AGENDA

TOWNSHIP OF
ASHFIELD - COLBORNE - WAWANOSH

Council Agenda
March 3, 2020

Township of Ashfield-Colborne-Wawanosh Council will meet in regular session on the 3rd day of March 2020, at 9:00 a.m. in the Township of Ashfield-Colborne-Wawanosh Council Chambers.

1.0 CALL TO ORDER

Video/Audio Approval – if applicable

2.0 DISCLOSURE OF PECUNIARY INTEREST / POTENTIAL CONFLICT OF INTEREST

3.0 ADOPTION OF PREVIOUS MEETING MINUTES

Moved by
Seconded by

ADOPT COUNCIL MINUTES	THAT Ashfield-Colborne-Wawanosh Township Council hereby adopts the February 18, 2020 Council Meeting Minutes as written.

4.0 OPEN FORUM (items pertaining to the agenda)

5.0 DELEGATIONS

5.1 9:00 a.m. – Celina Whaling-Rae / County of Huron Planner

Cannabis Production Zoning By-Law Amendment
Township of Ashfield-Colborne-Wawanosh / Zoning By-Law Housekeeping Amendment

As a follow-up from our last meeting, staff have revised the by-law as directed and have provided Council with a copy for consideration. Since the public meeting was held on February 18, 2020, Council must pass the following resolution to indicate that the changes to the original by-law are minor and no further notice is required.

STAFF COMMENTS: If Council are prepared to adopt the by-law as presented, they can proceed to adopt the by-law in Section 14. We seek your direction.

Moved by
Seconded by

NO FURTHER NOTICE REQUIRED

WHEREAS Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh has held a Public Meeting pursuant to Section 34(12) of the Planning Act, RSO 1990 with respect to a proposed zoning by-law on February 18, 2020;

AND WHEREAS certain changes have been made to the proposed by-law after holding of the public meeting;

NOW, THEREFORE, the Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh hereby resolves that, pursuant to Section 34(17) of the Planning Act, RSO 1990, no further notice is to be given in respect of the proposed by-law.

5.2 9:15 a.m. – Celina Whaling-Rae / County of Huron Planner - Consent Application

Preston Drennan - Consent File #C09-2020

We have provided Council with a copy of the report prepared by Celina Whaling-Rae in regards to the application for consent received from Preston Drennan. Ms. Whaling-Rae will review the application with Council.

STAFF COMMENTS: We seek your direction.

5.3 9:30 a.m. – Michael Gubesch – Preliminary Development Proposal – Port Albert

We have provided Council with a copy of the request for delegation by Michael Gubesch.

STAFF COMMENTS: None.

5.4 9:45 a.m. – Brian Barnim – Cannabis Zoning By-law Amendment Concerns

We have provided Council with a copy of the request for delegation by Brian Barnim.

STAFF COMMENTS: None.

5.5 10:00 a.m. – Building Permit Fees & Charges Amendments

We have provided Council with a copy of the “Notice” to amend the fees and charges for Building Permits, a copy of the changes proposed, as well as the fee by-law to authorize the amendments to the Fee & Charges By-Law. Chief Building Official Brett Pollock will be present this morning.

The Building Code Act requires that Council hold at least one public meeting and that proper notice be given of its intent to consider a by-law to amend the fee schedule for services rendered under the Building Code Act.

Notice of the Public Meeting was issued in accordance with Section 7(6), of the Building Code Act, section 1.9.1.2 of Ontario Regulation 332/12, and the Township of Ashfield-Colborne-Wawanosh Notice By-Law on February 7, 2020.

Comments are welcome from the public prior to the adoption of the such Building Fees & Charges.

Public Comments:

STAFF COMMENTS: That Council proceeds to adopt the by-law as drafted in Section 14.

6.0 ACCOUNTS

No items scheduled.

7.0 DEPARTMENT / COMMITTEE REPORTS

7.1 Water Department

7.1.1 Water Operations & Maintenance Report – January 2020

We have provided Council with a copy of the report prepared by Veolia Water Canada in regards to the operation and maintenance of our water systems for January 2020.

STAFF COMMENTS: For your information purposes.

7.1.2 2019 Annual Water System Reports and Compliance Summary

We have provided Council with a copy of the annual water system reports and compliance summaries for the following:

a) Benmiller Drinking Water System
b) Century Heights Drinking Water System
c) Dungannon Drinking Water System
d) Huron Sands Drinking Water System
e) Lakeshore Drinking Water System
f) Lucknow Drinking Water System

STAFF COMMENTS: That Council accepts the annual reports and compliance summaries as provided and adopt the following resolution.

	Moved by Seconded by
ACCEPT 2019 ANNUAL WATER REPORTS & COMPLIANCE SUMMARIES	THAT Ashfield-Colborne-Wawanosh Township Council hereby accepts the 2019 Annual Water Reports as submitted by Veolia Water for the Benmiller, Century Heights, Dungannon, Huron Sands, Lakeshore, and the Lucknow Drinking Water Systems.

7.2 Building Department

No items scheduled.

7.3 Cemetery Department

No items scheduled.

7.4 Drainage Department

No items scheduled.

7.5 Administration Department

7.5.1 Sound and Noise By-Law

As a follow-up from our last meeting we have provided Council with a copy of the revised "Draft Noise By-Law" that staff have revised as directed by Council for your consideration. If Council wishes they may adopt the by-law as drafted in Section 14. Ms. Witherspoon will be present this morning.

STAFF COMMENTS: We seek your direction.

7.5.2 Lucknow Medical Centre – Dental Suite – Lease Amendment Agreement

We have provided Council with a copy of the lease with the DentalCorp for execution and the authorizing by-law. The lease is extended until 2023, with a new base-rent in consideration of the new kitchen space that was provided as a result of the 2018-2019 renovation project.

STAFF COMMENTS: That Council authorize the agreement by by-law in Section 14.

7.5.3 Kingsbridge Centre Municipal Night

We have provided Council with a copy of the report prepared by Deputy Clerk Florence Witherspoon in this regard. Ms. Witherspoon will be present this morning.

STAFF COMMENTS: We seek your direction.

7.5.4 Goderich Municipal Airport Task Force

We have provided Council with a copy of the notice of the first meeting of the Goderich Municipal Airport Task Force which Mayor Glen McNeil will be attending. We have also provided Council with a copy of the Consolidated Appointment By-Law to appoint Mayor Glen McNeil to this committee.

STAFF COMMENTS: That Council adopt the by-law in Section 14.

7.6 Public Works Department

No items scheduled.

7.7 Environmental Services

7.7.1 Single Use Plastics – Municipal Owned Buildings

As a follow-up from our last meeting, Councillor Gloria Fisher requested that this item be added to the agenda for discussion.

STAFF COMMENTS: None.

7.8 Committee Reports

8.0 NEW BUSINESS

No items scheduled.

9.0 CORRESPONDENCE / DIRECTION REQUIRED

9.1 Township of Ashfield-Colborne-Wawanosh – 20th Anniversary Reunion 2021 Request

STAFF COMMENTS: We seek your direction.

10.0 CORRESPONDENCE / FOR INFORMATION PURPOSES

10.1 St. Helens Hall – Fundraising Report
10.2 Lucknow & District Joint Recreation Board - Minutes

11.0 CORRESPONDENCE / ON COUNCIL TABLE

No items scheduled.

12.0 UNFINISHED BUSINESS

12.1 Huron County Federation of Agriculture - MPP/MP/Local Politician Meeting - March 6th.

Mayor McNeil and Councillor Forster attending.

STAFF COMMENTS: Reminder only.

12.2 Economic Development Committee Annual Review – March 17th at 1:00 p.m.

Mayor McNeil, Deputy Mayor Watt, and Councillor Miltenburg attending.

STAFF COMMENTS: Reminder only.

12.3 2020 Budget Deliberations – March 20th at 9:00 a.m.

All members of Council attending for a full day.

STAFF COMMENTS: Reminder only.

12.4 Official Plan Preliminary Review – March 25th at 1:00 p.m.

All members of Council attending.

STAFF COMMENTS: Reminder only.

12.5 Burnside Annual Client Appreciation Night – March 25th

Mayor McNeil, Deputy Mayor Watt, Councillor Miltenburg, Vanstone, and Fisher attending.

STAFF COMMENTS: Reminder only.

12.6 Lake Huron Conference – Is the Coast Clear? – May 12th-13th

Mayor McNeil and Deputy Mayor Watt attending.

STAFF COMMENTS: Reminder only.

12.7 Association of Municipalities of Ontario (AMO) Annual Conference – August 16-19th 2020

Councillor Vanstone and Fisher attending.

STAFF COMMENTS: Reminder only.

13.0 IN-CAMERA / CLOSED SESSION

No items scheduled.

14.0 BY-LAWS

14.1 Cannabis Production Facility By-Law

Moved by
Seconded by

CANNABIS PRODUCTION ZONING BY-LAW AMENDMENT	THAT leave be given to introduce By-Law #17-2020 being a by-law to amend zoning by-law #32-2008 of the Township of Ashfield-Colborne-Wawanosh as amended, and that it now be read severally a first, second, and third time, and finally passed this 3rd day of March 2020.

14.2 Lucknow Medical Centre – Amending Lease Agreement By-Law

Moved by
Seconded by

LUCKNOW MEDICAL CENTRE LEASE	THAT leave be given to introduce By-Law #20-2020 being a by-law to authorize the execution of a lease amending agreement between the Township of Ashfield-Colborne-Wawanosh, Township of Huron-Kinloss, and the DentalCorp Health Services ULC, and Dr. Larry Podolsky Dentistry Professional Corporation for the Lucknow Medical Centre – Dental Suite, and that it now be read severally a first, second, and third time, and finally passed this 3rd day of March 2020.

14.3 Sound and Noise By-Law

Moved by
Seconded by

SOUND AND NOISE BY-LAW	THAT leave be given to introduce By-Law #21-2020 being a by-law to provide for the regulation and prohibition of sound and noise, and that it now be read severally a first, second, and third time, and finally passed this 3rd day of March 2020.

14.4 Consolidated Fee By-Law

Moved by
Seconded by

CONSOLIDATED FEE BY-LAW

THAT leave be given to introduce By-Law #22-2020 being a by-law to set various fees for the Township of Ashfield-Colborne-Wawanosh, and that it now be read severally a first, second, and third time, and finally passed this 3rd day of March 2020.

14.5 Consolidated Appointment By-Law

Moved by
Seconded by

CONSOLIDATED APPOINTMENT BY-LAW

THAT leave be given to introduce By-Law #23-2020 being a by-law to appoint members to various Township Committees and Positions, and that it now be read severally a first, second, and third time, and finally passed this 3rd day of March 2020.

14.6 Confirmation By-Law

Moved by
Seconded by

CONFIRMATION BY-LAW

THAT leave be given to introduce By-Law #24-2020 being a by-law to confirm the proceedings of the Township of Ashfield-Colborne-Wawanosh meeting held on March 3, 2020, and that it now be read severally a first, second, and third time, and finally passed this 3rd day of March 2020.

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15.0 <u>ADJOURNMENT</u>

Moved by
Seconded by

ADJOURN

THAT Ashfield-Colborne-Wawanosh Township Council does now adjourn to meet again on March 17, 2020 at 9:00 a.m. or at the Call of the Mayor.

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TOWNSHIP OF
ASHFIELD - COLBORNE - WAWANOSH

Council Minutes
February 18, 2020

Township of Ashfield-Colborne-Wawanosh Council met in regular session on the 18th day of February 2020, at 9:00 a.m. in the Township of Ashfield-Colborne-Wawanosh Council Chambers.

Mayor	Glen McNeil
Deputy Mayor	Roger Watt
Councillors	Gloria Fisher
	Wayne Forster
	Jennifer Miltenburg
	Anita Snobelen
	Bill Vanstone

Staff Present

CAO/Clerk-Treasurer	Mark Becker
Chief Building Official	Brett Pollock
Public Works Superintendent	Brian Van Osch
Deputy Clerk	Florence Witherspoon

OTHERS PRESENT: Celina Whaling-Rae, Bradley Hill, Doug Geoffrey, Elizabeth Grant, and Jason Morgan.

1.0 CALL TO ORDER

It was noted that the Township Staff will be audiotaping the mornings meeting.

2.0 DISCLOSURE OF PECUNIARY INTEREST / POTENTIAL CONFLICT OF INTEREST

None disclosed.

3.0 ADOPTION OF PREVIOUS MEETING MINUTES

3.1 Council Meeting Minutes – February 4, 2020

Moved by Vanstone
Seconded by Miltenburg

ADOPT COUNCIL MINUTES #1 THAT Ashfield-Colborne-Wawanosh Township Council hereby adopts the February 4, 2020 Council Meeting Minutes as written.

Carried.

4.0 OPEN FORUM (items pertaining to the agenda)

None.

5.0 DELEGATIONS

5.1 9:00 a.m. – Celina Whaling-Rae / County of Huron Planner

Cannabis Production Zoning By-Law Amendment
Township of Ashfield-Colborne-Wawanosh / Zoning By-Law Housekeeping Amendment

Moved by Miltenburg
Seconded by Snobelen

ADJOURN COUNCIL MEETING #2 THAT Ashfield-Colborne-Wawanosh Township Council hereby adjourns their regular Council Meeting.

Carried.

		Moved by Vanstone Seconded by Fisher
OPEN PUBLIC MEETING	#3	THAT Ashfield-Colborne-Wawanosh Township Council hereby opens the Planning Advisory Committee Public Meeting to deal with Zoning By-Law Amendment that was submitted by the Township of Ashfield-Colborne-Wawanosh.

Carried.

This public meeting is pertaining to the adoption of By-law 17-2020 for the purpose of introducing zoning provisions relating to cannabis production facilities is being held pursuant to Section 34 of the Planning Act, which requires any municipality passing a by-law with respect to land use controls to hold at least one public meeting to allow opportunity for members of the public to make representation to Council with respect to the proposed by-law.

Ms. Whaling-Rae reviewed the housekeeping amendment with the Planning Advisory Committee.

TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH PLANNING ADVISORY COMMITTEE MEETING

Call to order

Mayor McNeil.

Declaration of Pecuniary Interests

None declared.

Purpose

The purpose and effect of the proposed housekeeping amendment is to introduce zoning provisions for cannabis production facilities.

This public meeting is pertaining to the adoption of By-law 17-2020 for the purpose of introducing zoning provisions relating to cannabis production facilities is being held pursuant to Section 34 of the Planning Act, which requires any municipality passing a by-law with respect to land use controls to hold at least one public meeting to allow opportunity for members of the public to make representation to Council with respect to the proposed by-law.

This by-law affects all lands within the Township of Ashfield-Colborne-Wawanosh and amends the Zoning By-law of the Corporation of the Township of Ashfield-Colborne-Wawanosh (32-2008).

Requirement

This Public Meeting is being held under The Planning Act, which requires that Council hold at least one Public Meeting and that proper notice be given.

Application Process

An application was submitted by the Township of Ashfield-Colborne-Wawanosh and considered complete on January 17, 2020.

Notice of the Public Meeting was advertised by the municipality on January 29, 2020.

Comments:

1) Huron County Planner

   The Huron County Planner reviewed the amendment with the Planning Advisory Committee.

2) Applicant and/or Agent

   None.

3) Others

   None.

4) Council's Questions and/or Comments.

Councillor Jennifer Miltenburg, Councillor Bill Vanstone, and Councillor Gloria Fisher asked for clarification with respect to the setback requirements.

NOTE: If a person or public body that files an appeal of a decision of ACW Township in respect to the proposed rezoning, but does not make written or oral submissions before the proposed rezoning is adopted, the Local Planning Appeal Tribunal (LPAT) may dismiss all or part of the appeal.

Zoning By-law Procedure Following Public Meeting

- This is a Public Meeting, not a Council Meeting; therefore, a decision of Council may or may not be made later this morning.
- If the By-law is passed, the Clerk must send Notice of the Passing of the By-law to all persons notified of this meeting and to any person or public body that has requested it.
- There is a 20-day objection period from the time Notice of Passing has been mailed, where submissions will be received by the Clerk.
- If an objection is received, an appeal is lodged with the Local Planning Appeal Tribunal (LPAT) and the Municipality no longer has jurisdiction of the file and/or the processing time. You may only file an appeal if you have submitted oral or written comments prior to the decision of Council.
- The fee for filing an appeal is $300.00 payable by Certified Cheque or Money Order in Canadian funds, made out to the Minister of Finance, and must be accompanied by Appellant Form (A1).
- If Council does not pass the by-law, the applicant may appeal to the LPAT.
- If the By-law is passed and no objections are received within the 20-day appeal period, the Clerk will certify that the By-law is in force and effect as of the date of its passing and Notice is forwarded to the Planning Department and to the applicant.

Recommendation of the Huron County Planner

It is recommended that the zoning by-law amendment be approved.

Recommendation of the Planning Advisory Committee

It is recommended that the zoning by-law amendment be further amended to increase all the setbacks from to 500 metres. It was also agreed that the particular zones of Future Development and Recreation be included in the by-law.

The by-law will be amended to reflect the changes noted and will be brought back to the next meeting for consideration.

Effect of Public and Agency Comments on Decision of Council to the Application

Deferred to the next meeting.

Adjournment

That there being no further business, the Public Meeting be hereby closed at 9:13 a.m.

Moved by Watt
Seconded by Forster

CLOSE PUBLIC MEETING	#4	THAT Ashfield-Colborne-Wawanosh Township Council hereby closes the Planning Advisory Committee Public Meeting. Carried.

5.2 9:15 a.m. - Celina Whaling-Rae / County of Huron Planner – Committee of Adjustment

Jason Aurini / Doug Geoffrey - Minor Variance Application File - #MV01-20

Moved by Miltenburg
Seconded by Snobelen

OPEN COMMITTEE OF ADJUSTMENT MEETING	#5	THAT Ashfield-Colborne-Wawanosh Council hereby adjourns their regular Council Meeting and hereby opens their Committee of Adjustment Meeting and Hearing to review the Jason Aurini Minor Variance Application. Carried.

We have provided Council with a copy of the report prepared by the County Planner, Celina Whaling-Rae, in regards to this application. Ms. Whaling-Rae reviewed the application with the Committee of Adjustment.

STAFF COMMENTS: That this application for minor variance be approved subject to the following conditions:

- That the structure be located within the footprint contained on the site plan that accompanied the application.
- That the structure be constructed as shown in the elevation drawings that accompanied the application.
- That the variances' approval is valid for a period of 18 months from the date of the Committee's decision.

Moved by Forster
Seconded by Fisher

APPROVE AURINI APPLICATION	#6	THAT Ashfield-Colborne-Wawanosh Committee of Adjustment hereby agrees to approve the Jason Aurini Minor Variance Application as submitted, subject to the conditions as noted in the Planner's Report. Carried.

Effect of Public and Agency Comments on Decision of Council to the Application

No public comments were received on this application so there was no effect on the decision.

Agency comments were received in support of the application, the effect of which resulted in the decision to approve the application.

Moved by Vanstone
Seconded by Snobelen

CLOSE COMMITTEE OF ADJUSTMENT	#7	THAT Ashfield-Colborne-Wawanosh Committee of Adjustment hereby closes their meeting. Carried.

Moved by Watt
Seconded by Forster

RECONVENCE REGULAR COUNCIL MEETING	#8	THAT Ashfield-Colborne-Wawanosh Township Council hereby reconvenes the regular Council Meeting of February 18, 2020. Carried.

5.3 9:30 a.m. – Celina Whaling-Rae / County of Huron Planner - Consent Application

Bradley and Veronica Hill - Consent File #C03-2020

We have provided Council with a copy of the report prepared by Celina Whaling-Rae in regards to the application for consent received from Bradley & Veronica Hill. Ms. Whaling-Rae reviewed the application with Council.

STAFF COMMENTS: We seek your direction.

ACTION: Council agreed to recommend to the County of Huron that this application for consent be approved subject to the conditions as outlined in the Planners Report.

5.4 9:45 a.m. - Celina Whaling-Rae / County of Huron Planner – Housing Initiative

We have provided Council with a copy of the three associated reports with respect to the Housing Initiative, prepared by Denise Van Amersfoort, Senior Planner. Ms. Whaling-Rae reviewed the reports with Council.

STAFF COMMENTS: For your information purposes.

ACTION: Noted and filed.

5.5 10:00 a.m. - Celina Whaling-Rae / County of Huron Planner – Port Albert Closed Landfills

We have provided Council with a copy of the report prepared by Celina Whaling-Rae in regards to the Port Albert Closed Landfills along with a copy of the proposal and cost estimate provided by R.J. Burnside & Associates Limited. Ms. Whaling-Rae reviewed the report with Council.

STAFF COMMENTS: We seek your direction.

ACTION: Council agreed to proceed as outlined in the report with including the proposal of R.J. Burnside & Associates Limited in the Proposed 2020 Budget.

5.6 11:00 a.m. - Jason Morgan / Alan Avis Architects Inc. – Municipal Addition / Renovation

As a follow-up from the Council Meeting of January 14th, Council reviewed the "Schematic Design Drawings" and the "Estimate of Probable Construction Cost" for the Municipal Office Addition / Renovations, as prepared by Allan Avis Architects Inc. At that meeting Council agreed to proceed to have Allan Avis Architects Inc. to prepare the Construction Drawings with staff including the project into the 2020 Draft Budget.

We have now received the costs for the preparation of these drawings and have provided Council with a copy of the "Service and Fee Proposal", along with a copy of the "Fee Breakdown", as prepared by Allan Avis Architects Inc. Jason Morgan from Alan Avis Architects Inc. was present to answer any questions of Council.

STAFF COMMENTS: That we proceed with the "Service and Fee Proposal" as prepared by Allan Avis Architects Inc. and adopt the following resolution.

ACTION: Council agreed to proceed with the following resolution.

Moved by Miltenburg
Seconded by Fisher

ALLAN AVIS SERVICE & FEE PROPOSAL OFFICE ADDITION	#9	THAT Ashfield-Colborne-Wawanosh Township Council hereby accepts the Service and Fee Proposal as prepared by Allan Avis Architects Inc., and gives pre-budget approval in the amount of $61,300 plus H.S.T. for the Documents for Permit and Construction, Bidding Phase, and Construction Phase as outlined in their proposal dated February 5, 2020.

Carried.

6.0 <u>ACCOUNTS</u>

6.1 Payment of Current Accounts as Presented

Moved by Vanstone
Seconded by Forster

APPROVE ACCOUNTS	#10	THAT Ashfield-Colborne-Wawanosh Township Council hereby authorizes the payment of the February 2020 accounts as presented.

Carried.

6.2 Payment of Previous Month Actual Accounts

Moved by Watt
Seconded by Miltenburg

APPROVE ACTUAL PAYMENTS	#11	THAT Ashfield-Colborne-Wawanosh Township Council hereby approves the payment of the January 2020 accounts in the amount of $ 708,408.01.

Carried.

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6.3 Summary Revenue/Expenditure Reports

Reports for the Township, Lucknow & District Fire Department, Lucknow & District Medical Centre, and Lucknow & District Recreation from January 2020.

Moved by Snobelen
Seconded by Vanstone

REVENUE EXPEND-ITURE REPORT #12 THAT Ashfield-Colborne-Wawanosh Township Council adopts the summary revenue/expenditure reports of the Treasurer as written.

Carried.

7.0 DEPARTMENT / COMMITTEE REPORTS

7.1 Water Department

7.1.1 Century Heights Drinking Water System Inspection Report

We have provided Council with a copy of the above noted inspection report.

STAFF COMMENTS: For your information purposes.

ACTION: Noted and filed.

7.1.2 Veolia Water Canada Contract / Renewal

Veolia Water Canada maintains the ACW Municipal Water Systems. The contract expires in April 2020. Staff met with Veolia Water to discuss the renewal. Staff is content with the wording in the existing contract from 2011, as amended in 2015, and are very happy with the services that Veolia Water provide to the municipality. We have provided Council with a copy of the amending agreement, with the amendments of Section 2.1 as housekeeping only, and Section 8.1 being the term of the agreement. The term is one year only due to the unknown situation in Dungannon with the new Arsenic Treatment Facility.

The current contract compensation is $139,521.48 per year, with the Consumer Price Index being applied annually. The contract also includes the operation of the Benmiller Sanitary Collection System located in our road allowance at Benmiller Heights.

We have provided Council with a copy of the existing agreement (2011), amending agreement (2015), amending agreement (2020), along with the authorizing by-law.

STAFF COMMENTS: That Council adopts the amending agreement by by-law in Section 14.

ACTION: Council agreed to adopt the amending agreement as provided by by-law in Section 14.

7.2 Building Department

7.2.1 Chief Building Official's Report

We have provided Council with a copy of Mr. Pollock's report. Mr. Pollock was present this morning.

STAFF COMMENTS: For your information purposes.

ACTION: Noted and filed.

7.2.2 Complete Construction (Goderich) Ltd. – Development Amendment Agreement

We have provided Council with a copy of the report prepared by Chief Building Official Brett Pollock, a copy of the amending Development Agreement, and the authorizing by-law for consideration. Mr. Pollock was present this morning.

STAFF COMMENTS: That Council authorize the amending agreement by by-law in Section 14.

ACTION: Council agreed to authorize the amending agreement by by-law in Section 14.

7.3 Cemetery Department

No items scheduled.

7.4 Drainage Department

7.4.1 Amberley Beach Road Project – Closing of New Drainage Works Request

We have provided Council with a copy of a report prepared by Stephen Brickman of Dietrich Engineering Ltd. with respect to the closing of a request for a new drainage works under the Drainage Act.

STAFF COMMENTS: For your information purposes.

ACTION: Noted and received.

7.5 Administration Department

7.5.1 Human Resource Policy Amendment - Performance Review

We have provided Council with a copy of the revised policy for Performance Reviews which removes the following paragraphs:

The CAO/Clerk-Treasurer, Mayor, and Deputy-Mayor, are responsible for the review of the Public Works Superintendent.

Should an employee disagree with the performance review, they may have an opportunity to discuss the review with Council.

STAFF COMMENTS: That Council adopt the following resolution to amend Policy No. HR – 1.06 Performance Review.

ACTION: Council agreed to adopt the amended policy and adopt the following resolution.

Moved by Forster
Seconded by Miltenburg

AMEND HR – 1.06 PERFORMANCE REVIEW POLICY

#13

THAT Ashfield-Colborne-Wawanosh Township Council hereby adopts the revised Human Resource Policy 1.06 being the Performance Reviews, revised date of February 18, 2020.

Carried.

7.5.2 Tax Collector / Payroll Clerk (Maternity Leave) Appointment By-Law

As Council are aware, staff called for applications for the one-year contract, reviewed the applications received, and interviewed those selected. We are pleased to report that Brooke Austin has accepted this one-year maternity leave position as Tax Collector / Payroll Clerk. We are very excited to have Brooke as part of the ACW Team and are very confident that she will serve ACW well. We have provided Council with a copy of the appointment by-law for adoption.

STAFF COMMENTS: That Council adopts the by-law in Section 14.

ACTION: Council agreed to adopt the by-law in Section 14.

7.5.3 By-Law Enforcement Officer Report

We have provided Council with a copy of the report prepared by Bruce Brockelbank.

STAFF COMMENTS: For your information purposes.

ACTION: Noted and filed.

7.5.4 Noise By-Law

We have provided Council with a copy of the report along with a copy of the "Draft Noise By-Law" for review as prepared by Deputy Clerk Florence Witherspoon. Ms. Witherspoon was present this morning.

STAFF COMMENTS: We seek your direction.

ACTION: Council agreed to make a few minor adjustments to the draft by-law and to bring back to a future meeting for consideration.

7.6 Public Works Department

No items scheduled.

7.7 Environmental Services

No items scheduled.

7.8 Committee Reports

Councillor Wayne Forster reported on the Coalition for Huron Injury Prevention.

Councillor Gloria Fisher reported on the Benmiller Community Hall Committee.

8.0 NEW BUSINESS

Councillor Gloria Fisher requested that the topic of "Single Use Plastics" be added to the upcoming agenda for discussion.

9.0 CORRESPONDENCE / DIRECTION REQUIRED

9.1 33rd Annual Provincial Elementary School Curling Championship

We have provided Council with a copy of their Sponsorship Request.

STAFF COMMENTS: We seek your direction.

ACTION: Council agreed to donate $100 for a one quarter of a page advertisement.

Moved by Vanstone
Seconded by Watt

DONATE ANNUAL PROVINCIAL SCHOOL CURLING — #14 — THAT Ashfield-Colborne-Wawanosh Township Council hereby agrees to donate $100 to the 33rd Annual Provincial Elementary School Curling Championship.

Carried.

9.2 Dungannon Pro Rodeo – Financial Donation Request

We have provided Council with a copy of their Financial Donation Request.

STAFF COMMENTS: That we defer to the 2020 Budget Deliberations.

ACTION: Noted and filed.

9.3 Huron County Federation of Agriculture – Invitation

We have provided Council with a copy of the invitation to the Annual MPP/MP/Local Politician Meeting on March 6th.

STAFF COMMENTS: We seek your direction.

ACTION: Council agreed to register Mayor Glen McNeil and Councillor Wayne Forster.

9.4 Huron Perth Agriculture & Water Festival – Financial Donation Request

We have provided Council with a copy of their Financial Donation Request.

STAFF COMMENTS: We seek your direction.

ACTION: Received and filed.

10.0 CORRESPONDENCE / FOR INFORMATION PURPOSES

10.1 Maitland Valley Conservation Authority – Annual Meeting
10.2 County of Huron – External Service Review
10.3 Huron County Federation of Agriculture Letter – Bill 156 Support

ACTION: Council agreed to support Bill 156 with a letter being sent to the Minister of Agriculture & Food with Mayor Glen McNeil signing the letter of support.

10.4 St. Helens Hall Committee – Minutes

11.0 CORRESPONDENCE / ON COUNCIL TABLE

No items scheduled.

12.0 UNFINISHED BUSINESS

12.1 Ontario Good Roads Association (OGRA) Conference – February 23-26, 2020

Mayor McNeil and Councillor Vanstone and Miltenburg attending.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

12.2 Economic Development Committee Annual Review – March 17th at 1:00 p.m.

Mayor McNeil, Deputy Mayor Watt, and Councillor Miltenburg attending.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

12.3 2020 Budget Deliberations – March 20th at 9:00 a.m.

All members of Council attending for a full day.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

12.4 Official Plan Preliminary Review – March 25th at 1:00 p.m.

All members of Council attending.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

12.5 Burnside Annual Client Appreciation Night – March 25th

Mayor McNeil, Deputy Mayor Watt, Councillor Miltenburg, Vanstone, and Fisher attending.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

12.6 Lake Huron Conference – Is the Coast Clear? – May 12th-13th

Mayor McNeil and Deputy Mayor Watt attending.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

12.7 Association of Municipalities of Ontario (AMO) Annual Conference – August 16-19th 2020

Councillor Vanstone and Fisher attending.

STAFF COMMENTS: Reminder only.

ACTION: Noted.

13.0 IN-CAMERA / CLOSED SESSION

No items scheduled.

14.0 BY-LAWS

14.1 Cannabis Production Facility By-Law

Deferred.

14.2 Tax Collector / Payroll Clerk (Maternity Leave) Appointment By-Law

Moved by Fisher
Seconded by Forster

APPOINT TAX COLLECTOR PAYROLL CLERK BY-LAW	#15	THAT leave be given to introduce By-Law #15-2020 being a by-law to establish and appoint the position of Tax Collector / Payroll Clerk, and that it now be read severally a first, second, and third time, and finally passed this 18th day of February 2020.

Carried.

14.3 Veolia Water Contract By-Law

Moved by Miltenburg
Seconded by Watt

VEOLIA WATER CONTRACT BY-LAW	#16	THAT leave be given to introduce By-Law #18-2020 being a by-law to authorize the Clerk to execute the amendment agreement between Veolia Water Canada Inc. and the Township of Ashfield-Colborne-Wawanosh, and that it now be read severally a first, second, and third time, and finally passed this 18th day of February 2020.

Carried.

14.4 Complete Construction (Goderich) Ltd. Agreement By-Law

Moved by Snobelen
Seconded by Vanstone

COMPLETE CONSTRUCTION AGREEMENT BY-LAW	#17	THAT leave be given to introduce By-Law #19-2020 being a by-law to authorize the execution of the amending Development Agreement with Complete Construction Ltd. and the Township of Ashfield-Colborne-Wawanosh, and that it now be read severally a first, second, and third time, and finally passed this 18th day of February 2020.

Carried.

14.5 Confirmation By-Law

Moved by Snobelen
Seconded by Watt

CONFIRMATION BY-LAW	#18	THAT leave be given to introduce By-Law #16-2020 being a by-law to confirm the proceedings of the Township of Ashfield-Colborne-Wawanosh meeting held on February 18, 2020, and that it now be read severally a first, second, and third time, and finally passed this 18th day of February 2020.

Carried.

~

15.0 <u>ADJOURNMENT</u>

Moved by Miltenburg
Seconded by Forster

ADJOURN	#19	THAT Ashfield-Colborne-Wawanosh Township Council does now adjourn to meet again on March 3, 2020 at 9:00 a.m. or at the Call of the Mayor.

Carried.

~

_____ _____

Mayor, Glen McNeil CAO/Clerk-Treasurer, Mark Becker

PLANNING & DEVELOPMENT
57 Napier Street, Goderich, Ontario N7A 1W2 CANADA
Phone: 519.524.8394 Ext. 3 **Fax:** 519.524.5677 **Toll Free:** 1.888.524.8394 Ext. 3
www.huroncounty.ca

To: Mark Becker, CAO/Clerk-Treasurer, Township of Ashfield-Colborne-Wawanosh & Township of Ashfield-Colborne-Wawanosh Council
From: Celina Whaling-Rae, Planner
Date: February 27, 2020

Re: Amendments to Proposed Cannabis By-law Provisions

This report is submitted to Ashfield-Colborne-Wawanosh (ACW) Council for the council meeting on March 3, 2020.

Recommendation:
That Council approve By-law 17-2020 with the setbacks at 150 and 300 metres for cannabis production facilities with and without air treatment control respectively.

Background:
At the Public Meeting held on February 18, 2020 regarding to the proposed zoning by-law housekeeping amendment pertaining to the regulation of cannabis production facilities, Council directed staff to amend the proposed general provisions pertaining to cannabis production facilities in order to increase the distance between said facilities and described sensitive land uses from 150 metres for those equipped with air treatment control and 300 metres for those not equipped with air treatment control to 500 metres for all facilities. Staff have since submitted a revised by-law for Council's review.

Comments:
The setbacks as proposed by the County of Huron Planning and Development Department originate with research completed by the County of Norfolk Planning Department. The Norfolk approach has been adopted by many municipalities within the past year, including Huron East, Central Huron and Morris-Turnberry in Huron County. The Planning Department does not have data to support increased setbacks and recommends that the Township adopt the approach applied in other local municipalities.

Comments Received:
Following the Public Meeting, Brian Barnim reached out to staff to gather more information as it relates to the proposed housekeeping. Mr. Barnim has since submitted two formal letters via email in opposition of the amendments to the by-law proposed by Council at the Public Meeting. These comments are attached for Council's consideration.

I will be in attendance at the March 3 meeting of Council to answer any questions Council may have regarding the proposed by-law and Mr. Barnim's comments.

Sincerely,

Celina Whaling-Rae

Celina Whaling-Rae
Planner

Celina Whaling-Rae

From: Brian Barnim <brian.barnim@gmail.com>
Sent: Tuesday, February 25, 2020 2:59 PM
To: Celina Whaling-Rae
Subject: Re: Your inquiry and your application

Hello Celina

I am providing you with email in response to our conversation regarding zoning setback requirements for cannabis production.

It is my opinion that ACW Council needs to reconsider the proposed 500m separation distance, a separation of this distance will halt most if not all cannabis production in ACW.

If a 500m distance separation were to be implemented the only possible area production would be rural where there is limited access to 3 phase power which is essential and limited available natural gas supply.

Security I believe would also be a concern if built in a rural area which is another essential requirement.

I cannot find anywhere in the County of Huron where set backs to this degree have been passed or even considered.

Even with a proposed 150m setback it eliminates many locations, I believe each case needs to be considered on its own merit not all painted with the same brush.

Everything we read is about how the Municipalities are working with the County to reduce red-tape and streamline processes to attract new business ventures, I do not believe this is a good example of that.

Like it or not , the federal Government legalized cannabis for use and production, my properties are federally regulated as they are located at an airport so this maybe a mute request for consideration by ACW.

Nobody knows better than ACW of what happened when the Province stepped in and regulated setbacks for wind turbines, I would hate to see the Feds take the same position for cannabis production.

I offer my comments for Council consideration and by doing so this is my formal submission before the passing of the by-law which allows me to appeal the decision of Council if needed.

Regards
Brian J Barnim
Colborne Property Holdings Inc.
5199552515

On Tue, Feb 25, 2020 at 2:26 PM Celina Whaling-Rae <cwhalingrae@huroncounty.ca> wrote:

Hi Brian,

I wanted to send along a synopsis of my voicemail to you in writing in case you don't receive it. I previously left you a message regarding our conversation over the proposed amendments to the drafted cannabis by-law for ACW.

As per my voicemail, the mandatory Public Meeting for the proposed by-law was held at the last Council meeting on Tuesday, February 18. As such, there will not be an opportunity for open forum on Tuesday, March 3 to provide comment. Therefore, in order to retain your rights to appeal any by-law which is adopted, you will need to participate in the process formally through either i) submitting comments in writing to myself and/or dclerk@acwtownship.ca to be included on the Council Agenda, or ii) by making a request in writing to come forward as a delegation to Council to clerk@acwtownship.ca. Should you pick the latter option, you will need to provide detail regarding the nature of the request in order to be considered.

Please feel free to give me a call at 519-524-8394 ext. 3 to discuss further if needed.

Celina Whaling-Rae

Planner, County of Huron

519-524-8394 ext. 3

From: Monica Walker-Bolton
Sent: Tuesday, February 25, 2020 11:41 AM
To: Brian Barnim <brian.barnim@gmail.com>
Cc: Celina Whaling-Rae <cwhalingrae@huroncounty.ca>; Lisa Finch <lfinch@huroncounty.ca>
Subject: Your inquiry and your application

Hi Brian,

I will refer you to Celina Whaling-Rae regarding your question about a grow facility at the airport. She is the planner for ACW.

As for your severance, if you have all of your documentation, can you please be sure to provide that to Lisa Finch, Land Division Administrator in the Planning & Development office. Lisa will look over your application and if it is complete we can start our administrative work for processing your application.

-Monica

From: Brian Barnim [mailto:brian.barnim@gmail.com]
Sent: Tuesday, February 25, 2020 10:12 AM
To: Monica Walker-Bolton <mwalker-bolton@huroncounty.ca>
Subject: Separation distance

Hello Monica

Hope all is well, do you know if ACW has a MDS for grow-ops? I have inquiries into the possibility of growing Marijuana at the airport facilities.

Also I have all of the required documentation now for the Lane of Pines property.

--

Thank you,

Brian J Barnim

519-955-2515

--
Thank you,

Brian J Barnim
519-955-2515

Celina Whaling-Rae

From: Brian Barnim <brian.barnim@gmail.com>
Sent: Wednesday, February 26, 2020 12:23 PM
To: Celina Whaling-Rae; Sandra Weber
Subject: Fwd: ACW Cannabis zoning

Hello Celina and Sandra

i have forwarded my comments for consideration.

---------- Forwarded message ---------
From: **Brian Barnim** <brian.barnim@gmail.com>
Date: Wed, Feb 26, 2020 at 12:20 PM
Subject: ACW Cannabis zoning
To: Brian Barnim <brian.barnim@gmail.com>

Below are some items that should be considered while considering the proposed zoning for Cannabis production in ACW:

- no other Municipality in the County of Huron has passed or considered zoning restrictions as severe as what ACW is proposing

- restrictions of this magnitude is the same as essentially saying "NO" to Cannabis production in ACW

- any consideration for Cannabis production would automatically involve at the very least a minor variance application if proposed zoning is passed, in most cases this would initiate comments that would not be an issue if zoning was put in place to reflect the areas where production should be allowed
.
- zoning of this magnitude does reflect what we all read about, suggesting Municipalities and the County are attempting to streamline processes and reduce red tape

- ACW does not have any light industrial zoning currently with the exception of Village industrial (VM1), there are areas where this needs to be considered, times have changed

- Current airport zoning does not reflect what its current and future use looks like, example Truck center is zoned AG1-22 which is essentially legal non conforming , this should be addressed in ACW zoning by-law house keeping , given the nature of the aircraft industry in Ontario / Canada does not reflect what future use will look like

- Airport properties should be zoned "M" for industrial use to allow mixed use of business.

- surrounding Municipalities with "M" industrial use are allowing Cannabis production with a 70m setback and non industrial areas are 150m setback

- suggesting a 500m setback will in most cases will remove the ability to provide essential servicing required for cannabis production ie: 3 phase power / natural gas / high speed Internet / security

- currently airports and airport use zoned properties com under the "Federal Government Exclusive Constitutional Jurisdiction" adding the use of aircraft for transporting Cannabis in it production constitutes airport related use which exempts ACW from official plan and zoning By-Law regulations according to 8.7.4 (1) Polices from ACW official plan.

- building on these lands is regulated under the National Building Code, Ontario Building Code has no jurisdiction as the zoning stands now, several buildings have been built while under the ownership of SkyHarbor Refinishing without a building permit from ACW, have proof.

Ministry of Labor have no jurisdiction on these lands as zoned, also have proof

8.7.4. POLICIES 1. Jurisdiction The Federal Government has exclusive constitutional jurisdiction over aeronautics, which includes those areas designated Airport and used for airport-related uses. Airport uses and buildings are exempt from Township Official Plan policies and Zoning By-law regulations, but proponents will be asked to consider local requirements in their decision

- Aircraft maintenance and painting has taken place at the Sky harbor Airport since the early 40's far before any residential housing ever existed in the immediate area

.- Under 8.7.4. (3) : Compatibility there is to be no development around the airport that conflicts with airport use. Aircraft maintenance and painting has taken place at the Goderich airport since the early 1940's long before any residential housing existed in that area.

- MOE is the governing authority for air quality and emissions not ACW, permitting for air emissions would not be allowed without engineered air exchange units, most are heat recovery units which emit little to no exhaust / odor

- Aircraft maintenance and painting which is highly volatile from a odor and contamination aspect far exceed what any regulated cannabis production facility would ever emit.

In summary I believe ACW Council is killing an ant with a sledge hammer in considering the proposed 500m setback, in consultation with a planning lawyer if passed the zoning is highly appealable.

--
Thank you,

Brian J Barnim
519-955-2515
Colborne Property Holdings Inc

--
Thank you,

Brian J Barnim
519-955-2515

Celina Whaling-Rae

From: Brian Barnim <brian.barnim@gmail.com>
Sent: Wednesday, February 26, 2020 3:19 PM
To: Celina Whaling-Rae; Sandra Weber; gmcneil@acwtownship.ca; rwatt@acwtownship.ca; jmiltenburg@acwtownship.ca; gfisher@acwtownship.ca; bvanstone@acwtownship.ca; asnobelen@acwtownship.ca; wforester@acwtownship.ca; ACW Clerk
Subject: retraction from previous email

Hello All

I incorrectly stated earlier the MOE was responsible for air quality related issues with cannabis production, it is actually Health Canada as this is a federal law which further strengthens my case surrounding the airport properties

Odour mitigation guidelines In Canada, Health Canada regulates medical cannabis producers and requires that facilities are equipped with an air filtration system to prevent the escape of odours under Provision 61 of the Access to Cannabis for Medical Purposes Regulations. 13 An air filtration system using a H13 high-efficiency particle air (HEPA) filter is given as an example of such a system by Health Canada.14

--
Thank you,

Brian J Barnim
519-955-2515

5.1

14.1

THE CORPORATION OF THE TOWNSHIP OF
ASHFIELD-COLBORNE-WAWANOSH

BY-LAW NUMBER 17-2020

BEING A BY-LAW to amend the Zoning By-law 32-2008 for the Township of Ashfield-Colborne-Wawanosh.

WHEREAS the Municipal Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh considers it advisable to amend Zoning By-law 32-2008, as amended, of the Corporation of the Township of Ashfield-Colborne-Wawanosh and;

NOW THEREFORE the Council of the Township of Ashfield-Colborne-Wawanosh enacts as follows:

1. Section 2 (Definitions) is hereby amended by the addition of the following:

   "AIR TREATMENT CONTROL" shall mean the functional use of properly maintained industrial grade multi-stage carbon filtration system, or similar technology, to reduce any/or treat the emission of pollen, dust and odours expelled from a facility and sized accordingly in comparison to the facility it serves as designed by a qualified person.

   "CANNABIS" shall mean the plants hemp and marijuana in the family Cannabaceae.

   "CANNABIS PRODUCTION FACILITY" means lands, buildings, or structures used for producing, processing, testing, destroying, packaging and/or shipping of cannabis authorized by an issued license or registration by the federal Minister of Health, pursuant to the Access to Cannabis for Medical Purposes Regulations, SOR/2016-230, to the Controlled Drugs and Substances Act, SC 1996, c 19, as amended from time to time, or any successors thereto.

2. Section 2 (Definitions) is hereby amended by the deletion and replacement of the definitions of "Agricultural Industrial Establishment", "Agricultural Use, General", "Agricultural Use, Limited", and "Greenhouse, Commercial" with the following:

   AGRICULTURAL INDUSTRIAL ESTABLISHMENT shall mean the use of land and/or buildings or structures for the manufacturing and wholesale and/or retail sales of goods that are necessary to support agricultural uses, as defined in this by-law. These include such goods as farm machinery and equipment used for tillage of soil, the planting, spraying, harvesting, transporting, treatment, processing and storage of grain, forage, feed, or forest products, products used for the housing and husbandry of livestock, poultry and furbearing animals, and the storage, handling, and processing of milk, eggs, and manure and the manufacture of sub-surface drainage materials and equipment.

   AGRICULTURAL USE, GENERAL means general farming and without limiting the generality of the foregoing shall include such uses as: the general cultivation of land the associated production, conditioning, processing and storage of field crops, vegetables, fruit, horticultural crops and nursery stock and the selling of agricultural products produced on the premises, the breeding and care of livestock, fowl, furbearing animals and bees, and the selling of such stock or the product of such stock raised on the premises, and the management of forest, and the sale of forest products, including fuel wood, pulp wood, timber, Christmas trees, and maple products, and includes a farm dwelling and accessory buildings and uses but does not include a cannabis production facility.

   AGRICULTURAL USE, LIMITED means the planning and harvesting of field, bush, vine, forest, or tree crops and grazing not including an accessory residence, livestock building or cannabis production facility.

GREENHOUSE, COMMERCIAL means a building or structure used for the growing of flowers, plants, shrubs, trees or similar vegetation which are not necessarily transplanted outdoors on the same lot containing such building or structure, but are sole directly from such lot at wholesale or retail but does not include a cannabis production facility.

3. Section 3 (General Provisions) is hereby amended by the addition of the following:

3.44 Cannabis Production Facility

Notwithstanding any other provision of this By-law, any Cannabis Production Facility shall be subject to the following provisions:

a) Lands, buildings, or structures or portion(s) thereof used for Cannabis Production Facility purposes shall not be located any closer than 500 metres to a Residential Zone, Community Facility Zone, Recreational Zone, Future Development Zone, park or similar recreational use, dwelling, public school, private school, place of worship, or a day care.
b) Accessory buildings or structures used for security purposes for Cannabis Production Facilities may be located in any yard. The minimum setback for an accessory building used for security purposes from a front, side, or rear lot line shall be 1 metre, but it shall not be located in the sight triangle.
c) Outdoor storage is prohibited on the property in which a Cannabis Production Facility is located.
d) A Cannabis Production Facility shall only be permitted within the zones as explicitly indicated in this Zoning By-law.
e) Setback requirements do not apply to dwellings located on the same parcel as a Cannabis Production Facility.
f) All development in relation to the establishment of or the expansion to a Cannabis Production Facility shall be subject to Site Plan Control.

4. Section 4.1 is hereby amended by the addition of the following: ‘cannabis production facility subject to the provisions of Section 4 and 3.44’.

5. Section 5.1 is hereby amended by the addition of the following: ‘cannabis production facility subject to the provisions of Section 5 and 3.44’

6. Section 23.1 is hereby amended by the addition of the following: ‘cannabis production facility subject to the provisions of Section 23 and 3.44’

7. All other provisions of By-law 32-2008 shall apply.

8. This by-law shall come into force upon final passing, pursuant to Section 34(21) of the Planning Act.

Read a FIRST and SECOND time this 3rd day of March, 2020.

Read a THIRD TIME and FINALLY PASSED this 3rd day of March, 2020.

_____

Glen McNeil, Mayor

_____

Mark Becker, CAO/ Clerk-Treasurer

THE CORPORATION OF THE TOWNSHIP OF
ASHFIELD-COLBORNE-WAWANOSH
SCHEDULE 1
BY-LAW NUMBER 17-2020

By-law 17-2020 has the following purpose and effect:

1. The purpose of this housekeeping amendment is to introduce zoning provisions for cannabis production facilities.

2. This by-law affects all lands within the Township of Ashfield-Colborne-Wawanosh and amends the Zoning By-law of the Corporation of the Township of Ashfield-Colborne-Wawanosh (32-2008).

PLANNING & DEVELOPMENT

57 Napier Street, Goderich, Ontario N7A 1W2 CANADA
Phone: 519.524.8394 Ext. 3 **Fax:** 519.524.5677 **Toll Free:** 1.888.524.8394 Ext. 3
www.huroncounty.ca

Consent Application Report – File C09/20
To Ashfield-Colborne-Wawanosh Council

Owner/Applicant: **Leroy, Annette, and Preston Drennan (Preston Drennan)**	Date: **February 26, 2020**
Property Address: **86525 Division Line**	
Property Description: **South Part Lot 1, Concession 14 WD, Ashfield, Ashfield-Colborne-Wawanosh**	

Recommendation: That provisional consent be:

✓ granted with conditions (attached)
___ deferred
___ denied (referred to the County Committee of the Whole Day 1 for a decision)

Purpose:

__ enlarge abutting lot
___ create new lot
✓ surplus farm dwelling
___right-of-way / easement
___ other:

	Area	**Official Plan Designation:**	**Zoning:**	**Structures:**
Severed	1.2 hectares (3.18 acres)	Agriculture	AG1 (General Agriculture)	House, shed, and coverall
Retained	39.1 hectares (96.7 acres)	Agriculture	AG1 (General Agriculture) & NE1 (Natural Environment)	None

Review: This application:

✓ Is consistent with the Provincial Policy Statement (s. 3(5) Planning Act);
✓ Does not require a plan of subdivision for the proper and orderly development of the municipality (s.53(1) Planning Act);
✓ Conforms with section 51(24) of the Planning Act;
✓ Conforms with the Huron County Official Plan;
✓ Conforms with the Ashfield-Colborne-Wawanosh Official Plan;
✓ Complies with the Ashfield-Colborne-Wawanosh Zoning By-law (or will comply subject to a standard condition of rezoning or minor variance);
__ Has been recommended for approval by the local municipality; and
✓ Has no unresolved objections/concerns raised (to date) from agencies or the public.

(Applications that do not meet all of the foregoing criteria will be referred to the County Committee of the Whole Day 1 for a decision)

Agency / Other Comments:

	Not Received	No Concerns	Concerns	See Conditions / Comment
Neighbours	✓			
ACW Staff		✓		• The Building Department has completed a septic inspection for the proposed severed parcel. They have no concerns regarding the severed parcel's capacity to support the existing septic system. The department notes that the coverall building on the

				property is a farm building and is only designed to be used as such. • The Public Works Superintendent has confirmed that the current proposal to share the widened laneway as a house and field access for the respective parcels is acceptable.
Township of Huron-Kinloss		✓		

Additional Comments:
This consent application was submitted for the purpose of severing a surplus farmhouse residence. The residence is surplus to two of the three owners on title (Leroy and Annette Drennan). They own another farm with a residence, located at 35075 Amberley Road. The applicant and partial owner, Preston Drennan, is the intended purchaser of the surplus residence. Section 3.5.9.11 of the ACW Official Plan stipulates that a farmhouse residence may be considered surplus when the majority of an unincorporated group of owners own another farm containing a residence, as is the case with this application.

