



**TOWNSHIP OF WEST LINCOLN
PUBLIC WORKS/RECREATION/ARENA COMMITTEE
AGENDA**

MEETING NO. TWO

Tuesday, February 16, 2021, Immediately following the Administration/Finance/Fire Committee Meeting

Township Administration Building

318 Canborough Street, Smithville, Ontario

**** NOTE TO MEMBERS OF THE PUBLIC:** Due to efforts to contain the spread of COVID-19 and to protect all individuals, the Council Chamber will not be open to the public to attend Council meetings until further notice.**

Submission of Public Comments/Virtual Attendance: The public may submit comments for matters that are on the agenda or request to attend the virtual meeting as "Attendees" by emailing jscime@westlincoln.ca by February 16, 2021 before 4:30 pm. Email comments submitted will be considered as public information and read into public record. The meeting will be recorded and available on the Township's website within 48 hours of the meeting, unless otherwise noted.

Pages

- 1. CHAIR - Councillor Harold Jonker**
- 2. CHANGE IN ORDER OF ITEMS ON AGENDA**
- 3. DISCLOSURE OF PECUNIARY INTEREST AND/OR CONFLICT OF INTEREST**
- 4. APPOINTMENTS**

There are no appointments/presentations.

- 5. REQUEST TO ADDRESS ITEMS ON THE AGENDA**

NOTE: Procedural By-law Section 10.13(5) – General Rules

One (1) hour in total shall be allocated for this section of the agenda and each individual person shall only be provided with **five (5) minutes** to address their issue (some exceptions apply). A response may not be provided and the matter may be referred to staff.

The Chair will inquire if the IT Manager is aware if there were any members of the public who were in attendance virtually on the Zoom meeting call that wished to address a specific item on tonight's agenda, if so please raise your hand using the prompts found in the Zoom Options. Additionally, the Chair will ask the Clerk if she received any emails or correspondence from a member of the public prior to 4:30 p.m. today, that

wished to provide comments to any items on the agenda as permitted by Section 6.7 of the Procedural By-law.

6. **CONSENT AGENDA ITEMS**

NOTE: All items listed below are considered to be routine and non-controversial and can be approved by one resolution. There will be no separate discussion of these items unless a Council Member requests it, in which case the item will be removed from the consent resolution and considered immediately following adoption of the remaining consent agenda items.

6.1. **ITEM PW05-21**
CONSENT AGENDA ITEMS

RECOMMENDATION:

That the Public Works/Recreation/Arena Committee hereby approves the following Consent Agenda Items:

1. Items 1, 2, 3, 4, 5, 6, 7 and 8 be and are hereby received for information;

with the exception of Item #(s)_____

| | | |
|----|---|----|
| 1. | West Lincoln Public Library Board - January 8, 2021 Minutes | 4 |
| 2. | West Lincoln Santa Claus Parade Committee Minutes - December 16, 2020 | 8 |
| 3. | West Lincoln Santa Claus Parade Committee Minutes - December 21, 2020 | 10 |
| 4. | Information Report PW-01-2021 - 2021 Capital Budget for Plow Trucks | 11 |
| 5. | Information Report PW-02-2021 - Township of West Lincoln 2020 Water Quality Annual Report | 14 |
| 6. | Information Report PW-03-2021 - Township of West Lincoln 2020 Water Distribution System Annual Report | 23 |
| 7. | Information Report PW-04-2021 - 2020 MECP Annual Water Inspection | 35 |
| 8. | Information Report PW-05-2021 - Township of West Lincoln 2020 DWQMS Management Review Summary | 61 |

7. **COMMUNICATIONS**

There are no communications.

8. **STAFF REPORTS**

There are no staff reports.

9. **OTHER BUSINESS**

9.1. **ITEM PW06-21**

Members of Council

Re: Other Business Items of an Informative Nature

10. NEW BUSINESS

NOTE: Only for items that require immediate attention/direction and must first approve a motion to introduce a new item of business. (Motion Required)

11. CONFIDENTIAL MATTERS

There are no confidential matters.

12. ADJOURNMENT

The Chair declared the meeting adjourned at the hour of [time]

MINUTES

WEST LINCOLN PUBLIC LIBRARY BOARD MEETING

Meeting #1: Friday, January 8, 2021 10am
Zoom

PRESENT:

| | |
|--------|--|
| Board: | Cheryl Ganann Judi Kelly Sue Langdon Pat Nelson Joan Packham Karen Parker Wendy Wilson |
| Staff: | Vanessa Holm, Library CEO |

ABSENT: Julie Adams

CONFLICT OF INTEREST:

There were no disclosures of pecuniary interest or conflicts of interest declared by any Members of the West Lincoln Public Library Board.

1. Review and acceptance of minutes of the December 11, 2020 regular meeting

Moved by Wendy Wilson and seconded by Cheryl Ganann:

That the minutes of the December 11, 2020 West Lincoln Public Library Board meeting be accepted as presented.

-Carried.

2. Library Business

a) Library Closure and COVID-19 Update

The CEO provided an update on the status of the Library Closure in relation to COVID-19. Items of discussion included but were not limited to:

-Discussion of the Province's shut-down and how it relates to West Lincoln Public Library; the Library will operate by curbside appointment only. So far, curbside has been extremely busy, with most appointment slots filled.

b) Super Conference Registration for OLBA members

The CEO provided a reminder that any Board members who would like to register for Super Conference should let her know.

c) Professional Development

The CEO provided a report submitted by Peggy Madsen outlining Library staff tuition reimbursement.

Moved by Sue Langdon and seconded by Pat Nelson:

-That Library staff be reimbursed half of their tuition expenses, as per Library Policy 2.4 Tuition Reimbursement.

-Carried.

3. Financial Matters

a) Budget Status Report

Library CEO presented the budget status report.

Moved by Karen Parker and seconded by Judi Kelly:

That the Budget Status Report, dated October 31, 2020, be received for information.

-Carried.

b) 2021 Draft Capital Budget

Moved by Karen Parker and seconded by Wendy Wilson:

That the 2021 draft Capital Budget be accepted as presented, and forwarded to the Finance Department.

-Carried.

4. Closed Session

a) Library staffing update

Moved by Cheryl Ganann and seconded by Pat Nelson:

That, the next portion of this meeting be closed to the public, at the time of 10:34am to consider the following pursuant to Section 239(2) of the Municipal Act 2001:

(a) CEO (Vanessa Holm)

Re: Personnel Matter – Library staffing update

Applicable closed session exemption(s):

-personal matters about an identifiable individual, including municipal or local board employees; and,

-labour relations or employee negotiations.

-Carried.

Moved by Cheryl Ganann and seconded by Pat Nelson:

That, this West Lincoln Public Library Board meeting does now resume in open session at the time of 11:01am.

- Carried.

5. CEO's Report – December 2020

Library CEO presented the December 2020 CEO's Report.

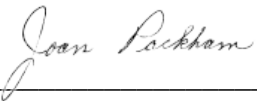
6. Correspondence

7. Set next meeting date – Feb 12, 2021 at 10am

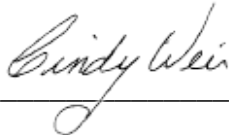
Meeting will take place via zoom, or in person, depending on developments from the Province and/or Public Health.

8. Adjournment

The Library Board meeting was adjourned at 11:12am.



JOAN PACKHAM, CHAIR



CINDY WEIR, CEO

CEO's Report – December 2020

Recorded Library Uses December 2020

E-books: 1391 check-outs

Circulation: 2246 loans

Social Media and Website:

Twitter

| | |
|---|--------------|
| Impressions (times displayed for viewers) | 5204 |
| Engagement (any interaction with tweets) | 67 |
| Number of posts | 19 |
| Most Popular Tweet | LiNC is live |

Facebook

| | |
|--|------------------------|
| People who saw content | 10112 |
| People clicking or engaging with content | 579 |
| Number of Posts | 36 |
| Most popular post | Ugly Christmas Sweater |
| Viewers over 1 minute (program attendance) | 114 |

Instagram

| | |
|-------------------|------------------|
| Posts | 20 |
| Post interactions | 159 |
| Followers | 699 |
| Most popular post | Elf on the shelf |

Website

| | |
|------------|------|
| Page views | 2242 |
|------------|------|

| | |
|---------------------------------|----|
| WebEx Program Attendance | 18 |
|---------------------------------|----|

In Person Program attendance/kit pickup: 120



Committee Meeting Minutes December 16, 2020 @ 7:00 PM

Location: via Zoom meeting

Chair: Nicole Scime

Secretary: Bev Packham

Committee Members present: Nicole, Joel, Carol, Bill, Scott W., Chuck, Wendy, Jeni, Chantel, Bev

Regrets: Roxanne, Vicky

Meeting commenced: 7:00 p.m.

