18 regarding Deputy Fire Chief/FPO Monthly report – February be received for information;

INTRODUCTION/BACKGROUND:

Activity	This Month	YTD 2018	YTD 2017	YTD 2016
Routine Inspections	2	4	1	1
Request Inspections	1	1	1	0
Complaint Inspections	0	2	0	0
Information Inspection	1	2	1	0
Follow up Inspections	4	7	2	2
Courses Attended	1	1	1	0
Fire Calls Attended	5	17	2	5
Meetings (PIP/OP-co-op etc)	5	9	1	2
Orders issued	1	3	0	1
Immediate threat to life	0	0	0	0
Burning Complaint(s)	0	0	0	0
Training Presented	1	2	1	1
Pub Ed Performed	0	1	0	2
Hall Meetings	4	8	4	2
Hall Practices	0	0	0	0
Council	0	0	0	0
Misc. (dept related)	7	12	3	6
Court	0	0	0	0
Fire safety plans reviewed	4	7	2	0
TOTAL	36	76	19	22

TICKETS ISSUED

Ticket	Quantity	Total
PART I	0	0
PART II	0	0
PART III	0	0
TOTAL	0	0

Prepared By:

Date: March 2, 2018

Shawn Aymer
Deputy Fire Chief/ Fire Prevention Officer

Recommended By:

Date: March 6, 2018

Brian Thomas
Fire Chief

Reviewed By:

Date: March 6, 2018

Robert J. Lamb, CEcD, Ec.D.
Chief Administrative Officer



STAFF REPORT

Department/Function: Protection to Persons & Property Committee

Chair: Councillor Sandy Talbot

Meeting Date: March 14th, 2018

Report No.: **PPP-2018-16**

Report Title: By-law Monthly Activity Report – February

RECOMMENDATION:

That Staff Report No. PPP-2018-16 regarding By-law Monthly Activity Report February 2018 be received for information;

COMPLAINT OVERVIEW – February 2018

By-Law	Open this Month	Closed this Month	Ongoing/Working towards Compliance
Clean Yards	0	0	18
Dogs	0	1	0
DOLA	0	2	1
Long Grass	0	0	0
Noise	0	0	0
Property Standards	0	0	10
Zoning	1	0	8
Fill	0	0	1
Burning	0	0	0

Total files opened YTD	Total files closed YTD
5	1

Not many complaints were received by the by-law department this month, and as a result staff focused on the Property Standards project. There was one charge laid for permit dog to run at large on February 28th, 2018.

Type of Actions Taken

<u>Actions</u>	<u>February 2018</u>
Notice of Violation	1
Order to Comply	1
Charges	1

PON/Tickets Issued

<u>Type of Ticket</u>	<u>Quantity</u>	<u>By-law</u>
Part 1	1	Canine
Part 2	15	Parking
Part 3	0	

Winter Parking Updates

<u>Type of Parking Ticket</u>	<u>Tickets written</u>	<u>Paid</u>	<u>No Payment</u>
Park on/within 3.05M of road	13	11	9
Interfere with Snow removal	1	0	1
Other parking fines (facing wrong direction)	1	0	1

Parking ticket numbers are on par with January numbers. There weren't many snowfalls in February, however during the one heavy snowfall event by-law staff patrolled the Township, and made sure that people who were on the road would move their vehicle before the snow plough arrived. No tickets were written at that time.

The set fine for parking with vehicle facing the wrong direction was approved near the end of February, so staff are now able to enforce that section of the by-law. As a result, one ticket has been issued for that this month.

Additional Items/ Future Considerations

There was a court date held on February 15th, 2018 in which 2 DOLA matters and one Building Code Violation were on the docket. One DOLA matter was resolved with a guilty plea and the dog owner accepting the Order that is now in place for muzzling the dog when off of the property it resides at.

The other DOLA matter was adjourned to April 12th, 2018 at the request of the defense council. That is set to be spoken to on that date.

The Building Code violation was also adjourned to April 12th, 2018 for ex-parte trial. This charge also was deemed to be dealt with on that day and if the ex-parte trial does not take place, the charge will be forced to be withdrawn by the order to the Justice of the Peace.

On February 21-22, the Fire Chief and MLEO attended a training session held by the Ministry of Housing in conjunction with the Municipal Law Enforcement Association. This session covered the new legislation that forces all Municipalities to have a Property Standards By-law or start enforcing the Residential Tenancies Act by July 1st, 2018. In addition, the training provided insight on what to expect and what a Property Standards by-law should cover. The Township is covered under this new legislation as we already have a Property Standards By-law in place. However, there was insight into other municipalities' by-laws and what our Township could add to ours in order to make it more comprehensive. Prior to the legislated deadline of July 1st, 2018 there will be a housekeeping report in relation to changes to the existing Property Standards by-law that is currently in place.

Prepared By:

Date: March 5, 2018

Rob Kennedy
Municipal Law Enforcement Officer

Recommended By:

Date: March 6, 2018

Brian Thomas
Fire Chief/CEMC

Reviewed By:

Date: March 6, 2018

Robert J. Lamb, CEcD, Ec.D.
Chief Administrative Officer



STAFF REPORT

Department/Function: Protection to Persons and Property Committee

Chair: Councilor Sandy Talbot

Meeting Date: March 14, 2018

Report No.: **PPP-2018-19**

Report Title: MLEO/Canine Monthly Activity Report - February

RECOMMENDATION:

That Staff Report No. PPP-2018-19 MLEO/Canine Activity Report February 2018 be received for information;

MLEO/ Canine Activity Report

Activity	Count
Complaints and Investigations	8
Pound and Seizure	1
DOLA Orders	0
Dog Tags Sold	418
Dog Tags Sold YTD	734
Fines Issued	0
Files Opened	0
Files Closed	0
Approved Kennel Inspections	3

Tags by Year	Tags Sold (YTD)
Total	734
2018 Tags	581
2019 Tags	86
2020 Tags	67

Dog license sales in February totaled 418 tags, representing an increase in sales of 32% from January 2018. More tags were sold in February than in the previous two months combined. One-year tags remain the most popular option.

Three kennel inspections were conducted and all three kennels received a kennel license. There are four outstanding kennels without licenses for 2018, two of which have upcoming scheduled inspections.

One dog was impounded at the Midland SPCA. On Saturday, February 17, a male intact husky type dog was brought to North Simcoe Veterinary Services by a member of the public. Tay Municipal Law Enforcement transported the dog to the Midland SPCA on Tuesday, February 20. The dog was not claimed and was neutered and put up for adoption.

This month 8 dog-related complaints were made. Of these 8 complaints, 5 were for dogs running-at-large, 2 were for barking dogs, and 1 was for exceeding the two-dog limit.

Prepared By:

Date: March 6, 2018

Ethan Dyer,
Municipal Law Enforcement Officer

Recommended By:

Date: March 6, 2018

Brian Thomas
Fire Chief

Reviewed By:

Date: March 6, 2018

Robert J. Lamb, CEcD, Ec.D.
Chief Administrative Officer

**General Government & Finance Committee
March 14, 2018**

Agenda

1. Call to Order:

2. Reports of Municipal Officials:

- 2.1 Verbal Report from the C.A.O.
Re: CAO's Report - February 2018
- 2.2 Report from the Clerk
Re: Clerk's Report – February/March 2018
- 2.3 Report from the Clerk
Report No. GGF-2018-13
Re: Joint Accessibility Advisory Committee
- 2.4 Report from the Director of Finance
Report No. GGF-2018-14
Re: 2017 Statement of Remuneration and Expenses
- 2.5 Report from the Director of Finance
Report No. GGF-2018-15
Re: 2019 Budget Schedule

3. OTHER BUSINESS:

- 3.1 Correspondence from Office of the Ombudsman
Re: Ombudsman Complaint, File No.318097

4. ITEMS FOR INFORMATION:

- 4.1 Correspondence from Simcoe County Agricultural Hall of Fame
Re: 2018 Nominations
- 4.2 Correspondence from the Township of Springwater
Re: Annual Log-Sawing Contest – Elmvale Maple Syrup Festival
- 4.3 Correspondence from the Hearn Family
Re: Thank You
- 4.4 Correspondence from the Southern Georgian Bay Chamber of Commerce
Re: 2018 Annual General Meeting & Business Achievement Awards
- 4.5 Correspondence from the Township of Springwater
Re: Resolution regarding Provincial Funding for Ontario Libraries

STAFF REPORT

Department/Function: General Government & Finance Committee

Chair: Deputy Mayor Dave Ritchie

Date: March 14, 2018

Subject: **Clerk's Report – February/March 2018**

The following are the highlights for February/March 2018:

- The renovation of the Port McNicoll Library Community Room is underway requiring regular contact with the architect and contractor. Work is moving quickly with project anticipated to be completed on time.
- 2018 Election:
 - Candidate Information Session to be held at the North Simcoe Recreation Centre on April 18th at 6:30 p.m. This session is joint with all four North Simcoe municipalities and will be presented by the Ministry of Municipal Affairs.
 - Communications and advertising plan developed
 - Nominations open on May 1st and staff are organizing a candidate information package that will be available in April
 - Draft procedures and terms of reference under review for County-wide Joint Compliance Audit Committee. The Committee must be appointed and procedures approved by September 28th
- Continued correspondence with the Privacy Commissioner's Office respecting privacy complaint and appeal of a Fee Estimate related to a 2017 FOI Request. At this time Fee Estimate appeal has been resolved; however, the complaint remains open.
- Submitted annual FOI reporting requirements to Privacy Commissioner's Office
- Completed recruitment of new Library C.E.O. with the new CEO, Terri Pope, starting on March 19th.
- Continued to spend time working with staff on organizing and sorting records as part of the annual records management processes. The year-end record shred is anticipated for the end of March.
- Property Standards hearing scheduled for February was rescheduled to March 21st due to lack of quorum.

- Horticulture Committee has begun planning for 2018 events including the Tay Blooms event on June 2nd, which will include the annual plant exchange & mulch pick up, Bus Tour on August 14, and garden awards.
- Attended court on February 23, 2018 in Midland
- Attended Simcoe County Clerks & Treasurers meeting on February 16th
- Emergency Management Program Committee meeting held on March 2nd. The Committee reviewed the draft RFP for the new development of a new Emergency Plan which will also include the development of a Business Continuity Plan and training proposal for future budgets.
- In light of changes in provincial legislation, and information received from recent staff training, it is necessary to formally appoint and/or re-affirm staff appointments as property standard officers; therefore, the required by-law will come forward to the March Council meeting

Respectfully submitted;

Alison Gray, Clerk



STAFF REPORT

Department/Function: General Government & Finance

Chair: Deputy Mayor David Ritchie

Meeting Date: March 14, 2018

Report No.: **GGF-2018-13**

Report Title: **Joint Accessibility Advisory Committee**

RECOMMENDATION:

That Staff Report GGF-2018-13 regarding Joint Accessibility Advisory Committee be received;

And that the Terms of Reference for the Joint Accessibility Advisory Committee as attached to Staff Report No. GGF-2018-13 be approved;

And that _____ be appointed as the council representative to the Committee;

And that the required by-law be brought forward for Council's consideration.

INTRODUCTION/BACKGROUND:

With the publication of the statistics from the federal 2016 Census, the population of the Township of Tay went over 10,000. As a result, per the Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11, as amended (AODA) the Township is required to create and appoint an accessibility advisory committee.

Through the AODA, as well as Planning Act once constituted this committee has various legislative responsibilities. Further, a unique requirement of this committee is that the majority of members must be persons with disabilities which provides the committee with direct knowledge of the matters they are required to review.

Council approved the creation of an Accessibility Advisory Committee in May 2017; however, after two rounds of advertising we did not received enough interest to form the Committee. As a result, staff approached other municipalities to determine their interest in creating or allowing Tay to join a Joint Accessibility Advisory Committee (AAC). At this time, the County of Simcoe and Township of Springwater have invited Tay to join their existing Joint AAC.

ANALYSIS:

The role and mandate of the Joint AAC is the same as the originally constituted Township committee as they operate under the same legislation.

As there are only two scheduled meetings remaining to the Council term, being April 19th & October 4th, 2018 it is proposed, and staff concur with the County's recommendation, that Tay only appoint an elected official to the Joint AAC for the remainder of the term. At the start of the new term, full recruitment would be undertaken to constitute the new Joint AAC with the full committee composition as detailed below.

The 2018-2202 Committee would consist of five to nine members as follows:

- a) The majority of members must be persons with disabilities as defined under the Acts, and are residents of the County of Simcoe. Preference will be given to appointing at least one eligible resident of "Springwater" and at least one eligible resident of "Tay".
- b) Three elected officials as follows:
 - One member of "Simcoe" Council, and
 - One member of "Springwater" Council, and
 - One member of "Tay" Council

The Councils may, at their discretion, authorize the appointment of:

- a) One citizen at large who may not be a person with a disability but who has special interest or expertise in the identification or removal of barriers or has specific expertise as a care giver to a person(s) with disabilities; and/or
- b) A representative of an organization representing persons with disabilities.

This late in the current term, there is a benefit to Tay in joining an existing experienced AAC as it allows access to a wider range of expertise and members who understand the scope and responsibility of the AAC, particularly as it related to Planning Act matters and the upcoming municipal election.

SUSTAINABILITY PLAN:

This report does not impact the Sustainability Plan.

FINANCIAL/BUDGET IMPACT:

Non-elected representatives shall be compensated in accordance with the existing policies of the Corporation of the County of Simcoe.

Elected officials shall be compensated in accordance with existing policies of their respective municipalities.

Non-elected representatives who are persons with disabilities will be provided, at the "Simcoe's" expense, with the resources related to their disability that are deemed necessary for them to fully participate in the "Committee's" activities. The resources could include such things as transportation, sign language, Braille translation etc. Any equipment shall remain the property of "Simcoe".

CONCLUSION:

Staff is recommending that the attached Terms of Reference for the Joint AAC be approved.

Prepared By: Alison Gray, Clerk

Recommended By: Date:

Alison Gray, BAH, CMO
Clerk

Reviewed By: Date:

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer

Attachment: Joint AAC Terms of Reference

THE CORPORATION OF THE TOWNSHIP OF TAY

BY-LAW NO. 2018-xx

A By-law to Establish a Joint Accessibility Advisory Committee for the Corporation of the Township of Tay with the County of Simcoe and Township of Springwater

WHEREAS the Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11, as amended requires the Council of every municipality having a population of not less than 10,000 to establish or continue an accessibility advisory committee;

WHEREAS the Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11, as amended requires that the Accessibility Advisory Committee shall advise the council in each year about the preparation, implementation and effectiveness of its accessibility plan; and

WHEREAS it desirous to establish a joint Accessibility Advisory Committee with the County of Simcoe and Township of Springwater to assist the Township of Tay in improving access and opportunities for persons with disabilities;

NOW THEREFORE THE MUNICIPAL COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF TAY ENACTS AS FOLLOWS:

1. That the Council of the Corporation of the Township of Tay hereby establishes a Committee to be known as the "Joint Accessibility Advisory Committee" under the authority of the Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11, as amended as amended.
2. That Schedule "A" attached hereto and forming part of this by-law be adopted as the Terms of Reference of the Joint Accessibility Advisory Committee.
3. This By-Law shall come into force and take effect immediately upon the final passage thereof.

BY-LAW READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS DAY OF , 2018.

THE CORPORATION OF THE TOWNSHIP OF TAY

MAYOR, Scott Warnock

CLERK, Alison Thomas

SCHEDULE 'A' TO BY-LAW 2018-xx

The Corporation of the County of Simcoe and The Corporation of the Township of Springwater and The Corporation of the Township of Tay Joint Accessibility Advisory Committee

Terms of Reference

Purpose

The Joint Accessibility Advisory Committee ("Committee") is established by the Corporation of the County of Simcoe ("Simcoe"), the Corporation of the Township of Springwater ("Springwater") and the Corporation of the Township of Tay ("Tay") in accordance with Ontarians with Disabilities Act 2001, and the Accessibility for Ontarians with Disabilities Act, 2005 ("Acts"), and shall act as an advisory body in accordance with both Acts and all related standards.

Mandate

The Committee shall:

- a) Provide input on the preparation of the accessibility plans for consideration by the respective municipal Council.

The plans will address and include steps that each municipality has taken and plans to take with respect to the identification, removal and prevention of barriers to persons with disabilities as required by legislation.

- b) Advise on major accessibility issues related to the significant renovation, operation, purchase or lease of buildings or structures or parts of buildings or structures used as municipal buildings with special attention to those that the public are encouraged to utilize through the review of site plans and drawings as described within the Planning Act.
- c) Advise on opportunities with respect to the identification and removal of barriers to persons with disabilities at facilities owned or operated by the municipalities.
- d) Identify any potential funding that could be available to assist with the removal of barriers for persons with disabilities.
- e) Research and report on specific matters referred to it by the municipal Councils.

- f) Advise on opportunities to increase staff awareness with respect to the provision of municipal programs and services to persons with disabilities.
- g) Advise on ways to improve opportunities for persons with disabilities with respect to programs and services offered by the municipalities.
- h) Perform other functions that are specified in the Regulations of the Acts.

Composition

The Committee shall consist of five to nine members as follows:

- c) The majority of members must be persons with disabilities as defined under the Acts, and are residents of the County of Simcoe. Preference will be given to appointing at least one eligible resident of "Springwater" and at least one eligible resident of "Tay".
- d) Three elected officials as follows:
 - One member of "Simcoe" Council, and
 - One member of "Springwater" Council, and
 - One member of "Tay" Council

The Councils may, at their discretion, authorize the appointment of:

- c) One citizen at large who may not be a person with a disability but who has special interest or expertise in the identification or removal of barriers or has specific expertise as a care giver to a person(s) with disabilities; and/or
- d) A representative of an organization representing persons with disabilities.

Recruitment

"Simcoe" will be responsible for advertising recruitment opportunities through local newspapers, local libraries, and relevant organizations representing persons with disabilities.

The participating municipalities will each be responsible for promoting recruitment opportunities on their respective website and through their social media accounts.

Enhanced advertising may be done by "Springwater" and "Tay" at their own expense.

Appointment of Members

Elected officials are to be appointed by their respective Council or in accordance with their applicable by-laws or policies.

The elected officials appointed to the "Committee" shall review applications and nominate the balance of the membership to the participating municipal Councils for approval.

Term of Appointment

a) Elected Officials:

- "Simcoe" Warden, or his or her designate, or other appointed County Council member shall serve for the term of office;
- "Springwater" Council Member shall serve for the term as specified by his/her Council.
- "Tay" Council Member shall serve for the term as specified by his/her Council.

b) Non-elected representatives:

- The term shall coincide with the term of Council
- Representatives are eligible for re-appointment

Members may be required to resign from the "Committee" if they have been absent for three consecutive meetings without good cause.

Quorum

More than half of the members eligible to vote must be present in order to transact business.

Voting

All members, when eligible to vote, shall have one vote only.

Chair and Vice-Chair

The Chair and Vice-Chair of the "Committee" shall be elected annually at the first meeting of the "Committee" in each year.

Compensation and Reimbursement of Expenses

Non-elected representatives shall be compensated in accordance with the existing policies of the Corporation of the County of Simcoe.

Elected officials shall be compensated in accordance with existing policies of their respective municipalities.

Non-elected representatives who are persons with disabilities will be provided, at the "Simcoe's" expense, with the resources related to their disability that are deemed necessary for them to fully participate in the "Committee's" activities. The resources could include such things as transportation, sign language, Braille translation etc. Any equipment shall remain the property of "Simcoe".

Exception

"Springwater" shall reimburse "Simcoe" for all expenses associated with holding special meetings of the "Committee" or conducting "Springwater" facility reviews that may be required by "Springwater" from time-to-time.

"Tay" shall reimburse "Simcoe" for all expenses associated with holding special meetings of the "Committee" or conducting "Tay" facility reviews that may be required by "Tay" from time-to-time.

Reporting Structure

The "Committee" shall report to the respective Councils, in accordance with the provisions of their respective Procedure By-laws. The presentation of the Committee's activities will be in the form of a report containing a record of those present at the meeting, the items considered, and the recommendations of the "Committee". The respective Councils may only consider and act on the recommendations within their jurisdiction.

The "Committee" does not have the authority to specifically direct the activities of staff.

Resources

The Clerk's Departments for "Simcoe", "Springwater" and "Tay" will share the responsibility for administrative support as appropriate, including co-ordination of meetings, compilation of agenda material, and meeting support.

Responsibility for creating and distributing the agendas and record of proceedings will reside with "Simcoe".

Other staff resources by "Simcoe", "Springwater" and "Tay" will be available as required.

Meetings

Meetings may be scheduled as may be required each year to support staff reporting and the advisory committee providing guidance and conducting facility reviews resulting in improved accessible services and facilities. All meetings shall be held during the day at a location to be determined.

Review

The effectiveness of having a joint “Committee” will be subject to review by all participating municipal Councils at least once per term.



STAFF REPORT

Department/Function: General Government & Finance

Chair: Deputy Mayor Dave Ritchie

Meeting Date: March 14, 2018

Report No.: **GGF-2018-14**

Report Title: **2017 Statement of Remuneration and Expenses**

RECOMMENDATION:

That Report GGF-2018-14 regarding the 2017 Statement of Remuneration and Expenses, paid to members of Council, Local Boards and Committees be received.

INTRODUCTION/BACKGROUND:

It is a requirement of the Municipal Act that the Treasurer provide Council an itemized statement on remuneration and expenses paid in the previous year to members of Council and to members appointed by the municipality to serve as a member of any body, including Local Boards. This report is due by March 31, of the following year.

ANALYSIS:

Accordingly, under the provision of Section 284 (1) of the Municipal Act, 2001 the attached itemized statement is submitted disclosing remuneration and expenses for each member of Council and appointed members to our Local Boards and Committees for the year ended December 31, 2017.

FINANCIAL/BUDGET IMPACT:

Funds are provided annually in the Township's operating budget under the Council section for Council remuneration and expenses and under various departmental sections for Boards and Committees.

CONCLUSION:

This report is provided to meet the requirements for reporting under section 284 (1) of the Municipal Act.

Prepared By;

Date Prepared:

Joanne Sanders
Treasurer

March 6, 2018

Reviewed By:

Date:

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer

March 6, 2018

TOWNSHIP OF TAY						
Summary of Remuneration and Expenses						
Treasurer's Statement of Remuneration and Expenses paid as of December 31, 2017, as per the Municipal Act, Section 284.						
COUNCIL						
Office	Name		Remuneration	Per Diem	Expenses	Total
Mayor	Scott Warnock		\$ 25,670.00	\$ 710.94	\$ 3,840.96	\$ 30,221.90
Deputy Mayor	Dave Ritchie		\$ 18,603.00	\$ 167.28	\$ 1,142.84	\$ 19,913.12
Councillor	James Crawford		\$ 15,170.00	\$ 250.92	\$ 2,409.80	\$ 17,830.72
Councillor	Gerard LaChapelle		\$ 15,170.00		\$ 300.00	\$ 15,470.00
Councillor	Heinrich Naumann		\$ 15,170.00		\$ 300.00	\$ 15,470.00
Councillor	Catherine Root		\$ 15,170.00	\$ 250.92	\$ 2,869.69	\$ 18,290.61
Councillor	Sandy Talbot		\$ 15,170.00		\$ 1,271.00	\$ 16,441.00
			\$ 120,123.00	\$ 1,380.06	\$ 12,134.29	\$ 133,637.35
Rates for Remuneration and Expenses as set by Motion No. 3 December 10, 2008 and By-Law 2009-28						
Council Expenditures:					Expenses	Total
Scott Warnock	Great Lakes/SLCI Mayors' Conference Expenses				\$ 822.07	\$ 822.07
	Queens Park Toronto - Mileage				\$ 152.46	\$ 152.46
	Great Lakes/SLCI - Parliament Hill Days - Expenses				\$ 1,651.83	\$ 1,651.83
	AMO Conference Expenses				\$ 50.69	\$ 50.69
	Great Lakes/SLCI Parliament Hill Days Ottawa - Expenses				\$ 717.32	\$ 717.32
	Great Lakes/SLCI Bd of Directors Mtg Toronto - Expenses				\$ 446.59	\$ 446.59
					\$ 3,840.96	\$ 3,840.96
Dave Ritchie	ROMA Conference Expenses				\$ 1,092.15	\$ 1,092.15
	AMO Conference Expenses				\$ 50.69	\$ 50.69
					\$ 1,142.84	\$ 1,142.84
James Crawford	2017 Internet Reimbursement				\$ 300.00	\$ 300.00
	AMO Conference Expenses				\$ 2,109.80	\$ 2,109.80
					\$ 2,409.80	\$ 2,409.80
Gerard LaChapelle	2017 Internet Reimbursement				\$ 300.00	\$ 300.00
					\$ 300.00	\$ 300.00
Heinrich Naumann	2017 Internet Reimbursement				\$ 300.00	\$ 300.00
					\$ 300.00	\$ 300.00
Catherine Root	2017 Internet Reimbursement				\$ 300.00	\$ 300.00
	OSUM Conference Expenses				\$ 626.58	\$ 626.58
	AMO Conference Expenses				\$ 1,943.11	\$ 1,943.11
					\$ 2,869.69	\$ 2,869.69
Sandy Talbot	2017 Internet Reimbursement				\$ 300.00	\$ 300.00
	OSUM Conference Expenses				\$ 971.00	\$ 971.00
					\$ 1,271.00	\$ 1,271.00

TOWNSHIP OF TAY						
Summary of Remuneration and Expenses						
Treasurer's Statement of Remuneration and Expenses paid as of December 31, 2017, as per the Municipal Act, Section 284.						
Boards and Committees						
The following per diems and expense reimbursements were made to persons appointed by Council to serve as members of the various boards/committees:						
Recreation Committee 1-1-1771-100-1225				Heritage Committee 1-1-8840-115-1225		
BAKER, KEN		\$ 250.00		FEGARTY, TERRY		\$ 225.00
CARRIERE, NANCY		\$ 320.00		FOSTER, SHERRIL		\$ 50.00
CARRIERE, RAYMOND		\$ 320.00		HEFFER, MATTHEW		\$ 225.00
GLIDDEN, KRISTA		\$ 55.00		LUCAS, SUSAN		\$ 200.00
GUTKOWSKA, CATHY		\$ 320.00		MANTEL, ALAN		\$ 175.00
KILLICK, BRENDA		\$ 320.00		O'CONNOR, STAN		\$ 250.00
MAURICE, GEOFFREY		\$ 320.00		TODD, JOHN		\$ 250.00
MAURICE, TAMMY		\$ 320.00				\$ 1,375.00
OSTERTAG, TAMMY		\$ 40.00				
PEARSON, CINDY		\$ 320.00				
VALE, DONNA		\$ 320.00				
		\$ 2,905.00		Horticultural Committee 1-1-1771-100-1225		
				BOSLEY, GLENDA		\$ 85.00
				JOSEY, MARINA		\$ 85.00
				WAKISH, BETTY		\$ 85.00
						\$ 255.00
			Library Board 3-6-6761-100-1225			
			CORYELL, BOB	\$	275.00	
			RAMLER, JACKIE	\$	200.00	
			READ, SUSAN	\$	275.00	
				\$	750.00	
Committee of Adjustment						
	MEETING REMUNERATION 1-1-8881-166-1225	INSPECTION TIME 1-1-8881-166-1221	MILEAGE 1-1-8881-166-2405	TOTAL		
CONSTANTINE-BARRON, CLAIRE	\$ 315.00	\$ 64.73	\$ 100.51	\$ 480.24		
HEFFER, MATTHEW	\$ 70.00	\$ 12.53	\$ 19.80	\$ 102.33		
OTT, ANDY	\$ 280.00	\$ 66.89	\$ 100.99	\$ 447.88		
RUF, FRED	\$ 280.00	\$ 66.89	\$ 81.18	\$ 428.07		
STRACHAN, DAVE	Dave chose not to submit any expenses for 2017					
VAN HALEM, MURRAY	\$ 280.00	\$ 66.89	\$ 83.16	\$ 430.05		
	\$ 1,225.00	\$ 277.93	\$ 385.64	\$ 1,888.57		
LEGEND						
AMO	Association of Municipalities Ontario					
OGRA	Ontario Good Roads Association					
OSUM	Ontario Small Urban Municipalities					
ROMA	Rural Ontario Municipal Association					
SLCI	St. Lawrence Cities Initiative					



STAFF REPORT

Department/Function: General Government & Finance

Chair: Deputy Mayor David Ritchie

Meeting Date: March 14, 2018

Report No.: **GGF-2018-15**

Report Title: 2019 Budget Schedule

RECOMMENDATION:

That Staff Report No. GGF-2018-15 regarding the 2019 Budget Schedule be received; and

That the 2019 Proposed Budget Schedule be endorsed and placed on the Township's website.

INTRODUCTION/BACKGROUND:

Annually a budget schedule is discussed with Council in order to consider the varying schedules and commitments of Council members in setting special meeting dates and to assist staff with setting work priorities. The Clerk brought forward a proposed schedule of meetings in January which included the two special meetings for the Long Term Plan and the Preliminary Budget shown on the attached schedule.

ANALYSIS:

The 2019 Budget Schedule identifies all currently scheduled meetings relating to the preparation of the 2019 Budget.

The budget discussions start with the Special Meeting held on March 28, 2018 which will be focused on roads capital, followed by a Special Meeting held for the 2019-2028 Long Term Capital Plan. An update of the Asset Management Plan will also be presented at this time.

The schedule has the Preliminary Budget being presented to the current Council October 17, 2018. Recommendations from the current Council would be presented to the new Council at the General Government Committee Meeting December 12, 2018, with adoption at the Regular Council Meeting on December 19, 2018.

Due to the early release of the Ontario Municipal Partnership Fund (OMPF) grant information and Policing budgets, staff has noticed that there are fewer amendments to the budget in the April draft and therefore the Final Operating and Capital Budget Meeting has been scheduled as part of the regular committee meeting in April.

FINANCIAL/BUDGET IMPACT:

There is no significant impact to the budget for these changes.

CONCLUSION:

Staff is recommending the approval of the attached 2019 Budget Schedule and that the Budget Schedule be posted on the Township website.

Prepared By:

Date: March 6, 2018

Joanne Sanders
Treasurer

Reviewed By:

Date: March 6, 2018

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer

Township of Tay
2019 Budget Schedule

Long Term Capital Plan 2019-2028

Wednesday March 28, 2018 6:00 p.m.	Council review of Roads Capital Plan/ Road Needs Study Public Works Committee
Thursday September 13, 2018 3:00 p.m.	Council review Long Term Plan / Asset Mgmt Plan *Special General Government Committee
Wednesday September 26, 2018 7:00 p.m.	2019-2028 Long Term Plan approval Regular Council Meeting

2019 Preliminary Operating and Capital Budget

Wednesday October 17, 2018 3:00 p.m.	Special Preliminary Budget Meeting Draft 1 *Special General Government Committee
Wednesday December 12, 2018 10:00 a.m.	2018 Preliminary Budget (New Council) By-laws for Water and Wastewater Rates General Government Committee
Wednesday December 19, 2018 7:00 p.m.	2018 Preliminary Budget Adoption Regular Council Meeting

2019 Final Operating and Capital Budget

Wednesday April 10, 2019 10:00 a.m.	2019 Final Operating and Capital Budget Report General Government Committee
Wednesday Adoption April 24, 2019 7:00 p.m.	2019 Final Operating and Capital Budget Tax Rate By-law Regular Council Meeting

BY MAIL

Council
Township of Tay
450 Park Street, P.O. Box 100
Victoria Harbour ON L0K 2A0

February 26, 2018

Dear Council:

Re: Ombudsman Complaint, Our File No. 318097

I am writing with respect to a complaint my Office received involving the Township of Tay (the "Township").

Further to recent conversations with Mayor Scott Warnock, the Township's Fire Chief, and Chief Administrative Officer ("CAO"), our Office would like to provide the Township with best practices and materials we believe will assist the Township in its municipal by-law enforcement.

Complaint

In June 2017, a citizen complained to our Office that a restriction imposed by the Township has prevented her from making noise complaints about a dog kennel, located adjacent to the citizen's property, to the Township's by-law enforcement department. This decision was made by council in open session on May 24, 2017.

The jurisdiction of the Ombudsman

The Ombudsman is an independent and impartial officer of the Ontario legislature with authority to address complaints about the administrative conduct of municipalities, universities, school boards, and provincial government organizations.

The Ombudsman's role with respect to municipalities is to review and investigate complaints about municipal government administration, including how local policies and

Bell Trinity Square
483 Bay Street, 10th Floor, South Tower, Toronto, ON M5G 2C9
483, rue Bay, 10^e étage, Tour sud, Toronto (Ontario) M5G 2C9
Tel / Tel 416-586-3300
Facsimile / Télécopieur 416-586-3485 TTY / ATS 1-866-411-4211

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procedures were applied and followed in the course of decision-making. When problems are identified, the Ombudsman may make suggestions or recommendations to a municipality to improve its processes, as well as to strengthen local governance and accountability.

Our review

Our review focused on the administrative conduct of the Township. In the course of our review, we spoke with Township staff on several occasions, including the CAO and Fire Chief who conducts by-law enforcement within the Township. We considered the Township's policies and procedures, as well as relevant legislation. We reviewed information and documentation provided by the Township as well as information that the citizen provided to our office.

During the course of our review, we noted that the Township does not have a by-law enforcement policy. We also had concerns about the impact of council's decision to cease by-law enforcement action at a specific kennel on the Township's kennel licensing regime.

Our Office contacted the Township on December 14, 2018 about the complaint. We spoke with Mayor Warnock, the CAO and Fire Chief. During the phone call we reviewed the history and circumstances surrounding the complaint. Our Office raised our concerns following our review. We discussed our Office's best practice suggestions for by-law enforcement including implementing a written by-law enforcement policy that accounts for circumstances where the Township utilizes its discretion not to enforce its by-laws.

Following the phone call, our Office sent an email to Mayor Warnock, the CAO and Fire Chief further explaining our best practice suggestions and including a number of resources for the Township's review.

Based on our Office's review of the complaint, we would like to share some best practice suggestions with council to promote greater transparency and accountability relating to the Township's by-law enforcement practices.

Best practice suggestions for by-law enforcement

Sections 224 and 227 of the *Municipal Act, 2001*¹ sets out the distinct roles of council and staff in municipal administration. Generally, it is the role of council to develop and evaluate the policies and programs of the municipality while it is staff's role to implement those policies. The Municipal Councillor's Guide 2014 reinforces the distinction:

¹ *Municipal Act, 2001*, SO 2001, c 25,

Once council makes a decision, staff has general responsibility to implement the policy of council, for example through administering and delivering services and programs to the community.²

Based on this legislation and in the context of by-law enforcement, our Office suggests that as a best practice municipal councils enact a by-law enforcement policy that assists the public to understand that the Township has discretion when it will take enforcement measures. Implementation of the policy should fall to Township staff, rather than council, who would be empowered to make decisions under the policy based on their expertise.