The proposed south lot line of the severed parcel cuts down the centre of the existing laneway. The portion of the laneway allocated to the retained parcel is intended to serve as a field entrance. The Public Works Superintendent has confirmed this to be an acceptable entrance, as the laneway is wide enough to be used as a shared access and to support farm equipment.

There is an existing coverall on the severed parcel. The manure tank shown in Figures 1 & 2 has since been removed since the 2015 aerial photos were taken. As the Building Department has noted, this is a farm building and is only designed to be used as such. Section 3.5.10 of the ACW Official Plan stipulates that barns in the immediate vicinity of a surplus severance may be required as a condition of severance to be demolished. Upon discussions with the applicant, it was noted that the coverall is currently used for storage, and has only been used for these purposes. The floor of the coverall is only partially cemented, and water servicing does not extend to the vicinity. The applicant intends to continue to use the building for storage purposes.

It is recommended that this consent application be approved subject to the recommended conditions.

Figures 1 & 2: *Aerial Photos of Subject Property* (severed parcel in blue, retained in orange)

Figure 3: *Image of the Severed Parcel as seen from Division Line*

Recommended Conditions
Expiry Period

1. Conditions imposed must be met within one year of the date of notice of decision, as required by Section 53(41) of the Planning Act, RSO 1990, as amended. If conditions are not fulfilled as prescribed within one year, the application shall be deemed to be refused. Provided the conditions are fulfilled within one year, the application is valid for two years from the date of the notice of decision.

Municipal Requirements

2. All municipal requirements be met to the satisfaction of the Township including servicing connections if required, cash-in-lieu of park dedication, property maintenance, compliance with zoning by-law provisions for structures, compliance with Section 65 of the Drainage Act and any related requirements, financial or otherwise.

3. The sum of $250.00 to be paid to the municipality as cash-in-lieu of parkland.

4. 911 addressing for the subject lands be dealt with the satisfaction of the Township.

Survey / Reference Plan

5. Provide to the satisfaction of the County and the Township:
   a) a survey showing the lot lines of the severed parcel and the location of any buildings thereon, and
   b) a reference plan based on the approved survey.

Storm Water and Drainage

6. A letter from a licensed contractor advising that the tank has been pumped and is functioning properly for the severed parcel be provided to the satisfaction of the Township.

Zoning

7. Where a violation of any municipal zoning by-law is evident, the appropriate minor variance or rezoning shall be obtained to the satisfaction of the Township.

NOTE:
The applicant is hereby advised that the severed parcel will be automatically rezoned to recognize the residential parcel (e.g. AG4-19) and the retained farmland will be automatically rezoned to prohibit a new residence (e.g. AG1-37) in the Township of Ashfield-Colborne-Wawanosh Zoning By-law.

Sincerely,

Celina Whaling-Rae

Celina Whaling-Rae
Planner

Site Inspection: February 27, 2020

HURON COUNTY

PLANNING & DEVELOPMENT
57 Napier Street, Goderich, Ontario N7A 1W2 CANADA
Phone: 519.524.8394 Ext. 3 **Fax:** 519.524.5677 **Toll Free:** 1.888.524.8394 Ext. 3
www.huroncounty.ca

NOTICE OF AN APPLICATION FOR CONSENT FOR SEVERANCE

DATE: February 11, 2020 File # **C09-2020**

TO:

- Owner: Leroy Drennan, Annette Drennan & Preston Drennan Applicant: Preston Drennan
- Florence Witherspoon, Deputy Clerk - Township of Ashfield-Colborne-Wawanosh
- Township of Huron-Kinloss (Abutting within 1 km of subject property)
- Brett Pollock, CBO – Township of Ashfield-Colborne-Wawanosh
- Sarah Louise McGregor, Building Administrative Assistant – Township Ashfield-Colborne-Wawanosh
- Celina Whaling-Rae, Planner, Huron County Planning Department

Enclosed is a copy of an application for Consent for your review and comments to the Huron County Planning & Development Department.

LOCATION OF PROPERTY

Township: Ashfield-Colborne-Wawanosh Lot: South Part Lot 1, Concession 14, WD, Ashfield
Address: 86525 Division Line
Owner: Leroy Drennan, Annette Drennan & Preston Drennan
Applicant: Preston Drennan

PURPOSE AND EFFECT

The purpose and effect of this application is for the creation of a new lot under the surplus farm residence policies. The proposed land to be severed is approximately 3.18 acres (1.29 ha) consisting a house, shed and coverall. The land to be retained is approximately 96.7 acres (39.13) consisting agricultural lands.

LAST DAY FOR RECEIVING COMMENTS

We would appreciate your comments by **February 25, 2020** as to whether or not your department or agency has any comments to this severance and whether or not any conditions should be imposed. All comments should be addressed to the Attention of Lisa Finch, Land Division Administrator at the following by e-mail address lfinch@huroncounty.ca or by regular mail to the address above and to the Attention of Lisa Finch, Land Division Administrator. We will assume you have no objections to the application if no comments are received by the time specified. If this does not provide you with sufficient opportunity to consider the application, please advise.

DECISION AND APPEAL

If you wish to be notified of the decision in respect to the proposed consent, you must make a written request to the Huron County Planning & Development Department c/o Ms. Lisa Finch, Land Division Administrator, Huron County Consent Granting Authority at 57 Napier Street, 2nd Floor, Goderich, Ontario, N7A 1W2.

If a person or public body, that files an appeal of a decision in respect of the proposed consent, does not make written submission to the Huron County Planning Department before it gives or refuses to give a provisional consent, then the Local Planning Appeal Tribunal may dismiss the appeal.

ADDITIONAL INFORMATION

Further information regarding this application will be available to the public for inspection between 8:30 a.m. to 4:30 p.m. - Monday to Friday at:

Huron County Planning & Development Department
57 Napier Street, 2nd Floor, Goderich, Ontario N7A 1W2

Alternatively, you may review the application at the local municipal office.

APPLICATION FOR CONSENT

RECEIVED
FEB 06 2020
DEPARTMENT OF PLANNING

HURON COUNTY

For office use only
File # C09/2020
Received FEB 4, 20 20
Considered Complete FEB 11, 20 20

1. PRE-SUBMISSION CONSULTATION

Applicants are strongly encouraged to contact the County and speak/meet with the Planner assigned to the Municipality before submitting an application..

Date of Applicant's consultation meeting with County Planner assigned to Municipality: Jan 23/20

2. APPLICATION INFORMATION

Name of Applicant	Name of Owner
Preston Drennan	Leroy and Annette Drennan, Preston Drennan
	☐ Check box if same as Applicant
Contact Information	**Contact Information**
Address: 86525 Division Line RR3	Address: 567 Outram St
Town: Lucknow	Town: Lucknow
Postal Code: N0G 2H0	Postal Code: N0G 2H0
Home Phone: 519-395-3550	Home Phone: 519-812-1020
Cell: 519-525-2053 Work:	Cell: Work:
Fax:	Fax:
Email: prestondrennan@gmail.com	Email:

Solicitor name (if known)

Address:

Tel: Email:

Correspondence to be sent to: ☐ all parties, or ☑ applicant, and\or ☐ owner

3. LOCATION OF THE SUBJECT PROPERTY – SEVERED & RETAINED (Complete applicable lines)

Municipality: ACW	Concession: 14
Ward: Ashfield	Lot Number(s) S ½ lot 1 WD
Registered Plan:	Lot(s) Block(s):
Reference Plan:	Part Number(s)
Municipal Address (911 number and street/road name): 86525 Division Line	Roll # (if available): 40 70 640 014 03900 0000

a) Are there any right-of-way easements or restrictive covenants affecting the severed or retained land?

☐ Yes ■ No

b) If **Yes**, describe the location of the right-of-way or easement or covenant and its effect:

c) **Is any of the severed or retained land in Wellhead Protection Area A, B or C?** ☐ **Yes** ☐ **No** ☐ **Unknown**

If yes, please obtain a Restricted Land Use Permit from the Risk Management Official.

If **Unknown**, please consult with your Municipal Planner and obtain a Restricted Land Use Permit if necessary.

d) Is the subject property systematically tiled? If **yes**, please submit tile maps with your application.

☐ Yes ■ No

4. PURPOSE OF THE APPLICATION

Type of proposed transaction:

Transfer:	Other:
■ Creation of a new lot	☐ Charge
☐ Addition to lot	☐ Lease
☐ An easement	☐ Correction of title
☐ Other purpose (please specify): _____	

Briefly, describe the proposed transaction:

Creation of a new lot under the surplus severance policies.

Name(s) of person(s), if known, to which land or interest in land is to be transferred, leased or charged:

If a surplus severance, provide legal description and locations of other farm holdings of owner/purchaser:

35075 Amberley Road, ACW

If creating a lot addition, identify the lands to which parcel will be added.

Municipality: _____	Concession: _____
Ward: _____	Lot Number(s): _____
Registered Plan: _____	Lot(s) Block(s): _____
Reference Plan: _____	Part Number(s): _____
Municipal Address (911 number and street/road name):	Roll # (if available: _____
_____	

5. DESCRIPTION OF SUBJECT LAND

Description land intended to be severed:

Frontage: 70 metres

Depth: 184 metres

Area: 3.18 acres

Existing Use(s): Residential

Proposed Use(s): Residential

Existing Building(s) or Structure(s)
House, shed, and coverall

a) **Type of access:**
(Check appropriate box)

- ☐ existing building(s) or structure(s)
- ☐ provincial highway
- ☐ county road
- ■ municipal road, maintained all year
- ☐ municipal road, seasonally maintained
- ☐ other means (please specify)

b) **Type of water supply proposed:**
(check appropriate box)

- ☐ publicly owned and operated piped water system
- ■ privately owned and operated individual well
  - ☐ dug
  - ■ drilled
- ☐ privately owned and operated communal well
- ☐ lake or other water body
- ☐ other means (please specify)

c) **Type of sewage disposal proposed:**
(check appropriate box)

- ☐ publicly owned & operated sanitary sewage system
- ■ privately owned & operated individual septic tank
- ☐ privately owned & operated communal septic system
- ☐ privy
- ☐ other means (please specify

Description land intended to be retained:

Frontage: _____

Depth: _____

Area: 96.7 acres

Existing Use(s): Agricultural

Proposed Use(s): Agricultural

Existing Building(s) or Structure(s)
None

a) **Type of access:**
(Check appropriate box)

- ☐ existing building(s) or structure(s)
- ☐ provincial highway
- ☐ county road
- ■ municipal road, maintained all year
- ☐ municipal road, seasonally maintained
- ☐ other means (please specify)

b) **Type of water supply proposed:**
(check appropriate box)

- ☐ publicly owned and operated piped water system
- ☐ privately owned and operated individual well
  - ☐ dug
  - ☐ drilled
- ☐ privately owned and operated communal well
- ☐ lake or other water body
- ☐ other means (please specify)

c) **Type of sewage disposal proposed:**
(check appropriate box)

- ☐ publicly owned & operated sanitary sewage system
- ☐ privately owned & operated individual septic tank
- ☐ privately owned & operated communal septic system
- ☐ privy
- ☐ other means (please specify

6. LAND USE

a) What is the existing Official Plan designation of the property?

prime agricultural

b) What is the zoning of the property?

AG1

c) Are any of the following uses or features on the subject land or on adjacent land, within 500 metres of the subject land?

Please respond **Yes** or **No** to each use or feature

Use of Feature	On Subject Land Please indicate: Yes / No	On Adjacent Land Within 500 metres of the Subject Land? Please indicate: Yes / No	Metres
An agricultural operation, including livestock facility or stockyard	No	No	
A landfill	No	No	
A sewage treatment plant or waste stabilization plant	No	No	
A provincially significant wetland (Class 1, 2 or 3 wetland)	No	No	
Flood plain	No	No	
A rehabilitated mine site	No	No	
A non-operating mine site within 1 km of the subject land	No	No	
An active mine site	No	No	
An industrial or commercial use (specify the use[s])	No	No	
A former industrial or commercial use	No	No	
An active railway line	No	No	
A municipal airport	No	No	
An underground storage tank or buried waste	No	No	
A current Environmental Site Assessment for the site or has one been prepared within the last 5 years. If Yes, please submit with application.	No	No	

7. HISTORY OF THE PROPERTY

a) Has the subject land ever been the subject of an application for approval of a plan of subdivision under Section 51 of the planning Act or a consent under Section 53 of the Planning Act?

☐ Yes ☑ No ☐ Unkown

If **Yes**, and known, provide file number of the application and the decision made on the application.

File Number: _____

Decision: _____

b) If this application is a re-submission of a previous consent application, describe how it has been changed from the original application.

_____

c) Is the subject land reserved for either manure applications under the Nutrient Management Plan or manure agreement submitted to the municipality?

☐ Yes ☑ No

8. PROVINCIAL POLICY

a) Is the application consistent with the Provincial Policy Statement issued under Section 3 (1) of the Planning Act?

☑ Yes ☐ No ☐ Unkown

9. NATURAL HERITAGE

a) Has the Planner advised the applicant that this application needs to be reviewed by the Huron County Stewardship coordinator for comments on Natural Heritage matters?

☐ Yes (submit a fee of $208.00 made payable to: Treasurer, County of Huron)

☑ No

10. HEALTH UNIT REVIEW

Please answer Section A OR Section B, depending on the type of servicing available.

Section A – Where **SANITARY SEWERS** are available:

Is the property within 183 meters (600 feet) of an abattoir? (slaughter house)	☐ Yes ☑ No

Section B – Where **SEPTIC SYSTEMS** are available:

The application is for the creation of a new lot for which the primary use will be a new dwelling (other than a new dwelling on a farm).	☐ Yes ☑ No
The severed parcel contains a residence or other building(s) serviced by an on-site sewage system?	☑ Yes ☐ No
If you answered **Yes**: is the on-site sewage system older than 5 years of age?	☑ Yes ☐ No
If you answered **Yes**: has the on-site sewage system been inspected by a licensed contractor within the past 3 years?	☐ Yes ☑ No
If you answered **Yes**: you are required to provide a certificate of inspection with your application. If you answered **No**: you will be required to have an inspection carried out and provide a certificate of inspection as a condition of consent (severance) approval.	
Is the property less than .4 hectares (1 acre) in area?	☐ Yes ☑ No
Does the property have less than .2 hectares (1/2 acre) of "useable land"* for septic tank and tile bed? See definition of "usable land" below	☐ Yes ☑ No

* "Usable Land" means an area of land with suitable original soil for the installation of a Class 4 subsurface sewage disposal system, free of any buildings, structures, swimming pools, etc. and such land is or will be used solely for a septic tank and tile bed and any future replacement of the tile bed, and which area is at least 3 metres (10 feet) from any property line, at least 15 metres (50 feet) from any drilled well, at least 30 metres (100 feet) from any dug well, at least 15 metres (50 feet) from any top-of-bank of a watercourse or lake, not located in a flood plain, not located in an environmentally sensitive area, and does not contain field tile or other artificial drainage. (Other restriction may apply according to legislation).

Note: *Regardless of the results from Section A or B, some applications may require comments from the Health Unit as identified through the planning process. In these cases, the relevant fee shall apply.*

If the answer to any question in Section 10 is "Yes" the Health Unit comments will be required and a fee must be submitted with your application: Cheque should be made payable to: Treasurer, County of Huron.

Health Unit Review Fee:	$ 268.00
Severance resulting in 2 lots or fewer:	$268.00
Severance resulting in 3 lots or more:	$509.00
Total Paid	$ 268.00

11. *SKETCH CHECKLIST*

The application shall be accompanied by a clean, legible sketch showing the following information. Failure to supply this information will result in a delay in processing the application.

Please do not use pencils for completing sketch as they do not copy well.

Please check the boxes indicating that your sketch provides the following information:

- ☐ boundaries and dimensions of the land that is to be severed and the part that is to be retained;
- ☐ boundaries and dimensions of any land owned by the owner of the subject land that abuts the severed and retained land;
- ☐ distance between the subject land and the nearest township lot line and/or landmark, such as a railway crossing or bridge;
- ☐ location of all land previously severed from theparcel;
- ☐ location of all wells, including abandoned wells, on neighbouring properties within 30m of lot lines of both the severed and retained lands subject to this consent application;
- ☐ location of all natural and artificial features in the subject land and adjacent lands such as railways, roads, watercourses, drainage ditches, field drains, river or stream banks, wetlands, wooded areas and the location and nature of any easement affecting the subjectland;
- ☐ location of all buildings, wells, abandoned wells and all components of a sewage system (i.e. septic tanks and weeping beds) on the severed and retained lands, and the distance of each to the proposed new lot line;
- ☐ existing uses on adjacent land such as residential, agricultural and commercial uses;
- ☐ location of beach access - if the property is a recreational property, adjacent to or in proximity to the waterfront;
- ☐ location and nature of any easements affecting theproperty;
- ☐ whether sewage disposal will be provided by a publicly owned and operated sanitary sewage system, a privately owned and operated individual or communal septic system, a privy or other means.

13. OWNER/APPLICANT'S CONSENT DECLARATION

In accordance with the provisions of the Planning Act, it is the policy of the County Planning Department to provide the public access to all development applications and supporting documentation.

In submitting this development application and supporting documentation,

I Annette Drennan Leroy Drennan the owner/the authorized applicant, hereby acknowledgethe above-noted policy and provide my consent, in accordance with the provisions of the Municipal Freedom of Information and Protection of Privacy Act, that the information on this application and any supporting documentation provided by myself, my agents, consultants and solicitors, will be part of the public record and will also be available to the generalpublic.

I hereby authorize the County of Huron staff, municipal staff and council members of the decision making authority to have access to the subject site for purposes of evaluation of the subject application.

If the application is deemed incomplete, the applicant has 60 days to provide the necessary information. After 60 days has lapsed, the application and fee will be mailed back to the applicant.

Signature — Date: Feb 4/20

Annette Drennan
Leroy Drennan
Print Name — Title

Where the owner is a firm or corporation, the person signing this section shall complete one or more of the following (please check):

☐ I have the authority to bind thecorporation.

☐ Affixed is the corporateseal.

14. AUTHORIZATIONS

If the applicant is not the owner of the land that is the subject of this application, the written authorization of the owner that the applicant is authorized to make the application must be included with this form or the authorization set out below must be completed.

Authorization of Owner for Agent
to Make the Application

I, Leroy Drennan Annette Drennan, am the owner of the land that is the subject of this application for a consent and for the purposes of the Freedom of Information and Protection of Privacy Act, I authorize

Preston Drennan, to make this application on my behalf.

Signature — Date: Feb 4/20

If the applicant is not the owner of the land that is the subject of this application, complete the authorization of the owner concerning personal information set out below.

12. APPLICANT'S/OWNER'S DECLARATION

*(This must be completed by the **Person Filing the Application** for the proposed development site.)*

I, Preston Drennan of the
(Name of Applicant)
Ashfield-Colborne-Wawanosh
(Name of Town, Municipality, etc.)

In the Region/County/District Huron solemnly declare that all of the statements contained in this application and supporting documentation are true and complete, and I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath, and by virtue of the "Canada Evidence Act." I hereby acknowledge and accept the requirements and costs referred to the in Noteslisted.

NOTES:

Please be advised the responsibility for filing a complete application rests solely with the owner/applicant. Anything not requested or applied for in this application and subsequently found to be necessary (which may require another application(s) and fee(s)) are the sole responsibility of the owner/applicant. The County/Municipality will address only the application as applied for, and any items that are not included in the application are not the responsibility of the County/Municipality.

All studies required to support this application shall be at the expense of the applicant and included at the time of submission as a complete application. Where the County/Municipality incurs costs for the peer review of any consultants' reports or fees for legal opinions, the County/Municipality will be reimbursed such costs by the applicant.

In the event of third-party appeals to applications approved by the County/Municipality, the applicant may be responsible for some or all of the legal and other costs incurred by the County/Municipality, at the discretion of the County/Municipality.

DECLARED before me at:

Region/County/District County of Huron

In the Municipality of North Huron

Signature

This 3rd day of February, 2020.
(Day) (Month) (Year)

Preston Drennan
Please Print Name of Applicant

Michelle Fenton
Commissioner of Oaths

Michelle Anne Fenton, a Commissioner, etc.,
Province of Ontario, for Crawford, Mill & Davies,
Barristers & Solicitors.
Expires February 5, 2022.

Authorization of Owner for Agent
to Provide Personal Information

I, Leroy Brennan Annette Brennan, am the owner of the land that is the subject of this application consent and, for the purposes of the ***Freedom of Information and Protection of Privacy Act***, I authorize

Preston Brennan, as my agent for this application to provide any of my personal information that will be included in his application or collected during the process of the application..

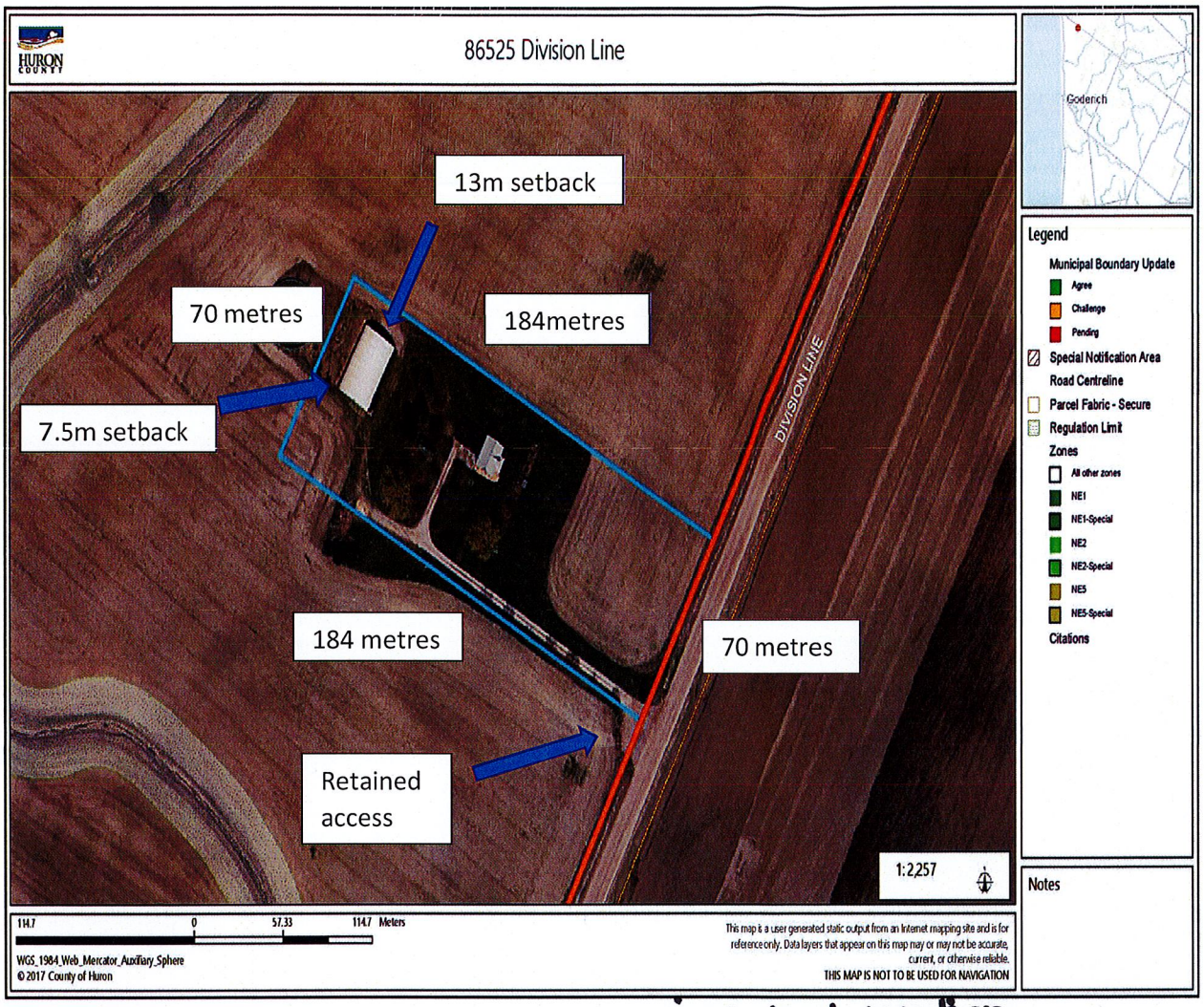
Signature

Feb 4
Date

Annette Brennan
Leroy Brennan
Print Name

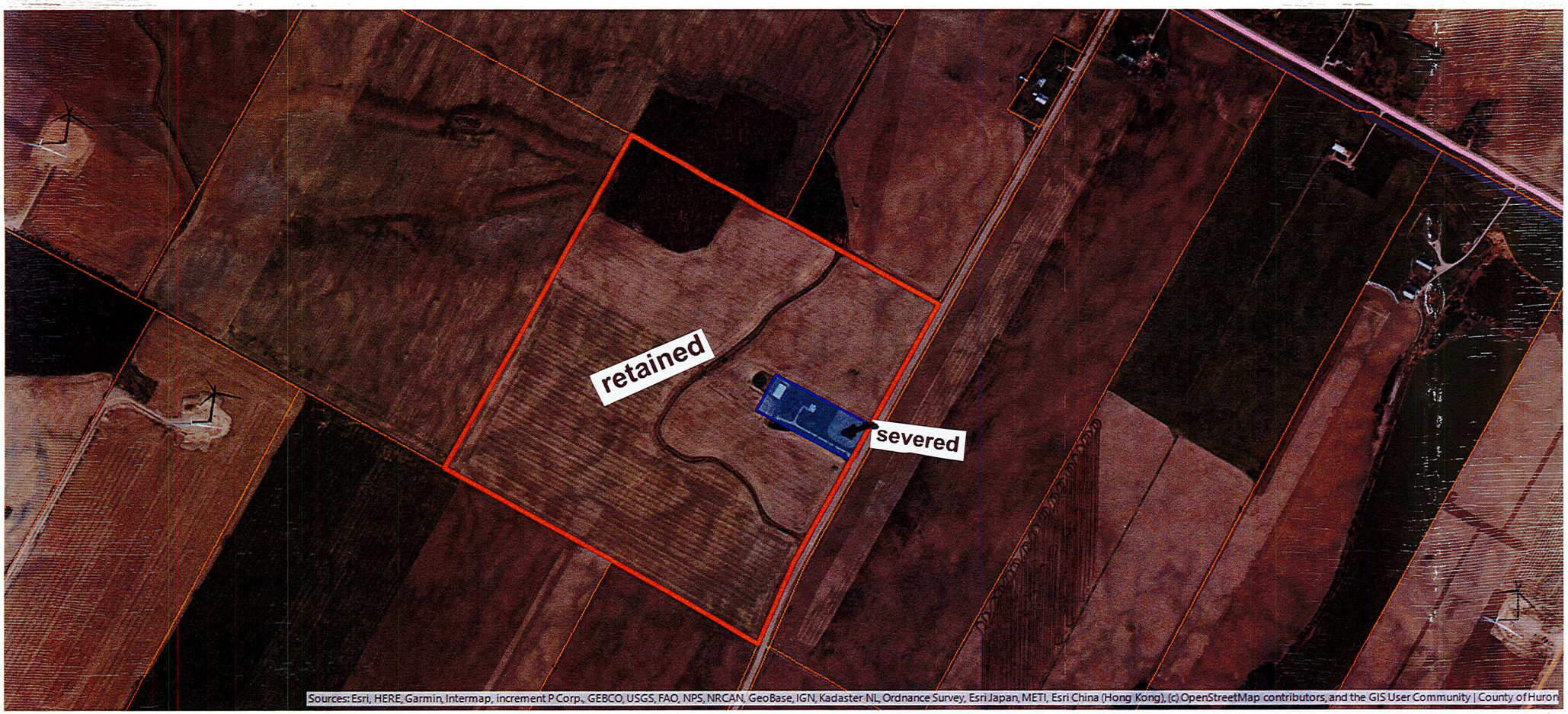
Title

Note: **Where the owner is a firm or corporation, the person signing this section shall statethat he/she has authority to bind the corporation or affix the corporateseal.**



• = weeping bed location

Total area = 3.19 acres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Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community | County of Huron

Florence Witherspoon

From: Michael Gubesch <mgkelt76@hotmail.ca>
Sent: Wednesday, February 26, 2020 6:33 PM
To: Florence Witherspoon
Cc: loristephens@live.com
Subject: Russell and Wellington Development - Proposed Submission to Council for this Tuesdays Council Meeting:
Attachments: Tigert Aerial 10.33 ac 2020.pdf

Hi Florence:

My wife Lori Stephens and I (Michael Gubesch) put in an offer in for a development property in Port Albert. The offer has been accepted and we are currently completing our due diligence prior to closing the deal. Attached is an aerial view of the property showing the 5 lots we are proposing to sever as Phase 1 of Phase 2. Phase 2 would be subdivision of lots for sale and/or development of the remainder of the property. The sale of lots in Phase 1 will be used to finance Phase 2. The property is currently zoned VR1 and the proposed lots meet ACW zoning requirements. We are looking to gather consensus from Council on whether or not what we are proposing would be favourably met.

We look forward to presenting on Tuesday night. Can you please include this email, and the attached PDF, as part of Tuesday evenings Agenda Package.

Michael Gubesch
21 North Street
Port Albert, ON
226-926-0509

false
false
Measure

GeoWarehouse®

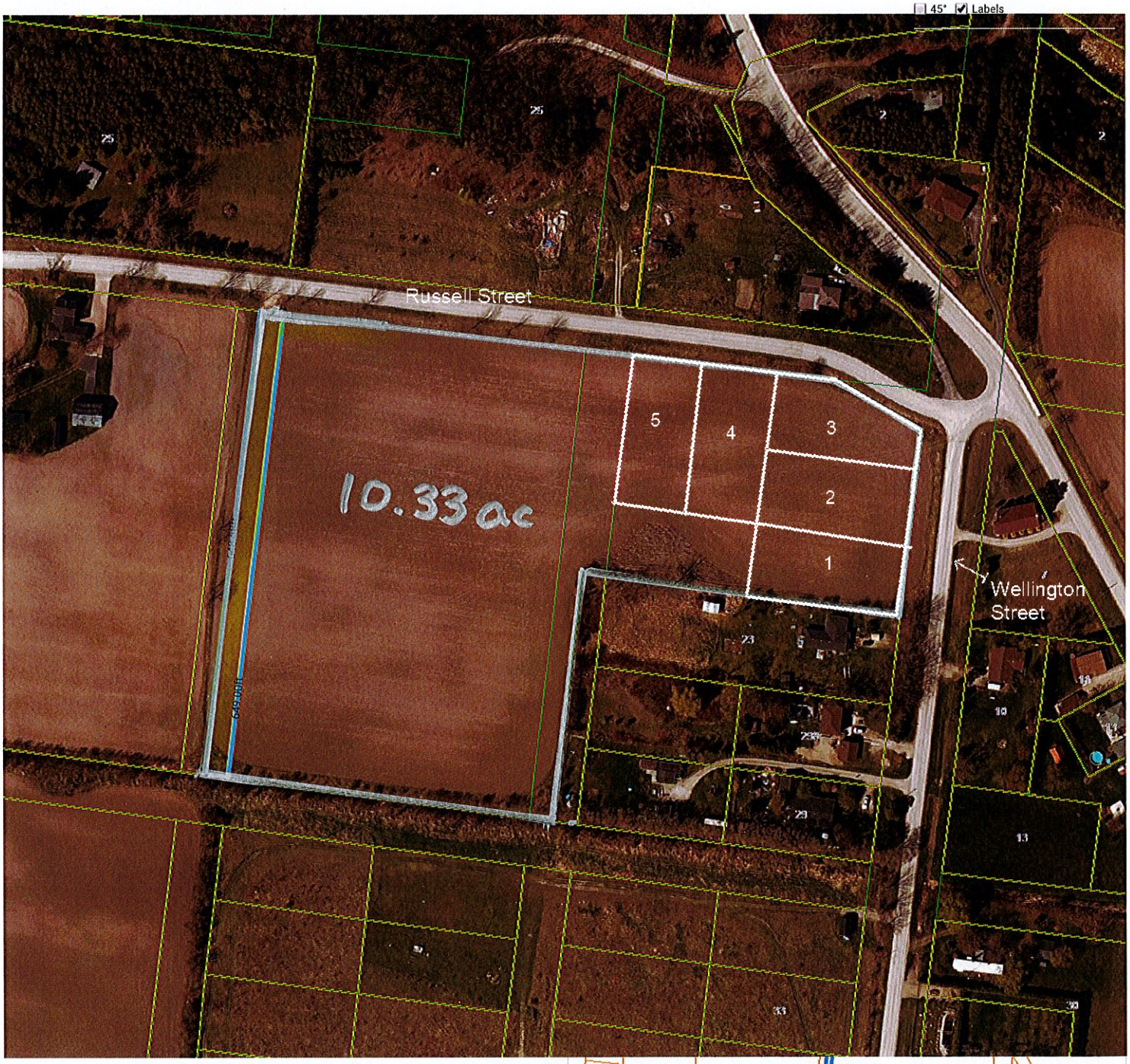
PIN: 411090447 | Generated: Feb. 3, 2020

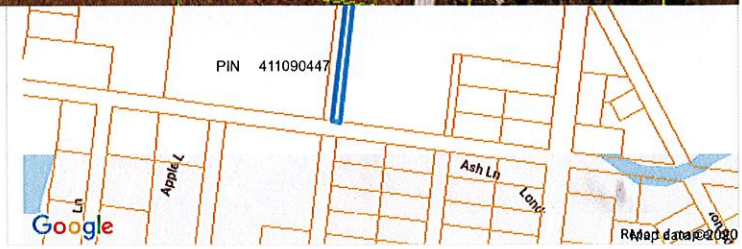
Map View
Map
Standard Road Map

Back | Overview | Property Details | Site & Structure | Valuation & Sales | Plans & Surveys | Print | Demographics | Comparables | Tools | Close

Address Not Available
Suggest an address correction

Aerial View
Bird's eye View
45° Labels





Map data ©2020 Imagery ©2020 CNES / Airbus, Maxar Technologies

Florence Witherspoon

From: Brian Barnim <brian.barnim@gmail.com>
Sent: Tuesday, February 25, 2020 3:37 PM
To: Florence Witherspoon
Subject: Re: Your inquiry and your application

Hi Florence

I would also like to be added to the agenda to speak to Council as i will not have the opportunity to do so without a formal request according to Celina.

Thank you
Brian

---------- Forwarded message ---------
From: **Brian Barnim** <brian.barnim@gmail.com>
Date: Tue, Feb 25, 2020 at 2:58 PM
Subject: Re: Your inquiry and your application
To: Celina Whaling-Rae <cwhalingrae@huroncounty.ca>

Hello Celina

I am providing you with email in response to our conversation regarding zoning setback requirements for cannabis production.

It is my opinion that ACW Council needs to reconsider the proposed 500m separation distance, a separation of this distance will halt most if not all cannabis production in ACW.

If a 500m distance separation were to be implemented the only possible area production would be rural where there is limited access to 3 phase power which is essential and limited available natural gas supply.

Security I believe would also be a concern if built in a rural area which is another essential requirement.

I cannot find anywhere in the County of Huron where set backs to this degree have been passed or even considered.

Even with a proposed 150m setback it eliminates many locations, I believe each case needs to be considered on its own merit not all painted with the same brush.

Everything we read is about how the Municipalities are working with the County to reduce red-tape and streamline processes to attract new business ventures, I do not believe this is a good example of that.

Like it or not , the federal Government legalized cannabis for use and production, my properties are federally regulated as they are located at an airport so this maybe a mute request for consideration by ACW.

Nobody knows better than ACW of what happened when the Province stepped in and regulated setbacks for wind turbines, I would hate to see the Feds take the same position for cannabis production.

I offer my comments for Council consideration and by doing so this is my formal submission before the passing of the by-law which allows me to appeal the decision of Council if needed.

Regards
Brian J Barnim
Colborne Property Holdings Inc.
5199552515

TOWNSHIP OF
ASHFIELD - COLBORNE - WAWANOSH

NOTICE TO AMEND THE FEES & CHARGES FOR

BUILDING PERMITS

Take notice that pursuant to The Building Code Act Section 7(6) and Div. C Section 1.9.1.2 of Ontario Regulation 332/12, and the Township of Ashfield-Colborne-Wawanosh Notice By-Law, the Township shall give notice of its intent to consider the amendment of the Building Department fees and charges.

The Council of the Township of Ashfield-Colborne-Wawanosh at its meeting to be held on **March 3, 2020 at 10:00 am** in the Council Chambers at the Municipal Office, will consider the amendment of various fees and charges.

Anyone may attend the meeting outlined above. Further information can be obtained by contacting the Building Department at 519-524-4669 or by visiting www.acwtownship.ca

Mark Becker,
CAO/Clerk-Treasurer
February 7, 2020

TOWNSHIP OF
ASHFIELD–COLBORNE–WAWANOSH

COUNCIL REPORT

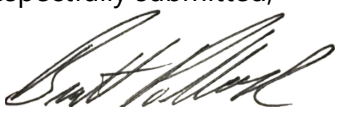
From: Brett Pollock, Chief Building Official
Date: January 29, 2020
Subject: Building Fees Update

RECOMMENDATION:
Council approve the update to the Building Permit Fees as per the attached and further directs that an amending by-law be brought forward to Council

BACKGROUND:
The Township has always updated building permit fees on a as needed basis with the intention of covering the costs related to the issuance of building permits. The last time the fees were reviewed and increased was in 2013. With the changes made to the operation of the building department it was determined that an increase in fees is required to maintain this service. It is anticipated that the fees proposed will help to ensure that the building department continues to operate as a user pay service and remain revenue neutral.

COMMENT:
Council previously approved an update to the Fee By-law for the addition of plumbing and septic fees. Due to the timelines and quick implementation of the plumbing and septic inspection and permits an update to the building fees was not included. There are no changes proposed to the plumbing and septic fees previously approved.

Respectfully submitted,



Brett Pollock, Chief Building Official

Building Department Fee Comparison for 2020

Classification	A-C-W 2013	Morris Turnberry 2017	South Bruce 2019	North Huron 2017	Huron Kinloss 2018	Central Huron 2019	Staff Recommendation
New Residential, Additions, and Mobile Homes	$70.00 base fee + $0.60 / sqft. + $0.25 / sqft for basement	$85.00 base fee + $0.80 / sqft + $0.45 / sqft for basement	$70.00 base fee + $0.65/ sqft	$200.00 base fee + $0.75 / sqft $0.35 / sqft for basement	$0.70 / sqft + $0.35 / sqft for attached garage	$100.00 base fee + $0.70 / sqft	**$85.00 base fee + $0.70 / sqft $0.35/ sqft for basement**
Permit Cost Comparison	**Example** 1500 Sqft Single Family Dwelling with 450 sqft attached garage			**Current** $1,615.00			**Proposed** $1,970.00
Detached Garages, Storage Sheds, > 108 sqft & additions to	$70.00 base fee + $0.50 / sqft	$85.00 base fee + $0.45 / sqft	$70.00 base fee + $0.40 / sqft	$100.00 base fee + $0.40 / sqft	$0.35 / sqft	$100.00 base fee + $0.50 / sqft	**$85.00 base fee + $0.50 / sqft**
Permit Cost Comparison	**Example** 500 Sq Ft detached garage			**Current** $320.00			**Proposed** $335.00
New Non -Livestock Farm Buildings	$70.00 base fee + $0.15 / sqft	$85.00 base fee + $0.30 / sqft	$70.00 base fee + $0.25/ sqft	$100.00 base fee + $0.25 / sqft	$0.20 / sqft	$100.00 base fee + $0.25 / sqft	**$85.00 base fee + $0.20 /sqft**
Permit Cost Comparison	**Example** 3500 Sq Ft Implement Storage Building			**Current** $595.00			**Proposed** $785.00
New Farm Buildings & Additions to (dry manure)	$70.00 base fee + $0.25 / sqft	$85.00 base fee + $0.30 / sqft	$70.00 base fee + $0.25 / sqft	$100.00 base fee + $0.25 / sqft	$0.25 / sqft	$100.00 base fee + $0.25 / sqft	**$85.00 base fee + $0.25 / sqft**
Permit Cost Comparison	**Example** 5500 Sq Ft Livestock Building			**Current** $1,445.00			**Proposed** $1,460.00
New Farm Buildings & Additions to (liquid manure)	$70.00 base fee + $0.35 / sqft	$85.00 base fee + $0.30 / sqft	$70.00 base fee + $0.25 / sqft	$100.00 base fee + $0.25 / sqft	$0.25 / sqft	$100.00 base fee + $0.25 / sqft	**$85.00 base fee + $0.35 / sqft**
Permit Cost Comparison	**Example** 5500 Sq Ft Livestock Building			**Current** $1,995.00			**Proposed** $2,010.00

Building Department Fee Comparison for 2020

Classification	A-C-W 2013	Morris Turnberry 2017	South Bruce 2019	North Huron 2017	Huron Kinloss 2018	Central Huron 2019	Staff Recommendation
New Commercial, Industrial, Institutional, & Additions to	$70.00 base fee + $0.60 / sqft	$85.00 base fee + $0.50 / sqft	$70.00 base fee + $0.65 / sqft	$200.00 base fee + $0.70 / sqft	$0.70 / sqft	$100.00 base fee + $0.50 / sqft	**$85.00 base fee + $0.70 / sqft**
Permit Cost Comparison	**Example** 10,000 Sq Ft Warehouse			**Current** $6,070.00			**Proposed** $7,085.00
Liquid Manure Tanks	$70.00 base fee + $6.00 / ft of diameter min charge $350.00 storage under barn, $350.00 additional	$85.00 base fee + $9.60 / ft diameter solid $0.20 sqft	$70 / sqft diameter or $0.20 / sqft for others	$100.00 base fee + $4.70 / linear foot	$0.20/ sqft min. $200.00	$60.00 base fee + $3.00 /ft diameter min fee $400.00	**$85.00 base fee + $8.60 / ft of diameter min charge $400 storage under barn, $400.00 additional**
Permit Cost Comparison	**Example** 110 Ft wide Liquid Manure Tank			**Current** $730.00, under barn $350			**Proposed** $745.00, under barn $400.00
Silos	$200.00	$85.00 base fee + $12.00 / thousand of constr. value	$175.00	Tower Silo $280 Bunker Silo $350.00	$200.00	$300.00	**$250.00**
Permit Cost Comparison	**Example** Silo - any size			**Curent** $200.00			**Proposed** $250.00
Grain Bins, Chimneys, & Canopies	$150.00	$85.00 base fee + $12.00 / thousand of constr. value	$70.00 base fee + $10.00 / thousand of constr. value	$100.00 base fee + $10.00 / thousand of constr value	$100.00 less than 315 sqft $200.00 > 315 sqft	$300.00	**$200.00**
Permit Cost Comparison	**Example** Grain Bin - any size			**Current** $150.00			**Proposed** $200.00

Building Department Fee Comparison for 2020

Classification	A-C-W 2013	Morris Turnberry 2017	South Bruce 2019	North Huron 2017	Huron Kinloss 2018	Central Huron 2019	Staff Recommendation
Change of Use (no renovations)	$100.00	$100.00	$100.00	$250.00	$100.00	$60.00 base fee + $0.40 / sqft	**$100.00**
Permit Cost Comparison	**Example** 1000 Sq Ft Commercial Space			**Current** $100.00			**Proposed** $100.00
Demolition Permit	$75.00	$85.00 base fee + $12.00 / thousand sqft	$100.00	$150.00	$75.00	$50.00 up to 1,000 sqft $150.00 for > 1,000 sqft	**$85.00**
Permit Cost Comparison	**Example** Any Building			**Current** $75.00			**Proposed** $85.00
Decks, Balconies, & Porches	$70.00 base fee + $0.50 / sqft	$85.00 base fee + $0.45 / sqft	$70.00 base fee + $0.25 / sqft	$100.00 base fee + $0.35 / sqft	$0.25 / sqft	$100.00 base fee + $0.50 / sqft	**$85.00 base fee + $0.50 / sqft**
Permit Cost Comparison	**Example** 225 Sq Ft Deck			**Current** $182.50			**Proposed** $197.50
Swimming Pools	$100.00	N/S	$150.00	$100.00	$100.00	$150.00	**$125.00**
Permit Cost Comparison	**Example** Above Ground Pool			**Current** $100.00			**Proposed** $125.00
Occupancy Permit (all buildings requiring an occupancy permit)	$100.00	$100.00	$100.00	$50.00	$75.00	$0.00 No additional fee	**$100.00**
Permit Cost Comparison	**Example** Single Family Dwelling			**Current** $100.00			**Proposed** $100.00

Building Department Fee Comparison for 2020

Classification	A-C-W 2013	Morris Turnberry 2017	South Bruce 2019	North Huron 2017	Huron Kinloss 2018	Central Huron 2019	Staff Recommendation
Renovations and repairs to existing buildings	$70.00 base fee + $11.00 / thousand of constr. value	$85.00 base fee + $12.00 / thousand of constr. value	$70.00 base fee + $10.00 / thousand of constr. Value	$100.00 base fee + $10.00 / thousand of constr value	$75.00 base fee + $10.00 / thousand of constr. value	$100.00 base fee + $0.70 / sqft	**$85.00 base fee + $11.00 / thousand of constr. value**
Permit Cost Comparison	**Example** $50,000 renovation to SFD			**Current** $620.00			**Proposed** $635.00
Any building construction, renovation, or repair not listed	$70.00 base fee + $11.00 / thousand of constr. value	N/S	N/S	$100.00 base fee + $10.00 / thousand of constr value	N/S	N/S	**$85.00 base fee + $11.00 / thousand of constr. value**
Permit Cost Comparison	**Example** Estimated Cost of Construction $50,000			**Current** $620.00			**Proposed** $635.00
Wind Turbines	$60.00 base fee + $12.00 / thousand of constr. value	$85.00 base fee + $15.00 / thousand of constr. value	$70.00 base fee + $15.00 / thousand of constr. value	$100.00 base fee + $15.00 thousand of constr value	$20.00 / thousand of constr. value for supporting structure	N/S	**$85.00 base fee + $20.00 / thousand of constr. value**
Construction w/out Building Permit	3 x cost of regular permit fee	4 x cost of regular permit fee	min $500.00 4 x cost of regular permit fee	$150.00 plus permit fee	fee doubled	fee doubled	**4 x cost of regular permit fee**
Zoning Compliance Certificate	$75.00	$80.00	$75.00	$75.00	$90.00	$50.00	**$100.00**
Miscellaneous Inspections and Re-Inspections	$50.00	N/S	N/S	$75	N/S	$60.00	**$100.00**
Transfer of Building Permit	$100.00	N/S	$125.00	N/S	N/S	$60.00	**$125.00**

Building Department Fee Comparison for 2020

Classification	A-C-W 2013	Morris Turnberry 2017	South Bruce 2019	North Huron 2017	Huron Kinloss 2018	Central Huron 2019	Staff Recommendation
Review by Consultant/ Engineer/ Solicitor Deposit (the difference to be returned or paid)	Minor $1,000.00 Major $5,000.00	N/S	N/S	N/S	Minor $1,000.00 Major $5,000.00	costs are added to permit fee	**Minor $1,000.00 Major $5,000.00**

N/S - not specified

BY-LAW NUMBER 22-2020

BEING A BY-LAW TO SET VARIOUS FEES FOR THE TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH

WHEREAS the Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh deems it expedient to establish fees in the Township;

NOW THEREFORE the Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh **ENACTS AS FOLLOWS**;

1. The Corporation of the Township of Ashfield-Colborne-Wawanosh hereby adopts the list of Fees in the attached Schedule “A” and Schedule “B” to this by-law.

2. That this by-law shall come into full force and effect on day of passing.

3. That this by-law be cited as the “Consolidated Fee” by-law.

4. This By-Law supersedes By-Law No. 95-2019.

Read a FIRST and SECOND time this 3rd day of March 2020.

Read a THIRD TIME and FINALLY PASSED this 3rd day of March 2020.

_____

Mayor, Glen McNeil

_____

CAO / Clerk-Treasurer, Mark Becker

SCHEDULE "A"
By-Law No. 22-2020

A. COLBORNE CEMETERY FEES

Please refer to By-Law 29-2018
Regulating the Colborne Cemetery

B. DOG LICENSE FEES (BY-LAW No. 57-2015)

First

Dog spayed or neutered ……..…$ 20.00

Dog unaltered…..…….……..$ 30.00

Second and each additional

Dog spayed or neutered…….$ 30.00

Dog unaltered….…….....$ 40.00

Vicious Dog……..$ 100.00

Pitbull and Pitbull Cross…….. $ 100.00

Kennel License…… $ 150.00

Municipal Administration Fee……..$ 50.00

Late Fee…….$ 15.00

C. BUILDING FEES

New Residential, Residential additions & Mobile Homes

$85.00 base fee, plus $0.70 per square foot including garage and finished basement, plus $0.35 per square foot for unfinished basement

New Accessory Buildings over 108 square feet and additions thereto (includes Decks, Detached Garage, Storage Shed, Etc.)

$85.00 base fee, plus $0.50 per square foot of floor area

New Farm Buildings and Additions thereto (dry manure)

$85.00 base fee, plus $0.25 per square foot of floor area

New Farm Buildings and Additions thereto (liquid manure)

$85.00 base fee, plus $0.35 per square foot of floor area

New Non-Livestock Farm Buildings and Additions thereto

$85.00 base fee, plus $0.20 per square foot of floor area

New Commercial, Industrial or Institutional and additions thereto

$85.00 base fee, plus $0.70 per square foot of floor area

Liquid Manure Tanks

Free Standing $85.00 base fee, plus $6.00 per foot diameter, minimum charge of $400.00

Liquid manure storage under barns subject to an additional fee of $400.00

Separate Installations of silos

$250.00

Separate installations of steel grain bins

$200.00

Change of Use (no renovations)

$100.00

Any construction project that is started without first obtaining necessary permit

Four (4) times the cost of the permit fee

Demolition permit

$85.00

Swimming Pools

$125.00

Occupancy Permit

$100.00

Renovations and repairs to existing buildings

$85.00 base fee, plus $11.00 per thousand of construction value

Miscellaneous Inspections & Re-Inspections

$100.00

Transfer of Building Permit

$125.00

Review by Consultant / Engineer / Solicitor Deposit (Actual cost to be paid from deposit. When the actual cost is less than the deposit the difference to be refunded. When the actual cost is greater than the deposit the difference is owing.)