Confirm Quorum: Yes

Secretary's Report:

Motion to accept the minutes of the last meeting Dec. 2, 2020

M/S Carol/Chantel

Carried

Treasurer's Report:

- Credit Card/RBC Issues - not returning calls or e-mails
- Balance \$9,588
 - Still waiting to receive \$500 from Marz and \$500 from Meesters
 - Will bring balance to \$10,588
 - Waiting for businesses to cash prizes, finishing off 1 in 16 prizes = \$1000
 - After \$3,000 in grand prizes balance will be = **\$6,588**
- Do we want to add a second and third prize for the residential categories?
 - e.g. 2nd Prize 4 x \$250 = \$1000 & 3rd Prize 4 x \$150 = \$600
 - Which would bring us too roughly \$4,988

Motion to add a second and third prize for the residential categories as set out above.

M/S Scott W./Bill

Carried

- Do we want to round up to 20 for entry prizes? (roughly \$400)

Motion to round up to 1 in 20 for entry prizes.

M/S Carol/Bev

Carried

Old Business:

- 1 in 16 prizes:
 - 1. \$100 Low Hive gift certificate (\$100)
 - 2. \$75 to pizzeria (\$100)
 - 3. \$75 to pizzeria (\$50 donated)
 - 4. \$100 to Touchdowns (\$100)
 - 5. \$100 to Touchdowns (donated)
 - 6. \$100 to Vitality (\$100)
 - 7. 3 month membership to ICON (\$100)
 - 8. 3 month membership to ICON (donated)
 - 9. Full interior and exterior car clean Royal Mint (\$130)
 - 10. Four passes to Safari Niagara (donated)
 - 11. Sweets & Treats basket #1 - \$25 worth of Alexander's fudge (donated by Scott W), two pies from Catholic Women's League (donated), candle from Deliciously Wicked (\$20)
 - 12. Sweets & Treats basket #2 - \$25 worth of Alexander's fudge (donated by Scott W), two pies from Catholic Women's League (\$25), candle from Deliciously Wicked (\$20)
 - 13. \$100 to Three D Beauty (\$100)
 - 14. \$100 to Nino's Pizza (\$100)
 - 15. \$100 to Flat Top Grill (\$100)
 - 16. \$100 to Beneath the Sun Alpaca's Store (\$100)
- Boost posts - PayPal \$10.00 USD charge. Nicole will set up PayPal account to boost map of competitors and competition results
- KM Coverage - Nicole will be emailing each member as to whether they would like to be a judge. Noting that there will be no reimbursement for Km as discussed tonight.

New Business:

- Contest entries as of tonight - 103 entries registered
- Map - because there are so many entries we will have 2 maps. One Rural and one Town. Which will be available to everyone online
- Judging - Joel - the 8 categories will be divided between judges
- Newspapers - publishing map, success of the contest, etc. Bill has been in touch with Tristan of News Now. He is willing to publish a story with pictures. Deadline to get pictures to him is Jan. 7th/21
- Next year's parade - thoughts on attempting to switch to an evening parade. Everyone give it some thought for our next meeting.

Meeting Adjourned: 7:50 p.m.

Next Meeting: Monday, Dec. 21st at 7:00 p.m.

Committee Meeting Minutes



Dec. 21, 2020 7:00 P.M.

Location: via Zoom meeting

Chaired by: Nicole Scime

Secretary: Bev Packham

Attendance: Nicole, Chuck, Carol, Roxanne, Jeni, Vicky, Chantel, Scott, Bill, Wendy, Bev

Quorum Confirmed: Yes

Old Business:

Update for 1 in 20 - Smithville Garage - 2 oil changes

John's Auto

Home Hardware, Nicole will get a \$100 gift card

List of Winners and Map - Both to be put on social media for those that would like to go out and see the winners.

New Business:

Announcement of Winners - do something pre-recorded with Santa announcing winners of the contest as well as 1 in 20 prizes. Scott offered to be Santa and Chuck said could possibly get a Santa suit. Scott and Chuck will coordinate this.

Stolen Santa's - Scott W. many thefts lately. Should we warn people so neighbours aren't calling the police on the judges? It was suggested an email go out to all contestants to remind people we will be driving by and stopping in front of their homes. If they have any concerns about suspicious vehicles they can email us and we could confirm it was us out judging at that specific day and time.

Meeting Adjourned: 7:45 p.m.

Next Meeting: Tuesday, Dec., 29/20 at 7:00 p.m.

DATE: February 16, 2021
REPORT NO: PW-01-2021
SUBJECT: **2021 Capital Budget for Plow Trucks**
CONTACT: Mike DiPaola, P Eng., Director of Public Works & Recreation
Steve McGean, ORO, CRSS, Manager of Operations

OVERVIEW:

- As part of the Township's Equipment Capital Budget, Council approves funding for the replacement of Plow Trucks. Staff then drafts and circulates tender documents for the purchase of the new trucks annually when it is required.
- The impact of the COVID-19 pandemic has dramatically increased the time it takes to receive a plow truck after it is ordered.
- The normal manufacturing time previous to COVID-19 was between 8 to 12 months for a plow truck once ordered. The current manufacturing time is now 24 + months.
- The 2020 Capital Budget and Forecast, included 3 trucks over the next 3 years as follows:
 - 2021 - Project #255 - Replace Tandem Axle Plow Truck
 - 2022 - Project #608 - Addition to Fleet; Single Axle Plow Truck
 - 2023 - Project #265 - Replace Tandem Axle Plow Truck
- Due to the rationale laid out in this Report, the three plow trucks identified above have all been included as a 2021 Capital Expenditure Request

RECOMMENDATION:

1. That, Report PW-01-2021, re: 2021 Capital Budget for Plow Trucks, dated February 16, 2021 be received

ALIGNMENT TO STRATEGIC PLAN:

Theme # 6

- Efficient, Fiscally Responsible Operations

BACKGROUND:

Purchasing replacement or additional plow trucks is an on-going task funded by the Equipment Reserve fund and DC charges respectively. After a Truck Tender is awarded to a company, the delivery time of the trucks has been a fairly consistent time frame. Trucks are usually delivered between 8 to 12 months after ordering.

Once the Capital Budget is approved, tender documents are circulated, and the tender award is brought to Public Works Committee and Township Council for approval. Once the tender award is approved by Public Works Committee and Township Council, a purchase order is created and submitted to the successful Tenderer. This entire process is usually completed during the same year.

CURRENT SITUATION:

The COVID-19 Pandemic has forced many manufacturing plants to close for a period of time. These closures and other pandemic restrictions have had a serious ripple effect throughout the entire manufacturing process. Trucks that are ordered today now have an expected delivery date of 24+ months.

This now means that the Township will be getting trucks at least a year later than normally expected. This has significant impacts on the Township's fleet and creates a higher level of liability for the Township.

Trucks that are at/or near their life expectancy generally have a much higher failure rate and put the Township at risk. The demand for plow trucks is currently very high and has driven the prices in an upward fashion beyond normal inflation increases.

The 2020 Capital Budget and Forecast, included 3 trucks over the next 3 years as follows:

- 2021 - Project #255 - Replace Tandem Axle Plow Truck
- 2022 - Project #608 - Addition to Fleet; Single Axle Plow Truck
- 2023 - Project #265 - Replace Tandem Axle Plow Truck

In an effort to secure lower prices and reduce the Township's risk for liability; Staff have included the three plow trucks mentioned above in the 2021 Capital Budget. This approach and strategy will secure our place in the manufacturing process to ensure the Township receives the necessary trucks when they are needed.