By developing and implementing a written by-law enforcement policy that is publicly available, potentially inconsistent, arbitrary, or unfair decision making will be avoided while enforcement standards will be transparent and accessible.

In its *Bylaw Enforcement: Best Practices Guide for Local Governments*, the British Columbia Ombudsperson provides similar best practices regarding council's role in enforcement:

Defining and maintaining separation between council and front-line enforcement staff is essential to an administratively fair bylaw enforcement system [which means] that while council sets policy and provides general direction on enforcement priorities, its individual members should not become directly involved in enforcement action by directing enforcement against specific residents, groups or business, or by directing that enforcement action not occur in a particular circumstance. Rather, individual enforcement decisions should be made by delegated bylaw enforcement staff or contractors.³

Our Office encourages the Town to implement a written by-law enforcement policy.

² The Municipal Councillor's Guide 2014 at page 14, available online: <http://www.mah.gov.on.ca/AssetFactory.aspx?did=4965>

³ Ombudsperson for the Province of British Columbia, *Bylaw Enforcement: Best Practices Guide for Local Governments*, at page 16, available online: <https://www.bcombudsperson.ca/documents/bylaw-enforcement-best-practices-guide-local-governments>.

Conclusion

Thank you for your co-operation in the course of our review. Please keep our office apprised of any actions taken by the Township as a result of our above suggestions.

Sincerely,



Lauren Chee-Hing
Counsel
Office of the Ontario Ombudsman

c.c. Alison Gray, Township Clerk, via email: agray@tay.ca

FEB 15 2018

To: Members and Contacts of Farm Organizations that are Members of Simcoe County Agricultural Hall of Fame

From: Linda van Rassel, Secretary Treasurer

Date: February 12, 2018

The Annual General Meeting of the Hall of Fame will be held on **Wednesday, March 28th at 1:00 p.m. at Simcoe County Museum, Midhurst**. As always, your attendance and/or input would be appreciated.

If you are not the correct person to be receiving this notice, please provide me with details as to the correct contact and mailing address so that we can update our files. You can contact me at 11 Luella Blvd, Minesing, ON L9X 0W9, by phone at 705-728-5399 or by email at linda.vanrassel@sympatico.ca

There are many worthy potential recipients in Simcoe County. Please consider making a nomination and contact me if you require nomination forms, nomination criteria and information.

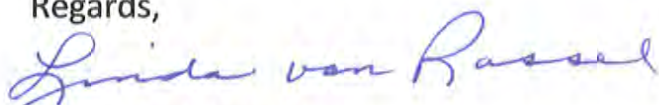
For nominations that were submitted and not accepted, you are invited to resubmit it if more research was done and more information gathered.

Remember, the Selection Committee can only assess the information on the form.

The deadline for receiving applications is **April 30, 2018**.

On behalf of the Directors of SCAHF I would like to emphasize that new nominations are always welcomed.

Regards,



Linda van Rassel

February 23, 2018Mayor Scott Warnock & Council
Township of Tay
450 Park Street, Box 100
Victoria Harbour, ON L4N 9Z6

FEB 28 2018

RE: Annual Log-Sawing Contest – Elmvale Maple Syrup Festival

Dear Mayor Warnock,

It is with pleasure that I invite you to compete in the Annual Log-Sawing Contest taking place at the **Elmvale Maple Syrup Festival on Saturday, April 28, 2018.**

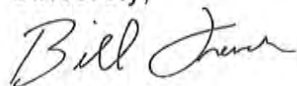
The log-sawing contest is scheduled to commence at 12:00 noon following the Opening Ceremonies. We are asking that all participants meet at the Main Stage (corner of Queen Street and Maria Street) at 11:45 a.m. in preparation for the competition.

If you are interested in participating in the competition, please contact Nicole Audette at nicole.audette@springwater.ca or via telephone at 705-728-4784 Ext. 2067 **by April 13, 2018 to RSVP.** If you cannot find a brave enough soul to join you in the competition, we will find a partner for you to lumberjack with on the day of the event!

A women's only competition will be taking place again this year (subject to number of registrants). Please indicate which competition you would like to participate in.

As in previous years, this invitation has been extended to a number of local dignitaries, including area MPs, MPPs and representatives from neighbouring Municipal Councils. I hope to see everyone out to support this worthwhile and fun community event.

Sincerely,

Bill French
Mayor, Springwater Township
Bill.French@springwater.ca

Gravure-Craft

AK 593



Thank you so much
for your kind
donation in memory
of our dear mother
Jean. She will be
greatly missed.

Day Township Council &
Staff

To thank you for your
expression of sympathy.

It will always
be remembered.

The Heards Family
Doug, Nora, Donna,
Carlene

Mark's Grandmother

Alison Gray

Subject: FW: 2018 Annual General Meeting & Business Achievement Awards
Attachments: 2018 REGISTRATION.pdf

From: Denise Hayes [mailto:dhayes@sgbchamber.ca]
Sent: March-07-18 2:21 PM
To: Robert Lamb
Subject: 2018 Annual General Meeting & Business Achievement Awards

Hi Robert,

On behalf of the Board of Directors of the Southern Georgian Bay Chamber of Commerce, we would like to invite you, Mayor Warnock and all Members of Council to attend the Chamber's 2018 Annual General Meeting & Business Achievement Awards evening taking place at the Quality Inn & Conference Centre on Tuesday, March 20.

We are hoping that you and/or representation from the Township of Tay may find time out of your busy schedule to attend this prestigious event honouring businesses that merit recognition for their outstanding achievements and contribution to the business community. The business portion of the evening will provide you with an overview of the Chamber's role in representing businesses in the Towns of Midland and Penetanguishene; and the Townships of Tay and Tiny.

Attached is a registration form with additional information for your consideration.

Please do not hesitate to contact me should you have any questions or concerns.
705-526-7885 ext. 202 or email dhayes@sgbchamber.ca

Would you please take a moment to forward our invitation to Mayor Warnock and all Members of Council. Thank you.

We look forward to hearing from you.

Sincerely,
Denise Hayes
General Manager

Southern Georgian Bay Chamber of Commerce
208 King Street, Midland, ON L4R 3L9
(705) 526-7885 Ext. 202
Organization of Choice - YOUR #1 Business Link
www.southerngeorgianbay.ca





SOUTHERN GEORGIAN BAY CHAMBER OF COMMERCE

2018

ANNUAL GENERAL MEETING & *Business Achievement Awards*

TUESDAY MARCH 20, 2018

QUALITY INN & CONFERENCE CENTRE

5:00 PM – 8:00 PM

SCHEDULE

5:00 PM	Registration - Social Time - Silent Auction
6:00 PM	Welcome - Business Meeting
6:30 PM	Dinner
7:30 PM	Awards Presentation
8:15 PM	Silent Auction Close



TITLE SPONSOR

REGISTRATION

Contact: _____ Business: _____

Telephone: _____ No. of Attendees: _____

Individual's name responsible for voting on behalf of your business: _____

Attendance: _____

\$60.00 + HST (PER PERSON)

PLEASE REGISTER BY MARCH 13, 2018

Method of Payment: ☐ Invoice ☐ Cheque ☐ VISA ☐ MasterCard

Card #: _____ Expiry Date: _____

Name on Card: _____

No refund on cancellations within one week of event.

Fax Back: 705.526.1744 or Call 705.526.7884

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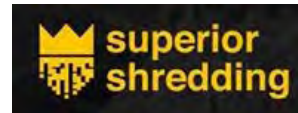
A L A I R

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ServiceMASTER
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CREDIT UNION



TRIPLE TECH
Heating, Air Conditioning
and Refrigeration Inc.



B Parkbridge

YMCA of
Simcoe/Muskoka
Employment Service
Service d'emploi



FHL Fred Hook Ltd

Centre de santé communautaire
CHIGAMIK
Community Health Centre

Midland
Home
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building centre



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March 1, 2018

John Daly, Clerk
County of Simcoe
1110 Highway 26
Midhurst, ON L9X 1N6

Re: Resolution regarding Provincial Funding for Ontario Libraries

At its meeting of February 21, 2018, Council for the Township of Springwater supported the following motion:

C060-2018

Moved by: Austin

Seconded by: Coughlin

Whereas Ontario's Libraries play a critical role in communities across Ontario by helping millions of residents improve their well-being, reach their potential and gain meaningful social connections and learning experiences; and,

Whereas there has been a sharp and steady decline (a decrease of over 60%) in provincial funding for libraries over the past 20 years; and,

Whereas, unlike Alberta, British Columbia, and Saskatchewan, Ontario does not have a centralized digital resource foundation or province-wide strategy for leveraging costs and licensing data-bases and e-learning resources across all public libraries.

Therefore Be It Resolved That the Township of Springwater call upon the Government of Ontario to return to its historic leadership role in supporting Ontario's public libraries with a modernized, sustainable funding model to respond to the changing needs of residents, students and local communities, by:

- increasing the annual base funding for all public and First Nations libraries from \$33 million to \$50 million, an increase of \$17 million in annual funding, and,
- dedicate \$25 million in new annual funding for the development and implementation of Ontario's Digital Library, and

That the County of Simcoe and other local municipalities be provided a copy of the resolution.

CARRIED

Regards,

Renée Chaperon
Clerk

cc. Simcoe County Municipalities

**Public Works Committee
March 14, 2018**

Agenda

1. Call to Order

2. Report of Municipal Officials

- 2.1 Report from Superintendent of Water/Wastewater Operations
Report No.: 2018-14
Re: February Activity Report
- 2.2 Report from Manager of Parks, Recreation & Facilities
Report No.: 2018-18
Re: February Activity Report
- 2.3 Report from Manager of Roads & Fleet
Report No.: 2018-19
Re: February Activity Report
- 2.4 Report from Director of Public Works
Report No.: 2018-15
Re: February Activity Report
- 2.5 Report from Director of Public Works
Report No.: 2018-16
Re: Contract 2018-17 - Dust Suppressant
- 2.6 Report from Director of Public Works
Report No.: 2018-20
Re: 2017 Tay Area Drinking Water System Summary Report
- 2.7 Report from Director of Public Works
Report No.: 2018-21
Re: 2017 Rope Drinking Water System Summary Report
- 2.8 Report from Director of Public Works
Report No.: 2018-22
Re: 2017 Tay Area DWS M.O.E.C.C. Inspection Reports
- 2.9 Report from Director of Public Works
Report No.: 2018-23
Re: 2017 Rope DWS M.O.E.C.C. Inspection Reports

3. Other Business:

- 3.1 Correspondence from Ministry of Municipal Affairs
Re: Water & Wastewater Servicing in Simcoe County

4. Items for Information:



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-14

Report Title: Monthly Activity Report –
Water/Wastewater Operations

ORIGIN:

Superintendent of Water & Wastewater Operations for the period of February 7, 2018 to February 28, 2018

TENDERED PROJECTS:

The Grandview Beach – Paradise Point watermain upgrades are currently underway. The servicing along Patterson Blvd. to Limestone and along Limestone to Woodland and back to First Ave. is now complete. The excavation work along Woodland to the end of Silver Birch is now completed. The contractor has brought in a second excavation team that has started work along Earldom Blvd. Work will now be centered on the Grandview Beach area weather permitting. The Contractor hopes to complete the works on the Grandview Beach side first before switching back to complete the water mains on the Paradise Point area. This will reduce the traffic congestion and allow the commissioning of the seasonal servicing area for the long weekend in May.

TREATMENT PLANTS:

The M.O.E.C.C. conducted a compliance inspection of the Tay Area Drinking Water Treatment facility on December 20, 2017. The Tay Area Drinking Water System received a compliance rating of 96%.

The M.O.E.C.C. conducted a compliance inspection of the Rope Drinking Water System on January 30, 2018. The Rope Drinking Water System received a compliance rating of 95.95%. The inspector noted there was a

non-compliance issue of failing to immediately report a 1.0 Total Coliform Adverse Water Sample taken on November 21, 2016. The lab notified the Township on November 23, 2016 at 3pm but, did not report it to the MOECC or SMDHU until 10:30am on November 24, 2016. As well, the inspection noted a late report for a THM running annual average exceedance on April 17, 2017 which was not reported until November 7, 2017.

As directed by the M.O.E.C.C. in response to the non-compliance issues we have conducted additional training with staff to ensure these types of incidences do not re-occur in the future.

The annual summary reports for both the Tay Area and Rope Drinking Water Systems are now complete.

The 2017 Annual Wastewater Treatment reports for Victoria Harbour and Port McNicoll are now complete and have been submitted to the Ministry of the Environment and Climate Change as required by the respective Environmental Compliance Approvals.

The Victoria Harbour Wastewater Treatment plant had a tertiary wastewater treatment by-pass event on February 21 and 22 of approximately 5000m³ due to the heavy melt combined with a rain fall event. It should be noted that testing during this event indicates that the Municipality met our effluent objectives in all areas except for Total Suspended Solids.

As per the Environmental Compliance Approval, the Limit for Total Suspended Solids is 15mg/L and during the by-pass event the Total Suspended Solids measured 17mg/L.

Parameter	Effluent Limits	Sample results
CBOD ₅	15 mg/L	12 mg/L
TSS	15 mg/L	17mg/L
Tphos	0.5 mg/L	0.21 mg/L
E.Coli	100 per 100mL	40 per 100mL

Repairs were completed to the variable speed drive and to the three phase surge suppressors at the Victoria Harbour Wastewater Treatment plant on February 20 and 22, 2017.

The block heater on the Victoria Harbour Wastewater Treatment plant stand by generator was repaired on February 6, 2018 and is now operational.

On February 14, 15 & 16 Seuz the Zenon service provider completed service to the Rope Drinking Water plant to provide assistance and training to staff on membrane maintenance and membrane strand repairs. All Operators attended for a day's hands on training and instruction during the site visit.

After repairs to train one had been completed it was cleaned and re-commissioned and is now meeting our turbidity objectives continuously.

DISTRIBUTION & COLLECTIONS SYSTEMS:

There were no sanitary service backups reported in February.

On February 26, 2018 there was a hydro outage caused by a phase loss that affected pumps at the Port Mc Nicoll Wastewater Treatment plant and the CNB Lift station causing the pumps to fault and the standby generator to fail. Upon further investigation the pump circuit breakers at the CNB lift station required resetting and the Generator required a manual reset. In addition two 3 phase line fuses were blown on pump P35-1 on the variable speed drive in the Port Mc Nicoll wastewater treatment plant. The pump was operational after the replacement of the blown fuses.

Further to the same power interruption we experienced failure of one of the 26hp three phase sewage pumps at the Winfield Drive lift stations and also a 7.4hp pump at the Mitchells Beach which also experienced issues and had to be replaced in addition one pump at the Wycliffe lift stations was found to be plugged with debris and was removed and repaired then reinstalled. We are currently awaiting repair estimates for the pumps from Mitchells Beach and Winfield drive.

There was one 2 inch watermain break on February 27, 2018, at 535 Fifth Avenue between Arpin and Albert Street.

ADVERSE DRINKING WATER:

We have not had any adverse water quality issues this month.

Prepared By:

Date Prepared: February 28, 2018

Mike Emms,
Water/Wastewater Superintendent



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-18

Report Title: Monthly Activity Report – Parks,
Recreation & Facilities

ORIGIN Manager of Parks, Recreation & Facilities for the period of February 8, 2018 to March 7, 2018

RECREATION

Spring Recreation Guide

The North Simcoe Recreation Guide was distributed through the Midland Mirror on Thursday February 22nd. This guide will cover program information and events from mid-March until mid-June. This guide also includes information regarding the TOTS Summer Soccer Program.

Portarama Committee

The Committee is working extremely hard to solidify their event schedule for the Victoria Day Weekend. Plans to have the full slate of events, other than the Parade, at Talbot Park have been confirmed by the Committee. They hope to have the full schedule of events confirmed by the end of March. Initial plans have a arts and crafts vendor show on the Tay Rink surface and various family games and activities throughout Talbot Park.

Recreation Software

At the end of February various staff received 'Power User Training' from PerfectMind in order to begin the process of training staff so they become familiar with the functionality of the software. Township Staff are now working within the software to ensure all areas are set-up correctly and functioning to an acceptable standard. More information regarding the 'go live' date will be communicated once it is determined.

Tay Bike Day

The committee was pleased to welcome a few new members to the group for this year's upcoming event which will take place on Saturday June 16th. Plans are underway to apply for an MTO grant that will help with costs related to aspects of the event which promote road and cyclist safety.

Youth Dances

Youth dances are hosted by Community Volunteers & Organizations on the following dates from 7pm to 10pm. The fee is \$5 at the door.

Oakwood Community Centre

March 9, April 13 & May 4

PARKS

Albert St Washroom Building

Staff have spent a considerable amount of time reviewing potential design options for the new washroom facility. Potential design layouts are keeping in mind functionality, AODA requirements and cost constraints. The preferred design layout has been chosen and communicated to the architect, and once detailed designs are created they will be circulated to the various departments for comment.

2018 Riding Lawn Mower

The new 2018 zero turn diesel riding lawnmower has been ordered through Earth Power Tractors and delivery of the unit is anticipated by mid-to-late May.

MacKenzie Park Improvements

The Committee has been working hard at finalizing their plans to host a Fundraising Golf Tournament at the Midland Golf and Country Club on Saturday July 7th. Members have also been busy approaching potential sponsors who may wish to donate to the future park improvements.

Outdoor Rinks

The outdoor rinks closed on the Family Day weekend after a very successful season. Thanks goes out to all staff that worked tirelessly to keep them operational for approximately 10 weeks.

FACILITIES

HVAC Units – Municipal Office

The RFQ document closed on Friday March 2nd and staff received very sharp pricing from various contractors for the job. In the end, the work has been awarded to Home + Life Heating and Cooling Ltd. The work will see all three of the 1994 York HVAC Units being replaced well within the prescribed budget.

Custodial Contract

The RFP document closed on Friday March 2nd. Staff spent considerable time reviewing the submitted RFP documents. A separate standalone report will deal with this item.

Municipal Office Reception Renovation

Staff met with the selected architect for this project and outlined the design concept based on comments received from the various departments.

Tay Community Rink Operations

The Tay Community Rink had another busy month in February with a steady mix of free public time and booked private time. Of particular note was a large weekend booking from a local manufacturing company which used the facility to offer their employees various skating options (family skates and hockey games).

Date Prepared: March 7, 2018

Prepared By:

A handwritten signature in black ink, appearing to read 'B. Anderson', written over a horizontal line.

Bryan Anderson
Manager of Parks, Recreation & Facilities

Dates to remember:

April 7th – Volunteer Appreciation Event

May 18th – 20th - Portarama

June 16th - Tay Bike Day

June 22nd & 23rd – Canada Day Celebrations

July 7th – MacKenzie Park Improvements Golf Tournament

November 25th – Santa Claus Parade

December 2nd – Township Tree Lighting Event



STAFF REPORT

Department/Function: Public Works
Chair: Councillor Jim Crawford
Meeting Date: March 14, 2018
Report No.: PW-2018-19
Report Title: Monthly Activity Report Roads & Fleet

ORIGIN

Manager of Roads and Fleet from February 7, 2018 to March 7, 2018.

OPERATIONS

Staff has been completing service requests and correcting deficiencies noted through regular road patrolling.

Staff has been cold patching roads and the grader has been routinely grading gravel roads.

WINTER CONTROL

The Township responded to thirteen winter events. Prior to the snow melting staff was hauling snow from areas with little boulevard storage and high-winging the snowbanks throughout the Township.

TENDERS

I have been working on putting together the detailed specifications for the plough equipment.

The Township has had a grader in as a demo. This is to help ensure the proper size of machine and functions can be properly specified in the tender for all competitors.

RESTRICTED LOAD PERIOD

The Township's restricted load period is in effect for all roads that aren't exempt in the by-law. The contractor working in Grandview Beach and Paradise Point watermain project has been given limited exemption so work can proceed. Prior to the restricted load period start date, the contractor had worked diligently to stockpile material to reduce the number of loaded trucks during this restricted load period.

FLEET

All units are receiving regular maintenance.

UPCOMING WORK FOR MARCH

- Complete service requests
- Winter control
- Prepare tenders for equipment Gervais Road

Prepared By:

Date Prepared: March 7, 2018

Bryan Ritchie
Manager of Roads and Fleet



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-15

Report Title: Monthly Activity Report
Public Works Department

ORIGIN

Director of Public Works for the period from February 7 to March 7, 2018.

ROADS/PARKS

- Attended Good Roads conference February 26 and 27. In addition to the more general sessions and the trade show attended sessions on asphalt, road safety, 'e-construction', cannabis legalization
- Streetlighting review
- Review of Albert Street washroom building issues
- Plough truck report and tender
- Preparation for road program issues meeting
- Dust suppression report review

WATER/WASTEWATER OPERATIONS

- Grandview Beach and Paradise Point: site meetings, road closures and construction updates
- Water and wastewater annual reports
- Water inspection reports

DEVELOPMENT

- Victoria Glen: Phase 1 and Phase 2 site visit; drainage report; security reduction
- Victoria Woods: Phase 4 review
- Waverley Heights stormwater and drawing review

- Victoria Mews – stormwater review

GENERAL

- Historic sign review with Heritage Committee members
- Transportation of Dangerous Goods training follow-up
- Administration building renovation discussion and meeting with architect
- Summer staffing interviews and review
- Meeting with MOECC staff on various water and development issues
- Custodial Contract proposal review

MEETINGS

- Emergency Management Program Committee meeting
- Department Heads' meetings
- Public Works Managers' meetings
- COAC
- Council

Prepared By:

Date Prepared: March 7, 2018

Peter Dance
Director of Public Works



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-16

Report Title: Dust Suppressant

RECOMMENDATION:

That Staff Report No. 2018-16 regarding Contract 2018-17, Liquid Dust Suppressant for a two year term be received;

And that Contract 2018-17 for the Supply and Apply of Liquid Dust Suppressant for a two year term be awarded to Pollard Highway Products for a price of \$56,250 plus HST.

And that staff be directed to prepare the by-law authorizing the execution of the contract between the Township of Tay and Pollard Highway Products

INTRODUCTION/BACKGROUND:

Included in the annual maintenance programs is the application of liquid dust suppressant to the gravel roads. Since this work is typically done over a short period it is not feasible for the Township to own its own equipment, therefore the Township has contractors apply liquid dust suppressant to the gravel roads.

Dust suppressant is a maintenance activity that not only reduces dust but preserves gravel and reduces the need for frequent maintenance grading.

The Township tendered this contract last in 2015 and has now expired. Contract 2018-17 was issued as a two year term with a one year extension if the Township is satisfied with their performance and if the contractor agrees to no more than a 2% increase over the final year's price. Council will need to approve the one year extension in 2020 since the per year value is more than the CAO's purchase authority.

The tender was advertised on Biddingo and the Township website. The tender closed on February 28, 2018 at 2:00 pm. At that time there were three bids received. The bids were opened by the Clerk, Director of Public Works, Administrative Assistant for the Roads/Parks Operations and the Manager of Roads and Fleet.

ANALYSIS:

The bidders are as follows:

- Pollard Highway Products
- Da-Lee Dust Control
- Morris Chemicals

Staff examined all three bids for proper documentation and pricing for arithmetical errors. All bids conform to the tender requirements and one mathematical error was found with the bid from Morris Chemicals, the corrected price is shown in the Financial Impact section of this report.

The low bid from Pollard Highway Products conforms to the tender specifications.

Staff contacted Pollard; they understand the contract and will commit to the terms of the contract. This contract was structured so that two years (2018 and 2019) formed the basis of award and then a one year extension if staff is satisfied with the performance and product quality.

Pollard has provided the Township with this service in the past and staff is satisfied with their work. They have the equipment and expertise necessary to complete the work.

The liquid dust suppressant from Pollard Highway Products meets all Provincial and Municipal specifications.

Typically spring and fall are wetter times of the year and dust is less likely to be an issue. During the summer months the gravel roads get very dusty, which is a nuisance especially for people with houses close to the road. Applying dust suppressant is essential to control dust during the summer months not only for people living close by but also for motorists; it will improve visibility on gravel roads allowing drivers to see what's ahead of them when following or passing other vehicles.

FINANCIAL/BUDGET IMPACT:

The bidders and their price are as follows:

- | | |
|----------------------------|------------------------------------|
| • Pollard Highway Products | \$56,250 |
| • Da-Lee Dust Control | \$64,350 |
| • Morris Chemicals | \$71,375 (corrected from \$71,275) |

The price of \$56,250 from Pollard is a two year total, the yearly price is as follows:

2018 \$27,500

2019 \$28,750

The funds for liquid dust suppressant are in the Loosetop Maintenance category of the Operating Budget. The approved 2018 budget for Loosetop Maintenance is \$34,000 of which \$24,000 is for the dust suppression contract. The budget of \$24,000 was based on a three year average at the previous contract pricing. The 2017 actual cost was \$18,570.

The unit price per litre in 2017 was \$0.095 and the per litre price for 2018 is \$0.11.

CONCLUSION:

It is recommended that Pollard Highway Product be awarded Contract 2018-17 for the supply and apply of liquid dust suppressant. Liquid dust suppressant is a maintenance activity that reduces dust and helps prevent aggregate loss of gravel roads.

Prepared By: Bryan Ritchie, Manager of Roads and Fleet

Recommended By: Date: March 7, 2018

Peter Dance
Director of Public Works

Reviewed By: Date: March 7, 2018

Robert J. Lamb, CEcD, Ec.D.
Chief Administrative Officer



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-20

Report Title: 2017 Tay Area Drinking Water System Annual Report

RECOMMENDATION:

That Staff Report No. PW-2018-20 regarding the 2017 Tay Area DWS Annual Report be received;

And that the 2017 Tay Area Drinking Water System Annual Report be accepted by Council as required by Schedule 22 and Section 11 of Ontario Regulation 170/03.

INTRODUCTION/BACKGROUND:

The 2017 Annual Report (attached) for Tay Area DWS has been prepared in accordance with both Schedule 22 and Section 11 of Ontario Regulation 170/03.

In this manner, the Summary Reports for Municipalities required by Schedule 22 and the Annual Reports required by Section 11 of Regulation 170/03 have been consolidated into a single document. This report is intended to brief the Municipal officials and the residents serviced by the Township of Tay's Drinking Water Systems on the Tay Area system's performance over the past calendar year (January 1, 2017 to December 31, 2017).

ANALYSIS:

The report includes a statement of compliance with the terms and conditions of all Approvals, Licenses and Permits issued by the Ministry of the

Environment and Climate Change and drinking water regulations under the Safe Drinking Water Act, 2002. The report contains a summary of the quantities and flow rates of water supplied, including monthly averages and maximum daily flows during January 1st through to December 31, 2017.

FINANCIAL/BUDGET IMPACT:

There is no financial impact with this report.

CONCLUSION:

Staff recommends that the 2017 Drinking Water System Annual Report be accepted as a requirement under Reg. 170/03 and the Safe Drinking Water Act, 2002.

Prepared By: Mike Emms, Water/Wastewater Superintendent

Recommended By: Date: March 6, 2018

Peter Dance
Director of Public Works

Reviewed By: Date: March 6, 2018

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer

The Corporation of the Township of Tay



2017 Drinking Water Systems Annual Report

Tay Area D.W.S.

Mike Emms, Water/Wastewater Operations Superintendent

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Section 1

REPORTING REQUIREMENTS & COMPLIANCE SUMMARY

Summary Reports for Municipalities

This 2017 Annual Report has been prepared in accordance with both Schedule 22, section 11 (Large Municipal water systems) of Ontario Regulation 170/03.

In this manner, the Summary Reports for Municipalities required by Schedule 22 and the Annual Reports required by sections 10 and 11 of Regulation 170/03 have been consolidated into a single document. This Report is intended to brief the Municipal officials and the residents serviced by the Township of Tay's Drinking Water Systems on each system's performance over the past calendar year (January 1, 2017 to December 31, 2017).

A summary of these Drinking Water Systems (DWS) is produced with the use of technical terms, some of which the reader may not be familiar with. It is recommended that the reader refer to the *Technical Support Document for Ontario Drinking Water Quality Standards, Objectives (ODWQS), and Guidelines*. Within this document the reader will find information on provincial water quality standards, objectives and guidelines, rationale for monitoring, and a brief description of water quality parameters. The Ontario Drinking Water Quality Standards (ODWQS) document can be found at the following website address:

<http://www.ontla.on.ca/library/repository/mon/14000/263450.pdf>

The report includes a statement of compliance with the terms and conditions of all Approvals, Licenses and Permits issued by the Ministry of the Environment and Climate Change and drinking water regulations under the Safe Drinking Water Act, 2002. The report contains a summary of the quantities and flow rates of water supplied, including monthly averages and maximum daily flows during January 1st through to December 31, 2017.

Section 2

TAY AREA DRINKING WATER SYSTEM LOCATION, DESCRIPTION & RATED CAPACITY

LOCATION OF PLANT

45 Lighthouse Crescent, Victoria Harbour

DESCRIPTION

The Tay Area Drinking Water System is categorized as a large municipal residential drinking water system. The system serves an estimated population of 8000 for the communities of Victoria Harbour, Port McNicoll and Waubaushene. The facility is rated at 10126 cubic meters/day.

The distribution system is comprised of many various materials including ductile iron, cast iron, polyvinyl chloride and galvanized steel. The system consists of 77,966 meters of distribution watermain, 336 hydrants and 400 isolation valves.

The primary disinfection system is achieved in two stages the first through UV irradiation and secondly through chlorine and chlorine contact time. The Tay Area Drinking Water System consists of three booster stations and three storage facilities one in each of the communities.

Drinking Water License No. 102-102

Drinking Water Permit No. 102-202

Financial Report 102-301A

Expiry Date: Jan 4, 2021

The Tay Area Drinking Water System shall not be operated to exceed the maximum flow rated capacity of 10,065m³/day as outlined in the Drinking Water System Permit unless where necessary for fighting a large fire or maintenance of the drinking water system.

Treatment Subsystem	Rated Capacity
Tay Area Drinking Water System	10,065 m ³ /day

In 2017 the treated water maximum daily flow was 3622m³/day or 36% of the rated capacity (10,065m³/day).

4221-9QDGS4 PERMIT TO TAKE WATER GUIDELINES

The Permit to Take Water allows the Township to remove 10,627.2m³/day.
(Maximum Amount Taken Per Day – 10,627,200 Litres/Day)

In 2017 the maximum day for taking water was 3656m³/d or 36% of the allowable. The Tay Area Drinking Water System continued to produce water of satisfactory quality in 2017. The descriptions below provide brief summaries of the parameters tested in the Tay Area DWS, and the reader is asked to consult **Appendix B** for a comprehensive summary of 2017 water quality.

Section 3

Chemical Analysis & Sampling Requirement Summary

In-House Analyses - The Tay Area DWS employs an extensive in-house testing program which includes analyses of water quality indicators beyond that required by Ontario's *Safe Drinking Water Act*. Such analyses are conducted on source, treated, and process water, and include testing for turbidity, colour, pH, temperature, alkalinity, aluminum, and residual free chlorine. Approximately 1700 routine independent in-house water quality tests were conducted with respect to this system in 2017.

Microbiological Analyses in 2017, as required by Schedule 10 of O. Reg. 170/03. These water samples were collected on a weekly basis, and included tests for E. coli, total coliforms, and heterotrophic plate counts. All routine treated samples tested were absent for E. coli and total coliform parameters.

Organic Parameters and Trihalomethanes -Organic parameters are sampled on an annual basis in treated water in accordance with Schedules 13 and 24 of O. Reg. 170/03. These parameters include various acids, pesticides, herbicides, PCBs, volatile organics, and other organic chemicals. With respect to the Tay Area DWS, sampling for organic parameters was conducted in January 2017. The results of all organic parameter testing were below the lower detectable limits (with the exception of Trihalomethanes and HAA's).

Trihalomethanes (THMs) are sampled on a quarterly basis from the farthest point in the Tay Area distribution system, in accordance with Schedule 13 of O. Reg. 170/03. Compliance with the provincial standard for trihalomethane concentrations is determined by calculating a running annual average (with a Maximum Acceptable Concentration of 0.100 mg/L or 100 ug/L). In 2017, the running annual average was 78.5 ug/L

Haloacetic acids(HAA's) are sampled on a quarterly basis from the nearest point in the Tay Area distribution system, in accordance with Schedule 13 of O. Reg. 170/03. Compliance with the provincial standard for Haloacetic acid concentrations is determined by calculating a running annual average (with a Maximum Acceptable Concentration of 0.080 mg/L or 80 ug/L). In 2017, the running annual average was 73.25 ug/L

Microbiological Analyses are conducted on source, treated, and distribution system water. A total of 548 routine water samples were collected for bacteriological analysis by an accredited laboratory

UV Summary – Our minimum UV requirement of a minimum 40 mj/cm² was met for 2017.

Inorganic Parameters and Nitrate/Nitrite

Inorganic parameters are sampled on an annual basis in treated water in accordance with Schedules 13 and 23 of O. Reg. 170/03. Inorganic sampling includes various parameters such as Antimony, Arsenic, Cadmium, Mercury, and Uranium. With respect to the Tay Area DWS, required annual sampling for inorganic parameters was conducted in January, 2017.

Treated water is also tested for nitrate and nitrite concentrations on a quarterly basis in accordance with Schedule 13 of O. Reg. 170/03. There was no exceedance for any inorganic parameter in 2017.

Community Lead Sampling

Based on results of the community lead sampling program in 2012 and 2015, the Tay Area DWS has qualified for reduced sampling in accordance with Schedule 15.1 of O. Reg. 170/03.

In 2017 and 2018 we will be required to sample for;

- Alkalinity and pH each year summer and winter period from the Distribution system.
- From Three Distribution points (Fire Hydrants)
- December to April (winter period)
- June to October (Summer period)

Reduced sampling will resume in the period corresponding to December 15, 2019 to April 15, 2019.

Turbidity – The minimum turbidity requirement was met for 2017.