Minor $1,000.00 / Major $5,000.00

Wind Turbines

$85.00 plus $20.00 per thousand of actual value of construction of footings and foundation

Any building construction, renovation or repair not listed above

$85.00 base fee, plus $11.00 per thousand of construction value

Sewage System Fees

Class 2, 3, 4 or 5 New or Replacement System	$750.00
Class 4 or 5 Tank Replacement or Leaching Bed	$400.00
Building Alterations / Change of Use*	$200.00

***A $200 credit shall be applied to a new sewer system permit application where a building alteration appraisal has required a new or altered sewage system be installed.*

Plumbing Permit Fees

Plumbing permit base fee	$204.00
Fixture unit rate ($12.00 per fixture unit)	$12.00
Sewer inspections ($131.00 for first 30 meters)	$131.00
Sewer inspections ($3.15 for each additional 30 meters)	$3.15
Water connections inspections ($131.00 for first 30 meters)	$131.00
Water connections inspections ($3.15 for each additional 30 meters)	$3.15
Alterations without addition of fixtures	$8.00
Storm sewer inspection (first 30 meters)	$131.00
Storm sewer inspection ($2.00 per linear meter exceeding 30 meters)	$2.00
Catch basins / manholes inspection	$11.00
Inspection of testable backflow prevention devices ($78.00 per unit)	$78.00
Rain water leader piping inspection ($2.00 per linear meter)	$2.00
Roof drains inspection ($11.00 per drain)	$11.00
Main building drain inspection ($2.00 per linear meter)	$2.00
Fire / water service inspection (first 30 meters)	$132.00
Fire / water service inspections ($2.00 per linear meter exceeding 30 meters)	$2.00

D. PLANNING FEES

Consent	$2,121.00
Zoning By-Law Amendment (ZBLA)	$1,909.00
Minor Variance	
1 or 2 variances	$1,484.00
3 or more variances	$1,909.00
Plan of Subdivision/Condominium	
1 to 10 lots/blocks/units	$6,366.00
11 or more lots/blocks/units 10 to a maximum of $15,606	$6,366.00 + $159 per lot, unit or block over
Official Plan Amendment (OPA)	
County OPA, local OPA	$3,714.00
Local OPA & ZBLA	$4,669.00
County OPA & local OPA	$6,154.00
County OPA, local OPA & ZBLA	$7,163.00
Removal of Holding (H) Symbol	$ 530.00
Renewal of Temporary Use Zoning By-Law	$1,432.00
By-law to Deem Lots not in a Plan Of Subdivision, or the repeal of such By-Law	$ 424.00
By-law to Deem Lots not in a Plan Of Subdivision, or the repeal of such By-Law Where combined with any other planning application (in both cases Applicants cover all legal costs & by-law prep)	$ 212.00
Part Lot Control Exemption	$2,122.00
Part Lot Control Exemption Following a related planning application (applicants cover all legal costs & by-law prep)	$1,060.00
Draft Approval Extension	$ 530.00
Phasing Final Approval	$1,060.00 for phases over 2
Changes following Draft Approval	
To Plan	$ 530.00
To Conditions	$ 530.00
Natural Heritage Review by County	$ 208.00
Parkland Fees	$ 250.00 per lot created

Sewage System Review

Severance Application Inspection (up to 2 lots)	$268.00
Severance Application Inspection (more than 2 lots)	$509.00
Plan of Subdivision (> 5 lots)	$1,058.00
Minor Variance Inspection	$127.00
Rezoning Inspection	$127.00
Official Plan Amendment	$181.00

E. TAX AND ZONING CERTIFICATES

Tax Certificate	$50
Zoning Certificate	$100
Zoning Certificate with Copy of Permit(s)	$175

F. LOTTERY, RAFFLE AND BINGO LICENSE FEES (no H.S.T.)

Charitable, non-profit events and community interest groups;

Bingo license	3% of prize package
Raffles	3% of prize package
Break-open tickets	3% of prize package

G. FACILITIES RENTAL

1. St. Helens Hall $60.00-Winter, $30.00-Summer + H.S.T.
2. Ashfield Park Pavilion $75.00 + H.S.T.
3. Benmiller Community Hall/Ball Diamond + H.S.T.

Upstairs	$ 100
Basement	$ 50
Ball Diamond per game - No Lights	$ 20
Ball Diamond per game - With Lights	$ 30
Tournament Rate – 1 Day (grounds only)	$ 215
Tournament Rate – Fri & Sat (grounds only)	$ 250
Tournament Rate – Weekend (grounds only)	$ 500
Additional rental of grounds with building	$ 25 + bldg rent
Additional rental of grounds/diamond lights with buildings	$ 50 + bldg rent
Ball Diamond advertising signs, 3 years	$500
Ball Diamond advertising signs, 1 year	$200

H. 9-1-1 PROPERTY SIGNS

Blade only	$35.00
Blade + Hardware	$45.00

I. ADMINISTRATION FEES

1.	Photocopies	$.25 per page
2.	Facsimile	
	(i) to transmit	$4.00 for 1st page $1.00 each additional
	(ii) to receive	$1.00 per page

J. LANDFILL/GARBAGE COLLECTION FEES

Ashfield Landfill

Bag Tags (Household Garbage, Standard 26” x 36” bag)	$ 2.00 each
Garbage (effective on date of passage of by-law)	$95.00 / ton
Minimum Charge Per Load of Waste (5 Household bags of garbage or less)	$10.00 $ 2.00 / bag
Automobile Tires up to 16.5 inch	$0.00 each-must be off rim
Truck Tires 16.5 inch to 19.5 inch	$0.00 each-must be off rim
Commercial Truck Tires 10.00 x 20 to 11.00 x 24.5	$0.00 each-must be off rim
Tractor Tires	$0.00 each-must be off rim
After Hour Charge	$30.00 per hour

WASTE COLLECTION STICKER FOR CURBSIDE PICK UP

Township of Ashfield-Colborne-Wawanosh Bag Tags (Household Garbage, Standard 26” x 36” bag)	$2.00 each

K. FOI FEES

In accordance with the Freedom of Information and Protection of Privacy Act, R.R.O. 1990, Regulation 460.

L. TILE LOAN INSPECTION FEES

Tile Loan Inspection Fee - $300.00

Municipal Drainage – Interest

Interest will be charged on Municipal Drainage Projects at the following rates

1. Maintenance Projects – billed at the rate of 1.25 % per month on outstanding accounts.
2. Capital Projects – will be billed at the rate of 3% on all invoices pertaining to the project, from the time of the municipal payment of the invoice to the invoicing of the project.

M. ROAD DEPARTMENT

1. Entranceways

   $35.00 permit fee, $300.00 + HST refundable deposit. A refund of $300.00 + HST shall be refunded to the owner within 30 days upon completion and inspection.

2. Cost of Services Sold+ HST

   Work for other departments, ie; office, cemetery, water sites, hourly rate

a) Other townships	$85.00/hour
b) Equipment truck + graders	$40.00/hour + payroll burden
tractor	$20.00/hour + payroll burden

Other (Unassumed Roads)

a) Grader + Operator	$75.00/hour + HST
b) Tandem + Operator	$75.00/hour + HST
c) Tractor + mower or attachment	$50.00/hour + HST

3. Sales at Shed Door

Culverts	Actual Costs + 25% + HST
Used Culverts	Good Condition ½ of replacement price + HST Poor Condition whatever agreed upon + HST
Signs	Actual Costs + 25% + HST
4. Gravel	Tendered Price + H.S.T.

N. NSF CHEQUES

$40.00

O. WATER SERVICE RATES

Huron Sands	$ 1181.00
Century Heights	$ 1181.00
Amberley	$ 1181.00
Lucknow (WW)	$ 1181.00
Lucknow (ASH)	$ 1181.00 + Over Flat
Dungannon	$ 1181.00
Benmiller Community Hall	$ 1181.00
Benmiller Estates	$ 1181.00
Benmiller Inn	$ 37,928.00
Benmiller Sewage	$ 1,050.00 ($1,000 BM / $50 Twsp)

P. LOCAL IMPROVEMENT RATES

Streetlights

Airport	$ 1.75
Auburn	$ 35.00
Saltford	$ 75.00
Benmiller	$ 40.00
Dungannon	$ 45.00
Port Albert	$ 7.00
St. Helens	$ 7.00

Roads

Huron Sands	$50.00

Q. WATER HOOK UP RATES

Please refer to By-Law 30-2016
Regulating connection to the Municipal Water Systems

R. PROPERTY STANDARDS APPEALS

Property Standards Appeal	$100.00

SCHEDULE "B"
By-Law No. 22-2020

LUCKNOW & DISTRICT RECREATION DEPARTMENT
LUCKNOW & DISTRICT SPORTS COMPLEX
2019 RATES & FEES

HALL/ROOM RENTAL RATES	RATE	HST	TOTAL
Arena Floor (Per Hour)	$50.00	$6.50	**$56.50**
Arena Floor (Per Day)	$285.00	$37.05	**$322.05**
Arena Floor (Stag & Doe/Licenced Event)	$675.00	$87.75	**$762.75**
Dave Farrish Champions Chamber - Meeting (Per Hour)	$25.00	$3.25	**$28.25**
Dave Farrish Champions Chamber - Meeting (Per Day)	$130.00	$16.90	**$146.90**
Dave Farrish Champions Chamber - Class (Per Hour) (Oct 1 to Mar 31)	$20.00	$2.60	**$22.60**
Dave Farrish Champions Chamber - Class (Per Hour) (Apr 1 to Sep 30)	$50.00	$6.50	**$56.50**
Dave Farrish Champions Chamber - Gratitude Group (Per Use)	$10.00	$1.30	**$11.30**
Dave Farrish Champions Chamber - Early On (Per Use)	$20.00	Exempt	**$20.00**
Paul Henderson Hall (Per Hour)	$25.00	$3.25	**$28.25**
Paul Henderson Hall Kitchen (Per Use)	$30.00	$3.90	**$33.90**
Paul Henderson Hall & Kitchen (Per Day)	$150.00	$19.50	**$169.50**
Paul Henderson Hall - Licensed Blue Line Club Events (Per Day)	$95.00	$12.35	**$107.35**
Paul Henderson Hall (Stag & Doe)	$275.00	$35.75	**$310.75**
Room Setup Fee (Per Use)	$25.00	$3.25	**$28.25**
ICE RENTAL RATES	**RATE**	**HST**	**TOTAL**
Prime Time Ice Rental (Per Hour)	$130.00	$16.90	**$146.90**
Non Prime Time Ice Rental - Weekday's 8:00 am to 4:00 pm (Per Hour)	$80.00	$10.40	**$90.40**
Last Minute Ice Rental - 2 Days in Advance - Casual Users (Per Hour)	$50.00	$6.50	**$56.50**
Broomball Ice Rental (Per Hour)	$80.00	$10.40	**$90.40**
Tournament Ice Rental (Minimum of 8 hours) (Per Hour)	$110.00	$14.30	**$124.30**
Huron Bruce Minor Hockey Ice Rental (Per Hour)	$85.00	$11.05	**$96.05**
Lucknow Skating Club Ice Rental (Per Hour)	$50.00	$6.50	**$56.50**
Time Clock Staff Charge (Per Game)	$25.00	$3.25	**$28.25**
PUBLIC SKATING ADMISSION RATES	**RATE**	**HST**	**TOTAL**
Public Skating Admission - Adult	$3.54	$0.46	**$4.00**
Public Skating Admission - Student	$1.77	$0.23	**$2.00**
Public Skating Admission - Child	$1.77	$0.23	**$2.00**
Public Skating Admission - Family (Maximum of 6)	$5.31	$0.69	**$6.00**
CALEDONIA & KINSMEN BASEBALL DIAMOND RENTAL RATES	**RATE**	**HST**	**TOTAL**
Diamond Rental (Unmaintained) - Without Lights (Per Game)	$10.00	$1.30	**$11.30**
Diamond Rental (Unmaintained) - With Lights (Per Game)	$20.00	$2.60	**$22.60**
MEN'S & LADIES SLO PITCH LEAGUE FEES	**RATE**	**HST**	**TOTAL**
Slo Pitch League Fees (Per Team)	$600.00	$78.00	**$678.00**
KINSMEN SOCCER FIELDS RENTAL RATES	**RATE**	**HST**	**TOTAL**
Field Rental - Per Field (Per Game)	$10.00	$1.30	**$11.30**
ADVERTISING RATES	**RATE**	**HST**	**TOTAL**
Arena Board Advertisement (Per Year)	$475.00	$61.75	**$536.75**
Ice Resurfacer Advertisement - 12" x 12" (Per Year)	$200.00	$26.00	**$226.00**
Ice Resurfacer Advertisement - 24" x 12" (Per Year)	$250.00	$32.50	**$282.50**
Ice Resurfacer Advertisement - 24" x 24" (Per Year)	$350.00	$45.50	**$395.50**
Ice Logo - Painted (Per year)	$300.00	$39.00	**$339.00**
Ice Logo - Freeze In (Per year)	$50.00	$6.50	**$56.50**
SPONSORSHIP RATES	**RATE**	**HST**	**TOTAL**
Public Skating Sponsorship (Per Event)	$90.00	$11.70	**$101.70**
Public Swimming Sponsorship (Per Event)	$75.00	$9.75	**$84.75**
SWIMMING POOL ADMISSION RATES	**RATE**	**HST**	**TOTAL**
Public Swimming Admission - Pre School (Ages 0 to 4)	$2.65	$0.35	**$3.00**
Public Swimming Admission - Child/Youth (Ages 5 to 17)	$3.54	$0.46	**$4.00**
Public Swimming Admission - Adults (Ages 18 +)	$5.31	$0.69	**$6.00**
Public Swimming Admission - Senior	$4.42	$0.58	**$5.00**
Parent/Tot Swimming Admission (Per Person)	$2.65	$0.35	**$3.00**

Water Games Admission (Per Person)	$2.65	$0.35	**$3.00**
Public Swimming Season Pass - Single	$70.80	$9.20	**$80.00**
Public Swimming Season Pass - Double	$123.89	$16.11	**$140.00**
Public Swimming Season Pass - Family (Maximum of 6)	$168.14	$21.86	**$190.00**
AQUATIC LESSONS/PROGRAMS RATES	**RATE**	**HST**	**TOTAL**
Swim Animal Public Lessons	$40.00	Exempt	**$40.00**
Swim Levels 1 to 4 Public Lessons	$70.00	Exempt	**$70.00**
Swim Levels 5 to 8 Public Lessons	$75.00	Exempt	**$75.00**
Swim Levels 9 & 10 Public Lessons	$80.00	Exempt	**$80.00**
Family Public Lessons (Maximum of 3 Children)	$180.00	Exempt	**$180.00**
Private Lessons (Per Child)	Additional $25.00		
Swim Team	$55.00	Exempt	**$55.00**
Aqua Fit (Per Class)	$5.31	$0.69	**$6.00**
Aqua Fit - Season Pass	$79.65	$10.35	**$90.00**
Lane Swim (Per Class)	$5.31	$0.69	**$6.00**
Lane Swim - Season Pass	$79.65	$10.35	**$90.00**
Private Pool Rental (Per Hour)	$60.00	$7.80	**$67.80**
MINOR SOCCER REGISTRATION RATES	**RATE**	**HST**	**TOTAL**
U 5	$50.00	Exempt	**$50.00**
U 7	$50.00	Exempt	**$50.00**
U 9	$80.00	Exempt	**$80.00**
U 11	$80.00	Exempt	**$80.00**
U 13	$95.00	Exempt	**$95.00**
U 15	$95.00	Exempt	**$95.00**
U 18	$100.00	Exempt	**$100.00**
MINOR BASEBALL REGISTRATION RATES	**RATE**	**HST**	**TOTAL**
T Ball	$25.00	Exempt	**$25.00**
Pre Mite	$55.00	Exempt	**$55.00**
Mite	$55.00	Exempt	**$55.00**
Squirt	$90.00	Exempt	**$90.00**
PeeWee	$90.00	Exempt	**$90.00**
Bantam	$90.00	Exempt	**$90.00**
Midget	$90.00	Exempt	**$90.00**
Coed Slo Pitch	$70.00	Exempt	**$70.00**
LEARN TO SKATE REGISTRATION RATES	**RATE**	**HST**	**TOTAL**
Junior	$120.00	Exempt	**$120.00**
Senior	$120.00	Exempt	**$120.00**
YOUTH SUMMER SPORTS CAMP REGISTRATION RATES	**RATE**	**HST**	**TOTAL**
5 Day Camp	$140.00	Exempt	**$140.00**
4 Day Camp	$115.00	Exempt	**$115.00**
Family Rate (3 or more Children)- 5 Day Camp (Per Child)	$110.00	Exempt	**$110.00**
Family Rate (3 or more Children)- 4 Day Camp (Per Child)	$95.00	Exempt	**$95.00**

VEOLIA WATER

7.1.1

Ashfield-Colborne-Wawanosh Monthly Summary

Month: January Year: 2020

Dungannon:

Item	Number	Comments
Adverse Samples	0	
Non-compliances	0	
Equipment issues:		Maintenance Activities Completed • 13th Cleaned NaSi Injector • 16th Cleaned Cl17 Analyzer, ran Sensaphone Auto dialer test and generator test
General Information:		17th Generator Inspection by Sommers
Alarms		Date: Alarm:
Main breaks/Leaks		Date: Type:
Power outages		Date:
Shut-off / Turn-on / Complaints		Shut-off: Turn-on: Complaint:
Locates		

Ashfield-Colborne-Wawanosh Monthly Summary

Month: January Year: 2020

Benmiller:

Item	Number	Comments
Adverse Samples	0	
Non-compliances	0	
Equipment issues:		Maintenance Activities Completed • 6th Checked eyewash bottle, fire extinguisher, emergency lighting, well house building, spill containment and day tank. Cleaned Injector and Cl17 analyzer. Ran auto dialer test. Replaced Stenner Pump tube.
General Information:		17th Generator Inspection by Sommers
Alarms		Date: Alarm:
Main breaks/Leaks		Date: Type:
Power outages		Date:
Shut-off / Turn-on / Complaints		Shut-off: Turn-on: Complaint:
Locates		

Ashfield-Colborne-Wawanosh Monthly Summary

Month: January Year: 2020

Century Heights:

Item	Number	Comments
Adverse Samples	0	
Non-compliances	0	
Equipment issues:		Maintenance Activities Completed • 6th Cleaned Cl17 analyzer and ran Auto dialer test. • 13th Cleaned online Turbidity analyzer, sodium silicate injector and Cl2 injector. Checked eyewash station, fire extinguisher, well house building, spill containment and day tank. • 16th Verified UV #1 and #2 sensors • 17th Ran generator test
General Information:		16th Installed new UV sensor 17th Generator Inspection by Sommers
Alarms		Date: Alarm: 12th UV Major and Ballast Power fail alarms
Main breaks/Leaks		Date: Type:
Power outages		Date: 12th Hydro Interruption
Shut-off / Turn-on / Complaints		Shut-off: Turn-on: Complaint:
Locates		

Ashfield-Colborne-Wawanosh Monthly Summary

Month: January Year: 2020

Huron Sands:

Item	Number	Comments
Adverse Samples		
Non-compliances		
Equipment issues:		Maintenance Activities Completed • CLOSED FOR SEASON
General Information:		
Alarms		Date: Alarm:
Main breaks/Leaks		Date: Type:
Power outages		Date:
Shut-off / Turn-on / Complaints		Shut-off: Turn-on: Complaint:
Locates		

On-Going Items / Recommendations:

Dungannon:

- Testing of the raw water arsenic is being completed bi-weekly
- Temporary regulatory relief has been granted for arsenic
- Annual Summaries and Reports being completed

Benmiller:

- Annual Summaries and Reports being completed
- Wiring issues in the building are slowly being looked after

Century Heights:

- Annual Summaries and Reports being completed
- UV needs to be addressed by engineer soon
- Could use a couple PSI tanks
- Main door in bad shape

Huron Sands:

- Annual Summaries and Reports being completed
- Checking building conditions weekly

Completed by: Sarah Telford_____
Quality Assurance and Compliance Specialist
Veolia Water Canada

7.1.2 (a)

Annual Report

For the 2019 Operating Year

Benmiller Drinking Water System
2019 Operation and Maintenance
Annual Report

PREPARED BY

Veolia Water
100 Cove Rd.
Goderich, ON
N7A 3Z2

TO

Township of Ashfield-Colborne-Wawanosh,
82133 Council Line, R.R.#5,
Goderich, ON
N7A 3Y2

Resourcing the world

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1.0 INTRODUCTION AND BACKGROUND

The purpose of the 2019 Annual Report is to document the operation and maintenance data for the Benmiller Drinking Water System for review by the Ministry of Environment, Conservation and Parks in accordance with O. Reg. 170/03. This report covers January 1, 2019 to December 31, 2019. A copy of this report will be submitted to the owner to be uploaded to the township's website and can be supplied to interested parties upon request.

2.0 DESCRIPTION OF WATER SYSTEM

The Benmiller Drinking Water System (DWS # **220007588**), is characterized as a "secure ground water" system and is classified as a small municipal residential system. The system consists of one well with a rated capacity of 196 m3/day, with chlorination treatment. The entire system is located on Concession 1, Part Lot 1, Eastern Division of Ashfield-Colborne-Wawanosh Township. The distribution system serves the community of Benmiller with a population of approximately 60 residents, with approximately 22 customer services, and a 47 guest room Inn and a Community Hall.

The system consists of a Limited Drinking Water System, which is owned by the Township of Ashfield-Colborne-Wawanosh and operated by Veolia Water Canada, the Operating Authority.

Well # 2 was put into service in January 2016, replacing # 1 well. It is a 150 mm drilled well, 70.1 m deep, originally drilled as a monitoring well in 2006. Well # 2 is equipped with a submersible vertical turbine pump rated at 2.5 L/s at 56.4 m TDH.

The well house is equipped with a well pump, flow restrictor limiting flow to 2.27 litres/second, back-up diesel generator, chlorinators, a chlorine contact reservoir, on-line monitoring and alarm generation and auto-dialer.

Back-up power is supplied by one 20 KW, 25 kVA diesel standby generator with automatic transfer switch and 340 L double wall sub-base fuel tank, all installed in an external weatherproof and acoustic enclosure on a concrete pad.

The well house and its equipment have a daily maximum capacity to deliver 196 cubic metres of potable water per day to the Benmiller community. The current water source is one secure deep bedrock well. The well is located on the well house site with a dedicated raw water main feeding the well house.

The water from the well is pumped to a chlorine contact / storage reservoir (7.6 m x 4.6 m x 3.8 m deep) to provide adequate chlorine contact time at maximum flow and before the first consumer, complete with a sampling / service water connection feed back to the pump house.

The well house is monitored by an alarm dialer and is equipped with a data logger that tracks chlorine residuals on the treated water.

The attached distribution system is constructed with a combination of galvanized steel and PVC piping with polyethylene services.

There is no elevated storage to maintain pressure and the system pressure is maintained using pressure tanks and 3 pressure pumps.

The system has no fire hydrants and lacks the capacity to provide fire flows.

Disinfection is achieved on the Benmiller well supply through the use of 6% sodium hypochlorite. In the well house this chemical is added prior to the water entering the chlorine contact reservoir at dosages high enough to achieve both primary and secondary disinfection objectives.

The chlorine dosages range varies with the chlorine demand of the raw water.
The free chlorine residual is monitored at the point of entry to the distribution system, by an on-line chlorine analyzer, with a target residual of > 1.00 mg/l and < 1.30 mg/l.

The Benmiller well supply has 1 PTTW (Permit To Take Water) #3180-BJKPVH issued December 27, 2019, with an expiry date of December 13, 2029, which allows 196 cubic metres per day to be pumped from the well.

The Benmiller Drinking Water System (treatment Subsystem) has maximum flows as specified in the Municipal Drinking Water Licence (MDWL) 080-104 and Drinking Water Works Permit (DWWP) 080-204 (previously C of A # 8710-5TMSL). The maximum total daily flow is 196 cubic meters per day.

The treated water is monitored by an on-line chlorine analyzer.

Distribution piping typically ranges in size from 50 mm to 100 mm, and consists of galvanized or PVC piping, with polyethylene service connections.

A 100 mm diameter discharge water main outside the pump house supplies treated water to the Benmiller Estates Subdivision, and two 50 mm discharge water main supply treated water to the Benmiller Inn.

Typical system pressure ranges from 40 P.S.I to 60 P.S.I.

3.0 SUMMARY OF WATER QUALITY MONITORING

3.1 Water Treatment Equipment Operation and Monitoring

3.1.1 Point of Entry Chlorine Residual

Chlorine residuals are continuously measured using a HACH CL17 online chlorine analyzer (8760 samples were taken) and verified for accuracy using hand-held HACH pocket colorimeter. **Table 1** shows the monthly average of free chlorine residual values on the treated water at the point of entry.

3.1.2 Distribution Chlorine Residual

Chlorine residuals in the distribution system are checked daily using a HACH pocket colorimeter. In 2019, 364 distribution chlorine residuals were recorded.

Table 1. – Treated and Distribution Chlorine Residuals for Benmiller Drinking Water System

Date	Average Treated Chlorine Residual (mg/L)	Average Distribution Chlorine Residual (mg/L)
Jan	1.22	1.15
Feb	1.33	1.25
Mar	1.35	1.22
Apr	1.33	1.25
May	1.31	1.22
Jun	1.29	1.21
Jul	1.35	1.22
Aug	1.28	1.14
Sep	1.31	1.10
Oct	1.28	1.10
Nov	1.33	1.18
Dec	1.31	1.09
Average	1.30	1.09
Min	0.70	.91
Max	2.02	1.32
# Samples	363	364

3.1.3 Turbidity

Turbidity is measured using a HACH pocket turbidimeter. **Table 2.** provides a summary of raw and treated turbidity results. The maximum turbidity measured in the treated water was 2.74 NTU.

Table 2. – Raw and Treated Water Turbidities for Benmiller Drinking Water System

Date	Average Raw Turbidity (NTU)	Average Treated Turbidity (NTU)
Jan	0.58	0.75
Feb	0.28	0.60
Mar	0.80	0.48
Apr	0.66	0.50
May	0.73	0.52
Jun	0.85	0.56
Jul	0.89	0.59
Aug	0.70	0.64
Sep	0.78	0.68
Oct	0.70	0.61
Nov	0.77	0.58
Dec	0.54	0.85
Average	0.72	0.59
Min	0.26	0.20
Max	0.98	2.74
# Samples	24	274

3.2 Microbiological Sampling

3.2.1 Raw Water Samples

Raw water samples are taken every two weeks. In 2019, a total of 26 samples were collected and analyzed for E. coli and Total Coliforms. Each E. coli result obtained was 0 cfu/100 ml and 1 Total Coliform sample in the raw water obtained had a 1cfu/100ml. Total. **Table 3** provides a summary of bacteriological results performed on the raw water.

Table 3. – Microbiological Results for Raw Water at Benmiller Drinking Water System

Date	E. coli			Total Coliform		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1
Jan	2	2	0	2	2	0
Feb	2	2	0	2	2	0
Mar	2	2	0	2	2	0
Apr	3	3	0	3	3	0
May	2	2	0	2	2	0
Jun	2	2	0	2	2	0
Jul	2	2	0	2	1	1
Aug	2	2	0	2	2	0
Sep	2	2	0	2	2	0
Oct	3	3	0	3	3	0
Nov	2	2	0	2	2	0
Dec	2	2	0	2	2	0
Total	26	26	0	26	25	1

3.2.2 Treated Water (Point of Entry) Samples

One treated water sample from the point of entry is taken every two weeks and analyzed for E.Coli, Total Coliforms and for Heterotrophic Plate Count (HPC). A total of 27 E.Coli and Total Coliforms water samples were collected and analyzed for the above parameters. Each E. coli and Total Coliform test result from the treated water was 0 cfu/100 ml. The range of HPC results were 0 - 4 cfu/100 ml. **Table 4** provides a summary of all bacteriological results performed on treated water.

Table 4. – Microbiological Results for Point of Entry at Benmiller Drinking Water System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	2	2	0	2	2	0	2	2	0
Feb	2	2	0	2	2	0	2	2	0
Mar	2	2	0	2	2	0	2	2	0
Apr	3	3	0	3	3	0	3	3	0
May	2	2	0	2	2	0	2	2	0
Jun	2	2	0	2	2	0	2	2	0
Jul	3	3	0	3	3	0	2	2	0
Aug	2	2	0	2	2	0	2	2	0
Sep	2	2	0	2	2	0	2	2	0
Oct	3	3	0	3	3	0	3	3	0
Nov	2	2	0	2	2	0	2	2	0
Dec	2	2	0	2	2	0	2	2	0
Total	27	27	0	27	27	0	26	26	0

3.2.3 Distribution System

Distribution samples are collected every two weeks and tested for E.Coli, Total Coliform and for Heterotrophic Plate Count (HPC). In 2019, a total of 26 distribution samples were collected and analyzed for the above parameters. All E. coli results from the treated water were 0 cfu/100 ml. There was 1 adverse of 4cfu/100 Total Coliforms (see AWQI on page 19). The range of HPC results were 0 - 11 cfu/100 ml. **Table 5** provides a summary of all bacteriological samples taken in the distribution system.

Table 5. – Microbiological Results for Benmiller Distribution System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	2	2	0	2	2	0	2	2	0
Feb	2	2	0	2	2	0	2	2	0
Mar	2	2	0	2	2	0	2	2	0
Apr	3	3	0	3	3	0	3	3	0
May	2	2	0	2	2	0	2	2	0
Jun	2	2	0	2	2	0	2	2	0
Jul	3	3	0	3	1	1	2	2	0
Aug	2	2	0	2	2	0	2	2	0
Sep	2	2	0	2	2	0	2	2	0
Oct	3	3	0	3	3	0	3	3	0
Nov	2	2	0	2	2	0	2	2	0
Dec	2	2	0	2	2	0	2	2	0
Total	27	27	0	27	26	1	26	26	0

3.3 Chemical Sampling & Testing

3.3.1 Inorganics

One treated water sample is taken every 60 months and tested for inorganics. The most recent samples for the Benmiller Drinking Water System were collected on June 21, 2016 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23. All parameters were found to be within compliance. Inorganics will be sampled and analyzed again on or before June 21, 2021. Results from 2016 can be found in **Table 6.**

Table 6. – Schedule 23 Results for Benmiller Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Antimony	0.02	6
Arsenic	3.1	10
Barium	85.7	1000
Boron	85	5000
Cadmium	<0.03	5
Chromium	0.36	50
Mercury	<0.01	1
Selenium	<0.04	10
Uranium	0.586	20

NOTE: New regulation standards changed in 2018 for Arsenic. The previous standard of 25µg/L changed January 2018, to the new standard of 10µg/L. The last sample taken in 2016 was within compliance at that time, the result was 3.1µg/L.The next sample is required before June 21, 2021. Consideration and discussion of this parameter should be investigated.

3.3.2 Lead

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken during two seasons: once between December 15 and April 15 and once between June 15 and October 15. The Maximum Allowable Concentration for Lead is 0.01 mg/L. In the two previous lead sampling seasons lead, pH and alkalinity samples were taken on January 24, 2019 and July 10, 2019. Lead is not required to be tested again until 2020. 2019 results can be found in **Table 7.**

Table 7. – Lead Sampling Program Results for Benmiller Drinking Water System

	Lead (mg/L)	pH	Alkalinity (mg/L)
Dec-Apr	n/a	7.77	208
Jun-Oct	n/a	8.07	209

3.3.3 Organics

One treated water sample is taken every 60 months and tested for schedule 24 organic parameters. The most recent samples were collected on June 21, 2016. All parameters were found to be within compliance. Organics will be sampled and analyzed again on or before June 21, 2021. 2016 sample results can be found in **Table 8.**

Table 8. – Schedule 24 Results for Benmiller Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Benzene	<0.32	1
Carbon Tetrachloride	<0.16	2
1,2-Dichlorobenzene	<0.41	200
1,4-Dichlorobenzene	<0.36	5
1,1-Dichloroethylene	<0.33	14
1,2-Dichloroethane	<0.35	5
Dichloromethane	<0.35	50
Monochlorobenzene	<0.3	80
Tetrachloroethylene	<0.35	30
Trichloroethylene	<0.43	50
Vinyl Chloride	<0.17	1
Diquat	<1	70
Paraquat	<1	10
Glyphosate	<1	280
Polychlorinated Biphenyls	<0.04	3
Benzo(a)pyrene	<0.004	0.01
2,4-dichlorophenol	<0.15	900
2,4,6-trichlorophenol	<0.25	5
2,3,4,6-tetrachlorophenol	<0.20	100
Pentachlorophenol	<0.15	60
Alachlor	<0.02	5
Atrazine+N-dealkylated metabolites	<0.01	5
Atrazine	<0.01	-
De-ethylated atrazine	<0.01	-
Azinphos-methyl	<0.05	20
Carbaryl	<0.05	90
Carbofuran	<0.01	90
Chlorpyrifos	<0.02	90
Diazinon	<0.02	20
Dimethoate	<0.03	20
Diuron	<0.03	150
Malathion	<0.02	190
Methoxychlor	<0.01	900
Metolachlor	<0.01	50
Metribuzin	<0.02	80
Phorate	<0.01	2
Prometryne	<0.03	1

Simazine	<0.01	10
Terbufos	<0.01	1
Triallate	<0.01	230
Trifluralin	<0.02	45
2,4-dichlorophenoxyacetic acid	<0.19	100
Bromoxynil	<0.33	5
Dicamba	<0.20	120
Diclofop-methyl	<0.40	9
MCPA	<0.00012	0.00012
Picloram	<1	190

3.3.4 Trihalomethanes and Haloacetic Acids

One distribution sample is taken every three months from a point in the distribution system and tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). In 2019, samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) has set a Maximum Allowable Concentration (MAC) of 100 µg/L for THMs and it is expressed as a running annual average. There was previously no MAC for HAAs. In 2020 the new HAA MAC will be 80 µg/L. In 2019, the average THM was found to be 6.47 µg/L, which is within compliance. Refer to **Table 9.** for the summary of trihalomethane and haloacetic acid results.

3.3.5 Nitrate & Nitrite

One treated water sample is taken every three months and tested for nitrate and nitrite. In 2019, samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) have set a Maximum Allowable Concentration (MAC) of 1 mg/L for nitrites and 10 mg/L for nitrates. The results were found to be within compliance. Refer to **Table 9.**

Table 9. – Nitrate, Nitrite, THM and HAA Results at Benmiller Drinking Water System

	Nitrate		**Nitrite**		**THMs**		**HAAs**	
Date	# Samples	Result (mg/L)	# Samples	Result (mg/L)	# Samples	Result (µg/L)	# Samples	Result (µg/L)
Feb	1	<0.006	1	<0.003	1	5.6	1	<5.3
May	1	0.008	1	<0.003	1	5.6	1	<5.3
Aug	1	<0.006	1	<0.003	1	4.4	1	<5.3
Nov	1	0.008	1	<0.003	1	5.8	1	<5.3
Total	4		4		4		4	
Average		.007		<0.003		5.35		<5.3
Maximum		.008		<0.003		5.8		<5.3

3.3.6 Sodium

One treated water sample is collected every 60 months and tested for Sodium. O. Reg 170/03 has set a Maximum Acceptable concentration (MAC) of 20 mg/L for Sodium which requires the Medical Office of Health be notified if the concentration exceeds the MAC. These samples were last collected on June 21, 2016 and were found to be 18.2 mg/L, which is within compliance. The next water sample for Sodium will be collected and analyzed on or before June 21, 2021.

3.3.7 Fluoride

One treated water sample is collected at least once every 60 months and tested for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a MAC of 1.5 mg/L. On August 22, 2017 and August 25, 2017 a sample was collected for this analysis. The samples were both found to have a concentration of 1.84 mg/L, which is greater than the MAC. This is due to high levels of naturally occurring fluoride in the aquifer. For more information see: http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/Benmiller.pdf. The next water sample for Fluoride will be collected and analyzed on or before August 25, 2022.

4.0 WATER AND CHEMICAL USAGE

4.1 Chemical Usage

Refer to **Table 10.** From January 1, 2018 to December 31, 2019. 44.41 kg of sodium hypochlorite was used to ensure proper disinfection in the distribution system with an average dosage of 2.70mg/L.

Table 10. – Chemical Usage at Benmiller Drinking Water System

Date	Sodium Hypochlorite	
	Usage (kg)	Average Dosage (mg/L)
Jan	3.37	2.85
Feb	2.75	2.71
Mar	3.11	2.80
Apr	3.12	2.56
May	3.14	2.64
Jun	4.46	2.61
Jul	5.27	2.68
Aug	5.43	2.69
Sep	4.70	2.61
Oct	3.71	2.73
Nov	2.76	2.86
Dec	2.59	2.71
Total	44.41	
Average		2.7

4.2 Annual Flows

A summary of the water supplied to the distribution system in 2019 is provided in **Table 11.** This Table provides a breakdown of the monthly flow provided to the distribution system.

Flow meters were calibrated on July 19, 2019 by Corix/Iconix and were found to be acceptable.

Table 11. – Treated Water Flows for Benmiller Drinking Water System

Date	Average Daily Flow (m^3)	Maximum Daily Flow (m^3)	Total Monthly Flow (m^3)
Jan	40.16	83	1245
Feb	36.46	61	1021
Mar	35.71	63	1107
Apr	40.48	73	1174
May	38.45	72	1192
Jun	56.00	102	1680
Jul	63.87	84	1980
Aug	65.87	87	2042
Sep	57.80	107	1734
Oct	43.42	80	1346
Nov	31.97	52	959
Dec	30.65	69	950
Average	45.07		
Max		107	
Total			16,430

5.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE

The following summarizes water system improvements and routine and preventative maintenance for the Benmiller Drinking Water System:

- Spring flushing of the distribution system occurred from May - August.
- Fall flushing of the distribution system occurred in September.

6.0 MINISTRY OF THE ENVIRONMENT INSPECTIONS AND REGULATORY ISSUES

The most recent inspection conducted by The Ministry of Environment,Conservation and Parks was completed by Rhonda Shannon on June 5, 2019.

There were no non-compliances noted. The Inspection Rating was 100%.

There was 1 instance of adverse water quality:

AWQI #146786 - Sample from Pfrimmer sample station had an adverse of 4 Total Coliforms. Bacteriological samples were taken up-stream, down-stream and at the source, all samples came back clear of E.Coli and Total Coliforms.

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7.0 MECP Regulatory Changes

It should be noted that there will be some upcoming changes to Ontario Regulation 170/03 and Ontario Regulation 169/03 that strengthen standards and clarify testing requirements as follows:

- Strengthen standards for Arsenic, Carbon Tetrachloride, Benzene, and Vinyl Chloride;
- Adopt new standards for Chlorate, Chlorite, 1-Methyl-4-Chlorophenoxyacetic acid (MCPA) and Haloacetic Acids (HAAs); (NOTE: Chlorate and Chlorite testing is only required for Municipal Drinking Water Systems using Chlorine Dioxide treatment equipment.)
- Clarify/optimize testing, sampling and reporting requirements for Trihalomethanes (THMs) and HAAs; and
- Remove 13 pesticides from testing requirements.

The aforementioned amendments will be phased in over the next four years to allow system owners and/or operators the opportunity to collect baseline information and complete required system upgrades. Currently, the new sampling, testing, reporting and re-sampling requirements, and the removal of 13 pesticides came into effect January 1, 2016. As well, testing requirements for HAAs and updates to standards for Carbon Tetrachloride, Benzene, Vinyl Chloride, Chlorate, Chlorite, and MCPA came into effect January 2017. Refer to **Table 12** for the new Regulatory Requirements. Subsequent phase-in dates are:

- January 1, 2018: Updates to standards for Arsenic come into effect / require reporting
- January 1, 2020: New standards for HAAs and HAAs testing optimization rule for smaller systems will come into effect / require reporting.

Table 12 – Regulatory Requirements

Parameter	Current Requirement		Amended Requirement	
	MAC	**½ MAC**	**MAC**	**½ MAC**
Arsenic	25 µg/L	12.5 µg/L	10 µg/L	5 µg/L
Benzene	5 µg/L	2.5 µg/L	1 µg/L	0.5 µg/L
Carbon Tetrachloride	5 µg/L	2.5 µg/L	2 µg/L	1 µg/L
Vinyl Chloride	2 µg/L	1 µg/L	1 µg/L	0.5 µg/L

Benmiller Drinking Water System – 2019 Compliance Summary

This document is a compliance summary for the Benmiller water supply for the year 2019 as per O. Reg. 170/03 Schedule 22. A full summary of the water system's test results, flows and significant activities was submitted in the Annual Report.

System Description

The Benmiller water system is characterized as a "secure ground water" system and is classified as a small municipally owned water system.
The well house and its equipment have a daily maximum capacity to deliver 196.4 cubic meters of potable water per day to the Benmiller community. This was not exceeded during 2019.
The current water source is a secure deep bed rock well.
A monitoring well, drilled due west of the well house in 2007, was constructed by the Maitland Valley Conservation Association to monitor water movement in the aquifer. It was constructed to municipal production standards. This well (Well #2) was put into service in January 2015 including a new well pump and water main, and well #1 was officially abandoned at that time.
The water system is monitored bi-weekly for bacteriological analysis to ensure the integrity of the water coming from the well.
The well house is equipped with a data logger, backup diesel generator set, chlorinators, a chlorine contact reservoir and online monitoring.
The distribution system is constructed of a combination of galvanized steel and PVC piping with polyethylene services.
There is no elevated storage to maintain pressure and the system pressure is maintained using pressure tanks and the three horizontal pumps. There is a backup generator with automatic switchover.
The system has no hydrants and lacks the capacity to provide fire flows.

Chemicals Fed

Disinfectant

Disinfection was achieved in the Benmiller well supply through the use of 6% sodium hypochlorite. In the well house this chemical was added prior to the water entering the chlorine contact reservoir at dosages high enough to achieve both primary and secondary disinfection objectives.
The chlorine dosages ranged from 2.61 mg/L to 2.86 mg/L. varying with the chlorine demand of the raw water.

The free chlorine residual was monitored at the point of entry to the distribution system with a target residual of 1.00 mg/L.

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Goderich Water Treatment Plant
100 Cove Rd., Goderich, ON Canada N7A 3Z2
Tel 519-524-6583/ Fax 519-524-9358
www.veoliawaterna.com

Flows

The Benmiller well supply PTTW (permit to take water) #2480-9LWNVZ was issued July 25, 2014 which allows 196 cubic meters per day to be pumped from Well #2 and expires March 8, 2020. This limit was not exceeded in 2019. A full summary of the 2019 flows can be found in the Annual Report.

The Drinking Water Works Permit (DWWP) #080-204 for the Benmiller Drinking Water System was issued on August 26, 2015. The maximum total daily flow is 196 cubic meters per day and the maximum instantaneous flow is 7.6 liters per second. The well is restricted to 2.27 L/s.
The limiting factor regarding flow is chlorine contact time in the chlorine contact reservoir. In order to meet the regulatory CT requirements, increased flows beyond this must have adequate free chlorine residual to counter the decreased retention time in the chlorine contact reservoir.

The combination of maximum flows through the chlorine contact reservoir and minimum free chlorine residuals exiting the contact reservoir did not exceed the limitations in 2019 as recorded by the flow meters and the online chlorine analyzer.

The maximum daily flow in 2019 was 107 cubic meters or 54.59% of capacity.
The 2019 average daily flow was 45.07 cubic meters or 22.99%.

Precautionary Boil Water Notices

There were no Precautionary Boil Water notices placed on the Benmiller water system in 2019.

Boil Water Advisory

There were no Boil Water Advisories issued by the Huron County Health Unit (now the Huron Perth Public Health HPPH) on the Benmiller water system in 2019.

Annual Ontario Ministry of the Environment Inspection

Rhonda Shannon, Ministry of the Environment, Conservation and Parks (MECP) Drinking Water Inspector, inspected the water system and examined the water quality and operational records on June 5, 2019.

There were 0 non-compliant issues. The rating was 100%.

Adverse Water Quality Indicators

There was one instance of adverse water to report AWQI #146786 which can be found on page 19 of the Annual Report.

Exceedances

Fluoride

O. Reg. 169/03 (the Ontario Drinking Water Standard) has a MAC (maximum allowable concentration) of 1.5 mg/L for fluoride.

The water from the Benmiller well is monitored every 5 years for fluoride. It has naturally occurring levels that can exceed 1.5 mg/L.

As required by O. Reg. 170/03 schedule 13 section 13.9, an AWQI (adverse water quality indicator) is filed every 60 months. On August 22, 2017 and August 25, 2017 samples were collected for this analysis. The samples were both found to have a concentration of 1.84 mg/L, which is greater than the MAC. This is due to high levels of naturally occurring fluoride in the aquifer. The next sample for fluoride will be collected in August of 2022.

Infrastructure Assessment

Regular contact is maintained with ACW's representative. The JobsPlus program is continually updated with preventative and corrective maintenance issues. A complete summary can be forwarded to the client upon their request. Through regular communication between the operating authority and the client, capital items are discussed. A list of capital items and concerns for 2019 was forwarded to ACW's representative in October 2018.

The annual Management Review was conducted by the operating authority on October 22, 2019 as per the DWQMS requirement in Element 14. These regular discussions between the client and the operating authority for this water system are continued throughout the year by emails, phone calls, and meetings as per the requirements of Element 15 of the DWQMS.

The Internal Audit was last completed on May 13, 2019 and the Risk Assessment was last completed October 22, 2019. An Emergency Response Exercise was conducted as a follow-up response to a water main break that happened in Goderich on May 23, 2019, where several utilities were involved. An "After Action Report" was submitted to the utilities involved following the tabletop incident review.

John Graham, Project Manager

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7.1.2 (b)

Annual Report

For the 2019 Operating Year

Century Heights Drinking Water System
2019 Operation and Maintenance
Annual Report

PREPARED BY

Veolia Water
100 Cove Rd.
Goderich, ON
N7A 3Z2

TO

Township of Ashfield-Colborne-Wawanosh,
82133 Council Line, R.R.#5,
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Resourcing the world

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1.0 INTRODUCTION AND BACKGROUND

The purpose of the 2019 Annual Report is to document the operation and maintenance data for the Century Heights Drinking Water System for review by the Ministry of Environment, Conservation and Parks (MECP) in accordance with O. Reg. 170/03. This report covers January 1, 2019 to December 31, 2019. A copy of this report will be submitted to the owner to be uploaded to the township's website and can be supplied to interested parties upon request.

2.0 DESCRIPTION OF WATER SYSTEM

The Century Heights Drinking Water System (DWS **#220008499**), is classified as a small municipal residential system. Studies to establish the security of these wells from surrounding water proved inconclusive in 2007 and they are now considered to be GUDI (Ground Under the Direct Influence of surface water) sources.The system consists of two wells with a rated capacity of (#1 at 4.2 L/s and #2 at 4.3 L/s) 734 m3/day, with ultra violet and sodium hypochlorite disinfection treatment.

The entire system is located on Concession 1, Lot 1, Western Division, of Ashfield-Colborne-Wawanosh Township. The distribution system serves the community of Century Heights, Maitland View Subdivision, and parts of the Community of Saltford, with a population approximately 250 residents, with approximately 85 customer services.

The system consists of a Class 1 Distribution and Supply, and Class 1 Treatment which is owned by the Township of Ashfield-Colborne-Wawanosh and operated by Veolia Water Canada, the Operating Authority.

Well # 1 is a 150 mm drilled well 66 metres deep, equipped with a submersible pump with a rated capacity of 4.2 Litres /second, with instrumentation and control equipment, and 50 mm discharge line connected to the pump house. Well # 2 is a 150 mm drilled well 66 metres deep equipped with a submersible pump with a rated capacity of 4.3 Litres /second, with instrumentation and control equipment and 100 mm discharge line connected to the pump house. Well # 1 was constructed in 1979, located within the well house and # 2 was constructed in 2005, approximately 10 meters north of the well house.

The well house is equipped with well pumps, back-up diesel generator, chlorinators, a chlorine contact main, cartridge filter trains, UV disinfection system, hydropneumatic pressure vessels, on-line monitoring and alarm generation. The system is controlled by an onsite control.

The well house and its equipment have a daily maximum capacity to deliver 734 cubic metres of potable water per day to the Century Heights community. The current water sources are two deep bedrock wells. Both wells are located on the well house site with dedicated raw water mains feeding the well house.

The water from each well is pumped to a common chlorine contact pipeline (120 m long by 150 mm diameter plus an additional 13 m long by 600 mm diameter water main for additional chlorine contact time) to provide adequate chlorine contact time at maximum flow and before the first consumer, complete with a sampling / service water connection feed back to the pump house.

The well house and equipment are monitored and controlled by an alarm dialer and data recorder.

The attached distribution system is constructed with a combination of polyethylene and PVC piping with polyethylene services. There is no elevated storage to maintain pressure and the system pressure is maintained using pressure tanks and the well pumps.

The system has 3 fire hydrants but lacks the capacity to provide fire flows.

Primary Disinfection is achieved with a UV Disinfection System consisting of two (2) disinfection reactors, one duty and one standby, rated at 40 mJ/cm2 throughout the lamp life time, complete with UV intensity monitor.

Disinfection is also achieved on the Century Heights well supply through chemical treatment with the use of 12% sodium hypochlorite. In the well house this chemical is added prior to the water entering the chlorine contact reservoir at dosages high enough to achieve both primary and secondary disinfection objectives. The system consists of two (2) sodium hypochlorite feed pumps (duty and standby) rated at 0.8 L/hr complete with auto switchover controls, piping, valves and associated monitoring equipment and 13 meters of 600 mm diameter water main as a contact reservoir.

The chlorine dosages range varies with the chlorine demand of the raw water. The free chlorine residual is monitored at the point of entry to the distribution system, by an on-line chlorine analyzer, with a target residual of > 1.00 mg/l and < 1.30 mg/l.

Additional treatment consists of a filtration system consisting of 2 streams of 2 cartridge filter trains one duty and one standby for the removal of particles 5 micron and larger, rated at 8.5 L/s.

The limiting factor regarding flow is chlorine contact time in the chlorine contact main. In order to meet the regulatory CT requirements (CT value > 3.0) increased flows beyond 8.5 litres per second must have an adequate free chlorine residual to counter the decreased retention time in the chlorine contact main.

The treated water is monitored by an on-line chlorine analyzer.

Distribution piping typically ranges in size from 50 mm to 100 mm, and consists of a combination of polyethylene and PVC piping, with polyethylene service connections.

Typical system pressure ranges from 40 P.S.I to 60 P.S.I.

3.0 SUMMARY OF WATER QUALITY MONITORING

3.1 Water Treatment Equipment Operation and Monitoring

3.1.1 Point of Entry Chlorine Residual

Chlorine residuals are continuously measured using a HACH CL17 online chlorine analyzer, (8760 samples were recorded) and verified for accuracy using hand-held HACH pocket colorimeter. **Table 1** shows the monthly average of free chlorine residual values on the treated water at the point of entry.

3.1.2 Distribution Chlorine Residual

Chlorine residuals in the distribution system are checked daily using a HACH pocket colorimeter. In 2019, 365 distribution chlorine residuals were recorded.

Table 1. – Treated and Distribution Chlorine Residuals for Century Heights Drinking Water System

Date	Average Treated Chlorine Residual (mg/L)	Average Distribution Chlorine Residual (mg/L)
Jan	1.22	1.05
Feb	1.27	1.04
Mar	1.31	1.09
Apr	1.46	1.18
May	1.37	1.12
Jun	1.34	1.07
Jul	1.28	1.02
Aug	1.19	0.90
Sep	1.23	0.98
Oct	1.37	1.04
Nov	1.35	1.09
Dec	1.30	1.06
Average	**1.31**	**1.05**
Min	**.99**	**0.90**
Max	**1.82**	**1.18**
# Samples	**346**	**365**

3.1.3 Turbidity

The Treated Turbidity and Raw Turbidity is recorded at least once a month using a pocket turbidimeter. **Table 2.** provides a summary of raw and treated turbidity results. The maximum turbidity measured in the treated water was 0.39 NTU.

Table 2. – Raw and Treated Water Turbidities for Century Heights Drinking Water System

Date	Average Raw Turbidity (NTU)#1	Average Raw Turbidity (NTU)#2	Average Treated Turbidity (NTU)
Jan	0.24	0.19	0.21
Feb	0.23	0.17	0.23
Mar	0.18	0.18	0.19
Apr	0.15	0.14	0.18
May	0.16	0.17	0.21
Jun	0.18	0.17	0.19
Jul	0.18	0.18	0.19
Aug	0.21	0.22	0.20
Sep	0.19	0.13	0.23
Oct	0.17	0.15	0.21
Nov	0.18	0.15	0.23
Dec	0.18	0.17	0.25
Average	**0.19**	**0.17**	**0.21**
Min	**0.09**	**0.07**	**0.12**
Max	**0.32**	**0.28**	**0.39**
# Samples	**52**	**52**	**289**

3.2 Microbiological Sampling

3.2.1 Raw Water Samples

Raw water samples are taken every week. In 2019, a total of 106 samples were collected at wells 1&2 and analyzed for E. coli and Total Coliforms. Each E. coli and Total Coliform result obtained was 0 cfu/100 ml in the raw water. **Table 3 a & b.** provides a summary of bacteriological results performed on the raw water.