Trucks that are ordered do not have an immediate financial impact. Payment for trucks is due upon delivery, not when the truck is ordered. Since the manufacturing timeline is currently in the order of 24+ months, the delivery date for the trucks ordered in 2021 will be circa 2023.

This plan and approach would have no extra financial impact and would provide for better pricing, as the Township could leverage economies of scale and secure 2021 prices. This plan would also keep the Township's fleet at an optimal service level and avoid more risk and liability.

Some municipalities take this approach to purchasing plow trucks. The City of Hamilton and the City of Burlington are a couple good examples and they generally commit to a 5 year tender document which allows them to purchase plow trucks in a 5 year period from one tender document. This method assures lower pricing and the ability to fluctuate purchasing with changing market conditions.

FINANCIAL IMPLICATIONS:

The 2020 Capital Budget and Forecast included the following plow trucks in the first 3 years as follows:

2021

- Project #255
- Tandem Axle Plow Truck Replacement
- \$315 000 transfer from Equipment Reserve

2022

- Project #608
- Single Axle Plow Truck Addition to Fleet
- \$300 000 transfer from DC Charges Roads

2023

- Project #265
- Tandem Axle Plow Truck Replacement
- \$320 000 transfer from Equipment Reserve

As per the rationale laid out in this Report, the three plow trucks identified above have all now been moved to the 2021 budget year.

The Contribution to the Equipment Reserve over the years 2021 to 2023 is planned to ensure that sufficient funds are in place at the time of anticipated delivery in 2023.

INTER-DEPARTMENTAL COMMENTS:

This report has been reviewed with the Treasurer/Director of Finance and CAO.

CONCLUSION:

In an effort to secure lower prices and reduce the Township's risk for liability; Staff have included the three plow trucks mentioned in this Report in the 2021 Capital Budget.

This approach and strategy will secure our place in the manufacturing process to ensure the Township receives the necessary trucks when they are needed.

Prepared & Submitted by:

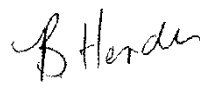


Steve McGean, ORO, CRSS
Manager of Operations



Mike DiPaola, P.Eng
Director of Public Works & Recreation

Approved by:



Beverly Hendry
Township CAO

DATE: February 16, 2021

REPORT NO: PW-02-2021

SUBJECT: Township of West Lincoln 2020 Water Quality Annual Report

CONTACT: Steve McGean CRSI, ORO, Manager of Operations

OVERVIEW:

- Under the requirements of O. Reg. 170 made under the Safe Drinking Water Act, the owner of a drinking water system is required to prepare an Annual Report and make it available free of charge to any persons requesting a copy.
- This report is being provided to Council supplementary to regulatory requirements.
- A copy of this report is attached.

RECOMMENDATION:

1. That, report PW-02-2021, re: Township of West Lincoln 2020 Water Quality Annual Report, dated February 16, 2021, be received for information.

ALIGNMENT TO STRATEGIC PLAN:

Theme #5

- Community Health and Safety

Theme #6

- Efficient, Fiscally Responsible Operations

BACKGROUND:

The delivery of potable water in Ontario is regulated by the Ministry of the Environment, Conservation and Parks (MECP) under the Safe Drinking Water Act, 2002. On June 1, 2003, O. Reg. 170/03, Drinking Water Systems, came into effect. This regulation prescribes requirements for owners and operators of municipal drinking water systems.

Under the requirements of O. Reg. 170/03 made under the Safe Drinking Water Act, the owner of a drinking water system is required to prepare an Annual Report no later than February 28 of each year and make it available free of charge to any persons requesting a copy.

This Regulation also requires the owner to produce an Annual Report. This report must include the following:

- Description of the system
- Summary of all required testing results
- Summary of any adverse water quality reports and corrective actions
- Description of any major expenses incurred to install, repair or replace required equipment

CURRENT SITUATION:

The Smithville Distribution System has approximately 34 km of water mains, serving approximately 5945 residents; the system contains about 257 hydrants and 308 valves.

The Township also owns and operates a bulk fill station to serve the rural population as well as a small container fill station.

All Township owned services are protected by backflow devices.

Smithville receives its treated water from the Grimsby Water Treatment Plant which is owned by the Regional Municipality of Niagara (MOE waterworks #220007150).

Distribution Water is sampled for Microbiological and Chemical parameters and chlorine residuals. These samples are done weekly and quarterly by Licensed Township water operators.

There was one adverse sample in 2020 within the distribution system. A hydrant sample had a parameter of TC 1, which is very indicative of a sampling error. All other samples taken were within ministry standards. The water operators follow all policies and procedures while sampling.

The distribution system added approximately 750 metres of new water main.

The Township of West Lincoln's 2020 Water Quality Report is being provided to Council for information purposes.

The report has been made available to the public.

FINANCIAL IMPLICATIONS:

There are no financial implications as a result of this report.

INTER-DEPARTMENTAL COMMENTS:

Not Applicable

CONCLUSION:


In conclusion, Township of West Lincoln 2020 Water Quality Annual Report is being provided to Council for information purposes and to advise them that the report has been made available to the public.

Prepared & Submitted by:



Steve McGean, ORO, CRSS
Manager of Operations

Approved by:



Beverly Hendry
Township CAO

Attachment A: 2020 Annual Drinking Water Report



ATTACHMENT A: OPTIONAL ANNUAL REPORT TEMPLATE

| | |
|--|-----------------------------------|
| Drinking-Water System Number: | 260002876 |
| Drinking-Water System Name: | Smithville Water Distribution |
| Drinking-Water System Owner: | Township Of West Lincoln |
| Drinking-Water System Category: | Class 1 |
| Period being reported: | January 1 2020 – December 31 2020 |

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [] No [x]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No []

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of West Lincoln:
Administrative Building
318 Canborough Road
Smithville ON
L0R 2A0

Website: www.westlincoln.ca

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes [] No []

Number of Interested Authorities you report to:

4

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes [x] No []

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

| Drinking Water System Name | Drinking Water System Number |
|--|------------------------------|
| Robert Land Academy Cistern System | 260077350 |
| Little House 3- 864 Regional Rd 27 Cistern | 260078416 |
| Attercliffe Canadian Reformed elementary School Cistern System | 260078884 |

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [x] No []



Indicate how you notified system users that your annual report is available, and is free of charge.

- ☒ Public access/notice via the web
☐ Public access/notice via Government Office
☐ Public access/notice via a newspaper
☒ Public access/notice via Public Request
☐ Public access/notice via a Public Library
☐ Public access/notice via other method _____

Describe your Drinking-Water System

Smithville Distribution System has approximately 34 km of water mains, serving approximately 5945 residents.

The system contains about 257 hydrants and 308 valves.

The municipality also has a bulk fill station with two top and two bottom feeds to serve the rural population as well as a small container fill station.

All Township owned services are protected by backflow devices.

We receive our water from the Grimsby Water Treatment Plant which is owned by the Regional Municipality of Niagara (MOE waterworks #220007150)

List all water treatment chemicals used over this reporting period

N/A

Were any significant expenses incurred to?

- ☐ Install required equipment
☐ Repair required equipment
☒ Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

The Township has a meter program to replace old meters to reduce water loss at a cost of \$50 000.

A water main was constructed to service Industrial Park Rd and Spring Creek Rd in the Commercial and Industrial areas at a cost of \$456 920.



Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

| Incident Date | Parameter | Result | Unit of Measure | Corrective Action | Corrective Action Date |
|---------------|-----------|--------|-----------------|--------------------|------------------------|
| Aug 6, 2020 | TC | 1 | CFU/100ml | Flush and Resample | Aug 8, 2020 |
| | | | | | |
| | | | | | |
| | | | | | |

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

| | Number of Samples | Range of E.Coli Or Fecal Results (min #)-(max #) | Range of Total Coliform Results (min #)-(max #) | Number of HPC Samples | Range of HPC Results (min #)-(max #) |
|--------------|-------------------|--|---|-----------------------|--------------------------------------|
| Raw | | | | | |
| Treated | | | | | |
| Distribution | 204 | 0 | 0 | 204 | 0-19 |

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

| | Number of Grab Samples | Range of Results (min #)-(max #) | Unit of Measure | <i>NOTE: For continuous monitors use 8760 as the number of samples.</i> |
|---|------------------------|----------------------------------|-----------------|---|
| Turbidity | | | | |
| Chlorine (free) | 466 | 0.34-1.13 | mg/l | |
| Fluoride (If the DWS provides fluoridation) | | | | |

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

| Date of legal instrument issued | Parameter | Date Sampled | Result | Unit of Measure |
|---------------------------------|-----------|--------------|--------|-----------------|
| N/A | | | | |
| | | | | |

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|-----------|-------------|--------------|-----------------|------------|
| Antimony | | | | |
| Arsenic | | | | |
| Barium | | | | |
| Boron | | | | |



| | | | | |
|----------|--|--|--|--|
| Cadmium | | | | |
| Chromium | | | | |
| *Lead | | | | |
| Mercury | | | | |
| Selenium | | | | |
| Sodium | | | | |
| Uranium | | | | |
| Fluoride | | | | |
| Nitrite | | | | |
| Nitrate | | | | |

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

| Location Type | Number of Samples | Range of Lead Results (min#) – (max #) | Unit of Measure | Number of Exceedances |
|---------------|-------------------|--|-----------------|-----------------------|
| Plumbing | exempt | | | |
| Distribution | exempt | | | |

Summary of Organic parameters sampled during this reporting period or the most recent sample results

| Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|--------------------------------------|-------------|--------------|-----------------|------------|
| Alachlor | | | | |
| Aldicarb | | | | |
| Aldrin + Dieldrin | | | | |
| Atrazine + N-dealkylated metabolites | | | | |
| Azinphos-methyl | | | | |
| Bendiocarb | | | | |
| Benzene | | | | |
| Benzo(a)pyrene | | | | |
| Bromoxynil | | | | |
| Carbaryl | | | | |
| Carbofuran | | | | |
| Carbon Tetrachloride | | | | |
| Chlordane (Total) | | | | |
| Chlorpyrifos | | | | |
| Cyanazine | | | | |
| Diazinon | | | | |
| Dicamba | | | | |
| 1,2-Dichlorobenzene | | | | |
| 1,4-Dichlorobenzene | | | | |



| | | | | |
|---|------|---------|------|---|
| Dichlorodiphenyltrichloroethane (DDT) + metabolites | | | | |
| 1,2-Dichloroethane | | | | |
| 1,1-Dichloroethylene (vinylidene chloride) | | | | |
| Dichloromethane | | | | |
| 2-4 Dichlorophenol | | | | |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | | | | |
| Diclofop-methyl | | | | |
| Dimethoate | | | | |
| Dinoseb | | | | |
| Diquat | | | | |
| Diuron | | | | |
| Glyphosate | | | | |
| Heptachlor + Heptachlor Epoxide | | | | |
| Lindane (Total) | | | | |
| Malathion | | | | |
| Methoxychlor | | | | |
| Metolachlor | | | | |
| Metribuzin | | | | |
| Monochlorobenzene | | | | |
| Paraquat | | | | |
| Parathion | | | | |
| Pentachlorophenol | | | | |
| Phorate | | | | |
| Picloram | | | | |
| Polychlorinated Biphenyls(PCB) | | | | |
| Prometryne | | | | |
| Simazine | | | | |
| HAA (NOTE: show latest annual average) | 2020 | 0.00068 | mg/l | 0 |
| THM (NOTE: show latest annual average) | 2020 | 0.00184 | mg/l | 0 |
| Temephos | | | | |
| Terbufos | | | | |
| Tetrachloroethylene | | | | |
| 2,3,4,6-Tetrachlorophenol | | | | |
| Triallate | | | | |
| Trichloroethylene | | | | |
| 2,4,6-Trichlorophenol | | | | |
| 2,4,5-Trichlorophenoxy acetic acid (2,4,5-T) | | | | |
| Trifluralin | | | | |
| Vinyl Chloride | | | | |



List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

| Parameter | Result Value | Unit of Measure | Date of Sample |
|-----------|--------------|-----------------|----------------|
| N/A | | | |

DATE: February 16, 2021

REPORT NO: PW-03-2021

SUBJECT: **Township of West Lincoln 2020 Water Distribution System Annual Report**

CONTACT: Steve McGean CRSI, ORO, Manager of Operations

OVERVIEW:

- The delivery of potable water in Ontario is regulated by the Ministry of Environment, Conservation and Parks (MECP) under the Safe Drinking Water Act, 2002. On June 1, 2003, O. Reg. 170/03, Drinking Water Systems, came into effect. This regulation prescribes requirements for owners and operators of municipal drinking water systems.
- The Annual Summary Report is prepared in accordance with the regulations for the preceding calendar year. A copy of the report must be given to members of the Municipal Council. Copy of this report is attached.

RECOMMENDATION:

1. That, report PW-03-2021, re: Township of West Lincoln 2020 Water Distribution System Annual Report, dated February 16, 2020 be received for information.

ALIGNMENT TO STRATEGIC PLAN:

Theme #5

- Community Health and Safety

Theme #6

- Efficient, Fiscally Responsible Operations

BACKGROUND:

Under the requirements of O. Reg. 170/03 made under the Safe Drinking Water Act, the owner of a drinking water system shall ensure that no later than March 31 of each year, an Annual Summary Report is prepared in accordance with the regulations for the preceding calendar year. A copy of the report must be given to Municipal Council.

The report must include:

- Total number of samples taken
- The range of parameters
- Total number of adverse situations
- Any work done to repair the system

CURRENT SITUATION:

In 2020, the water operators took 695 distribution system water samples.

Of the 695 samples taken, the ranges of the parameters are as follows:

Microbiological Analysis

| | |
|-----------------------------------|--------|
| - Escherichia Coliform (E. Coli) | 0 |
| - Total Coliforms | 0 - 1 |
| - Fecal Coliforms | 0 |
| - Heterotrophic Plate Count (HPC) | 0 - 19 |

Chemical Analysis

| | |
|--------------------|----------------------------------|
| - Trihalomethanes | 18.4 ug/L running annual average |
| - Haloacetic Acids | 6.8 ug/L running annual average |
| - Lead | 0.000 – 0.000 mg/L |

Disinfection

| | |
|---------------------------------|-------------|
| - Free Chlorine Residuals taken | 466 |
| - Range | 0.34 – 1.13 |

In 2020 there was one water main repair, 4 water service repairs and 108 new water meters installed. The Quality Management System (QMS) has been continually updated to address outdated procedures, SOP's, tables and forms. The QMS was also updated to reflect new regulations. The Director of Public Works will continually be trained by the Overall Responsible Operator to understand all the necessary changes that are made. If significant changes are made, a report will be provided to Council.

The Township of West Lincoln 2020 Water Quality Annual Summary Report is being provided to Council for information purposes.

FINANCIAL IMPLICATIONS:

There are no financial implications as a result of this report.

INTER-DEPARTMENTAL COMMENTS:

Not applicable

CONCLUSION:

In conclusion, by providing Council the 2020 Water Distribution System Annual Summary Report (Attachment A), West Lincoln is meeting its compliance obligations under the Safe Drinking Water Act for this item.

Prepared & Submitted by:



Steve McGean, CRSI, ORO
Manager of Operations

Approved by:



Beverly Hendry
Chief Administrative Officer

Attachment A: Township of West Lincoln 2020 Water Distribution System Annual
Summary Report

Township of West Lincoln Water Distribution System Annual Summary Report

Period: January 1, 2020 to December 31, 2020

Drinking Water Works Permit Number: 077-201

Municipal Drinking Water License Number: 077-101

Prepared By: Steve McGean

Table of Contents

| | |
|--|-----|
| Introduction | 3 |
| Waterworks Description | 3 |
| Compliance..... | 3 |
| Municipal Drinking Water Licensing Program..... | 3-4 |
| Safe Drinking Water Act | 4-5 |
| Township of West Lincoln Water Quality Test Results..... | 5 |
| Adverse Water Quality Incidents and Actions..... | 6 |
| Operational Activities | 6 |
| Water Main Repairs..... | 7 |
| Water Service Repairs..... | 7 |
| Water Meters Installed | 7 |
| Back Flow Devices Installed/Inspected..... | 7 |
| DWQMS Updates..... | 7 |
| Flow Rates..... | 8 |
| Definitions | 8-9 |

Introduction

In accordance with the *Safe Drinking Water Act* this report provides members of council of West Lincoln, the legal Owners of the water distribution system with an annual summary report of actions that took place from January 1, 2020 to December 31, 2020. In accordance with the *Act*, this report must list any time the Township failed to meet the conditions and requirements of the Acts, Regulations, Approvals, Drinking Water Works Permits, Municipal Drinking Water Licenses and Orders issued by the Ministry of the Environment. For each requirement not met, the report must specify the duration of the failure and the measures taken to correct the failure. Additionally, the report must list the summary of the quantities and flows of the water supplied.