TAY AREA DWS M.O.E.C.C. REQUIREMENT					
NTU 0.3-95% time		NTU 0.1-99% time			
ECODYNE TURBIDITY PERCENTAGE		PALL SYSTEM PERCENTAGE			TURBIDITY
MONTH	ECODYNE	MONTH	RACK 1	RACK 2	RACK 4
Jan	n/a	Jan	99.9	99.9	99.9
Feb	n/a	Feb	99.8	99.9	99.7
Mar	n/a	Mar	99.8	99.9	100.0
Apr	n/a	Apr	99.9	99.9	100.0
May	n/a	May	99.9	100.0	99.9
June	n/a	June	100.0	100.0	100.0
July	n/a	July	100.0	99.9	100.0
Aug	n/a	Aug	100.0	99.8	100.0
Sept	n/a	Sept	99.8	99.8	99.9
Oct	n/a	Oct	100.0	99.8	100.0
Nov	n/a	Nov	100.0	99.9	100.0
Dec	n/a	Dec	100.0	99.9	100.0
Average % To Date	n/a	Avg % to Date	99.9%	99.8%	99.9%

Section 4

Drinking Water System Flow Summary

2017 Flows

Throughout the reporting period, the Tay Area DWS supplied 712228 m³ of treated water to consumers. On an average day in 2017, 1948.2 m³ of treated water was supplied to the community. This average daily flow rate in 2017 represented 26 % of the rated capacity of the Tay Area WTP (10065 m³/day). The maximum daily flow rate in 2017 was 3622 m³/day, which represented 36 % of the rated capacity of the Tay Area WTP. The maximum day flow was due to high usage on an extreme heat day in September 2017. The reader is asked to consult **Appendix A** for a complete summary of 2017 flow data.

Treated Water Flow 2017

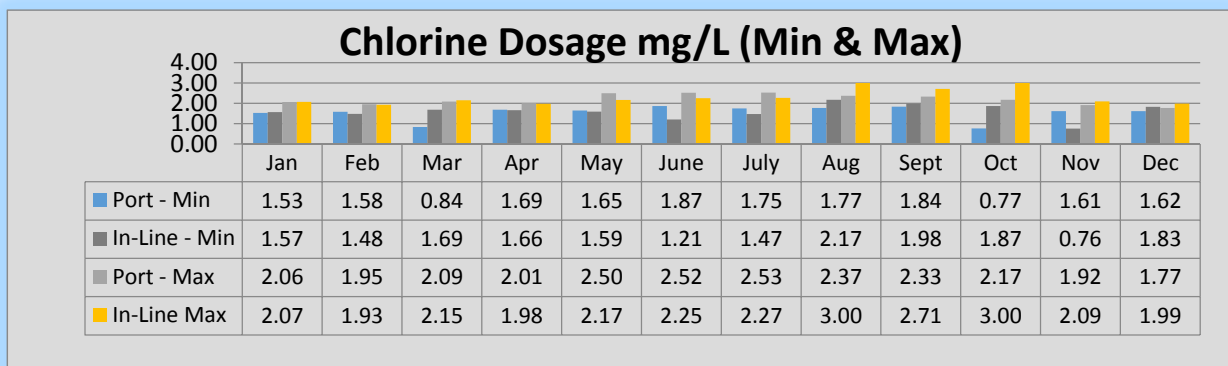
Treated Water Flow m3					Comparison	
	Daily Flow Min	Daily Flow Max	Daily Flow Avg	Monthly Total Flow	Daily Avg to Rated Capacity	Daily Max to Rated Capacity
Jan	1,090	1,818	1,442	44,703	14%	18%
Feb	1,142	1,837	1,434	40,153	14%	18%
Mar	1,184	1,874	1,498	46,429	15%	19%
Apr	1,348	2,345	1,837	55,112	18%	23%
May	1,763	2,784	2,216	68,698	22%	28%
June	1,687	3,269	2,255	67,645	22%	32%
July	2,070	3,254	2,483	76,971	25%	32%
Aug	2,249	3,124	2,646	82,026	26%	31%
Sept	2,058	3,622	2,526	75,779	25%	36%
Oct	1,419	2,438	1,848	57,302	18%	24%
Nov	1,309	2,009	1,591	47,739	16%	20%
Dec	1,251	2,174	1,602	49,671	16%	22%
Annual	1090(Min)	3622(Max)	1948.2(Avg)	712,228	26% (Max)	36% (Max)

Section 5

Tay Area DWS Chlorine Dosage

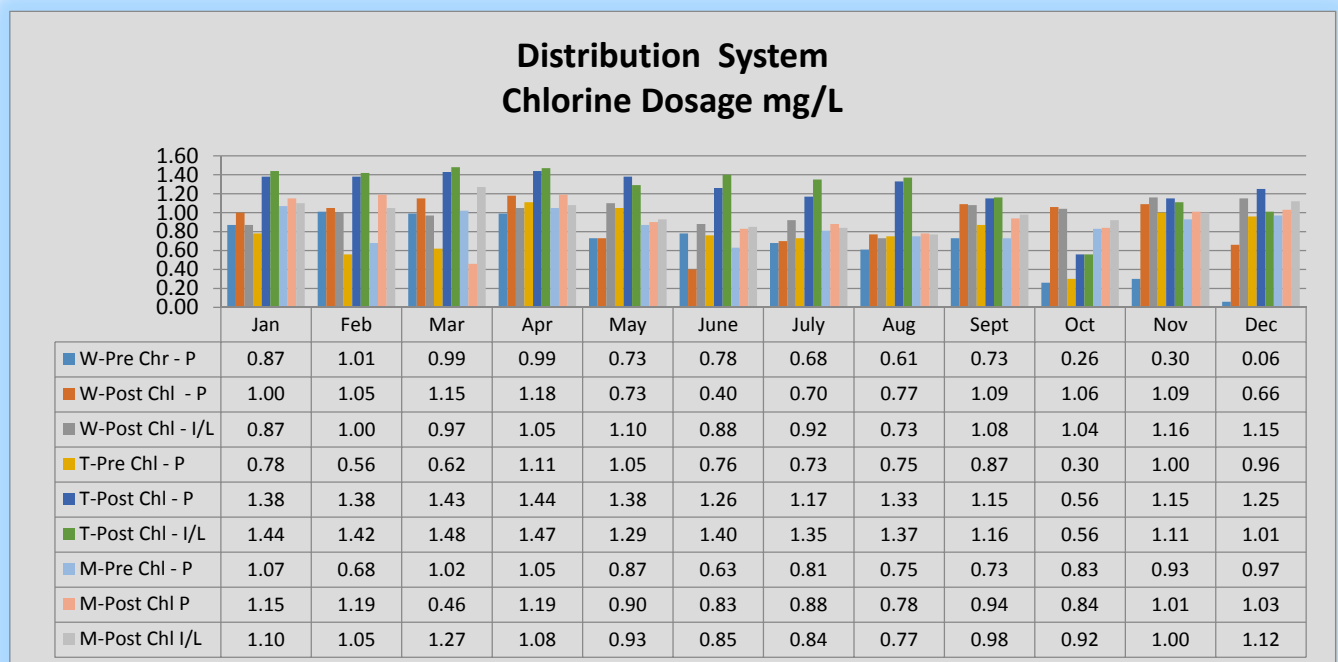
Treatment Subsystem

MOECC Minimum Free Chlorine residual Guideline requirement of 0.25mg/L



Distribution System

MOECC Minimum Free Chlorine residual Guideline requirement of 0.05 mg/L



Therefore, the Tay Area Water system met or exceeded the Ministry's Minimum chlorination requirements in 2017. With the exception of the Seasonal area water system in Grandview Beach & Paradise Point.

Section 6

Tay Area DWS Adverse Water Quality Reports

There were a total of twelve AWQI reports.

Nine (majority) of the reports were for low or no chlorine were within the seasonal system of Grandview Beach and Paradise Point. Staff continually sampled and monitored the situation and consulted with the S.M.D.H.U. and the M.O.E.C.C. regularly to resolve the issue.

Two reports were for low or no chlorine on Assiniboia Street and Oleary Lane. In all cases, staff sampled and monitored the situation and advised/consulted with the S.M.D.H.U. and the M.O.E.C.C. regularly to resolve the issue.

There was one report of low chlorine at the Tay Area DWS plant (treated water) which was due to an equipment malfunction - CL2 feed line.

Boil Water Summary

Year Previous – History (2016)

There was one Water Boil Water Advisory's issued on August 15, 2016 due to low to no chlorine within the seasonal system of Paradise Point (Evergreen and Silverbirch Cres). The S.M.D.H.U. increased the advisory to a Boil Water Order on September 2, 2016 to include all of Grandview Beach and Paradise Point and it stayed in effect until the system closed on Tuesday, October 11, 2016.

When, the seasonal system opened in the spring on May 19, 2017 the Boil Water Order remained in effect until chlorine levels were achieved and the SMDHU & MOECC were satisfied with the all efforts/results on May 29, 2017.

Staff sampled and monitored the situation and advised/consulted with the S.M.D.H.U. and the M.O.E.C.C. regularly.

2017 Annual Report Tay Area Drinking Water System

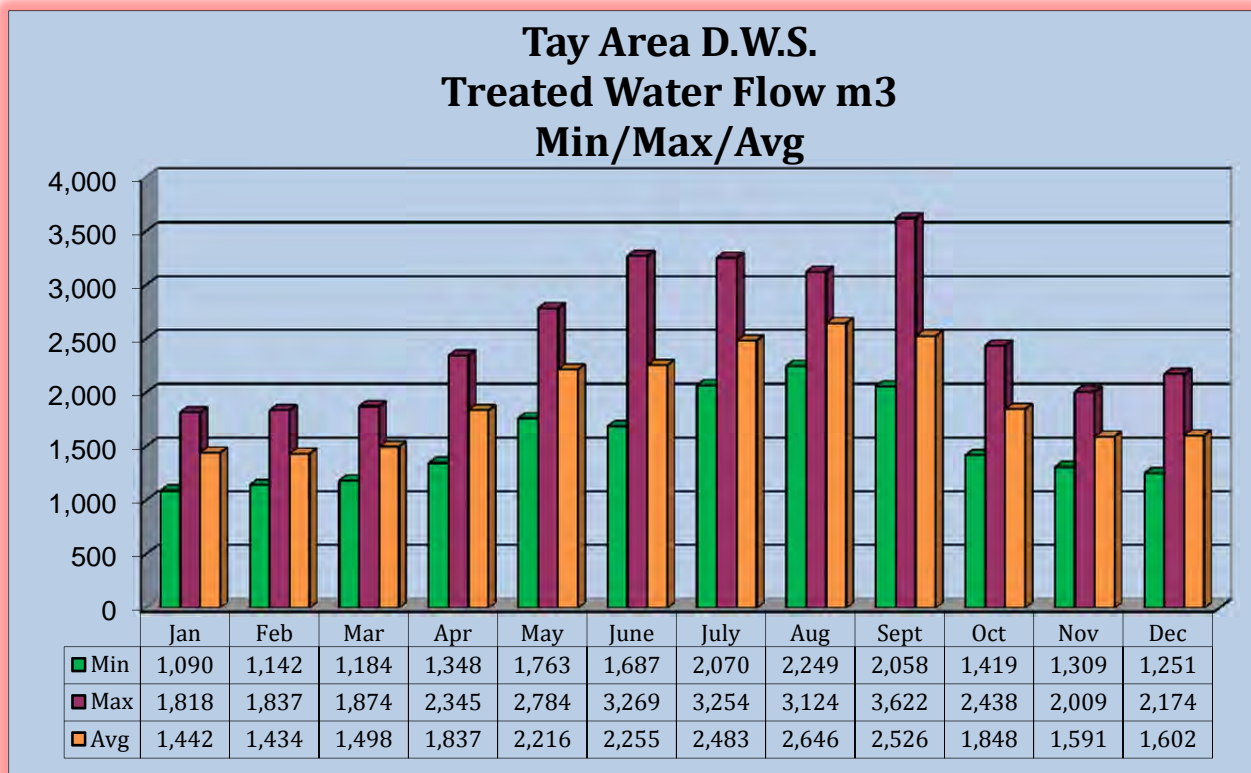
DRINKING WATER SYSTEM ADVERSE AND/OR OTHER PROBLEM SUBMISSIONS 2017								
TAY AREA D.W.S. #220001076								
OCCURRENCE#	PLANT LOCATION	DATE	PARAMETER	SAMPLE LOCATION	RESULT	UNIT MEASURE	CORRECTIVE ACTION DESCRIPTION	RESOLUTION DATE
N/A	TAY AREA DWS #220001076	MAY 19 2017	FREE CHLORINE	DIST SEASONAL AREA			MDHU CONFIRMED BOIL ORDER FROM LAST SEASON UNTIL FOLLOWING CORRECTIVE ACTIONS ARE COMPLETED FOR GRANDVIEW BEACH & PARADISE POINT SEASONAL WATER USERS * ALL UNPROTECTED X CONNECTIONS HAVE BEEN IDENTIFIED & MITIGATION ACTIONS COMPLETED * MINIMUM OF 2 SETS OF SAMPLES WITH NON-DETECTABLE TTL COLIFORM OR ECOLI * FREE CHLORINE RESIDUALS IN DIST SYSTEM ARE MAINTAINED	
133171	TAY AREA DWS #220001076	MAY 26 2017	FREE CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA	0.01 0.02	74 CLOUCESTER 39 SILVERBIRCH	BOIL ORDER IN EFFECT FOR GRANDVIEW BEACH & PARADISE POINT SEASONAL WATER USERS * LOW CHLORINE IN 2/5 LOCATIONS	MAY 29 2017
134417	TAY AREA DWS #220001076	JULY 21 2017	NO PRESSURE: LOW/NO CHLORINE	DIST SEASONAL AREA		30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION - W/M BREAK DURING CONSTRUCTION BY CONTRACTOR FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS - HAND DELIVERED NOTICES SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
134664	TAY AREA DWS #220001076	JULY 27 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA		30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
134665	TAY AREA DWS #220001076	JULY 27 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA		30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
134666	TAY AREA DWS #220001076	JULY 27 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA		30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
134761	TAY AREA DWS #220001076	JULY 31 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA		30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
134772	TAY AREA DWS #220001076	JULY 31 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA		30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017

2017 Annual Report Tay Area Drinking Water System

134821	TAY AREA DWS # 220001076	AUG 1 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA	30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
134954	TAY AREA DWS # 220001076	AUG 3 2017	LOW/NO CHLORINE SEASONAL SYSTEM	DIST SEASONAL AREA	30-93 SILVERBIRCH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION FOR USERS ONLY ON 30-93 SILVER BIRCH CRES - SEASONAL WATER USERS SAMPLES CONTINUALLY TAKEN & MONITORED RESIDUALS CONTINUALLY TAKEN & MONITORED	AUG 14 2017
136076	TAY AREA DWS # 220001076	AUG 29 2017	NO PRESSURE: LOW/NO CHLORINE	DIST	ASSINIBOLA ST BETWEEN 1ST & 4TH	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION - W/M BREAK DURING CONSTRUCTION BY CONTRACTOR FOR USERS ONLY ON ASSINIBOLA ST - 1ST TO 4TH AVE ONLY - HAND DELIVERED NOTICES PRECAUTIONS TAKEN: SAMPLES, FLUSH, DISINFECT & MONITOR	SEPT 5 2017
136928	TAY AREA DWS # 220001076	SEPT 28 2017	NO PRESSURE: LOW/NO CHLORINE	DIST	OLEARY LN VALVE BLEW OFF W/M	BOIL ADVISORY (SELF IMPOSED) AS PRECAUTION - W/M BREAK DURING CONSTRUCTION BY DEVELOPER DEVELOPER WORKING ON OLEARY LN - VALVE BLEW OFF AT HYDRANT (MAIN BREAK) W/M SHUT DOWN TO CONDUCT REPAIR THEREFORE LOST PRESSURE & RESIDUALS FLUSHED, DISINFECTED & SAMPLED	OCT 2 2017
136996	TAY AREA DWS # 220001076	OCT 1 2017	LOW CHLORINE	TREATED	PLANT	LOW CL2 - FOUND CL2 & FEED LINE TO BE THE ISSUE RAN PLANT HLP'S TO DILUTE, FLUSHED AT CLOSEST HYDRANT & MONITORED CL2 RESIDUALS AT LOCATION & DOWNSTREAM UNTIL SITUATION & RESIDUALS RESOLVED	OCT 2 2017

Appendix A

Flow Summary



Appendix B

Annual Sampling Requirements

Tay Area DWS Water Quality Reporting

Large Municipal Residential DWS #220001076

Period Reporting: January 1, 2017 - December 31, 2017

Report Available: On Website or In Office

Microbiological Parameters 2017

Parameter	Units	No. of Samples	Min	Max	ODWQS	ODWQS Compliant
Ecoli-Raw	MPN -100mL	Continuous (52)	0	20	N/A	✓
Ecoli-Treated	p/a 100 mL	Continuous (52)	0	0	Not Detected	✓
Ecoli-Dist	p/a 100 mL	Continuous (444)	0	0	Not Detected	✓
Ttl Coliform - R	MPN -100mL	Continuous (52)	0	5200	N/A	✓
Ttl Coliform - T	p/a 100 mL	Continuous (52)	0	0	Not Detected	✓
Ttl Coliform - D	p/a 100 mL	Continuous (444)	0	0	Not Detected	✓
HPC - T	CFU/mL	Continuous (52)	0	3		✓
HPC - D	CFU/mL	Continuous (444)	0	760		✓

ODWQS - Ontario Drinking Water Quality Standard

R- Raw Water

T-Treated Water

D-Distribution Water

Chemical & Physical Parameters 2017 (In-House)

Parameter	Units	No. of Samples	Min	Max	Avg	ODWQS	ODWQS Compliant
Turbidity Filter-R	NTU	Continuous	0	9.997	0.98	5	✓
Turbidity Filter-T Rack 1	NTU	Continuous	0	2.00	0.02	5	✓
Turbidity Filter-T Rack 2	NTU	Continuous	0	2.00	0.02	5	✓
Turbidity Filter-T Rack 4	NTU	Continuous	0	2.00	0.02	5	✓
Residual Free Chlorine-T	mg/L	Continuous	0.76	3.00	1.89	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.56	2.20	1.63	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.56	2.22	1.65	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.46	2.20	1.43	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.77	2.36	1.48	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.40	2.18	1.44	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.73	2.18	1.47	4	✓
pH (R)	pH units	Continuous	6.88	8.88	7.34	6.5-8.5	✓
pH (T)	pH units	Continuous	6.87	7.37	7.07	6.5-8.5	✓
Total Alkalinity - R	mg/L CaCO3	Continuous	4.0	88.6	62.0	12	✓
Total Alkalinity - T	mg/L CaCO3	Continuous	46.0	84.0	65.0	12	✓
Residual Aluminum - T	mg/L	Continuous	0.015	0.14	0.061	0.1	✓

The Township does not fluoridate the drinking water.

Inorganic Parameters-2017

Parameter	Unit	Result	ODWQS	ODWQS Compliant
Antimony	ug/L	0.05	6	✓
Arsenic	ug/L	0.30	25	✓
Barium	ug/L	26.70	1000	✓
Boron	ug/L	13.00	5000	✓
Cadmium	ug/L	0.00	5	✓
Chromium	ug/L	0.52	50	✓
*Lead	ug/L	0.08	10	✓
Mercury	ug/L	0.01	1	✓
Selenium	ug/L	0.07	10	✓
Sodium	mg/L	15.50	20	✓
Uranium	ug/L	0.10	20	✓
Fluoride	mg/L	0.06	1.5	✓
Nitrite	mg/L	0.00	1	✓
Nitrate	mg/L	0.20	10	✓
Nitrite+Nitrate	mg/L	0.20	10	✓

Organic Parameters-2017

Parameter	Unit	Result	ODWQS	ODWQS Compliant
Alachlor	ug/L	0.02	5	✓
Atrazine + N-dealkylated metabolites	ug/L	0.01	5	✓
Azinphos-methyl	ug/L	0.05	20	✓
Benzene	ug/L	0.32	1	✓
Benzo(a)pyrene	ug/L	0.004	0.01	✓
Bromoxynil	ug/L	0.33	5	✓
Carbaryl	ug/L	0.05	90	✓
Carbofuran	ug/L	0.01	90	✓
Carbon Tetrachloride	ug/L	0.16	2	✓
Chlorpyrifos	ug/L	0.02	90	✓
Diazinon	ug/L	0.02	20	✓
Dicamba	ug/L	0.20	120	✓
1,2-Dichlorobenzene	ug/L	0.41	200	✓
1,4-Dichlorobenzene	ug/L	0.36	5	✓
1,2-Dichloroethane	ug/L	0.35	5	✓
1,1-Dichloroethylene (vinylidene chloride)	ug/L	0.33	14	✓
Dichloromethane	ug/L	0.35	50	✓
2-4 Dichlorophenol	ug/L	0.15	900	✓

2,4-Dichlorophenoxy acetic acid (2,4-D)	ug/L	0.19	100	✓
Diclofop-methyl	ug/L	0.40	9	✓
Dimethoate	ug/L	0.03	20	✓
Diquat	ug/L	1.00	70	✓
Diuron	ug/L	0.03	150	✓
Glyphosate	ug/L	1.00	280	✓
Malathion	ug/L	0.02	190	✓
Metolachlor	ug/L	0.01	50	✓
Metribuzin	ug/L	0.02	80	✓
Monochlorobenzene	ug/L	0.30	80	✓
Paraquat	ug/L	1.00	10	✓
Pentachlorophenol	ug/L	0.15	60	✓
Phorate	ug/L	0.01	2	✓
Picloram	ug/L	1.00	190	✓
Polychlorinated Biphenyls(PCB)	ug/L	0.04	3	✓
Prometryne	ug/L	0.03	1	✓
Simazine	ug/L	0.01	10	✓
THM - Latest Annual Average	ug/L	78.5	100	✓
Terbufos	ug/L	0.01	1	✓
Tetrachloroethylene	ug/L	0.35	30	✓
2,3,4,6-Tetrachlorophenol	ug/L	0.20	100	✓
Triallate	ug/L	0.01	230	✓
Trichloroethylene	ug/L	0.44	5	✓
2,4,6-Trichlorophenol	ug/L	0.25	5	✓
MCPA	ug/L	0.00012	0.1	✓
Trifluralin	ug/L	0.02	45	✓
Vinyl Chloride	ug/L	0.17	1	✓
HAA5 - Annual Average	ug/L	73.25	N/A	✓
Chloroacetic Acid	ug/L	4.7	N/A	✓
Bromoacetic	mg/L	2.9	N/A	✓
Dichloroacetic Acid	ug/L	19.4	N/A	✓
Dibromoacetic	mg/L	2.00	N/A	✓
Trichloroacetic Acid	ug/L	34.10	N/A	✓

The Township does not fluoridate the drinking water.

Chemicals used over reporting period:

Aluminum sulphate is used as the coagulant and sodium hypochlorite is used as the disinfectant. A change in chemical dosing is typical during changes in raw water quality, however no abnormal dosages were experienced.

Appendix C

Chemical Usage

Stern Pac	kg
Tay Area Water Treatment	20,130

Alum Sulfate	kg
Tay Area Water Treatment	24.463

25% Sodium Hydroxide(Caustic Soda)	Litres
Tay Area Water Membrane Filter Cleaning	11,094

50% Citric Acid	Litres
Tay Area Water Membrane Filter Cleaning	7,900

Calculated coagulant dosage based on 1000m³ divided by 1kg equals 1mg/L.

The annual average coagulant dosage was 15.3mg/L for 2017.



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-21

Report Title: 2017 Rope Drinking Water System Annual Report

RECOMMENDATION:

That Staff Report No. PW-2018-21 regarding the 2017 Rope DWS Annual Report be received;

And that the 2017 Rope Drinking Water System Annual Report be accepted By Council as required by Schedule 22 and Section 11 of Ontario Regulation 170/03.

INTRODUCTION/BACKGROUND:

The 2017 Annual Report (attached) for Rope DWS has been prepared in accordance with both Schedule 22 and Section 11 of Ontario Regulation 170/03.

In this manner, the Summary Reports for Municipalities required by Schedule 22 and the Annual Reports required by Section 11 of Regulation 170/03 have been consolidated into a single document. This report is intended to brief the Municipal officials and the residents serviced by the Township of Tay's Drinking Water Systems on the Rope system's performance over the past calendar year (January 1, 2017 to December 31, 2017).

ANALYSIS:

The report includes a statement of compliance with the terms and conditions of all Approvals, Licenses and Permits issued by the Ministry of the

Environment and Climate Change and drinking water regulations under the Safe Drinking Water Act, 2002. The report contains a summary of the quantities and flow rates of water supplied, including monthly averages and maximum daily flows during January 1st through to December 31, 2017.

FINANCIAL/BUDGET IMPACT:

There is no financial impact with this report.

CONCLUSION:

Staff recommends that the 2017 Rope Drinking Water System Annual Report be accepted as a requirement under Reg. 170/03 and the Safe Drinking Water Act, 2002.

Prepared By: Mike Emms, Water/Wastewater Superintendent

Recommended By: Date: March 6, 2018

Peter Dance
Director of Public Works

Reviewed By: Date: March 6, 2018

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer

The Corporation of the Township of Tay



2017 Drinking Water Systems Annual Report

Rope D.W.S.

Mike Emms, Water/Wastewater Operations Superintendent

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Section 1

REPORTING REQUIREMENTS & COMPLIANCE SUMMARY

Summary Reports for Municipalities

This 2017 Annual Report has been prepared in accordance with both Schedule 22, section 10 (Small Municipal water systems) of Ontario Regulation 170/03.

In this manner, the Summary Reports for Municipalities required by Schedule 22 and the Annual Reports required by sections 10 of Regulation 170/03 have been consolidated into a single document. This Report is intended to brief the Municipal officials and the residents serviced by the Township of Tay's Drinking Water Systems on each system's performance over the past calendar year (January 1, 2017 to December 31, 2017).

A summary of these Drinking Water Systems (DWS) is produced with the use of technical terms, some of which the reader may not be familiar with. It is recommended that the reader refer to the *Technical Support Document for Ontario Drinking Water Quality Standards, Objectives (ODWQS), and Guidelines*. Within this document the reader will find information on provincial water quality standards, objectives and guidelines, rationale for monitoring, and a brief description of water quality parameters. The Ontario Drinking Water Quality Standards (ODWQS) document can be found at the following website address:

<http://www.ontla.on.ca/library/repository/mon/14000/263450.pdf>

The report includes a statement of compliance with the terms and conditions of all Approvals, Licenses and Permits issued by the Ministry of the Environment and Climate Change and drinking water regulations under the Safe Drinking Water Act, 2002. The report contains a summary of the quantities and flow rates of water supplied, including monthly averages and maximum daily flows during January 1st through to December 31, 2017.

Section 2

ROPE DRINKING WATER SYSTEM LOCATION, DESCRIPTION & RATED CAPACITY

PLANT LOCATION - 204 Ruta Rd, Waubaushene

DESCRIPTION

The Rope Drinking Water System is categorized as a small municipal residential drinking water system. The system consists of 430 metres of 100mm & 150mm diameter PVC watermain, seven main isolation valves and four hydrants. Hydrants are used for maintenance only, and are not capable for firefighting purposes. There is no storage facilities associated with the distribution system and pressure for the system is maintained by three high lift pumps.

Drinking Water Licence No. 129-101

Drinking Water Permit No. 129-201

Financial Report 129-301A

Expiry Date: January 4, 2021

The Rope Drinking Water System maximum daily volume of treated water that flows from the treatment subsystem shall not exceed the rated capacity as follows;

Treatment System	Rated Capacity
Membrane Filtration System, each train	216 m3/day
UV System, each unit	274 m3/day

The Rope Drinking Water System maximum flow rate of water that flows into the treatment subsystem shall not exceed;

Treatment Subsystem Component	Maximum Flow Rate
Membrane Filtration System, each train	2.5 L/s (216 m3/day)
UV System, each unit	3.2L/s (274 m3/day)

In 2017 the treated water maximum day was 58.8m3/day or 21.4% of the rated capacity (274m3/day).

92P-3074 PERMIT TO TAKE WATER GUIDELINES

Expiry Date: March 16, 2022

The Permit to Take Water allows the Township to remove a maximum of 273,866 L/Day (273.8m3/day).

In 2017 the maximum day for taking water was 74m³/day which is 27% of the allowable/day which is higher than norm due to maintenance conducted at the plant.

The Rope Drinking Water System continued to produce water of satisfactory quality in 2017. The descriptions below provide brief summaries of the parameters tested in the Rope DWS, and the reader is asked to consult **Appendix B** for a comprehensive summary of 2017 water quality.

Section 3

Chemical Analysis & Sampling Requirements Summary In-House Analyses

The Rope DWS employs an extensive in-house testing program which includes analyses of water quality indicators beyond that required by Ontario's *Safe Drinking Water Act*. Such analyses are conducted on source, treated, and process water, and include testing for turbidity, colour, pH, temperature, alkalinity, aluminum, and residual free chlorine. Approximately 1566 routine independent in-house water quality tests were conducted with respect to this system in 2017.

Microbiological Analyses in 2017, as required by Schedule 10 of O. Reg. 170/03. These water samples were collected on a weekly basis, and included tests for E. coli, total coliforms, and heterotrophic plate counts. All routine treated samples tested were absent for E. coli and total coliform parameters.

Organic Parameters and Trihalomethanes

Organic parameters are sampled on an annual basis in treated water in accordance with Schedules 13 and 24 of O. Reg. 170/03. These parameters include various acids, pesticides, herbicides, PCBs, volatile organics, and other organic chemicals. With respect to the Rope DWS, sampling for organic parameters was conducted in January 2017. The results of all organic parameter testing were below the lower detectable limits (with the exception of Trihalomethanes and HAA's).

Trihalomethanes (THMs) are sampled on a quarterly basis from the farthest point in the Rope distribution system, in accordance with Schedule 13 of O. Reg. 170/03. Compliance with the provincial standard for trihalomethane concentrations is determined by calculating a running annual average (with a Maximum Acceptable Concentration of 0.100 mg/L or 100 ug/L). In 2017, the running annual average was 106 ug/l this exceedance of the THM standard has been observed in the past. The Township of Tay is aware of the THM issue and is making every effort to correct the issue.

Haloacetic acids(HAA's) are sampled on a quarterly basis from the nearest point in the Rope distribution system, in accordance with Schedule 13 of O. Reg. 170/03. Compliance with the provincial standard for Haloacetic acid concentrations is determined by calculating a running annual

average (with a Maximum Acceptable Concentration of 0.080 mg/L or 80 ug/L). In 2017, the running annual average was 83.3 ug/L this exceedance of the THM standard has been observed in the past. The Township of Tay is aware of the THM issue and is making every effort to correct the issue.

Community Lead Sampling

Based on results of the community lead sampling program in 2012 and 2015, the Rope DWS has qualified for reduced sampling in accordance with Schedule 15.1 of O. Reg. 170/03.

In 2017 and 2018 we will be required to sample for;

- Alkalinity and pH each year summer and winter period from the Distribution system.
- From Two Distribution points (Fire Hydrants)
- December to April (winter period)
- June to October (Summer period)

Reduced sampling will resume in the period corresponding to December 15, 2019 to April 15, 2019.

UV Summary – Our minimum UV requirements of 40mj/cm² was met for 2017.

Turbidity –

Our Minimum Turbidity requirement of 99% was not met during the months of October and December 2017 due to problems with broken Membrane strands which have since been repaired.

It should be noted the UV disinfection system and the Chlorination injection system prior to the water entering the clear well which has a capacity 50.5 m³, provides sufficient treatment prior to discharge into the distribution system to ensure our minimum treatment requirements were met continuously throughout 2017.

Turbidity% NTU <.1 - 99% TIME	
Jan	99.82%
Feb	99.50%
Mar	99.74%
Apr	99.50%
May	99.93%
June	99.99%
July	100.0%
Aug	99.99%
Sept	99.80%
Oct	98.37%
Nov	98.80%
Dec	79.39%
Average % To Date	97.9%

Section 4

Drinking Water System Flow Summary

2017 Flows

Throughout the reporting period, the Rope DWS supplied 9179.8 m³ of treated water to consumers. On an average day in 2017, 25.27 m³ of treated water was supplied to the community. This average daily flow rate in 2017 represented 9.2 % of the rated capacity of the Rope DWS (273.8 m³/day). The maximum daily flow rate in 2017 was 58.8 m³/day, which represented 21.47% of the rated capacity of the Rope DWS. The maximum day flow was due to high usage on an extreme heat day in May 2017. The reader is asked to consult **Appendix A** for a complete summary of 2017 flow data.

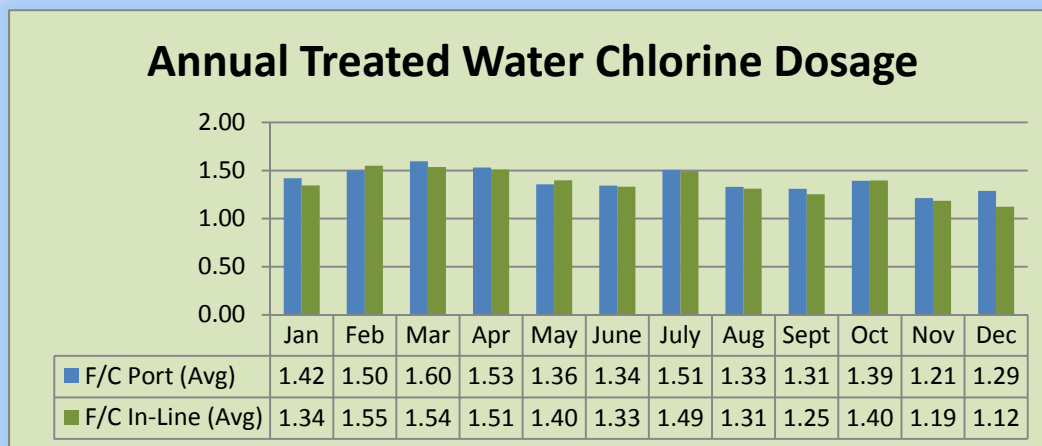
Treated Water Flow m3					Comparison	
Daily Flow				Monthly Total Flow	Daily Avg to Rated Capacity	Daily Max to Rated Capacity
	Min Tr. 1 & 2	Max Tr. 1 & 2	Avg Tr. 1 & 2			
Jan	17.9	28.2	21.2	656.7	7.73%	10.30%
Feb	15.9	28.7	20.8	581.7	7.58%	10.47%
Mar	13.7	24.9	20.4	632.5	7.45%	9.10%
Apr	15.1	31.1	19.6	588.0	7.15%	11.35%
May	14.6	58.8	29.9	927.8	10.92%	21.47%
June	20.8	41.1	30.7	921.5	11.21%	15.01%
July	22.2	49.0	30.9	959.0	11.29%	17.87%
Aug	17.4	43.1	32.0	991.8	11.68%	15.73%
Sept	16.1	48.5	26.2	785.6	9.56%	17.71%
Oct	17.9	34.2	26.0	782.6	9.50%	12.47%
Nov	11.8	36.9	22.3	650.0	8.14%	13.47%
Dec	16.4	37.0	23.2	702.6	8.46%	13.49%
Yearly	11.8	58.8	25.27	9179.8		

Section 5

Rope DWS Chlorine Dosage

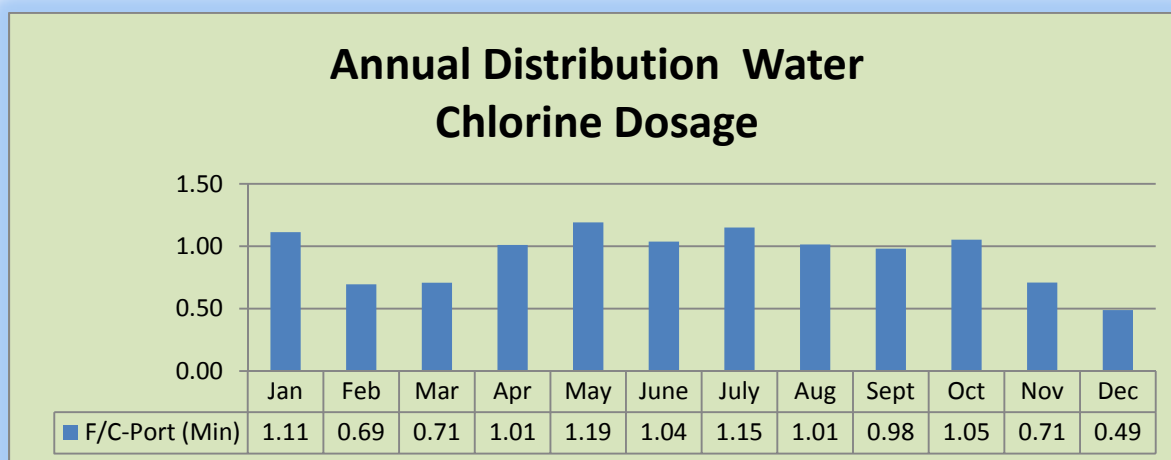
Treatment Subsystem

Minimum Guideline - >0.25



Distribution System

Minimum Guideline - >0.05



Therefore, the DWS system met or exceeded the Ministry's Minimum disinfection treatment requirements.