Table 3a. – Microbiological Results for Raw Water at Century Heights Drinking Water System for Well #1

Date	E. coli			Total Coliform		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1
Jan	5	5	0	5	5	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	4	0	4	4	0
Oct	5	5	0	5	5	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
Total	**53**	**53**	**0**	**53**	**53**	**0**

Table 3b. – Microbiological Results for Raw Water at Century Heights Drinking Water System for Well #2

Date	E. coli			Total Coliform		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1
Jan	5	5	0	5	5	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	4	0	4	4	0
Oct	5	5	0	5	5	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
Total	**53**	**53**	**0**	**53**	**53**	**0**

3.2.2 Treated Water (Point of Entry) Samples

One treated water sample from the point of entry is taken every week and analyzed for E.Coli, Total Coliforms and for Heterotrophic Plate Count (HPC). A total of 53 treated water samples were collected and analyzed for E. coli and Total Coliforms. 53 samples were collected and analyzed for HPCs. All samples were found to be safe. Each E. coli and Total Coliform result from the treated water was 0 cfu/100 ml. The range of HPC results were 0 - 10 cfu/100 ml. **Table 4.** provides a summary of all bacteriological results performed on treated water.

Table 4. – Microbiological Results for Point of Entry at Century Heights Drinking Water System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	5	5	0	5	5	0	5	5	0
Feb	4	4	0	4	4	0	4	4	0
Mar	4	4	0	4	4	0	4	4	0
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	4	0
Jun	4	4	0	4	4	0	4	4	0
Jul	5	5	0	5	5	0	5	5	0
Aug	4	4	0	4	4	0	4	4	0
Sep	4	4	0	4	4	0	4	4	0
Oct	5	5	0	5	5	0	5	5	0
Nov	4	4	0	4	4	0	4	4	0
Dec	5	5	0	5	5	0	5	5	0
Total	**53**	**53**	**0**	**53**	**53**	**0**	**53**	**53**	**0**

3.2.3 Distribution System

Distribution samples are collected every week and tested for E.Coli, Total Coliform and for Heterotrophic Plate Count (HPC). In 2019, a total of 53 distribution samples were collected and analyzed for E. coli and Total Coliforms. 53 samples were collected and analyzed for HPCs. All E. coli and total coliform result from the treated water were 0 cfu/100 ml. The range of HPC results were 0 - 10 cfu/100 ml. **Table 5.** provides a summary of all bacteriological samples taken in the distribution system.

Table 5. – Microbiological Results for Century Heights Distribution System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	5	5	0	5	5	0	5	5	0
Feb	4	4	0	4	4	0	4	4	0
Mar	4	4	0	4	4	0	4	4	0
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	4	0
Jun	4	4	0	4	4	0	4	4	0
Jul	5	5	0	5	5	0	5	5	0
Aug	4	4	0	4	4	0	4	4	0
Sep	4	4	0	4	4	0	4	4	0
Oct	5	5	0	5	5	0	5	5	0
Nov	4	4	0	4	4	0	4	4	0
Dec	5	5	0	5	5	0	5	5	0
Total	53	53	0	53	53	0	**53**	**53**	**0**

3.3 Chemical Sampling & Testing

3.3.1 Inorganics

One treated water sample is taken every 60 months and tested for inorganics. The most recent samples for the Century Heights Drinking Water System were collected on December 18, 2015 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23. All parameters were found to be within compliance. Inorganics will be sampled and analyzed again on or before December 18, 2020. Results from 2015 can be found in **Table 6.**

Table 6. – Schedule 23 Results for Century Heights Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Antimony	0.02	6
Arsenic	4.1	10
Barium	57.6	1000
Boron	106	5000
Cadmium	0.008	5
Chromium	0.04	50
Mercury	<0.01	1
Selenium	<0.04	10
Uranium	1.12	20

NOTE: New regulation standards changed in 2018 for Arsenic. The previous standard of 25µg/L changed January 2018, to the new standard of 10µg/L. The last sample taken in 2016 was within compliance at that time, the result was 4.1µg/L.The next sample is required before December, 2020. Consideration and discussion of this parameter should be investigated as soon as possible.

3.3.2 Lead

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken during two seasons: once between December 15 and April 15 and once between June 15 and October 15. The Maximum Allowable Concentration for Lead is 0.01 mg/L. In the two previous lead sampling seasons,, pH and alkalinity samples were taken on January 24, 2019 and again on July 15, 2019. The next Lead sample is due in the winter of 2020. 2019 results can be found in **Table 7.**

Table 7. – Lead Sampling Program Results for Century Heights Drinking Water System

	Lead (mg/L)	pH	Alkalinity (mg/L)
Dec-Apr	n/a	7.69	186
Jun-Oct	n/a	7.95	200

3.3.3 Organics

One treated water sample is taken every 60 months and tested for Schedule 24 organic parameters. The most recent samples were collected on December 18, 2015. All parameters were found to be within compliance. Organics will be sampled and analyzed again on or before December 18, 2020. 2015 sample results can be found in **Table 8.**

Table 8. – Schedule 24 Results for Century Heights Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Benzene	<0.32	1
Carbon Tetrachloride	<0.16	2
1,2-Dichlorobenzene	<0.41	200
1,4-Dichlorobenzene	<0.36	5
1,1-Dichloroethylene	<0.33	14
1,2-Dichloroethane	<0.35	5
Dichloromethane	<0.35	50
Monochlorobenzene	<0.3	80
Tetrachloroethylene	<0.35	30
Trichloroethylene	<0.43	50
Vinyl Chloride	<0.17	1
Diquat	<1	70
Paraquat	<1	10
Glyphosate	<1	280
Polychlorinated Biphenyls	<0.04	3
2,4-dichlorophenol	<0.15	90
2,4,6-trichlorophenol	<0.25	5
2,3,4,6-tetrachlorophenol	<0.20	100
Alachlor	<0.02	5
Atrazine	<0.01	5
Azinphos-methyl	<0.05	20
Carbaryl	<0.05	90
Carbofuran	<0.01	90
Chlorpyrifos	<0.02	90
Diazinon	<0.02	20
Dimethoate	<0.03	20
Diuron	<0.03	150
Malathion	<0.02	190
Methoxychlor	<0.01	900
Metolachlor	<0.01	50
Metribuzin	<0.02	80
Phorate	<0.01	2

Simazine	<0.01	10
Terbufos	<0.01	1
Triallate	<0.01	230
Trifluralin	<0.02	45
2,4-dichlorophenoxyacetic acid	<0.19	100
Bromoxynil	<0.33	5
Dicamba	<0.20	120
Diclofop-methyl	<0.40	9
Picloram	<1	190

3.3.4 Trihalomethanes and Haloacetic Acids

One distribution sample is taken every three months from a point in the distribution system and tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). In 2019, samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) has set a Maximum Allowable Concentration (MAC) of 100 µg/L for THMs and it is expressed as a running annual average. Currently there is no MAC for HAAs. In 2019, the average THM was found to be 11.9 µg/L, which is within compliance. Refer to **Table 9.** for the summary of trihalomethane and haloacetic acid results.

3.3.5 Nitrate & Nitrite

One treated water sample is taken every three months and tested for nitrate and nitrite. In 2019, samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) have set a Maximum Allowable Concentration (MAC) of 1 mg/L for nitrites and 10 mg/L for nitrates. The results were found to be within compliance. Refer to **Table 9.**

Table 9. – Nitrate, Nitrite, THM and HAA Results at Century Heights Drinking Water System

	Nitrate		**Nitrite**		**THMs**		**HAAs**	
Date	# Samples	Result (mg/L)	# Samples	Result (mg/L)	# Samples	Result (µg/L)	# Samples	Result (µg/L)
Feb	1	<0.006	1	<0.003	1	6	1	<5.3
May	1	<0.006	1	<0.003	1	18	1	<5.3
Aug	1	0.013	1	<0.003	1	14	1	<5.3
Nov	1	0.008	1	<0.003	1	9.4	1	<5.3
Total	4		4		4		4	
Average		0.008		<0.003		11.9		<5.3
Maximum		0.013		<0.003		18		<5.3

3.3.6 Sodium

One water sample is collected every 60 months and tested for Sodium. O. Reg 170/03 has set a Maximum Acceptable concentration (MAC) of 20 mg/L for Sodium which requires the Medical Office of Health be notified if the concentration exceeds the MAC. These samples were last collected on June 21, 2016 and June 30, 2016 and were found to be 23.0 mg/L and 21.9 mg/L respectively, which is over the MAC and requires notice to the Health Unit. The Huron County Health Unit has prepared a notice regarding high sodium levels in drinking water. More information can be found at http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/Century-Heights.pdf. The next water sample for Sodium will be collected and analyzed on or before June 12, 2021.

3.3.7 Fluoride

One water sample is collected at least once every 60 months and tested for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a MAC of 1.5 mg/L. On August 22, 2017 and August 25, 2017 a sample was collected for this analysis. The first sample was found to have a concentration of 2.22 mg/L, which is greater than the MAC. The second sample again came back higher than the MAC at 2.20 mg/L This is due to high levels of naturally occurring fluoride in the aquifer. For more information see: http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/CenturyHeights.pdf. The next water sample for Fluoride will be collected and analyzed on or before November 14, 2022.

4.0 WATER AND CHEMICAL USAGE

4.1 Chemical Usage

Refer to **Table 10.** From January 1, 2019 to December 31, 2019, 115.28 kg of sodium hypochlorite was used to ensure proper disinfection in the distribution system with an average dosage of 4.03 mg/L.

Table 10. – Chemical Usage at Century Heights Drinking Water System

Date	Sodium Hypochlorite	
	Usage (kg)	Average Dosage (mg/L)
Jan	6.84	3.93
Feb	6.14	4.14
Mar	6.90	4.07
Apr	6.56	4.10
May	7.38	3.81
Jun	9.52	3.91
Jul	16.91	3.90
Aug	15.94	3.46
Sep	12.28	4.02
Oct	9.18	4.35
Nov	9.00	4.28
Dec	8.63	4.30
Total	**115.28**	
Average		**4.03**

4.2 Annual Flows

A summary of the water supplied to the distribution system in 2019 is provided in **Table 11.** This Table provides a breakdown of the monthly flow provided to the distribution system.

Flow meters were calibrated on June 19, 2019 by Corix/Iconix and were found to be acceptable.

Table 11. – Treated Water Flows for Century Heights Drinking Water System

Date	Average Daily Flow (m^3)	Maximum Daily Flow (m^3)	Total Monthly Flow (m^3)
Jan	57	90	1773
Feb	56	97	1577
Mar	55	76	1702
Apr	54	67	1612
May	63	103	19404
Jun	83	122	2488
Jul	114	285	4380
Aug	139	210	4292
Sep	103	159	3085
Oct	68	95	2096
Nov	68	97	2043
Dec	65	95	2026
Average	**79**		
Max		**285**	
Total			**29014**

5.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE

The following summarizes water system improvements and routine and preventative maintenance for the Century Heights Drinking Water System:

- Maintenance Work Orders carried out monthly
- The system was flushed during the months of September and October.
- The HACH 1720E on-line Turbidimeter was replaced with a used GLI unit.
- New Chlorine pumps were installed in April

6.0 MINISTRY OF THE ENVIRONMENT INSPECTIONS AND REGULATORY ISSUES

The Century Heights Drinking Water System was inspected by The Ministry of Environment , Conservation and Parks on March 22, 2019. The inspection was completed by Rhonda Shannon and received 100%

There were no instances of adverse water quality.

7.0 MOECC Regulatory Changes

It should be noted that there will be some upcoming changes to Ontario Regulation 170/03 and Ontario Regulation 169/03 that strengthen standards and clarify testing requirements as follows:

- Strengthen standards for Arsenic, Carbon Tetrachloride, Benzene, and Vinyl Chloride;
- Adopt new standards for Chlorate, Chlorite, 1-Methyl-4-Chlorophenoxyacetic acid (MCPA) and Haloacetic Acids (HAAs); (NOTE: Chlorate and Chlorite testing is only required for Municipal Drinking Water Systems using Chlorine Dioxide treatment equipment.)
- Clarify/optimize testing, sampling and reporting requirements for Trihalomethanes (THMs) and HAAs; and
- Remove 13 pesticides from testing requirements.

The aforementioned amendments will be phased in over the next four years to allow system owners and/or operators the opportunity to collect baseline information and complete required system upgrades. Currently, the new sampling, testing, reporting and re-sampling requirements, and the removal of 13 pesticides came into effect January 1, 2016. As well, testing requirements for HAAs and updates to standards for Carbon Tetrachloride, Benzene, Vinyl Chloride, Chlorate, Chlorite, and MCPA came into effect January 2017. Refer to **Table 12** for the new Regulatory Requirements. Subsequent phase-in dates are:

- January 1, 2018: Updates to standards for Arsenic come into effect / require reporting
- January 1, 2020: New standards for HAAs and HAAs testing optimization rule for smaller systems will come into effect / require reporting.

Table 12 – Regulatory Requirements

Parameter	Current Requirement		Amended Requirement	
	MAC	**½ MAC**	**MAC**	**½ MAC**
Arsenic	25 µg/L	12.5 µg/L	10 µg/L	5 µg/L
Benzene	5 µg/L	2.5 µg/L	1 µg/L	0.5 µg/L
Carbon Tetrachloride	5 µg/L	2.5 µg/L	2 µg/L	1 µg/L
Vinyl Chloride	2 µg/L	1 µg/L	1 µg/L	0.5 µg/L

Century Heights Subdivision Drinking Water System – 2019 Compliance Summary

This document is a compliance summary for the Century Heights water supply for the year 2019 as per O Reg. 170/03 Schedule 22. A full summary of the water system's test results, flows and significant activities was submitted in the Annual report.

System Description

The Century Heights water system is characterized as a "GUDI" (ground water under the direct influence of surface water) system and is classified as a small municipally owned water system.
The well house and its equipment have a daily maximum capacity to deliver 734.4 cubic meters of potable water per day to Century Heights subdivision, Maitlandview subdivision and parts of the Saltford community.
The current water sources are two deep bed rock wells. Studies to establish the security of these wells from surrounding surface water proved inconclusive in 2007 and they are now considered to be GUDI sources. BM Ross is currently investigating the new well designations established by the Ministry of the Environment.
Well #1, constructed in 1979, is located within the well house and Well #2, constructed in 2005, is located approximately 10 meters north of the well house.
A third monitoring well, drilled on the south side of Saltford Rd. was used in studies to establish the security of the two production wells. This well was abandoned and sealed in 2008.
The well house is equipped with well pumps, backup diesel generator set, chlorinators, a chlorine contact main, UV disinfection and online monitoring.
The attached distribution system is constructed of a combination of polyethylene and PVC piping with polyethylene services.
There is no elevated storage to maintain pressure and the system pressure is maintained by using pressure tanks and the two well pumps.
The system has hydrants, but lacks the capacity to provide fire flows.

Chemicals Fed

Disinfectant

Disinfection was achieved on the Century Heights well supply through the use of 12% sodium hypochlorite.
In the well house this chemical was added prior to the water entering the chlorine contact main at dosages high enough to achieve both primary and secondary disinfection objectives.
The chlorine dosages ranged from 3.46 mg/L to 4.35 mg/L, this varies with the chlorine demand of the raw water.
The free chlorine residual was monitored at the point of entry to the distribution system with a target residual of > 1.00 mg/L and < 1.50 mg/L.

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Flows

The Century Heights well supply has 1 PTTW (permit to take water) #8807-98EQ6C which permits 734.4 cubic metres of water per day to be pumped from the wells. This limit was not exceeded in 2018. This permit was issued on July 25, 2013 and the PTTW expires on November 30, 2023. A full summary of the 2019 flows can be found in the Annual Report.

The Drinking Water Works Permit (DWWP) #080-205 for the Century Heights Subdivision Drinking Water System was issued on May 25, 2017. The maximum total daily flow is 734.4 cubic meters per day and the maximum instantaneous flow is 8.5 litres per second.
The limiting factor regarding flow is the chlorine contact time in the chlorine contact main. In order to meet the regulatory CT requirements, increased flows beyond 8.5 litres per second must have an adequate free chlorine residual to counter the decreased retention time in the chlorine contact main. The combination of maximum flows through the chlorine contact main and minimum free chlorine residuals exiting the contact main did not exceed limitations in 2019 as recorded by the flow meter and online chlorine analyzer.

The maximum daily flow in 2019 was 285 cubic meters or 38.8% of capacity.
The 2019 average daily flow was 79 cubic meters or 10.75%

Precautionary Boil Water Notices

There were no Precautionary Boil Water Notices in 2019.

Boil Water Advisory

There were no Boil Water Advisories issued by the Huron County Health Unit (now the Huron Perth Public Health - HPPH) on the Century Heights water system in 2019.

Annual Ontario Ministry of the Environment Inspection

The Century Heights Drinking Water System was inspected by The Ministry of the Environment , Conservation and Parks on March 22, 2019. The final inspection rating was 100% for 2019.

Adverse Water Quality Indicators

There were no instances of adverse water quality.

Exceedences

Fluoride

O. Reg. 169/03, the Ontario Drinking Water Standard has a MAC (maximum allowable concentration) of 1.5 mg/L for fluoride.
The water from the Century Heights well is monitored every 5 years for fluoride. It has naturally occurring levels that can exceed 1.5 mg/L.
As required by O. Reg. 170/03 schedule 13 section 13.9 an AWQI (adverse water quality indicator) is filed every 60 months. This was last reported to the MECP in August 2017. Fluoride is scheduled to be sampled again in August of 2022. See below for the 2017 results:

Aug 22, 2017 – 2.22 mg/L
Aug 25, 2017 – 2.20 mg/L

Sodium

O. Reg. 169/03 the Ontario Drinking Water Standard has a MAC (maximum allowable concentration) of 20 mg/L for sodium.
The water from the Century Heights well is monitored every 5 years for sodium. It has naturally occurring levels that can exceed 20 mg/L.
As required by O. Reg. 170/03 schedule 13 section 13.9 an AWQI (adverse water quality indicator) is filed every 60 months. This was last reported to the MECP in June 21, 2016.
Sodium was last sampled on June 21 & 30, 2016. Sodium is scheduled to be sampled again in June of 2021. Below are the 2016 results:

Jun 21, 2016 – 23.0 mg/L
Jun 30, 2016 – 21.9 mg/L

Infrastructure Assessment

Regular contact is maintained with ACW's representative. The JobsPlus program is continually updated with preventative and corrective maintenance issues. A complete summary can be forwarded to the client upon their request. Through regular communication between the operating authority and the client, capital items are discussed. A list of capital items and concerns for 2019 was forwarded to ACW's representative in October 2018.

The annual Management Review was conducted by the operating authority on October 22, 2019 as per the DWQMS requirement in Element 14. These regular discussions between the client and the operating authority for this water system are continued throughout the year by emails, phone calls, and meetings as per the requirements of Element 15 of the DWQMS.

The last Internal Audit was completed on May 13, 2019 and the last Risk Assessment was completed October 22, 2019. An external surveillance audit was conducted by SAI GLOBAL from August 22-28, 2019. An Emergency Response Exercise was conducted as a follow-up response to a water main break that happened in Goderich on May 23, 2019, where several utilities were involved. An "After Action Report" was submitted to the utilities involved following the tabletop incident review.

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7.1.2 (c)

Annual Report

For the 2019 Operating Year

Dungannon Drinking Water System
2019 Operation and Maintenance
Annual Report

PREPARED BY

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TO

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1.0 INTRODUCTION AND BACKGROUND

The purpose of the 2019 Annual Report is to document the operation and maintenance data for the Dungannon Drinking Water System for review by the Ministry of the Environment, Conservation and Parks (MECP) in accordance with O. Reg. 170/03. This report covers January 1, 2019 to December 31, 2019. A copy of this report will be submitted to the owner to be uploaded to the township's website and can be supplied to interested parties upon request.

2.0 DESCRIPTION OF WATER SYSTEM

The Dungannon Drinking Water System (DWS **#260007842**), consists of one drilled well, Well # 2-02 was constructed December 2002 in accordance with construction standards as identified in the Ontario Regulation 903/03 made under the Ontario Water Resources Act. Well # 2 is a 203 mm diameter 87 m deep drilled groundwater well (Water well record number 3007430) located south of the Well House.

Well # 1 was removed from service to the drinking water system on April 3, 2017.

Well # 2 water quality monitoring results confirm this well meets the Ontario Drinking Water Quality Standards. (O Reg 169/03). Only Well # 2 provides water supply to the system. Arsenic regulation change from 25µg/L to 10µg/L on January 1, 2018 has caused Well #2 to be at or below the limit. The MECP is aware of this.

The Dungannon Well Supply is designated as a Large Municipal Residential drinking-water system that obtains water from a raw water source that is groundwater. The treatment and distribution system was commissioned in 2003 and provides potable water to an estimated population of 250 residents in the village of Dungannon.

The treatment process consists of a sodium hypochlorite disinfection system and an iron sequestering system using sodium silicate.

The rated capacity of the treatment system is 657 m3/day as identified in the facility drinking water licence.

The water treatment equipment is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario, including at least 99 per cent removal or inactivation of viruses by the time the water enters the distribution system. Secondary disinfection is provided by residual chlorine from the primary disinfection process.

The distribution system does not include any storage facilities and has no fire hydrants. There are 7 blow off valves in the distribution system to accommodate flushing.

3.0 SUMMARY OF WATER QUALITY MONITORING

3.1 Water Treatment Equipment Operation and Monitoring

3.1.1 Point of Entry Chlorine Residual

Chlorine residuals are continuously measured using a HACH CL17 online chlorine analyzer, 8760 samples were taken in 2019 and verified for accuracy using hand-held HACH pocket colorimeter. **Table 1** shows the monthly average of free chlorine residual values on the treated water at the point of entry.

3.1.2 Distribution Chlorine Residual

Chlorine residuals in the distribution system are checked daily using a HACH pocket colorimeter. In 2019, 365 distribution chlorine residuals were recorded.

Table 1. – Treated and Distribution Chlorine Residuals for Dungannon Drinking Water System using the HACH pocket colorimeter.

Date	Average Treated Chlorine Residual (mg/L)	Average Distribution Chlorine Residual (mg/L)
Jan	1.55	1.43
Feb	1.38	1.29
Mar	1.31	1.26
Apr	1.36	1.19
May	1.26	1.12
Jun	1.50	1.26
Jul	1.79	1.30
Aug	1.54	1.29
Sep	1.19	1.09
Oct	1.24	1.03
Nov	1.32	1.19
Dec	1.23	1.23
Average	1.39	1.22
Min	0.70	0.69
Max	2.08	1.22
# Samples	361	365

3.1.3 Turbidity

Turbidity is measured using a pocket turbidimeter. **Table 2.** provides a summary of raw and treated turbidity results.

Table 2. – Raw and Treated Water Turbidities for Dungannon Drinking Water System

Date	Average Raw Turbidity (NTU)	Average Treated Turbidity (NTU)
Jan	0.24	0.16
Feb	0.22	0.21
Mar	0.20	0.14
Apr	0.26	0.20
May	0.24	0.25
Jun	0.24	0.33
Jul	1.02	0.78
Aug	1.06	0.75
Sep	1.62	1.07
Oct	0.73	0.34
Nov	0.53	0.33
Dec	0.58	0.28
Average	**0.56**	**0.43**
Min	**0.14**	**0.09**
Max	**1.63**	**1.47**
# Samples	**53**	**221**

3.2 Microbiological Sampling

3.2.1 Raw Water Samples

Raw water samples are taken every week. In 2019, a total of 55 samples were collected and analyzed for E. coli and Total Coliforms. Each E. coli and Total Coliform results obtained was 0 cfu/100 ml in the raw water. **Table 3.** provides a summary of bacteriological results performed on the raw water.

Table 3. – Microbiological Results for Raw Water at Dungannon Drinking Water System

Date	E. coli			Total Coliform		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1
Jan	5	5	0	5	5	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	4	0	4	4	0
Oct	6	6	0	6	6	0
Nov	5	5	0	5	5	0
Dec	5	5	0	5	5	0
Total	55	55	0	55	55	0

3.2.2 Treated Water (Point of Entry) Samples

One treated water sample from the point of entry is taken every week and analyzed for E.Coli, Total Coliforms and for Heterotrophic Plate Count (HPC). A total of 55 treated water samples were collected and analyzed for the above parameters. All samples were found to be safe. Each E. coli and total coliform result from the treated water was 0 cfu/100 ml. The range of HPC results were 0 - <10 cfu/100 ml. **Table 4.** provides a summary of all bacteriological results performed on treated water.

Table 4. – Microbiological Results for Point of Entry at Dungannon Drinking Water System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	5	5	0	5	5	0	5	5	0
Feb	4	4	0	4	4	0	4	4	0
Mar	4	4	0	4	4	0	4	4	0
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	4	0
Jun	4	4	0	4	4	0	4	4	0
Jul	5	5	0	5	5	0	5	5	0
Aug	4	4	0	4	4	0	4	4	0
Sep	4	4	0	4	4	0	4	4	0
Oct	6	6	0	6	6	0	6	6	0
Nov	5	5	0	5	5	0	5	5	0
Dec	5	5	0	5	5	0	5	5	0
Total	**55**	**55**	**0**	**55**	**55**	**0**	**55**	**55**	**0**

3.2.3 Distribution System

Distribution samples are collected every week and tested for E.Coli, Total Coliform and for Heterotrophic Plate Count (HPC). In 2019, a total of 107 distribution samples were collected and analyzed for the above parameters.The range of HPC results were 0 - 7 cfu/100 ml. **Table 5.** provides a summary of all bacteriological samples taken in the distribution system.

Table 5. – Microbiological Results for Dungannon Distribution System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	10	10	0	10	10	0	5	5	0
Feb	8	8	0	8	8	0	4	4	0
Mar	8	8	0	8	8	0	4	4	0
Apr	9	9	0	9	9	0	5	5	0
May	8	8	0	8	8	0	4	4	0
Jun	10	10	0	10	10	0	5	5	0
Jul	10	10	0	10	9	0	4	4	0
Aug	8	8	0	8	8	0	4	4	0
Sep	8	8	0	8	8	0	4	4	0
Oct	12	12	0	12	12	0	6	6	0
Nov	6	6	0	6	6	0	5	5	0
Dec	10	10	0	10	10	0	10	10	0
Total	107	107	0	107	107	0	**61**	**61**	**0**

3.3 Chemical Sampling & Testing

3.3.1 Inorganics

One treated water sample is taken every 36 months and tested for inorganics. The most recent samples for the Dungannon Drinking Water System were collected on December 16, 2019 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23. All parameters were found to be within compliance. Inorganics will be sampled and analyzed again on or before December 16, 2022. Results from 2019 can be found in **Table 6a.** Results for arsenic testing can be found in **Table 6b.**

Table 6a. – Schedule 23 Results for Dungannon Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Antimony	<0.09	6
Barium	159	1000
Boron	64	5000
Cadmium	0.004	5
Chromium	0.11	50
Mercury	<0.01	1
Selenium	<0.04	10
Uranium	1.08	20

Table 6b. – Arsenic Results for Dungannon Drinking Water System

Date	Raw (µg/L)	Treated Water (µg/L)
01-02-19	10.90	
01-15-19	10.20	
01-22-19	10.60	
01-29-19	10.80	
02-06-19	11.10	

02-12-19	10.20	
02-19-19	9.60	
02-26-19	10.20	10.20
03-05-19	10.10	
03-12-19	10.00	
03-19-19	9.20	
03-26-19	11.00	
04-02-19	10.00	
04-09-19	10.70	
04-16-19	11.30	
04-23-19	10.30	
04-30-19	11.40	
05-07-19	10.90	
05-14-19	10.20	11.10
05-21-19	9.40	
05-28-19	9.80	
06-04-19	11.30	
06-11-19	9.50	
06-18-19	10.40	
06-25-19	8.40	
07-02-19	8.70	
07-09-19	10.10	
07-15-19	16.90	
07-23-19	10.80	
07-30-19	10.30	
08-06-19	9.50	

08-13-19	8.20	
08-14-19	--	9.6
08-20-19	11.70	
08-27-19	10.70	
09-03-19	16.30	
09-10-19	13.00	
09-17-19	10.80	
09-24-19	16.40	
10-01-19	14.80	
10-08-19	12.00	
10-15-19	9.40	
10-22-19	10.40	
10-29-19	9.60	
11-04-19	ND	12.20
11-12-19	11.50	
11-19-19	9.50	
11-26-19	9.80	
12-3-19	8.40	
12-10-19	10.80	
12-17-19	10.50	10.80
12-23-19	10.20	
12-30-19	10.60	

3.3.2 Lead

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken during two seasons: once between December 15 and April 15 and once between June 15 and October 15. The Maximum Allowable Concentration for Lead is 0.01 mg/L. In the two previous lead sampling seasons, pH and alkalinity samples were taken on January 22, 2019 and July10, 2019. The next lead samples are due in the 2020 schedule. 2019 results for pH and alkalinity can be found in **Table 7.**

Table 7. – Lead Sampling Program Results for Dungannon Drinking Water System

	Lead (mg/L)	pH	Alkalinity (mg/L)
Dec-Apr	<0.01	8.12	214
Jun-Oct	<0.26	8.12	216

3.3.3 Organics

One treated water sample is taken every 36 months and tested for schedule 24 organic parameters. The most recent samples were collected on December 16, 2019. All parameters were found to be within compliance. Organics will be sampled and analyzed again on or before December 16, 2022. The 2019 sample results can be found in **Table 8.**

Table 8. – Schedule 24 Results for Dungannon Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Benzene	<0.32	1
Carbon Tetrachloride	<0.17	2
1,2-Dichlorobenzene	<0.41	200
1,4-Dichlorobenzene	<0.36	5
1,1-Dichloroethylene	<0.33	14
1,2-Dichloroethane	<0.35	5
Dichloromethane	<0.35	50
Monochlorobenzene	<0.3	80
Tetrachloroethylene	<0.35	30
Trichloroethylene	<0.44	50
Vinyl Chloride	<0.17	1
Diquat	<1	70
Paraquat	<1	10
Glyphosate	<1	280
Polychlorinated Biphenyls	<0.04	3
Benzo(a)pyrene	<0.004	0.01
2,4-dichlorophenol	<0.19	900
2,4,6-trichlorophenol	<0.25	5
2,3,4,6-tetrachlorophenol	<0.20	100
Pentachlorophenol	<0.15	60
Alachlor	<0.02	5
Atrazine+N-dealkylated metabolites	<0.01	5
Atrazine	<0.01	-
De-ethylated atrazine	<0.01	-
Azinphos-methyl	<0.05	20
Carbaryl	<0.05	90
Carbofuran	<0.01	90
Chlorpyrifos	<0.02	90
Diazinon	<0.02	20
Dimethoate	<0.06	20
Diuron	<0.03	150
Malathion	<0.02	190
Methoxychlor	<0.01	900
Metolachlor	<0.01	50
Metribuzin	<0.02	80
Phorate	<0.01	2
Prometryne	<0.03	1
Simazine	<0.01	10
Terbufos	<0.01	1

Triallate	<0.01	230
Trifluralin	<0.02	45
2,4-dichlorophenoxyacetic acid	<0.19	100
Bromoxynil	<0.33	5
Dicamba	<0.20	120
Diclofop-methyl	<0.40	9
MCPA	<0.00012	0.00012
Picloram	<1	190

3.3.4 Trihalomethanes and Haloacetic Acids

One distribution sample is taken every three months from a point in the distribution system and tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). In 2019, samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) has set a Maximum Allowable Concentration (MAC) of 100 µg/L for THMs and it is expressed as a running annual average(RAA). Currently there is no MAC for HAAs. In 2019, the average THM was found to be 11.85 µg/L, which is within compliance. Refer to **Table 9.** for the summary of trihalomethane and haloacetic acid results.

3.3.5 Nitrate & Nitrite

One treated water sample is taken every three months and tested for nitrate and nitrite. In 2019, samples were collected during the months of February, May and August and November. The Ontario Drinking Water Quality Standard (ODWQS) have set a Maximum Allowable Concentration (MAC) of 1 mg/L for nitrites and 10 mg/L for nitrates. The results were found to be within compliance. Refer to **Table 9.**

Table 9. – Nitrate, Nitrite, THM and HAA Results at Dungannon Drinking Water System

	Nitrate		**Nitrite**		**THMs**		**HAAs**	
Date	# Samples	Result (mg/L)	# Samples	Result (mg/L)	# Samples	Result (µg/L)	# Samples	Result (µg/L)
Feb	1	<0.006	1	<0.003	1	7.3	1	<5.3
May	1	<0.006	1	<0.003	1	16	1	<5.3
Aug	1	0.013	1	0.013	1	14	1	<5.3
Nov	1	0.008	1	0.008	1	9.4	1	<5.3*
Total	4		4		4		4	
Average		0.008		0.008		11.85		<5.3
Maximum		0.008		0.008		18		<5.3

* This is a resample that was done in November as the Lab had an accident with the first sample

3.3.6 Sodium

One treated water sample is collected every 60 months and tested for Sodium. O. Reg 170/03 has set a Maximum Acceptable concentration (MAC) of 20 mg/L for Sodium which requires the Medical Office of Health be notified if the concentration exceeds the MAC. These samples were last collected on June 21, 2016 and were found to be 18.2 mg/L, which is within compliance. The next water sample for Sodium will be collected and analyzed on or before June 21, 2021.

3.3.7 Fluoride

One treated water sample is collected at least once in every 60 months and tested for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a MAC of 1.5 mg/L. On November 6, 2018 a sample was collected for this analysis. The first sample was found to have a concentration of 1.5 mg/L, which is greater than the MAC. This is due to high levels of naturally occurring fluoride in the aquifer. For more information see: http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/DungannonWaterQualityInformation.pdf. The second sample came back under the MAC at 1.45 mg/L. The next water sample for Fluoride will be collected and analyzed on or before November 6,

4.0 WATER AND CHEMICAL USAGE

4.1 Chemical Usage

Refer to **Table 10.** From January 1, 2019 to December 31, 2019, 66.07 kg of sodium hypochlorite was used to ensure proper disinfection in the distribution system with an average dosage of 3.86 mg/L. 67.05 kg of sodium silicate was used in 2019 to reduce the concentration of dissolved iron the an average dosage of 4.05 kg.

Table 10. – Chemical Usage at Dungannon Drinking Water System

Date	Sodium Hypochlorite		Sodium Silicate	
	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)
Jan	5.66	4.25	5.66	4.38
Feb	4.81	3.90	5.13	4.19
Mar	4.75	3.88	5.13	4.18
Apr	6.50	4.04	4.87	3.33
May	4.62	3.52	4.47	3.38
Jun	5.42	4.79	5.24	4.79
Jul	6.89	4.14	8.16	4.99
Aug	7.37	3.85	7.37	4.72
Sep	5.01	3.59	6.05	4.41
Oct	4.68	3.33	4.87	3.49
Nov	4.62	3.49	4.18	3.24
Dec	5.92	3.52	5.92	3.51
Total	**66.07**		**67.05**	
Average		**3.86**		**4.05**

4.2 Annual Flows

A summary of the water supplied to the distribution system in 2019 is provided in **Table 11.** This Table provides a breakdown of the monthly flow provided to the distribution system.

Flow meters were calibrated on July 4, 2019 by Corix/Iconix and were found to be acceptable.

Table 11. – Treated Water Flows for Dungannon Drinking Water System

Date	Average Daily Flow (m^3)	Maximum Daily Flow (m^3)	Total Monthly Flow (m^3)
Jan	43.32	64	1343
Feb	44.04	56	1233
Mar	39.19	52	1215
Apr	52.80	90	1584
May	41.84	111	1297
Jun	43.43	59	1303
Jul	54.06	89	1676
Aug	51.45	74	1595
Sep	46.17	62	1385
Oct	43.00	62	1333
Nov	43.67	70	1310
Dec	54.03	76	1675
Average	**46.53**		
Max		**111**	
Total			**16949**

5.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE

The following summarizes water system improvements and routine and preventative maintenance for the Dungannon Drinking Water System:

- Testing of raw water is being completed weekly for arsenic.
- April - Temporary regulatory relief granted for arsenic until July 1, 2020.
- July - Well #1 offline - removed from service on April 3, 2017.
- October- Well #2 pump replaced.
- Flushing of the system occurred in May, September and October.
- MDWL expires August 24, 2020. BM Ross has sent in the renewal application.

6.0 MINISTRY OF THE ENVIRONMENT INSPECTIONS AND REGULATORY ISSUES

T**his 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.**

The Dungannon Drinking Water System was inspected in 2019 by The Ministry of Environment, Conservation and Parks. The inspection was completed by Rhonda Shannon on June 18, 2019.

The Inspection rating achieved was 100% for this report.

There was 1 instance of adverse water quality in 2019:

1. AWQI #146002 - on June 28, 2019 Loss of chlorination and higher than normal flows resulting in improperly disinfected water directed to users . Disinfection was restored and the system was flushed. No micro bacteriological samples were not required as per Huron County Health Unit.

7.0 MECP Regulatory Changes

It should be noted that there will be some upcoming changes to Ontario Regulation 170/03 and Ontario Regulation 169/03 that strengthen standards and clarify testing requirements as follows:

- Strengthen standards for Arsenic, Carbon Tetrachloride, Benzene, and Vinyl Chloride;
- Adopt new standards for Chlorate, Chlorite, 1-Methyl-4-Chlorophenoxyacetic acid (MCPA) and Haloacetic Acids (HAAs); (NOTE: Chlorate and Chlorite testing is only required for Municipal Drinking Water Systems using Chlorine Dioxide treatment equipment.)
- Clarify/optimize testing, sampling and reporting requirements for Trihalomethanes (THMs) and HAAs; and
- Remove 13 pesticides from testing requirements.

The aforementioned amendments will be phased in over the next four years to allow system owners and/or operators the opportunity to collect baseline information and complete required system upgrades. Currently, the new sampling, testing, reporting and re-sampling requirements, and the removal of 13 pesticides came into effect January 1, 2016. As well, testing requirements for HAAs and updates to standards for Carbon Tetrachloride, Benzene, Vinyl Chloride, Chlorate, Chlorite, and MCPA came into effect January 2017. Refer to **Table 12** for the new Regulatory Requirements. Subsequent phase-in dates are:

- January 1, 2018: Updates to standards for Arsenic come into effect / require reporting
- January 1, 2020: New standards for HAAs and HAAs testing optimization rule for smaller systems are in effect / require reporting.

Table 12 – Regulatory Requirements

Parameter	**Current Requirement**		**Amended Requirement**	
	MAC	**½ MAC**	**MAC**	**½ MAC**
Arsenic	25 µg/L	12.5 µg/L	10 µg/L	5 µg/L
Benzene	5 µg/L	2.5 µg/L	1 µg/L	0.5 µg/L
Carbon Tetrachloride	5 µg/L	2.5 µg/L	2 µg/L	1 µg/L
Vinyl Chloride	2 µg/L	1 µg/L	1 µg/L	0.5 µg/L

Dungannon Drinking Water System – 2019 Compliance Summary

This document is a compliance summary for the Dungannon water supply for the year 2019 as per Reg. 170/03 Schedule 22. A full summary of the water system's test results, flows and significant activities was submitted on February 27, 2020

System Description

The Dungannon water system is characterized as a "secure ground water" system and is classified as a large municipally owned water system. The well house and its equipment have a daily maximum capacity to deliver 657 cubic meters of potable water per day to the Dungannon community.

The water source is a secure deep bedrock well. The production Well # 2 is located approximately 30 meters due south of the well house.

Well #2 was drilled in 2003. The well pump and associated piping in the Well #2 was installed in August of 2005.

The well house is equipped with well pumps, backup diesel generator set, chlorinators, a chlorine contact main and online monitoring. The system is controlled and monitored by an on-site PLC.

The distribution system was constructed in 2005 and is constructed of PVC with polyethylene services. There is no elevated storage to maintain pressure therefore the system pressure is maintained using pressure tanks and the well pump. The system has no hydrants and lacks the capacity to provide fire flows.

Chemicals Fed

Disinfectant

Disinfection was achieved on the Dungannon well supply through the use of 6% sodium hypochlorite.

In the well house, this chemical was added prior to the water entering the chlorine contact main at dosages high enough to achieve both primary and secondary disinfection objectives.
The chlorine average dosages ranged from 3.33 mg/L to 4.79 mg/L. The chlorine demand of the water is high on the Dungannon water due to naturally occurring raw water characteristics. This creates a noticeable chlorine odour on the treated water. The free chlorine residual was monitored at the point of entry to the distribution system with a target residual of > 1.03 mg/L and <1.43 mg/L which is typical of the treated water in other municipal water systems.

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Iron Sequestering

The well water at Dungannon has iron levels higher than what is considered aesthetically acceptable. The well house provides chemically assisted iron sequestering. The chemical used in 2019 was sodium silicate. This chemical was fed prior to the chlorine contact main.
A full summary of dosages and chemical used can be found in **Table 10** of the Annual Report.

Flows

The Drinking Water Works Permit (DWWP) #080-203 issue #4 for the Dungannon Drinking Water System was issued on May 25, 2017 and expires August 24, 2020. Limits of the Permit to Take Water (PTTW) was not exceeded on Well #2 in 2019. The PTTW was issued for this system on July 25, 2013 and expires on July 19, 2023. A full summary of the 2019 flows included in the 2019 in the Annual Report.

The Dungannon treatment system had a maximum total daily flow of 111 cubic meters per day. The maximum liters per minute allowed is restricted to 682 for Well #2. Well #2 is the only source of water.
The limiting factor regarding flow is chlorine contact time (CT) in the chlorine contact main. In order to meet the regulatory CT requirements, increased flows beyond 11.36 liters per second must have an increased free chlorine residual to counter the decreased retention time in the chlorine contact main.

The combination of maximum flows through the chlorine contact main and minimum free chlorine residuals exiting the contact main did not exceed limitations in 2019 as recorded by the flow meters and the on-line chlorine analyzer.

The maximum daily flow from the Dungannon well house in 2019 was 111 cubic meters or 25.34% of capacity.
The average daily flow was 46 cubic meters or 6.7% of the capacity from the PTTW for Well #2.

Precautionary Boil Water Notices

There were no precautionary boil water notices issued on the Dungannon system in 2019.

Boil Water Advisory

There were no Boil Water Advisories issued by the Huron County Health Unit (HCHU) on the Dungannon water system in 2019

Annual Ontario Ministry of Environment, Conservation and Parks Inspection

The Dungannon Drinking Water System was inspected on June 19, 2019 by Rhonda Shannon from The Ministry of the Environment, Conservation and Parks. There were no instances of non-compliance noted. Final Inspection Rating: 100%.

Adverse Water Quality Indicators

There was one instance of adverse water quality in Dungannon in 2019, AWQI #146002 – which can be found on page 20 of the annual report.

Exceedances

Fluoride

O. Reg. 169/03 (the Ontario Drinking Water Standard) has a MAC (maximum allowable concentration) of 1.50 mg/L for fluoride.
The water from the Dungannon well is monitored every 5 years for fluoride. They have naturally occurring levels that can exceed 1.5 mg/L.
As required by O. Reg. 170/03 schedule 13 section 13.9 an AWQI (adverse water quality indicator) is filed every 60 months. The last sample was taken on November 6, 2018 and was found to be acceptable at 1.50 mg/L.

Parameters over 50% of MAC

Arsenic

O. Reg. 169/03 had a MAC of 25 µg/L for arsenic. Which was been lowered to 10 µg/L as of January 1, 2018.
The water from the Dungannon well can have naturally occurring levels that exceed the arsenic MAC. As required by O. Reg. 170/03 schedule 13 section 13.5 the treated water is monitored quarterly for this parameter. The Dungannon well has been granted a temporary relief for the arsenic MAC which expires July 1, 2020.

The results for 2019 were as follows:

Date	Raw Water (µg/L)	Treated Water (µg/L)	Date	Raw Water (µg/L)	Treated Water (µg/L)
01-02-19	10.90		**07-15-19**	16.90	
01-15-19	10.20		**07-23-19**	10.080	
01-22-19	10.60		**07-30-19**	10.30	
01-29-19	10.80		**08-06-19**	9.50	
02-06-19	11.10		**08-13-19**	8.20	
02-12-19	10.20		**08-14-19**		9.60
02-19-19	9.60		**08-20-19**	11.70	
02-26-19	10.20	10.20	**08-27-19**	10.70	
03-05-19	10.10		**09-03-19**	16.30	
03-12-19	10.00		**09-10-19**	13.00	
03-19-19	9.20		**09-17-19**	10.80	

Date	Raw Water (µg/L)	Treated Water (µg/L)	Date	Raw Water (µg/L)	Treated Water (µg/L)
03-26-19	11.00		**09-24-19**	16.40	
04-02-19	10.00		**10-01-19**	14.80	
04-09-19	10.70		**10-08-19**	12.00	
04-16-19	11.30		**10-15-19**	9.40	
04-23-19	10.30		**10-22-19**	10.40	
04-30-19	11.40		**10-29-19**	9.60	
05-07-19	10.90		**11-04-19**	ND*	12.20
05-14-19	10.20	11.10	**11-12-19**	11.50	
05-21-19	9.40		**11-19-19**	9.50	
05-28-19	9.80		**11-26-19**	9.80	
06-04-19	11.30		**12-3-19**	8.40	
06-11-19	9.50		**12-10-19**	10.80	
06-19-19	10.40		**12-17-19**	10.50	10.80
06-25-19	8.40		**12-23-19**	10.20	
07-02-19	8.70		**12-30-19**	10.60	
07-09-19	10.10				

**ND= No Data, This was a LAB error*

NOTE: Raw water samples were taken throughout the year to monitor the arsenic levels. This has been undertaken through discussions with the Municipality, the Operating Authority, the HPPH, MECP, and BM Ross.

Infrastructure Assessment

Regular contact is maintained with ACW's representative. The JobsPlus program is continually updated with preventative and corrective maintenance issues. A complete summary can be forwarded to the client upon their request. Through regular communication between the operating authority and the client, capital items are discussed. A list of capital items and concerns was forwarded to ACW's representative in October 2019. Arsenic concentrations remain a major concern and remedies are still being investigated.

The annual Management Review was conducted by the operating authority on October 22, 2019 as per the DWQMS requirement in Element 14. Regular discussions between the client and the operating authority for this water system are continued throughout the year by emails, phone calls, and meetings as per the requirements of Element 15 of the DWQMS.

The Internal Audit was last completed on May 13, 2019 and the last Risk Assessment was completed October 21, 2019. An external surveillance Audit was conducted by SAI Global on August 27-28, 2019. An Emergency Response Exercise was conducted as a follow-up response to a water main break that happened in Goderich on May 23, 2019, where several utilities were involved. An “After Action Report” was submitted to the utilities involved following the tabletop incident review.

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Annual Report

For the 2019 Operating Year

Huron Sands Drinking Water System
2019 Operation and Maintenance
Annual Report

PREPARED BY

Veolia Water
100 Cove Rd.
Goderich, ON
N7A 3Z2

TO

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Resourcing the world

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1.0 INTRODUCTION AND BACKGROUND

The purpose of the 2019 Annual Report is to document the operation and maintenance data for the Huron Sands Drinking Water System for review by The Ministry Environment, Conservation and Parks(MECP) in accordance with O. Reg. 170/03. This report covers January 1, 2019 to December 31, 2019 A copy of this report will be submitted to the owner to be uploaded to the township's website and can be supplied to interested parties upon request.

2.0 DESCRIPTION OF WATER SYSTEM

The Huron Sands Drinking Water System (DWS **#220007757**), is characterized as a "secure ground water" system and is classified as a small municipal residential system. It is owned by the Township of ACW and operated by Veolia Water
Canada, the Operating Authority. The system consists of one well with chlorination treatment and iron sequestering, and is operated seasonally between April and November.

The entire system is located on Front Concession, Lot 19, in the Huron Sands Subdivision of Ashfield-Colborne-Wawanosh Township. The Huron Sands well house is located at 85019 Michelle St. S, Huron Sands Subdivision, Ashfield-Colborne-Wawanosh. The distribution system serves the community of Huron Sands with a population of approximately 100 residents, with approximately 48 customer services.

Well # 1, drilled in 2001, is a secure deep bedrock well, 200 mm, 100 metres deep, equipped with a submersible pump with a rated capacity of 3.8 L/s, with instrumentation and control equipment, and 50 mm discharge line connected to the pump house. The well house and its equipment have a daily capacity to deliver 328 m^3 of potable water per day to the Huron Sands community.

The well house is equipped with a flow control valve, a chlorine pump, a chemical feed pump for iron sequestering, a chlorine contact watermain, on-line chlorine monitoring, alarm generation, data recorder and auto-dialer. A double throw manually operated transfer switch is available allowing the use of a portable gen set during extended power outages.

The water from the well is pumped to a chlorine contact main (900 mm x 6.1 metres long DR41 PVC) to provide adequate chlorine contact time at maximum flow and before the first consumer, complete with a sampling / service water connection feed back to the pump house. The distribution system is constructed with a combination of PVC piping with polyethylene services.

There is no elevated storage to maintain pressure and the system pressure is maintained using pressure tanks and the well pump.

The system has no fire hydrants and lacks the capacity to provide fire flows.

Disinfection is achieved on the Huron Sands well supply through the use of 6% sodium hypochlorite. In the well house, this chemical is added prior to the water entering the chlorine contact main at dosages high enough to achieve both primary and secondary disinfection objectives.

The chlorine dosages range varies with the chlorine demand of the raw water. The free chlorine residual is monitored at the point of entry to the distribution system, by an on-line chlorine analyzer, with a target residual of > 1.00 mg/L and < 1.30 mg/L.

The limiting factor regarding flow is chlorine contact time in the chlorine contact main. In order to meet the regulatory CT requirements (CT value > 3.0), increased flows beyond 3.8 L/s must have an adequate free chlorine residual to counter the decreased retention time in the chlorine contact watermain.

The treated water is monitored by an on-line chlorine analyzer.

Distribution piping typically ranges in size from 50 mm to 100 mm, and consists of PVC piping, with polyethylene service connections.

A 100 mm diameter discharge water main outside the pump house supplies treated water to the Huron Sands Estates Subdivision.

Typical system pressure ranges from 40 P.S.I to 60 P.S.I.

3.0 SUMMARY OF WATER QUALITY MONITORING

3.1 Water Treatment Equipment Operation and Monitoring

3.1.1 Point of Entry Chlorine Residual

Chlorine residuals are continuously measured using a HACH CL17 online chlorine analyzer (5110 samples were recorded over a 7 month period) and verified for accuracy using hand-held HACH pocket colorimeter. **Table 1** shows the monthly average of free chlorine residual values on the treated water at the point of entry.

3.1.2 Distribution Chlorine Residual

Chlorine residuals in the distribution system are checked using a HACH pocket colorimeter. In 2019, 220 distribution chlorine residuals were recorded.

Table 1. – Treated and Distribution Chlorine Residuals for Huron Sands Drinking Water System

Date	Average Treated Chlorine Residual (mg/L)	Average Distribution Chlorine Residual (mg/L)
Jan	-	-
Feb	-	-
Mar	-	-
Apr	1.47	1.46
May	1.36	1.33
Jun	1.51	1.42
Jul	1.36	1.31
Aug	1.39	1.28
Sep	1.49	1.33
Oct	1.44	1.31
Nov	1.44	1.27
Dec	-	-
Average	**1.44**	**1.34**
Min	**.87**	**.73**
Max	**2.26**	**2.05**
# Samples	**219**	**220**

3.1.3 Turbidity

Turbidity is measured using a pocket turbidimeter. **Table 2.** provides a summary of raw and treated turbidity results.