Waterworks Description

The Township of West Lincoln is a class 1 water distribution system, which receives all treated water from the Regional Municipality of Niagara via the Grimsby Water Treatment Plant. The raw water source is surface water supplied from Lake Ontario. The distribution system consists of approximately 34 km of water main servicing approximately 5945 residents of Smithville in the Township of West Lincoln, 251 fire hydrants and 298 valves. There are approximately 2400 service connections. The size of water mains owned by the Township of West Lincoln range from 150 mm to 300 mm in size.

Compliance

Municipal Drinking Water Licensing Program

As part of a recommendation made by Justice O' Connor during the Walkerton Inquiry, the Ministry of the Environment has introduced a new program, the Municipal Drinking Water Licensing Program. This program requires the Drinking Water System Owner (Township of West Lincoln) to obtain a license to operate their drinking water system.

There are four components to each license;

- Drinking Water Works Permit,
 - Drinking Water Quality Management System (DWQMS)
 - Accreditation of the Quality Management System
 - Financial Plan.
-
- Drinking Water Work Permit allows the Municipality to alter, add, replace, modify and extend the drinking water based on a series of predefined conditions.

- Drinking Water Quality Management System (DWQMS) is a series of 21 elements that address all aspects of a water system. The overall goal of the DWQMS is continuous improvement with respect to planning, operating and reviewing the drinking water system. Through the creation of an operational plan the drinking water system Owner demonstrates the ability to operate a safe and effective drinking water system, while continuously monitoring performance and compliance via internal and external audits.
- Accreditation of the Quality Management System is achieved through internal and external audits, the goal of these audits are to ensure that the Owner is following the processes and procedures laid out in the operational plan. The Ministry of the Environment has engaged in an agreement with NSF International Strategic Registrations and QMI-SAI Global to act as the Quality Management System accreditation body. The Township of West Lincoln has registered with QMI-SAI Global as the Quality Management System accreditation body.
- *Ontario Regulation 453/07, Safe Drinking Water Act* requires that each Owner prepare a Financial Plan for the drinking water system. The Township has prepared a Financial Plan and it was submitted to the Ministry of Environment, Conservation and Parks in December 2020.

The Township received its Municipal Drinking Water License and Drinking Water Works Permit on June 10, 2016. This License expires June 9, 2021 and the application for our new License had to be submitted before December 9, 2020. An accreditation Audit was done by SAI global to ensure that the Township is on compliance with all regulations, in order to renew our License. This audit reviewed the Township's Operational Plan and associated documentation to ensure all requirements of the DWQMS were met.

Safe Drinking Water Act

To remain compliant with the *Safe Drinking Water Act*, the Township performs a minimum of 16 microbiological samples a month. Each of these samples is taken from a variety of locations, providing a diverse profile of the water distribution system. Disinfection levels showing free chlorine residual are also taken at the time of each sample; ensuring proper disinfection levels are maintained. The Township takes additional free chlorine residuals throughout the week, again to ensure proper disinfection levels are maintained.

The Township also takes water samples for testing elevated levels of Trihalomethanes (THM) and Haloacetic Acids (HAA's), both are chlorine disinfection by-products. The Township takes these water samples for both parameters from areas where the formation of THM and HAA's would most likely occur.

The Ministry of the Environment has also provincially mandated a Community Lead Testing Program. This program involves taking 3 samples directly from the distribution

system, twice a year. This must be done once between December 15 and April 15 and again June 15 to October 15th, on an ongoing cycle.

All of the aforementioned samples, in accordance with the *Act* must be taken by an individual with a Water Operators license, Operator in Training license or a Water Quality Analyst license. These licenses are distributed by the Ontario Water Wastewater Certification Office, in accordance with *Ontario Regulation 128/04, Safe Drinking Water Act*.

Samples are then taken to a Ministry of the Environment approved laboratory. Laboratories must meet quality standards determined by the Ministry of the Environment and are audited by the Canadian Association for Laboratories Accreditation. In the event an incident occurs where water samples do not meet Provincial water quality standards, this is deemed an Adverse Water Quality Incident (AWQI). This is detailed further in the chart following entitled *Adverse Water Quality Incidents and Actions*

An Annual Drinking Water Report has been completed and is available free of charge to the public through the Township's website and at the West Lincoln Town Hall located at 318 Canborough St., Smithville as well as Public Works Yard at 6218 London Rd., Smithville.

Township of West Lincoln Water Quality Test Results

| Parameter | | MAC | Number of Samples | Range | Comments |
|--|-----------------|------------|-------------------|--------|--|
| Microbiological Analysis | | | | | |
| Escherichia Coli (E. Coli) CFU/ 100mL | | 0 | 204 | 0 | Indicates presence of fecal matter |
| Total Coliforms CFU/ 100 mL | | 0 | 204 | 0 - 1 | Indicates the possible presence of fecal contamination |
| Fecal Coliforms CFU/ 100 mL | | 0 | 204 | 0 | Indicates the possible presence of fecal contamination |
| Heterotrophic Plate Count (HPC) CFU/mL | | N/A | 204 | 0 - 19 | Indication of overall water quality |
| Chemical Analysis | | | | | |
| Haloacetic Acids | | 0.08 mg/L | 4 | 0.0068 | Average of Samples taken quarterly |
| Trihalomethanes mg/L | | 0.10 mg/L | 4 | 0.0184 | Average of Samples taken quarterly |
| Lead mg/L | Residential | 0.010 mg/L | N/A | N/A | Township is exempt for residential sampling |
| | Non-Residential | 0.010 mg/L | N/A | N/A | |
| | Distribution | 0.010 | N/A | N/A | Township is exempt |

| | | | | | |
|-----------------------------|------------------|------|-----------|-----------------------|------------|
| | | mg/L | | | until 2021 |
| Disinfection | | | | | |
| Free Chlorine Residual mg/L | 0.05 to 4.0 mg/L | 466 | 0.34-1.13 | Level of disinfectant | |

Adverse Water Quality Incidents and Actions

| Date | Location | Parameter | Result | Actions | Date of Resolution |
|----------------|--------------|-----------|--------|--------------------|--------------------|
| August 6, 2020 | Hydrant #133 | TC | 1 | Flush and Resample | August 8, 2020 |
| | | | | | |
| | | | | | |
| | | | | | |

* Denotes distribution system only

In the event of an adverse water quality incident (AWQI), the Township of West Lincoln receives immediate notification from the laboratory. The Township is then required as per Ontario regulations to verbally notify the Regional Public Health Unit and the Ministry of Environment Spills Action Centre.

These individuals are then faxed the same information that was shared verbally.

To ensure water safety, the Township of West Lincoln immediately sends a member of staff to flush the upstream and downstream fire hydrants closest to the adverse location as possible, and resample at the source of the AWQI, as well as upstream and downstream of the AWQI. 24 – 48 hrs after the first resample, a second set of resamples must be taken. If both sets of resamples come back clear from the laboratory, than the issue is considered resolved and the AWQI number is closed.

In the above table, the column “Date of Resolution” indicates the date in which the Township of West Lincoln has received copies of the laboratory results and submits the “Notice of Resolution” to the Ministry of Environment and Public Health Unit.

It should be noted that an Adverse Water Quality Incident does not indicate that the drinking water is unsafe; rather it indicates that with respect to that specific sample, the Provincial water quality objective was exceeded.