Section 6

Rope DWS Adverse Water Quality Reports

There were two A.W.Q.I. reports during 2017.

There was one Total Coliform report on January 11, 2017, staff re-sampled and followed M.O.E.C.C. guidelines and resolved the situation.

The second report was for THM's not meeting the running annual average.

Additional Reporting:

The Township advised the S.M.D.H.U. & M.O.E.C.C that the plant was not meeting the Turbidity requirement of 0.10 NTU- 99% of the time. It was noted that the plant was still achieving 4 log removal through UV which satisfied the guideline/requirement.

Noted: No Log Removal Credit for Filter - UV Providing 4 Log Removal

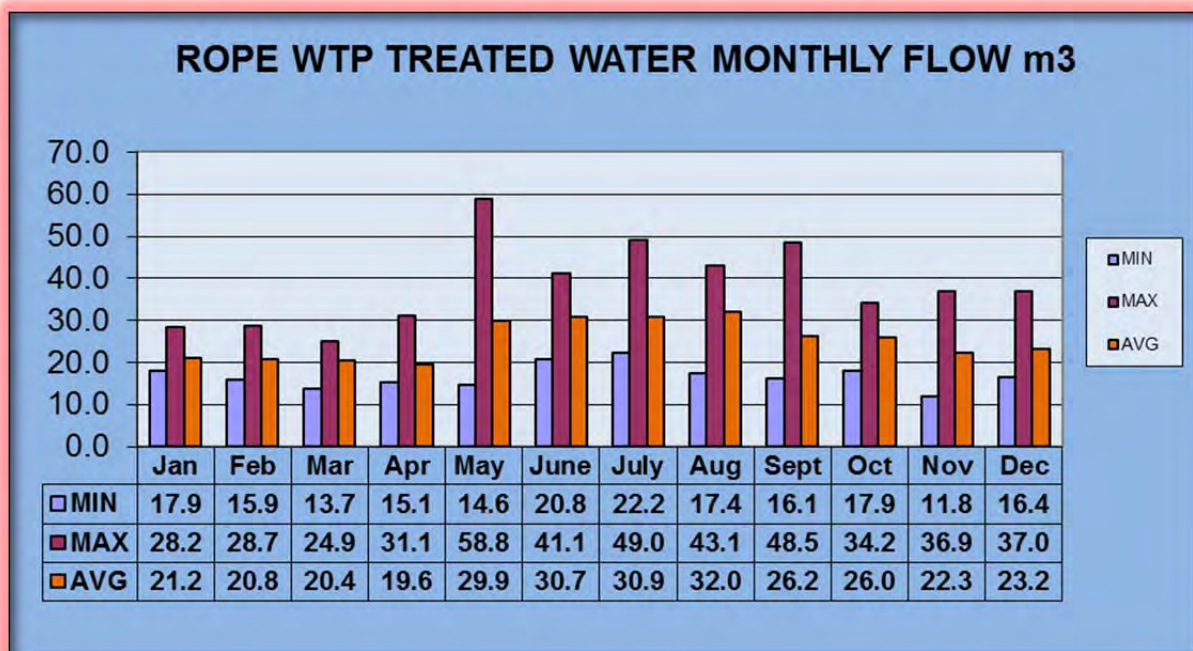
Boil Water Summary

There were no Boil Water Reports for 2017.

WATER TREATMENT PLANT SUBMISSIONS 2017 ROPE D.W.S. #220011323								
OCCURRENCE#	PLANT LOCATION	DATE OF REPORT(S)	PARAMETER	SAMPLE LOCATION	RESULT	UNIT MEASURE	CORRECTIVE ACTION DESCRIPTION	RESOLUTION DATE
132197	Rope DWS 2200011323	Jan. 11 2017	Total Coliform	Treated	1.0	Count/100mL	Re-Sampled and Results Clear - Closed the Report Flushed, Disinfected & Re-Sampled	Jan 16 2017
N/A	Rope DWS 2200011323	Jan. 17 2017	Turbidity	Treated	93.60%	Monthly Percentage	Occurrence date: Jan 17, 2017 Reported Jan 19 & 23 2017 LIMIT: <0.1 NTU -99% Time Lead Hand advised MOECC of results and, that we would not achieve our monthly turbidity average.	Jan 23 2017
N/A	Rope DWS 2200011323	July/Oct/Jan/Apr	THMS	DIST	102.00% 101+99+123+85	RAA Actual Sample Results	QUARTERLY SAMPLE DATE: JULY 25 2017 REPORTED AUG 4 2017 NO DIRECTION FROM SMDHU Written Report to SAC Only	Nov 7 2017
135012	Rope DWS 2200011323	Oct/Jan/Apr/July	THMS	DIST	107.25% 99+123+85+122	RAA Actual Sample Results	QUARTERLY SAMPLE DATE: JULY 25 2017 REPORTED AUG 4 2017 NO DIRECTION FROM SMDHU Written & Verbal Report to SAC	Aug 4 2017
N/A	Rope DWS 2200011323	Jan/Apr/July/Oct	THMS	DIST	106.00% 123+85+122+94	RAA Actual Sample Results	QUARTERLY SAMPLE DATE: OCT 24 2017 REPORTED OCT 31 2017 NO DIRECTION FROM SMDHU Written Report to SAC Only	Oct 31 2017
N/A	Rope DWS 2200011323	Nov. 13 2017	Turbidity	Treated	98.37%	Monthly Percentage	Occurrence date: October Reported Nov 13 2017 LIMIT: <0.1 NTU -99% Time Lead Hand advised MOECC of results and, that we would not achieve our monthly turbidity average.	Nov 13 2017

Appendix A

Flow Summary



Appendix B

Annual Sampling Requirements

Rope DWS Water Quality Reporting

Small Municipal Residential DWS #2220011323

Period Reporting: January 1, 2017 - December 31, 2017

Report Available: On Website or In Office

Microbiological Parameters 2017

Parameter	Units	No. of Samples	Min	Max	ODWQS	ODWQS Compliant
Ecoli-Raw	MPN -100mL	Continuous (52)	0	20	N/A	✓
Ecoli-Treated	p/a 100 mL	Continuous (52)	0	0	Not Detected	✓
Ecoli-Dist	p/a 100 mL	Continuous (104)	0	0	Not Detected	✓
Ttl Coliform - R	MPN -100mL	Continuous (52)	0	6400	N/A	✓
Ttl Coliform - T	p/a 100 mL	Continuous (52)	0	1		✓
Ttl Coliform - D	p/a 100 mL	Continuous (104)	0	0	Not Detected	✓
HPC - T	CFU/mL	Continuous (52)	0	5		✓
HPC - D	CFU/mL	Continuous (104)	0	2000		✓

ODWQS - Ontario Drinking Water Quality Standard

R- Raw Water

T-Treated Water

D-Distribution Water

Chemical & Physical Parameters 2017 (In-House)

Parameter	Units	No. of Samples	Min	Max	Avg	ODWQS	ODWQS Compliant
Turbidity Filter-R	NTU	Continuous	0.532	1.202	0.797	5	✓
Turbidity Filter-T	NTU	Continuous	0.016	0.300	0.158	5	✓
Res. Free Chlorine-T (Port)	mg/L	Continuous	1.17	1.91	1.42	4	✓
Res. Free Chlorine-T (I/L)	mg/L	Continuous	1.03	1.95	1.34	4	✓
Residual Free Chlorine-D	mg/L	Continuous	0.83	1.60	1.11	4	✓
pH (T)	pH units	Continuous	7.08	7.56	7.33	6.5-8.5	✓
Total Alkalinity - R	mg/L CaCO ₃	Continuous	10.0	78.0	55.0	120	
Total Alkalinity - T	mg/L CaCO ₃	Continuous	12.0	62.0	38.0	120	✓
Residual Aluminum - R	mg/L	Continuous	0	7.0	1.0	0.1	
Residual Aluminum - T	mg/L	Continuous	0.022	0.02	0.116	0.1	

The Township does not fluoridate the drinking water.

Port - Portable I/L - In-Line

Additional Testing and Sampling Carried out in accordance with an approval or other legal instrument.

Parameter	Units	No. of Samples	Result	ODWQS	ODWQS Compliant
Suspended Solids	mg/L	Continuous	4.98	15	✓

Inorganic Parameters-2017

Parameter	Unit	Result	ODWQS	ODWQS Compliant
Antimony	ug/L	0.03	6	✓
Arsenic	ug/L	0.20	25	✓
Barium	ug/L	18.70	1000	✓
Boron	ug/L	11.00	5000	✓
Cadmium	ug/L	0.005	5	✓
Chromium	ug/L	0.550	50	✓
*Lead	ug/L	0.070	10	✓
Mercury	ug/L	0.010	1	✓
Selenium	ug/L	0.040	10	✓
Sodium	mg/L	20.10	20	✓
Uranium	ug/L	0.004	20	✓
Fluoride	mg/L	0.060	1.5	✓
Nitrite	mg/L	0.003	1	✓
Nitrate	mg/L	0.057	10	✓
Nitrite + Nitrate	mg/L	0.057	10	✓

Organic Parameters-2017

Parameter	Unit	Result	ODWQS	ODWQS Compliant
Alachlor	ug/L	0.02	5	✓
Atrazine + N-dealkylated metabolites	ug/L	0.01	5	✓
Azinphos-methyl	ug/L	0.05	20	✓
Benzene	ug/L	0.32	1	✓
Benzo(a)pyrene	ug/L	0.004	0.01	✓
Bromoxynil	ug/L	0.33	5	✓
Carbaryl	ug/L	0.05	90	✓
Carbofuran	ug/L	0.01	90	✓
Carbon Tetrachloride	ug/L	0.16	2	✓
Chlorpyrifos	ug/L	0.02	90	✓
Diazinon	ug/L	0.02	20	✓
Dicamba	ug/L	0.20	120	✓
1,2-Dichlorobenzene	ug/L	0.41	200	✓
1,4-Dichlorobenzene	ug/L	0.36	5	✓
1,2-Dichloroethane	ug/L	0.35	5	✓
1,1-Dichloroethylene (vinylidene chloride)	ug/L	0.33	14	✓
Dichloromethane	ug/L	0.35	50	✓
2,4-Dichlorophenol	ug/L	0.15	900	✓
2,4-Dichlorophenoxy acetic acid (2,4-D)	ug/L	0.19	100	✓
Diclofop-methyl	ug/L	0.40	9	✓

Dimethoate	ug/L	0.03	20	✓
Diquat	ug/L	1.00	70	✓
Diuron	ug/L	0.03	150	✓
Glyphosate	ug/L	1.00	280	✓
Malathion	ug/L	0.02	190	✓
Metolachlor	ug/L	0.01	50	✓
Metribuzin	ug/L	0.02	80	✓
Monochlorobenzene	ug/L	0.30	80	✓
Paraquat	ug/L	1.00	10	✓
Pentachlorophenol	ug/L	0.15	60	✓
Phorate	ug/L	0.01	2	✓
Picloram	ug/L	1.00	190	✓
Polychlorinated Biphenyls(PCB)	ug/L	0.04	3	✓
Prometryne	ug/L	0.03	1	✓
Simazine	ug/L	0.01	10	✓
THM (Annual Average)	ug/L	106.0	100	
Terbufos	ug/L	0.01	1	✓
Tetrachloroethylene	ug/L	0.35	30	✓
2,3,4,6-Tetrachlorophenol	ug/L	0.20	100	✓
Triallate	ug/L	0.01	230	✓
Trichloroethylene	ug/L	0.44	5	✓
2,4,6-Trichlorophenol	ug/L	0.25	5	✓
Trifluralin	ug/L	0.02	45	✓
Vinyl Chloride	ug/L	0.17	1	✓
Bromodichloromethane	ug/L	4.20	N/A	✓
Bromoform	ug/L	0.34	N/A	✓
Chloroform	ug/L	119	N/A	✓
Desethyl atrazine	ug/L	0.01	N/A	✓
Dibromoacetic Acid	ug/L	41.0	N/A	✓
Dibromochloromethane	mg/L	0.37	N/A	✓
Chloroacetic Acid	ug/L	7.4	N/A	✓
Bromoacetic Acid	ug/L	2.9	N/A	✓
Dichloroacetic Acid	ug/L	41	N/A	✓
Trichloroacetic Acid	ug/L	28.9	N/A	✓
Total Haloacetic Acids (HAA5) Annual Average	ug/L	83.33	N/A	✓
MCPA	mg/L	0.00012	0.1	✓

The Township does not fluoridate the drinking water.

Chemicals used over reporting period:

Stern-pac is used from January through to October and aluminum sulphate was used as the coagulant for the balance of the year. Sodium Hypochlorite is used as the secondary disinfectant. Sulfuric acid is currently used for pH adjustment when necessary. A change in chemical dosage is typical during change in raw water quality however no abnormal usages were experienced. Alum was used all year as well.

Appendix C

Chemical Usage

Stern Pac	kg
Tay Area Water Treatment	3,060



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-22

Report Title: Tay Area DWS M.O.E.C.C. Compliance Inspection Report

RECOMMENDATION:

That Staff Report No. PW-2018-22 regarding the 2017 M.O.E.C.C. Tay Area DWS Inspection be received;

And that the M.O.E.C.C. report 1-F6KWY be received for information.

INTRODUCTION/BACKGROUND:

On an annual basis the Ministry of the Environment and Climate Change (M.O.E.C.C.) conducts detailed inspections of water treatment plants and the associated water distribution systems. This report reviews the most recent inspection (report attached).

ANALYSIS

The M.O.E.C.C. inspected the Tay Area Drinking Water System on December 20, 2018. The primary focus of this inspection is to confirm compliance with M.O.E.C.C. legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.

In response to the inspection the M.O.E.C.C. identified one issue of Non-compliance as follows:

"A review of records did not confirm that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/L free chlorine. Specifically, low chlorine residuals were observed within the seasonal water distribution system within the communities of Grandview Beach and Paradise Point. These areas have historically been affected by low distribution residuals and continued to experience low chlorine distribution residuals during 2017."

The Township is aware of the need to improve the water services in these communities and did initiate some immediate, interim and long-term solutions.

The Tay Area DWS received a final inspection rating of 96.05% from the M.O.E.C.C. and a risk rating of 3.95%.

FINANCIAL/BUDGET IMPACT:

There are no direct financial impacts associated with this report.

CONCLUSION:

This report provides Council with the M.O.E.C.C. annual inspection report and notes the non-compliance item and inspection rating.

Prepared By: Mike Emms, Water/Wastewater Superintendent

Recommended By: Date: March 6, 2018

Peter Dance
Director of Public Works

Reviewed By: Date: March 6, 2018

Robert J. Lamb, CEC, Ec.D.
Chief Administrative Officer

Ministry of the Environment and
Climate Change

Drinking Water and Environmental
Compliance Division
Barrie District Office
Unit 1201
54 Cedar Pointe Drive
Barrie ON L4N 5R7

Ministère de l'Environnement et de
l'Action en matière de changement
climatique

Division de la conformité en matière d'eau
potable et d'environnement
Bureau du district de Barrie
Bureau 1201
54, chemin Cedar Pointe
Barrie (Ontario) L4N 5R7



February 20, 2018

The Corporation of the Township of Tay
450 Park Street, P/O/ Box 100
Victoria Harbour, Ontario L0K 2A0

Attention: Mr. Robert Lamb, Chief Administrative Officer

**Re: Victoria Harbour Drinking Water System
2017 Communal Drinking Water Inspection Report # 1-F6KWY**

Please find attached the Ministry of the Environment's final inspection report for the above facility. The report provides an assessment of compliance with applicable legislation, Licences, Permits and any other control documents.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation and Enforcement Secretariat and advice of internal/external risk experts. The Inspection Summary Rating Record (IRR), included as an appendix to this report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulation water quality testing performance.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A guide for members of municipal council" (PIBS 7889e) found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater."

Sincerely,

Donna Staniscia, Provincial Officer
Drinking Water and Environmental Compliance Division
Barrie District Office, Ministry of the Environment and Climate Change

cc.

Peter Dance, Director of Public Works, Township of Tay
Michael Emms, Water and Wastewater Superintendent
Medical Officer of Health, Simcoe Muskoka District Health Unit
Manager, MOECC Licencing and Approvals Branch
Area Officer, Ministry of Natural Resources – Southern Region, Bracebridge Office
MOECC Barrie District Office File
Severn Sound Environmental Association



Ministry of the Environment and Climate Change

VICTORIA HARBOUR DRINKING WATER SYSTEM
Inspection Report

Site Number:	220001076
Inspection Number:	1-F6KWY
Date of Inspection:	Dec 20, 2017
Inspected By:	Donna Staniscia

OWNER INFORMATION:

Company Name:	TAY, THE CORPORATION OF THE TOWNSHIP OF		
Street Number:	450	Unit Identifier:	
Street Name:	PARK St		
City:	VICTORIA HARBOUR		
Province:	ON	Postal Code:	L0K 2A0

CONTACT INFORMATION

Type:	Owner	Name:	Peter Dance
Phone:	(705) 534-7248 x224	Fax:	(705) 534-4493
Email:	pdance@tay.ca		
Title:	Director of Public Works, Township of Tay		

Type:	Main Contact	Name:	Michael Emms
Phone:	(705) 534-7248	Fax:	(705) 534-4493
Email:	meems@tay.ca		
Title:	Water Wastewater Superintendent		

Type:	Operator	Name:	Leonard Todd
Phone:	(705) 529-5472	Fax:	(705) 534-4493
Email:			
Title:	Environmental Lead Hand, Township of Tay		

INSPECTION DETAILS:

Site Name:	VICTORIA HARBOUR DRINKING WATER SYSTEM
Site Address:	45 LIGHTHOUSE CRES VICTORIA HARBOUR L0K 2A0
County/District:	Tay
MOECC District/Area Office:	Barrie District
Health Unit:	SIMCOE MUSKOKA DISTRICT HEALTH UNIT
Conservation Authority:	
MNR Office:	
Category:	Large Municipal Residential
Site Number:	220001076
Inspection Type:	Announced
Inspection Number:	1-F6KWY
Date of Inspection:	Dec 20, 2017
Date of Previous Inspection:	Sep 15, 2016

COMPONENTS DESCRIPTION

Site (Name):	MOE DWS Mapping	Sub Type:
Type:	DWS Mapping Point	

Site (Name):	RAW WATER INTAKE
---------------------	------------------

Type: Source **Sub Type:** Surface

Comments:

The Victoria Harbour Water Treatment Plant draws source water from Hogg Bay within Georgian Bay. The raw water intake crib structure is located approximately 140 metres from shore in approximately five metres of water. The intake crib allows water to gravity feed from the bay to the intake pipe. A raw water sample line and the chlorine diffuser for zebra mussel control are located at the intake crib structure. There are two raw water sampling pumps located within the low lift pump station for raw water monitoring purposes.

The intake crib structure is connected to the intake pipe which consists of approximately 131 metres of buried 406 mm diameter polyethylene pipe, with a 7.6 metre section of ductile iron pipe at the shoreline, extending from the intake structure to the low lift pump station and screened wet well.

Site (Name): LOW LIFT PUMP STATION

Type: Other **Sub Type:** Surface Water

Comments:

The low lift pump station (LLPS) is located on an extension of Juneau Road in the community of Victoria Harbour. During operation of the low lift pumps, raw water is conveyed to the low lift pump well. The low lift pump well is a 2.5 m diameter concrete wet well with a divider wall with a coarse screened opening. In the LLPS, there are three vertical turbine pumps (lead/lag/standby), each with a rated capacity of 62.5 L/s and a total firm capacity of 125 L/s. The pumps draw water from the pump well and supply water to the treatment plant via a discharge header and a 300 mm by 140 m ductile iron raw water watermain.

Two (2) automatic self-cleaning strainers with a sieve size of approximately 300 um are in place on the discharge header; each with a minimum capacity of 120 L/s. Wastewater from the strainers is discharged into the wastewater lift station located outside the LLPS.

After the strainers, raw water flows through a turbidimeter and is then injected with a coagulant (alum) to assist in the filtration treatment processes at the water treatment plant (WTP). This coagulant feed system is referred to as the 'primary coagulant feed system'. It consists of two chemical day tanks with spill containment and two feed pumps (duty/standby). The low lift pumps will automatically shut-down if this coagulant system fails.

After the coagulant addition, there is an in-line mixer for flash mixing the coagulant with the raw water prior to entering into the raw water watermain. The watermain has a volume of 15 m³ and provides approximately two (2) minutes of flocculation time at a raw water flow rate of 125 L/s. Water taken from the source is measured by an electromagnetic flow meter which is linked to the Supervisory Control and Data Acquisition (SCADA) system for monitoring and trending purposes.

Site (Name): Zebra Mussel Control System

Type: Source **Sub Type:** Chemical Addition

Comments:

The zebra mussel control system is typically used on a seasonal basis when water temperatures exceed 12 degrees Celsius or more frequently if observations and inspections warrant.

The zebra mussel control system pre-chlorinates the raw water at either the intake crib structure. The system is housed within the low lift pump station and is interlocked with the low lift pump controls. A 105 L bulk sodium hypochlorite solution storage tank with spill containment is housed within the low lift station.

At the intake structure, the sodium hypochlorite solution is fed through a 25 mm line running along the intake piping and exists through a 25 mm diameter ring diffuser situated inside the intake bellmouth.

Site (Name): TREATED WATER

Type: Treated Water POE **Sub Type:** Treatment Facility

Comments:

From the LLPS, raw water is conveyed to the Victoria Harbour WTP for treatment, including filtration and disinfection. The filtration treatment subsystem is comprised of two systems, an older system and a newer system. The older filtration system consists of chemically-assisted conventional filtration via one Ecodyne-Graver Monoplant® (conventional filter). The newer filtration system consists of three positive-pressure, hollow-fibre microfiltration Pall

membrane racks ® (membrane racks). Primary disinfection is done in two stages by ultraviolet (UV) irradiation and chlorination with contact time through the addition of sodium hypochlorite. Secondary disinfection is accomplished through the addition of sodium hypochlorite. After the LLPS, raw water (with some coagulant previously added in from the 'primary coagulant feed system') enters the WTP via the raw watermain. Once in the WTP building, the raw watermain splits into two inlet pipes. One inlet pipe feeds raw water to two membrane racks. The other pipe feeds one membrane rack and the conventional filter.

Prior to entering into the conventional filter, the raw water is injected a second time with more coagulant (currently alum) via the 'secondary coagulant feed system.' The secondary coagulant feed system consists of two chemical day tanks with spill containment and two metering pumps (duty/standby) with automatic switch-over and alarms. The conventional filter system will automatically shut-down should this coagulant system fail. The conventional filter is a packaged unit that consists of coagulation, flocculation, settling clarifier and dual-media filter with a combination of sand and anthracite coal. The packaged filtration unit has a capacity of 1962 cubic metres per day (m³/day) or 23 L/s. The packaged unit contains an up-flow clarifier comprised of a rapid coagulant mixing zone, sludge recirculation and flocculation zone, settling zones with tube settlers, floc barriers and a clarified water collection flume. Clarified water is discharged to parallel dual media (anthracite/silica sand) filter. The filter has backwash and filter-to-waste capabilities.

Each membrane rack is a positive-pressure, hollow-fibre microfiltration membrane train, each with a capacity of 2,720 m³/day. Each membrane train consists of a rack of 34 membrane modules. Each module is 6" in diameter and 79" tall, with a surface area of 538 square feet (ft²) and a nominal pore size of 0.1 micrometers. The membrane racks are controlled by a dedicated PLC and are HMI integrated with the SCADA system. They are equipped with a self-clean system which uses sodium hypochlorite, sodium hydroxide and citric acid. The cleaning system includes three double-walled day tanks with spill containment, three level transmitters, three chemical pumps and one cleaning solution recirculation pump. The membrane racks also have a backwash system with a wastewater neutralization system prior to wastewater being discharged to sanitary sewer. It should be noted that the secondary coagulant feed system is not used or required for the membrane racks.

The filtrate flow line coming off of each filter/membrane filter is outfitted with a Hach ® Low-range turbidimeter for continuously measuring filtrate turbidity, and a dedicated Krohne 150 mm magnetic flow meter. Each turbidimeter and each flow meter is linked to SCADA for trending, alarming and control purposes. After the turbidimeters and flow meters, each of the four filtrate lines is equipped with a Trojan UVSwift 2L12 ultraviolet light (UV) irradiation disinfection system unit (Note: the flow meters on UV units 101 and 201 are installed after the UV units due to pipe spacing limitations). Each UV unit is complete with an ultraviolet reactor housing two medium pressure high intensity lamps, a dedicated UV intensity sensor, a control panel and an automatic cleaning mechanism. At a flow of 28.8 L/s and a UV transmittance of 85%, each UV unit is able to provide a minimum UV dosage rate of 40 milli-Joules per centimetre squared (mJ/cm²). Air is automatically vented from each reactor by an air relief valve. SCADA-controlled pneumatic valves are installed both upstream and downstream of the reactors to allow/stop flow through each reactor and to isolate a specific reactor. The UV units operate on automatic dose-pacing and are programmed to shut down and become isolated should UV dosage fall below the 40 mJ/cm² necessary for primary disinfection (the normal operational set-point is 50 mJ/cm²). A UV transmittance meter is installed on the combined header downstream of the UV systems and is linked to the individual UV system controls for UV dosage calculation purposes and to the SCADA system for monitoring and trending.

A continued description of the treatment process follows directly below under "Site (Name): TREATED WATER CONTINUED"

Site (Name): TREATED WATER CONTINUED

Type: Treated Water POE

Sub Type: Treatment Facility

Comments:

Following UV disinfection, the treated water from each UV unit combine into one pipe where a solution of 12% sodium hypochlorite is injected prior to water entering two 409m³ below grade (818 m³ total capacity), baffled treated water reservoir where chlorine contact time is afforded. The chlorination system consists of chemical storage tanks with spill containment and two chemical metering pumps (duty/standby) each with nameplates indicating a pumping capacity of 26 L/h. The chemical metering pumps alternate duty and standby position, are equipped with auto-switchover

capabilities, and operate under flow-pace with the total treated water flow from the sum of the four filtered water Krohne flow meters. Water enters one end of the reservoir and travels along three baffles in each chamber before entering the high lift pump well which has a capacity of 80 m³.

Water is discharged to the distribution system via three 60 horsepower vertical turbine pumps, each rated at approximately 47.2 L/s at 71 m TDH, and one submersible jockey pump rated at 2 L/s at 45 m TDH. The high lift pumps operate in a lead/lag/standby configuration with a maximum of two pumps in operation. Under normal operation, the high lift pumps are controlled automatically through the SCADA system based on the water levels in the Victoria Harbour standpipe. The pumps are configured to shut down should the reservoir level drop below 1.0 metre, in order to protect the high lift pumps and to provide sufficient chlorine contact time. Water conveyed into the distribution system is measured by a flow meter installed on the discharge header leaving the WTP and entering into the distribution. The flow meter is linked to SCADA for monitoring and trending purposes. A continuous chlorine analyzer continuously draws a sample of treated water from the effluent of the high lift chamber, prior to being discharged to the distribution system. The chlorine analyzer is linked to SCADA for continuous monitoring, alarming and reporting purposes.

Wastewater generated during the sedimentation, filtration, backwash and cleaning cycles is directed to the sanitary sewer system, after neutralization where required.

A 545 kW emergency standby diesel generator, equipped with an automatic transfer switch, is located inside the WTP. The generator can provide emergency power to all equipment in the WTP and the LLPS. The 6,500 L diesel fuel storage tank has concrete spill containment.

Site (Name): PORT McNICOLL (TALBOT) BOOSTER PUMPING AND RECHLORINATION STATION
Type: Other **Sub Type:** Booster Station

Comments:

The Port McNicoll (Talbot) Booster Station, which houses a rechlorination system and booster pumps, serve consumers in the Bay Berry Estates and Midland Bay Woods subdivisions. Approximately 360 persons are served in those respective communities by the booster station. The equipment consists of one jockey pump, rated at 20 L/s at 36 m TDH, three split case centrifugal pumps, each rated at 40 L/s at 55 m TDH, complete with a 350 mm diameter suction head discharging to a 250 mm diameter common header. Water discharged from the booster station is measured by a flow meter linked to SCADA for trending and chemical control purposes. Pressure transmitters are installed on both the inlet and outlet piping and are linked to SCADA for monitoring, control and alarming purposes. The booster pumps are operated to target a discharge pressure of 450 kiloPascals (kPa).

Secondary disinfectant residual is maintained by a rechlorination system using sodium hypochlorite solution. A continuous on-line chlorine analyzer draws samples from water being discharged from the station (i.e. after re-chlorination). The analyzer is linked to the SCADA system for continuous monitoring, alarming and reporting control purposes. The rechlorination system consists of two chemical metering pumps, each rated at 1.4 L/hr, which inject sodium hypochlorite solution on the booster station inlet piping. The chemical metering pumps alternate duty and are equipped with auto-switchover capabilities. The rate of sodium hypochlorite addition is paced to flow and relative to the free chlorine residual measured by the analyzer. The sodium hypochlorite solution is stored in two 200 L storage tanks within spill containment.

A 150 kW standby diesel generator set provides emergency stand-by power. The diesel fuel tank is located within the booster station and is situated within secondary (spill) containment.

Site (Name): WAUBAUSHENE BOOSTER PUMPING AND RECHLORINATION STATION
Type: Other **Sub Type:** Booster Station

Comments:

The Waubashene Booster Station and rechlorination facility is situated within the former Waubashene WTP at the base of Pine Street in the community of Waubashene. In 2007, the former Waubashene WTP was decommissioned and users of that system were connected to the Victoria Harbour Drinking Water System via an 8.25 km long watermain. The Waubashene distribution system supplied by the booster station serves a population of approximately 1200 persons. The serviced area is primarily a residential and cottage community, with a few commercial and small industrial operations. Some of the users connected to the distribution

system are seasonal only. There are no large industrial operations connected to the Waubaushe distribution system. The piping associated with the Waubaushe distribution system is primarily plastic, with most of it being installed in the late 1970's and early 1980's.

The Waubaushe Booster Station consists of a 200 mm diameter suction header and appurtenances, two in-line booster pumps (one duty, one standby), each rated at 14.2 L/s at a TDH of 60 m. The facility is also equipped with pressure controls to operate the pumps in line with the Waubaushe standpipe, or under pressure if the standpipe were to be taken out of service. Water discharged from the booster station is measured by a flow meter which is linked to SCADA for trending purposes. Secondary disinfectant residual is maintained by a rechlorination system using sodium hypochlorite solution. A continuous on-line chlorine analyzer draws samples from water being discharged from the station (i.e. after re-chlorination). The analyzer is equipped with outputs connected to the SCADA system for continuous monitoring, alarming and reporting purposes. The rechlorination system consists of two chemical metering pumps, each rated at 3.6 L/hr, which inject sodium hypochlorite solution on the booster station discharge piping. The chemical metering pumps alternate duty and are equipped with auto-switchover capabilities. The rate of sodium hypochlorite addition is fixed as flow from the station is fixed. The sodium hypochlorite solution is stored in two 200 L storage tanks within spill containment.

A 150 mm diameter booster pump bypass, complete with motorized isolation valves, is also installed along with a surge relief valve. The topography and bypass allows for water stored within the Waubaushe distribution system and standpipe to be fed back towards Victoria Harbour, if necessary.

There is no emergency back up power supply for this facility, however a portable generator is kept on site.

Site (Name): MAPLE STREET BOOSTER PUMPING AND RECHLORINATION STATION

Type: Other

Sub Type: Booster Station

Comments:

The Maple Street Booster Station and rechlorination facility is located at the corner of Maple Street and Albert Street in Victoria Harbour. The facility consists of a 200 mm diameter suction header and appurtenances, three in-line booster pumps, each capable of pumping at 26.7 L/s at a TDH of 45.8 m, and a rechlorination system. The rechlorination system consists of a 200 L chemical storage tank situated in secondary (spill) containment and two chemical metering pumps, each rated at 7.8 L/hr, which inject sodium hypochlorite solution on the booster station discharge piping. A continuous on-line chlorine analyzer (Hach CL17) draws samples from water downstream of the rechlorination point, prior to being discharged from the station. The analyzer is equipped with outputs connected to the SCADA system for continuous monitoring, alarming and reporting purposes. Water discharged from the booster station via a 200 mm diameter discharge header, which is equipped with a flow meter linked to SCADA for trending purposes. A 150 kW standby diesel generator set is located within the booster station and provides emergency stand-by power. The diesel fuel tank is situated within secondary (spill) containment.

Site (Name): PORT MCNICOLL STANDPIPE

Type: Other

Sub Type: Reservoir

Comments:

The Port McNicoll standpipe, located at Simcoe and Eighth Streets, provides water storage within the community of Port McNicoll. The standpipe has a capacity of 2375 m³ and stands at a height of 16 metres. Consumer service connections exist between the booster facility and standpipe.