Table 2. – Raw and Treated Water Turbidities for Huron Sands Drinking Water System

Date	Average Raw Turbidity (NTU)	Average Treated Turbidity (NTU)
Jan	-	-
Feb	-	-
Mar	-	-
Apr	0.44	0.37
May	0.24	0.26
Jun	0.32	0.27
Jul	0.58	0.26
Aug	0.62	0.26
Sep	0.57	0.31
Oct	0.29	0.26
Nov	.46	0.29
Dec	-	-
Average	**.44**	**0.29**
Min	**.24**	**0.12**
Max	**.62**	**0.61**
# Samples	**10**	**121**

3.2 Microbiological Sampling

3.2.1 Raw Water Samples

Raw water samples are taken every two weeks. In 2019, a total of 17 samples were collected and analyzed for E. coli and Total Coliforms. Each E. coli and Total Coliform result obtained was 0 cfu/100 ml in the raw water. **Table 3.** provides a summary of bacteriological results performed on the raw water.

Table 3. – Microbiological Results for Raw Water at Huron Sands Drinking Water System

Date	E. coli			Total Coliform		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1
Jan	-	-	-	-	-	-
Feb	-	-	-	-	-	-
Mar	-	-	-	-	-	-
Apr	2	2	0	2	2	0
May	3	3	0	3	3	0
Jun	2	2	0	2	2	0
Jul	2	2	0	2	2	0
Aug	2	2	0	2	2	0
Sep	2	2	0	2	2	0
Oct	2	2	0	2	2	0
Nov	1	1	0	1	1	0
Dec	-	-	-	-	-	-
Total	**17**	**17**	**0**	**17**	**17**	**0**

3.2.2 Treated Water (Point of Entry) Samples

One treated water sample from the point of entry is taken every two weeks and analyzed for E.Coli, Total Coliforms and for Heterotrophic Plate Count (HPC). In 2019, a total of 17 treated water samples were collected and analyzed for the above parameters. All samples were found to be safe. Each E. coli and total coliform result from the treated water was 0 cfu/100 ml. The range of HPC results were 0 - 2 cfu/100 ml. **Table 4.** provides a summary of all bacteriological results performed on treated water.

Table 4. – Microbiological Results for Point of Entry at Huron Sands Drinking Water System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-
Apr	3	3	0	2	2	0	3	3	0
May	2	2	0	3	3	0	2	2	0
Jun	2	2	0	2	2	0	2	2	0
Jul	2	2	0	2	2	0	2	2	0
Aug	2	2	0	2	2	0	2	2	0
Sep	2	2	0	2	2	0	2	2	0
Oct	3	3	0	3	3	0	3	3	0
Nov	1	1	0	1	1	0	1	1	0
Dec	-	-	-	-	-	-	-	-	-
Total	**17**	**17**	**0**		**17**	**0**		**17**	**0**

3.2.3 Distribution System

Distribution samples are collected every two weeks and tested for E.Coli, Total Coliform and for Heterotrophic Plate Count (HPC). In 2019, a total of 17 distribution samples were collected and analyzed for the above parameters. All E. coli and total coliform result from the treated water were 0 cfu/100 ml. The range of HPC results were 0 - 6 cfu/100 ml. **Table 5.** provides a summary of all bacteriological samples taken in the distribution system.

Table 5. – Microbiological Results for Huron Sands Distribution System

Date	E. coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-	-	-
Apr	3	3	0	3	3	0	3	3	0
May	2	2	0	2	2	0	2	2	0
Jun	2	2	0	2	2	0	2	2	0
Jul	2	2	0	2	2	0	2	2	0
Aug	2	2	0	2	2	0	2	2	0
Sep	2	2	0	2	2	0	2	2	0
Oct	3	3	0	3	3	0	3	3	0
Nov	1	1	0	1	1	0	1	1	0
Dec	-	-	-	-	-	-	-	-	-
Total	**17**	**17**	**0**	**17**	**17**	**0**	**17**	**17**	**0**

3.3 Chemical Sampling & Testing

3.3.1 Inorganics

One treated water sample is taken every 60 months and tested for inorganics. The most recent samples for the Huron Sands Drinking Water System were collected on June 21, 2016 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23. All parameters were found to be within compliance. Inorganics will be sampled and analyzed again on or before June 21, 2021. Results from 2016 can be found in **Table 6.**

Table 6. – Schedule 23 Results for Huron Sands Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Antimony	<0.02	6
Arsenic	4.5	10
Barium	30.2	1000
Boron	94	5000
Cadmium	0.004	5
Chromium	0.29	50
Mercury	<0.01	1
Selenium	<0.04	10
Uranium	1.43	20

NOTE: New regulation standards changed in 2018 for Arsenic. The previous standard of 25µg/L changed January 2018, to the new standard of 10µg/L. The last sample taken in 2016 was within compliance at that time, the result was 4.5µg/L.The next sample is required before June 21, 2021. Consideration and discussion of this parameter should be investigated as soon as possible.

3.3.2 Lead

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken once between June 15 and October 15. The Maximum Allowable Concentration for Lead is 0.01 mg/L. In the previous lead sampling seasons, pH and alkalinity samples were taken on April 11, 2019 and again on July10, 2019. Lead is scheduled to be sampled again between June 15 and October 15 2019. 2019 results can be found in **Table 7.**

Table 7. – Lead Sampling Program Results for Huron Sands Drinking Water System

	Lead (mg/L)	pH	Alkalinity (mg/L)
Jun-Oct	n/a	8.10	188
Dec-April	n/a	7.88	188

3.3.3 Organics

One treated water sample is taken every 60 months and tested for schedule 24 organic parameters. The most recent samples were collected on June 21, 2016. All parameters were found to be within compliance. Organics will be sampled and analyzed again on or before June 21, 2021. 2016 sample results can be found in **Table 8.**

Table 8. – Schedule 24 Results for Huron Sands Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Benzene	<0.32	1
Carbon Tetrachloride	<0.16	2
1,2-Dichlorobenzene	<0.41	200
1,4-Dichlorobenzene	<0.36	5
1,1-Dichloroethylene	<0.33	14
1,2-Dichloroethane	<0.35	5
Dichloromethane	<0.35	50
Monochlorobenzene	<0.3	80
Tetrachloroethylene	<0.35	30
Trichloroethylene	<0.43	50
Vinyl Chloride	<0.17	1
Diquat	<1	70
Paraquat	<1	10
Glyphosate	<1	280
Polychlorinated Biphenyls	<0.04	3
Benzo(a)pyrene	<0.004	0.01
2,4-dichlorophenol	<0.15	900
2,4,6-trichlorophenol	<0.25	5
2,3,4,6-tetrachlorophenol	<0.20	100
Pentachlorophenol	<0.15	60
Alachlor	<0.02	5
Atrazine+N-dealkylated metabolites	<0.01	5
Atrazine	<0.01	-
De-ethylated atrazine	<0.01	-
Azinphos-methyl	<0.05	20
Carbaryl	<0.05	90
Carbofuran	<0.01	90
Chlorpyrifos	<0.02	90
Diazinon	<0.02	20
Dimethoate	<0.03	20
Diuron	<0.03	150
Malathion	<0.02	190
Methoxychlor	<0.01	900
Metolachlor	<0.01	50

Metribuzin	<0.02	80
Phorate	<0.01	2
Prometryne	<0.03	1
Simazine	<0.01	10
Terbufos	<0.01	1
Triallate	<0.01	230
Trifluralin	<0.02	45
2,4-dichlorophenoxyacetic acid	<0.19	100
Bromoxynil	<0.33	5
Dicamba	<0.20	120
Diclofop-methyl	<0.40	9
MCPA	<0.00012	0.00012
Picloram	<1	190

3.3.4 Trihalomethanes and Haloacetic Acids

One distribution sample is taken every three months from a point in the distribution system and tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). In 2019, samples were collected during the months of May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) has set a Maximum Allowable Concentration (MAC) of 100 µg/L for THMs and it is expressed as a running annual average. There was previously no MAC for HAAs, in 2020 the new HAA MAC will be 80µg/L. In 2019, the average THM was found to be 10.33 µg/L, which is within compliance. Refer to **Table 9.** for the summary of trihalomethane and haloacetic acid results.

3.3.5 Nitrate & Nitrite

One treated water sample is taken every three months and tested for nitrate and nitrite. In 2019, samples were collected during the months of May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) have set a Maximum Allowable Concentration (MAC) of 1 mg/L for nitrites and 10 mg/L for nitrates. The results were found to be within compliance. Refer to **Table 9.**

Table 9. – Nitrate, Nitrite, THM and HAA Results at Huron Sands Drinking Water System

	Nitrate		**Nitrite**		**THMs**		**HAAs**	
Date	# Samples	Result (mg/L)	# Samples	Result (mg/L)	# Samples	Result (µg/L)	# Samples	Result (µg/L)
May	1	<0.006	1	<0.003	1	7.0	1	<5.3
Aug	1	<0.006	1	<0.003	1	11	1	<5.3
Nov	1	<0.006	1	<0.003	1	13	1	<5.3
Total	3		3		3		3	
Average		<0.006		<0.003		10.33		<5.3
Maximum		<0.006		<0.003		13		<5.3

3.3.6 Sodium

One water sample is collected every 60 months and tested for Sodium. O. Reg 170/03 has set a Maximum Acceptable concentration (MAC) of 20 mg/L for Sodium which requires the Medical Office of Health be notified if the concentration exceeds the MAC. These samples were last collected on June 21, 2016 and were found to be 18.2 mg/L, which is within compliance. The next water sample for Sodium will be collected and analyzed on or before June 21, 2021.

3.3.7 Fluoride

One water sample is collected at least once in every 60 months and tested for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a MAC of 1.5 mg/L. On August 22, 2017 and August 25, 2017 a sample was collected for this analysis. The first sample was found to have a concentration of 2.13 mg/L and the second set came back at 2.19 mg/L, which are both greater than the MAC. This is due to high levels of naturally occurring fluoride in the aquifer. For more information see:
http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/HuronSands.pdf.
The next water sample for Fluoride will be collected and analyzed on or before August 22, 2022.

4.0 WATER AND CHEMICAL USAGE

4.1 Chemical Usage

Refer to **Table 10.** From January 1, 2019 to December 31, 2019, 10.22 kg of sodium hypochlorite was used to ensure proper disinfection in the distribution system with an average dosage of 6.39 mg/L. 60.26kg of sodium silicate was used in 2019 to reduce the concentration of dissolved iron.

Table 10. – Chemical Usage at Huron Sands Drinking Water System

Date	Sodium Hypochlorite		Sodium Silicate
	Usage (kg)	Average Dosage (mg/L)	Usage (kg)
Jan	-	-	-
Feb	-	-	-
Mar	-	-	-
Apr	1.20	6.35	5.52
May	1.58	5.44	9.66
Jun	1.20	5.00	7.36
Jul	1.74	4.22	11.50
Aug	1.77	4.01	11.50
Sep	1.33	6.24	7.59
Oct	1.19	6.89	7.13
Nov	.39	12.97	-
Dec	-	-	-
Total	**10.22**		**60.26**
Average		**6.39**	

4.2 Annual Flows

A summary of the water supplied to the distribution system in 2019 is provided in **Table 11.** This Table provides a breakdown of the monthly flow provided to the distribution system.

Flow meters were calibrated on June18, 2019 by Corix/Iconix and were found to be acceptable.

Table 11. – Treated Water Flows for Huron Sands Drinking Water System

Date	Average Daily Flow (m^3)	Maximum Daily Flow (m^3)	Total Monthly Flow (m^3)
Jan	-	-	-
Feb	-	-	-
Mar	-	-	-
Apr	7.70	76	177
May	12.13	39	376
Jun	8.37	21	251
Jul	14.10	26	437
Aug	14.81	30	459
Sep	8.00	20	240
Oct	7.42	28	230
Nov	2.33	5	35
Dec	-	-	-
Average	**9.35**		
Max		**76**	
Total			**2205**

5.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE

The following summarizes water system improvements for the Huron Sands Drinking Water System:

- New Sensaphone (Sentinel) online data logger.

6.0 MINISTRY OF THE ENVIRONMENT INSPECTIONS AND REGULATORY ISSUES

The Huron Sands Drinking Water System was inspected by the Ministry of Environment, Conservation and Parks on July 25, 2019 by Matthew Shannon.

There were no non-compliances. The rating was 100%

There were no Instances of adverse water quality:

7.0 MECP Regulatory Changes

It should be noted that there will be some upcoming changes to Ontario Regulation 170/03 and Ontario Regulation 169/03 that strengthen standards and clarify testing requirements as follows:Change noted in Table 6 and 8.

- Strengthen standards for Arsenic, Carbon Tetrachloride, Benzene, and Vinyl Chloride;
- Adopt new standards for Chlorate, Chlorite, 1-Methyl-4-Chlorophenoxyacetic acid (MCPA) and Haloacetic Acids (HAAs); (NOTE: Chlorate and Chlorite testing is only required for Municipal Drinking Water Systems using Chlorine Dioxide treatment equipment.)

- Clarify/optimize testing, sampling and reporting requirements for Trihalomethanes (THMs) and HAAs; and
- Remove 13 pesticides from testing requirements.

The aforementioned amendments will be phased in over the next four years to allow system owners and/or operators the opportunity to collect baseline information and complete required system upgrades. Currently, the new sampling, testing, reporting and re-sampling requirements, and the removal of 13 pesticides came into effect January 1, 2016. As well, testing requirements for HAAs and updates to standards for Carbon Tetrachloride, Benzene, Vinyl Chloride, Chlorate, Chlorite, and MCPA came into effect January 2017. Refer to **Table 12** for the new Regulatory Requirements. Subsequent phase-in dates are:

- January 1, 2018: Updates to standards for Arsenic come into effect / require reporting
- January 1, 2020: New standards for HAAs and HAAs testing optimization rule for smaller systems will come into effect / require reporting.

Table 12 – Regulatory Requirements

Parameter	**Current Requirement**		**Amended Requirement**	
	MAC	**½ MAC**	**MAC**	**½ MAC**
Arsenic	25 µg/L	12.5 µg/L	10 µg/L	5 µg/L
Benzene	5 µg/L	2.5 µg/L	1 µg/L	0.5 µg/L
Carbon Tetrachloride	5 µg/L	2.5 µg/L	2 µg/L	1 µg/L
Vinyl Chloride	2 µg/L	1 µg/L	1 µg/L	0.5 µg/L

Huron Sands Drinking Water System – 2019 Compliance Summary

This document is a compliance summary for the Huron Sands water supply for the year 2018 as per Reg. 170/03 Schedule 22. A full summary of the water system's test results, flows and significant activities was submitted in the Annual Report. The system was in operation between April 10 and November 16, 2019.

System Description

The Huron Sands water system is characterized as a "secure ground water" system and is classified as a small municipally owned water system. The well house and its equipment have a daily maximum capacity to deliver 328.3 cubic meters of potable water per day to the Huron Sands recreational community.

The current water source is a secure deep bedrock well. The production well is located approximately 10 meters south east of the well house.

This production well was drilled in 2001. The piping and well pump were installed in 2002.

The well house is equipped with a well pump, chlorinators, a chlorine contact main and online monitoring.

The attached distribution system is constructed of a combination of PVC piping with polyethylene services.

There is no elevated storage to maintain pressure and the system pressure is maintained using pressure tanks and the well pump.

The system has no hydrants and lacks the capacity to provide fire flows.

Chemicals Fed

Disinfectant

Disinfection was achieved on the Huron Sands well supply through the use of 12% sodium hypochlorite.
In the well house this chemical was added prior to the water entering the chlorine contact reservoir at dosages high enough to achieve both primary and secondary disinfection objectives.
The chlorine dosages ranged from 2.41 mg/L to 32.52 mg/L, varying with the chlorine demand of the raw water.
The free chlorine residual was monitored at the point of entry to the distribution system with a target residual of 1.20 mg/L.

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Iron Sequestering

The well water at Huron Sands has iron levels higher than what is considered aesthetically acceptable. The well house provides chemically assisted iron sequestering. The chemical used in 2019 was sodium silicate. This chemical was fed prior to the chlorine contact main.
A full summary of dosages and chemical used can be found in the of the Annual Report sent February 27, 2019.

Flows

The Huron Sands well supply has a PTTW (permit to take water) #2571-8GQQ4X which allows 328.3 cubic meters per day to be pumped from the well. This permit was issued on June 3, 2011 and expires on June 1, 2021. This limit was not exceeded in 2019. The system was prepared for start-up April 10, 2019. The system was shut down for the season on November 16, 2019. A full summary of the 2019 flows was submitted in the attached Annual Report.

The Drinking Water Works Permit (DWWP) #080-206 for the Huron Sands Drinking Water System was issued on August 26, 2015. The maximum total daily flow is 328.3 cubic meters per day and the maximum instantaneous flow is 3.8 liters per second.

The maximum daily flow in 2019 was 76 cubic meters or 23.14% of the allowable limit.
The 2019 average daily flow was 9.35 cubic meters or 2.8% of the allowable limit.

The limiting factor regarding flow is chlorine contact time in the chlorine contact main. In order to meet the regulatory CT requirements increased flows beyond 3.8 liters per second must have an increased free chlorine residual to counter the decreased retention time in the chlorine contact main.

The combination of maximum flows through the chlorine contact main and minimum free chlorine residuals exiting the contact main did not exceed limitations in 2019 as recorded by the flow meter and the on-line chlorine analyzer.

Precautionary Boil Water Notices

There were no Precautionary Boil Water Notices (PBWN) placed on the Huron Sands system in 2019, except upon the start-up date on April 9, 2019 until the release on April 12, 2019.

Boil Water Advisory

There were no Boil Water Advisories issued by the Huron County Health Unit (HCHU) on the Huron Sands water system in 2019.

Annual Ontario Ministry of the Environment Inspection

The Huron Sands Drinking Water System was inspected by the Ministry of the Environment, Conservation and Parks (MECP) on July 25, 2019. There were no non-compliances and the rating was 100%.

Adverse Water Quality Incidents

There were no instances of adverse water quality.

Exceedances

Fluoride

O. Reg. 169/03 the Ontario Drinking Water Standard has a MAC (maximum allowable concentration) of 1.5 mg/L for fluoride.
The water from the Huron Sands well is monitored every 5 years for fluoride. It has naturally occurring levels that can exceed 1.5 mg/L.
As required by O. Reg. 170/03 schedule 13 section 13.9 an AWQI (adverse water quality indicator) is filed every 60 months. This was done on August 22, 2017 both samples are above the MAC. This is due to high levels of the naturally occurring fluoride. The next sample is due in August 2022.

August 22, 2017 – 2.13 mg/L
August 25, 2017 – 2.19 mg/L

Sodium

O. Reg. 169/03 the Ontario Drinking Water Standard has a MAC (maximum allowable concentration) of 20 mg/L for sodium.
The water from the Huron Sands well is monitored every 5 years for sodium. It has naturally occurring levels that can exceed 20 mg/L.
As required by O. Reg. 170/03 schedule 13 section 13.9 an AWQI (adverse water quality indicator) is filed every 60 months. This was last reported to the MECP on June 21, 2016 and the result was 18.2 mg/L, which is within compliance. The next sample is due in June 2021.

Infrastructure Assessment

Regular contact is maintained with ACW's representative. The JobsPlus program is continually updated with preventative and corrective maintenance issues. A complete summary can be forwarded to the client upon their request. Through regular communication between the operating authority and the client, capital items are discussed. A list of capital items and concerns for 2019 was forwarded to ACW's representative in October 2019.

The annual Management Review was conducted by the operating authority on May 9, 2019 as per the DWQMS requirement in Element 14. These regular discussions between the client and the operating authority for this water system are continued throughout the year by emails, phone calls, and meetings as per the requirements of Element 15 of the DWQMS.

The last Internal Audit was completed on May 13, 2019 and the last Risk Assessment was completed December 19, 2017. An external surveillance was conducted by SAI GLOBAL on August 27, 2019. An Emergency Response Exercise was conducted as a follow-up response to a water main break that happened in Goderich on May 23, 2019, where several utilities were involved. An "After Action Report" was submitted to the utilities involved following the tabletop incident review.

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Lakeshore
Annual and Summary Report

For the 2019 Operating Year

PREPARED BY:

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Resourcing the world

Table of Contents

1.0 EXECUTIVE SUMMARY

The purpose of this report is to provide information to system Owners and Stakeholders to satisfy the regulatory requirements of the following:

- *Safe Drinking Water Act (SDWA)*
- Drinking Water Quality Management Standard (DWQMS)
- Section 81 of the Clean Water Act (CWA)
- Reporting required under Ontario Regulation (O. Reg.) 170/03, Section 11
- Reporting required under O. Reg. 170/03, Schedule 22

The Operating Authority (Veolia), on behalf of the Owner (Township of Huron-Kinloss), has prepared this report as a compilation of information that demonstrates the ongoing provision of a safe, consistent supply of high quality drinking water to customers supplied by the Lakeshore Drinking Water System.

SAFE DRINKING WATER ACT

Following the Walkerton Tragedy in 2000, the Ontario Government developed a new, comprehensive legislative paradigm based on a source-to-tap, multi-barrier approach to the protection of drinking water. The *Safe Drinking Water Act (SDWA)*, 2002, and its Regulations, contain requirements for Municipalities that provide potable water to their residents.

Under Section 19 (Standard of Care of the *SDWA*), Owners of a Drinking Water System are required to:

a) exercise the level of care, diligence and skill in respect of a Municipal Drinking Water System that a reasonably prudent person would be expected to exercise in a similar situation; and
b) act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the Municipal Drinking Water System.
2002, c. 32, s. 19(1).

The following chart outlines key aspects of the *SDWA* that relate to the Lakeshore Drinking Water System:

Legislative Framework for the Lakeshore Drinking Water System

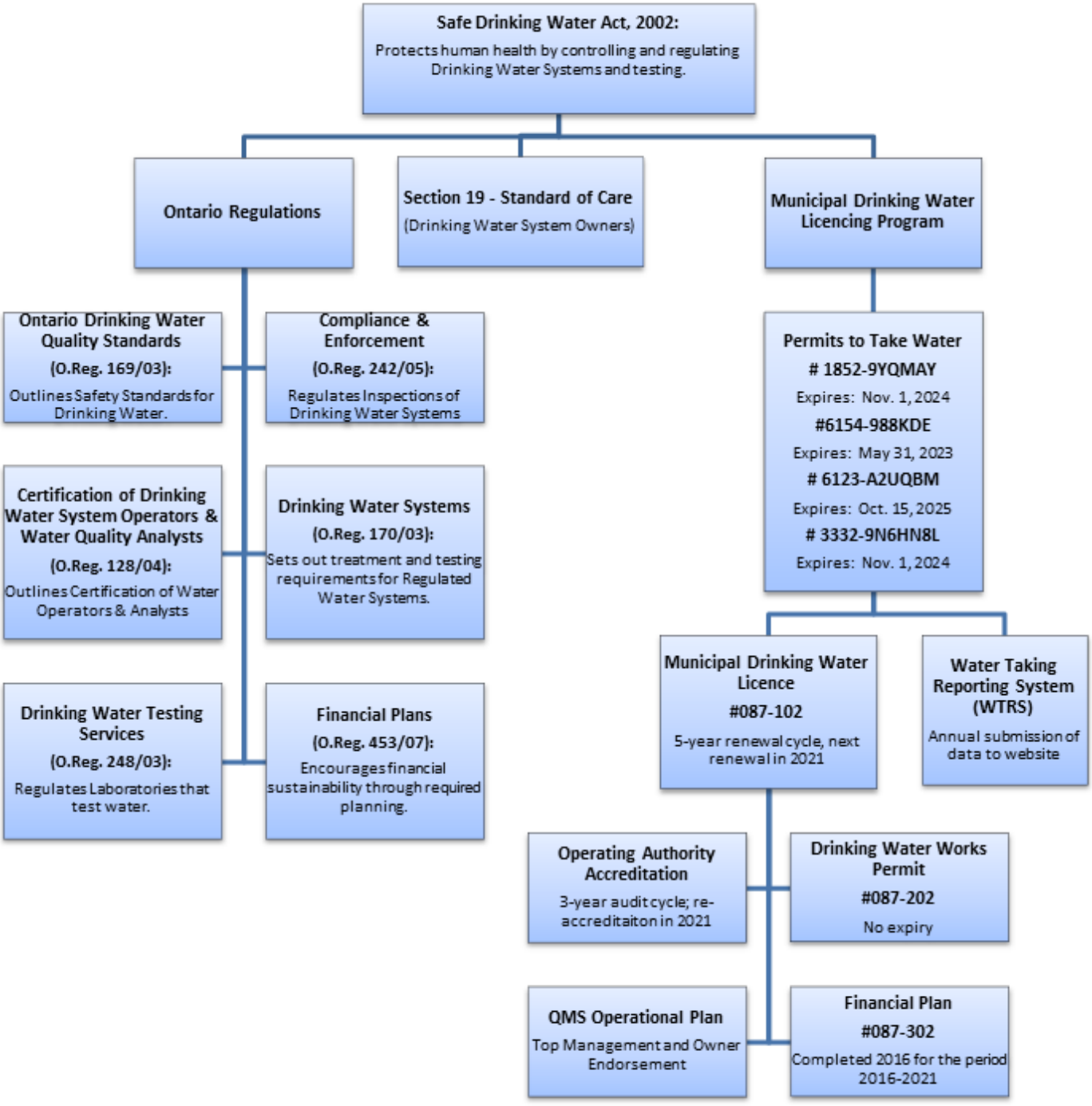

Figure 1

2.0 REPORTING REQUIREMENTS:

This report intends to provide relevant information to help the Township of Huron-Kinloss, its Council, as Owners of the Lakeshore Drinking Water System, meet the Standard of Care. Its contents are organized as follows, according to specific reporting requirements under the *SDWA*:

O. REG. 170/03, SECTION 11 - ANNUAL REPORT

- The Owner shall ensure an annual report is prepared as per O. Reg. 170/03, s. 11(1)
- The Owner of a Drinking Water System (DWS) that supplies water to another DWS shall provide a copy of the annual report to the system that receives the water
- The annual report must cover the period of January 1 to December 31 in a year and must be prepared not later than February 28 of the following year
- The annual report must:
    - Contain a brief description of the DWS, including a list of water treatment chemicals used
    - Summarize any reports made to the Ministry under s.s. 18(1) of the *Act*, or Sch. 16 (16-4)
    - Summarize the results of tests made under O. Reg. 170/03 and the Municipal Drinking Water Licence (MDWL)
    - Describe any corrective actions taken under Sch. 17
    - Describe any major expenses to install, repair or replace required equipment
    - Include a statement of where a report prepared as per Sch. 22 will be available for inspection under s.s. 12(4)
    - Specify the number of points sampled as per s.s. 15.1-4(2) or s.s. 15.1-5(5), the number of samples taken, and the number of points where a sample exceeded the prescribed standard for lead
- The Owner shall ensure that a copy of an annual report for a system is given, without charge, to every person who requests a copy
- If a DWS is connected to and receives all of its drinking water from another DWS, the Owner of the system that receives the water shall ensure that a copy of an annual report for the DWS that supplies water is given, without charge, to every person who requests a copy
- Every time that an annual report is prepared for a DWS, the Owner of the system shall ensure that effective steps are taken to advise users of water from the system that copies of the report are available, without charge, and of how a copy may be obtained

O. REG. 170/03, SCHEDULE 22 - SUMMARY REPORT FOR MUNICIPALITIES

- The Owner of a DWS shall ensure that, not later than March 31 of each year, a report is prepared as per s.s. (2) and (3) for the preceding year and is given to:
    - in the case of a DWS owned by a Municipality, the members of the Municipal Council;
    - in the case of a DWS owned by a Municipal Service Board established under s. 195 of the *Municipal Act, 2001*, the members of the Municipal Service Board; or
    - in the case of a DWS owned by a Corporation, the Board of Directors of the Corporation

- The summary report must,
    - list the requirements of the *Act*, the Regulations, the system's approval, Drinking Water Works Permit (DWWP), MDWL, and any Orders applicable to the system that were not met at any time during the period covered by the report; and
    - for each requirement referred to above that was not met, specify the duration of the failure and the measures that were taken to correct the failure.
- The summary report must also include the following information for the purpose of enabling the Owner of the DWS to assess the capability of the system to meet existing and planned uses of the system:
    - A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows;
    - A comparison of the summary referred to above to the rated capacity and flow rates approved in the system's approval, DWWP or MDWL, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5(4), to the flow rates specified in the written agreement.
- If a report is prepared under s.s. (1) for a system that supplies water to a Municipality under the terms of the contract, the Owner of the DWS shall give a copy of the report to the Municipality by March 31.

MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP) INSPECTION REPORT

- In 2006, the MECP introduced a comprehensive inspection program for Municipal Residential Drinking Water Systems. The objectives of this program are to determine compliance with the *SDWA* and associated regulations; to encourage the continuous improvement of the Drinking Water System; and to establish a process to measure these improvements.

MUNICIPAL DRINKING WATER MANAGEMENT REVIEW

- The *SDWA*, through Municipal Drinking Water System Licensing Program, requires that the Township maintain an accredited Quality Management System (QMS) for its drinking water system. This review communicates to Council the key information related to the QMS and the Municipal Drinking Water Licencing Program.

QMS OPERATIONAL PLAN

- The *SDWA*, through the Municipal Drinking Water Licensing Program, requires that a Municipal Drinking Water System Owner (Council) endorse the most current version of the QMS Operational Plan. This document, once endorsed, is posted on the Township of Huron-Kinloss website and is available at the Operations Centre.

The Township of Huron-Kinloss is approved by the MECP to operate a Class 3 Distribution and Supply System through its MDWL # 087-102, and to alter the system through it DWWP # 087-202.

The MECP "Municipal Drinking Water Systems" web portal provides the most current version of the *Act* and its regulations and can be found:

https://www.ontario.ca/page/municipal-drinking-water-systems-licencing-registration-and-permits

3.0 DESCRIPTION OF WATER SYSTEM (O. Reg. 170/03, s. 11 (6) (a))

A summary of the Lakeshore Drinking Water System description is outlined below:

Drinking Water System Number:	220000425
Drinking Water System Name:	Lakeshore Well Water Distribution and Supply
Drinking Water System Owner:	Corporation of the Township of Huron-Kinloss
Drinking Water System Category:	Large Municipal Residential
Drinking Water System Classification:	Water Distribution and Supply Subsystem Class 3
Drinking Water System Certificate No.:	1808
Daily Maximum Water Supply Capacity:	11,636.26 m^3
Disinfection Chemicals:	Sodium Hypochlorite, 12%
Iron Sequestering Chemicals:	Sodium Silicate (N), undiluted
Population (as per Engineer's Design notes):	3,200
Total Number of Service Connections:	2,324
Estimated Seasonal Population:	6,042 (based on Census data of 2.6 persons per household)
Average Day Demand:	1,812.01 m^3
Peak Day Demand:	3,876.29 m^3 (July 14, 2019)
Average Capacity:	15.57%
Peak Capacity:	33.31% (July 14, 2019)
Distribution Network:	64 km
Fire Hydrants:	198
Blow-offs:	43

The Lakeshore Drinking Water Distribution and Supply Subsystem (LDWDSS) is characterized as a "secure groundwater system". It consists of four sub-systems (well supplies), that deliver potable water to the Huron-Kinloss Lakeshore Community, extending from Point Clark in the south, to Huronville in the north, and to the Courtney/Amberley Beach subdivision in the Township of Ashfield-Colborne-Wawanosh. The Township of Huron-Kinloss has an agreement with The Township of Ashfield-Colborne-Wawanosh, where the Courtney/Amberley Beach Subdivision is treated as part of the Lakeshore Drinking Water System.

The four sub-systems are: Point Clark, Blairs Grove, Huronville South, and Murdoch Glen. All of these sites are located within the Township of Huron-Kinloss along Lake Huron. All sites are controlled, monitored, and alarmed through a Supervisory Control and Data Acquisition (SCADA) system which is connected to the main controller, autodialer, and server at the Ripley Municipal Office. The desktop computer used by the system's operators is located at the Ripley Township Shed and is connected remotely to the SCADA server. As a redundancy, each site is also equipped with an auto-dialer that is independent of the SCADA system, and is used to call out alarms in the event of communications/SCADA failure. This SCADA system provides the operator with the ability to monitor current operating status of the supply and treatment equipment throughout the water system at any given time via remote access by computer or Smartphone, and to have control over operations.

The Township of Huron-Kinloss also has an agreement with the Municipality of Kincardine, where Kincardine is the Operating Authority for a small area of Huron-Kinloss known as the Huronville Subdivision Distribution System (Plan M28). This subdivision received all their water from the Municipality of Kincardine Water System. There is an interconnecting valve between the LDWDSS and Huronville Subdivision Distribution System, and the Town of Kincardine. This valve is normally closed and is used for emergency purposes only.

The four well supplies are detailed as follows:

Site: Point Clark - 603 Tuscarora Road

- Water Source: Groundwater, Non-GUDI
- Number of Production Wells: 2 (Well # 2 - 1994; Well # 3 - 2015)
- Depth of Wells: 75.6 m; 82.3 m
- Well Pumps: 15 hp each (submersible)
- Disinfection: Sodium hypochlorite (12%)
- CT Requirement: 2-log, 5ºC, baffled reservoir (0.5 BF)
- Iron Sequestering: Sodium silicate (undiluted)
- High Lift Pumps: 2 (25 hp each)
- Reservoir: 65 m^3
- Permit To Take Water: 1852-9YQMAY, expires November 1, 2024

Site: Blairs Grove - 28 Cathcart Street

- Water Source: Groundwater, Non-GUDI
- Number of Production Wells: 1 (1982, flowing artesian)
- Depth of Well: 69.5 m
- Well Pump: 10 hp (submersible)
- Disinfection: Sodium hypochlorite (12%)
- CT Requirement: 2-log, 5ºC, baffled reservoir (0.5 BF)
- Iron Sequestering: Sodium silicate (undiluted)
- High Lift Pump: 1 (30 hp)
- Reservoir: 83 m^3
- Permit To Take Water: 6154-988KDE, expires May 31, 2023

Site: Murdoch Glen - 815 Parkplace

- Water Source: Groundwater, Non-GUDI
- Number of Production Wells: 1 (1992)
- Depth of Well: 80.5 m
- Well Pump: 25 hp (submersible)
- Disinfection: Sodium hypochlorite (12%)
- CT Requirement: 2-log, 5ºC, contact watermain (BF 1.0)
- Iron Sequestering: Sodium silicate (undiluted)
- High Lift Pumps: 4 total; 2 (15 hp each), 2 (50 hp each)
- Reservoir: 400 m^3
- Standby Power: 130 kW Diesel Generator (1,100 L fuel storage)
- Permit To Take Water: 6123-A2UQBM, expires October 15, 2025

Site: Huronville South - 39 Penetangore Row South

- Water Source: Groundwater, Non-GUDI
- Number of Production Wells: 1 (1994)
- Depth of Well: 93.3 m
- Well Pump: 30 hp (submersible, soft-start)
- Disinfection: Sodium hypochlorite (12%)
- CT Requirement: 2-log, 5ºC, baffled reservoir (BF 0.5)
- Iron Sequestering: Sodium silicate (undiluted)
- High Lift Pumps: 2 (30 hp each)
- Reservoir: 65 m^3
- Permit To Take Water: 3332-9N6H8L, expires November 1, 2024

The LDWDSS currently (December 2019) has a distribution network with a combination of PVC and polyethylene water mains, in sizes varying between 1-inch and 10-inch diameter. The Lakeshore area has a large seasonal population of potentially 6,042 (based on Census data of 2.6 people per household connection x 2,324 connections), and therefore, the demands are significantly higher during the cottage season.

All the Lakeshore wells are secure, deep bedrock wells that penetrate limestone aquifers. Due to the depth and structure of the aquifers, the water temperature is relatively constant (< 10ºC), turbidity is low, and the water is relatively hard. The raw water is also relatively **high in naturally-occurring sodium, fluoride and iron**, but the lead content of the raw water is well below the half-MAC (Maximum Allowable Concentration). Iron sequestering is achieved by means of treating the water with sodium silicate. Sequestering does not remove iron, but instead it prevents the dissolved iron from precipitating. When iron is precipitated, it can lead to stained plumbing fixtures and appear as discolouration in the water. Sodium silicate can leave a slight metallic taste in the water. Those who are supplied from the LDWDSS are made aware of the various concentrations in their drinking water by numerous means of communication from the Township of Huron-Kinloss.

A 130 kW diesel generator, located at the Murdoch Glen pumphouse, includes a 1,100 L capacity fuel storage tank and is used for emergency power supply. A standpipe is situated in the Point Clark area at 3405 Concession 2, and is constructed of bolted steel (1996). The 31 m (102 ft) high and 9.45 m (31 ft) diameter standpipe has an effective storage of approximately 1,500 m^3 to supply the entire Lakeshore System in emergency situations. Periodic inspections of the standpipe (exterior and interior) are conducted. In 2017, the standpipe was isolated, drained, cleaned, and had some minor repairs. After repairs, it was disinfected, flushed, sampled, and put back into service.

4.0 SUMMARY OF REPORTS MADE TO THE MINISTRY (O. Reg. 170/03, s. 11 (6) (b))

- There was one Adverse Water Quality Incident (AWQI #149181) in the LDWDSS: 1 Total Coliform was detected in the distribution system on December 5, 2019. Resamples were collected and they were all free of any microbiological contamination.

5.0 SUMMARY OF WATER QUALITY MONITORING (O. Reg. 170/03, s. 11 (6) (c))

The purpose of sampling and testing is to confirm that water is safe for human consumption and to provide a comprehensive track record.

Table 1 - Monitoring Requirements:

Parameter	Description	Required # of Samples	Requirement Source
Chlorine Residual (grab)	For monitoring amount of residual in system, and confirming of water quality following maintenance	365/year (1 daily)	O. Reg. 170/03, Sch. 7
Chlorine Residual (continuous monitoring)	Continuous monitoring equipment used to sample and test treated water at the location where intended contact time has been completed	5 minute intervals, minimum	O. Reg. 170/03, Sch. 7
E. Coli (EC) **Total Coliform (TC)** **Heterotrophic Plate Count (HPC)**	For testing presence of microbiological activity	168/year (Dist) 260/year (Raw) 208/year (Treated)	O. Reg. 170/03, Sch. 10
Trihalomethanes (THMs)	For testing presence of disinfection by-products (DBPs)	4/year (quarterly)	O. Reg. 170/03, Sch. 13, s. 13-6
Lead (Pb)	For testing presence of lead in the distribution system only - not private side	reduced sampling in effect for 2019	O. Reg. 170/03, Sch. 15; MDWL #087-102, Sch. D
Haloacetic Acids (HAAs)	For monitoring the formation of disinfection by-products (DBPs)	4/year (quarterly)	O. Reg. 170/03, Sch. 13, s. 13-6.1
Nitrate and Nitrite	For testing presence of nitrates and nitrites in the treated water at Point-of-Entry	4/year (quarterly)	O. Reg. 170/03, Sch. 13, s. 13-7
Sodium	For testing presence of sodium in the treated water at Point-of-Entry	60 month interval	O. Reg. 170/03, Sch. 13, s. 13-8
Fluoride	For testing presence of fluoride in the treated water at Point-of-Entry	60 month interval	O. Reg. 170/03, Sch. 13, s. 13-9

COMMUNICATIONS WHEN ADVERSE WATER SAMPLES ARE IDENTIFIED

Requirement - Laboratory

A water sample that does not meet Provincial water quality standards is considered “adverse”. When adverse water quality is detected, the accredited laboratory conducting the testing will immediately notify the Operating Authority, the Spills Action Centre (SAC), and the office of Grey Bruce Health Services, and occasionally the office of Huron-Perth Public Health (as necessary, if applicable). This notification is made by telephone through live communication to a person in authority. In addition to the phone calls, a fax of the sample results is sent to these agencies to verify the live communication made earlier.

Requirement - Drinking Water System Owner/Operating Authority

The *SDWA* also requires the Drinking Water System Owner/Operating Authority to immediately notify the MECP and the Grey Bruce Health Services office and the Huron-Perth Public Health office (if applicable), that the laboratory notice has been received and that "corrective actions" are being initiated. The method of contact is by telephone to a person of authority. The Operating Authority also faxes Form 2A - Notices of Adverse Test Results and Issue Resolution (Schedule 16) within 24 hours to both agencies first to verify previous live communication. Once the issue has been resolved and to confirm that corrective actions have been completed, the Operating Authority also faxes Form 2B - Notices of Adverse Test Results and Issue Resolution (Schedule 16) within 7 days to the agencies. This reporting system provides assurance that the DWS Owner is complying with the applicable regulations and that appropriate corrective actions are being taken and are being reported.

5.1 Water Treatment Equipment Operation and Monitoring

5.1.1 Treated Water (Point of Entry) Free Chlorine Residuals (Grab Samples)

In 2019, a total of 1,457 treated water grab samples were collected and analyzed for free chlorine residual at the point of entry (POE) using a Hach pocket chlorine colorimeter. **Table 2** shows the grab samples monthly average of free chlorine residual values. **Table 3** shows the on-line continuous samples monthly average (as collected by SCADA) of the free chlorine residual values.

5.1.2 Distribution Free Chlorine Residuals (Grab Samples)

In 2019, a total of 688 distribution residuals were collected: 365 daily grab residuals and an additional 323 weekly grab residuals were taken in conjunction with the required weekly microbiological sampling. A summary of all the residuals collected is presented in **Table 2**.

Table 2 - Average Treated and Distribution Free Chlorine Residuals (Grab Samples)

Month	Blairs Grove	Huronville South	Murdoch Glen	Point Clark	Distribution
Jan	1.37	1.54	1.56	1.52	1.32
Feb	1.34	1.50	1.56	1.55	1.32
Mar	1.43	1.56	1.60	1.59	1.36
Apr	1.27	1.50	1.60	1.48	1.31
May	1.34	1.55	1.53	1.57	1.40
Jun	1.34	1.55	1.49	1.58	1.42
Jul	1.45	1.53	1.54	1.52	1.37
Aug	1.50	1.67	1.70	1.58	1.45
Sep	1.38	1.56	1.66	1.66	1.43
Oct	1.28	1.54	1.54	1.68	1.39
Nov	1.46	1.65	1.61	1.63	1.40
Dec	1.40	1.63	1.65	1.62	1.41
CT Requirement	**0.22**	**0.40**	**0.26**	**0.32**	**0.20**
Annual Min	0.54	1.33	1.42	0.95	0.50
Annual Max	2.20	1.94	1.81	1.88	1.90
Annual Avg	1.38	1.57	1.59	1.58	1.38
# Samples	365	365	365	365	688

Table 3 - Average Treated Free Chlorine Residuals (On-Line Continuous from SCADA)

Month	Blairs Grove	Huronville South	Murdoch Glen	Point Clark
Jan	1.41	1.54	1.56	1.54
Feb	1.38	1.51	1.57	1.55
Mar	1.46	1.55	1.61	1.60
Apr	1.32	1.49	1.59	1.47
May	1.33	1.52	1.53	1.56
Jun	1.34	1.51	1.49	1.56
Jul	1.44	1.52	1.54	1.54
Aug	1.54	1.66	1.70	1.58
Sep	1.40	1.53	1.67	1.67
Oct	1.35	1.53	1.55	1.70
Nov	1.46	1.65	1.63	1.62
Dec	1.43	1.61	1.68	1.65
CT Requirement	**0.22**	**0.40**	**0.26**	**0.32**
Annual Min	0.72	1.10	0.77	0.85
Annual Max	3.49	2.00	2.00	2.48
Annual Avg	1.41	1.55	1.59	1.59

5.1.3 Raw and Treated Water Turbidity

Raw water and treated water grab samples were collected and analyzed for turbidity using a portable turbidity analyzer. **Table 4** provides a summary of raw water turbidity results and **Table 5** provides a summary of treated water turbidity results.

Table 4 - Raw Water Turbidity Results

Month	Blairs Grove	Huronville South	Murdoch Glen	Point Clark W2	Point Clark W3
Jan	1.49	0.17	0.14	0.16	0.18
Feb	0.87	0.13	0.10	0.18	0.21
Mar	0.18	0.11	0.15	0.17	0.18
Apr	0.64	0.06	0.20	0.15	0.13
May	2.78	0.89	0.21	0.17	0.13
Jun	1.99	0.17	0.56	0.53	0.44
Jul	0.27	0.15	0.17	0.11	0.13
Aug	0.37	0.14	0.20	0.19	0.16
Sep	0.91	0.16	0.19	0.19	0.15
Oct	0.93	0.18	0.19	0.20	0.17
Nov	0.87	0.15	0.17	0.15	0.16
Dec	0.89	0.21	0.16	0.22	0.19
Annual Min	0.18	0.06	0.10	0.11	0.11
Annual Max	2.78	0.89	0.56	0.53	0.44
Annual Avg	1.02	0.21	0.20	0.20	0.19
# Samples	13	13	13	13	13

Table 5 - Treated Water Turbidity Results

Month	Blairs Grove	Huronville South	Murdoch Glen	Point Clark
Jan	0.17	0.10	0.16	0.28
Feb	0.14	0.21	0.15	0.22
Mar	0.96	0.15	0.18	0.26
Apr	0.24	0.14	0.15	0.24
May	1.22	0.15	0.38	0.15
Jun	1.02	0.13	0.21	0.13
Jul	0.73	0.14	0.27	0.15
Aug	0.79	0.12	0.21	0.18
Sep	0.58	0.21	0.30	0.21
Oct	0.31	0.13	0.21	0.21
Nov	0.27	0.21	0.23	0.14
Dec	0.34	0.17	0.19	0.21
Annual Min	0.14	0.10	0.15	0.13
Annual Max	1.22	0.21	0.43	0.28
Annual Avg	0.56	0.16	0.22	0.20
# Samples	13	13	13	13

5.2 Microbiological Sampling per Schedule 10, O. Reg. 170/03

5.2.1 Raw Water Samples

Raw water samples are collected every week. In 2019, a total of 265 samples were collected and analyzed for E. Coli and Total Coliform. **Table 6** provides a summary of microbiological results performed on the raw water.

Table 6 - Microbiological Results for Raw Water

Month	Total Coliform			E. Coli		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1
Jan	25	25	0	25	25	0
Feb	20	20	0	20	20	0
Mar	20	20	0	20	20	0
Apr	25	25	0	25	25	0
May	20	20	0	20	20	0
Jun	20	20	0	20	20	0
Jul	25	25	0	25	25	0
Aug	20	20	0	20	20	0
Sep	20	20	0	20	20	0
Oct	25	25	0	25	25	0
Nov	20	20	0	20	20	0
Dec	25	25	0	25	25	0
TOTAL	**265**	**265**	**0**	**265**	**265**	**0**

5.2.2 Treated Water (Point of Entry) Samples

One (1) treated water sample from each point of entry is taken every week and analyzed for E. Coli, Total Coliform, and Heterotrophic Plate Count (HPC). In 2019, a total of 212 treated water samples were collected and analyzed for the above parameters. Each EC and TC result from the treated water was 0 cfu/100 mL. The range of HPC results were 0 - 9 cfu/100 mL. **Table 7** provides a summary of all microbiological results performed on treated water.

Table 7 - Microbiological Results for Treated Water (Point of Entry)

Month	Total Coliform			E. Coli			HPC		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1
Jan	20	20	0	20	20	0	20	15	5
Feb	16	16	0	16	16	0	16	10	6
Mar	16	16	0	16	16	0	16	14	2
Apr	20	20	0	20	20	0	20	17	3
May	16	16	0	16	16	0	16	11	5
Jun	16	16	0	16	16	0	16	12	4
Jul	20	20	0	20	20	0	20	13	7
Aug	16	16	0	16	16	0	16	12	4
Sep	16	16	0	16	16	0	16	13	3
Oct	20	20	0	20	20	0	20	11	9
Nov	16	16	0	16	16	0	16	13	3
Dec	20	20	0	20	20	0	20	14	6
TOTAL	**212**	**212**	**0**	**212**	**212**	**0**	**212**	**155**	**57**

5.2.3 Distribution Samples

Distribution samples are collected every week and tested for E. Coli, Total Coliform, and 25% of the samples are also analyzed for Heterotrophic Plate Count (HPC). Ontario Regulation 170/03 requires 8 distribution samples plus one additional sample for every 1,000 people served by the system. In 2019, a total of 373 distribution samples were collected and analyzed for TC and EC, which is above the required number of samples (n=168, based on 6,042 potential residents). A total of 212 distribution samples were analyzed for HPC (n=42, 25% of 168). Each E. Coli result from the treated water was 0 cfu/100 mL. The range of HPC results were 0 - 12 cfu/100 mL. **Table 8** provides a summary of all microbiological samples taken in the distribution system.

Table 8 - Microbiological Results for Distribution System

Month	Total Coliform			E. Coli			HPC		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples 1 - 12
Jan	35	35	0	35	35	0	20	13	7
Feb	28	28	0	28	28	0	16	11	5
Mar	28	28	0	28	28	0	16	10	6
Apr	35	35	0	35	35	0	20	19	1
May	28	28	0	28	28	0	16	9	7
Jun	28	28	0	28	28	0	16	10	6
Jul	35	35	0	35	35	0	20	10	10
Aug	28	28	0	28	28	0	16	9	7
Sep	28	28	0	28	28	0	16	8	8
Oct	35	35	0	35	35	0	20	18	2
Nov	28	28	0	28	28	0	16	12	4
Dec	37	36	**1**	37	37	0	20	14	6
TOTAL	**373**	**372**	**1**	**373**	**373**	**0**	**212**	**143**	**69**

Note: On December 3, 2019, one distribution sample had a result of 1 Total Coliform. It was reported to the Grey Bruce Health Unit and the Ministry's Spills Action Center (AWQI # 149181). Resamples collected as per O. Reg. 170/03, Schedule 17-6 were all clear of TCs.

5.3 Chemical Sampling and Testing as per Schedule 13, O. Reg. 170/03

5.3.1 Inorganics (Schedule 13, s. 13-2; Schedule 23)

Treated water samples are collected every 36 months and analyzed for inorganics. The most recent samples for the Lakeshore Drinking Water System were collected on June 4, 2018 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23 (see **Table 9**). All parameters were found to be within compliance, however, the Arsenic level at Point Clark exceeded the Half-Maximum Allowable Concentration (half-MAC). Any half-MAC exceedance must be sampled on a quarterly basis to comply with O. Reg. 170/03, Schedule 13-5(1) - Increased frequency under s.s 13-2 and 13-4.

NON-COMPLIANCE: In 2019, the frequency of the Arsenic sampling was not in-line with the normal quarterly sampling, so it was not collected within the 60 - 120 days for two of the samples (167 days and 59 days, respectively). The sampling frequency is now in-line with the normal quarterly sampling. **Table 22** (Section 7.1 - Regulatory Changes, Arsenic Results) provides a summary of the increased Arsenic sampling.

Inorganics will be sampled and analyzed again in June 2021.

Table 9 - Inorganics (Schedule 13, s. 13-2; Schedule 23) Results

Parameter	Blairs Grove (µg/L)	Huronville South (µg/L)	Murdoch Glen (µg/L)	Point Clark (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Antimony	0.03	0.02<MDL	0.02	0.03	6	No
Arsenic	0.4	0.4	1.6	**5.6**	10	No
Barium	4.65	24.6	27.1	26.3	1000	No
Boron	155	170	154	78	5000	No
Cadmium	0.004	0.003<MDL	0.018	0.003<MDL	5	No
Chromium	0.57	0.09	0.57	0.08	50	No
Mercury	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	1	No
Selenium	0.04<MDL	0.04<MDL	0.04<MDL	0.04<MDL	50	No
Uranium	0.359	0.269	1.27	0.437	20	No

*MDL = Laboratory Minimum Detection Limit

5.3.2 Organics (Schedule 13, s. 13-4; Schedule 24)

Treated water samples are collected every 36 months and tested for Schedule 24 organic parameters. The most recent samples were collected on June 4, 2018. All parameters were found to be within compliance. Organics will be sampled and analyzed again in June 2021. Samples results can be found in **Table 10**.