Operational Activities

In 2020, the Township of West Lincoln experienced one water main repair. The Township of West Lincoln follows a standard operating procedure, detailing the steps taken to repair a water main, while ensuring water quality. Following a water main break, microbiological samples are taken upstream and downstream of the break when necessary as per Regulations; ensuring the break was repaired in such a way that water quality levels were not affected.

Water Main Repairs

| Date | Location | Cause |
|--------------|---------------|------------|
| Oct 24, 2020 | 34 Wallis Ave | Ring Break |
| | | |

In 2020, the Township of West Lincoln performed 5 water service repairs. The Township of West Lincoln follows a standard operating procedure, detailing the steps taken to repair the services, while ensuring water quality.

Water Service Repairs

| Date | Location | Repair Type |
|------------|------------------|----------------|
| June 16/20 | 118 Colver St | Service repair |
| June 17/20 | 6427 Townline Rd | Service repair |
| June 23/20 | 215 Station St | Service repair |
| June 23/20 | 221 Station St | Service repair |
| July 21/20 | 6421 Townline Rd | Service repair |
| | | |

Water Meters Installed

114 meter installations carried out in 2020. This was a combination of new water meters and replacement water meters.

Backflow Devices

All known backflow devices were inspected and documented for 2020 as per the Township By-Law.

DWQMS Updates

As a requirement of DWQMS (Drinking Water Quality Management System) the DWQMS representative is to update members of council and senior management of any major changes to the Operational Plan as well as any activities that relate to the DWQMS. No major changes were made to our QMS.

Flow Rates

2020 Monthly Water Flow Rates (m³)

| Month | Quantity (m ³) |
|----------|----------------------------|
| January | 87 150.00 |
| February | 81 000.00 |
| March | 87 160.00 |
| April | 90 070.00 |

| | |
|-----------------|---------------------|
| May | 94 200.00 |
| June | 117 220.00 |
| July | 131 300.00 |
| August | 123 580.00 |
| September | 97 440.00 |
| October | 80 200.00 |
| November | 77 200.00 |
| December | 75 370.00 |
| Total | 1 141 890.00 |
| Monthly Average | 95,157.50 |
| Daily Average | 3 876.41 |

Definitions

MAC - Maximum Acceptable Concentration

This is a health-related standard established for parameters which when present above a certain concentration, have known or suspected adverse health effects. The length of time the MAC can be exceeded without injury to health will depend on the nature and concentration of the parameter. (Ontario Drinking Water Standards - Ministry of Environment, Conservation and Parks)

Mg/L - milligrams per litre (parts per million)

cfu/100 mL - Colony Forming Units per 100 millilitres of sample

ug/l - micrograms per litre

< - Less than

> - Greater than

Microbiological parameters (i.e. bacteria) - the source of bacteria may come from wastewater treatment plants, livestock operations, septic systems and wildlife. Microbiological analysis is the most important aspect of drinking water quality due to its association with dangerous waterborne diseases. (Ontario Drinking Water Standards- Ministry of Environment, Conservation and Parks)

Total Coliform - the group of bacteria most commonly used as an indicator of water quality. The presence of these bacteria in a water sample indicates inadequate filtration and / or disinfection. (Ontario Drinking Water Standards - Ministry of the Environment)

Escherichia coli (E. coli) - a sub-group of coliform bacteria. It is most frequently associated with recent fecal pollution. The presence of E. coli or fecal coliforms in

drinking water is an indication of sewage contamination. (Ontario Drinking Water Standards- Ministry of the Environment)

Heterotrophic Plate Count (HPC) - an estimate of the number of background bacteria present in the distribution system. It is not an indicator of fecal contamination, but more a general indicator of disinfection effectiveness and distribution system status with respect to biofilm presence and the influence of bacterial re-growth in the distribution system.

Haloacetic Acids (HAA'S) – The maximum acceptable concentration (MAC) for HAA's in drinking water is 0.080 mg/L based on a four quarter running annual average of test results. The most commonly detected HAA's in drinking water are Dibromoacetic Acid, Dichloroacetic Acid, Bromoacetic Acid, Chloroacetic Acid and Trichloroacetic Acid. HAA's in drinking water is the action of chlorine with naturally occurring organics (precursors) left in the water after filtration.

Trihalomethanes (THM's) - The maximum acceptable concentration (MAC) for Trihalomethanes (THMs) in drinking water is 0.10 mg/L based on a four quarter moving annual average of test results. Trihalomethanes are the most widely occurring synthetic organics found in chlorinated drinking water.

The four most commonly detected Trihalomethanes in drinking water are chloroform, bromodichloromethane, dibromochloromethane and bromoform. The principal source of Trihalomethanes in drinking water is the action of chlorine with naturally occurring organics (precursors) left in the water after filtration.

Lead - Metals, for the most part, are naturally present in source water, or are the result of industrial activity. Some, such as Lead, may enter the drinking water from plumbing in the distribution system.

Lead can occur in the source water as a result of erosion of natural deposits. The most common source of lead is corrosion of the household plumbing. The MAC for lead levels is 0.010 mg/L.

DATE: February 16, 2021

REPORT NO: PW-04-2021

SUBJECT: **2020 MECP Annual Water Inspection**

CONTACT: Steve McGean, CRSI, ORO, Manager of Operations

OVERVIEW:

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as to evaluate conformity with Ministry drinking water related policies and guidelines during the inspection period
- The focused inspection included a review of operational records for the distribution system (DS) from January 25, 2020 to December 15, 2020
- Copy of the MECP Smithville Distribution Inspection Report is attached

RECOMMENDATION:

1. That, report PW-04-2021, re: 2020 MECP Annual Inspection Report, dated February 16, 2021, be received for information.

ALIGNMENT TO STRATEGIC PLAN:

Theme #5

- Community Health and Safety

Theme #6

- Efficient, Fiscally Responsible Operations

BACKGROUND:

On December 17, 2020 an MECP Waterworks Inspector completed a focused inspection of the Smithville Distribution Water System. The system was audited for the period covering January 25, 2020 to December 15, 2020.

- No non-compliance issues were identified.
- No recommendations were given to the Township.
- A reminder was given to take Lead Samples for 2021

CURRENT SITUATION:

This audit was based on a "focused" inspection of the system. The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformity with Ministry drinking water policies and guidelines during the inspection period. The inspection contained critical elements required to assess key compliance issues. The Ministry audit found no non-conformance or non-compliance issues with our Drinking Water Quality Management System. We were found to be meeting or exceeding all Standards set out by the MECP. We were given a 100% score for the audit. The auditor was very pleased with the outcome of the audit and noted that our Quality Management System is operating efficiently.

Although we were given a 100% score, we will continue to try and improve our Quality Management System. This will ensure that we will always be ahead of regulation changes and continue to surpass all legislative requirements.

FINANCIAL IMPLICATIONS

There are no financial implications as a result of this report.

INTER-DEPARTMENTAL COMMENTS

Not Applicable

CONCLUSION

Staff has reviewed the MECP's Annual Inspection Report.

Staff requests that the 2020 MECP Annual Inspection Report be received for information purposes.

Prepared & Submitted by:



Steve McGean CRSI, ORO
Manager of Operations

Approved by:



Beverly Hendry
Chief Administrative Officer

Attachment "A": 2020 MECP Smithville Distribution System Inspection Report

**Ministry of the Environment,
Conservation and Parks**

Drinking Water and Environmental
Compliance Division, West Central Region
Niagara District Office
9th Floor, Suite 15
301 St. Paul Street
St. Catharines, ON L2R 7R4
Tel.: 905-704-3900
1-800-263-1035
Fax.: 905-704-4015

**Ministère de l'Environnement de la Protection de
la nature et des Parcs**

Division de la conformité en matière d'eau potable
et d'environnement
Direction régionale du Centre-Ouest
Bureau du district de Niagara
9^e étage, bureau 15
301, rue St. Paul
St. Catharines, ON L2R 7R4
Tél.: 905-704-3900
1-800-263-1035
Télééc.: 905-704-4015

Friday, January 15, 2021

File: SI NI WL A540 – 2020-21
DWS# 260002876

Steve McGean

Manager of Road Operations, Water & Wastewater –
Public Works Department Township of West Lincoln,
6218 London Road, Smithville, Ontario,
L0R 2A0

Re: Smithville Distribution System Inspection Report

Dear Mr. McGean,

Please find the enclosed copy of the inspection report for the Smithville Distribution System initiated on December 17, 2020.