Site (Name): WAUBAUSHENE STANDPIPE

Type: Other

Sub Type: Reservoir

Comments:

The Waubaushe standpipe, located at 214 Browns Line, has a total storage volume of 1,508 m³ and a usable volume of 716 m³. The 'bottom' storage of the standpipe provides necessary elevation for operational pressure, as well as reserve for fire fighting. The standpipe provides enough storage to provide approximately 2.5 days supply under design maximum day demand. The standpipe is fed by the Waubaushe booster and rechlorination facility with water from the Victoria Harbour WTP. Consumer service connections exist between the booster station and the standpipe.

Site (Name): VICTORIA HARBOUR - TAY AREA WIDE DISTRIBUTION SYSTEM
Type: Other **Sub Type:** Other

Comments:

The Victoria Harbour Drinking Water System provides drinking water to approximately 2830 private residences (an estimated population of 7500 people), and 119 institutional, commercial and industrial services. Approximately 930 residences are serviced in the community of Port McNicoll; 1347 residences in Victoria Harbour; 415 residences in Waubaushene; 41 residences in Bay Berry Estates; and 93 residences in Midland Bay Woods. The communities of Midland Bay Woods and Bay Berry Estates were connected to the Victoria Harbour drinking water system in March 2006, while the community of Waubaushene was connected in January 2007. Approximately 170 residences in the Paradise Point and Grandview Beach areas of Port McNicoll are provided drinking water on seasonal basis only, from May through October each year. The distribution system is comprised of various materials including cast iron, ductile iron, polyvinyl chloride, and galvanized steel. The seasonal distribution system is constructed of a variety of materials, typically of cast iron, ductile iron and galvanized steel.

Site (Name): VICTORIA HARBOUR STANDPIPE
Type: Other **Sub Type:** Reservoir

Comments:

The Victoria Harbour standpipe, located on Jephson Street, provides water storage within the community of Victoria Harbour. The standpipe has a capacity of 4500 m³ and stands at a height of 32 metres. Consumer service connections exist between the WTP and the standpipe.

INSPECTION SUMMARY:

Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The Tay Area Drinking Water System (DWS) (formerly called Victoria Harbour DWS) is a surface water system which services communities within the Township of Tay, situated on the southern shores of Severn Sound, southeastern inlet of Georgian Bay, Lake Huron. The DWS provides potable water to approximately 7830 residents and 140 institutional, commercial and industrial users located within the communities of Victoria Harbour, Port McNicoll, Waubaushene, Paradise Point, Grandview Beach, Bay Berry Estates and Midland Bay Woods. The DWS consists of both treatment and distribution subsystems; and both are owned and operated by the Corporation of the Township of Tay, hereinafter referred to as the Township. The distribution subsystem is classified as a Water Distribution Subsystem Class 2 and the water treatment subsystem is classified as a Water Treatment Class 3, as defined and regulated under the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation (O.Reg.) 170/03.

The DWS is comprised of the low-lift pumping station (LLPS), the water treatment plant (WTP) and the distribution system and its appurtenances, including three rechlorination/booster stations and three standpipes. The source water is drawn from Georgian Bay. The system uses seasonal pre-chlorination for Zebra Mussel control followed by conventional filtration or membrane filtration. The conventional filtration consists of one packaged conventional Ecodyne filtration unit that consists of coagulation, flocculation, settling clarifier and dual-media filter with a combination of sand and anthracite coal. The membrane filtration consists of three positive-pressure, hollow-fibre microfiltration Pall membrane racks. Primary disinfection is accomplished in two stages: Ultraviolet light (UV) followed by chlorination with contact time using sodium hypochlorite. Secondary disinfection is accomplished using sodium hypochlorite. It should be noted that the conventional filter has been off-line and not in use since the fall of 2015.

In 2017, Provincial Officer, Donna Staniscia conducted an on-site physical inspection of the Victoria Harbour DWS. Specifically, a site visit at the WTP was conducted on December 20th. The inspection also included a review of relevant documents and data. This inspection report encompasses an inspection review period between September 15, 2016 and December 20, 2017. During the inspection review period, the Township was operating under the

Introduction

following control documents:

PTTW: 4221-9QDGS4 (current)

Municipal Drinking Water Licence (MDWL): 129-102, Issue Number 2 (revoked)

MDWL: 129-102, Issue Number 3

Drinking Water Works Permit (DWWP): 129-202, Issue Number 3 (revoked)

DWWP: 129-202, Issue 4 (current)

Capacity Assessment

- **There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit Issued under Part V of the SDWA.**

Through the PTTW, DWWP and the MDWL, the Township is required to have continuous flow measurement and recording for:

- 1) the flow rate and daily volume of water takings from Georgian Bay – Lake Huron;
- 2) the flow rate and daily volume of water that flows into the treatment subsystem;
- 2) the flow rate entering into/through each of the four (4) UV disinfection systems;
- 3) the flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system.

At the LLPS, raw water enters into a concrete wet well and is then pumped to the WTP. A 250 mm Krohne magnetic flow meter (FIT100) is installed on the discharge header to the plant in order to measure the flow rate and volume of water takings from Georgian Bay.

At the WTP, a Krohne 150 mm magnetic flow meter (FIT101, FIT201, FIT301 and FIT401) is installed on each filter's filtrate line, before or after the corresponding UV unit. Flow meters FIT301 and FIT401 are installed before UV units 3 and 4. Flow meters FIT101 and FIT201 are installed after UV units 1 and 2 due to pipe spacing limitations. Regardless of the positions, the flow meters are capable of measuring the flow rate and volume of water through the UV units. Disinfected water from each UV unit then combines into one pipe where a solution of 12% sodium hypochlorite is injected prior to entering the post-chlorination, baffled contact chamber. Treated water then enters into the high lift pump clear well.

From the clear well, the high lift pumps supply water to the distribution system through a combined treated water discharge header. A Krohne 300 mm magnetic meter (FIT200) is installed on the discharge header to measure the flow rate and volume of treated water entering into the distribution system.

The magnetic meters are equipped with 4-20mA outputs linked to the SCADA system for the monitoring and recording of data as well as for alarming the Operator in cases of adverse flow conditions. The magnetic meter on each UV unit is also integrated with the individual UV control panels for UV operations.

The combination of flow meters and the SCADA system are sufficient in meeting the requirements of flow monitoring as stipulated in the PTTW, MDWL and DWWP.

- **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.**

The raw water takings are prescribed by Permit to Take Water (PTTW) #4221-9QDGS4. The PTTW authorizes the Township to take up to 10,627 cubic metres per day (m³/day) of water from Georgian Bay, at a rate up to 7,380 litres/minute (L/min). There are three low lift pumps each rated at 61.5 L/s, that operate in lead/lag/standby configuration. With two pumps running, the firm capacity is 123 L/s, equivalent to the PTTW rate of 10,627 m³/day.

Capacity Assessment

The MDWL prescribes that the rated capacity of the treatment subsystem (i.e. the daily volume of water that flows from the treatment subsystem to the distribution system) shall not exceed 10,065 m³/day. Each of the three membrane racks has a design flow capacity of 2,720 m³/day, equivalent to 1890 L/min or 31.5 L/s (maximum instantaneous flow can reach as high as 47 L/s). The operational control set-points for each membrane are set to 25L/s. An alarm will occur if the filtrate flow reaches 50L/s (i.e. varies from the control set-point by +/-25L/s). The conventional filtration system has a design capacity of 23 L/s, equivalent to 1380 L/min or 1962 m³/day. The conventional filtration system has not been in use since the fall of 2015. The combined total daily design capacity of all four filters is 7050 L/min or 10,122 m³/day.

The flow rate of the filtrate coming off of the filter and membrane racks dictate the flow rate of water through the associated UV unit. The Operations and Maintenance (O&M) manual indicate that each UV unit is capable of providing a dose of 40mJ/cm² at a flow of 28.8 L/s and a UVT of 85%; and at a flow of 52 L/s at a UVT of 90%. Design information submitted to the MOECC as part of the approval application for the expansion/upgrade to the WTP, indicated that each UV unit is actually capable of providing 40 mJ/cm² at a flow of 35.8 L/s at a UVT of 85%; and at a flow of 61.1 L/s at a UVT of 90%. The UV units are set to alarm at 50 L/s (and coincide with the filter flow maximum set-point). Since the UV units operate in a calculated dose mode, a maximum flow rate through the units is not explicitly prescribed by the MDWL. Instead, the Township must ensure to monitor and record flow rate, UV dose and UV transmittance (UVT) continuously and ensure that the required dose is maintained.

The flow rates are maintained below the prescribed rates using a series of various flow control valves which are operated through local PLCs and the SCADA system. The flow rates are monitored and recorded continuously.

A review of flow records verify that the Township was in compliance with the maximum allowable takings, maximum flow rates, design rates and rated capacities. For this inspection review period, the maximum raw water daily taking from Georgian Bay was 3656m³ (approximately 34% of the permitted water takings) and occurred in September 2017. The maximum daily treated water that flowed from the treatment subsystem to the distribution system was 3622 m³ (approximately 36% of the prescribed rated capacity) and occurred in September 2017.

Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

All equipment appeared to be installed as listed in Schedule A and Schedule C of the DWWP 129-202, with the exception of the coagulation system for the conventional filtration unit (a.k.a. secondary coagulation system). The DWWP references the use of Alum specifically as the coagulant in use. The Township began using SternPac in place of Alum in the summer of 2017. The Township did complete a Form 2 and a Director Notification form.

It should also be noted that the DWWP lists the rating of the HLPs as 47.2 L/s at 71m of TDH, providing a firm capacity of 94.4 L/s. However, the HLPs are actually producing a flow of approximately 60 L/s, for a firm capacity of 120 L/s, at a TDH of approximately 60m. The worst-case scenario CT calculations submitted to the Ministry's Approvals section by the Township in October 2016, included the 120L/s flow.

- **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.**

A number of watermain and service replacements were completed as part of the 2017 Watermain and Road Reconstruction Project during this inspection review period, including watermain and service replacement on parts of Simcoe Ave, Assiniboia St., and Albert St. Form 1 documents were completed for this project as well as for the installation of new hydrant(s) on Industrial Rd.

All Form 1 documents were prepared in accordance with the DWWP.

Treatment Processes

- **The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.**

In the fall of 2016, the Township rearranged some of the chemical tanks in order to provide for easier access, increased Operator safety and to allow for some bulk delivery directly into some of the chemical tanks. The changes to the chemical storage and locations were recorded on a Form 2 and a Director Notification form. The most recent DWWP has been modified to reflect the altered chemical storage and locations.

In the spring of 2017, the outmoded HACH 1720 low-range turbidity analyzers on the Pall filters were replaced with HACH 5300 SC low-range turbidity analyzers. The replacement of the analyzers is documented on a Form 2.

In the summer of 2017, the Township began using SternPac in place of Alum. The change in coagulant was recorded on a Form 2 and a Director Notification form.

- **Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.**

The Victoria Harbour DWS obtains water from a surface water supply, Georgian Bay. As such, the system must be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection in Ontario (Procedure for Disinfection), including at least a 2-log removal/inactivation of *Cryptosporidium* oocysts (Crypto), a 3-log removal/inactivation of *Giardia* cysts (*Giardia*) and a 4-log removal/inactivation of viruses before the water is delivered to the first customer; and of which at least 0.5-log removal/inactivation of *Giardia* and 2-log removal/inactivation of viruses must be provided through the disinfection portion of the overall treatment process. Schedule 6 of the MDWL lists the log removal/inactivation credits assigned to each individual treatment process in place at the WTP, and also specifies certain assignment criteria that must be met in order to achieve the credits.

Both the conventional filter and the membrane racks use a chemical coagulant. The 'primary coagulant feed system' uses a flow-paced injection to provide the filters with coagulant (currently polyaluminum chloride but alum may be used). If this feed system fails, it will alarm and shut-down the low lift pumps. The 'secondary feed system' provides coagulant only to the conventional filter. The dosage for the conventional filter is established and set by the Operator based on the raw water turbidity. If this feed system fails, it will alarm and the filter will shut-down. Both filtration systems use a filter-to-waste backwash system to aid in maintaining the effluent turbidity requirements stated in the MDWL, Schedule E.

Turbidity is continuously monitored in the filtrate via four (4) Hach Low-range turbidimeters to ensure that the turbidity is less than 1.0 NTU, as per O.Reg. 170/03. A dedicated turbidimeter has been installed on the outflow line of each membrane rack and on the conventional filter outflow line. Each membrane rack is set to alarm and notify an Operator should the turbidity reach 0.20 NTU and will automatically shut-down if the turbidity reaches 0.30 NTU, with a 60 second delay. For the conventional filter system, an Operator will be notified and the filter system will shut-down should the turbidity reach 0.7 NTU. In accordance with the MDWL, the conventional filter must also achieve filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month; and each membrane rack must achieve filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month. In order to monitor the filtrate turbidity against the required monthly performance criteria, each day the total number of turbidity readings above 0.3 NTU or 0.1 NTU (whichever is applicable) is calculated as a daily percentage using SCADA data. At the end of the month, the monthly average percentage of readings above 0.3 or 0.1 NTU (whichever is applicable) is calculated. Further sufficing regulatory and Approval requirements, direct integrity testing (i.e. pressure decay test) is performed on the membrane racks once per week. The Township performs the IT tests manually so that the Operators may take corrective action should the IT test fail.

A Trojan UVSwift2L12 reactor is installed on the outflow line of each of the four preceding filter/membrane racks.

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Each UV reactor (UVR) is capable of providing the minimum required UV dose of 40 mJ/cm², at a minimum UVT of 85% and at the design flow capacity of the membranes. Each UVR operates on an automatic dose paced control system to maintain an operational target UV dose of 45 mJ/cm². Flow to each reactor is dictated by the flow of the filtrate coming from the associated preceding filter. Pneumatic butterfly valves, installed on each side of each reactor, will stop the flow through an affected unit should the dosage fall below 45 mJ/cm², thereby ensuring that the 40 mJ/cm² is achieved at all times. If the UV system fails to provide the minimum required dose, the entire plant will automatically shut-down in sequence. Records show that the UV system achieved the required minimum dose throughout this inspection period and was operated such that the assignment criteria were met, including the monthly/annual sensor/reference sensor checks. Overall, the UV disinfection system achieved the 2-log Crypto, 3-log Giardia and 2-log viruses throughout the inspection review period.

After the UV disinfection system, the water is injected with sodium hypochlorite prior to entering into two contact tanks with baffles and sufficient contact time (CT). After the contact tanks, treated water enters into the below grade high lift pump (HLP) well prior to entering into the WTP's discharge header. An on-line chlorine analyser continuously measures the chlorine residual in treated water from within the discharge header. The analyser is linked to the SCADA. Should the chlorine residual fall below the low residual set-point, and/or should the contact tank level fall below the low level alarm set-point, the HLPs will automatically shut-down and an Operator will be notified. The alarms are set at values that ensure CT is achieved at all times during treated water production. The CT calculations, including worst case scenarios, are included in the O&M manual. The Operators refer to the CT calculations prior to making any adjustments to critical set-points. Records show that the chlorination system achieved the 2-log inactivation of viruses throughout this inspection period.

- **Records did not confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

A result indicating that the concentration of free chlorine residual is less than 0.05 mg/L in a distribution grab sample is prescribed as an adverse test result for the purpose of section 18 of the SDWA, 2002. Further, the Ministry's Procedure for Disinfection of Drinking Water in Ontario recommends that the optimum target for free chlorine residual concentration in a water distribution system is maintained above 0.2 mg/L at a pH of 8.5 or less in order to prevent microbiological re-growth within the system.

Secondary disinfection is provided by the Victoria Harbour DWS through the addition of sodium hypochlorite at the WTP. Operators monitor the chlorine residuals at various locations throughout the distribution system each week using portable hand-held colourimeters. There are also three rechlorination/booster pumping stations (BPS) located in the distribution system to help ensure adequate chlorine residuals are maintained.

Records of chlorine residual testing conducted in the Victoria Harbour distribution system during the inspection review period were reviewed in conjunction with this inspection. A review of records did not confirm that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free chlorine. Specifically, low chlorine residuals were observed within the seasonal areas of the water distribution system within the communities of Grandview Beach and Paradise Point. These areas have historically been affected by low distribution residuals and continued to experience low chlorine distribution residuals during 2017.

On May 26, 2017, records show that free chlorine residuals measured less than 0.05 mg/L in two samples taken within a seasonal section of the distribution system, in the communities of Grandview Beach and Paradise Point. The adverse results were immediately reported to the Ministry and the medical officer of health (MOH). An Adverse Water Quality Incident (AWQI) number 133171 was assigned to the incident. The Operators began flushing the area on a daily basis until the residuals increased to satisfactory levels over the following couple of days. The Township continued to flush the seasonal water system via automatic flusher boxes and temporary flushing lines throughout the operating season. At the time of this incident, these two communities were already under a Boil Water Order (BWO) issued by the Simcoe Muskoka District Health Unit (SMDHU) on September 1, 2016, in

Treatment Processes

response to frequently occurring low distribution residuals. On June 21, 2017, the BWO was rescinded based on a request by the Township and its ability to show adequate residuals and to complete the other actions required by the Order.

On July 21, 2017, a zero chlorine residual was measured in the area of Silver Birch Cres., in the community of Paradise Point. In response to the incident, a Boil Water Advisory was issued and the Township increased the flushing efforts. Despite the increased efforts, adverse low chlorine residuals continued to affect the area (specifically, the 'Silver Birch' area and to a lesser degree the 'Evergreen' area). Low chlorine residuals were measured on July 24, 25, 26, 27 and 28, and August 3. On August 3rd, a 1" temporary line was installed directly between the 6" main on 1st Avenue and the Silver Birch area in order to increase the flow in this immediate area. On August 14, the BWA was rescinded based on two weeks of satisfactory residuals and favourable microbiological sample results (i.e. zero *Escherichia coli* and total coliform.).

The Township reported each measured low chlorine residual incident immediately and took timely and appropriate action in order to improve the situation. As stated above, the last low chlorine incident occurred on August 3, 2017. The seasonal water system was shut-down after the Thanksgiving long weekend, as per usual.

The

Township is aware of the need to improve the water services in these communities and did initiate some immediate, interim and long-term solutions. For example, in 2016 the Township began the process to identify and address potential unprotected cross connections. A backflow prevention by-law #2016-76 was created and implementation began in 2016. The by-law includes specific requirements for residents in the Grandview Beach/Paradise Point communities. It has been reported by the Township that all back-flow prevention devices have been installed where cross-connections existed. In the fall of 2017, the Township began the physical process of replacing the current distribution watermain system. The Township was successful in securing Provincial and Federal funding to help with the costs of this project. The Township estimates that the replacement of the watermains will be completed in and around the summer of 2018.

SEE NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

- **The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03.**

For primary disinfection equipment that does not use chlorination or chloramination (i.e. UV disinfection is used for primary disinfection), the disinfection equipment must meet the conditions set out in subsection 1-6(1) or subsection 1-6(2) of Schedule 1 of O.Reg. 170/03.

There are four Trojan UVSwift2L12 UVR units in place at the WTP. A UV unit is installed on the outflow line of each of the four preceding filters/membrane racks. Each unit is capable of providing a minimum UV dose of 40 mJ/cm², at a minimum UVT of 85% and at the design flow capacity of the membranes. The UV units are individually alarmed through the PLC and SCADA systems to activate an alarm, an automatic shut-down and a call-out to an Operator if there is a power failure or if the UV dose falls below 45 mJ/cm² (operational set-point). In the event that the UV dose falls below 45 mJ/cm², the UV units are programmed to ramp-up the intensity to 100% in an attempt to restore the dosage. Failing this, the UV unit will automatically shut-down and flow to and from the unit will stop via the pneumatic valves on either side of each unit, thereby ensuring that no water is directed to users of water system in the event that the equipment malfunctions, loses power or ceases to provide appropriate level of disinfection.

As mentioned above, each UVR is capable of 40mJ/cm², at a minimum UVT of 85%. Each individual UVR calculates dose automatically based on a set default of 90%. The actual UVT of the water is monitored by a single UVT analyzer (UVT-501) and this data is then sent to the SCADA system. The SCADA system will notify an Operator when the UVT reaches 70%.

Treatment Processes

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

Treatment Process Monitoring

- **Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved.**

The continuous free chlorine analyzer located at the WTP draws treated water from the discharge header leaving the high lift pump chamber. The high lift pump chamber is downstream of the treated water reservoir/clear well, where sufficient contact time has been afforded.

- **Continuous monitoring of each filter effluent line was being performed for turbidity.**

Continuous monitoring for filtrate turbidity was being performed at each Pall filter effluent line with the use of a Hach ® TU5300 sc low-range turbidimeter system. The Ecodyne filter effluent line is fitted with a Hach ® 1720E Low-range Turbidimeter system for turbidity monitoring. Each turbidimeter is linked to SCADA, and configured to alarm and notify an Operator at various set-points. Each membrane rack will alarm and notify an Operator should the turbidity reach 0.20 NTU and will shut-down if the turbidity reached 0.30 NTU (with a 60 second delay). If the turbidity reaches 0.7 NTU in the filtrate of the conventional filter, an Operator will be notified and the filter will shut-down.

- **The secondary disinfectant residual was measured as required for the distribution system.**

Subsection 7-2(3) of Schedule 7 of O. Reg. 170/03 prescribes that at least seven free chlorine residuals must be collected each week from the distribution system of a Large Municipal Residential drinking water system such as the Victoria Harbour Drinking Water System. Subsection 7-2(4) includes two options available to satisfy this requirement. For the first option, at least one free chlorine residual must be taken in the distribution system each day of the week. For the second option, at least four free chlorine residual tests must be conducted from four different locations on one day of the week, at least 48 hours after the last sample was taken the previous week; and at least three more chlorine residual tests must be conducted at three different locations on another day during the week, at least 48 hours after the first day that week.

The Township conducts free chlorine residual tests at five distribution locations each week, in conjunction with the weekly microbiological sampling. Based on this testing regime, the Township is required to conduct at least three more additional free chlorine residual tests at least 48 hours before or after the day on which the microbiological distribution sampling is conducted. For the remaining three required FCR tests, the Township conducts one free chlorine residual test from 430 Pine St., Waubaushene, one from the Maple Street BPS and one from the Port McNicoll BPS on each day of the week (except weekends). It should be noted that at the Maple Street and Port McNicoll BPSs, the grab sample is taken prior to the re-chlorination injection points. The Waubaushene BPS does not have a sampling point prior to the re-chlorination system and is therefore the FCR sample is taken at a local gas station.

- **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

Subsection 6-5(1) paragraph 3 of Schedule 6 of O.Reg. 170/03 requires that test results recorded by continuous monitoring equipment used for testing free chlorine residual and turbidity must be examined by a certified Operator within 72 hours after the tests are conducted.

Operators typically review SCADA trending and continuous monitoring test results every 24 hours except on weekends for many operational/critical parameters, including but not limited to the following:

- raw and treated water daily flow volumes and raw water flow rate;
- filtrate turbidity for each filter/membrane rack;

Treatment Process Monitoring

- filtrate flow/UV flow;
- free chlorine residual after contact time and chlorine tank levels;
- UV dosage;
- UV transmittance (UVT);
- standpipe (SP) levels at the BPSs; and
- coagulant dosage.

In addition to reviewing SCADA data, the Operators also print and review a "Daily Report", listing "Operations Data Summary" information. After the Operators perform the review of the continuous monitoring test results and summary information, they record specific relevant data such as maximums, minimums, averages and instantaneous values, as applicable, on the daily operational log sheets (spiral bound).

- **All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.**

Subsection 6-5(1) paragraph 5i and subsection 6-5(1.1) paragraph 1 of Schedule 6 of O.Reg. 170/03 set out the standards for continuous monitoring equipment that is used to conduct sampling and testing required by the Regulation. In summary, these subsections state that in the event of an exceedance of a standard, the continuous monitoring equipment must be equipped with either alarming capability and/or automatic shut-off mechanism. In the case of the Victoria Harbour DWS, these subsections apply to the chlorine and turbidity analysers located at the WTP. Further to the Regulation, the pathogen log removal/inactivation credits for the WTP, included in Schedule E of the MDWL, is based on each treatment process being fully operational and the assignment criteria being met. This section of the MDWL applies to the filtration, UV disinfection and chlorination.

When using a continuous analyser to monitor free chlorine residuals for primary disinfection, as is the case with the Victoria Harbour WTP, the Table in section 6-5 states that the minimum alarm standard shall be 0.1 mg/L less than the concentration of free chlorine required to achieve primary disinfection. However, the chlorination criterion included in Schedule E of the MDWL states that, at all times the concentration of free chlorine must be at least equal to the concentration required to achieve primary disinfection.

The Township determined the concentration of free chlorine required to achieve primary disinfection for various worst case scenarios (i.e. high flows, low temperatures and low contact tank levels). These calculations are included in the O&M manual and are used to set the critical low chlorine alarm and low low chlorine alarm. Where a critical low chlorine alarm set-point is reached, an Operator is paged out and will respond immediately. Where a critical low low chlorine alarm set-point is reached, the HLPs will automatically shut-off and stop the flow of water to the distribution system. There is a 30 second delay on these chlorine alarms. Records show that the critical low chlorine alarm and low low chlorine alarm were typically set around 1.10 mg/L and 1.00 mg/L, respectively. At the typical HLP shut-off point of 1.5 metres, these set-points will achieve the 2-log inactivation of viruses by chlorination. It should be noted that the lead HLP will shut-off at 2m depth and the lag HLP will shut-off at 1.5m depth.

Section 6-5 also applies to the four continuous turbidity analysers located on the outflow line of each conventional filter/membrane rack outflow line, which are used to satisfy the turbidity monitoring requirements set out in subsection 7-3(2)(b). The maximum alarm standard for filter effluent turbidity analysers, as specified in the Table, is 1.0 NTU. However, the filter turbidity criterion set out the Procedure for Disinfection in Ontario and Schedule E of the MDWL is much more stringent. The filter criterion for the Ecodyne conventional filter is at least 0.3 NTU in 95% of the measurements in each month. The filter criterion for each Pall membrane filter is at least 0.1 NTU in 99% of the measurements each month.

Each membrane rack is set to alarm and notify an Operator if the turbidity reaches 0.2NTU and set to automatically shut-down if the turbidity reaches 0.3 NTU. There is a 60 second delay on these turbidity alarms. These set-points

Treatment Process Monitoring

and alarms ensure that the turbidity always meets the turbidity criterion required for 2-log Crypto and 3-log Giardia removal credits. Please note that the conventional filtration system was not currently in use at the time of this inspection and was not considered in this question/section of the inspection report.

The Table in Schedule E of the MDWL, item #5 of UV disinfection, states that in the event that the UV equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection, the UV equipment shall have a feature that ensures that an alarm is triggered and/or no water is directed to the users of the system. Each UV reactor operates using a 'calculated UV dose' control strategy, set on AUTO mode to achieve a target set-point dose of 45 mJ/cm². In the event that the UV dose falls below 45 mJ/cm², the UV units automatically ramp-up the intensity to 100% in an attempt to restore the dosage. Failing this, the UV unit will automatically shut-down and flow to and from the unit will stop via the pneumatic valves on either side of each unit, thereby ensuring that no water is directed to users of water system in the event that the equipment malfunctions, loses power or ceases to provide appropriate level of disinfection. Further, the UV units are individually alarmed through the PLC and SCADA systems to activate an alarm and a call-out to an Operator if there is a power failure or if the UV dose falls below 45 mJ/cm². The Auto mode, control strategy operation, target dose and set-points ensure that the minimum required pass-through dose of 40 mJ/cm² is continuously met at all times water is directed to the users of the system. The Township ensures that all the UV Credit Assignment Criteria is met as required by the MDWL, thereby ensuring that the 2-log Crpto, 3-log Giardia and 2-log virus UV inactivation credits are obtained.

The continuous monitoring equipment used for free chlorine residual testing, filter turbidity and UV dose, appears to have alarms and shut-off mechanisms that satisfy the standards described in Schedule 6 of O.Reg. 170/03 and the MDWL.

- **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.**

Subsection 6-5(1) of Schedule 6 of O.Reg. 170/03 sets out standards to be adhered to where continuous monitoring equipment is used for sampling and testing required under O.Reg. 170/03, for a parameter set out in the Table included in Schedule 6. For the Victoria Harbour DWS, this subsection applies to the continuous chlorine analyser used to monitor primary disinfection residuals at or near the intended contact time at the WTP, as well as to the continuous turbidity analysers used to monitor filter effluent. In the case of primary disinfection chlorine residual monitoring, subsection 6-5(1) paragraph 1, subparagraph i and the associated Table requires that the continuous analyser test for free chlorine residual at least once every five minutes, and test for turbidity at least once every 15 minutes.

Subsection 6-5(1) paragraph 1ii of Schedule 6 of O.Reg. 170/03 further requires that the continuous monitoring equipment used to conduct chlorine residual and turbidity testing must also record the date, time, sample location and result of every test, and at the same frequency as the test. The continuous free chlorine residual analyser and the turbidity analysers, as well as the UV monitoring equipment, measure and provide readings to the SCADA system continuously (i.e. approximately every 10 seconds).

- **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

The continuous chlorine residual analysers and the turbidimeters in use at the Victoria Harbour WTP and the rechlorination/booster stations are cleaned and verification checks are performed by Operators at least once per week. These activities are documented by Operators on the weekly check sheets, as well as in the Operator logbooks.

The continuous chlorine residual and turbidity analysers at the WTP and the portable hand-held units are serviced and calibrated on an annual basis. The annual calibrations were most recently performed in May 2017. However,

Treatment Process Monitoring

the turbidimeters on the effluent line of the three Pall membranes were replaced in and around the summer/fall of 2017.

Operations Manuals

- The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.
- The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.

Condition 16.0 Operations and Maintenance Manual (O&M) of the MDWL lists the minimum content that the O&M manual must contain. Condition 16.2.4 specifically requires that the O&M contain procedures for monitoring and recording the in-process parameters necessary for control of the system and for assessing the performance of the system. The Township's O&M manual did contain some procedures for monitoring and recording the in-process parameters for control of the system and assessing the performance of the system. However, the procedures were lacking detail with respect to the Duty UV Sensor Checks and Calibrations, and the filter performance criterion for filtrate turbidity.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

Logbooks

- Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.

Security

- The owner had provided security measures to protect components of the drinking water system.

The Victoria Harbour WTP, the LLPS and the rechlorination/BPSs are locked when operational staff are not onsite and are equipped with entry alarms. The WTP is also surrounded by a locked fence. Additionally, the access ladders for the three standpipes are disabled to prevent unauthorized entry and the access hatches to the below grade valve chambers are locked. The WTP and rechlorination/BPSs are typically attended by Operators five days per week; the standpipes are attended by Operators a minimum of weekly.

Certification and Training

- The overall responsible operator had been designated for each subsystem.

Subsection 23(1) of O.Reg. 128/04 states that the Owner of a municipal residential subsystem shall designate as Overall Responsible Operator of the subsystem an Operator who holds a certificate for that type of subsystem that is of the same class as or higher than the class of that subsystem. For example, the Overall Responsible Operator (ORO) of a Class III water treatment subsystem must possess a Class III or Class IV water treatment subsystem Operator's certificate. Subsection 23(4) states that if the ORO designated under subsection 23(1) is absent or unable to act, the Owner may designate an Operator who holds a certificate that is applicable to that type of subsystem and, if applicable, that is not more than one class lower than the class of the subsystem to act in the place of the ORO. Subsection 23(6) further states that subsection 23(4) shall not be relied on by the Owner for more than 150 days in any 12 month period.

The Victoria Harbour DWS is comprised of two subsystems classified under O.Reg. 128/04: a Class III Water Treatment subsystem (certificate #301) and a Class II Water Distribution subsystem (certificate #302). The

Certification and Training

Township of Tay's Environmental Superintendent serves as the ORO for the Victoria Harbour WTP and the associated distribution system. The Environmental Superintendent possesses a Class III Water Treatment Operator certificate and a Class III Water Distribution Operator certificate and is thereby adequately certified to serve as ORO for both the WTP and the distribution system. When the Environmental Superintendent is absent or otherwise unable to act (e.g. on vacation), the Environmental Lead Hand (Chief Operator) or an Operator with appropriate certification, as selected by the Director of Public Works, will temporarily serve as ORO. The Environmental Lead Hand has a Class II Water Treatment Operator certificate and a Class II Water Distribution Operator certificate. As such, he can act as temporary ORO for the WTP and the distribution system for up to 150 days in a 12 month period.

- **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

Currently, all certified Operators (except for Operator-in-Training) rotate as the Operator-in-Charge at the Plant on a six week cycle.

- **All operators possessed the required certification.**

Subsection 25(1) of O.Reg. 128/04 states that the Owner of a subsystem or a person authorized by the Owner shall designate one or more Operators as Operators-in-Charge (OIC) of the subsystem. Subsection 25(4) further states that a person who holds an Operator-in-Training certificate shall not be designated as an Operator-in-Charge. Operators associated with the Victoria Harbour Drinking Water System typically rotate as Operator-in-Charge (OIC) on a frequency dependent on operational needs. During the inspection review period, it is reported that only certified Operators served as OIC.

- **Only certified operators made adjustments to the treatment equipment.**

Any work done to the system by contracted personnel is overseen by certified Township Operators.

Water Quality Monitoring

- **All microbiological water quality monitoring requirements for distribution samples were being met.**

The Victoria Harbour DWS is classified as a Large Municipal Residential drinking water system which serves an estimated population of approximately 7,800 individuals. Based on this service population, subsection 10-2(1) of Schedule 10 of O.Reg. 170/03 requires that a minimum of 15 samples be collected within the Victoria Harbour distribution system on a monthly basis, with at least one of the 15 samples collected each week. Subsection 10-2(2) further requires that each of the distribution system samples is tested for *Escherichia coli* (E.coli), total coliforms (T.C.) and background colonies. At least 25 percent of the distribution system samples collected each month shall be tested for general bacteria populations expressed as colony counts on a heterotrophic plate count (HPC).

The Township collects microbiological samples for testing at five distribution locations each week. The current schedule for sampling rotates between 35 various locations within the distribution system; with 5-locations being sampled each week and each week's locations rotating through a 7-week schedule. Each sample is tested for E.coli, T.C. and HPC.

- **All microbiological water quality monitoring requirements for treated samples were being met.**

Section 10-3 of Schedule 10 of O.Reg. 170/03 states that the Owner of a drinking water system shall ensure that a treated water sample is collected at least once every week and tested for E.coli, total coliforms and HPC. In accordance with section 6-2 of Schedule 6, these samples shall be collected at every treated water point of entry (POE) into the distribution system.

Water Quality Monitoring

The discharge header at the Victoria Harbour WTP is the only treated water POE location associated with the Victoria Harbour WTP. During the inspection review period, a sample was collected from this location every week and submitted for E. coli, total coliforms and HPC testing.