Table 10 - Organics (Schedule 13, s. 13-4; Schedule 24) Results

Parameter	Blairs Grove (µg/L)	Huronville South (µg/L)	Murdoch Glen (µg/L)	Point Clark (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Benzene	0.32<MDL	0.32<MDL	0.32<MDL	0.32<MDL	1	No
Carbon Tetrachloride	0.16<MDL	0.16<MDL	0.16<MDL	0.16<MDL	2	No
1,2-Dichlorobenzene	0.41<MDL	0.41<MDL	0.41<MDL	0.41<MDL	200	No
1,4-Dichlorobenzene	0.36<MDL	0.36<MDL	0.36<MDL	0.36<MDL	5	No
1,1-Dichloroethylene	0.33<MDL	0.33<MDL	0.33<MDL	0.33<MDL	14	No
1,2-Dichloroethane	0.35<MDL	0.35<MDL	0.35<MDL	0.35<MDL	5	No
Dichloromethane	0.35<MDL	0.35<MDL	0.35<MDL	0.35<MDL	50	No
Monochlorobenzene	0.3<MDL	0.3<MDL	0.3<MDL	0.3<MDL	80	No
Tetrachloroethylene	0.35MDL	0.35MDL	0.35MDL	0.35MDL	10	No
Trichloroethylene	0.44<MDL	0.44<MDL	0.44<MDL	0.44<MDL	5	No
Vinyl Chloride	0.17<MDL	0.17<MDL	0.17<MDL	0.17<MDL	1	No
Diquat	1<MDL	1<MDL	1<MDL	1<MDL	70	No
Paraquat	1<MDL	1<MDL	1<MDL	1<MDL	10	No
Glyphosate	1<MDL	1<MDL	1<MDL	1<MDL	280	No
Polychlorinated Biphenyls	0.04<MDL	0.04<MDL	0.04<MDL	0.04<MDL	3	No

*MDL = Laboratory Minimum Detection Limit

Table 10 - Organics (Schedule 13, s. 13-4; Schedule 24) Results - Continued

Parameter	Blairs Grove (µg/L)	Huronville South (µg/L)	Murdoch Glen (µg/L)	Point Clark (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Benzo(a)pyrene	0.004<MDL	0.004<MDL	0.004<MDL	0.004<MDL	0.01	No
Alachlor	0.02<MDL	0.02<MDL	0.02<MDL	0.02<MDL	5	No
Atrazine+N-dealkylated metabolites	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	5	No
Atrazine	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	--	No
Desethyl Atrazine	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	--	No
Azinphos-methyl	0.05<MDL	0.05<MDL	0.05<MDL	0.05<MDL	20	No
Carbaryl	0.05<MDL	0.05<MDL	0.05<MDL	0.05<MDL	90	No
Carbofuran	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	90	No
Chlorpyrifos	0.02<MDL	0.02<MDL	0.02<MDL	0.02<MDL	90	No
Diazinon	0.02<MDL	0.02<MDL	0.02<MDL	0.02<MDL	20	No
Dimethoate	0.03<MDL	0.03<MDL	0.03<MDL	0.03<MDL	20	No
Diuron	0.03<MDL	0.03<MDL	0.03<MDL	0.03<MDL	150	No
Malathion	0.02<MDL	0.02<MDL	0.02<MDL	0.02<MDL	190	No
Metolachlor	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	50	No
Metribuzin	0.02<MDL	0.02<MDL	0.02<MDL	0.02<MDL	80	No
Phorate	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	2	No
Prometryne	0.03<MDL	0.03<MDL	0.03<MDL	0.03<MDL	1	No
Simazine	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	10	No
Terbufos	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	1	No
Triallate	0.01<MDL	0.01<MDL	0.01<MDL	0.01<MDL	230	No
Trifluralin	0.02<MDL	0.02<MDL	0.02<MDL	0.02<MDL	45	No
2,4-Dichlorophenoxyacetic acid	0.19<MDL	0.19<MDL	0.19<MDL	0.19<MDL	100	No
Bromoxynil	0.33<MDL	0.33<MDL	0.33<MDL	0.33<MDL	5	No
Dicamba	0.20<MDL	0.20<MDL	0.20<MDL	0.20<MDL	120	No
Diclofop-methyl	0.40<MDL	0.40<MDL	0.40<MDL	0.40<MDL	9	No
MCPA	0.00012<MDL	0.00012<MDL	0.00012<MDL	0.00012<MDL	0.1	No
Picloram	1<MDL	1<MDL	1<MDL	1<MDL	190	No
2,4-Dichlorophenol	0.15<MDL	0.15<MDL	0.15<MDL	0.15<MDL	900	No
2,4,6-Trichlorophenol	0.25<MDL	0.25<MDL	0.25<MDL	0.25<MDL	5	No
2,3,4,6-Tetrachlorophenol	0.20<MDL	0.20<MDL	0.20<MDL	0.20<MDL	100	No
Pentachlorophenol	0.15<MDL	0.15<MDL	0.15<MDL	0.15<MDL	60	No

*MDL = Laboratory Minimum Detection Limit

5.3.3 Trihalomethanes (Schedule 13, s. 13-6)

Distribution samples are taken every three months from representative points in the distribution system and tested for Trihalomethanes (THMs). In 2019, samples were collected during the months of February, May, August, and November. The Ontario Drinking Water Quality Standards (ODWQS) have set a Maximum Allowable Concentration (MAC) of 100 µg/L for this parameter and it is expressed as a running annual average (RAA). In 2019, the average THM was found to be 12.36 µg/L, which is within compliance. Refer to **Table 11** for the summary of Trihalomethane results and **Table 13** for the RAA. In 2020, samples will be collected in February, May, August, and November.

Table 11 - Trihalomethane (Schedule 13, s. 13-6) Results

BLAIRS GROVE

Month	THMs (µg/L)	Bromodichloro methane (µg/L)	Bromoform (µg/L)	Chloroform (µg/L)	Dibromochloro methane (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	8.1	2.8	<0.34	3.3	2.2	100	No
May	8.4	2.8	<0.34	3.7	2.0	100	No
Aug	9.4	3.3	0.48	2.7	3.0	100	No
Nov	23.0	7.4	0.51	11.0	4.1	100	No
Average	12.2	4.1	0.42	5.2	2.8		
Maximum	23.0	7.4	0.51	11.0	4.1		

HURONVILLE SOUTH

Month	THMs (µg/L)	Bromodichloro methane (µg/L)	Bromoform (µg/L)	Chloroform (µg/L)	Dibromochloro methane (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	9.5	3.3	<0.34	3.8	2.4	100	No
May	7.1	2.2	<0.34	3.2	1.7	100	No
Aug	5.2	1.6	<0.34	2.4	1.3	100	No
Nov	14.0	4.8	0.42	5.4	3.4	100	No
Average	9.0	3.0	0.36	3.7	2.2		
Maximum	14.0	4.8	0.42	5.4	3.4		

Table 11 - Trihalomethane (Schedule 13, s. 13-6) Results Continued

MURDOCH GLEN

Month	THMs (µg/L)	Bromodichloromethane (µg/L)	Bromoform (µg/L)	Chloroform (µg/L)	Dibromochloromethane (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	15.0	5.2	0.92	4.2	4.5	100	No
May	11.0	3.8	0.69	3.3	3.3	100	No
Aug	14.0	4.7	0.73	4.1	4.2	100	No
Nov	17.0	5.9	0.94	5.0	4.9	100	No
Average	14.3	4.9	0.82	4.2	4.2		
Maximum	17.0	5.9	0.94	5.0	4.9		

POINT CLARK

Month	THMs (µg/L)	Bromodichloromethane (µg/L)	Bromoform (µg/L)	Chloroform (µg/L)	Dibromochloromethane (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	28.0	4.3	<0.34	22.0	1.8	100	No
May	14.0	4.6	0.37	6.1	2.8	100	No
Aug	4.6	1.6	<0.34	1.9	1.2	100	No
Nov	9.5	3.4	<0.34	3.9	2.2	100	No
Average	14.0	3.5	0.35	8.5	2.0		
Maximum	28.0	4.6	0.37	22.0	2.8		

5.3.4 Haloacetic Acids (Schedule 13, s. 13-6.1)

Ontario Regulation 170/03 has been amended to include quarterly testing for Haloacetic Acids (HAAs). Four (4) distribution samples are taken every three months from representative points in the distribution system and tested for Haloacetic Acids (HAAs). In 2019, samples were collected during the months of February, May, August, and November and results are expressed as a running annual average (RAA). Results are summarized in **Table 12** and the RAA can be found in **Table 13**.

Table 12 - Haloacetic Acid (Schedule 13, s. 13-6.1) Results

BLAIRS GROVE

Month	Total HAAs (µg/L)	Bromo acetic acid (µg/L)	Chloro acetic acid (µg/L)	Dichloro acetic acid (µg/L)	Dibromo acetic acid (µg/L)	Trichloro acetic acid (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
May	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Aug	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Nov	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Avg	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		
Max	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		

HURONVILLE SOUTH

Month	Total HAAs (µg/L)	Bromo acetic acid (µg/L)	Chloro acetic acid (µg/L)	Dichloro acetic acid (µg/L)	Dibromo acetic acid (µg/L)	Trichloro acetic acid (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
May	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Aug	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Nov	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Avg	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		
Max	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		

MURDOCH GLEN

Month	Total HAAs (µg/L)	Bromo acetic acid (µg/L)	Chloro acetic acid (µg/L)	Dichloro acetic acid (µg/L)	Dibromo acetic acid (µg/L)	Trichloro acetic acid (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
May	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Aug	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Nov	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Avg	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		
Max	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		

Table 12 - Haloacetic Acid (Schedule 13, s. 13-6.1) Results - Continued

POINT CLARK

Month	Total HAAs (µg/L)	Bromo acetic acid (µg/L)	Chloro acetic acid (µg/L)	Dichloro acetic acid (µg/L)	Dibromo acetic acid (µg/L)	Trichloro acetic acid (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
May	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Aug	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Nov	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Avg	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		
Max	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		

Table 13 - THMs and HAAs - Rolling Annual Average Summary

Location	Sample Date	RAA - THMs (µg/L)	RAA - HAAs (µg/L)
BLAIRS GROVE	Feb	8.1	<5.3
	May	8.4	<5.3
	Aug	9.4	<5.3
	Nov	23.0	<5.3
HURONVILLE SOUTH	Feb	9.5	<5.3
	May	7.1	<5.3
	Aug	5.2	<5.3
	Nov	14.0	<5.3
MURDOCH GLEN	Feb	15.0	<5.3
	May	11.0	<5.3
	Aug	14.0	<5.3
	Nov	17.0	<5.3
POINT CLARK	Feb	28.0	<5.3
	May	14.0	<5.3
	Aug	4.6	<5.3
	Nov	9.5	<5.3
Average		12.36	<5.3
MAC		100 (RAA)	80 (RAA)

5.3.5 Nitrate and Nitrite (Schedule 12, s. 13-7)

Four treated water samples are taken every three months and tested for nitrate and nitrite. In 2019, samples were collected during the months of February, May, August, and December. The Ontario Drinking Water Quality Standards (ODWQS) have set a Maximum Allowable Concentration (MAC) of 10 mg/L for nitrates and 1 mg/L for nitrites. The results were found to be within compliance. Refer to **Table 14**. In 2020, samples will be collected in February, May, August, and November.

Table 14 - Nitrate and Nitrite (Schedule 13, s. 13-7) Results

BLAIRS GROVE

Month	Nitrite (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Nitrate (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Feb	<0.003	1	No	<0.006	10	No
May	<0.003	1	No	<0.006	10	No
Aug	<0.003	1	No	<0.006	10	No
Nov	<0.003	1	No	<0.006	10	No
Average	<0.003			<0.006		
Maximum	<0.003			<0.006		

HURONVILLE SOUTH

Month	Nitrite (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Nitrate (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Feb	<0.003	1	No	<0.006	10	No
May	<0.003	1	No	<0.006	10	No
Aug	<0.003	1	No	<0.006	10	No
Nov	<0.003	1	No	<0.006	10	No
Average	<0.003			<0.006		
Maximum	<0.003			<0.006		

MURDOCH GLEN

Month	Nitrite (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Nitrate (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Feb	<0.003	1	No	<0.006	10	No
May	<0.003	1	No	<0.006	10	No
Aug	<0.003	1	No	<0.006	10	No
Nov	<0.003	1	No	<0.006	10	No
Average	<0.003			<0.006		
Maximum	<0.003			<0.006		

Table 14 - Nitrate and Nitrite (Schedule 13, s. 13-7) Results - Continued

POINT CLARK

Month	Nitrite (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Nitrate (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Feb	<0.003	1	No	<0.006	10	No
May	<0.003	1	No	<0.006	10	No
Aug	<0.003	1	No	<0.006	10	No
Nov	<0.003	1	No	<0.006	10	No
Average	<0.003			<0.006		
Maximum	<0.003			<0.006		

5.3.6 Sodium (Schedule 13, s. 13-8)

One (1) water sample is collected from each of the four (4) Points of Entry (treated water) every 60 months and analyzed for Sodium. The *Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, PIBS 4449e01, June 2006*, states: "The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets." These samples were collected on June 21, 2016. Three (3) of the samples exceeded 20 mg/L and were reported to the Grey Bruce Health Unit and the Ministry's Spills Action Centre (AWQI # 129989). Results can be found in **Table 15**. The next sampling date for Sodium will be on or before June 21, 2021.

5.3.7 Fluoride (Schedule 13, s. 13-9)

One (1) water sample is collected from each of the four (4) Points of Entry (treated water) every 60 months and analyzed for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a Maximum Allowable Concentration (MAC) of 1.5 mg/L. On August 15, 2017, samples were collected for this analysis. All four samples exceeded the MAC due to naturally occurring fluoride in the aquifers. These exceedances were reported to the Grey Bruce Health Unit and the Ministry's Spills Action Centre (AWQI # 135640). The results are summarized in **Table 15**. The next sampling date for Fluoride will be on or before August 15, 2022.

Table 15 - Sodium (Schedule 13, s. 13-8) and Fluoride (Schedule 13, s. 13-9) Results

Location	Sodium			Fluoride		
	Result (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Result (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Blairs Grove	101	20	Yes	2.20	1.5	Yes
Huronville South	52.7	20	Yes	2.24	1.5	Yes
Murdoch Glen	68.4	20	Yes	2.14	1.5	Yes
Point Clark	19.8	20	No	2.20	1.5	Yes

5.3.8 Lead (Schedule 15.1) - (O. Reg. 170/03, s. 11 (6) (g)

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken during two seasons: once between December 15 and April 15, and once between June 15 and October 15. The Lakeshore Drinking Water System is currently under a reduced sampling program for lead where lead, pH and alkalinity are sampled in each season every 36 months (3 years). In the interim, pH and alkalinity are tested during each sampling season. Three (3) pH and alkalinity samples were collected on February 5, 2019 and three (3) pH and alkalinity samples were collected on July 15, 2019. These parameters are required to be sampled and analyzed again between the months of December 2019 and April 2020, and again between June and October 2020. Lead samples are required next in the 2020 sampling season. Results for 2019 can be found in **Table 16**.

Table 16 - Lead Sampling Program (Schedule 15.1) Results

Season	Alkalinity (mg/L)	pH	Lead (mg/L)	Maximum Allowable Concentration - Lead (mg/L)	Exceedance
Dec-Apr	184 191 198	7.94 7.76 7.76	Not required in 2019	0.010	n/a
Jun-Oct	177 185 186	7.34 7.39 7.39	Not required in 2019	0.010	n/a

5.3.9 Non-Regulatory Testing - Aesthetic Objectives and Operational Guidelines (AO/OG)

Samples were collected from each of the four (4) Points of Entry (treated water) on November 21, 2016 and tested for parameters listed in the *MOECC Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, June 2006, PIBS 4449e01*. These results are included in **Table 17** for information purposes.

Table 17 - Aesthetic Objectives and Operational Guideline Results

Parameter	AO/OG	Blairs Grove	Huronville South	Murdoch Glen	Point Clark
pH	6.5 - 8.5	7.89	8.10	8.17	8.07
Alkalinity (mg/L as $CaCO_3$)	30 - 500	174	156	171	190
Conductivity (µS/cm)	---	1,720	694	771	709
Colour (TCU)	5	3 <MDL	3 <MDL	3 <MDL	7
Total Dissolved Solids (mg/L)	500	1,350	494	511	534
Organic Nitrogen (mg/L)	0.15	0.05 <MDL	0.05 <MDL	0.05 <MDL	0.05 <MDL
Total Kjeldahl Nitrogen (mg/L)	---	0.05 <MDL	0.07	0.05 <MDL	0.05 <MDL
Ammonia + Ammonium (mg/L)	---	0.04 <MDL	0.04	0.07	0.05
Hydrogen Sulphide (mg/L)	0.05	<0.006	<0.006	<0.006	<0.006
Sulphide (mg/L)	0.05	0.006 <MDL	0.006 <MDL	0.006 <MDL	0.006 <MDL
Chloride (mg/L)	250	150	18	37	13
Sulphate (mg/L)	500	620	170	170	170

*MDL = Laboratory Minimum Detection Limit

Table 17 - Aesthetic Objectives and Operational Guideline Results - Continued

Parameter	AO/OG	Blairs Grove	Huronville South	Murdoch Glen	Point Clark
Hardness (mg/L as $CaCO_3$)	80 - 100	765	237	246	308
Aluminum (µg/L)	100	25.5	1.0	2.8	3.3
Copper (µg/L)	1000	0.08	0.12	5.80	0.22
Iron (µg/L)	300	581	150	102	311
Manganese (µg/L)	50	3.70	2.02	3.07	4.11
Zinc (µg/L)	5000	2	4	20	4
Dissolved Organic Carbon (mg/L)	5	1 <MDL	1 <MDL	1 <MDL	1 <MDL
Methane (L/m³)	3	0.02 <MDL	0.02 <MDL	0.02 <MDL	0.02 <MDL
Ethylbenzene (µg/L)	2.4	0.33 <MDL	0.33 <MDL	0.33 <MDL	0.33 <MDL
Toluene (µg/L)	24	0.36 <MDL	0.36 <MDL	0.36 <MDL	0.36 <MDL
Xylene (µg/L)	300	0.43 <MDL	0.43 <MDL	0.43 <MDL	0.43 <MDL
m/p-xylene (µg/L)	---	0.43 <MDL	0.43 <MDL	0.43 <MDL	0.43 <MDL
o-xylene (µg/L)	---	0.17 <MDL	0.17 <MDL	0.17 <MDL	0.17 <MDL

6.0 WATER AND CHEMICAL USE (O. Reg. 170/03, s. 11 (6) (a); Schedule 22-2 (3))

6.1 Chemical Usage (O. Reg. 170/03, s. 11 (6) (a))

In 2019, the total amount of 12% sodium hypochlorite (NaOCl) used to treat the water supplied by the five wells in the Lakeshore Drinking Water System is tabulated in **Table 18** with the average chlorine dosage. During the same period, the total amount of undiluted sodium silicate (Na_2SiO_3) for iron sequestering is tabulated in **Table 19** with the average silicate dosage.

Table 18 - Sodium Hypochlorite Usage

Month	BLAIRS GROVE		HURONVILLE SOUTH		MURDOCH GLEN		POINT CLARK	
	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)
Jan	1.40	4.52	30.70	3.09	7.99	3.27	87.18	2.99
Feb	0.56	4.71	29.15	3.13	9.25	3.31	77.65	2.89
Mar	10.37	3.89	28.31	3.09	11.49	3.24	78.91	2.78
Apr	0.98	6.25	30.13	3.21	21.02	3.44	90.54	2.98
May	0.42	5.26	42.61	3.23	9.11	3.33	131.47	3.13
Jun	0.84	5.10	60.83	3.27	9.39	3.45	126.00	3.17
Jul	22.43	4.00	107.36	3.36	19.48	3.65	175.20	3.36
Aug	24.67	3.98	108.62	3.45	21.58	3.58	167.49	3.17
Sep	5.61	3.94	75.83	3.27	10.93	3.67	130.07	3.28
Oct	1.96	10.61	48.64	3.39	7.01	3.79	122.92	3.45
Nov	8.69	3.66	35.88	3.71	7.57	3.73	102.74	3.34
Dec	0.56	7.99	34.34	3.45	5.75	3.76	108.90	3.23
TOTAL	78.49		632.40		140.58		1,399.08	
Average		5.31		3.30		3.52		3.15

Sodium Hypochlorite Grand Total Usage: **2,250.55 kg**
Sodium Hypochlorite Average Dosage: **3.82 mg/L**

Table 19 - Sodium Silicate Usage

Month	BLAIRS GROVE		HURONVILLE SOUTH		MURDOCH GLEN		POINT CLARK	
	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)
Jan	1.20	3.86	13.16	1.32	11.56	4.73	70.17	2.41
Feb	0.80	6.70	12.76	1.37	13.16	4.71	70.97	2.64
Mar	13.95	5.23	13.16	1.44	15.55	4.38	68.17	2.40
Apr	1.99	12.70	13.56	1.44	27.51	4.51	74.55	2.45
May	0.00	0.00	16.35	1.24	11.96	4.37	99.27	2.36
Jun	0.40	2.42	23.92	1.29	13.95	5.13	96.48	2.43
Jul	28.71	5.12	66.98	2.10	23.92	4.48	134.36	2.58
Aug	31.10	5.02	72.96	2.32	26.71	4.43	134.76	2.55
Sep	6.78	4.77	41.06	1.77	13.56	4.55	94.89	2.39
Oct	1.99	10.78	21.13	1.47	8.37	4.53	93.29	2.62
Nov	9.57	4.03	18.34	1.89	9.57	4.72	78.14	2.54
Dec	1.20	16.61	21.53	2.16	6.38	4.17	89.70	2.66
TOTAL	97.68		334.89		182.20		1,104.75	
Average		6.43		1.65		4.56		2.50

Sodium Silicate Grand Total Usage: **1,719.52 kg**
Sodium Silicate Average Dosage: **3.79 mg/L**

6.2 Summary of Flow Rates, Annual Volumes and Capacities (O. Reg. 170/03, Schedule 22-2 (3))

A summary of the water supplied to the distribution system in 2019 from each well supply is provided in **Table 20**. The volumes reported for each well supply are taken from the SCADA continuous monitoring system. The flow meters were calibrated on the following dates:

Blairs Grove:	Raw water flow meter	June 28, 2019
Huronville South:	Treated water flow meter	June 18, 2019
Murdoch Glen:	Raw water flow meter	June 28, 2019
Murdoch Glen:	Treated water flow meter - Zone 2	June 18, 2019
Murdoch Glen:	Treated water flow meter - Zone 3	June 18, 2019
Point Clark:	Raw water flow meter	October 2, 2019

Table 20 - Flow Rates, Annual Volumes, and Capacities

BLAIRS GROVE

Month	Raw Flow Daily Max (L/s)	Raw Flow Monthly Avg (L/s)	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	27.92	17.80	300.22	151.61	9.68	5.78
Feb	27.81	16.14	119.18	24.43	4.26	0.93
Mar	28.26	23.49	2,664.34	1,199.86	85.95	45.78
Apr	27.70	17.75	174.05	23.00	5.80	0.88
May	28.11	13.09	63.27	27.35	2.04	1.04
Jun	28.19	21.76	159.49	42.26	5.32	1.61
Jul	27.87	22.38	5,588.17	580.71	180.26	22.16
Aug	27.83	20.75	6,473.46	769.00	208.82	29.34
Sep	28.75	23.10	1,122.78	648.58	37.43	24.75
Oct	29.46	14.25	184.54	66.43	5.95	2.53
Nov	30.06	26.53	2,397.99	665.32	79.93	25.38
Dec	29.17	26.43	73.13	14.38	2.36	0.55
PTTW Max	**30.33**	**30.33**	**79,722.08**	**2,621.00**	---	---
Annual Max	30.06	---	6,473.46	1,199.86	---	45.78%
Annual Avg	---	20.29	1,610.05	---	52.32	2.02%
Annual Total	---	---	**19,320.62**		---	---

HURONVILLE SOUTH

Month	Raw Flow Daily Max (L/s)	Raw Flow Monthly Avg (L/s)	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	10.95	3.64	9,753.32	346.04	314.62	8.81
Feb	20.27	3.97	9,150.23	458.83	326.79	11.68
Mar	8.08	3.41	9,118.73	338.67	294.15	8.62
Apr	23.28	3.56	9,100.08	464.06	303.34	11.81
May	23.95	4.91	13,159.98	564.40	424.52	14.37
Jun	23.30	7.38	19,113.50	961.61	637.12	24.48
Jul	23.45	11.21	29,877.64	1,360.73	963.79	34.64
Aug	18.64	9.31	24,438.48	1,036.69	788.34	26.39
Sep	18.75	6.65	17,162.54	893.68	572.08	22.75
Oct	18.34	3.71	9,938.15	447.45	320.59	11.39
Nov	19.28	2.28	5,847.49	349.79	194.92	8.91
Dec	6.39	2.17	5,798.50	215.68	187.05	5.49
PTTW Max	**45.47**	**45.47**	**119,468.76**	**3,927.74**	---	---
Annual Max	23.95	---	29,877.64	1,360.73	---	34.64%
Annual Avg	---	5.18	13,538.22	---	443.94	11.30%
Annual Total	---	---	**162,458.64**	---	---	---

Table 20 - Flow Rates, Annual Volumes and Capacities Continued

MURDOCH GLEN

Month	Raw Flow Daily Max (L/s)	Raw Flow Monthly Avg (L/s)	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	19.26	18.29	2,417.49	128.71	77.98	7.10
Feb	19.28	18.23	2,809.30	297.86	100.33	16.42
Mar	19.29	18.22	3,709.75	289.12	119.67	15.94
Apr	19.24	18.30	5,897.61	332.34	198.59	18.32
May	19.23	18.22	2,724.00	208.55	87.87	11.50
Jun	19.18	17.98	2,716.98	134.03	90.57	7.39
Jul	19.08	17.78	5,332.58	695.32	172.02	38.33
Aug	19.15	17.59	5,870.43	460.07	198.10	25.36
Sep	19.05	17.43	2,860.69	223.86	95.36	12.34
Oct	19.15	17.47	1,845.09	118.26	59.52	6.52
Nov	20.01	17.73	2,128.13	288.52	70.94	15.91
Dec	19.79	17.98	1,538.41	72.29	49.63	3.99
PTTW Max	**21.0**	**21.0**	**55,188.00**	**1814.40**	**---**	**---**
Annual Max	20.01	---	5,897.61	695.32	---	38.33%
Annual Avg	---	17.94	3,320.87	---	110.05	6.07%
Annual Total	---	---	**39,850.46**	---	---	---

POINT CLARK

Month	Raw Flow Daily Max (L/s)	Raw Flow Monthly Avg (L/s)	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	33.56	20.20	29,206.31	1,093.82	942.14	33.42
Feb	34.44	19.29	25,738.93	1,120.48	952.79	34.23
Mar	34.26	19.73	28,700.57	1,206.93	925.82	36.87
Apr	36.00	20.72	30,591.93	1,207.00	1,019.73	36.88
May	33.05	20.81	41,649.43	1,606.58	1,343.53	49.08
Jun	35.96	20.78	40,578.05	1,871.34	1,352.60	57.17
Jul	33.60	21.01	51,427.91	1,908.85	1,658.96	58.32
Aug	32.10	20.97	53,370.31	1,886.55	1,721.62	57.64
Sep	31.84	20.50	38,640.93	1,858.38	1,288.03	56.78
Oct	31.46	20.37	36,224.60	1,440.63	1,168.54	44.01
Nov	31.70	18.17	30,154.26	1,375.96	1,005.14	42.04
Dec	31.01	20.40	33,471.92	1,480.79	1,079.74	45.24
PTTW Max	**37.88**	**37.88**	**99,557.40**	**3,273.12**	**---**	**---**
Annual Max	36.00	---	53,370.31	1,908.85	---	58.32%
Annual Avg	---	20.25	36,646.26	---	1,204.89	36.81%
Annual Total	---	---	**439,755.15**	---	---	---

6.3 System Capacity (O. Reg. 170/03, Schedule 22-2 (3) Continued)

The following is a comparison of the of the annual volumes to the rated capacity and flow rates approved in the systems' PTTW, DWWP and MDWL. The total system capacity represents the percentage capacity of the sum of all the water produced in relation to the total system volume permitted. A summary of the totals for all the well supplies is presented in Table 21. The visual representations of each well and the Lakeshore total capacity are presented in Figures 2 through 6.

Table 21 - Total Volumes of All Well Supplies

Location (Well Supply)	Total Volume for 2019 (m^3)
Blairs Grove	19,320.62
Huronville South	162,458.64
Murdoch Glen	39,850.46
Point Clark	439,755.15
Total Rated Capacity, PTTW (m^3)	**4,247,234.90**
Grand Total (all well supplies), Actual (m^3)	**661,384.87**
Overall Operating Capacity, Actual %	15.57%

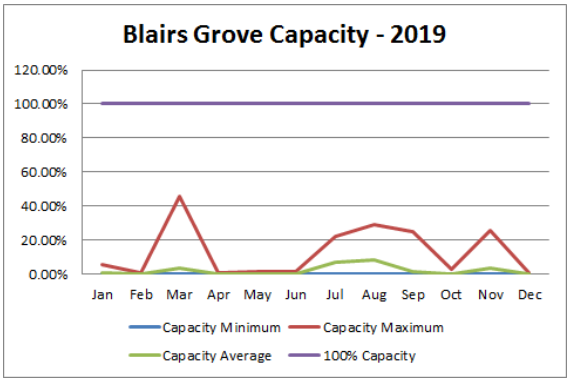

Figure 2

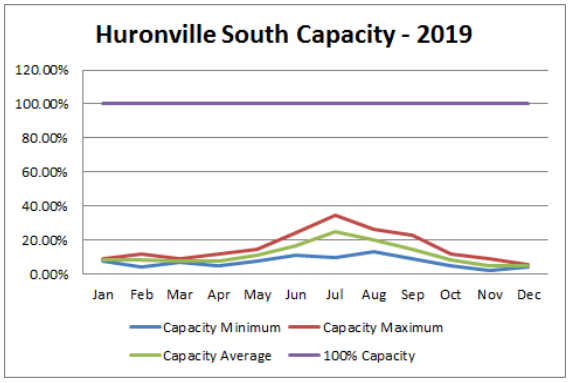

Figure 3

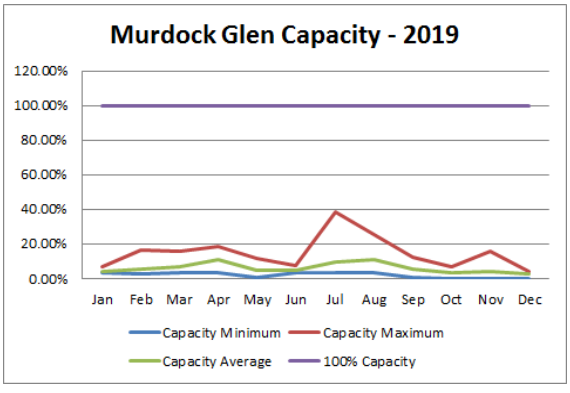

Figure 4

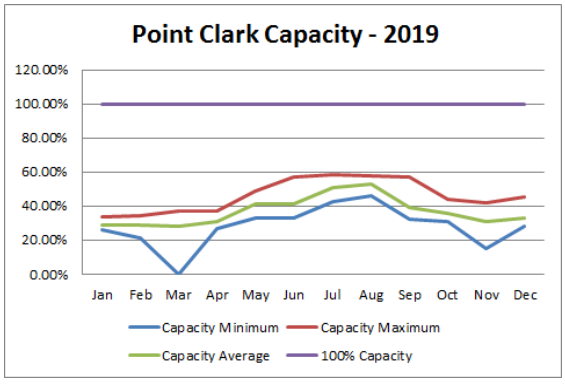

Figure 5

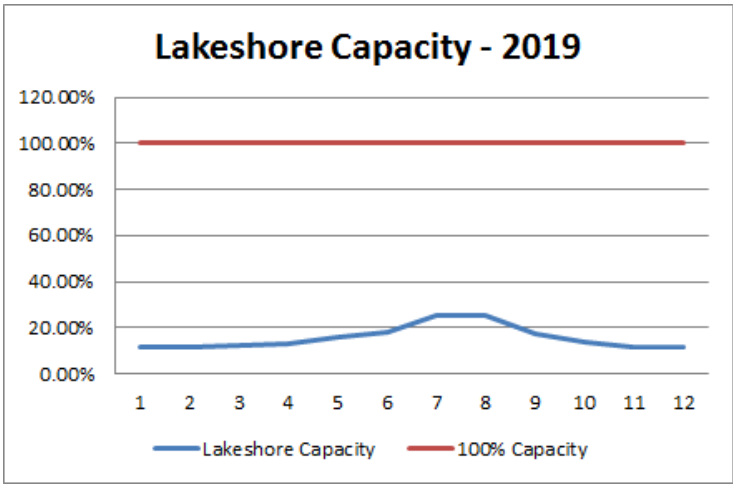

Figure 6

7.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE (s. 11 (6) (e))

The following summarizes water system improvements and routine and preventative maintenance for the Lakeshore Drinking Water System Supply:

All Sites:

Routine and preventative maintenance performed as per Jobs Plus schedule.
Flow meter calibrations completed.
Georgian Bay Fire and Safety inspections completed.
Semi-annual flushing and annual valve turning completed.

Blairs Grove:

July: Two (2) water quality complaints were received related to the aesthetic deficiencies from the Blairs Grove supply (i.e. excessive hardness, high iron, sodium, and mineral content). Blairs Grove has been supplying Zone 1 to supplement the higher summer demands.

August: Three (3) water quality complaints were received related to the aesthetic deficiencies from the Blairs Grove supply. The summer demands in Zone 1 are excessive.

October: SCADA upgrades have been completed.

Huronville South:

January: Power factor correction capacitors were by-passed due to a burnt terminal strip.
February: New sensor installed on the chlorine analyzer.
August: High lift pump 2 overload was tripped due to a power interruption.
September: High lift pump 2 overload was tripped due to a power interruption.

Murdoch Glen:

August: Eramosa submitted the Process Control Narrative for the SCADA upgrades at Murdoch Glen for operator review and comment.
October: HuronTel installed new fibre optic lines to upgrade the site communications.
November: SCADA upgrades have been completed.
HuronTel installed a new phone line.

Point Clark:

February: Bristol hardware failure in the instrument control panel. Site was altered to continue running until SCADA upgrades can be completed.
March: Hydro issues resulted in a burnt relay on the Well Pump 2 controller and a burnt contactor on the Well Pump 3 controller. Both were replaced.
April: Hydro monitoring equipment was installed by Belwood Electric.
May: Hydro monitoring equipment was removed.
Eramosa submitted the Process Control Narrative for the SCADA upgrades at Blairs Grove for operator review and comment.
August: Excessive summer demands resulted in the Point Clark supply running continuously for 24-hour periods on ten (10) occasions, one of them for four (4) consecutive days.
October: High lift pump 2 failed and was taken off-line.
November: Well pump 2 failed and was replaced with a new well pump. High lift pump 2 was removed and sent out for repair.
December: High lift pump 2 could not be repaired and was replaced.

8.0 MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS INSPECTIONS AND REGULATORY ISSUES (Schedule 22-2 (2))

- MECP Drinking Water Inspection was conducted on November 6, 2019 and awarded a rating of 98.27% (previous rating was 100.00%).
- A list of Capital Items for 2019 was submitted to the Township of Huron-Kinloss on November 1, 2018.
- DWQMS Management Review was conducted on June 6, 2019.
- DWQMS Internal Audit was conducted between May 15 - June 11, 2019.
- DWQMS External Audit (off-site) was conducted on June 14, 2019.
- Emergency Response Exercise was conducted as a follow-up response to a temporary water main break that happened in Goderich on May 23, 2019, where many utilities were involved. An “After Action Report” was submitted to the utilities involved following the tabletop incident review.

9.0 REGULATORY CHANGES

Changes to Ontario Regulation 170/03 and Ontario Regulation 169/03 that strengthen standards and clarify testing requirements, new sampling and testing parameters, reporting and resampling requirements, and the removal of the 13 pesticides came into effect January 1, 2016. Updates to the standards and reporting requirements for Arsenic came into effect January 1, 2018. Over the next year, the following amendment will be added. The subsequent phase-in date is:

- January 1, 2020: New standards for HAAs and HAAs testing optimization rule for smaller systems will come into effect/require reporting.

9.1 Arsenic Sampling

In January 2018, O. Reg. 169/03 - Ontario Drinking Water Quality Standard for Arsenic was changed to 0.010 mg/L from 0.025 mg/L, making the new Half-MAC (Maximum Allowable Concentration) 0.005 mg/L. Point Clark is the only Lakeshore well supply that has an Arsenic level in exceedance of the Half-MAC and therefore must be sampled on a quarterly basis to satisfy O. Reg. 170/03, Schedule 13-5(1) - Increased frequency under s.s 13-2 and 13-4. See Table 22 for Point Clark Arsenic results.

Table 22 - Arsenic Results

Sample Date	Arsenic Concentration (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Oct 2, 2018	5.3	10	No
Mar 19, 2019	5.8	10	No
May 13, 2019	5.6	10	No
Aug 12, 2019	5.6	10	No
Nov 18, 2019	5.0	10	No

NOTE:
O. Reg. 170/03, Schedule 13: Increased frequency under s.s 13-2 and 13-4
13-5. (1) If a test result obtained under section 13-2 or 13-4 for a parameter ***exceeds half of the standard prescribed*** *for the parameter in Schedule 2 to the Ontario Water Quality Standards, the frequency of sampling and testing for that parameter under that section shall be* ***increased*** *so that at least one sample is taken and tested* ***every three months.***

10.0 WELL LEVELS (PTTW)

Each of the four sub-systems have a Permit To Take Water (PTTW), which dictates the capacity that each well is permitted to supply, as well as specific monitoring parameters. In addition to flow, static well levels are taken on a monthly basis to monitor the performance of the aquifer. **Table 23** provides a summary of the static well levels recorded in 2019. It should be noted that four (4) of the wells have static levels that are below grade. One of the wells, Blairs Grove, is a flowing artesian well that has a well level that is above grade and the well level is a calculation based on its corresponding pressure reading.

Table 23 - Static Well Levels (PTTW)

Month	Blairs Grove (above grade, m)	Huronville South (m)	Murdoch Glen (m)	Point Clark Well 2 (m)	Point Clark Well 3 (m)
Jan	1.52	11.58	8.70	8.23	7.62
Feb	1.52	11.28	8.59	8.53	7.62
Mar	2.28	10.67	8.65	7.01	7.62
Apr	2.28	10.06	9.05	7.01	7.32
May	2.74	9.44	8.05	5.79	7.32
Jun	2.74	9.75	8.50	5.48	7.31
Jul	2.39	10.36	8.83	7.01	7.92
Aug	2.46	10.05	9.25	6.10	7.31
Sep	2.10	10.05	9.42	5.48	7.92
Oct	1.94	10.05	9.40	5.79	7.62
Nov	1.90	10.67	9.20	5.79	7.31
Dec	1.90	10.05	9.52	7.01	9.14
Min	1.52	9.44	8.05	5.48	7.31
Max	2.74	11.58	9.52	8.53	9.14
Avg	2.15	10.33	8.93	6.60	7.67

11.0 SOURCE WATER PROTECTION (*Clean Water Act, 2006*)

A Drinking Water Source Protection Assessment (DWSPA) Report was generated for the Saugeen Valley Source Protection Area by the Conservation Authority Source Protection Office. This report identifies vulnerable areas, recharge areas, and potential threats to help protect existing and future sources of drinking water from contamination and overuse. This report can be found on-line at:

http://home.waterprotection.ca/source-protection-plan/assessment-reports/saugeen-valley/

The Well Head Protection Areas (WHPAs) within the Lakeshore Drinking Water System have 4 designations:
WHPA-A: 100 m radius around the well head
WHPA-B: 2-year time-of-travel capture zone
WHPA-C: 5-year time-of-travel capture zone
WHPA-D: 25-year time-of-travel capture zone
The Lakeshore wells are NOT classified as groundwater under direct influence of surface water (GUDI).

The DWSPA report states: "The WHPAs within the Township of Huron-Kinloss vary significantly in their vulnerability to contamination. A large percentage of the total area within the Blairs Grove, Murdoch Glen and Point Clark WHPAs has a low intrinsic vulnerability to contamination. Blairs Grove and Point Clark have low vulnerability in over 94% of their area. Huronville South has a slightly higher vulnerability to contamination and a larger portion of moderate vulnerability." **Table 24** shows a summary of significant drinking water threats within the Lakeshore Drinking Water System.

Table 24 - Lakeshore WHPA: Summary of Significant Drinking Water Threats

WHPA A-D	Number of "are or would be significant" threats				Number of properties with "are or would be significant" threats			
	Chemical	DNAPL	Pathogen	Total	Agricultural	Residential	Others	Total
Blairs Grove	32	0	22	54	0	22	0	22
Huronville South	84*	0	2*	86	0	82	2**	84
Murdoch Glen	12	4	10	26	1	10	0	11
Point Clark	22	4	15	41	0	14	1	15

* One threat of the stated threat count is found in the Municipality of Kincardine.
** One property of the stated property count is found in the Municipality of Kincardine.

In conclusion, as stated in the DWSPA Report: "Based on available data and knowledge on raw water quality, no drinking water quality issues were identified for this water system that would result from ongoing or past activities. Also, no conditions resulting from past activities were identified within the WHPA."

12.0 OBSERVATIONS AND HISTORICAL TRENDS

Raw Water Quality

- Microbiological: There were no positive microbiological test results in 2019.

  10-Year Historical results:

Year	Well Source	Positive microbiological Result
2013	Point Clark Well # 2	1 Total Coliform
2015	Huronville South	4 Total Coliforms
2015	Point Clark Well # 2	1 Total Coliform
2017	Huronville South	1 Total Coliform
2018	Blairs Grove	1 Total Coliform

  Due to the infrequent historical results, there are no concerns at this time.

- Chemical Parameters: There were no exceedances for any of the chemical parameters tested in 2019. Sodium and Fluoride are tested every 60 months and were not required in 2019. These parameters will be sampled again in 2021.

  10-Year Historical results:

Year	Blairs Grove		Huronville South		Murdoch Glen		Point Clark	
	Sodium	Fluoride	Sodium	Fluoride	Sodium	Fluoride	Sodium	Fluoride
2006	98.0	2.01	43.9	2.07	43.7	2.06	17.9	2.12
2011	86.4	1.83	46.6	2.32	49.7	2.15	16.0	2.22
2016	101.0	1.71	52.7	2.19	68.4	2.12	19.8	2.04

12.0 OBSERVATIONS AND HISTORICAL TRENDS - Continued

- Raw Turbidity:

Well Source	4-Year Historical Average (2015 to 2018) (NTU)	2019 Average (NTU)	Comments
Blairs Grove	0.78	1.02	There is a 29.5% increase in raw turbidity based on the 4-year historical average. Turbidity monitoring will be increased in 2020 to acquire a bigger sampling base. Since the average raw turbidity is >1.0 NTU, a well inspection could be warranted.
Huronville South	0.15	0.21	There is a 40.0% increase in raw turbidity based on the 4-year historical average. Turbidity monitoring will be increased in 2020 to acquire a bigger sampling base. Since the raw turbidity is low despite the increase, it is not a concern at this time.
Murdoch Glen	0.21	0.20	The raw turbidity has remained consistent based on the 4-year historical average. There is no concern at this time.
Point Clark Well # 2	0.23	0.20	The raw turbidity has remained consistent based on the 4-year historical average. There is no concern at this time.
Point Clark Well # 3	0.21	0.18	The raw turbidity has remained consistent based on the 4-year historical average. There is no concern at this time.

- Well Levels:

Well Source	4-Year Historical Average (2015 to 2018) (m)	2019 Average (m)	Comments
Blairs Grove	2.43 m above grade	2.15 m above grade	The well level has remained consistent based on the 4-year historical average. There is no concern at this time.
Huronville South	10.47 m below grade	10.33 m below grade	The well level has remained consistent based on the 4-year historical average. There is no concern at this time.
Murdoch Glen	9.18 m below grade	8.93 m below grade	The well level has remained consistent based on the 4-year historical average. There is no concern at this time.
Point Clark Well # 2	6.73 m below grade	6.60 m below grade	The well level has remained consistent based on the 4-year historical average. There is no concern at this time.
Point Clark Well # 3	9.42 m below grade	7.67 m below grade	The well level has remained consistent based on the 4-year historical average. There is no concern at this time.

12.0 OBSERVATIONS AND HISTORICAL TRENDS - Continued

- Well Flows and Pump Performance:

Well Source	4-Year Historical Average (2015 to 2018)	2019 Average	Comments
Blairs Grove	Avg flow: 22.54 L/s Capacity: 3.18%	Avg flow: 20.29 L/s Capacity: 2.02%	Flows are consistent based on the 4-year historical average. The Blairs Grove supply is used infrequently, mostly when the demand is high in Zone 1 (summer). There are no concerns at this time.
Huronville South	Avg flow: 6.17 L/s Capacity: 13.52%	Avg flow: 5.18 L/s Capacity: 11.33%	Flows are consistent based on the 4-year historical average. There are no concerns at this time.
Murdoch Glen	Avg flow: 17.94 L/s Capacity: 5.67%	Avg flow: 17.94 L/s Capacity: 6.02%	Flows are consistent based on the 4-year historical average. There are no concerns at this time.
Point Clark Wells	Avg flow: 19.43 L/s Capacity: 25.66%	Avg flow: 20.25 L/s Capacity: 36.81%	Flows are consistent based on the 4-year historical average, however, the total volumes pumped from 2015 until 2019 have been increasing each year. In 2015, the capacity was 18.63% and has increased by approximately 4% each year, with 2019 being 36.81% capacity. This trend illuminates an increasing demand in Zone 1, due to additional full time residents and/or possible undetected leaks in the distribution system.

7.1.2 (e)

Lucknow

Annual and Summary Report

For the 2019 Operating Year

PREPARED BY:
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Resourcing the world

Table of Contents

1.0 EXECUTIVE SUMMARY

The purpose of this report is to provide information to system Owners and Stakeholders to satisfy the regulatory requirements of the following:

- *Safe Drinking Water Act (SDWA)*
- Drinking Water Quality Management Standard (DWQMS)
- Section 81 of the Clean Water Act (CWA)
- Reporting required under Ontario Regulation (O. Reg.) 170/03, Section 11
- Reporting required under O. Reg. 170/03, Schedule 22

The Operating Authority (Veolia), on behalf of the Owner (Township of Huron-Kinloss), has prepared this report as a compilation of information that demonstrates the ongoing provision of a safe, consistent supply of high quality drinking water to customers supplied by the Lucknow Drinking Water System.

SAFE DRINKING WATER ACT

Following the Walkerton Tragedy in 2000, the Ontario Government developed a new, comprehensive legislative paradigm based on a source-to-tap, multi-barrier approach to the protection of drinking water. The *Safe Drinking Water Act (SDWA)*, 2002, and its Regulations, contain requirements for Municipalities that provide potable water to their residents.

Under Section 19 (Standard of Care of the *SDWA*), Owners of a Drinking Water System are required to:

a) exercise the level of care, diligence and skill in respect of a Municipal Drinking Water System that a reasonably prudent person would be expected to exercise in a similar situation; and
b) act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the Municipal Drinking Water System.
2002, c. 32, s. 19(1).

The following chart outlines key aspects of the *SDWA* that relate to the Lucknow Drinking Water System:

Legislative Framework for the Lucknow Drinking Water System

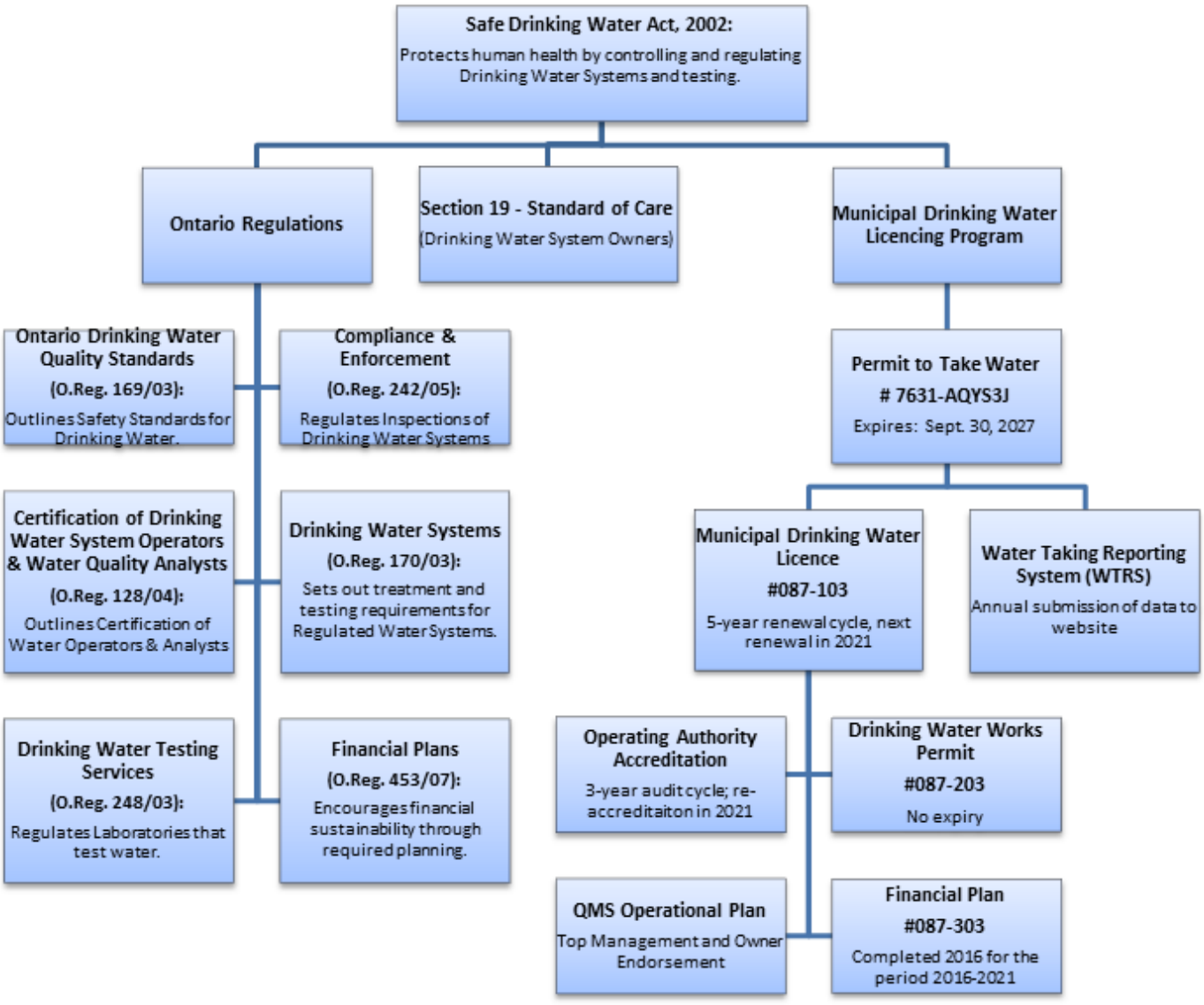


Figure 1

2.0 REPORTING REQUIREMENTS:

This report intends to provide relevant information to help the Township of Huron-Kinloss, its Council, as Owners of the Lucknow Drinking Water System, meet the Standard of Care. Its contents are organized as follows, according to specific reporting requirements under the *SDWA*:

O. REG. 170/03, SECTION 11 - ANNUAL REPORT

- The Owner shall ensure an annual report is prepared as per O. Reg. 170/03, s. 11(1)
- The Owner of a Drinking Water System (DWS) that supplies water to another DWS shall provide a copy of the annual report to the system that receives the water
- The annual report must cover the period of January 1 to December 31 in a year and must be prepared not later than February 28 of the following year
- The annual report must:
    - Contain a brief description of the DWS, including a list of water treatment chemicals used
    - Summarize any reports made to the Ministry under s.s. 18(1) of the *Act*, or Sch. 16 (16-4)
    - Summarize the results of tests made under O. Reg. 170/03 and the Municipal Drinking Water Licence (MDWL)
    - Describe any corrective actions taken under Sch. 17
    - Describe any major expenses to install, repair or replace required equipment
    - Include a statement of where a report prepared as per Sch. 22 will be available for inspection under s.s. 12(4)
    - Specify the number of points sampled as per s.s. 15.1-4(2) or s.s. 15.1-5(5), the number of samples taken, and the number of points where a sample exceeded the prescribed standard for lead
- The Owner shall ensure that a copy of an annual report for a system is given, without charge, to every person who requests a copy
- If a DWS is connected to and receives all of its drinking water from another DWS, the Owner of the system that receives the water shall ensure that a copy of an annual report for the DWS that supplies water is given, without charge, to every person who requests a copy
- Every time that an annual report is prepared for a DWS, the Owner of the system shall ensure that effective steps are taken to advise users of water from the system that copies of the report are available, without charge, and of how a copy may be obtained

O. REG. 170/03, SCHEDULE 22 - SUMMARY REPORT FOR MUNICIPALITIES

- The Owner of a DWS shall ensure that, not later than March 31 of each year, a report is prepared as per s.s. (2) and (3) for the preceding year and is given to:
    - in the case of a DWS owned by a Municipality, the members of the Municipal Council;
    - in the case of a DWS owned by a Municipal Service Board established under s. 195 of the *Municipal Act, 2001*, the members of the Municipal Service Board; or
    - in the case of a DWS owned by a Corporation, the Board of Directors of the Corporation

- The summary report must,
    - list the requirements of the *Act*, the Regulations, the system's approval, Drinking Water Works Permit (DWWP), MDWL, and any Orders applicable to the system that were not met at any time during the period covered by the report; and
    - for each requirement referred to above that was not met, specify the duration of the failure and the measures that were taken to correct the failure.
- The summary report must also include the following information for the purpose of enabling the Owner of the DWS to assess the capability of the system to meet existing and planned uses of the system:
    - A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows;
    - A comparison of the summary referred to above to the rated capacity and flow rates approved in the system's approval, DWWP or MDWL, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5(4), to the flow rates specified in the written agreement.
- If a report is prepared under s.s. (1) for a system that supplies water to a Municipality under the terms of the contract, the Owner of the DWS shall give a copy of the report to the Municipality by March 31.

MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS (MECP) INSPECTION REPORT

- In 2006, the MECP introduced a comprehensive inspection program for Municipal Residential Drinking Water Systems. The objectives of this program are to determine compliance with the *SDWA* and associated regulations; to encourage the continuous improvement of the Drinking Water System; and to establish a process to measure these improvements.

MUNICIPAL DRINKING WATER MANAGEMENT REVIEW

- The *SDWA*, through Municipal Drinking Water System Licensing Program, requires that the Township maintain an accredited Quality Management System (QMS) for its drinking water system. This review communicates to Council the key information related to the QMS and the Municipal Drinking Water Licencing Program.

QMS OPERATIONAL PLAN

- The *SDWA*, through the Municipal Drinking Water Licensing Program, requires that a Municipal Drinking Water System Owner (Council) endorse the most current version of the QMS Operational Plan. This document, once endorsed, is posted on the Township of Huron-Kinloss website and is available at the Operations Centre.

The Township of Huron-Kinloss is approved by the MECP to operate a Class 2 Distribution and Supply Subsystem through its MDWL # 087-103, and to alter the system through it DWWP # 087-203.

The MECP "Municipal Drinking Water Systems" web portal provides the most current version of the *Act* and its regulations and can be found:

https://www.ontario.ca/page/municipal-drinking-water-systems-licencing-registration-and-permits

3.0 DESCRIPTION OF WATER SYSTEM (O. Reg. 170/03, s. 11 (6) (a))

A summary of the Lucknow Drinking Water System description is outlined below:

Drinking Water System Number:	220002663
Drinking Water System Name:	Lucknow Water Distribution and Supply
Drinking Water System Owner:	Corporation of the Township of Huron-Kinloss
Drinking Water System Category:	Large Municipal Residential
Drinking Water System Classification:	Water Distribution and Supply Subsystem Class 2
Drinking Water System Certificate No.:	1381
Daily Maximum Water Supply Capacity:	1,500 m^3
Disinfection Chemicals:	Sodium Hypochlorite, 12%
Population (as per Engineer's Design notes):	1,100
Total Number of Service Connections:	665
Estimated Seasonal Population:	1,729 (based on Census data of 2.6 persons per household)
Average Day Demand:	533.22 m^3
Peak Day Demand:	1,210.24 m^3 (February 28, 2019)
Average Capacity:	36.23%
Peak Capacity:	80.68% (February 28, 2019)
Distribution Network:	13.5 km
Fire Hydrants:	65
Blow-offs:	4

The Lucknow Drinking Water Distribution and Supply Subsystem is characterized as a "secure groundwater system". It consists of two (2) well supplies and its equipment deliver potable water to the Village of Lucknow and ten (10) Lucknow South properties in the Township of Ashfield-Colborne-Wawanosh in Huron County. The Township of Huron-Kinloss has an agreement with The Township of Ashfield-Colborne-Wawanosh, where the Lucknow South distribution system is treated as part of the Lucknow Drinking Water System.

Each well supply is located within its own pumphouse in the Village of Lucknow. Both sites are controlled, monitored, and alarmed through a Supervisory Control and Data Acquisition (SCADA) system which is connected to the main controller, autodialer, and server at the Ripley Municipal Office. The desktop computer used by the system's operators is located at the Ripley Township Shed and is connected remotely to the SCADA server. As a redundancy, each site is also equipped with an auto-dialer that is independent of the SCADA system, and is used to call out alarms in the event of communications/SCADA failure. This SCADA system provides the operator with the ability to monitor current operating status of the supply and treatment equipment throughout the water system at any given time via remote access by computer or Smartphone, and to have control over operations.

The two (2) well supplies are detailed as follows:

Site: Lucknow Well # 4 - 600 Havelock Street

- Water Source: Groundwater, Non-GUDI
- Number of Production Wells: 1 (drilled 1957)
- Depth of Wells: 54.8 m
- Well Pumps: 15 hp each (vertical turbine)
- Disinfection: Sodium hypochlorite (12%)
- CT Requirement: 2-log, 5ºC, contact watermain (1.0 BF)
- Permit To Take Water: 7631-AQYS3J, expires September 29, 2027

Site: Lucknow Well # 5 - 381 South Delhi Street

- Water Source: Groundwater, Non-GUDI
- Number of Production Wells: 1 (drilled 1967)
- Depth of Well: 58.8 m
- Well Pump: 70 hp (submersible)
- Disinfection: Sodium hypochlorite (12%)
- CT Requirement: 2-log, 5ºC, contact watermain (1.0 BF)
- Permit To Take Water: 7631-AQYS3J, expires September 29, 2027

Both Lucknow wells are secure, deep bedrock wells that penetrate limestone aquifers. Due to the depth and structure of the aquifers, the water temperature is relatively constant (< 10ºC), turbidity is low, and the water is relatively hard. The raw water is also relatively **high in naturally-occurring fluoride,** but the lead content of the raw water is well below the half-MAC (Maximum Allowable Concentration). Those who are supplied from the Lucknow DWS are made aware of the various concentrations in their drinking water by numerous means of communication from the Township of Huron-Kinloss.

Each pumphouse is equipped with a receptacle and manual transfer switch for a portable diesel generator in the event of an extended power outage. A stand-by propane generator is located at the Ripley Municipal Office for back-up power requirements for the office and SCADA server equipment.

The Lucknow DWS currently (December 2019) has a distribution network with a combination of PVC, copper, ductile, and cast iron water mains, in sizes varying between 1-inch and 12-inch diameter. A Standpipe, located at 656 Wheeler Street, is 6.7 m in diameter, 27.5 m high and has a total volume of 996 m^3. The well pumps at Well # 4 and Well # 5 are automatically controlled by the water level in the Standpipe via communications located at 482 Ross Street (former pumphouse).

The Standpipe was built in 1930, making it approximately 90 years old. It consists of a riveted steel design (bolted steel top section), which includes a protective layer of 'shop coat' (lead and linseed oil), two (2) coats of 'anti aqua paint' (unknown), and a food grade grease paint on the interior that is intended to provide corrosion protection. The riveted steel design of Standpipes was phased out in the 1930s and is no longer used. The Standpipe is in a state of disrepair, but is currently in operable condition. As it is risky to perform aggressive cleaning without compromising its structural integrity and introducing a potential for contamination, the replacement of the Standpipe with a new Elevated Tank is currently in the design phase and is expected to begin in 2021.

4.0 SUMMARY OF REPORTS MADE TO THE MINISTRY (O. Reg. 170/03, s. 11 (6) (b))

- There was one Adverse Water Quality Incident (AWQI #148236) in the Lucknow DWS: 1 Total Coliform was detected in the distribution system on September 26, 2019. Resamples were collected and they were all free of any microbiological contamination.

5.0 SUMMARY OF WATER QUALITY MONITORING (O. Reg. 170/03, s. 11 (6) (c))

The purpose of sampling and testing is to confirm that water is safe for human consumption and to provide a comprehensive track record.

Table 1 - Monitoring Requirements:

Parameter	Description	Required # of Samples	Requirement Source
Chlorine Residual (grab)	For monitoring amount of residual in the Distribution system, and confirming of water quality following maintenance	365/year (1 daily)	O. Reg. 170/03, Sch. 7
Chlorine Residual (continuous monitoring)	Continuous monitoring equipment used to sample and test Treated water at the location where intended contact time has been completed	5 minute intervals, minimum, each POE	O. Reg. 170/03, Sch. 7
E. Coli (EC) **Total Coliform (TC)** **Heterotrophic Plate Count (HPC)**	For testing presence of microbiological activity	108/year (Dist) 104/year (Raw) 104/year (Treated)	O. Reg. 170/03, Sch. 10
Trihalomethanes (THMs)	For testing presence of disinfection by-products (DBPs) in the Distribution system	4/year (quarterly)	O. Reg. 170/03, Sch. 13, s. 13-6
Lead (Pb)	For testing presence of lead in the Distribution system only - not private side	reduced sampling in effect for 2019	O. Reg. 170/03, Sch. 15; MDWL #087-102, Sch. D
Haloacetic Acids (HAAs)	For monitoring the formation of disinfection by-products (DBPs) in the Distribution system	4/year (quarterly, near each well supply)	O. Reg. 170/03, Sch. 13, s. 13-6.1
Nitrate and Nitrite	For testing presence of nitrates and nitrites in the Treated water at Point-of-Entry	4/year (quarterly)	O. Reg. 170/03, Sch. 13, s. 13-7
Sodium	For testing presence of sodium in the Treated water at Point-of-Entry	60 month interval	O. Reg. 170/03, Sch. 13, s. 13-8
Fluoride	For testing presence of fluoride in the treated water at Point-of-Entry	60 month interval	O. Reg. 170/03, Sch. 13, s. 13-9

COMMUNICATIONS WHEN ADVERSE WATER SAMPLES ARE IDENTIFIED

Requirement - Laboratory

A water sample that does not meet Provincial water quality standards is considered “adverse”. When adverse water quality is detected, the accredited laboratory conducting the testing will immediately notify the Operating Authority, the Spills Action Centre (SAC), and the office of Grey Bruce Health Services, and occasionally the office of Huron-Perth Public Health (as necessary, if applicable). This notification is made by telephone through live communication to a person in authority. In addition to the phone calls, a fax of the sample results is sent to these agencies to verify the live communication made earlier.

Requirement - Drinking Water System Owner/Operating Authority

The *SDWA* also requires the Drinking Water System Owner/Operating Authority to immediately notify the MECP and the Grey Bruce Health Services office and the Huron-Perth Public Health office (if applicable), that the laboratory notice has been received and that "corrective actions" are being initiated. The method of contact is by telephone to a person of authority. The Operating Authority also faxes Form 2A - Notices of Adverse Test Results and Issue Resolution (Schedule 16) within 24 hours to both agencies first to verify previous live communication. Once the issue has been resolved and to confirm that corrective actions have been completed, the Operating Authority also faxes Form 2B - Notices of Adverse Test Results and Issue Resolution (Schedule 16) within 7 days to the agencies. This reporting system provides assurance that the DWS Owner is complying with the applicable regulations and that appropriate corrective actions are being taken and are being reported.

5.1 Water Treatment Equipment Operation and Monitoring

5.1.1 Treated Water (Point of Entry) Free Chlorine Residuals (Grab Samples)

In 2019, a total of 730 treated water grab samples were collected and analyzed for free chlorine residual at the point of entry (POE) using a Hach pocket chlorine colorimeter. **Table 2** shows the grab samples monthly average of free chlorine residual values. **Table 3** shows the on-line continuous samples monthly average (as collected by SCADA) of the free chlorine residual values.

5.1.2 Distribution Free Chlorine Residuals (Grab Samples)

In 2019, a total of 477 distribution residuals were collected: 365 daily grab residuals and an additional 112 weekly grab residuals were taken in conjunction with the required weekly microbiological sampling. A summary of all the residuals collected is presented in **Table 2**.

Table 2 - Average Treated and Distribution Free Chlorine Residuals (Grab Samples)

Month	Lucknow # 4 Treated Water	Lucknow # 5 Treated Water	Lucknow Distribution
Jan	1.57	1.59	1.40
Feb	1.63	1.65	1.39
Mar	1.68	1.67	1.44
Apr	1.55	1.61	1.35
May	1.59	1.59	1.37
Jun	1.63	1.55	1.33
Jul	1.57	1.59	1.32
Aug	1.66	1.65	1.33
Sep	1.68	1.63	1.35
Oct	1.71	1.65	1.38
Nov	1.66	1.68	1.42
Dec	1.69	1.65	1.41
CT Requirement	**0.26**	**0.27**	**0.20**
Annual Min	1.33	0.61	1.01
Annual Max	1.92	1.97	1.79
Annual Avg	1.64	1.63	1.37
# Samples	365	365	477

Table 3 - Average Treated Free Chlorine Residuals (On-Line Continuous from SCADA)

Month	Lucknow # 4 Treated Water	Lucknow # 5 Treated Water
Jan	1.61	1.61
Feb	1.71	1.68
Mar	1.65	1.69
Apr	1.58	1.62
May	1.62	1.61
Jun	1.67	1.53
Jul	1.61	1.64
Aug	1.68	1.66
Sep	1.72	1.64
Oct	1.75	1.69
Nov	1.70	1.71
Dec	1.72	1.65
CT Requirement	0.26	0.27
Annual Min	0.50	0.66
Annual Max	4.85	3.55
Annual Avg	1.67	1.64

5.1.3 Raw and Treated Water Turbidity

Raw water and treated water grab samples were collected and analyzed for turbidity using a portable turbidity analyzer. **Table 4** provides a summary of raw and treated water turbidity results.

Table 4 - Raw and Treated Water Turbidity Results

Month	Lucknow # 4		Lucknow # 5	
	Raw	Treated	Raw	Treated
Jan	0.22	0.26	0.25	0.35
Feb	0.24	0.25	0.24	0.31
Mar	0.11	0.09	0.09	0.22
Apr	0.15	0.32	0.17	0.29
May	0.13	0.22	0.11	0.28
Jun	0.09	0.29	0.13	0.23
Jul	0.20	0.27	0.27	0.29
Aug	0.19	0.21	0.15	0.22
Sep	0.08	0.13	0.17	0.21
Oct	0.12	0.13	0.07	0.19
Nov	0.10	0.16	0.16	0.22
Dec	0.10	0.18	0.14	0.25
Annual Min	0.08	0.09	0.07	0.19
Annual Max	0.24	0.32	0.27	0.35
Annual Avg	0.14	0.21	0.16	0.26
# Samples	12	12	12	12

5.2 Microbiological Sampling per Schedule 10, O. Reg. 170/03

5.2.1 Raw Water Samples

Raw water samples are collected every week. In 2019, a total of 106 samples were collected and analyzed for E. Coli and Total Coliform. **Table 5** provides a summary of microbiological results performed on the raw water.

Table 5 - Microbiological Results for Raw Water

LUCKNOW # 4

Month	Total Coliform			E. Coli		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1
Jan	5	5	0	5	5	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	4	0	4	4	0
Oct	5	5	0	5	5	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
TOTAL	**53**	**53**	**0**	**53**	**53**	**0**

LUCKNOW # 5

Month	Total Coliform			E. Coli		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1
Jan	5	5	0	5	5	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	4	0	4	4	0
Oct	5	5	0	5	5	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
TOTAL	**53**	**53**	**0**	**53**	**53**	**0**

5.2.2 Treated Water (Point of Entry) Samples

One (1) treated water sample from each point of entry is taken every week and analyzed for E. Coli, Total Coliform, and Heterotrophic Plate Count (HPC). In 2019, a total of 106 treated water samples were collected and analyzed for the above parameters. Each EC and TC result from the treated water was 0 cfu/100 mL. The range of HPC results were 0 - 5 cfu/100 mL. **Table 6** provides a summary of all microbiological results performed on treated water.

Table 6 - Microbiological Results for Treated Water (Point of Entry)

LUCKNOW # 4

Month	Total Coliform			E. Coli			HPC		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1
Jan	5	5	0	5	5	0	5	4	1
Feb	4	4	0	4	4	0	4	4	0
Mar	4	4	0	4	4	0	4	3	1
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	2	2
Jun	4	4	0	4	4	0	4	3	1
Jul	5	5	0	5	5	0	5	4	1
Aug	4	4	0	4	4	0	4	2	2
Sep	4	4	0	4	4	0	4	2	2
Oct	5	5	0	5	5	0	5	2	3
Nov	4	4	0	4	4	0	4	4	0
Dec	5	5	0	5	5	0	5	3	2
TOTAL	**53**	**53**	**0**	**53**	**53**	**0**	**53**	**38**	**15**

LUCKNOW # 5

Month	Total Coliform			E. Coli			HPC		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1
Jan	5	5	0	5	5	0	5	4	1
Feb	4	4	0	4	4	0	4	2	2
Mar	4	4	0	4	4	0	4	3	1
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	2	2
Jun	4	4	0	4	4	0	4	2	2
Jul	5	5	0	5	5	0	5	5	0
Aug	4	4	0	4	4	0	4	4	0
Sep	4	4	0	4	4	0	4	4	0
Oct	5	5	0	5	5	0	5	2	3
Nov	4	4	0	4	4	0	4	1	3
Dec	5	5	0	5	5	0	5	3	2
TOTAL	**53**	**53**	**0**	**53**	**53**	**0**	**53**	**37**	**16**

5.2.3 Distribution Samples

Distribution samples are collected every week and tested for E. Coli, Total Coliform, and 25% of the samples are also analyzed for Heterotrophic Plate Count (HPC). Ontario Regulation 170/03 requires 8 distribution samples plus one additional sample for every 1,000 people served by the system. In 2019, a total of 162 distribution samples were collected and analyzed for TC and EC, which is above the required number of samples (n=108, based on 1,729 potential residents). A total of 106 distribution samples were analyzed for HPC (n=27, 25% of 108). Each E. Coli result from the treated water was 0 cfu/100 mL. The range of HPC results were 0 - 15 cfu/100 mL. **Table 7** provides a summary of all microbiological samples taken in the distribution system.

Table 7 - Microbiological Results for Distribution System

Month	Total Coliform			E. Coli			HPC		
	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples ≥1	# Samples	# Samples "0"	# Samples 1 - 15
Jan	15	15	0	15	15	0	10	4	6
Feb	12	12	0	12	12	0	8	3	5
Mar	12	12	0	12	12	0	8	3	5
Apr	15	15	0	15	15	0	10	7	3
May	12	12	0	12	12	0	8	4	4
Jun	12	12	0	12	12	0	8	4	4
Jul	15	15	0	15	15	0	10	8	2
Aug	12	12	0	12	12	0	8	4	4
Sep	15	14	1	15	15	0	8	4	4
Oct	15	15	0	15	15	0	10	6	4
Nov	12	12	0	12	12	0	8	7	1
Dec	15	15	0	15	15	0	10	5	5
TOTAL	**162**	**161**	**1**	**162**	**162**	**0**	**106**	**59**	**47**

Note: On September 24, 2019, one distribution sample had a result of 1 Total Coliform. It was reported to the Grey Bruce Health Unit and the Ministry's Spills Action Center (AWQI # 148236). Resamples collected as per O. Reg. 170/03, Schedule 17-6 were all clear of TCs.

5.3 Chemical Sampling and Testing as per Schedule 13, O. Reg. 170/03

5.3.1 Inorganics (Schedule 13, s. 13-2; Schedule 23)

Treated water samples are collected every 36 months and analyzed for inorganics. The most recent samples for the Lucknow Drinking Water System were collected on June 4, 2018 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23 (see **Table 8**). All parameters were found to be within compliance, however, the Arsenic level at Lucknow #5 exceeded the Half-Maximum Allowable Concentration (half-MAC). Any half-MAC exceedance must be sampled on a quarterly basis to comply with O. Reg. 170/03, Schedule 13-5(1) - Increased frequency under s.s 13-2 and 13-4.

NON-COMPLIANCE: In 2019, the frequency of the Arsenic sampling was not in-line with the normal quarterly sampling, so it was not collected within the 60 - 120 days for two of the samples (134 days and 239 days, respectively). The sampling frequency is now in-line with the normal quarterly sampling. **Table 19** (Section 7.1 - Regulatory Changes, Arsenic Results) provides a summary of the increased Arsenic sampling.

Inorganics will be sampled and analyzed again in June 2021.

Table 8 - Inorganics (Schedule 13, s. 13-2; Schedule 23) Results

Parameter	Lucknow # 4 Treated Water (µg/L)	Lucknow # 5 Treated Water (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Antimony	0.05	0.07	6	No
Arsenic	4.8	**5.7**	10	No
Barium	302	332	1000	No
Boron	39	34	5000	No
Cadmium	0.003 <MDL	0.003 <MDL	5	No
Chromium	0.07	0.47	50	No
Mercury	0.01 <MDL	0.01 <MDL	1	No
Selenium	0.04 <MDL	0.04 <MDL	50	No
Uranium	0.832	0.697	20	No

*MDL = Laboratory Minimum Detection Limit

5.3.2 Organics (Schedule 13, s. 13-4; Schedule 24)

Treated water samples are collected every 36 months and tested for Schedule 24 organic parameters. The most recent samples were collected on June 4, 2018. All parameters were found to be within compliance. Organics will be sampled and analyzed again in June 2021. Samples results can be found in **Table 9**.

Table 9 - Organics (Schedule 13, s. 13-4; Schedule 24) Results

Parameter	Lucknow # 4 Treated Water (µg/L)	Lucknow # 5 Treated Water (µg/L)	Maximum Allowable Concentration (µg/L)	Aesthetic Objective / Operational Guideline (µg/L)	Exceedance
Benzene	0.32 <MDL	0.32 <MDL	1	--	No
Carbon Tetrachloride	0.16 <MDL	0.16 <MDL	2	--	No
1,2-Dichlorobenzene	0.41 <MDL	0.41 <MDL	200	3	No
1,4-Dichlorobenzene	0.36 <MDL	0.36 <MDL	5	1	No
1,1-Dichloroethylene	0.33 <MDL	0.33 <MDL	14	--	No
1,2-Dichloroethane	0.35 <MDL	0.35 <MDL	5	--	No
Dichloromethane	0.35 <MDL	0.35 <MDL	50	--	No
Monochlorobenzene	0.3 <MDL	0.3 <MDL	80	30	No
Tetrachloroethylene	0.35MDL	0.35 MDL	10	--	No
Trichloroethylene	0.44 <MDL	0.44 <MDL	5	--	No
Vinyl Chloride	0.17 <MDL	0.17 <MDL	1	--	No
Diquat	1 <MDL	1 <MDL	70	--	No
Paraquat	1 <MDL	1 <MDL	10	--	No
Glyphosate	1 <MDL	1 <MDL	280	--	No
Polychlorinated Biphenyls	0.04 <MDL	0.04 <MDL	3	--	No

*MDL = Laboratory Minimum Detection Limit

Table 10 - Organics (Schedule 13, s. 13-4; Schedule 24) Results - Continued

Parameter	Lucknow # 4 Treated Water (µg/L)	Lucknow # 5 Treated Water (µg/L)	Maximum Allowable Concentration (µg/L)	Aesthetic Objective / Operational Guideline (µg/L)	Exceedance
Benzo(a)pyrene	0.00 4<MDL	0.004 <MDL	0.01	--	No
Alachlor	0.02 <MDL	0.02 <MDL	5	--	No
Atrazine+N-dealkylated metabolites	0.01 <MDL	0.01 <MDL	5	--	No
Atrazine	0.01 <MDL	0.01 <MDL	--	--	No
Desethyl Atrazine	0.01 <MDL	0.01 <MDL	--	--	No
Azinphos-methyl	0.05 <MDL	0.05 <MDL	20	--	No
Carbaryl	0.05 <MDL	0.05 <MDL	90	--	No
Carbofuran	0.01 <MDL	0.01 <MDL	90	--	No
Chlorpyrifos	0.02 <MDL	0.02 <MDL	90	--	No
Diazinon	0.02 <MDL	0.02 <MDL	20	--	No
Dimethoate	0.03 <MDL	0.03 <MDL	20	--	No
Diuron	0.03 <MDL	0.03 <MDL	150	--	No
Malathion	0.02 <MDL	0.02 <MDL	190	--	No
Metolachlor	0.01 <MDL	0.01 <MDL	50	--	No
Metribuzin	0.02 <MDL	0.02 <MDL	80	--	No
Phorate	0.01 <MDL	0.01 <MDL	2	--	No
Prometryne	0.03 <MDL	0.03 <MDL	1	--	No
Simazine	0.01 <MDL	0.01 <MDL	10	--	No
Terbufos	0.01 <MDL	0.01 <MDL	1	--	No
Triallate	0.01 <MDL	0.01 <MDL	230	--	No
Trifluralin	0.02 <MDL	0.02 <MDL	45	--	No
2,4-Dichlorophenoxyacetic acid	0.19 <MDL	0.19 <MDL	100	--	No
Bromoxynil	0.33 <MDL	0.33 <MDL	5	--	No
Dicamba	0.20 <MDL	0.20 <MDL	120	--	No
Diclofop-methyl	0.40 <MDL	0.40 <MDL	9	--	No
MCPA	0.00012 <MDL	0.00012 <MDL	0.1	--	No
Picloram	1 <MDL	1 <MDL	190	--	No
2,4-Dichlorophenol	0.15 <MDL	0.15 <MDL	900	0.3	No
2,4,6-Trichlorophenol	0.25 <MDL	0.25 <MDL	5	2	No
2,3,4,6-Tetrachlorophenol	0.20 <MDL	0.20 <MDL	100	1	No
Pentachlorophenol	0.15 <MDL	0.15 <MDL	60	30	No

*MDL = Laboratory Minimum Detection Limit

5.3.3 Trihalomethanes (Schedule 13, s. 13-6)

Distribution samples are taken every three months from representative points in the distribution system and tested for Trihalomethanes (THMs). In 2019, samples were collected during the months of February, May, August, and November. The Ontario Drinking Water Quality Standards (ODWQS) have set a Maximum Allowable Concentration (MAC) of 100 µg/L for this parameter and it is expressed as a running annual average (RAA). In 2019, the average THM was found to be 7.5 µg/L, which is within compliance. Refer to **Table 10** for the summary of Trihalomethane results. In 2020, samples will be collected in February, May, August, and November.

Table 10 - Trihalomethane (Schedule 13, s. 13-6) Results

Month	THMs (µg/L)	Bromodichloro methane (µg/L)	Bromoform (µg/L)	Chloroform (µg/L)	Dibromochloro methane (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	6.1	1.20	<0.34	4.9	<0.37	100	No
May	9.0	1.80	<0.34	6.6	0.57	100	No
Aug	12.0	2.20	<0.34	9.3	0.53	100	No
Nov	6.0	0.95	<0.34	5.0	<0.37	100	No
Nov	4.6	0.77	<0.34	3.8	<0.37	100	No
RAA	7.5	1.4	<0.34	5.9	0.40		
Maximum	12.0	2.20	<0.34	9.3	0.57		

5.3.4 Haloacetic Acids (Schedule 13, s. 13-6.1)

Ontario Regulation 170/03 has been amended to include quarterly testing for Haloacetic Acids (HAAs). Distribution samples are taken every three months from representative points in the distribution system and tested for Haloacetic Acids (HAAs). In 2019, samples were collected during the months of February, May, August, and November and results are expressed as a running annual average (RAA). Results are summarized in **Table 11**.

Table 11 - Haloacetic Acid (Schedule 13, s. 13-6.1) Results

Month	Total HAAs (µg/L)	Bromo acetic acid (µg/L)	Chloro acetic acid (µg/L)	Dichloro acetic acid (µg/L)	Dibromo acetic acid (µg/L)	Trichloro acetic acid (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
Feb	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
May	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Aug	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Nov	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Nov	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3	80	No
Avg	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		
Max	<5.3	<2.9	<4.7	<2.6	<2.0	<5.3		

5.3.5 Nitrate and Nitrite (Schedule 12, s. 13-7)

Treated water samples are taken every three months and tested for nitrate and nitrite. In 2019, samples were collected during the months of February, May, August, and November. The Ontario Drinking Water Quality Standards (ODWQS) have set a Maximum Allowable Concentration (MAC) of 10 mg/L for nitrates and 1 mg/L for nitrites. The results were found to be within compliance. Refer to **Table 12**. In 2020, samples will be collected in February, May, August, and November.

Table 12 - Nitrate and Nitrite (Schedule 13, s. 13-7) Results

LUCKNOW # 4

Month	Nitrite (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Nitrate (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Feb	<0.003	1	No	<0.006	10	No
May	<0.003	1	No	<0.006	10	No
Aug	<0.003	1	No	<0.006	10	No
Nov	<0.003	1	No	<0.006	10	No
Average	<0.003			<0.006		
Maximum	<0.003			<0.006		

LUCKNOW # 5

Month	Nitrite (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Nitrate (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Feb	<0.003	1	No	<0.006	10	No
May	<0.003	1	No	<0.006	10	No
Aug	<0.003	1	No	<0.006	10	No
Nov	<0.003	1	No	<0.006	10	No
Average	<0.003			<0.006		
Maximum	<0.003			<0.006		

5.3.6 Sodium (Schedule 13, s. 13-8)

One (1) water sample is collected from each Point of Entry (treated water) every 60 months and analyzed for Sodium. The Ministry's *Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, PIBS 4449e01, June 2006*, states: "The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets." These samples were collected on June 21, 2016. Results can be found in **Table 13**. The next sampling date for Sodium will be on or before June 21, 2021.

5.3.7 Fluoride (Schedule 13, s. 13-9)

One (1) water sample is collected from each Point of Entry (treated water) every 60 months and analyzed for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a Maximum Allowable Concentration (MAC) of 1.5 mg/L. On August 15, 2017, samples were collected for this analysis. All four samples exceeded the MAC due to naturally occurring fluoride in the aquifers. These exceedances were reported to the Grey Bruce Health Unit and the Ministry's Spills Action Centre (AWQI # 135641). The results are summarized in **Table 13**. The next sampling date for Fluoride will be on or before August 15, 2022.

Table 13 - Sodium (Schedule 13, s. 13-8) and Fluoride (Schedule 13, s. 13-9) Results

Location	Sodium			Fluoride		
	Result (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance	Result (mg/L)	Maximum Allowable Concentration (mg/L)	Exceedance
Lucknow # 4 Treated Water	10.8	20	No	1.75	1.50	Yes
Lucknow # 5 Treated Water	12.8	20	No	1.78	1.50	Yes

5.3.8 Lead (Schedule 15.1) - (O. Reg. 170/03, s. 11 (6) (g)

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken during two seasons: once between December 15 and April 15, and once between June 15 and October 15. The Lucknow Drinking Water System is currently under a reduced sampling program for lead where lead, pH and alkalinity are sampled in each season every 36 months (3 years). In the interim, pH and alkalinity are tested during each sampling season. Two (2) pH and alkalinity samples were collected on February 5, 2019, one (1) on March 11, 2019, two (2) on April 1, 2019 and three (3) pH and alkalinity samples were collected on July 15, 2019. These parameters are required to be sampled and analyzed again between the months of December 2019 and April 2020, and again between June and October 2020. Lead samples are required next in the 2020 sampling season. Results for 2019 can be found in **Table 14**.

Table 14 - Lead Sampling Program (Schedule 15.1) Results

Season	Alkalinity (mg/L)	pH	Lead (mg/L)	Maximum Allowable Concentration - Lead (mg/L)	Exceedance
Dec-Apr	218 (ACW) 222 (ACW) 232 230 219	7.67 (ACW) 7.54 (ACW) 7.76 7.43 7.49	Not required in 2019	0.010	n/a
Jun-Oct	230 (ACW) 226 226	7.34 (ACW) 7.23 7.17	Not required in 2019	0.010	n/a

5.3.9 Non-Regulatory Testing - Aesthetic Objectives and Operational Guidelines (AO/OG)

Samples were collected from each Point of Entry (treated water) on November 21, 2016 and tested for parameters listed in the Ministry's *Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, June 2006, PIBS 4449e01*. These results are included in **Table 15** for information purposes.

Table 15 - Aesthetic Objectives and Operational Guideline Results

Parameter	AO/OG	Lucknow # 4 Treated Water	Lucknow # 5 Treated Water
pH	6.5 - 8.5	7.88	8.03
Alkalinity (mg/L as $CaCO_3$)	30 - 500	217	224
Colour (TCU)	5	3	3 <MDL
Total Dissolved Solids (mg/L)	500	280	274
Organic Nitrogen (mg/L)	0.15	0.05 <MDL	0.05 <MDL
Total Kjeldahl Nitrogen (mg/L)	---	0.05 <MDL	0.05 <MDL
Ammonia + Ammonium (mg/L)	---	0.06	0.06
Hydrogen Sulphide (mg/L)	0.05	0.006 <MDL	0.006 <MDL
Sulphide (mg/L)	0.05	0.006 <MDL	0.006 <MDL
Chloride (mg/L)	250	3.7	3.9
Sulphate (mg/L)	500	31	31
Hardness	80 - 100	206	209
Aluminum (µg/L)	100	0.5	2.5
Copper (µg/L)	1000	4.25	1.99
Iron (µg/L)	300	132	264
Manganese (µg/L)	50	8.38	13.8
Zinc (µg/L)	5000	3	4
Dissolved Organic Carbon (mg/L)	5	1 <MDL	1 <MDL
Methane (L/m^3)	3	0.02 <MDL	0.02 <MDL
Ethylbenzene (µg/L)	2.4	0.33 <MDL	0.33 <MDL
Toluene (µg/L)	24	0.36 <MDL	0.36 <MDL
Xylene (µg/L)	300	0.43 <MDL	0.43 <MDL
m/p-xylene (µg/L)	---	0.43 <MDL	0.43 <MDL
o-xylene (µg/L)	---	0.17 <MDL	0.17 <MDL

*MDL = Laboratory Minimum Detection Limit

6.0 WATER AND CHEMICAL USE (O. Reg. 170/03, s. 11 (6) (a); Schedule 22-2 (3))

6.1 Chemical Usage (O. Reg. 170/03, s. 11 (6) (a))

In 2019, the total amount of 12% sodium hypochlorite (NaOCl) used to treat the water supplied by the Lucknow wells the Lucknow DWS is tabulated in **Table 16** with the average chlorine dosage.

Table 16 - Sodium Hypochlorite Usage

Month	LUCKNOW # 4		LUCKNOW # 5	
	Usage (kg)	Average Dosage (mg/L)	Usage (kg)	Average Dosage (mg/L)
Jan	30.27	3.91	28.73	3.65
Feb	26.21	3.84	30.55	3.98
Mar	24.25	3.72	35.46	3.94
Apr	37.00	3.72	21.30	4.49
May	34.62	3.96	23.27	3.94
Jun	37.00	4.19	25.51	3.88
Jul	27.89	3.77	54.10	4.25
Aug	41.49	4.23	36.58	3.84
Sep	49.62	4.04	17.66	4.24
Oct	52.84	4.18	22.85	4.10
Nov	52.42	3.98	27.61	3.93
Dec	37.28	3.98	19.48	3.81
TOTAL	450.89	--	343.11	--
Average	37.57	3.96	28.59	4.01

Sodium Hypochlorite Grand Total Usage: **794.01 kg**
Sodium Hypochlorite Average Dosage: **3.98 mg/L**

6.2 Summary of Flow Rates, Annual Volumes and Capacities (O. Reg. 170/03, Schedule 22-2 (3))

A summary of the water supplied to the distribution system in 2019 from each well supply is provided in **Table 17**. The volumes reported for each well supply are taken from the SCADA continuous monitoring system. The flow meters were calibrated on the following dates:

Lucknow # 4:	Raw water flow meter	June 18, 2019
Lucknow # 5:	Raw water flow meter	June 18, 2019

Table 17 - Flow Rates, Annual Volumes, and Capacities

LUCKNOW # 4

Month	Raw Flow Daily Max (L/s)	Raw Flow Monthly Avg (L/s)	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	10.59	9.39	7,676.89	442.71	247.67	47.35
Feb	10.58	9.33	6,922.44	595.89	247.23	63.73
Mar	9.47	9.36	6,463.92	412.46	208.51	44.11
Apr	10.47	9.40	9,856.52	452.08	328.55	48.35
May	10.51	9.40	8,649.89	568.78	279.03	60.83
Jun	13.74	9.38	9,073.90	547.76	302.46	58.58
Jul	10.29	9.17	7,305.63	574.11	235.71	61.40
Aug	10.23	9.13	9,869.75	630.51	318.41	67.43
Sep	10.20	9.06	12,010.39	568.75	400.35	60.83
Oct	10.30	9.04	12,685.22	603.68	409.20	64.56
Nov	10.15	9.04	13,013.28	806.08	433.79	86.21
Dec	10.30	9.05	9,189.20	401.85	296.43	42.98
PTTW Max	**14.42**	**14.42**	**28,439.58**	**935.00**	---	---
Annual Max	13.74	---	13,013.28	806.08	---	86.21
Annual Avg	---		9,393.09	---	308.95	33.04
Annual Total	---	---	**112,717.03**		---	---

LUCKNOW # 5

Month	Raw Flow Daily Max (L/s)	Raw Flow Monthly Avg (L/s)	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	34.41	31.75	7,878.51	523.18	254.15	34.88
Feb	32.98	30.35	8,065.17	614.35	288.04	40.96
Mar	32.40	28.98	8,669.25	583.59	279.65	38.91
Apr	33.18	30.33	4,615.75	428.14	153.85	28.54
May	32.70	30.22	6,042.59	626.94	194.92	41.80
Jun	32.78	30.86	6,392.75	582.90	213.09	38.86
Jul	32.87	31.49	12,691.83	767.44	409.41	51.16
Aug	32.98	31.47	9,502.63	793.46	306.54	52.90
Sep	33.00	31.53	4,203.15	248.02	140.11	16.53
Oct	32.79	31.50	5,437.53	631.17	175.41	42.08
Nov	32.76	31.57	7,062.49	997.72	235.42	66.51
Dec	32.95	31.67	5,079.68	850.07	163.86	56.67
PTTW Max	**37.90**	**37.90**	**45,625.00**	**1500**	---	---
Annual Max	34.41	---	12,691.83	997.72	---	66.51
Annual Avg	---	30.91	7,069.35	---	232.75	15.52
Annual Total	---	---	**85,641.33**	---	---	---

Table 17 - Flow Rates, Annual Volumes and Capacities Continued

LUCKNOW # 4 AND # 5 COMBINED

Month	Raw Volume Monthly Total (m^3)	Raw Volume Daily Max (m^3)	Raw Volume Monthly Avg (m^3)	Capacity Monthly Max (%)
Jan	15,555.40	562.60	501.79	37.51
Feb	14,987.61	1,210.24	535.27	80.68
Mar	15,133.17	583.80	488.17	38.92
Apr	14,472.27	666.67	482.41	44.44
May	14,692.48	815.85	473.95	54.39
Jun	15,466.65	648.71	515.56	43.25
Jul	19,997.46	771.78	645.08	51.45
Aug	19,372.38	793.46	624.92	52.90
Sep	16,213.54	636.96	540.45	45.46
Oct	18,122.75	820.71	584.60	54.71
Nov	20,075.77	997.72	669.19	66.51
Dec	14,268.88	1,072.45	460.29	71.50
PTTW Max	**45,625.00**	**1,500.00**	**---**	**---**
Annual Max	20,075.77	1,210.24	---	80.68
Annual Avg	16,529.86	---	547.26	36.23
Annual Total	**198,358.36**	---	---	---

6.3 System Capacity (O. Reg. 170/03, Schedule 22-2 (3) Continued)

The following is a comparison of the of the annual volumes to the rated capacity and flow rates approved in the systems' PTTW, DWWP and MDWL. The total system capacity represents the percentage capacity of the sum of all the water produced in relation to the total system volume permitted. A summary of the totals for all the well supplies is presented in **Table 18**. The visual representations of each well and the Lucknow total capacity are presented in Figures 2 through 4.

Table 18 - Total Volumes of All Well Supplies

Location (Well Supply)	Total Volume for 2019 (m^3)
Lucknow Well # 4	112,717.03
Lucknow Well # 5	85,641.33
Total Rated Capacity, PTTW (m^3)	**547,500.00**
Grand Total (all well supplies), Actual (m^3)	**198,358.36**
Overall Operating Capacity, Actual %	**36.23%**

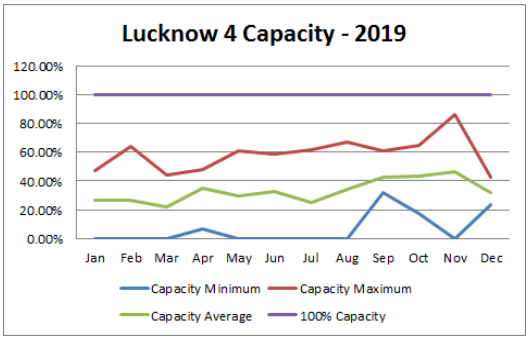


Figure 2

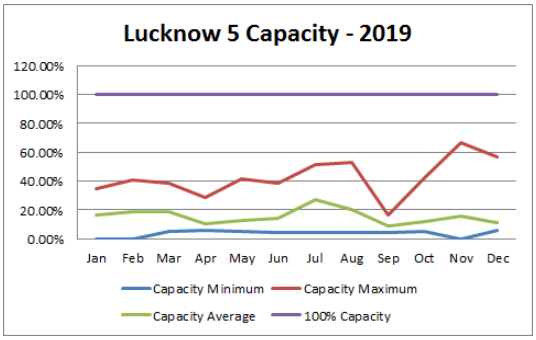


Figure 3

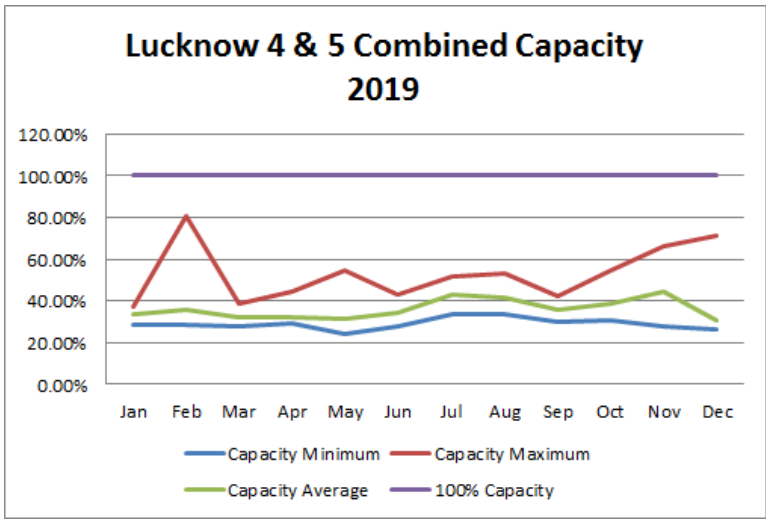


Figure 4

7.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE (s. 11 (6) (e))

The following summarizes water system improvements and routine and preventative maintenance for the Lakeshore Drinking Water System Supply:

Both Sites:

Routine and preventative maintenance performed as per Jobs Plus schedule.
Flow meter calibrations completed.
Georgian Bay Fire and Safety inspections completed.
Semi-annual flushing and annual valve turning completed.

Lucknow # 4:

January:	New tubing on chlorine analyzer
February:	Tower overflow due to control failure
March:	New chlorine analyzer due to analyzer failure and new tubing
September:	Tower overflow due to control failure

Lucknow # 5:

February:	Flow control valve failure
March:	Well pump hour meter grounding circuit repaired
December:	New chlorine analyzer due to analyzer failure

8.0 MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS INSPECTIONS AND REGULATORY ISSUES (Schedule 22-2 (2))

- MECP Drinking Water Inspection was conducted on June 13, 2019 and awarded a rating of 98.28% (previous rating was 98.27%).
- A list of Capital Items for 2020 was submitted to the Township of Huron-Kinloss on November 1, 2019.
- DWQMS Management Review was conducted on June 6, 2019.
- DWQMS Internal Audit was conducted between May 15 - June 11, 2019.
- DWQMS External Audit (off-site) was conducted on June 14, 2019.
- Emergency Response Exercise was conducted as a follow-up response to a temporary water main break that happened in Goderich on May 23, 2019, where many utilities were involved. An “After Action Report” was submitted to the utilities involved following the tabletop incident review.

9.0 REGULATORY CHANGES

Changes to Ontario Regulation 170/03 and Ontario Regulation 169/03 that strengthen standards and clarify testing requirements, new sampling and testing parameters, reporting and resampling requirements, and the removal of the 13 pesticides came into effect January 1, 2016. Updates to the standards and reporting requirements for Arsenic came into effect January 1, 2018. Over the next year, the following amendment will be added. The subsequent phase-in date is:

- January 1, 2020: New standards for HAAs and HAAs testing optimization rule for smaller systems will come into effect/require reporting.

9.1 Arsenic Sampling

In January 2018, O. Reg. 169/03 - Ontario Drinking Water Quality Standard for Arsenic was changed to 0.010 mg/L from 0.025 mg/L, making the new Half-MAC (Maximum Allowable Concentration) 0.005 mg/L. Point Clark is the only Lakeshore well supply that has an Arsenic level in exceedance of the Half-MAC and therefore must be sampled on a quarterly basis to satisfy O. Reg. 170/03, Schedule 13-5(1) - Increased frequency under s.s 13-2 and 13-4. See **Table 19** for Lucknow Arsenic results.

Table 19 - Arsenic Results

Sample Date	Lucknow # 4 Arsenic Concentration (µg/L)	Lucknow # 5 Arsenic Concentration (µg/L)	Maximum Allowable Concentration (µg/L)	Exceedance
June 4, 2018	4.8	**5.7**	10	No
October 16, 2018	4.3	4.6	10	No
June 12, 2019	4.7	**5.4**	10	No
September 3, 2019	3.5	4.9	10	No
November 18, 2019	3.1	3.5	10	No

NOTE:
O. Reg. 170/03, Schedule 13: Increased frequency under s.s 13-2 and 13-4
13-5. (1) If a test result obtained under section 13-2 or 13-4 for a parameter ***exceeds half of the standard prescribed*** *for the parameter in Schedule 2 to the Ontario Water Quality Standards, the frequency of sampling and testing for that parameter under that section shall be* ***increased*** *so that at least one sample is taken and tested* ***every three months.***

10.0 WELL LEVELS (PTTW)

The Lucknow DWS has a Permit To Take Water (PTTW), which dictates the capacity that each well is permitted to supply, as well as specific monitoring parameters. In addition to flow, static well levels are taken on a weekly basis to monitor the performance of the aquifer. **Table 20** provides a summary of the static well levels recorded in 2019.

Table 20 - Static Well Levels (PTTW) - Monthly Averages

Month	Lucknow Well # 4					Lucknow Well # 5				
Jan	6.70	7.01	7.01	6.70	7.01	5.79	6.40	5.79	6.40	6.40
Feb	7.01	7.31	6.71	7.01	7.01	5.79	6.70	5.79	6.09	
Mar	6.70	7.01	7.31	7.01		5.48	6.70	6.09	6.09	
Apr	6.71	6.71	6.71	6.40		5.40	5.49	5.49	5.18	
May	6.70	6.70	6.70	6.70	6.70	5.48	5.48	5.18	5.18	5.79
Jun	6.40	7.31	7.31	7.01		5.79	5.48	6.40	5.79	
Jul	6.70	6.40	6.40	6.40	7.01	5.79	5.79	6.09	6.40	6.40
Aug	7.01	7.01	6.70	7.01		5.79	6.70	5.79	6.40	5.79
Sep	6.70	7.01	6.70	7.01		5.79	6.09	6.09	6.09	
Oct	6.70	6.70	7.01	7.01	6.70	6.09	6.09	6.09	5.79	6.40
Nov	6.70	6.70	6.40	6.40		6.40	6.40	6.10	6.40	
Dec	6.40	6.40	6.70	6.40	6.40	6.10	5.79	6.10	5.79	6.10
Min	6.40					5.18				
Max	7.31					6.70				
Avg	6.78					5.95				

11.0 SOURCE WATER PROTECTION (*Clean Water Act, 2006*)

A Drinking Water Source Protection Assessment (DWSPA) Report was generated for the Ausable Bayfield Maitland Valley Source Protection Region by the Conservation Authority Source Protection Office. This report identifies vulnerable areas, recharge areas, and potential threats to help protect existing and future sources of drinking water from contamination and overuse. This report can be found on-line at:

https://www.sourcewaterinfo.on.ca/the-plans/

The Well Head Protection Areas (WHPAs) within the Lakeshore Drinking Water System have 4 designations:
WHPA-A: 100 m radius around the well head
WHPA-B: 2-year time-of-travel capture zone
WHPA-C: 5-year time-of-travel capture zone
WHPA-D: 25-year time-of-travel capture zone
The Lucknow wells are NOT classified as groundwater under direct influence of surface water (GUDI).

The DWSPA report states: "The WHPA extends south-eastward from the wells to include about 7.7 km along the south Huron-Kinloss border and into Ashfield-Colborne-Wawanosh. WHPA-A, the 100 m radius around the wells, falls entirely within Huron-Kinloss. However, a small portion of WHPA-B, located in ACW, has a vulnerability score of 10. The remainder of WHPA-B has a vulnerability score of 8 or 6. The section of WHPA-C that falls into ACW has a vulnerability score of 8, 6 or 4. Finally, WHPA-D has a vulnerability score of 6 or less."

Table 21, taken from the report, shows a summary of significant drinking water threats within the Lucknow Drinking Water System.

Table 24 - Lucknow WHPA: Summary of Significant Drinking Water Threats

Threat (numbered according to *Clean Water Act, 2006*)		Significant Instances		
		Chemical	Pathogens	DNAPL
1	Waste Disposal Site	1		
2	Sewage System		3	
3	Agricultural Source Material Application		1	
4	Agricultural Source Material Storage		1	
6	Non-Agricultural Source Material Application			
7	Non-Agricultural Source Material Handling/Storage			
8	Commercial Fertilizer Application	2		
9	Commercial Fertilizer Handling/Storage			
10	Pesticide Application	1		
11	Pesticide Handling/Storage			
15	Fuel Handling/Storage	11		
16	Dense Non-Aqueous Phase Liquid Handling/Storage			2
21	Grazing/Pasturing Livestock	2	2	
TOTAL		**17**	**7**	**2**

In conclusion, as stated in the DWSPA Report: "No issues with wells or conditions resulting from past activities were identified within the WHPA."

12.0 OBSERVATIONS AND HISTORICAL TRENDS

Raw Water Quality

- Microbiological: There were no positive microbiological test results in 2019.