The items found within the section entitled “Non-compliance with Regulatory Requirements and Actions Required” outline non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or guidelines. Please ensure that the required actions are completed within the prescribed timeframe.

The items found within the section entitled “Summary of Best Practice Issues and Recommendations” provide information to the owner or operating authority outlining practices or standards established through existing and emerging industry standards that should be considered in order to advance current efforts. These items do not, in themselves, constitute violations. More recommendations are also provided within the body of the report.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (IIE) Secretariat and advice of internal/external risk experts. The Inspection Summary Rating Record (IRR), included as an Appendix of the inspection report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system’s annual inspection and regulated water quality testing performance. Please note the attached IRR methodology memo describing how the risk rating

model has improved to better reflect the health related and administrative non-compliance found in an inspection report. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report. If you have any questions or concerns regarding the rating, please contact Zafar Bhatti, Water Compliance Supervisor, at (519) 400-6731.

Thank you for the assistance during the inspection. Please do not hesitate to contact me if you have any questions or concerns about the attached report.

Sincerely,



Sylvain Campbell, P. Eng.
Provincial Officer #1278, Water Inspector
Niagara District Office - West Central Region
Phone: (905) 321-9169
E-mail: sylvain.campbell@ontario.ca

Cc: Atrayu Benish – Township of West Lincoln
Glen Hudgin - Niagara Public Health Department
Darrin MacKenzie - Niagara Peninsula Conservation Authority
Zafar Bhatti – Ministry of the Environment, Conservation and Parks
MECP Niagara District File



Ministry of the Environment, Conservation and Parks

**SMITHVILLE DISTRIBUTION SYSTEM
Inspection Report**

| | |
|----------------------------|------------------|
| Site Number: | 260002876 |
| Inspection Number: | 1-NS39J |
| Date of Inspection: | Dec 17, 2020 |
| Inspected By: | Sylvain Campbell |

TABLE OF CONTENTS

Cover Letter

Owner & Contact Information 2

Inspection Details & Drinking Water System Components Description 2

Inspection Summary (should include all of the following if applicable) 4

- Introduction
- Capacity Assessment
- Treatment Processes
- Treatment Process Monitoring
- Distribution System
- Operations Manuals
- Logbooks
- Contingency/Emergency Planning
- Security
- Consumer Relations
- Certification and Training
- Water Quality Monitoring
- Water Quality Assessment
- Reporting & Corrective Actions
- Other Inspection Findings

Non-Compliance with Regulatory Requirements and Actions Required 8

Summary of Best Practice Issues and Recommendations 9

Signatures 10

APPENDIX A: Stakeholder Appendix

APPENDIX B: MOE Audit Sample Results (if applicable)

APPENDIX C: Inspection Rating Report

OWNER INFORMATION:

| | | | |
|-----------------------|--|-------------------------|---------|
| Company Name: | WEST LINCOLN, THE CORPORATION OF THE TOWNSHIP OF | | |
| Street Number: | 318 | Unit Identifier: | |
| Street Name: | CANBOROUGH St E | | |
| City: | SMITHVILLE | | |
| Province: | ON | Postal Code: | L0R 2A0 |

CONTACT INFORMATION

| | | | |
|---------------|------------------------|--------------|----------------|
| Type: | ORO | Name: | Steve McGean |
| Phone: | (905) 957-3346 x4692 | Fax: | (905) 957-1773 |
| Email: | smcgean@westlincoln.ca | | |
| Title: | Manager Of Operations | | |

| | | | |
|---------------|---|--------------|----------------|
| Type: | Niagara Public Health Unit | Name: | Glen Hudgin |
| Phone: | (905) 688-3762 | Fax: | (905) 641-4994 |
| Email: | glen.hudgin@niagararegion.ca | | |
| Title: | Manager, Environmental Health - Niagara Region Public Health Unit | | |

| | | | |
|---------------|--------------------------------------|--------------|------------------|
| Type: | Conservation Authority | Name: | Darren MacKenzie |
| Phone: | (905) 788-3135 | Fax: | |
| Email: | dmackenzie@npca.ca | | |
| Title: | Director of Planning and Regulations | | |

INSPECTION DETAILS:

| | |
|-------------------------------------|---|
| Site Name: | SMITHVILLE DISTRIBUTION SYSTEM |
| Site Address: | 6218 LONDON Road SMITHVILLE ON L0R 2A0 |
| County/District: | WEST LINCOLN |
| MECP District/Area Office: | Niagara District |
| Health Unit: | REGIONAL NIAGARA PUBLIC HEALTH DEPARTMENT |
| Conservation Authority: | Niagara Peninsula Conservation Authority |
| MNR Office: | Guelph District Office |
| Category: | Large Municipal Residential |
| Site Number: | 260002876 |
| Inspection Type: | Unannounced |
| Inspection Number: | 1-NS39J |
| Date of Inspection: | Dec 17, 2020 |
| Date of Previous Inspection: | Jan 24, 2020 |

COMPONENTS DESCRIPTION

| | | | |
|---------------------|--------------------------------|------------------|-------|
| Site (Name): | SMITHVILLE DISTRIBUTION SYSTEM | | |
| Type: | Other | Sub Type: | Other |
| Comments: | | | |

The Township of West Lincoln (the Township) owns and operates the Smithville Class I stand-alone water distribution system. Secondary disinfected, free chlorine treated water is supplied by the Grimsby Drinking Water System. All

treatment and storage facilities are owned and operated by the Regional Municipality of Niagara and are subject to a separate inspection.

The Smithville Distribution System has approximately 31 km of water mains, serving approximately 5945 residents via approx. 2389 fully metered service connections. The system contains about 236 hydrants and 265 valves.

The Township also owns and operates a bulk fill station with two top filling and two bottom filling lines to serve the rural population as well as a small container fill station. All Township owned services are protected by backflow devices.

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

Sub Type:

INSPECTION SUMMARY:

Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period.

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

This report is based on an inspection of a "stand alone connected distribution system". This type of system receives treated water from a separately owned "donor" system. This report contains the elements required to assess key compliance and conformance issues associated with a "receiver" system. This report does not contain items associated with the inspection of the donor system, such as source waters, intakes/wells and treatment facilities.

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

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

This focused inspection included a review of operational records for the distribution system (DS) from January 25, 2020 to December 15, 2020. Issues 2 of Drinking Water Works Permit (DWWP) 077-201 and Municipal Drinking Water Licence (MDWL) 077-101 were approved on June 10, 2016.

During the site visits, the Water Inspector met with the Manager of Operations who is the Overall Responsible Operator (ORO) for the system.

Treatment Processes

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

The Form 1 projects which were mentioned in the last inspection report were commissioned and included in the distribution system (DS) drawings.

During this inspection, 5 new Forms 1 were reviewed. They appeared to meet the requirements of Condition 3 of Schedule B of the DWWP. The following list shows the status of each project:

Treatment Processes

| Project Description | Approval Date | Date Commissioned | In DS Drawing? |
|--|---------------|-------------------|----------------|
| 1 – Old Town Gateway Estate Block 47 | Nov. 18, 2019 | Feb. 20, 2020 | No |
| 2 – Griffin Street between RR20 and Convenient Street | May 12, 2020 | May 28, 2020 | No |
| 3 – Spring Creek Road | May 12, 2020 | July 7, 2020 | No |
| 4 – 105 West Street | May 15, 2020 | Not yet | N/A |
| 5 – Industrial Park | July 8, 2020 | Aug 17, 2020 | No |

The Township usually sends hand marked changes of its DS drawings to the Region of Niagara who transfers the changes to its GIS system and sends updated drawings. The changes are ready but have not been processed due to the pandemic.

- **Where an activity has occurred that could introduce contamination, all parts of the drinking water system were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.**

The Township's watermain commissioning and watermain repairs documentation met the requirements of the current Ontario Watermain Disinfection Procedure. The Manager of Operations was aware that an updated version of the Watermain Disinfection Procedure was released on August 1, 2020. He was advised to modify the DS watermain repair/commissioning procedures and forms to meet the updated procedure's documentation requirements by the date required in the DS future DWWP.