- **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Subsection 13-2(1) of Schedule 13 of O.Reg.170/03 states that the Owner of a Large Municipal Residential system shall ensure that (a) at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water. Subsection 13-2(2) further states that the samples taken under subsection (1) must be tested for every parameter set out in Schedule 23 (i.e. inorganic parameters). In accordance with section 6-2 of Schedule 6, these samples shall be collected at every treated water POE location. For samples required to be collected every 12 months, subsection 6-1.1(5) states that the samples are collected not more than 30 days before or after the first anniversary of the day a sample was taken for that purpose in the previous 12 months.

Samples were collected from the single treated water POE location at the Victoria Harbour WTP on January 16, 2017 and submitted to SGS Canada Inc. for analysis of Schedule 23 (inorganic) parameters. Samples were previously collected from this location for analysis of Schedule 23 parameters on January 27, 2016.

- **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Subsections 13-4(1) and (2) of Schedule 13 of O.Reg.170/03 state that the Owner of a Large Municipal Residential system shall ensure that at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water, and is tested for every parameter set out in Schedule 24 (i.e. organic parameters). In accordance with section 6-2 of Schedule 6, these samples shall be collected at every treated water POE location. For samples required to be collected every 12 months, subsection 6-1.1(5) states that the samples are collected not more than 30 days before or after the first anniversary of the day a sample was taken for that purpose in the previous 12 months.

Samples were collected from the treated water POE location at the Victoria Harbour WTP on January 16, 2017 and submitted to SGS Canada Inc. for analysis of Schedule 24 (organic) parameters. Samples were previously collected from this location for analysis of Schedule 24 parameters on January 27, 2016.

- **All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.**

As of January 1, 2017, drinking water system owners/operating authorities are required to take samples quarterly and have them tested for HAAs as outlined in O. Reg. 170/03 (subsection 13-6.1 of Schedule 13).

Effective January 1, 2020, a standard for HAAs will be introduced. The standard will be 0.08 mg/L (80 µg/L) and will be expressed as an RAA.

The Township sampled and tested for HAAs once every three months, as prescribed. Samples were collected in January, April, July and October, 2017 and January 2018. The records show that the three of the four samples were collected from a home located near the end of Glacier Trail in Midland Bay Woods. One sample was collected on 1st Avenue sample station#10-12 and contained a significantly higher concentration of HAAs than the Glacier Trail location. Both locations are likely to have a relatively long maximum residence time within the distribution system, where there may be an elevated potential for the formation of HAAs. However, at extreme residence times HAAs may decline, especially in warmer temperatures. It is recommended that the Township rotate HAA sample locations in order to characterize the system with respect to HAA concentrations.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

Water Quality Monitoring

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

Trihalomethanes (THMs) are collected once every three months, as prescribed. The Township samples THM's every January, April, July and October each year.

Historic records show that the Township has consistently sampled THMs from a home located near the end of Glacier Trail in Midland Bay Woods. Glacier Trail is a dead-end street at a significant distance from the WTP. It is likely to have a relatively long maximum residence time within the distribution system, where there is an elevated potential for the formation of trihalomethanes. However, it is recommended that the Township rotate THM sample locations in order to characterize the system with respect to THM concentrations.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

- **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

Nitrate/nitrite samples were collected once every three months, as prescribed. The Township samples nitrates/nitrites every January, April, July and October each year.

- **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

A sample was collected from the treated water POE location at the Victoria Harbour WTP on January 16, 2017 and submitted to SGS Canada Inc. for sodium analysis. The previous sodium sample was collected from the same location on January 27, 2016.

- **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Fluoridation is not practiced at the Victoria Harbour WTP. A sample was collected from the treated water POE location at the WTP on January 16, 2017 and submitted to SGS Canada Inc. for fluoride analysis. The previous fluoride sample was collected from the same location on January 27, 2016.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

A review of microbiological test results indicates that free chlorine residual tests were conducted in conjunction with the collection of treated and distribution water microbiological samples during the inspection review period. The chlorine residual measurements are recorded by the Operator on the laboratory chain of custody/sample submission forms, which are retained by the Owner. The chlorine residual measurements are then transferred from the chain of custody by the laboratory onto the resulting analytical test result report.

Water Quality Assessment

- **Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

The standards for drinking water quality in Ontario are prescribed in O.Reg.169/03 "Ontario Drinking Water Quality Standards" (ODWQS). A review of analytical laboratory results and monitoring data indicated that the water provided by the system met the prescribed drinking water quality standard values.

Reporting & Corrective Actions

- **Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other**

Reporting & Corrective Actions

steps that were directed by the Medical Officer of Health.

A grab sample result indicating that the concentration of free chlorine residual in the distribution system is less than 0.05mg/L is prescribed as an adverse result and the Township is required to take immediate corrective action, including flushing to restore adequate residual and other steps directed by the MOH.

A review of distribution chlorine residual records indicate that the free chlorine residual was less than 0.05mg/L on eight (8) separate days throughout the inspection review period. The specific days and details of these events were described previously in this report. Records show that the Operators took immediate corrective actions to improve the low chlorine residuals. The corrective actions were also discussed in detail previously in this report.

- **All required notifications of adverse water quality incidents were Immediately provided as per O. Reg. 170/03 16-6.**

A grab sample result indicating that the concentration of free chlorine residual in the distribution system is less than 0.05mg/L is prescribed as an adverse result; and, the Township is required to report the adverse condition immediately to the MOH and the Spills Action Centre (SAC).

A review of distribution chlorine residual records indicate that the free chlorine residual was less than 0.05mg/L on eight (8) separate days throughout the inspection review period. The specific days and details of these events were described previously in this report. Records show that the Operators provided immediate verbal notifications to both the MOH and the SAC.

- **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**

On October 1, 2017, the free chlorine residual (FCR) leaving the water treatment plant was below the automatic shut-down set-point for free chlorine in the CT clearwell. In and around the time of this event, the FCR was recorded as 0.18mg/L at the lowest concentration and the clearwell's lowest depth was recorded as 2.29m. A chemical system leak was discovered and determined to be the cause of the low chlorine. The low chlorinated water was then directed into the distribution system and was flushed at the nearest hydrant. The Operator then took FCR readings intermittently from within the distribution system. The Operator took immediate, effective and appropriate actions and followed the Township's SOP for Low Chlorine Leaving the Plant. However, the Operator did not perform a CT calculation at or near the time of the event. It was reported to the undersigned Provincial Officer by the Operator-in-Charge at the time of the event, that the CT calculator that he was directed to use in such situations was not available at the Plant.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

- **When the primary disinfection equipment, other than that used for chlorination or chloramination, has failed causing an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.**

Other Inspection Findings

- **The following issues were also noted during the inspection:**

1. As per the manufacturer, each individual UV reactor (UVR) is capable of 40mJ/cm², at a minimum UVT of 85%. Each individual UVR calculates dose automatically based on a set default input of 90%. The actual UVT of the water is monitored by the single UVT analyzer (UVT-501) common to all four UVR units. The UVT data from UVT-501 is sent to the SCADA system and the SCADA system will automatically notify an Operator when the UVT reaches 70%. This alarm set-point is less than the set default input of 90% used in the UVR's dose calculation.

Other Inspection Findings

Further, a UVT of 70% was not considered in the validation reports provided by the manufacturer.

2. The procedures in the O&M manual were lacking detail with respect to the Duty UV Sensor Checks and Calibrations, and the monitoring and recording filter performance criterion for filtrate turbidity.

3. As of January 1, 2017, drinking water system owners/operating authorities are required to take samples quarterly and have them tested for HAAs as outlined in O. Reg. 170/03 (subsection 13-6.1 of Schedule 13). Effective January 1, 2020, a standard for HAAs will be introduced. The standard will be 0.08 mg/L (80 µg/L) and will be expressed as an RAA.

4. Historic records show that the Township has consistently sampled THMs from a home located near the end of Glacier Trail in Midland Bay Woods.

5. On October 1, 2017, the free chlorine residual leaving the water treatment plant was below the automatic shut-down set-point for free chlorine residual in the CT clearwell. It was later determined through a CT calculation that CT was achieved and that primary disinfection by chlorination was met. However, the Operator did not perform a CT calculation at or near the time of the event. It was reported to the undersigned Provincial Officer by the Operator-in-Charge at the time of the event, that the CT calculator that he was directed to use in such situations was not available at the Plant.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

1. **Records did not confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

A review of records did not confirm that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free chlorine. Specifically, low chlorine residuals were observed within the seasonal water distribution system within the communities of Grandview Beach and Paradise Point. These areas have historically been affected by low distribution residuals and continued to experience low chlorine distribution residuals during 2017.

The Township is aware of the need to improve the water services in these communities and did initiate some immediate, interim and long-term solutions. For example, in 2016 the Township began the process to identify and address potential unprotected cross connections. A backflow prevention by-law #2016-76 was created and implementation began in 2016. The by-law includes specific requirements for residents in the Grandview Beach/Paradise Point communities. It has been reported by the Township that all back-flow prevention devices have been installed where cross-connections existed. In the fall of 2017, the Township began the physical process of replacing the current distribution watermain system. The Township was successful in securing Provincial and Federal funding to help with the costs of this project. The Township estimates that the replacement of the watermains will be completed in and around the fall of 2018.

Action(s) Required:

The undersigned Provincial Officer fully supports the Township of Tay in its efforts to improve water servicing in these affected communities. It is recommended that the Township strongly encourage the residents in these communities to opt for the year-round servicing option.

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. The following issues were also noted during the inspection:

1. As per the manufacturer, each individual UV reactor (UVR) is capable of 40mJ/cm², at a minimum UVT of 85%. Each individual UVR calculates dose automatically based on a set default input of 90%. The actual UVT of the water is monitored by the single UVT analyzer (UVT-501) common to all four UVR units. The UVT data from UVT-501 is sent to the SCADA system and the SCADA system will automatically notify an Operator when the UVT reaches 70%. This alarm set-point is less than the set default input of 90% used in the UVR's dose calculation. Further, a UVT of 70% was not considered in the validation reports provided by the manufacturer.
2. The procedures in the O&M manual were lacking detail with respect to the Duty UV Sensor Checks and Calibrations, and the monitoring and recording filter performance criterion for filtrate turbidity.
3. As of January 1, 2017, drinking water system owners/operating authorities are required to take samples quarterly and have them tested for HAAs as outlined in O. Reg. 170/03 (subsection 13-6.1 of Schedule 13). Effective January 1, 2020, a standard for HAAs will be introduced. The standard will be 0.08 mg/L (80 µg/L) and will be expressed as an RAA.
4. Historic records show that the Township has consistently sampled THMs from a home located near the end of Glacier Trail in Midland Bay Woods.
5. On October 1, 2017, the free chlorine residual leaving the water treatment plant was below the automatic shut-down set-point for free chlorine residual in the CT clearwell. It was later determined through a CT calculation that CT was achieved and that primary disinfection by chlorination was met. However, the Operator did not perform a CT calculation at or near the time of the event. It was reported to the undersigned Provincial Officer by the Operator-in-Charge at the time of the event, that the CT calculator that he was directed to use in such situations was not available at the Plant.

Recommendation:

1. The Township should investigate the feasibility of setting the SCADA's UVT alarm to a UVT level that coincides with the individual UVR's set default input of 90% (or greater), aligns with the manufacturer's validation curves, and is representative of the expected UVT of the filtered water.
The Township should consider measuring the UVT of the filtrate coming from each individual filter on a set frequency as well as on an ad-hoc basis.
2. The O&M manual should be updated to include more detailed instructions for the Operators when performing the monthly and 3-year UV Sensor Checks and Calibrations.
The O&M manual should be updated to include more detailed instruction for the Operators when recording and monitoring the performance criterion for filtered water turbidity (e.g. 0.1/0.3 NTU in 99/95% of monthly measurements).

The Township should refer to Schedule E of the MDWL for further guidance when preparing these instructions.

3. The Township should rotate HAA sample locations in order to characterize the system with respect to HAA concentrations via a sampling schedule that considers relative location and season/temperature. The sample

locations should include: 1) various locations where long residence times are expected; 2) locations near the booster pumping stations and after re-chlorination. The Township should monitor the results of the HAA tests as they become available and adjust the sampling schedule accordingly/appropriately. Immediate and continued attention to HAA formation should be given to the areas within Zone 2 – C8 and Zone 5 – C4 (e.g. sample station #10-12).

4. The Township should rotate THM sample locations in order to characterize the system with respect to THM concentrations via a sampling schedule that includes: 1) various locations where long residence times are expected, and 2) seasonal variations (including temperature and usage). The Township should monitor the results of THM tests as they become available and adjust the sample schedule accordingly. Immediate attention to THM formation should be given to the areas within Zone 2 – C8 and Zone 5 – C4 (e.g. sample station #10-12). These areas are likely to have relatively long maximum residence times, where there is an elevated potential for the formation of THMs.

5. The Township should include in the SOPs for Low Chlorine Leaving the Plant, directions for the Operators to perform a CT calculation in order to determine if the required level of primary disinfection by chlorine was achieved as per the Procedure for Disinfection and section 1.0 of Schedule E of the MDWL.

The Township should ensure that the information needed to perform a CT calculation manually is readily available to the Operators at all times at the WTP.

If the Township wishes the Operators to use a CT calculator, the CT calculator must be readily available at the WTP at all times.

SIGNATURES

Inspected By:

Donna Staniscia


Signature: (Provincial Officer)



Reviewed & Approved By:

Sheri Broeckel

Signature: (Supervisor)



Review & Approval Date:

Feb 21, 2018

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

MOE Audit Sample Results

Not Applicable

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2017-2018)

DWS Name: TAY AREA DRINKING WATER SYSTEM
DWS Number: 220001076
DWS Owner: Tay, The Corporation Of The Township Of
Municipal Location: Tay

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: December 20, 2017
Ministry Office: Barrie District

Maximum Question Rating: 531

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	21 / 85
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 42
Water Quality Monitoring	0 / 112
Reporting & Corrective Actions	0 / 87
Treatment Process Monitoring	0 / 133
TOTAL	21 / 531

Inspection Risk Rating 3.95%

FINAL INSPECTION RATING: 96.05%

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2017-2018)

DWS Name: TAY AREA DRINKING WATER SYSTEM
DWS Number: 220001076
DWS Owner: Tay, The Corporation Of The Township Of
Municipal Location: Tay

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: December 20, 2017
Ministry Office: Barrie District

Non-compliant Question(s)	Question Rating
Treatment Processes	
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined?	21
TOTAL QUESTION RATING	21

Maximum Question Rating: 531

Inspection Risk Rating 3.95%

FINAL INSPECTION RATING: 96.05%



STAFF REPORT

Department/Function: Public Works

Chair: Councillor Jim Crawford

Meeting Date: March 14, 2018

Report No.: PW-2018-23

Report Title: Rope DWS M.O.E.C.C. Compliance
Inspection Report

RECOMMENDATION:

That Staff Report No. PW-2018-23 regarding the 2017 M.O.E.C.C. Rope DWS Inspection be received;

And that M.O.E.C.C. report 1-F6KVP be received for information.

INTRODUCTION/BACKGROUND:

On an annual basis the Ministry of the Environment and Climate Change (M.O.E.C.C.) conducts detailed inspections of water treatment plants and the associated water distribution systems. This report reviews the most recent inspection (report attached).

ANALYSIS

The M.O.E.C.C. inspected the Rope DWS on January 30, 2018. The primary focus of this inspection is to confirm compliance with M.O.E.C.C. legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.

In response to the inspection, the M.O.E.C.C. identified two issues of non-compliance as follows:

“On November 23, 2016 the ORO did not immediately report an adverse water quality indicator the S.M.D.H.U. and the Spills Action

centre as per Ontario regulation 170/03 Section 16-6 (1) we did not contest this issue as it was evident that the ORO had not fulfilled his requirement to immediately provide a verbal notification. Instead the ORO reported the adverse the next day."

Additionally, contrary to O. Reg. 170/03 Section 16-6 (1). The ORO failed to report an exceedance of the THM's Running Annual Average on April 24, 2017 which was not reported until November 17, 2017 when a review of the test results revealed the error in reporting at which time an amended report was filed.

"The M.O.E.C.C. has directed the Municipality to shall ensure that all personnel employed by the Township that may be responsible for providing immediate notification for any prescribed adverse result of a drinking-water test conducted on any water from a drinking water system shall perform a review of:

- a) Standard Operating Procedure Element 8.1, and
- b) Schedule 16 of O.Reg.170/03.

By no later than March 31, 2018, the Township of Tay shall verify in writing via email to the undersigned Provincial Officer, that the review of items a) and b) listed above was completed by all specified personnel.

The printed full names and signatures of all personnel who completed the review shall be included in the written verification.

The Township should also consider reviewing, and modifying if need be, SOP Element 8.1 to ensure its accurateness as it relates to the requirements of O.Reg.170/03 Schedule 16 and Section 18 of the Safe Drinking Water Act, 2002."

The Township addressed the Ministry's concerns and reviewed procedures with staff to meet the M.O.E.C.C. requirement.

The Rope DWS received a final inspection rating of 95.95% from the M.O.E.C.C. and a risk rating of 4.05%.

FINANCIAL/BUDGET IMPACT:

There are no direct financial impacts associated with this report.

CONCLUSION:

This report provides Council with the M.O.E.C.C. annual inspection report and notes the non-compliance items and inspection rating.

Prepared By: Mike Emms, Water/Wastewater Superintendent

Recommended By: Date: March 6, 2018

Peter Dance
Director of Public Works

Reviewed By: Date: March 6, 2018

Robert J. Lamb, CECd, Ec.D.
Chief Administrative Officer

Ministry of the Environment and
Climate Change

Drinking Water and Environmental
Compliance Division
Barrie District Office
Unit 1201
54 Cedar Pointe Drive
Barrie ON L4N 5R7

Ministère de l'Environnement et de
l'Action en matière de changement
climatique

Division de la conformité en matière d'eau
potable et d'environnement
Bureau du district de Barrie
Bureau 1201
54, chemin Cedar Pointe
Barrie (Ontario) L4N 5R7



March 5, 2018

The Corporation of the Township of Tay
450 Park Street, P/O/ Box 100
Victoria Harbour, Ontario L0K 2A0

Attention: Mr. Robert Lamb, Chief Administrative Officer

**Re: Rope Drinking Water System
2017 Communal Drinking Water Inspection Report # 1-F6KVP**

Please find attached the Ministry of the Environment and Climate Change's final inspection report for the above facility. The report provides an assessment of compliance with applicable legislation, Licences, Permits and any other control documents.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation and Enforcement Secretariat and advice of internal/external risk experts. The Inspection Summary Rating Record (IRR), included as an appendix to this report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulation water quality testing performance.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A guide for members of municipal council" (PIBS 7889e) found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater."

Sincerely,

Donna Staniscia, Provincial Officer
Drinking Water and Environmental Compliance Division
Barrie District Office, Ministry of the Environment and Climate Change

cc.

Peter Dance, Director of Public Works, Township of Tay
Michael Emms, Water and Wastewater Superintendent
Medical Officer of Health, Simcoe Muskoka District Health Unit
Manager, MOECC Licencing and Approvals Branch
Area Officer, Ministry of Natural Resources – Southern Region, Bracebridge Office
MOECC Barrie District Office File
Severn Sound Environmental Association



Ministry of the Environment and Climate Change

ROPE DRINKING WATER SYSTEM

Inspection Report

Site Number:	220011323
Inspection Number:	1-F6KVP
Date of Inspection:	Jan 30, 2018
Inspected By:	Donna Staniscia

OWNER INFORMATION:

Company Name:	TAY, THE CORPORATION OF THE TOWNSHIP OF	Unit Identifier:	
Street Number:	450		
Street Name:	PARK St		
City:	VICTORIA HARBOUR		
Province:	ON	Postal Code:	L0K 2A0

CONTACT INFORMATION**INSPECTION DETAILS:**

Site Name:	ROPE DRINKING WATER SYSTEM
Site Address:	204 RUTA RD WAUBAUSHENE L0K 2C0
County/District:	Tay
MOECC District/Area Office:	Barrie District
Health Unit:	SIMCOE MUSKOKA DISTRICT HEALTH UNIT
Conservation Authority:	
MNR Office:	
Category:	Small Municipal Residential
Site Number:	220011323
Inspection Type:	Unannounced
Inspection Number:	1-F6KVP
Date of Inspection:	Jan 30, 2018
Date of Previous Inspection:	Nov 03, 2016

COMPONENTS DESCRIPTION

Site (Name):	MOE DWS Mapping	Sub Type:	
Type:	DWS Mapping Point		

Site (Name):	RAW WATER	Sub Type:	Surface
Type:	Source		

Comments:

The Rope Water Treatment Plant (WTP) draws water from the Severn Sound in Georgian Bay, which forms part of Lake Huron. The intake structure is located approximately 460 metres from shore in approximately 2.3 metres of water. The intake structure consists of a 300 mm diameter stainless steel intake screen which is connected to a 2.82 m long, 200 mm diameter stainless steel pipe that is in turn connected to the 100 mm diameter intake pipe. Raw water is directed by gravity through the intake pipe which consists of approximately 507 m of 100 mm diameter polyethylene enclosed in 127 mm diameter galvanized steel pipe casing extending from the intake structure to the low lift pumps. The intake pipe is reportedly inspected and cleaned on an annual basis.

A 12 mm diameter polyethylene tube attached to the outside of the intake pipe is used to feed chlorine for the provision of zebra mussel control and pre-chlorination. The zebra mussel control chlorination system consists of a 100 Litre (L) sodium hypochlorite solution storage tank and one chemical metering pump, located within the WTP and used to feed sodium hypochlorite solution via the feed line to the intake structure. The zebra mussel control system is operated on a seasonal basis when raw water temperature exceeds 16 degrees Celsius or more frequently if

observations and inspections warrant. When zebra mussel control is necessary, the chemical metering pump is put into the Auto position which interlocks operation of the metering pump with the operation of the low lift pump controls.

Site (Name): LOW LIFT PUMP STATION

Type: Source

Sub Type: Surface Water

Comments:

The low lift pumping system consists of two low lift submersible pumps, each rated at 5 L/s at a total dynamic head of 22.9 m. The low lift pumps are set in 200 mm diameter vertical steel casings with a 100 mm diameter vertical intake swab launcher pipe. A 100 mm diameter raw water discharge header connects the low lift pumps to the water treatment plant. Gate valves provide isolation control on the process pipe. Operation of the low lift pumps is controlled by the level in the treated water clear well. The pumps are called to service and shut down when the water level in the clear well hits operator-adjustable levels. The pumping volumes and flow rates from the low lift pumps are monitored on the raw water supply line to each membrane train in the water treatment plant.

Site (Name): TREATED WATER

Type: Treated Water POE

Sub Type: Pumphouse

Comments:

The Rope WTP is located at 204 Ruta Road in Waubaushe, Tay Township. The facility is situated above the treated water reservoir and contains all water treatment works, high lift pumps and controls. Treatment for the Rope Drinking Water System consists of seasonal pre-chlorination for zebra mussel control, chemically-assisted membrane filtration, Ultraviolet (UV) irradiation, and chlorination for secondary disinfection.

The filtration component of the works consists of two membrane trains, each consisting of one ZENON Environmental EC-04 enhanced coagulation skid and one ZENON Environmental MDW-04 packaged membrane water treatment plant. Each membrane train is rated at 274 cubic metres per day (m³/day), providing 100% redundancy. Each enhanced coagulation skid consists of a coagulant tank, flocculation tank, coagulant injection system, and a pH adjustment system. The coagulant, PolyAluminum Chloride (SternPAC) is injected into the 75 mm raw water feed line. A static mixer effectively mixes the coagulant in the raw water. Sulphuric acid can be injected into the 75 mm raw water feed line prior to the coagulant injection point for pH control. The pH adjustment system is only intermittently used in response to a significant change in raw water pH. The flocculation tank includes a flocculator which slowly mixes the coagulated water to produce floc which can then be filtered from the water by the membranes.

Each membrane water treatment train consists of a membrane tank, aeration blower, permeate pump, backwash tank and pump, and human machine interface (HMI) control panel. Each membrane tank includes a membrane cassette assembly consisting of three ZeeWeed "Outside-In", immersed hollow fiber filtration modules, and one spare module space. The membranes have a pore size of 0.1 microns, capable of removing particulate matter including Giardia cysts and Cryptosporidium oocysts. The permeate pump draws water through the membranes and to the UV disinfection units. The backwash pump reverses the flow of water through the membranes for periodic cleaning (backpulse) using water from the backwash tank. After backpulsing, permeate is diverted to the backwash storage tank.

An on-line turbidimeter is installed on each membrane train and supplied with permeate (filtered effluent) on a continuous basis. The turbidimeters are equipped with 4-20 milli-Amp (mA) outputs linked to the Programmable Logic Controller (PLC) for alarming and control purposes, as well as to the Supervisory Control And Data Acquisition (SCADA) system for trending. The HMI control panel displays readings for the influent and effluent flow rate and total flow for each membrane train, as well as turbidity and pressure readings. The membrane system is automatically controlled by the level in the membrane tank. The membrane trains are configured to shut down should set points for water levels, turbidity, pressure or UV intensity be exceeded.

Permeate is directed to the primary disinfection system prior to entering the clear well. The primary disinfection

system consists of two Trojan UV Swift SC B-04 disinfection units, only one of which is 'on duty' at any given time. Both units are rated for a flow of 274 m³/day with a wave length illumination of 254 nanometers and a light flux of at least 40 milli-Joules per square centimeter (mJ/cm²). Each UV unit consists of a stainless steel reactor chamber housing four low pressure amalgam lamps in protective quartz sleeves, a UV intensity sensor and a HMI. Each control panel displays readings from the UV intensity sensor and the individual lamp status indicators, as well as a running hour meter. The control panel is linked with the controls for the membrane filtration trains and configured to alarm and shut down the membrane trains should UV intensity fall below factory calibrated setpoint necessary to ensure a dosage of 40 mJ/cm² for primary disinfection purposes. The UV control panel is also linked to the SCADA system. The disinfection chlorination system consists of two 100 L sodium hypochlorite solution storage tanks and two chemical metering pumps with nameplates indicating rated capacities of 4.9 L/hr. Sodium hypochlorite solution is injected after UV disinfection, prior to the discharge of treated water into the clear well with contact time. The chemical metering pumps are automatically controlled on start-up of the membrane trains. The metering pumps operate at an operator-adjustable fixed rate. The metering pumps alternate duty, and are configured for automatic switch-over should the duty pump fail. Treated water discharges into the 50.5 m³ capacity reinforced concrete clear with contact time. The tank also serves as a storage reservoir. It is located entirely within the footprint of the pumphouse. Treated water is discharged to one end of the clear well and the high lift pumps draw from the opposite end. There is an overflow to ground 3.0 metres from the south wall and a flanged drain pipe 1.5 m from the south wall. The overflow pipe is above ground and protected by two screens. Treated water is conveyed to the distribution system by three variable speed high lift pumps: two rated at 5 L/s at 45 m TDH and one rated at 2 L/s at 45 m TDH via a 50 mm to 100 mm diameter treated water discharge header.

One continuous on-line analyzer measuring free chlorine residual concentration and a particle counter are supplied with a treated water sample from the high lift discharge. The chlorine analyzer monitors chlorine residual for primary and secondary disinfection purposes. The particle counter is intended to monitor particulate in the water for membrane integrity purposes. Each of the analyzers is equipped with a 4-20 mA output for continuous monitoring and alarming purposes.

One 80 kW standby diesel generator is installed within the pumphouse and is designed to power key components of the works during power interruptions.

Site (Name): WASTE WATER TREATMENT

Type: Other

Sub Type: Other

Comments:

Residual particulate from the membrane backpulsing is sent to a backwash sump pit. The sump pit discharges by gravity to a 41 m³ underground backwash settling tank located outside and to the west of the water treatment plant. The backwash settling tank provides the time necessary for solids to settle. A supernatant pump rated at 2.5 L/s at a total dynamic head of 5 m discharges the supernatant to an adjacent drainage ditch where it flows overland by gravity to Georgian Bay. Settled sludge is removed periodically from the backwash settling tank by a vacuum truck and disposed of at the Victoria Harbour Water Pollution Control Plant for further treatment.

Site (Name): DISTRIBUTION (WATER INSPECTION)

Type: Other

Sub Type: Other

Comments:

The Rope Drinking Water System serves a population of approximately 70 persons (26 equivalent residential units). There are no institutional, commercial or industrial properties served by the system. The distribution system consists of approximately 430 metres of four and six inch PVC water mains, seven main isolation valves and four hydrants. The four hydrants in the system are used for system maintenance only, and are not capable of fire protection. There are no storage facilities associated with the distribution system.

INSPECTION SUMMARY:

Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water related policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment and distribution components as well as management practices.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The Rope Drinking Water System (DWS) is a surface water system which services the Rope subdivision, with a population of approximately 70 persons (26 residences), located in the community of Waubaushene, Township of Tay.

The DWS consists of both treatment and distribution subsystems; and both are owned and operated by the Corporation of the Township of Tay, hereinafter referred to as the Township. The Rope DWS is categorized as a Small Municipal Residential drinking water system, as defined and regulated under the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation (O.Reg.)170/03.

The Rope DWS is comprised of the Rope Water Treatment Plant (WTP), classified as a Class II Water Treatment subsystem, and the Rope distribution system, classified as a Class I Water Distribution subsystem. The distribution system consists entirely of residential service connections. The source water for the Rope WTP is drawn from Severn Sound of Georgian Bay, Lake Huron. Treatment at the Rope WTP consists of seasonal pre-chlorination for zebra mussels, chemically-assisted membrane filtration, ultraviolet (UV) disinfection and chlorination for secondary disinfection.

On January 30, 2018, Provincial Officer Donna Staniscia, conducted an on-site physical inspection of the Rope DWS. The inspection also included a review of relevant documents and data. This inspection report encompasses an inspection review period between November 3, 2016 and January 30, 2018. This inspection was conducted pursuant to section 81 of the Safe Drinking Water Act in order to assess compliance with the requirements of O.Reg.170/03.

During the inspection review period, the Township was operating under the following control documents:
Permit to Take Water (PTTW): 2756-8UKPGS;
Municipal Drinking Water Licence (MDWL): 129-101 Issue #4;
Drinking Water Works Permit (DWWP): 129-201 Issue #2.

Introduction

Capacity Assessment

- **There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.**

Through the PTTW, DWWP and the MDWL, the Township is required to have continuous flow measurement and recording for:

- 1) the flow rate and daily volume of water takings from Georgian Bay – Lake Huron;
- 2) the flow rate and daily volume of water entering and leaving each of the two membrane filtration system trains;
- 3) the flow rate and daily volume of water entering and leaving each of the two UV disinfection systems;
- 4) the flow rate and daily volume of treated water that flows from the treatment subsystem(s) to the distribution system.

There are five flow meters installed at the Rope WTP. A raw water flow meter is located on the supply line to each of the two membrane filter trains. The sum of these two flows is equivalent to the raw water takings. A membrane filtration flow meter is located on the outlet from each membrane filter train, after the fill-line to the backwash pulse tank but before the backwash waste line. A treated water flow meter is located after the treated water clearwell and prior to the distribution system and is equivalent to the flow rate of treated water entering the distribution system.

The flow meters are linked to the Supervisory Control And Data Acquisition (SCADA) system for monitoring and trending purposes. The flow rates are continuously measured and recorded. The records maintained include the total daily volume, minimum/maximum/average flow rates and the number of hours per day that low and high lift pumps are in operation. These records are maintained electronically, as well as within the facility record keeping mechanisms, and can be used to determine daily, weekly, monthly and annual trends.

- **The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.**

Condition 1.2 and Table 2 of Schedule C of the Municipal Drinking Water Licence 129-101 state that the maximum flow rate of water that flows into the membrane filtration system (each train) shall not exceed 2.5 litres per second (l/s); and the maximum flow rate into the UV system (each unit) shall not exceed 3.2 l/s. Filter flow is set seasonally such that filter flow during the winter months is around 0.5L/s and during the summer months is around 0.8L/s,

Condition 1.1 and Table 1 of Schedule C of the Municipal Drinking Water Licence 129-101 state that the maximum daily volume of treated water that flows through the membrane filtration system (each train) shall not exceed the rated capacity of 216 cubic metres per day (m³/d); and that the maximum daily volume of treated water that flows through the UV system (each unit) shall not exceed the rated capacity of 274 m³/d.

A review of records and daily volume trending data indicate that the prescribed rated capacities and the maximum flow rates were not exceeded during this inspection review period. For this inspection review period, the maximum raw water daily taking occurred in December 2016 and was 99 m³, approximately 36% of the permitted takings as per the PTTW; the maximum treated water flow through the filters/UV system was 58m³, approximately 22% of the rated capacity (based on the UV system capacity).

Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

A detailed description of the Rope DWS is set out in Schedule A of the Drinking Water Works Permit 129-201 (Issue 1). Based on observations made during the physical inspection, the system description contained with the Permit appears to be accurate and up-to-date.

Treatment Processes

- **The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.**

A Hach bubble trap was installed on the influent line to each 1720E Hach turbidity analyzer in order to obtain more accurate turbidity readings. A Form 2 was prepared and signed as required.

- **Records Indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.**

Section 1.4 of Schedule 1 of O.Reg.170/03 requires that the Owner of a drinking water system that obtains water from a surface water supply ensures the provision of water treatment equipment that is designed to be capable of chemically-assisted filtration or an equivalent, and is designed to be capable of achieving primary disinfection in accordance with the Ministry's "Procedure for Disinfection of Drinking Water in Ontario" (Procedure of Disinfection) including at least 99% (2 log) removal/inactivation (R/I) of *Cryptosporidium* oocysts (Crypto), at least 99.9% (3 log) R/I of *Giardia* cysts (*Giardia*), and at least 99.99% (4 log) R/I of viruses by the time water enters the distribution system; and of which at least 0.5-log removal/inactivation of *Giardia* and 2-log R/I of viruses must be provided through the disinfection portion of the overall treatment process.

Treatment at the Rope WTP consists of membrane filtration, UV disinfection and chlorination. Schedule E of the MDWL specifically lists the log removal/inactivation credits assigned to each individual treatment process in-place at the WTP. Both Schedule E of the MDWL and the Procedure for Disinfection list certain criteria specific to each treatment type (i.e. membrane filtration, UV and chlorination) that must be met in order to achieve the respective log removal/inactivation credits.

There are two membrane filter trains at the WTP, each rated at 2.5 L/s, running in parallel and providing 100% redundancy. A coagulant system is in-use with the membranes. Each enhanced coagulation skid consists of a coagulant tank, flocculation tank, coagulant injection system, and a pH adjustment system. The coagulant, PolyAluminum Chloride (SternPAC) is injected into the raw water feed line. A static mixer effectively mixes the coagulant in the raw water. The flocculation tank includes a flocculator which slowly mixes the coagulated water to produce floc which can then be filtered from the water by the membrane filters. The two membrane filter trains at the Rope WTP back-pulse every 15 minutes for 20 seconds and upon start-up of the low lift pumps. Backwash water is directed to a settling tank which is pumped out when it reaches a certain depth. Filters are cleaned in place with sodium hypochlorite and citric acid when necessary (approximately every six months), based on the pressure gradient across the filters (i.e. when the transient membrane pressure (TMP) reaches -10 psi).