  10-Year Historical results:

Year	Well Source	Positive microbiological Result
2017 - September 5	Lucknow # 4	1 Total Coliform
2017 - October 17	Lucknow # 4	1 Total Coliform

  Due to the infrequent historical results, there are no concerns at this time.

- Chemical Parameters: There were no exceedances for any of the chemical parameters tested in 2019. Sodium and Fluoride are tested every 60 months and were not required in 2019. These parameters will be sampled again in 2021.

  10-Year Historical results:

Year	Lucknow # 4		Lucknow # 5	
	Sodium	Fluoride	Sodium	Fluoride
2006	9.63	1.81	9.49	1.82
2011	8.72	1.82	9.92	1.74
2016	10.8	--	12.8	--
2017	--	1.75	--	1.74

- Raw Turbidity:

Well Source	10-Year Historical Average (2009 to 2018)	2019 Average	Comments
Lucknow Well # 4	0.19 NTU	0.14 NTU	The raw turbidity has remained consistent based on the 10-year historical average. There is no concern at this time.
Lucknow Well # 5	0.18 NTU	0.16 NTU	The raw turbidity has remained consistent based on the 10-year historical average. There is no concern at this time.

- Well Levels:

Well Source	10-Year Historical Average (2009 to 2018)	2019 Average	Comments
Lucknow Well # 4	7.03 m below grade	6.80 m below grade	The well level has remained consistent based on the 10-year historical average. There is no concern at this time.
Lucknow Well # 5	6.69 m below grade	5.96 m below grade	The well level has remained consistent based on the 10-year historical average. There is no concern at this time.

12.0 OBSERVATIONS AND HISTORICAL TRENDS - Continued

- Well Flows and Pump Performance:

Well Source	4-Year Historical Average (2015 to 2018)	2019 Average	Comments
Lucknow Well # 4	Avg flow: 8.80 L/s Capacity: 10.72 %	Avg flow: 9.23 L/s Capacity: 33.04 %	Flows are consistent based on the 4-year historical average. The operation of the well cycling has been changed and the capacities are reflective of this change. There are no concerns at this time.
Lucknow Well # 5	Avg flow: 27.55 L/s Capacity: 36.28%	Avg flow: 30.91 L/s Capacity: 15.64 %	Flows are consistent based on the 4-year historical average. The operation of the well cycling has been changed and the capacities are reflective of this change. There are no concerns at this time.

THE CORPORATION OF THE TOWNSHIP OF
ASHFIELD-COLBORNE-WAWANOSH

BY-LAW NUMBER 21-2020

BEING A BY-LAW to provide for the Regulation and Prohibition of Noise and Sound for the Township of Ashfield-Colborne-Wawanosh

WHEREAS section 9 of the Municipal Act, 2001, S.O. 2001, c. 25, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS subsection 10(1) of the Municipal Act, 2001 provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

AND WHEREAS subsection 10(2) of the Municipal Act, 2001 provides that a municipality may pass by-laws respecting the health, safety and well- being of persons;

AND WHEREAS section 129 of the Municipal Act, 2001 provides that, without limiting sections 9 and 10 of the Act, a municipality may: (a) prohibit and regulate with respect to noise;

AND WHEREAS section 128 of the Municipal Act, 2001 provides that a municipality may prohibit and regulate with respect to public nuisances, including matters that, in the opinion of Council are or could become public nuisances;

AND WHEREAS in the opinion of Council for the Township of Ashfield-Colborne-Wawanosh, certain kinds of noise are or could become a public nuisance;

AND WHEREAS subsection 391(1) of the Municipal Act, 2001 provides that a municipality may impose fees and charges on persons, for services or activities provided or done by or on behalf of it; for costs payable by it for services or activities provided or done by or on behalf of any other municipality or any local board; and, or the use of its property including property under its control;

AND WHEREAS section 23.2 of the Municipal Act, 2001 permits a municipality to delegate certain legislative and quasi-judicial powers;

AND WHEREAS section 444 of the Municipal Act, 2001 provides that the municipality may make an order requiring the person who contravened the by-law or who caused or permitted the contravention or the owner or occupier of the land on which the contravention occurred to discontinue the contravening activity, and any person who contravenes such an order is guilty of an offence;

AND WHEREAS section 447.8 of the Municipal Act, 2001 provides that a by-law of a municipality made under this or any other Act may, adopt by reference, in whole or in part, with such changes as the council considers appropriate, any code, standard, procedure or regulation as it stands at a specific date, as it stands at the time of adoption or as amended from time to time; and require compliance with any code, standard, procedure or regulation so adopted;

THEREFORE, the Council of The Corporation of the Township of Ashfield-Colborne-Wawanosh enacts as follows:

PART 1 – DEFINITIONS

1.1 For the purpose of this by-law:

"Agricultural Operation" has the same meaning as contained in the Farming and Food Production Protection Act, 1998, S.O. 1998, C. 1, as amended, or any successor legislation;

"Amplified Live Speech" means live speech amplified by any means that is clearly audible at a Point of Reception, but does not include live speech that is incidental to a commercial, industrial, or institutional premise, and does not include live speech amplified by an assistive device used by a person due to a disability;

"Community Event" means an event open to the public, including a public fair, public exhibition, public celebration, public sporting event, public concert; or a school board event;

"Construction" includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, moving, land clearing, earth moving, grading, excavating, the laying of pipe and conduit whether above or below ground level, street and highway building, concreting, equipment installation and alteration and the structural installation of construction components and materials in any form for any purpose, and includes any work in connection therewith;

"Conveyance" includes a vehicle and any other device employed to transport a person or persons or goods from place to place but does not include any such device or vehicle if operated only within the premises of a person;

"Council" means the Council for the Municipality;

"Municipality" means The Corporation of the Township of Ashfield-Colborne-Wawanosh;

"Normal Farm Practice" has the same meaning as contained in the Farming and Food Production Protection Act, 1998, S.O. 1998, C. 1, as amended, or any successor legislation;

"Point of Reception" means any point on the premises where sound originating from other than those premises is received;

"Settlement Area" means any area of the Municipality as designated Settlement Area by the Official Plan of the Municipality;

1.2 Any word or term not defined in this By-law, that is defined in the Ontario Ministry of the Environment Publication Noise Pollution Control NPC-101, 102, 103, 104, 115, 205, 206, 215 or 232 (as set out in Part 3 of this By-law) shall have the meaning ascribed to it in such NPC Publication.

PART 2 - QUALITATIVE NOISE PROHIBITIONS

General Prohibition

2.1 No person shall make, cause or permit an unreasonable noise, or a noise that is likely to disturb the inhabitants within a Settlement Area of the Municipality.

Prohibitions - Deemed

2.2 Without limiting the generality of section 2.1 of this By-law, the provisions of sections 2.3 through 2.4 shall be deemed to be unreasonable noise, or noise that is likely to disturb the inhabitants.

Prohibitions - Deemed

2.3 At any time or location in the Settlement Area of the Municipality:

Vehicle – Warning Device

(a) the sounding of any bell, horn, siren or other warning device on any motor vehicle or vehicle for an unnecessary or unreasonable period of time, except when permitted by law;

Vehicle – Excessive Noise

(b) the sound created by the operation of any motor vehicle that is used in such a manner as to create unreasonable noise for an unreasonable period of time or is noise that is likely to disturb the inhabitants.

Vehicle - Disrepair

(c) the grating, grinding or rattling sound caused by the condition of disrepair or maladjustment of any motor vehicle or vehicle or part or accessory thereof;

Vehicle – Improperly Secured Load

(d) the sound created by the operation of any motor vehicle, trailer or other vehicle bearing material, articles or things that are loaded upon such vehicle in such manner as to create excessive noise;

Vehicle - Exhaust

(e) the sound from the discharge into the open air of the exhaust of any steam engine, internal combustion engine (including the engine of any motor vehicle), or pneumatic device without an effective exhaust or intake muffling device in good working order and in constant operation that prevents excessive noises that are loud or explosive;

Vehicle - Speakers

(f) the sound from or created by any radio, amplifier, loud speaker, public address system, or equipment, device or instrument that emits sound when the same is used or operated from any motor vehicle, trailer or vehicle that is clearly audible at least 8 metres (25 feet) from the vehicle;

Attracting Attention - Advertising

(g) the sound from or created by any instrument, radio, amplification device, loud speaker, public address system, equipment or device that emits sound when the same is used or operated for the purpose of advertising or for attracting attention to any performance or sale, show or display of goods or services and projects such sound into any street or other public place;

Alarm – Warning Device

(h) the sounding of any alarm, bell, horn, siren or other warning device for an unnecessary or unreasonable period of time;

Amplified Sound

(i) the sound created by any electronic device or group of connected electronic devices incorporating one or more loudspeakers or other electro-mechanical transducers intended for the production, reproduction or amplification of sound, including but not limited to a radio, television, amplifier, loud speaker, public address system, sound equipment, that is clearly audible at a Point of Reception in a Settlement Area at any time;

Shouting, Yelling, Hooting, Whistling, Singing

(j) any shouting, yelling, loud hooting, loud whistling or loud singing that is clearly audible at a Point of Reception in a Settlement Area at any time;

Construction – Excavation – 9 p.m. to 7 a.m.

(k) the noise arising from Construction that is clearly audible at a Point of Reception in a Settlement Area between 9:00 p.m. and 7:00 a.m. of the following day (or 9:00 a.m. if the following day is Sunday);

Firearms – Discharge – 11 p.m. to 7 a.m.

(l) the sound caused by the discharge of any gun or other firearm, air gun, spring-gun of any class or type that is clearly audible at a Point of Reception in a Settlement Area between 11:00 p.m. and 7:00 a.m. of the following day (or 9:00 a.m. if the following day is Sunday), except if lawfully discharged by a peace officer in the performance of their duties;

Power Equipment – 11 p.m. to 7 a.m.

(m) the sound caused by the use or operation of a lawnmower, chain-saw, leaf- blower, or any other such noise-generating tool or device that is clearly audible at a Point of Reception in a Settlement Area between 11:00 p.m. of any day and 7:00 a.m. of the next following day (or 9:00 a.m. if the following day is Sunday).

PART 5 - ENFORCEMENT

Order to Discontinue Activity

5.1 If a municipal law enforcement officer or a police officer is satisfied that this by-law has been contravened, the officer may make an order, known as an Order to Discontinue Activity, requiring the person who contravened the by-law, or who caused or permitted the contravention, or the owner or occupier of the land on which the contravention occurred, to discontinue the contravention.

Order to Discontinue Activity - Particulars

5.2 An Order to Discontinue Activity shall set out:

(a) the municipal address of the property on which the contravention occurred;
(b) the date of the contravention;
(c) the reasonable particulars of the contravention of the by-law; and
(d) the date by which there must be compliance with the order.

Order to Discontinue Activity - Service

5.3 The Order to Discontinue Activity may be served personally on the person to whom it is directed or by regular mail to the last known address of that person, in which case it shall be deemed to have been given on the third day after it is mailed. Service on a corporation can be effected by registered mail to the corporate mailing address.

Contravention of Order

5.4 No person shall contravene an Order to Discontinue Activity.

Inspection Fee

5.5 (a) Where the municipal law enforcement officer determines that an activity producing noise or sound is not in compliance with this by-law or with an Order to Discontinue Activity, the fee or charge set out in the applicable Fees and Charges By-law for inspection may be imposed on the owner, or the person responsible for the noise or sound.

(b) The fees imposed constitute a debt of the person to the Municipality. The Municipality may add fees to the tax roll and collect them in the same manner as municipal taxes on any property for which all the owners are responsible for paying the fees.

Hinder or Obstruct

5.6 No person shall hinder or obstruct, or attempt to hinder or obstruct, any person who is exercising a power or performing a duty under this By-law, including carrying out an inspection.

By-law Enforcement

5.7 This by-law may be enforced by a Municipality municipal law enforcement officer or a police officer.

PART 6 – EXEMPTIONS

6.1 Despite any provision of this By-law, this By-law shall not apply to the following sounds arising from:

Police – Fire Services - Ambulance

(a) a vehicle of the provincial or federal police, fire department, or ambulance, while in performance of their duty;

Railway - Airport

(b) any activity that is integral to the operation of any railway or airport within the legislative authority of Parliament;

Public Necessity - Emergency

(c) a matter of public necessity or public emergency;

Municipal Equipment

(d) the operation of machines and equipment by or on behalf of the Municipality, including but not limited to snow removal equipment, road cleaning equipment, grass cutting or field maintenance equipment, tree and shrub pruning and mulching equipment, painting machines for crosswalks and highways;

Garbage & Recycling Collection / Disposal

(e) the collection or disposal of garbage, waste or recyclable material by or on behalf of the Municipality;

Municipal Construction Projects

(g) the operation of equipment in conjunction with Municipal Construction projects, Municipal general maintenance projects, and Municipal emergency maintenance projects;

Fireworks - Pyrotechnics

(h) the discharge of consumer fireworks, display fireworks or pyrotechnic special effects fireworks on Statutory Holidays;

Industrial Use in Industrial Zone

(i) activities from industrial uses located in lands zoned for industrial use if sound is in accordance with the terms and conditions of a valid Certificate of Approval, provisional Certificate of Approval or other approval issued under the Environmental Protection Act, R.S.O. 1990, c. E.19, where such approval addresses sound as a source of contamination;

Normal Farm Practice

(j) activities as part of a Normal Farm Practice and carried on as part of an Agricultural Operation;

Public Utilities

(k) operation of machinery by or on behalf of a public utility where work needs to be done to minimize service interruptions;

Public Election - Gathering

(l) the use in a reasonable manner of any apparatus or mechanism for the amplification of the human voice or of music in a public park or any other commodious space in connection with any public election meeting or other lawful gathering between 9:00 a.m. and 6:00 p.m.;

Community Event

(m) activities and noise as part of a Community Event if the Event is operating under written permission of the Municipality;

Parade – Band

(n) a military or other band in a parade if the parade is operating under written permission of the Municipality;

Snow Removal

(n) the use in a reasonable manner of vehicles and equipment when utilized for the clearing and the removal of snow from private property;

6.2 Despite any provision of this By-law, this By-law shall not apply where:

(a) a sound is from a facility that has been designed, developed, built, operated and maintained in accordance with the terms and conditions of a valid Certificate of Approval, provisional Certificate of Approval or other approval issued under the Environmental Protection Act, R.S.O. 1990, c. E.19, where such approval addresses sound as a source of contamination; or

(b) an order or permit has been issued under the Environmental Protection Act.

PART 7 - PENALTY

Guilty of Offence

7.1 (a) Any person who contravenes any provision of this By-law is guilty of an offence.

(b) A director or officer of a corporation who knowingly concurs in the contravention of this By-law is guilty of an offence.

Liability

7.2 Any person convicted under this By-law is liable:

(a) upon a first conviction, to a minimum fine of $175.00 and a maximum fine of $5,000.00;

(b) upon a subsequent conviction, to a minimum fine of $500.00 and a maximum fine of $10,000.00.

Liability - Corporation

7.3 Despite section 7.2, where the person convicted is a corporation, the corporation is liable,

(a) upon a first conviction, to a minimum fine of $175.00 and a maximum fine of not more than Ten Thousand Dollars ($10,000.00); and
(b) upon any subsequent conviction, to a minimum fine $1000.00 and a maximum fine of not more than Twenty-Five Thousand Dollars ($25,000.00).

7.4 If this by-law is contravened and a conviction entered, in addition to any other remedy and to any penalty imposed by the by-law, the court in which the conviction has been entered and any court of competent jurisdiction thereafter may make an order prohibiting the continuation or repetition of the offence by the person convicted.

PART 8 - MISCELLANEOUS

8.1 This by-law may be referred to as the "Noise and Sound By-law".

8.2 This by-law shall come into force and effect on the final passage thereof.

Read a FIRST and SECOND time this 3rd day of March, 2020.

Read a THIRD TIME and FINALLY PASSED this 3rd day of March, 2020.

_____

Glen McNeil, Mayor

_____

Mark Becker, CAO/ Clerk-Treasurer

THE CORPORATION OF THE TOWNSHIP OF
ASHFIELD-COLBORNE-WAWANOSH

BY-LAW NUMBER 20-2020

Being a bylaw to authorize the execution of a lease amending agreement between the Corporation of the Township of Ashfield-Colborne-Wawanosh, the Corporation of the Township of Huron-Kinloss, and the DentalCorp Health Services ULC, and Dr. Larry Podolsky Dentistry Professional Corporation for the Lucknow Medical Centre – Dental Suite.

WHEREAS Section 11(1) of the Municipal Act, S.O., 2001, c. 25, as amended, gives municipalities the authority to pass by-laws within their spheres of jurisdiction for services or things that the municipality considers necessary or desirable for the public good;

AND WHEREAS the Township of Ashfield-Colborne-Wawanosh and the Township of Huron-Kinloss are joint owners of the facility known as the Lucknow Medical Centre – Dental Suite;

AND WHEREAS the Council of the Township of Ashfield-Colborne-Wawanosh, as joint owner of the Lucknow Medical Centre, deems it desirable to enter into a lease agreement with the Township of Huron-Kinloss, DentalCorp Health Services ULC, and Dr. Larry Podolsky Dentistry Professional Corporation;

NOW THEREFORE, the Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh **ENACTS AS FOLLOWS:**

1. **THAT** the Mayor and Clerk are hereby authorized to execute the agreement attached hereto as Schedule A, which forms part of this by-law.

Read a FIRST and SECOND time this 3rd day of March, 2020.

Read a THIRD TIME and FINALLY PASSED this 3rd day of March, 2020.

_____
Mayor, Glen McNeil

_____
CAO/Clerk-Treasurer, Mark Becker

LEASE AMENDING AGREEMENT

THIS AGREEMENT made as of September 15, 2018 (the "**Effective Date**"). **BETWEEN:**

THE CORPORATION OF THE TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH and THE CORPORATION OF THE TOWNSHIP OF HURON-KINLOSS

(collectively, the "**Landlord**")

- and -

DENTALCORP HEALTH SERVICES ULC (FORMERLY DENTAL CORPORATION OF CANADA INC.) and DR. LARRY PODOLSKY DENTISTRY PROFESSIONAL CORPORATION (FORMERLY DR. MEIKLE DENTISTRY PROFESSIONAL CORPORATION)

(collectively, the "**Tenant**")

WHEREAS the Landlord and Dr. Derek Grundy Dentistry Professional Corporation entered into a lease dated September 16, 2008, for certain premises known municipally as 693 Havelock Street, Lucknow, Ontario (the "**Lease**");

AND WHEREAS by an Assignment and Assumption of Lease dated May 6, 2014, the Tenant assumed the Lease

AND WHEREAS the parties have agreed to amend and extend the Lease in accordance with the terms and conditions hereinafter set forth;

NOW THEREFORE in consideration of TWO DOLLARS ($2.00) and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties covenant and agree as follows:
Effective as of the Effective Date, the lease is amended as follows:

1. The Lease is extended for a further five (5) years (the "Extended Term") to be computed from September 15, 2018 and fully to be complete and ended on September 14, 2023;

2. The Premises is expanded to include the new kitchen space which is 103 square feet and includes access to the mechanical room as necessary. The total area of the Premises shall be 1,145 square feet, effective February 1, 2020 (the "Expansion Effective Date");

3. As of the Effective Date, rent shall be $716.41 per month, plus HST, which will increase January 1st of each proceeding year by 3%;

4. Effective February 1, 2020, the base rent for the Premises shall be $988.05 per month, plus HST, which will increase January 1st of each proceeding year by 3%;

5. All other terms of the Lease shall remain the same and in force and effect.

----------signature page to follow----------
-

IN WITNESS WHEREOF the parties have executed this Agreement.

THE CORPORATION OF THE TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH (LANDLORD)

Glen McNeil, Mayor

Mark Becker, CAO/Clerk-Treasurer
We have the authority to bind the corporation.

THE CORPORATION OF THE TOWNSHIP OF HURON-KINLOSS (LANDLORD)

Mitch Twolan, Mayor

Emily Dance, Clerk
We have the authority to bind the corporation.

DENTALCORP HEALTH SERVICES ULC (TENANT)

I have the authority to bind the corporation.

DR. LARRY PODOLSKY DENTISTRY PROFESSIONAL CORPORATION (TENANT)

I have the authority to bind the corporation.

TOWNSHIP OF
ASHFIELD–COLBORNE–WAWANOSH

COUNCIL REPORT

From: Florence Witherspoon, Deputy Clerk
Date: March 3, 2020
Subject: Kingsbridge Centre Municipal Night

RECOMMENDATION:
We seek your direction.

BACKGROUND:
In the fall of 2019, Council expressed interest in showcasing the Kingsbridge Centre by hosting a municipal theatre night, similar to what North Huron does with the Blyth Festival.

COMMENT:
In consultation with Jennifer Miltenburg of the Kingsbridge Centre, it was determined that there is great interest from the Kingsbridge Centre Board in organizing a Municipal Night.

Staff contacted North Huron and their arrangement with the Blyth Festival in hosting a Municipal Night is part of a marketing partnership. No monies are exchanged for the event. To that end, it is thought that this arrangement could work differently.

Staff proposes the following:

The Kingsbridge Centre will be performing Kingsbridge the Musical IV and would like to hold a Municipal Night on June 13th.

The Township would invite municipalities to attend the event with two complimentary tickets each. The Township would purchase these complimentary tickets. The Kingsbridge Centre, in return for hosting the event, would offer any additional tickets to the invitees at a discounted rate for the June 13th performance.

The Township would host a reception one hour before the performance. Kingsbridge Centre would provide the bartenders, and the Township would arrange for an array of treats for guests. A few volunteers would be needed to help arrange the reception.

Staff is recommending that should Council wish to proceed with hosting a Municipal Night at the Kingsbridge Centre, that the invitations be sent out to all lower tier municipalities in Huron, Bruce, Perth, and Middlesex.

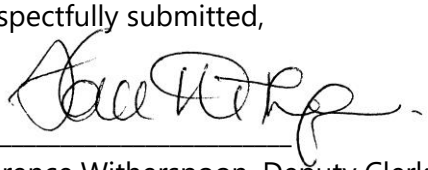
Bruce County	**Huron County**
Municipality of Arran Elderslie	Municipality of Bluewater
Municipality of Brockton	Municipality of Central Huron
Municipality of Kincardine	Municipality of Huron East
Municipality of Northern Bruce Peninsula	Municipality of Morris-Turnberry
Municipality of South Bruce	Municipality of South Huron
Town of Saugeen Shores	Town of Goderich
Town of South Bruce Peninsula	Township of Howick
Township of Huron-Kinloss	Township of North Huron

Middlesex County	Perth County
Municipality of North Middlesex	City of Stratford (Separated)*
Municipality of Southwest Middlesex	Municipality of North Perth
Municipality of Thames Centre	Town of St. Marys (Separated)*
Township of Adelaide Metcalfe	Township of Perth East
Township of Lucan Biddulph	Township of Perth South
Township of Middlesex Centre	Municipality of West Perth
Township of Strathroy - Caradoc	

The Complimentary Tickets, at $20 per ticket, including ACW Municipal Council would amount to $1,300. The reception would have a food budget of $1000. A total budget for the event would be $2,300.

OTHERS CONSULTED:
Jennifer Miltenburg, Kingsbridge Centre

Respectfully submitted,



Florence Witherspoon, Deputy Clerk

Please be advised of the following motion passed at the February 3, 2020 regular meeting of Council;

Moved by: Councillor Bazinet
Seconded by: Deputy Mayor Murdock

That a Goderich Municipal Airport Task Force be formed consisting of Taylor Lambert, John Marshall, 1 Town of Goderich Council representative, 1 Ashfield-Colborne-Wawanosh Council representative, and 1 Huron County Council representative, for the purpose of discussing the economic impact and future activities of the Goderich Municipal Airport for a term of up to 6 months, and that the Town of Goderich be the staff lead and that appropriate staff be added upon request as resources are needed and that the Motion of January 27, 2020 assigning two members of Goderich Council to the Airport Task Force be hereby repealed.

CARRIED

Please be advised the first meeting of the Goderich Municipal Airport Task Force will be on February 28th at 9:00 a.m., Menesetung Room, Goderich Town Hall.
An agenda will follow. Please forward this to the ACW and Huron County representative who have been appointed to the Committee and please provide their contact information.
Thank you,
Andrea

Andrea Fisher
Clerk/Planning Coordinator
Town of Goderich
519-524-8344 ext. 210

7.5.4

14.5

TOWNSHIP OF
ASHFIELD - COLBORNE - WAWANOSH

BY-LAW NUMBER 23-2020

BEING A CONSOLIDATED APPOINTMENT BY-LAW FOR THE TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH

WHEREAS the Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh deems it desirable to appoint members to various Township Committees and Positions;

NOW THEREFORE the Council of the Corporation of the Township of Ashfield-Colborne-Wawanosh ENACTS as follows;

1) The Corporation of the Township of Ashfield-Colborne-Wawanosh hereby adopts the list of Committees and Positions in the attached Schedule "A" to this by-law.

2) That this by-law shall come into full force and effect upon its final passage.

3) That this by-law be cited as the "Consolidated Appointment" by-law.

4) This by-law supersedes by-law 14-2020.

Read a FIRST and SECOND time this 3rd day of March, 2020.

Read a THIRD TIME and FINALLY PASSED this 3rd day of March, 2020.

_____

Mayor, Glen McNeil

_____

CAO/Clerk-Treasurer, Mark Becker

SCHEDULE "A"
BY-LAW NUMBER 23 - 2020

COMMITTEE/POSITION	APPOINTEE	TERM EXPIRES
Mid-Huron Landfill Site Board	Glen McNeil	Indefinite
Lucknow & District Joint Recreation Board	Jennifer Miltenburg Anita Snobelen Glen McNeil Alternate - Discretion of the Member	Indefinite Indefinite Indefinite
Lucknow & District Joint Fire Board	Glen McNeil Gloria Fisher Bill Vanstone Alternate – Discretion of the Member	Indefinite Indefinite Indefinite
Auburn Memorial Community Hall Board	Bill Vanstone	Indefinite
Lucknow Community Health Centre Board	Anita Snobelen Wayne Forster Alternate – Discretion of the Member	Indefinite
Dungannon Community Alliance	Jennifer Miltenburg	Indefinite
Coalition for Huron Injury Prevention	Wayne Forster	Indefinite
Maitland Valley Conservation Authority	Roger Watt	Indefinite
Goderich Fire Committee	Roger Watt	Indefinite
Performance Evaluation Review Committee	Glen McNeil Roger Watt	Indefinite
Planning Advisory Committee	All Members of Council	Indefinite
Fence Viewers	Bruce Fisher Bob Trick	Indefinite Indefinite
Livestock Evaluator	Bob Trick	Indefinite
Pound Keepers	John Finlay	Indefinite
Tile Drain Loan Inspector	Brian VanOsch	Indefinite
Drainage Superintendent/Inspector	Jeff Dickson, RJ Burnside and Staff	Indefinite
Weed Inspector	Allan Scott	Indefinite
Wingham Physician Recruitment Committee	Wayne Forster	Indefinite
St. Helen's Hall Board	Jennifer Miltenburg	Indefinite
Balls Bridge Committee	Bill Vanstone Anita Snobelen	Indefinite
Election Compliance Audit Committee	Jacquie Bishop Jack McLachlan Tom Prout Luanne Phair	Indefinite
Benmiller Community Hall Board	Gloria Fisher	Indefinite
Head of the Municipal Freedom of Information and Protection of Privacy Act	Roger Watt	Indefinite
Petrie Park Committee	Bill Vanstone	Indefinite
Alexandra Marine and General Hospital – Community Advisory Committee	Bill Vanstone	Indefinite
Property Standards Committee	All Members of Council	Indefinite
Source Protection Committee	Myles Murdock	Indefinite
Bank Erosion Committee	Roger Watt	Indefinite
Economic Development Committee	Glen McNeil Roger Watt Jennifer Miltenburg	Indefinite
Community Development Committee	Roger Watt Jennifer Miltenburg	Indefinite
Goderich Municipal Airport Task Force	Glen McNeil	Indefinite

Dear Council,

The year 2021 marks the 20th anniversary of the Ashfield-Colborne-Wawanosh amalgamation. As a community it is important to celebrate such occasions and appreciate and recognize the tremendous strides we have made as a municipality.

There are a number of community members who are interested in forming a planning committee to host an ACW Reunion. We acknowledge that it is important to have an event that aims to involve our diverse community as well as Service clubs and representatives.

We would ask that the Council of ACW approve a budget to host such an event, based on a rough proposal of some initial feedback.

1. We realize that location is key. We discussed different venues within the municipality that we felt may be suitable, and have concluded that Dungannon makes the most sense.
   A) it is fairly central to the municipality,
   B)incorporates 2 of the wards currently within the municipality,
   C)has an area suitable of significant space to accommodate parking, beer gardens, dance, washrooms etc. (as proven by other events that have been hosted there (ie. Tractor pull etc.)
2. Date is equally important. We feel it is important to make contact with other organizations who host yearly events (ie tractor pull, strawberry fest, rodeo, fall fair etc.) to ensure there are no conflicts, and that we choose a date that will be convenient for community members to attend.
   *****Our initial thoughts are July 2021
3. It is our hope to host a Friday night opening, followed by a Saturday scheduled events day, closing with a Saturday night dance. Some ideas include
   A) local service groups (St. Helen's, Benmiller, Port Albert, Dungannon, Kingsbridge) provide meals as fundraisers for their own cause (ie. Friday night fish fry, Saturday am brunch, Saturday night wing night/ or beef on a bun, could have a concession booth etc.)
   B) Friday night would be a local talent night. (however we would require a sound system)

C) Saturday parade and beer gardens (with DJ???)
D) Saturday night dance (hire a band …. Possibly “Full Nelsons”)

4. We could sell memrobilia (beer mugs, t-shirts etc.) with the ACW logo
5. We could even have an area with local vendors (for example the amish community)

We would hope to re-coup all costs to the ACW township budget (plus), but cannot ensure this.

Thank you for your time and consideration, we look forward to hearing from you.

Sincerely,

Julie Kuik

Helen VanOsch

Vanda McNeil

February 18/20

10.1

Mark.

I am handing in money raised from Roast Beef Dinner.

Profit was $1028.40

We are having a ham dinner for St. Patricks and our meeting for both events will be held after the second dinner.

As usual the money raised will be held in reserves for our playground project. We will vote on this @ our upcoming meeting. I will forward all bills after the meeting. I do not foresee any other bills owing from this event.

Call if you have any questions

Thanks

Barb Snowden

Chairperson

528-2279

St. Helen's Hall Roast Beef Supper

February 14/20

Income

Tickets sold 133 @ 20.00 each	2660.00
Donation @ door 5 p.m	60.00
Donation @ door 7 p.m	59.00
Donation after event Eilleen Miller	20.00
Extra food sold	120.00
Total income	$ 2919.00

Expenses

Desserts Lila 42 Kathy 36 Barb 30 Amy 24.	132.00
Armstrongs Bakery 17 dozen Rolls	74.80
Greens Meat MKt 4 steak Rsts 99.8 lbs	567.86
Greens 2 cases (8 Bags corn)	60.00
Valu Mart Freezer Bags. Gravy Mix, 2% milk	31.41
Red onion white onion	8.97
Ultra Mar 3 Bags Ice	54.07
Home Hardware Chafing Fuel	107.67
Valu-Mart - coffee, gravy flavouring, Tea Flour, Beef Broth, onion soup, Horseradish	
Butter for veg, creamer	42.20
H.O. Jerry Tablecloth, Dessert plates, glasses * used serviettes, coffee cups from Last event	46.34
Hortons Dairy - Butterpats for Rolls	30.00
Homegrown - potatoes 2/50lb Wingham	
Knights columbus coleslaw/dressing	135.27
	$ 1290.59

Profit from event $ 1628.40

Lucknow & District Joint Recreation Board

10.2

7:00 pm - Lucknow & District Sports Complex

January 22, 2020

MINUTES

MEMBERS

Jennifer Miltenburg	(X)
Lillian Abbott	(X)
Jim Hanna	(X)
Glen McNeil	(X)
Don Murray	(X)
Anita Snobelen – excused at 8:12 p.m.	(X)

OTHERS

Steve Bushell, Facility Manager / Recreation Co-ordinator	(X)
Mark Becker, CAO/Clerk-Treasurer (Board Secretary)	(X)

Shawn Ritchie and Cam Alton – Lucknow Agricultural Society

1.0 CALL TO ORDER

Mark Becker, Board Secretary, called the meeting to order.

1.1 Election of 2020 Chairperson

As per the terms of the agreement it is the Township of Ashfield-Colborne-Wawanosh's term to hold the chair.

Call for Nominations / Three Times

Moved by Don Murray
Seconded by Jim Hanna

NOMINATE CHAIR #1 THAT Glen McNeil be nominated for the 2020 Chairperson. Carried.

Moved by Glen McNeil
Seconded by Anita Snobelen

NOMINATE CHAIR #2 THAT Jennifer Miltenburg be nominated for the 2020 Chairperson. Carried.

Moved by Don Murray
Seconded by Jim Hanna

CLOSE NOMINATIONS #3 THAT the nominations be closed for the 2020 Chairperson. Carried.

Glen McNeil thanked his nominators, however declined the nomination.

Jennifer Miltenburg agreed to accept the nomination.

Moved by
Seconded by

2020 CHAIR #4 THAT Jennifer Miltenburg be appointed as the 2020 Chairperson. Carried.

The newly appointed Chairperson Jennifer Miltenburg chaired the remainder of the meeting.

2.0 DISCLOSURE OF PECUNIARY INTEREST / POTENTIAL CONFLICT OF INTEREST

None disclosed.

3.0 ADOPTION OF PREVIOUS MEETING MINUTES

Moved by Anita Snobelen
Seconded by Don Murray

ADOPTION OF MINUTES #5 THAT the Lucknow & District Joint Recreation Board hereby adopts the December 18, 2019 Meeting Minutes as written.

Carried.

4.0 DELEGATIONS

4.1 7:15 p.m. – Shawn Ritchie / Cam Alton - Lucknow Agricultural Society

The Lucknow Agricultural Society has requested to address the Board this evening with respect to waiving the room rental fee for a Mental Health First Aid training course in which they hosted, and plan to host again. We have provided the Board with a copy of their request. The room rental is $130 / day plus H.S.T. Shawn Ritchie addressed the Board.

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to waive the rental fee and adopt the following resolution.

The Board further agreed to have staff bring back a policy to an upcoming meeting for the Boards consideration on rental fees for Service Clubs.

Moved by Don Murray
Seconded by Anita Snobelen

LUCKNOW AG SOCIETY MENTAL HEALTH RENTAL FEE #6 THAT the Lucknow & District Joint Recreation Board hereby agrees to waive the rental fee for the January 3rd and 4th Mental Health First Aid Training Courses hosted by the Lucknow Agricultural Society as well as any future Mental Health Courses that the Lucknow Agricultural Society will be hosting in 2020.

Carried.

5.0 REPORT OF THE CHAIRPERSON

No report.

6.0 REPORT OF FACILITY MANAGER / RECREATION CO-ORDINATOR

6.1 Moffitness Agreement – 2020 Renewal Contract Agreement

We have provided the Board with a copy of the current agreement between the Board and Moffitness for the Fitness Centre. Starting in 2016, Moffitness was to pay a yearly fee of $600.00, with a 3% increase every year for the space used at the Lucknow & District Sports Complex to operate the Fitness Centre. In 2019, the Board asked for a revenue and expenditure report for the Fitness Centre and adjusted the rental increase to 5%, and would review for the 2020 contract. We have also provided the Board with a copy of their revenue expenditure report that was received from Moffitness for 2016, 2017, 2018 and 2019.

Staff recommends that the future agreement states that any current agreement will carry forward until a new agreement is reached. This will show due diligence and cover any incidents that occur between the expiry of the agreement and the commencement of a new agreement

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to renew the agreement by adding in the staff recommendation with respect to carrying forward until a new agreement is reached, adjust the rental fee each year by 5%, the agreement extending to the end of this Boards Term, and that Financials will be presented each year to the Board from Moffitness for their information purposes.

Staff will bring the revised agreement back to the next Board meeting for review and approval.

6.2 Lucknow & District Kinsmen Club – Paul Henderson Hall Rental Fees

We have provided the Board with a copy of the letter that was received from the Lucknow & District Kinsmen Club requesting that the Board waive the fees for the rental of Paul Henderson Hall for the 2020 Rec Hockey Tournament on January 17th & 18th.

Staff recommends that the rental fees for Paul Henderson Hall be waived for the 2020 Lucknow Kinsmen Rec Hockey Tournament. This recommendation is based on the fact that in the minutes of January 23, 2019, the Board agreed to waive the fees and review this decision yearly based upon receiving a formal written request from the Lucknow Kinsmen Club. The Lucknow & District Kinsmen Club is a major supporter of the Lucknow & District Joint Recreation Board with their continued sponsorships and donations.

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to adopt the following resolution.

Moved by Don Murray
Seconded by Anita Snobelen

LUCKNOW KINSMEN REC HOCKEY TOURNAMENT WAIVE HALL RENTAL	#7	THAT the Lucknow & District Joint Recreation Board hereby agrees to waive the rental fees for the Lucknow Kinsmen Club for the Paul Henderson Hall for their Kinsmen Rec Hockey Tournament held in January. This will be reviewed on a yearly basis upon receiving a formal written request from the Lucknow Kinsmen Club.

Carried.

6.3 Refund Policy

Staff has reviewed the past Minor Hockey refund policy and prepared a refund policy to cover all programs ran through the Lucknow and District Recreation Department. Having a set refund policy would eliminate the need to look at refunds on a case to case basis and create consistency among any refund request. We have provided the Board with the refund policy.

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to accept the policy as drafted and adopt the following resolution.

Moved by Jim Hanna
Seconded by Lillian Abbott

PROGRAM REFUND POLICY	#8	THAT the Lucknow & District Joint Recreation Board hereby approves the "Refund Policy" for all programs ran through the Lucknow & District Recreation Department as drafted and provided.

Carried.

6.4 Huron Bruce Minor Hockey Association (HMBHA) Request

We have provided the Board with a copy of the request received from HBMHA for the Arena Students to look after collecting gate admissions for minor hockey games. HBMHA would also like Arena Staff to be responsible for looking after the float, replenishing it as needed and keeping track of revenue. Staff has spoken with Huron-Kinloss Staff and neither party wishes to pursue this.

Staff recommends that HBMHA look at hiring their own staff to run the admission for hockey games rather than trying to run everything through the two Arenas. Furthermore, there is not enough staff to cover all the shifts that would be required to operate the gate admissions. Staff recommends that we do not take on this request.

STAFF COMMENTS: Staff recommends that we deny their request.

ACTION: The Board agreed with the staff comments to deny their request. Staff will advise the Huron Bruce Minor Hockey Association of the Boards decision.

6.5 Lucknow Minor Baseball Registration Rates

Staff has reviewed the current Lucknow Minor Baseball registration rates with the other organizations in the Tri County Softball League. We have provided the Board with a copy of the baseball registration rate comparison document. The Lucknow Minor Baseball registration fees were last increased in 2019.

Staff recommends some minor changes to some of the divisions for the 2020 Lucknow Minor Baseball Registrations as follows:

T Ball	$35
Mite	$65
Squirt	$90
Slo Pitch	$75

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to adopt the following resolution.

Moved by Jim Hanna
Seconded by Don Murray

APPROVE BASEBALL REGISTRATION 2020 #9

THAT the Lucknow & District Joint Recreation Board hereby approves the following 2020 Lucknow Minor Baseball Registration Rates amended registration fees for the balance of this Boards Term.

T Ball	$35
Mite	$65
Squirt	$90
Slo Pitch	$75

Carried.

6.6 Lucknow Minor Soccer Registration Rates

Staff has reviewed the current Lucknow Minor Soccer registration rates with the other organizations in the North Huron Soccer League and Saugeen Mixed League and have provided the Board with a copy of the soccer registration rate comparison document. The Lucknow Minor Soccer registration fees were last increased in 2016.

Staff recommends some minor changes to some of the divisions for the 2020 Lucknow Minor Soccer Registrations as follows:

U-18G	$105
U-18B	$105

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to adopt the following resolution.

Moved by Jim Hanna
Seconded by Don Murray

APPROVE SOCCER REGISTRATION 2020 #10

THAT the Lucknow & District Joint Recreation Board hereby approves the following 2020 Lucknow Minor Soccer Registration Rates amended registration fees for the balance of this Boards Term.

U-18G	$105
U-18B	$105

Carried.

6.7 Ice Rental Fees

Staff has gathered ice rental rates from surrounding areas and have provided the Board with a comparison document including the average cost of ice rentals in each category.

Staff recommends increasing the Prime-Time Ice Rental Rate to $135 per hour, and Non-Prime Time Ice Rental Rates to $85 per hour.

Staff has spoken with Huron-Kinloss staff in regards to Huron Bruce Minor Hockey Association (HBMHA) and both agree their rental rate should be equal and be raised to $95 per hour.

Staff also recommends increasing the Public Skating Sponsorship from $90 per hour to $95 per hour for the 2020/2021 season.

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to adopt the following resolution and review again next year.

Moved by Lillian Abbott
Seconded by Anita Snobelen

ICE RENTAL RATES #11 THAT the Lucknow & District Joint Recreation Board hereby approves the following amended 2020 Ice Rental Rates:

Prime-Time	$135 per hour
Non-Prime Time	$85 per hour
Huron Bruce Minor Hockey Association	$95 per hour
Public Skating Sponsorship	$95 per hour

Carried.

6.8 Ontario Trillium Grant Update

We have been advised that we have been approved for the Ontario Trillium Grant and that we can now publicly communicate about the grant and share that we have been successful in receiving $50,000 to go towards the Pool/Fitness Centre renovation. Staff has called for tenders for the completion of the project.

STAFF COMMENTS: For your information purposes.

ACTION: Noted.

6.9 Dungannon Baseball Diamond

The contract for the use of the Dungannon Ball Diamond is expiring June 1 2020. The Dungannon Agricultural Society has tried to fix the infield of the Ball Diamond, but it is still in very poor shape.

It is Staff's opinion that the 'Big O' that guards the top of the fence needs replaced before any team should be permitted to use the diamond, and more fence repairs are likely required.

Last year, the Dungannon Diamond was used for 10 women's games and 21 men's games. Of the 10 women's games, a Ball Diamond went unused in Lucknow on 9 of those nights. The one game that an intown Ball Diamond was not available for, a Ball Diamond was available on a different night that week. Therefore, all of the women's games could have been played in Lucknow rather than Dungannon, with 9 of them being played on the same day. Of the 21 men's games, a Ball Diamond in Lucknow sat empty 4 times on the same night Dungannon was used, and 4 more times on a different day in the same week that Dungannon was used. The men's Slo-pitch league currently has 8 teams and have 4 available Ball Diamond times in Lucknow per week, and the women's league currently has 7 teams and 4 available ball diamond times in Lucknow per week. This means that both leagues could fit all of their games in on our Lucknow Ball Diamonds.

Staff recommends that the contract for the use of the Dungannon Ball Diamond not be renewed.

STAFF COMMENTS: We seek your direction.

ACTION: The Board agreed to bring back the renewal for consideration. Chairperson Jennifer Miltenburg will speak to the Dungannon Agricultural Society in conjunction with Facility Manager, Steve Bushell, with respect to the list of items that need to be repaired.

6.10 5 Year Equipment Replacement Plan

We have provided the Board with a copy of the 5-year equipment replacement plan.

STAFF COMMENTS: For your information purposes.

ACTION: Noted.

6.11 2020 Proposed Draft Budget

We have provided the Board with a copy of the proposed draft 2020 Budget for the Lucknow & District Joint Recreation Board. Staff will review the budget in more detail at our meeting with discussion and possible revisions.

We have also included a list of Capital Project recommendations in the 2020 Proposed Draft Budget. The Capital Project recommendations include the following:

Pool Filtration Sand:
The Filtration Sand for the Pool is due to be replaced.

Pool Change Room Renovations / Accessibility:
In 2019, $22,500 was budgeted to assist in accessibility upgrades to the Pool and Fitness Centre. This work will be completed in 2020 now rather than 2019. The quote received for the OTF grant did not include flooring for the pool, or any lighting upgrades. The Pool renovation cost vs. the Fitness Centre renovation cost are approximately 60/40 so the costs have been split accordingly. The Pool Budget has been increased to allow for updated costs, flooring, lighting upgrades and extras. The Budget for the Fitness Centre has been increased slightly to allow for updated costs and any extras that may arise. Lighting upgrades for the Fitness Centre have been budgeted with the lighting project. The OTF grant for this program was approved for $50,000.

Sprinkler System Backflow Preventor:
A backflow preventor is a requirement on sprinkler system to prevent the black sprinkler water that sits in the piping from going backwards into the drinking water of the town/building. Since the Walkerton Water event, all new sprinkler systems require a backflow device and now municipalities are working through existing buildings to get these devices added to existing systems.

Zero Turn Lawn Mower:
The current zero turn lawn mower was purchased in 2006 and is due for replacement. Staff recommends purchasing a new lawn mower and keeping the old lawn mower to use as an extra. A second lawn mower would be extremely helpful to Staff as most mornings the lawn mower was gone to use in Dungannon and Benmiller meaning that intown grass would need to be left until the mower returned. The old lawn mower would be well suited for use while watering flowers, taking to Benmiller for dragging Ball Diamonds and for use in Dungannon if we continue to maintain the Dungannon Diamonds. This would keep the new lawn mowers hours down for activities were grass was not necessarily being cut, but the lawn mower is required. Additionally, Grass cutting could be better kept up on if a lawn mower is available for use rather than being out of town.

Engineer Approved Ramp for Stage:
In 2018 the homemade wooden stage that was used at the Lucknow & District Sports Complex was condemned following an inspection and recommendation by the insurance company for Huron-Kinloss. A new engineered approved stage at the Lucknow & District Sports Complex was deemed necessary for events including the Fall Fair, 4-H Dairy Cattle Show, Stag & Does, Minor Hockey Banquet, and other special events. However, at the time of purchasing the Stage, no ramp for accessibility was purchased. This leaves staff to use the homemade wooden ramp for events requiring an accessibility ramp to the stage.

New Door to Ice for Half Ice Boards:
In 2019, younger hockey groups started to play half ice hockey. To do this properly, half ice boards are required and were purchased and donated by the Robert Nash Memorial Golf Classic. As hockey moves forward, the half ice boards will be used more frequently, which will require more set up and take down. The half ice board system consists of 4 corner pieces and 10 board sections that are 40” H x 96” W, and a fair lift for two people to maneuver through the Visitors team bench to get on the ice surface. Staff recommends making the far removable board section into a door so persons setting up the half ice boards could more easily transfer the board sections onto the ice surface. This would save having to maneuver through the small door leading into the Visitors bench and then having to make a sharp turn through the door leading to the ice.

Manual Chain Hoist and Repairs for Overhead Doors:
The overhead door on the South side of the building is used for many events between spring and fall. The door is extremely heavy, and there is no safety mechanism in place to hold the door open other than relying on the tension cables and springs. The door has needed constant adjustment over the past few years and is becoming wore out. Replacing the door spring system and adding a manual chain hoist would allow the door to be opened and closed safely and controlled. This would also allow the door to be locked in place with the chain links, eliminating the risk of the door closing unexpectedly. A manual chain hoist is also recommended on the West overhead door(s) used for the Olympia.

Lighting Upgrades:
Upgrading to LED lighting will help reduce energy costs, create a more clear and clean light, and give a new appearance to the interior of the Lucknow and District Sports Complex. Staff Has looked into grants/rebates and found that approximately $10,000 to $15,000 in Save On Energy rebates would be available.

STAFF COMMENTS: We seek your direction.

Moved by Jim Hanna
Seconded by Glen McNeil

APPROVE 2020 BUDGET #12 THAT the Lucknow & District Joint Recreation Board hereby approves the 2020 Budget in the total amount of $780,825.00.

Carried.

6.12 Municipal Property

Please refer to the “In-Camera Session” (the security of property of the municipality)

6.13 Personal Matters About an Identifiable Individual / Municipal or Local Board Employee

Please refer to the “In-Camera Session” (personal matters)

7.0 ACCOUNTS

7.1 Revenue/Expenditure Report

Please note that this is not final for 2019 with a final following to our next meeting.

Moved by Jim Hanna
Seconded by Don Murray

REVENUE/ EXPENDITURE REPORT #13 THAT the Lucknow & District Joint Recreation Board hereby accepts the Revenue/Expenditure Report as written.

Carried.

7.2 December 2019 Cheque Listing

Moved by Glen McNeil
Seconded by Lillian Abbott

CHEQUE LISTING #14 THAT the Lucknow & District Joint Recreation Board hereby accepts the cheque listing for December 2019 as presented in the total amount of $ 57,543.31.

Carried.

8.0 OTHER BUSINESS

No items scheduled.

9.0 IN-CAMERA / CLOSED SESSION

Moved by Jim Hanna
Seconded by Don Murray

MOVE TO IN-CAMERA #15 THAT the Lucknow and District Joint Recreation Board move into an “In-Camera” session at 8:43 p.m. for the purpose of discussing:

1) Personal matters about an identifiable individual, including municipal or Local board employee.
2) The security of property of the municipality.

Carried.

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9.1 RETURN TO OPEN SESSION

Moved by Glen McNeil
Seconded by Lillian Abbott

RISE FROM IN-CAMERA #16 THAT the Lucknow and District Joint Recreation Board rise from the “In- Camera” session at 8:59 p.m.

Carried.

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9.2 BUSINESS ARISING FROM IN-CAMERA / CLOSED SESSION

Municipal Property
(the security of property of the municipality)

ACTION: The Board agreed to proceed as outlined in the “In-Camera” Session.

Personal Matters About an Identifiable Individual / Municipal or Local Board Employee
(personal matters)

ACTION: The Board agreed and approve the wages as presented in the “In-Camera” Session for Pool and Bar Staff.

ACTION: The Board agreed to proceed to hire a “Summer Student” as presented in the “In-Camera” Session.

10.0 ADJOURNMENT

Moved by Don Murray
Seconded by Lillian Abbott

ADJOURN #17 THAT the Lucknow and District Joint Recreation Board do now adjourn to meet again on February 19, 2020 at 7:00 p.m. or at the Call of the Chairperson.

Carried.

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Chair, Jennifer Miltenburg Secretary, Mark Becker

THE CORPORATION OF THE TOWNSHIP OF
ASHFIELD-COLBORNE-WAWANOSH

BY-LAW NUMBER 24-2020

BEING A BY-LAW TO CONFIRM THE PROCEEDINGS OF THE CORPORATION OF THE TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH AT ITS MEETING HELD ON MARCH 3, 2020.

WHEREAS by the Municipal Act, 2001 the powers of a municipal corporation are to be exercised by its Council;

AND WHEREAS by the Municipal Act, 2001, the powers of every Council are to be exercised by its by-laws;

AND WHEREAS it is deemed expedient that the proceedings of the Council of The Corporation of the Township of Ashfield-Colborne-Wawanosh at its meeting be confirmed and adopted by by-law;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF ASHFIELD-COLBORNE-WAWANOSH ENACTS AS FOLLOWS:

1. The action of the Council of The Corporation of the Township of Ashfield-Colborne-Wawanosh at its meeting held on the 3rd day of March in respect to each motion and resolution passed, and other action taken by the Council of The Corporation of the Township of Ashfield-Colborne-Wawanosh at its meeting, is hereby adopted and confirmed as if all such proceedings were expressly embodied in this by-law.

2. The Mayor and Clerk are authorized and directed to do all the things necessary to give effect to the action of the Council of The Corporation of the Township of Ashfield-Colborne-Wawanosh referred to in the preceding section hereof.

3. The Mayor and the Clerk are authorized and directed to execute all documents necessary in that behalf and to affix thereto the seal of The Corporation of the Township of Ashfield-Colborne-Wawanosh.

Read a FIRST and SECOND time this 3rd day of March, 2020.

Read a THIRD TIME and FINALLY PASSED this 3rd day of March, 2020.

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Mayor, Glen McNeil

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CAO/Clerk-Treasurer, Mark Becker