Each of the two membrane filter effluent lines at the Rope WTP is equipped with an online continuous Hach 1720E turbidity analyser. A dedicated turbidimeter has been installed on the outflow line of each membrane filter. Each filter is set to alarm and notify an Operator should the turbidity reach 0.2 NTU. In order to monitor the filtrate turbidity against the required monthly performance criteria, each day the total number of turbidity readings above 0.1 NTU is calculated as a daily percentage using the SCADA data; at the end of the month, the monthly percentage is calculated. Further sufficing regulatory and Approval requirements, manual direct integrity testing (i.e. pressure decay test) is performed on the membranes once per week. An online LaserTrac Model PC 2400 D particle counter is installed on the filtered water line to the UV disinfection units but is not currently being used. According to the records and trending data, the performance criteria for filtered water turbidity of less than or equal to 0.1 NTU in 99% of measurements each month was not met during the inspection review period.

See Other Inspection Findings

There are two Trojan UV Swift SC B04 units installed at the Rope WTP. Each unit is capable of supplying a minimum required UV dose of 40 mJ/cm² at the designed maximum flow rate of 3.2 L/s (or approximately 11.0

Treatment Processes

m³/hour). Typical flow rates are approximately 0.8 L/s, directed towards the UV units. The UV units operate on a UV intensity set point control strategy and are configured to shut down if the UV intensity falls below 27.5 watts per centimetre squared (W/cm²). This ensures that the minimum required dosage of 40 mJ/cm² is provided at all times when water flows through the units. Further sufficing the assignment criteria listed in the MDWL and the Procedure for Disinfection, the UV sensors are validated against a reference UV sensor each month and annually against a Master Reference Assembly. A review of SCADA data and records indicate that the UV system achieved the assigned log inactivation credits as per Schedule E of the MDWL and achieved primary disinfection by UV in accordance with the Procedure for Disinfection.

After the UV disinfection system, the water is injected with a sodium hypochlorite solution prior to entering the clear well. The 50.5 m³ clear well, without baffles, provides sufficient contact time prior to discharge into the distribution system via the three variable speed high lift pumps (HLPs). Normal operation is one HLP. A continuous on-line chlorine analyser is linked to the SCADA for monitoring, alarming and recording. Should the chlorine residual fall below the low residual set-point and/or should the depth in the clear well fall below the low level set-point, an alarm will sound and an Operator will be notified. There is no automatic shut-down associated with low chlorine residual. A review of records and SCADA trending indicates that at all times during the inspection review period, the CT provided was greater than the CT required to achieve the log removal credits assigned to the chlorination system used for primary disinfection.

Overall, a review of records indicated that all the treatment equipment was operated in a manner that achieved the design capabilities required under O.Reg.170/03, the MDWL and the Procedure for Disinfection at all times that water was being supplied to consumers during this inspection review period.

- **Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.**

In addition to primary disinfection, the chlorination system in-place at the WTP is also used to provide secondary disinfection. The system provides and maintains the free available chlorine residual necessary for secondary disinfection purposes intended to reduce the potential for microbial re-growth within the distribution system, and in accordance with section 1-5 of Schedule 1 O.Reg.170/03.

During the inspection review period, a free chlorine residual test was conducted at one location in the distribution system on every week day, with the exception of statutory holidays. The results of the tests are recorded on the form "Tay Water Treatment and Distribution Systems, Daily Test – Rope". Free chlorine residuals are also measured at the same time and same location as the collection of samples in the distribution system for microbiological analysis.

Records reviewed indicate that the free chlorine residual within the distribution system was never less than 0.05 mg/l.

- **The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03.**

There are two Trojan UV Swift SC B-04 disinfection units in place at the DWS. The two units alternate duty position via a manual transfer and are not operated simultaneously. Each UV unit is operated to provide a UV intensity of 27.5 W/cm² (operational set-point) which ensures that a UV dosage of 40 mJ/cm² is delivered at the maximum permitted flow rate of 3.2 L/s and equivalent rated capacity of 274 m³/day. In the event that the UV intensity falls below 27.5 W/cm², an alarm and page-out to an Operator will occur, the low-lift pumps will automatically shut-down and the membrane units will fault.

Treatment Processes

The UV control cabinet includes a human machine interface (HMI) which enables operational staff to verify, among other parameters, the operational status of each lamp at the WTP. The control cabinet is linked to the SCADA system for continuous monitoring, alarming and recording purposes, including UV intensity. A Programmable Logic Controller (PLC) is used for alarming and to control the automatic shut-down of the low lift pumps. UV transmittance is also measured on a weekly basis by operational staff as part of the weekly lab analyses.

The alarms and automatic shut-off mechanisms associated with the UV system satisfy the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03.

Treatment Process Monitoring

- **Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit Issued under Part V of the SDWA, or at/near a location where the Intended CT has just been achieved.**

The continuous free chlorine analyzer located at the WTP draws treated water from the discharge header downstream of the treated water reservoir/clear well, where sufficient contact time has been afforded.

- **Continuous monitoring of each filter effluent line was being performed for turbidity.**

Each of the two membrane trains is equipped with a Hach 1720E online turbidimeter which measures filtrate turbidity on a continuous basis. The turbidimeters are equipped with 4-20 milli-Amp (mA) outputs linked to a PLC for alarming and control purposes, as well as to the SCADA system for trending. The filters are configured to shut down the low-lift pumps if the effluent turbidity exceeds 0.2 NTU. A call-out to an Operator will also occur at this same set-point.

- **The secondary disinfectant residual was measured as required for the distribution system.**

During the inspection review period, a free chlorine residual test was conducted at one location in the distribution system on every week day, with the exception of statutory holidays. The results of the tests are recorded on the form "Tay Water Treatment and Distribution Systems, Daily Test – Rope". Free chlorine residuals are also measured at the same time and same location as the collection of samples in the distribution system for microbiological analysis.

- **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

Operators review SCADA trending on a daily basis, except on weekends, and document that the review was performed on the "Daily Operational Log". Operators review the trending data for many operational/critical parameters, including but not limited to:

- raw and treated water daily flow volumes and raw water flow rates;
- filtrate turbidity for each filter/membrane rack;
- filtrate flow/UV flow
- free chlorine residuals leaving the WTP;
- coagulant dosage;
- UV intensity and transmittance.

At this same time, the Operators also review the membrane filter effluent turbidity trending for the previous 24 hours and record the percentage of readings above 0.1 NTU on the daily sheet.

- **All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.**

Treatment Process Monitoring

Subsection 6-5(1) paragraph 5i and subsection 6-5(1.1) paragraph 1 of Schedule 6 of O.Reg.170/03 set out the standards for continuous monitoring equipment that is used to conduct sampling and testing required by the Regulation. In summary, these subsections state that in the event of an exceedance of a standard, the continuous monitoring equipment must be equipped with either alarming capability and/or automatic shut-off mechanism. In the case of the Rope DWS, these subsections apply to the chlorine and turbidity analysers located at the WTP. Further to the Regulation, the pathogen log removal/inactivation credits for the WTP, included in Schedule E of the MDWL, are based on each treatment process being fully operational and the assignment criteria being met. This section of the MDWL applies to the filtration, UV disinfection and chlorination. When using a continuous analyser to monitor free chlorine residuals for primary disinfection, as is the case with the Rope WTP, the Table in section 6-5 states that the minimum alarm standard shall be 0.1 mg/L less than the concentration of free chlorine required to achieve primary disinfection. However, the chlorination criterion include in Schedule E of the MDWL states that, at all times the concentration of free chlorine must be at least equal to the concentration required to achieve primary disinfection.

The Township determined the concentration of free chlorine required to achieve primary disinfection for various worst case scenarios (i.e. high flows, low temperatures and low contact tank levels). These calculations are included in the O&M manual. The low chlorine alarm is set above the minimum concentration required to achieve primary disinfection by chlorine. Where a low chlorine alarm set-point is reached, an Operator is paged and will respond immediately. Records show that the low chlorine alarm is typically set around 0.6 mg/L and the HLP shut-off point is typically set at 180cm.

Section 6-5 also applies to the two continuous turbidity analysers located on the outflow line of each filter membrane, which are used to satisfy the turbidity monitoring requirements set out in subsection 7-3(2)(b). The maximum alarm standard for filter effluent turbidity analysers, as specified in the Table, is 1.0 NTU. However, the filter turbidity criterion set out in the Procedure for Disinfection in Ontario and Schedule E of the MDWL is much more stringent. The filter criterion for each membrane filter is at least 0.1 NTU in 99% of the measurements each month. Each membrane rack is set to alarm and notify an Operator if the turbidity reaches 0.2 NTU.

The Table in Schedule E of the MDWL, item #5 of UV disinfection, states that in the event that the UV equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection, the UV equipment shall have a feature that ensures that an alarm is triggered and/or no water is directed to the users of the system. Each UV reactor operates using a 'UV Intensity Set Point' control strategy. The UV intensity set-point is 27.5 W/cm² which will ensure that a minimum target dose of 40 mJ/cm² is achieved at the prescribed daily rated capacity and maximum flow rate of the UV system. In the event that the UV intensity falls below 27.5 W/cm², an alarm and page-out to an Operator will occur, the low-lift pumps will automatically shut-down and the membrane units will fault.

- **Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.**

Subsection 6-5(1) of Schedule 6 of O.Reg.170/03 sets out standards to be adhered to where continuous monitoring equipment is used for sampling and testing required under O.Reg.170/03, for a parameter set out in the Table included in Schedule 6. For the Rope DWS, this subsection applies to the continuous chlorine analyser used to monitor primary disinfection residuals at or near the intended contact time at the WTP, as well as to the continuous turbidity analysers used to monitor filter effluent. In the case of primary disinfection chlorine residual monitoring, subsection 6-5(1) paragraph 1, subparagraph i and the associated Table requires that the continuous analyser test for free chlorine residual at least once every five minutes, and test for turbidity at least once every 15 minutes. Subsection 6-5(1) paragraph 1ii of Schedule 6 of O.Reg.170/03 further requires that the continuous monitoring equipment used to conduct chlorine residual and turbidity testing must also record the date, time, sample location and result of every test, and at the same frequency as the test.

Treatment Process Monitoring

The continuous free chlorine residual analyser and the turbidity analysers, as well as the UV monitoring equipment, measure and provide readings to the SCADA system continuously (i.e. approximately every 10 seconds).

- **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**

The continuous chlorine residual analysers and the turbidimeters in use at the Rope WTP are cleaned and verification checks are performed by Operators at least once per week. These activities are documented by Operators on the weekly check sheets, as well as in the Operator logbooks. The continuous chlorine residual and turbidity analysers at the WTP and the portable hand-held units are serviced and calibrated on an annual basis. The annual calibrations were last performed in May 2017.

Operations Manuals

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**
- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Logbooks

- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

Security

- **The owner had provided security measures to protect components of the drinking water system.**

The Rope WTP has a locking steel door and is equipped with an intrusion alarm, linked to the alarming system for a call-out to an Operator. Signage is posted restricting access to authorized personnel. The reservoir is located beneath the WTP. It is a concrete in-ground reservoir which is accessible via a raised metal plate hatch located within the plant.

Certification and Training

- **The overall responsible operator had been designated for each subsystem.**

Subsection 23(1) of O.Reg.128/04 states that the Owner of a municipal residential subsystem shall designate as Overall Responsible Operator (ORO) of the subsystem an operator who holds a certificate for that type of subsystem that is of the same class as or higher than the class of that subsystem. Subsection 23(4) states that if the ORO designated under subsection 23(1) is absent or unable to act, the owner or operating authority may designate an operator who holds a certificate that is applicable to that type of subsystem and, if applicable, that is not more than one class lower than the class of the subsystem to act in the place of the ORO; but for not more than 150 days in any 12 month period.

The Rope Drinking Water System is comprised of two subsystems classified under O.Reg. 128/04: a Class II Water Treatment subsystem (certificate #1915) and a Class I Water Distribution subsystem (certificate #852). The Township of Tay's Environmental Superintendent serves as the ORO for the WTP and the associated distribution system. The Environmental Superintendent possesses a Class III Water Treatment Operator certificate and a Class III Water Distribution Operator certificate and is thereby adequately certified to serve as ORO for both the WTP and the distribution system. When the Environmental Superintendent is absent or otherwise unable to act (e.g. on

Certification and Training

vacation), the Environmental Lead Hand (Chief Operator) or an Operator with appropriate certification, as selected by the Director of Public Works, will temporarily serve as ORO. The Environmental Lead Hand has a Class II Water Treatment Operator certificate and a Class II Water Distribution Operator certificate. As such, he can act as temporary ORO for the WTP and the distribution system for up to 150 days in a 12 month period.

- **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

Subsection 25(1) of O.Reg.170/03 states that the Owner of a subsystem or a person authorized by the Owner shall designate one or more operators as Operators-in-Charge (OIC) of the subsystem. Subsection 25(4) further states that a person who holds an Operator-in-Training certificate shall not be designated as an Operator-in-Charge.

Operators associated with the Rope DWS typically rotate as OIC every six weeks, depending on operational needs. Logbook entries indicate which operator is serving as OIC at any given time.

- **All operators possessed the required certification.**

Subsection 25(1) of O.Reg.170/03 states that the Owner of a subsystem or a person authorized by the Owner shall designate one or more operators as Operators-in-Charge (OIC) of the subsystem. Subsection 25(4) further states that a person who holds an Operator-in-Training certificate shall not be designated as an Operator-in-Charge.

Operators associated with the Rope DWS typically rotate as OIC every six weeks, depending on operational needs. Logbook entries indicate which operator is serving as OIC at any given time.

- **Only certified operators made adjustments to the treatment equipment.**

Water Quality Monitoring

- **All microbiological water quality monitoring requirements for distribution samples prescribed by legislation were being met.**

Section 11-2 of Schedule 11 of O.Reg.170/03 states that the Owner of a small municipal residential drinking water system shall ensure that a distribution water sample is collected at least once every two weeks, if the required treatment equipment is in place and is operated as required. The sample must be tested for E.coli, total coliforms and HPC.

During the inspection review period, the Township met the sampling requirements. For most weeks, a sample was collected from both the West Blow Off and East Blow off locations. All samples were tested for E.coli, total coliforms and HPC.

The Township also collected a microbiological sample from the raw water prior to treatment and the treated water leaving the WTP in most weeks. All raw water samples were also tested for E.coli, total coliforms and HPC.

- **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Subsection 13-2(3) of Schedule 13 of O.Reg.170/03 states that the Owner of a Small Municipal Residential system shall ensure that (a) at least one water sample is taken every 60 months, if the system obtains water from a raw water supply that is surface water, as is the case with the Rope DWS. In accordance with section 6-2 of Schedule 6, these samples shall be collected at every treated water POE location.

Samples were collected from the treated water POE location at the Rope WTP in January 2017 and submitted for the analysis of Schedule 23 (inorganic) parameters. Inorganic samples were previously collected and tested in January, 2015.

Water Quality Monitoring

- **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Subsections 13-4(3) of Schedule 13 of O.Reg.170/03 state that the Owner of a Small Municipal Residential system shall ensure that at least one water sample is taken every 60 months, if the system obtains water from a raw water supply that is surface water, and is tested for every parameter set out in Schedule 24 (i.e. organic parameters). In accordance with section 6-2 of Schedule 6, these samples shall be collected at every treated water POE location.

Samples were collected from the treated water POE location at the Rope DWS in January 2017 and submitted for the analysis of Schedule 24 (organic) parameters. Organic samples were previously collected and tested in January 2015.

- **All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.**

As of January 1, 2017, drinking water system owners/operating authorities are required to take samples quarterly and have them tested for HAAs as outlined in O. Reg.170/03 (subsection 13-6.1 of Schedule 13).

Effective January 1, 2020, a standard for HAAs will be introduced. The standard will be 0.08 mg/L (80µg/L) and will be expressed as an RAA.

The Township sampled and tested for HAAs once every three months, as prescribed. Samples were collected in January, April, July and October, 2017 and January 2018. At the time of this report, the RAA for HAA is 87ug/L.

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

Trihalomethane samples were collected once every three months, as prescribed. During this inspection review period, samples were collected in January, April, July and October of 2017 and January 2018.

All of the samples were taken from the east blow-off. This location is likely to have a relatively long maximum residence time within the distribution system, where there is an elevated potential for the formation of trihalomethanes.

- **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**

Nitrate/nitrite samples were collected once every three months, as prescribed. During this inspection review period, samples were collected from the WTP POE in January, April, July and October of 2017 and January 2018.

- **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

A sample was collected from the treated water POE location at Rope DWS in January 2017 and January 2018. The previous sodium sample was collected in January 2015.

- **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Fluoridation is not practiced at the Rope DWS. A sample for naturally occurring fluoride was collected from the treated water location at the WTP in January 2017 and January 2018. The previous fluoride sample was collected from the same location on January 2015.

- **All water quality monitoring requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit were being met.**

Water Quality Monitoring

Pursuant to Schedule C, Condition 4.2 and 4.4 of the MDWL, the Owner shall ensure that Total Suspended Solids (TSS) is tested and monitored in the outlet of the wastewater holding tank on a monthly basis. The annual average concentration of these samples must not exceed 15 mg/L TSS.

Records indicate that the TSS is tested on a weekly basis and that the monthly average did not exceed 15 mg/L during the inspection review period.

Condition 1.6.2 of Schedule C of the MDWL states that continuous monitoring and recording, with a minimum testing frequency of every five minutes and a minimum recording frequency of every four hours, shall be carried out for the following UV disinfection parameters: flow rate through UV units, UV intensity and lamp status. Condition 1.6.3 requires that the recording of these parameters must be at least once every five minutes during an alarm situation.

The SCADA system at the Rope WTP continuously measures and records the UV intensity and flow every 10 seconds, during normal operation and alarm scenarios.

Condition 1.6.4 states that a monthly summary report shall be prepared at the end of each calendar month, which sets out the time, date and duration of each UV equipment alarm, the volume of water treated during each alarm period and the actions taken by the operating authority to correct the alarm situation. A major UV alarm will automatically cause the low lift pumps, filter trains and UV units to shut-down sequentially; and an Operator call-out. The Operators record the date, time and event details, including corrective actions, in the logbook. The MOECC Approvals and Licencing Branch agreed that the Township does not have to summarize the volume of water passing through the UV units during an alarm scenario, as the system is equipped with automatic shut-off and will not allow untreated water to enter into the distribution system.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

Subsection 6-3(1) of Schedule 6 of O.Reg.170/03 states that if the Regulation or an approval, municipal drinking water licence or order, requires a water sample to be taken and tested for a microbiological parameter, a free chlorine residual test must be conducted at the same time from the same location.

A review of test results indicates that free chlorine residual tests were conducted in conjunction with the collection of treated and distribution water microbiological samples during the inspection review period. The chlorine residual measurements were recorded by the operator on the laboratory chain of custody/sample submission forms. The chlorine residual measurements were then transferred by the laboratory from the chain of custody to the resulting analytical report.

Water Quality Assessment

- **Records did not show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

The standards for drinking water quality in Ontario are prescribed in O.Reg.169/03 "Ontario Drinking Water Quality Standards" (ODWQS).

A review of microbiological laboratory results and monitoring data indicated that the water provided by the system met the microbiological drinking water quality standard values with the exception of one adverse total coliform test result. A test result of 1 colony forming units (CFU) total coliform was detected in a sample collected from the water treatment plant (AWQI 131924) on November 21, 2016. The free chlorine residual present in the sample measured 1.27mg/L.

Water Quality Assessment

A review of analytical laboratory results and monitoring data indicate that the water provided by the system met all of the chemical drinking water standard values with the exception of trihalomethanes (THMs). The standard for THMs in drinking water is 0.1mg/L based on a four quarter running annual average (RAA) of test results. During this inspection review period, the following quarterly RAAs (reported in mg/L) were as follows starting in January 2017: 92.5, 102.0, 107.25, 106.0, and 108.25. Exceedances of the THM RAA standard have been observed in the past. The Township of Tay is aware of the THM issue.

THMs in drinking water are, primarily, produced by the reaction of chlorine and the naturally occurring organics (precursors) left in the water after filtration. The elevated THM results for the Rope Subdivision drinking water system suggest that the coagulation, flocculation and filtration systems may not be effectively removing precursors which are resulting in the formation of THMs. There may be other issues contributing to the elevated levels.

SEE OTHER INSPECTION FINDINGS

Reporting & Corrective Actions

- **Corrective actions (as per Schedule 18) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**
- **All required notifications of adverse water quality incidents were not immediately provided as per O. Reg. 170/03 16-6.**

A test result of 1 colony forming units (CFU) total coliform (T.C.) was detected in a sample collected from the water treatment plant on November 21, 2016. A T.C. result of 1CFU is prescribed as an adverse result and must be reported immediately by the Township to the Ministry and the medical officer of health (MOH). The laboratory made an oral notification to the Ministry, the medical officer of health (MOH) and the Township on November 23 at approximately 3p.m. and written notification shortly thereafter on the same afternoon. The Township of Tay provided the required oral notification to the Ministry and the MOH the following day, November 24, at approximately 10:30a.m. Contrary to O.Reg.170/03 section 16-6(1), the Township did not immediately report the adverse test result as prescribed.

On April 17, 2017, a THM sample was collected from the distribution system. The sample result of 85mg/L was reported by the laboratory to the Township on May 2, 2017. Based on this quarterly sample result, a running annual average (RAA) test result for THMs was 102mg/L. A THM result of 100mg/L (and greater) based on a RAA comprised of quarterly sample results is prescribed as an adverse test result and immediate written notice must be given by the Township to the Ministry and the MOH no later than seven days after the last day of the calendar quarter in which the test that produced the adverse test result was conducted. In this case, the immediate written notice was required no later than June 30, 2017 +7days. The Township of Tay provided the required immediate notification (i.e. written notice) to the Ministry and the MOH on November 7, 2017. Contrary to O.Reg.170/03 section 16-6(1), the Township did not immediately report the adverse test result as prescribed.

- **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**
- **When the primary disinfection equipment, other than that used for chlorination or chloramination, has failed causing an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.**

Other Inspection Findings

Other Inspection Findings

- **The following issues were also noted during the inspection:**

According to the records and trending data, the performance criteria for filtered water turbidity of less than or equal to 0.1 NTU in 99% of measurements each month was not met during the inspection review period.

Section 1.4 of Schedule 1 of O.Reg.170/03 requires that the Owner of a drinking water system that obtains water from a surface water supply ensures the provision of water treatment equipment that is designed to be capable of chemically-assisted filtration or an equivalent, and is designed to be capable of achieving primary disinfection in accordance with the Ministry's "Procedure for Disinfection of Drinking Water in Ontario". Filtration at Rope is achieved by membrane microfiltration. A coagulation system is also in use. In order to claim log removal credits from the filters, the filters must meet certain criteria listed in the Procedure for Disinfection and in the MDWL. The criteria includes but is not limited to the filter performance criteria for filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month on each filter train. According to the records provided by the Township, the performance criteria for filtered water turbidity of less than or equal to 0.1 NTU in 99% of measurements each month was not met during the inspection review period, specifically during the months of January, March and October 2017. For these months respectively, the required monthly average turbidity of 0.1 NTU was met for the following percentage of time: 94, 98 and 98.

Proper filtration contributes to the overall pathogen removal/inactivation (R/I) of the source water. At the Rope DWS, the filtration system has been credited with 2-log Crypto and 3-log Giardia R/I when meeting all of the operational assignment criteria, as listed in the MDWL. It is not possible to determine the level of pathogen removal achieved during times of reduced filter performance; and, therefore the DWS cannot claim any of the assigned pathogen R/I credits for the months of January, March and October 2017. However, for the Rope DWS, the filtration process represents only one of the subsystems that form the overall treatment system. The downstream chlorination system with adequate contact time and the UV disinfection system were in operation at the time of the reduced filter performance and achieved their assigned log R/I credits, as verified by the operators. It was also verified that the overall required pathogen R/I requirements were met by the DWS and the system achieved primary disinfection.

The Township of Tay is aware of the reduced filter performance issues and the operators have been trying to correct the issues over the past few months. Some of the efforts to date include the installation of a bubble trap on each turbidimeter, a thorough clean and calibration of the turbidimeters, a thorough chemical clean on each filter, filter header repair and seal replacement, and >700 strands repaired. The manufacturer of the membranes was also on-site for a couple of days aiding in the resolving the issues and providing further training to the operators. The efforts have seemingly improved the filter turbidity. In the month of February 2018, train 1 was operating with an average turbidity of approximately 0.03NTU, and train 2 was operating with an average turbidity of approximately 0.07NTU.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES, Issue 1.

THMs in drinking water are, primarily, produced by the reaction of chlorine and the naturally occurring organics (precursors) left in the water after filtration. The elevated THM results for the Rope Subdivision drinking water system suggest that the coagulation, flocculation and filtration systems may not be effectively removing precursors which are resulting in the formation of THMs. There may be other issues contributing to the elevated levels.

SEE SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES, Issue 2.

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

1. All required notifications of adverse water quality incidents were not immediately provided as per O. Reg. 170/03 16-6.

Contrary to O.Reg.170/03 section 16-6(1), the Township did not immediately report the adverse test results of 1CFU T.C. and a RAA of 102mg/L THM.

Action(s) Required:

The Township of Tay shall ensure that all personnel employed by the Township that may be responsible for providing immediate notification for any prescribed adverse result of a drinking-water test conducted on any water from the Rope drinking water system shall perform a review of

- a) the Standard Operating Procedure Element 8.1.2, and
- b) Schedule 16 of O.Reg.170/03.

By no later than March 31, 2018, the Township of Tay shall verify in writing via email to the undersigned Provincial Officer, that the review of items a) and b) listed above was completed by all specified personnel. The printed full names and signatures of all personnel who completed the review shall be included in the written verification.

The Township should also consider reviewing, and modifying if need be, SOP Element 8.1.2 to ensure its accurateness as it relates to the requirements of O.Reg.170/03 Schedule 16 and section 18 of the Safe Drinking Water Act, 2002.

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. The following issues were also noted during the inspection:

1. The Township of Tay is aware of the reduced filter performance issues and the operators have been trying to correct the issues over the past few months and have realized some recent improvements.

See Recommendation(s)

2. THMs in drinking water are, primarily, produced by the reaction of chlorine and the naturally occurring organics (precursors) left in the water after filtration. The elevated THM results for the Rope Subdivision drinking water system suggest that the coagulation, flocculation and filtration systems may not be effectively removing precursors which are resulting in the formation of THMs. There may be other issues contributing to the elevated levels.

See Recommendation(s)

Recommendation:

1. It is recommended that the Township continue to monitor the filter performance and consider an independent comprehensive performance evaluation of the overall performance of the treatment process should filter performance continue to be an issue.

It is also recommended that the Township continue to report and update the local Ministry area inspector of the filter performance, especially when the filtration subsystem fails to meet any of the log removal assignment credits listed in the MDWL.

The Township is reminded that where the log R/I assignment criteria for filtration was not met and the downstream treatment processes did not compensate for the lost pathogen removal credits, an immediate report under section 16-4 of Schedule 16 of O.Reg.170/03 must be made to the Spills Action Centre of the Ministry and the MOH. In the case of turbidity monitoring, the immediate report must be made within 72 hours after the end of the calendar month, immediately after the average filter turbidity calculation was conducted.

2. The Township of Tay should continue to investigate ways to reduce the potential for the formation of THMs.

SIGNATURES

Inspected By:

Donna Staniscia

Signature: (Provincial Officer)



Reviewed & Approved By:

Sheri Broeckel

Signature: (Supervisor)



Review & Approval Date:

March 2, 2018

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

MOE Audit Sample Results

Not Applicable



Provincial Officer's Report & Order

Not Applicable

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2017-2018)

DWS Name: ROPE DRINKING WATER SYSTEM
DWS Number: 220011323
DWS Owner: Tay, The Corporation Of The Township Of
Municipal Location: Tay

Regulation: O.REG 170/03
Category: Small Municipal Residential System
Type Of Inspection: Focused
Inspection Date: January 30, 2018
Ministry Office: Barrie District

Maximum Question Rating: 518

Inspection Module	Non-Compliance Rating
Capacity Assessment	0 / 30
Treatment Processes	0 / 81
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 42
Water Quality Monitoring	0 / 103
Reporting & Corrective Actions	21 / 87
Treatment Process Monitoring	0 / 133
TOTAL	21 / 518

Inspection Risk Rating 4.05%

FINAL INSPECTION RATING: 95.95%

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2017-2018)

DWS Name: ROPE DRINKING WATER SYSTEM
DWS Number: 220011323
DWS Owner: Tay, The Corporation Of The Township Of
Municipal Location: Tay

Regulation: O.REG 170/03
Category: Small Municipal Residential System
Type Of Inspection: Focused
Inspection Date: January 30, 2018
Ministry Office: Barrie District

Non-compliant Question(s)	Question Rating
Reporting & Corrective Actions	
Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?	21
TOTAL QUESTION RATING	21

Maximum Question Rating: 518

Inspection Risk Rating 4.05%

FINAL INSPECTION RATING: 95.95%

OB

**Ministry of
Municipal Affairs**

Office of the Provincial Land and
Development Facilitator

777 Bay Street
27th Floor, Suite 2704
Toronto ON M5G 2C8

**Ministère des
Affaires municipales**

Bureau du Facilitateur provinciale de
l'aménagement du territoire

777, rue Bay
27^e étage, bureau 2704
Toronto ON M5G 2C8

MAR 2 2018



February 26, 2018

Robert Lamb, Chief Administrative Officer
Township of Tay
450 Park Street, P.O. Box 100
Victoria Harbour, ON L0K 2A0

Dear Mr. Lamb,

I am writing to introduce myself as the Provincial Land and Development Facilitator. As you are aware, the Simcoe County undertook a process in the summer of 2015 to meet with all member municipalities to discuss, amongst other matters, the provision of water and wastewater services. Based on feedback from these individual meetings, Simcoe County Council requested a staff report on the potential future roles of the County and its local municipalities in the provision of water and wastewater services. A copy of the staff report is attached for reference. On February 17, 2017, County Council passed the following resolution:

Recommendation No. GOV-003-17

*That Item GOV 17-003, dated February 17, 2017 regarding water and wastewater servicing in Simcoe County, be received; and
That a request be made to the Office of the Provincial Facilitator to initiate discussions with Simcoe municipalities regarding potential future roles of the County and its local municipalities in the provision of coordinated, sustainable water and wastewater servicing in accordance with the Provincial Growth Plan.*

In the fall of 2017, the Minister of Municipal Affairs requested that I initiate preliminary meetings in Simcoe County, as well as the separated cities of Barrie and Orillia, to establish a process going forward. I am now in a position to begin a dialogue with the County and its lower-tier municipalities on the future delivery of water and wastewater services. Separate meetings will be held with each individual Simcoe area municipality. While County staff will not be participating in the lower-tier meetings, they have generously offered to make the meeting arrangements. To that end, potential meeting dates will be forwarded to you shortly.

The meetings will be informal, and are meant to be an opportunity for local municipal representatives to discuss any current or future servicing challenges, with the objective to identify common themes and potential solutions. I anticipate the meetings to be approximately 45 minutes in duration, and suggest that attendance should include your Mayor and/or Deputy Mayor, yourself, and senior staff as appropriate. Participation is of course voluntary.

I look forward to the opportunity to speak directly with you about your municipality's servicing opportunities and constraints.

Sincerely,



Paula Dill
Provincial Land and Development Facilitator



To: **Governance Committee**

Agenda Section: Corporate Services
Division: Engineering, Planning and Environment
Department:

Item Number: GOV - 17-003

Meeting Date: February 17, 2017

Subject: Water and Wastewater Service in Simcoe County

Recommendation

That Item GOV 17-003, dated February 17, 2017 regarding water and wastewater servicing in Simcoe County, be received; and

That a request be made to the Office of the Provincial Facilitator to initiate discussions with Simcoe municipalities regarding potential future roles of the County and its local municipalities in the provision of coordinated, sustainable water and wastewater servicing in accordance with the Provincial Growth Plan.

Executive Summary

At its meeting of November 24, 2015, Council endorsed Recommendation number GOV-013-15 which read:

THAT staff be requested to prepare a report for the Governance Committee on potential options regarding the County's role with respect to water and waste water and how the County may be able to assist the member municipalities in the provision of this service.

This item starts to address that request by summarizing the County's current involvement in water and wastewater service provision and outlines a potential range of possible alternatives. The challenge is that while there is significantly more interest in the County having more of a role in water and waste water services, what that role means to the member municipalities appears to differ. Staff recommend that, should Council desire further details and reports on this endeavour, a request be made to the Office of the Provincial Facilitator to facilitate some more detailed and specific discussions with the local municipalities to assist us in determining a role, allow the member municipalities to provide their opinions and thoughts to a third party, and allow the Province to better understand the situational opportunities that exist in the County as this time.

Background/Analysis/Options

During the summer of 2015, Warden Marshall and CAO Aitken visited all member municipalities and met with senior elected officials and staff. Meetings were reported on in Item GOV 15-006 dated November 16, 2015. The purpose of the meetings was to establish better communications with member municipalities and to determine the opportunities, issues and challenges facing the local municipal level. Many suggestions came out of these meetings that have already been acted upon, including the Simcoe County Conference, investigation of transit, increased communications with respect to capital programs and forestry initiatives and many more.

One issue identified by a number of different municipalities was the challenge of provision of water and wastewater servicing. The Warden and CAO have just completed their 2016 / 2017 municipal discussions and this topic was again raised by municipalities in various ways, some with some urgency. Municipalities asked:

- how can the County assist with servicing and costs?
- how can the concepts identified in the County's visioning strategy be advanced?
- how can we transition for future needs for the overall long term benefit of taxpayers?

Many municipalities expressed difficulty leveraging funds to maintain older infrastructure and build new infrastructure to realize economic development opportunities. Others with operational and capacity issues, with concerns for future abilities to adequately address these services.

Following discussion at the Governance Committee November 16, 2015, staff were instructed to prepare a report on potential options regarding the County's role with respect to water and waste water and how the County may be able to assist the member municipalities in the provision of this service.

Recent County Involvement in Water and Wastewater

IGAP

The previous Inter-Governmental Action Plan (IGAP 2006 / 2007) looked at growth, planning and service challenges. The provincially led exercise made a number of implementation recommendations including the provision of water and waste water services, but there was little political appetite at any level at that time to implement many of these types of recommendations. This information is substantive, but is available to any Councillors that would like to refresh their memories on these reports and findings.

Water and Wastewater Visioning Strategy

When the Province approved the Growth Plan for the Greater Golden Horseshoe in 2006, Amendment No 1 dealing with the Simcoe sub-area indicated that an overall strategy for water and wastewater servicing would be developed. In order to be proactive, at the request of County Council, staff embarked on a water and wastewater visioning strategy in 2012. The project included a detailed inventory of water and wastewater treatment capacity in all 16 local municipalities, assessed future needs and planned expansions, and identified gaps and opportunities to meet future servicing needs. The study concluded that several opportunities for collaboration existed among municipalities and suggested cooperative servicing arrangements where appropriate. Examples of cooperative servicing arrangements already existed between Bradford West Gwillimbury and Innisfil and between Collingwood and New Tecumseth. Wasaga Beach and Clearview Township are currently exploring water and wastewater servicing partnerships.

County Septage Study

In 2015, staff were directed by County Council to explore a potential County role in septage treatment and disposal. A consultant was retained to complete a study to identify current and projected quantities of septage, existing treatment and disposal infrastructure, potential gaps in treatment capacity and a range of potential options to address those gaps. The study involved three rounds of consultation with municipal staff and draft technical memos and reports were shared with the local municipalities throughout the course of the study. The consultant's final report on this initiative will be presented to Committee of the Whole in March 2017. The study concluded that at present there is sufficient septage treatment and disposal capacity to service the County; however, should the Province initiate a ban of raw septage disposal on land, several options would be feasible to ensure adequate future capacity through construction or enhancement of capacity at existing wastewater treatment plants or construction of a dedicated County wide facility. Staff will seek Council direction in March / April, when the study is presented to Committee of the Whole as to next steps.

Provincial Growth Plan Update, 2016

Through the Coordinated Land Use Planning Review, the Province has put forward a proposed update of the Growth Plan for the Greater Golden Horseshoe. The public comment period has now closed and the new document is expected to be released in early 2017. The proposed plan contains a number of policies dealing with managing growth and the provision of sustainable servicing. It is likely that the County, as the approval authority for local official plan amendments, will be required to play a role in ensuring that water and wastewater servicing, regardless of whether it is provided at the local level or another level, be coordinated, directed towards settlement areas, and be financially sustainable.

Direct County Support

In 2016, County Council approved a plan to provide assistance to the Town of Innisfil in servicing its Innisfil Heights Employment area. These lands are recognized in the County Official Plan and the Provincial Growth Plan as significant employment lands and will be an economic driver for the County as a whole. The approved plan consists of a short term loan in the amount of \$57 Million to the Town of Innisfil in order to facilitate construction of servicing, with staff reporting back on options for long term support to the Town. In addition, it was recommended that the Warden and CAO continue to investigate further opportunities for strategic regional economic investment and servicing solutions with member municipalities at their municipal meetings.

Governance Models

There are several governance models that exist throughout Ontario. These are described below, along with some of the pros and cons of each:

Municipal Ownership – Lower Tier

This is the current system in Simcoe County, in which the lower tier municipality has responsibility for ownership and operation of systems. Operation can be contracted out to a third party like Ontario Clean Water Agency (OCWA), however, this does not shield members of Council from their Duty of Care under current legislation. This system is efficient in that there is a direct connection between ratepayers and their local municipal council representatives, and between the planning and engineering functions within a municipality; however, financial obligations to build and maintain infrastructure in an increasingly stringent and changing regulatory environment can be challenging where there is a relatively small tax base with low growth. A potential disadvantage of this model is that coordination / partnerships meant to take advantage of economies of scale are not necessarily encouraged.

Municipal Ownership – Shared Between the Upper and Lower Tier

This type of system currently exists in York and Niagara Regions. The Regions are responsible for treatment and storage of drinking water and wholesale it to local municipalities who are responsible for the distribution systems and individual customer billing. The Regions are also responsible for the treatment and disposal of wastewater, with the local municipalities responsible for collection and billing. There is some duplication of effort in this type of system, however, quality control can be enhanced and construction and maintenance of local systems can be closely coordinated between engineering and planning functions.

Municipal Ownership – Upper Tier

This type of system currently exists in Peel and Durham Regions, where the upper tier is responsible for all aspects of the water and wastewater systems. Operation of a portion of the Peel Region system is contracted out to OCWA. This type of system can be administratively efficient and more easily financed due to a larger tax base and growth rate, however, there is the potential for some disconnect coordinating planning, engineering and transportation with the local municipal level.

Municipal Service Board or Joint Municipal Service Board

An example of this type of governance exists in the London area with the Lake Huron and Elgin Area Water Supply System. Bradford West Gwillimbury also has a joint municipal services board with King Township for operation of the Holland Marsh Drainage System. A Municipal Service Board is a corporate body with the mandate to operate a utility like water and wastewater or electric power. The municipality or municipalities maintain ownership of the assets, but the Board is responsible for operation and financial reporting. In the case of the Lake Huron and Elgin system, administrative services are provided by the City of London, and a Regional Water Supply Division has been established to provide staff for operation. The system allows for operation of a large regional water supply that services 14 municipalities from two large surface water plants, one on Lake Erie and one on Lake Huron. This model is advantageous where municipalities want to maintain ownership of the system, but would benefit from a regional approach to system operation.

Municipal Services Corporation

The Town of Innisfil has recently implemented a municipal services corporation model for its water and wastewater systems. In this form of governance, a corporate entity separate from the municipality is created. The separate corporation owns and operates the assets. The corporation is run by a Board of Directors which may or may not include members of municipal Council and staff. One advantage of this type of governance is that capital can be raised through the sale of shares and debt limitations imposed under the Municipal Act for municipalities do not apply. The corporation may also be more flexible than the municipality in its operational policies such as for procurement. A disadvantage of this type of structure is that the municipal council does not have direct control over the corporation so it can be seen as less responsive to ratepayers.

Role of the Provincial Facilitator

The Office of the Provincial Land and Development Facilitator (OPF) helps the province, municipalities, developers, businesses and community groups assess and work through issues related to growth management, land use and infrastructure planning, and environmental protection by providing impartial facilitation services. In certain situations, the Provincial Land and Development Facilitator may also act as a negotiator on behalf of the Province on issues dealing with provincial land, assets or interests.

Any individual, municipality or business can request assistance from the Office of the Provincial Land and Development Facilitator. Requests for assistance will be considered in the context of provincial objectives.

General criteria for Provincial Land Development Facilitator involvement as a facilitator include:

- The request relates to ongoing, large-scale planning and/or development applications, infrastructure and/or environmental issues that are overarching in nature and may cross municipal boundaries and/or watersheds;
- The matter appears to fall under the mandate(s) of two or more provincial ministries and/or agencies;
- The matter arises out of the implementation of the Growth Plan for the Greater Golden Horseshoe, the Provincial Policy Statement, the Greenbelt Plan, or other relevant provincial legislation, plans and/or policies.

Given the breadth of potential models for provision of water and wastewater service in the County, the number of partners involved and the challenges associated with the mandated growth for the area under the Provincial Growth Plan, staff are of the view that if Council wishes to further discussions on this matter, it would be very beneficial to involve the Office of the Provincial Facilitator, who could instigate discussions with the various local municipalities and determine without direct County involvement, what the needs and opportunities are in terms of addressing these service challenges at the County and local level. If Council finds favour with this suggestion, the second operative recommendation in this item is that a formal request be made to the OPF for their involvement.

Financial and Resource Implications

There are no immediate financial or resource implications associated with this informational Item at this time, however, a potential change in the governance of water and wastewater servicing in the County could have significant future financial implications. These can't be quantified at this time. It is clear though however, that costs related to the provision of these services will be increasing due to demand, asset management, legislative and operating compliance, and operational capacity needs. The question is, what is the best way forward to minimize costs, and maximize service.

Relationship to Corporate Strategic Plan

This Item supports Strategic Direction A- Growth Related Service Delivery, D - Environmental Sustainability, E - A Culture of Workplace Excellence, and F – Responsive and Effective Governance.

Reference Documents

- Item CS 12-031 County of Simcoe Water and Wastewater Visioning Strategy

Attachments

There are no attachments to this Item

Prepared By Debbie Korolnek, GM, Engineering, Planning and Environment

Approvals
Mark Aitken, Chief Administrative Officer

Date
February 13, 2017

**Planning & Development Committee
March 14, 2018**

Agenda

1. Call to Order:

2. Reports of Municipal Officials:

- 2.1 Report from the Chief Building Official
Report No. PD-2018-13
Re: Building Services Division Monthly Update – February 2018
- 2.2 Report from the Director of Planning & Development
Report No. PD-2018-15
Re: Planning and Development Director Update
- 2.3 Report from the Planning Consultant
Report No. PD-2018-14
Re: Port McNicoll Holding LP – March 2018 Update

3. OTHER BUSINESS:

3.1

4. ITEMS FOR INFORMATION:

- 4.1 Correspondence from the Township of Severn
Re: Study Area for a Proposed Greenbelt Expansion
- 4.2 Correspondence EDCNS
Re: Economic Development Office Update – January 2018
- 4.3 Report from Severn Sound Environmental Association – Re: 2017 Fourth Quarter Update (October 1-December 31)
- 4.4 Correspondence from the Ministry of Municipal Affairs – Proclamation of the Building Better Communities & Conserving Watersheds Act, 2017 changes to the land use planning and appeal system



STAFF REPORT

Department / Function: Planning and Development Committee

Chair: Councillor Heinrich Naumann

Meeting Date: March 14, 2018

Report No: **PD-2018-13**

Subject: Building Services Division Monthly Update Report February 2018

RECOMMENDATION:

That Report No. PD-2018-13 regarding Building Services Division Monthly Update Report February 2018 be received.

INTRODUCTION/BACKGROUND

The following is an overview of the activities of the Building Services Division for the February 2018 calendar month.

PERMITS	FEBRUARY 2017	FEBRUARY 2018
Number of Permits Issued this Month	13	12
Number of Permits Issued to Date	23	21
New Dwelling Units	0	1
Total New Dwelling Units to Date	0	2
Accessory Buildings(garages,sheds,gazebos etc.)	3	2
Additions	0	0
Decks	1	0
Demolition	4	3
Water line services/Plumbing	1	1
Farm Buildings	0	0
Renovations	4	2
Solid Fuel-Fired Appliances	0	0
Swimming Pool / Fence Permits	0	0
Commercial/Industrial/Institutional	0	2
Transfer	0	0
Temporary Structures	0	1

Other Government New	0	0
Residential Solar Panel/Mechanical	0	0
Change of Use	0	0
Septic System	0	0
Inspections and Orders		
Inspections Conducted	66	109
Site Inspections/Consultations Conducted without a Permit	51	30
Inspections Conducted to Date	224	322
	0	0
Stop Work Orders Issued	0	0
Orders to Remedy Unsafe Building Issued/Prohibited Use	0	0
Orders to Uncover	0	0
Permits Closed	9	10
Total Permits Closed to Date	17	23
Total Permits Outstanding	629	671
Fees and Construction Value		
Permit Fees	\$5,144.32	\$6,081.24
Total Permit Fees to Date	\$7,583.32	\$11,922.55
Construction Value	\$599,000.00	\$458,500.00
Total Construction Value to Date	\$813,000.00	\$971,500.00

Prepared by: Terry Tompkins, CBCO, CRBO, CPSO
Chief Building Official

Recommended by:

Date: March 14, 2018

Steven Farquharson, B.URPL, MCIP, RPP
Director of Planning and Development

Reviewed by:

Date: March 14, 2018

Robert J. Lamb, CEcD, Ec.D.
Chief Administrative Officer



STAFF REPORT

Department/Function: Planning and Development Committee

Chair: Councillor Heinrich Naumann

Meeting Date: March 14th, 2018

Report Number: PD-2018-15

Report Title: Planning and Development Director February Update

The following are the highlights from February 1, 2018 to February 28, 2018:

Zoning Certificates

1. For the month of February, 6 applications were received, 4 have been issued with a review period of 1.3 days. While the two remaining applications have been reviewed by Planning and are currently at the lot grading review stage.

Provincial Land Use Policy Reviews

2. Proposed Methodology for Land Needs Assessment for the Greater Golden Horseshoe. Planning Staff provided comments to the Province on February 27, 2018 through the Environmental Registry (EPR page)
3. Protecting Water for Future Generations Growing *the Greenbelt in the Outer Ring*.
 - While the Greenbelt Expansion Study area does not affect lands within the Township, Planning staff provided general planning comments for consideration in case the study area is expanded to include Tay.
4. Watershed Planning Guidance
 - Watershed planning is an opportunity for municipalities and other planning authorities to take a collaborative approach to planning by creating a framework for the management of human activities, land, water, aquatic life and resources within a watershed, and for the assessment of cumulative, cross-jurisdictional and cross-watershed impacts.
 - Environmental Registry at <https://www.ebr.gov.on.ca/ERS-WEB-External/> using EBR # **013-1817. Deadline to provide comments is April 7, 2018**

5. Building Better Communities and Conserving Watersheds Act, 2017.
 - o The Province provided an email on February 27, 2018, with an update on regulations under the Planning Act related to the Building Better Communities and Conserving Watersheds Act, 2017.
 - o The Planning Act regulations will come into effect on April 3, 2018.
 - o The Province will be having a training session in Toronto and online on March 23rd, 2018. North Simcoe Planning Directors will be attending the Town of Penetanguishene office to participate in the training session and have an open discussion about the regulations.
6. Natural Heritage and Agricultural System Mapping has been released. Planning staff are still reviewing the mapping and working with our Consultant at GSP to determine how this impacts the Official Plan review.

Development

7. Working with the consultant to finalize the EIS for Oakwood Park. Presently waiting for MNR to review proposal of 4 acres on site as a potential building envelope. Once approved EIS document will be finalized and a staff report regarding the OPA and ZBA would come forward for Council consideration.
8. The MOECC has advised the Township that there is a evidence of a new Waste Disposal Site on lands on Newton Street, south of Highway 12. While the MOECC is not able to share particular information, the owners of the Golf Course Subdivision will be required to update or complete a new D4 study prior to any residential development occurring on the site.
9. Completed the hiring process for the summer Planning and Development Student. Brandon Eidner has accepted the position for the summer. He is presently completing his Masters at University of Guelph and will be starting at the end of April.

Meetings/Training

10. Attended Department Head Meetings
11. Simcoe County Planners Meeting
12. Municipal Liaison Group Meeting
13. Provincial Greenbelt Plan Open House
14. Joint Health and Safety

Prepared and Recommended By;

Steven Farquharson, B.URPL, MCIP, RPP
Director of Planning and Development



STAFF REPORT

TO: Planning and Development Committee
CHAIR: Councillor Heinrich Naumann
MEETING DATE: March 14, 2018
REPORT NO.: PD-2018-14
SUBJECT: Port McNicoll Holding LP – March 2018 Update

RECOMMENDATION:

That Report Number PD-2018-14 regarding Port McNicoll Holding LP – March 2018 Update be received as informational.

File Activity for period ending March 6, 2018.

The purpose of this report is to provide Council with an update on the planning activities for the Port McNicoll Holding LP.

Staff continues to have contact with CIM International Group Inc. (CIM), who are the developers of Port McNicoll Holding LP lands formerly known as the Skyline Development Lands. Over the past month there has been emails and telephone conversations related to the conditions of draft approval for Cargill Pier and specifics on how the conditions are to be met and by whom. Certain conditions did require the municipality to complete the work at the landowners cost. MHBC has contacted staff that they are in discussions with CIM but have not yet been retained. Staff has informed MHBC and CIM that with respect to the Official Plan it would be a prudent time to work with their planner on establishing how the Skyline lands holding will be dealt with in the Official Plan (ie. special policy area).

Date Prepared: March 6, 2018

Prepared by:

Kristine Loft, MCIP, RPP
Consulting Planner

Reviewed by:

Robert Lamb
C.A.O.



TOWNSHIP OF SEVERN

THE CORPORATION OF THE TOWNSHIP OF SEVERN

February 8, 2018

Ministry of Municipal Affairs
c/o Honorable Minister Bill Mauro
minister.mma@ontario.ca

Dear Minister Mauro:

RE: Study Area for a Proposed Greenbelt Expansion

The following is a copy of a resolution enacted by Severn Township Council at a regular meeting held February 7, 2018:

" *THAT Planning Report No. P18-002, dated January 30, 2018, with respect to the Study Area for a Proposed Greenbelt Expansion be received;*
AND WHEREAS the Ministry of Municipal Affairs issued a Policy Proposal Notice on the Ontario Environmental Registry on December 7, 2017 seeking input on a study area for potential greenbelt expansion to protect water resources in the outer ring of the Greater Golden Horseshoe (GGH), including the Township of Severn, with the comment period to expire on March 7, 2018;
NOW THEREFORE BE IT RESOLVED THAT the Clerk be directed to contact the Ministry of Municipal Affairs to request a 6 month extension to the commenting period, being July 9, 2018, to ensure that the Township of Severn has sufficient time to review the scope of the proposal and to be fully engaged in the public commenting process;
AND FURTHER THAT in the event that the extension is not granted, the preliminary comments contained in Appendix "3" to this Report be submitted electronically through Ontario's Environmental Registry (013-1661) before the March 7, 2018 deadline by the Director of Planning & Development.

CARRIED "

As directed by Council, the Township of Severn respectfully requests an extension of the commenting period to July 9, 2018 in order to provide the necessary review of the proposed greenbelt expansion. Your consideration of this request is truly appreciated.

Yours truly,



Sharon R. Goerke, CMO, AOMC
Clerk

/srg

c.c. County of Simcoe Municipalities

WEBSITE STATISTICS

January 1 – January 31, 2018

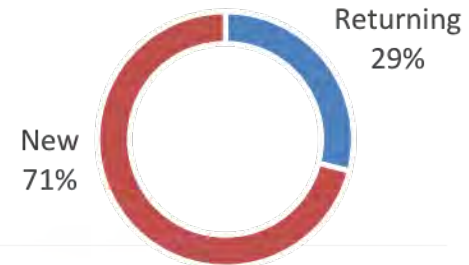
763 TOTAL SESSIONS January 2018

VISITORS
Returning
New

#
221
542

%
29%
71%

Visitors



TOP PAGEVIEWS

EDCNS.ca – Home page

➤ 412 views

EDCNS.ca – Tourism Coordinator Opportunity

➤ 310 views

EDCNS.ca – Board Director Opportunity

➤ 57 views

EDCNS.ca – Sector Focus: The Power of Four

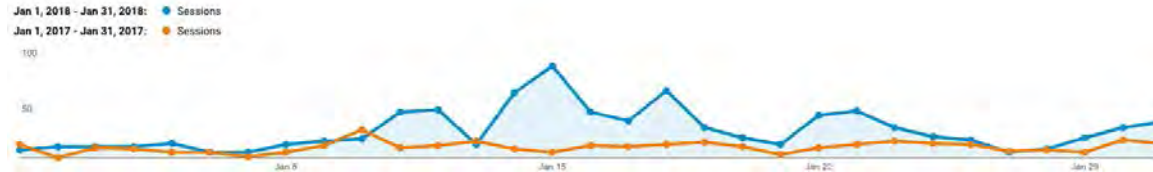
➤ 56 views

157% more visitors January 2018 vs 2017

Visits	January 2017	January 2018
New	215	542
Returning	82	221
Total	297	763

WEBSITE STATISTICS

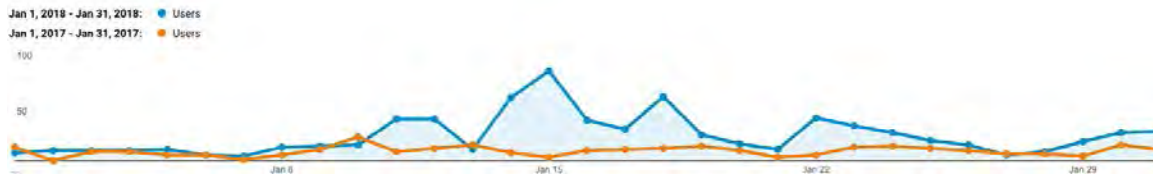
January 2018 vs January 2017



SESSIONS

157%

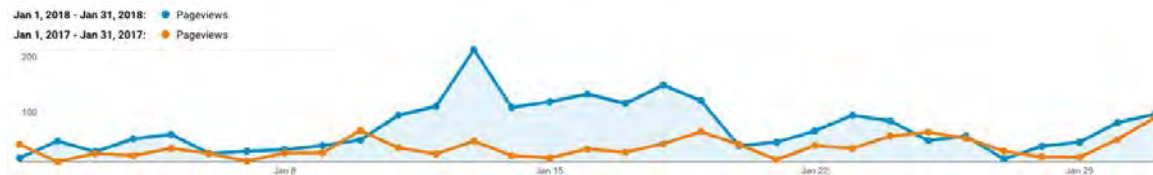
763 vs 297



USERS

152%

584 vs 232



PAGEVIEWS

143%

1,915 vs 789



PAGES/SESSION

6%

2.51 vs 2.66



Severn Sound Environmental Association 2017 Fourth Quarter (October 1-December 31) Report/Update

Financial

Donations, Grants, Budget, Invoicing and Revenue (fee for service)

Grants

- Reporting on 2017 grant deliverables

Budget

- 2016 Financial Statements completed (Town of Midland & KPMG)
- Budget deputations to municipal councils as requested

Cost Recovery

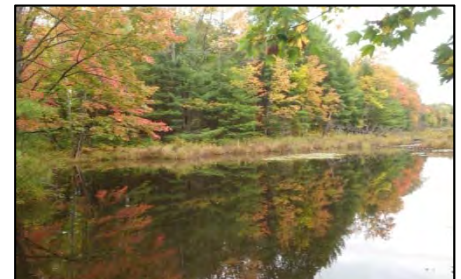
- Responded to solicitor inquiries (1)

Staffing/HR

Administration, Staffing, Training and Volunteers

Administration

- Strategic Plan Renewal process continues
 - Board strategic planning session held October 12
 - Staff strategic planning session held December 18
- 1 Board of Directors meeting and 2 Board Executive meetings
- Attended Sustainable Severn Sound Board meeting
- Transitioning to Township of Tay for financial services and office location



Autumn at the Severn Sound

Staffing

- Welcomed part-time staff Judy Hancock (Contract Treasurer) and Laurie Barron (part time Coordinator – Corporate Services) – secondment from NVCA
- Welcomed Melissa Carruthers (Data Management Technician/ Risk Management Inspector) back from maternity leave

Team SSEA – Q4
Full Time = 8
Part Time = 1
Contract = 4

Training

- Provincial Groundwater Monitoring Network telemetry hardware training session (MOECC)
- Microsoft Excel Level 3 course (County of Simcoe)
- Multivariate statistics webinar (National Water Quality Monitoring Council)

Volunteers ***Thank you for your help!***

- Christopher Fox - Great Canadian Shoreline Cleanup
- Pat Woodford & volunteers from Copeland Forest Friends – water sampling in Copeland Forest as part of the *Citizen Science in Severn Sound* project

Education, Engagement, Outreach

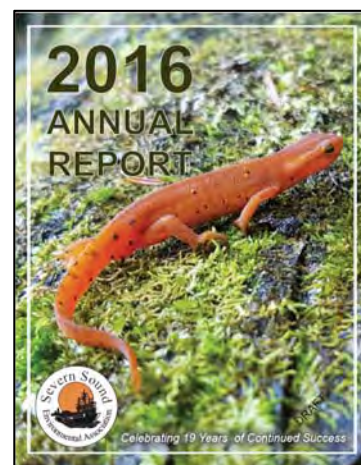
Presentations, Articles, Media, School Involvement and Events

Reports

- Yellow Fish Road™ report submitted to Trout Unlimited Canada
- *Severn Sound Community Environmental Monitoring Kit* project report submitted to World Wildlife Fund Canada
- *Citizen Science in Severn Sound* project report submitted to Lake Huron-Georgian Bay Canadian Initiative for Community Action
- [SSEA 2016 Annual Report](#)

Presentations

- Metis Council of Ontario - State of the Severn Sound Watershed
- Township of Georgian Bay - Honey Harbour Water Quality



Simcoe.com coverage of SSEA

News/Media

- [There are Aliens Among Us – Springwater News](#)
- [Volunteers help fight invasive species overtaking Tiny Township's Lafontaine Beach](#) – Midland Mirror/Simcoe.com
- [Severn Sound Environmental Association part of large community effort to sustain watershed](#) – Midland Mirror/Simcoe.com
- [Volunteers pick up 138 kilograms of garbage along Midland's Rotary Waterfront Trail](#) – Midland Mirror/Simcoe.com
- [SSEA Recognizes Local Environmental Leaders](#) – Media Release
- @SSEA_SSRAP Twitter activity: 50 tweets, 1844 page visits, 136 Followers

Events/Meetings/Conferences

- Great Canadian Shoreline Cleanup event – Midland trail – 11kg recycling & 127 kg garbage collected
- Annual SSEA Partners Reception – November 9, Oakwood Community Centre
 - SSEA displays, presentation of recognition awards and certificates
 - THANK YOU, event sponsors; Grounded Coffee, Golder Associates Ltd. & Township of Tay
- Staff attended: Seed Collecting Workshop, MNRF Forest Health Review, Lake Huron-Georgian Bay 2017 Summit for Community Action, GIS day, Latonnell Conservation Symposium, LSRCA Forestry Adaptation to Climate Change



Great Canadian Shoreline Cleanup



Annual SSEA Partners Reception

Education/Citizen Science

- Completed *Citizen Science in Severn Sound* pilot project: involved 20 volunteers using community environmental water quality monitoring kits in Copeland Forest
- Stream data collected with Copeland Forest Friends volunteers
- 2017/18 *Ice Spotters* program volunteers contacted and ice-on data received

Tree Planting

Planting and Distribution

Community Tree Planting & Tree Seedling Distribution

- In planning stages for spring 2018, seedlings ordered from nursery
- Report produced on 2017 Tree Distribution program results
- 8 SSEA municipalities participating in and promoting 2018 Distribution program

Fish and Wildlife Habitat / Natural Heritage

Natural Heritage Assessments, Invasive Species, Wetlands, Habitat and Stewardship

Invasive Species (IS) - Pilot Project

- Organized first IS municipal working group meeting, discussing IS issues and current/previous management
- Planning additional meetings for 2018, focusing on Phragmites and spring training sessions for municipal staff on IS identification and management
- Collaborated with the Township of Tiny and Lafontaine Area Shoreline Homeowners Association on spotted knapweed removal in Lafontaine Beach Park
- Prepared a report on glossy buckthorn in Little Lake Park for Town of Midland
- Creation of an IS strategy outline for the Severn Sound area
- Continued mapping IS occurrences in Tay, Tiny, Midland and Severn
- Submission of almost 500 IS reports to [EDDMapS Ontario](#)



Invasive species municipal working group meeting

Coastal Margins/Fish Habitat

- Collected and processed a total of 40 km of sonar data in portions of Tay Twp (Sturgeon Bay and Hogg Bay) and Georgian Bay Twp (Treasure Bay, Beausoleil Bay, South Bay and Oak Bay), to enhance habitat modelling for the Severn Sound Nearshore Fish Communities Project (MNR – Great Lakes Protection Fund)

Land Use Planning

Input and Review

- Ongoing participation in Official Plan reviews for Midland, Penetanguishene and Tiny
- Attended: Creating Flood Resilient Communities, County of Simcoe Workshop on Municipal Comprehensive Review, Township of Tiny Recreation Master Plan Focus Group (Trails, Natural Areas and Environment), Environmental Defence Workshop on Cornerstone Aggregate Standards
- Commented on 6 applications, reports and EIS proposals
- Commented on Environmental Registry posting on proposed provincial Natural Heritage System
- Commented on provincial Draft Agricultural Soil Health and Conservation Strategy
- Staying apprised on developments in provincial watershed planning guidance

Source Water Protection

Education & Outreach, Risk Management

Source Water

- Attended regional Implementation Review Team and Administrative Staff Team meetings, and fuel handlers workshop
- Stream sampling in Lafontaine for Issue Contributing Area study, updated production well monitoring for nitrates
- Provided SS SPA budget to LSRCA for submission to MOECC
- Participated in Provincial Part IV/ RMO teleconference

Education & Outreach

- Provided input into the rebuild of the SWP Region's website (ourwatershed.ca)
- Provided input into a video on residential fuels and DNAPLs

Risk Management Services

- Provided comments on 6 properties in Midland and 2 properties in Severn
- Attended 1 pre-consultation meeting for a property in Oro-Medonte
- Met with Township of Tiny, Towns of Midland and Penetanguishene to provide status updates
- Reviewed and commented on Township of Georgian Bay Official Plan/ Zoning By-law amendment specific to source water protection

Monitoring Programs

Field/data collection: Open Water, Inland Lakes, PGMN, PWQMN/Tributaries, Stream Temperature, Stream Invertebrates and Climate

Open Water

- Worked with Town of Midland and Canadian Hydrographic Service on Midland [water level gauge](#) improvements
- Removal of water level equipment at Bayview Dam in Port Severn prior to rehabilitation and construction repairs
- Completed 2017 sampling at Tay Area Water Intake
 - Standard water quality (temperature, conductivity, ions, nutrients, and algae), plus metals, taste & odour and microcystin
- Completed 2017 bi-weekly sampling at 14 open water stations (last sampling day for 2017 = November 21)
 - Standard water quality plus dissolved oxygen, turbidity, metals, & zooplankton



*Taking measurements
with vertical profiler*

Inland Lakes

- Completed 2017 bi-weekly sampling at 1 station in Little Lake
 - Standard water quality plus dissolved oxygen, pH, turbidity, zooplankton & water levels

Provincial Water Quality Monitoring Network (PWQMN)

- Completed 2017 sampling at 12 sampling sites
 - Water temperature, dissolved oxygen, pH, turbidity, conductivity, water chemistry, and metals

Provincial Groundwater Monitoring Network (PGMN)

- Monthly water levels & data download at 13 wells
- Sampling of 6 wells for water temperature, dissolved oxygen, pH, turbidity, conductivity, water chemistry, and metals
- New barologger acquired to provide atmospheric compensation for well level loggers; new equipment acquired to replace aging equipment



Collecting a total phosphorous sample

Stream Temperature

- Retrieved and downloaded 73 stream temperature and 2 air temperature loggers

Climate

- Retrieved 4 rain gauges and analyzed data for the ice-free period of 2017
 - Calculated daily, cumulative, and monthly rainfall, plus rainfall intensity

Special Projects

- Conducted sampling of baseline surface water quality near future development on Silk Line as requested by Township of Severn

Data Analysis and Reporting

Statistics, Data Management & Analysis, Stream Invertebrate ID, and GIS/Mapping

Reporting

- Staff report sent to Township of Tay on 2016 and 2017 algae compounds from Tay Area Water Intake
- Deanlea Beach quality report finalized
- Copeland Forest Stream Quality report produced using data collected through the *Citizen Science in Severn Sound* project
- Report submitted to Township of Severn on background water quality for Silk Line property

Sample Identification

- Secured contracts for sample processing services:
 - St. Lawrence River Institute - algae
 - Laurentian University - zooplankton

GIS/Mapping

- Station map produced to support Township of Severn request for Silk Line sampling

Data Requests Fulfilled

- Water chemistry data for Mud Lake (PWQMN program) supplied to Golder Associates Ltd.

Partnerships

New/Updated partners and MOU's

NGO and Government Partners

- Friends of Wye Marsh
- Southern Georgian Bay Coastal Initiative

Collaborations

- Contributed to Georgian Bay Biosphere Reserve State of the Bay report
- Working with NVCA to produce Orr Lake Report Card

Thank you from #TeamSSEA

- Julie Cayley – General Manager
- Gail Marchildon – Office Manager
- Lex McPhail – IT Manager/GIS Applications Specialist
- Michelle Hudolin – Wetlands and Habitat Biologist
- Aisha Chiandet – Water Scientist
- Paula Madill – Ecosystem Technologist
- Carl Lesperance – Lead Environmental Monitoring Technician
- Keith Sherman – Risk Mgmt. Official/Special Projects Officer
- Anna McClymont – Invasive Species Program Coordinator
- Melissa Carruthers – Data Management Technician/Risk Management Inspector
- Amanda Taylor – Contract Risk/Data Management Technician
- Judy Hancock – Contract Treasurer
- Laurie Barron – Coordinator - Corporate Services



Contact Information

Mailing Address: 67 Fourth St. Midland, ON L4R 3S9

Phone Number: (705) 527-5166

General Email: sseainfo@midland.ca

Website: www.severnsound.ca

Twitter: @SSEA_SSRAP

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Provincial Planning Policy
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Toronto ON M5G 2E5
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Fax 416-585-6870

**Ministère des
Affaires municipales**

Direction des politiques provinciales
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Tél. 416-585-6014
Téléc. 416-585-6870



**Ministry of
the Attorney General**

Agency and Tribunal Relations
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720 Bay St, 3rd Floor
Toronto ON M7A 2S9
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Fax 647-723-2051

**Ministère du
Procureur général**

Direction des relations avec les
organismes et les tribunaux
720, rue Bay, 3^e étage
Toronto ON M7A 2S9
Tél. 416-326-3723
Téléc. 647-723-2051

Date: February 27, 2018

Subject: Proclamation of the *Building Better Communities and Conserving Watersheds Act, 2017* changes to the land use planning and appeal system

We are writing to provide an update on the *Building Better Communities and Conserving Watersheds Act, 2017*, which was passed by the Legislature on December 12, 2017.

In Effect Date

The changes the Act makes to the land use planning and appeal system will come into effect on April 3, 2018, as specified by proclamation.

This includes changes to:

- establish the Local Planning Appeal Tribunal (the Tribunal) as the province-wide appeal body for land use planning matters;
- improve the hearing process at the Tribunal;
- establish the Local Planning Appeal Support Centre to provide legal and planning support services to eligible Ontarians for matters before the Tribunal;
- limit the Tribunal's ability to overturn municipal decisions that adhere to municipal official plans, provincial plans and the Provincial Policy Statement;
- give municipalities more control over local planning, resulting in fewer decisions being appealed; and
- shelter certain major planning decisions from appeal.

These changes are in response to the province-wide consultation undertaken as part of the [Ontario Municipal Board Review](#).

Regulations

To facilitate implementation of the *Building Better Communities and Conserving Watersheds Act, 2017*, several new and amended regulations have been proposed.

Proposals for the regulations under the Act were posted on Ontario's Regulatory and Environmental Registries for a 45-day public consultation period from December 7, 2017 to January 21, 2018.

We anticipate providing you with an update on the proposed regulation changes and finalized approach to transition in the near future.

Questions

If you have any questions about the changes to the land use planning and appeal system, please email OMBReview@ontario.ca.

Sincerely,

Laurie Miller, Director
Provincial Planning Policy Branch
Ministry of Municipal Affairs

Mariela Orellana, Director (Acting)
Agency and Tribunal Relations Branch
Ministry of the Attorney General