Treatment Process Monitoring

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

Free chlorine residual (FCR) measurements were performed 2 days a week, at least 48 hours apart, during the inspection period. The minimum readout recorded was 0.34 mg/L on October 6, 2020. The Township has an autoflusher near 124 Erie Street, a dead end on the system.

Operations Manuals

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

The Township has included the operations and maintenance (O&M) manual requirements from the MDWL into its Operations Plan. Although the plan did not contain the DS drawing, a large copy of the drawing was posted at the Public Work's building. The drawing was last updated in January 2020.

- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Logbooks

- **Logbooks were properly maintained and contained the required information.**
- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person**

Logbooks

who suffices the requirements of O. Reg. 170/03 7-5.

Security

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

The bulk fill stations were not visited due to the pandemic. The ORO mentioned that both fill stations were alarmed and had security cameras. The stations were also equipped with backflow prevention devices which are tested on a yearly basis.

Certification and Training

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

The Smithville DS has received Class 1 Water Distribution Subsystem Certificate #2339 in October 2004. The ORO and his back-up were appropriately licensed for this DS.

- **Operators-in-charge had been designated for all subsystems which comprised the drinking water system.**
- **All operators possessed the required certification.**

One of the operators had to renew his licence during the pandemic. He obtained an extension but his updated licence is expiring soon. The Township has already sent a request for a second extension.

Water Quality Monitoring

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

The Township is required to take 14 microbiological samples per month, including 1 every week. The Township met the requirements as at least 4 microbiological samples were collected per week during the inspection period. In addition, at least 25% of these samples must also be tested for Heterotrophic Plate Count (HPC). All bacteriological samples were tested for HPC.

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

The running annual average for haloacetic acid (HAA) for 2020 was 6.8 µg/L. The limit for this parameter is 80 µg/L.

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

The running annual average for trihalomethane (THM) for 2020 was 18.4 µg/L. The limit for this parameter is 100 µg/L.

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

Water Quality Assessment

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

During the inspection period, there was one adverse water quality incident (AWQI) reported to the Ministry for a total coliform result of 1 CFU/100 mL. Flushing and resampling resolved the issue.

Water Quality Assessment

Reporting & Corrective Actions

- **Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**
- **All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.**

Other Inspection Findings

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

The Township qualified for exemption from taking samples in plumbing as per subsection 15.1-5 (9) of Schedule 15.1 of O. Regulation 170/03. Section 15.1-5 (10) requires that, as long as the population served remains in the 3,300 to 9,999 range, 3 distribution samples are to be taken and tested for pH and alkalinity in every lead sampling session. In addition, 3 distribution samples are to be tested for lead during each of the sampling session in every third 12-month period. Three lead samples were obtained during the winter 2017-18 and summer 2018 sampling sessions. The Township is then required to take lead samples during the winter 2020-21 and summer 2021.

- **The following items are noted as being relevant to the Drinking Water System:**

The system's MDWL is expiring on June 9, 2021. The Manager of Operations indicated that the application for renewal has already been sent to the Ministry.

The Niagara Region's Water and Wastewater Masterplan indicates that the Township will be doubling population by 2041. The Manager of Operations indicated that the Township is planning to begin working on three large size subdivisions in 2021.

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

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

Not Applicable

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

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

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

Three distribution samples are to be tested for lead during each of the sampling session in every third 12-month period. Three lead samples were obtained during the winter 2017-18 and summer 2018 sampling sessions.

Recommendation:

The Township is reminded that it is required to take lead samples during the winter 2020-21 and summer 2021.

SIGNATURES

Inspected By:

Sylvain Campbell

Signature: (Provincial Officer)



Reviewed & Approved By:

Zafar Bhatti

Signature: (Supervisor)



Review & Approval Date:

January 14, 2021

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

Appendix A:

Stakeholder Appendix

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



| PUBLICATION TITLE | PUBLICATION NUMBER |
|--|-------------------------------------|
| FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification | 012-2149E 012-2148E 012-4444E |
| Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils | Website |
| Procedure for Disinfection of Drinking Water in Ontario | Website |
| Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids | Website |
| Filtration Processes Technical Bulletin | Website |
| Ultraviolet Disinfection Technical Bulletin | Website |
| Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments | Website |
| Certification Guide for Operators and Water Quality Analysts | Website |
| Guide to Drinking Water Operator Training Requirements | 9802E |
| Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption | Website |
| Drinking Water System Contact List | 7128E01 |
| Ontario's Drinking Water Quality Management Standard - Pocket Guide | Website |
| Watermain Disinfection Procedure | Website |
| List of Licensed Laboratories | Website |

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

| TITRE DE LA PUBLICATION | NUMÉRO DE PUBLICATION |
|---|-----------------------|
| Renseignements sur le profil du réseau d'eau potable | 012-2149F |
| Avis de demande de services de laboratoire | 012-2148F |
| Avis de résultats d'analyse insatisfaisants et de règlement des problèmes | 012-4444F |
| Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux | Site Web |
| Marche à suivre pour désinfecter l'eau potable en Ontario | Site Web |
| Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection | Site Web |
| Filtration Processes Technical Bulletin (en anglais seulement) | Site Web |
| Ultraviolet Disinfection Technical Bulletin (en anglais seulement) | Site Web |
| Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable | Site Web |
| Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable | Site Web |
| Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable | 9802F |
| Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption | Site Web |
| Liste des personnes-ressources du réseau d'eau potable | Site Web |
| L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche | Site Web |
| Procédure de désinfection des conduites principales | Site Web |
| Laboratoires autorisés | Site Web |

Appendix B:

Ministry Audit Sample Results (If Applicable)

Appendix C:

Inspection Rating Report

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2020-2021)

DWS Name: SMITHVILLE DISTRIBUTION SYSTEM
DWS Number: 260002876
DWS Owner: West Lincoln, The Corporation Of The Township Of
Municipal Location: West Lincoln

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Adhoc
Inspection Date: December 17, 2020
Ministry Office: Niagara District

Maximum Question Rating: 216

| Inspection Module | Non-Compliance Rating |
|--------------------------------|-----------------------|
| Treatment Processes | 0 / 25 |
| Operations Manuals | 0 / 28 |
| Logbooks | 0 / 18 |
| Certification and Training | 0 / 28 |
| Water Quality Monitoring | 0 / 51 |
| Reporting & Corrective Actions | 0 / 45 |
| Treatment Process Monitoring | 0 / 21 |
| TOTAL | 0 / 216 |

Inspection Risk Rating 0.00%

FINAL INSPECTION RATING: 100.00%

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2020-2021)

DWS Name: SMITHVILLE DISTRIBUTION SYSTEM
DWS Number: 260002876
DWS Owner: West Lincoln, The Corporation Of The Township Of
Municipal Location: West Lincoln

Regulation: O.REG 170/03

Category: Large Municipal Residential System

Type Of Inspection: Adhoc

Inspection Date: December 17, 2020

Ministry Office: Niagara District

Maximum Question Rating: 216

| | |
|-------------------------------|--------------|
| Inspection Risk Rating | 0.00% |
|-------------------------------|--------------|

| | |
|---------------------------------|----------------|
| FINAL INSPECTION RATING: | 100.00% |
|---------------------------------|----------------|

APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS



The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection

results since fiscal year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains 15 inspection modules consisting of approximately 100 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

ontario.ca/drinkingwater

The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. The inspection protocol also contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system’s operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry’s annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario’s Risk Management Framework. Risk management is a systematic approach to identifying potential hazards, understanding the likelihood and consequences of the hazards, and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

RISK = LIKELIHOOD × CONSEQUENCE
(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

| TABLE 1: | |
|---|------------------|
| Likelihood of Consequence Occurring | Likelihood Value |
| 0% - 0.99% (Possible but Highly Unlikely) | L = 0 |
| 1 – 10% (Unlikely) | L = 1 |
| 11 – 49% (Possible) | L = 2 |
| 50 – 89% (Likely) | L = 3 |
| 90 – 100% (Almost Certain) | L = 4 |

| TABLE 2: | |
|-----------------------------------|-------------------|
| Consequence | Consequence Value |
| Medium Administrative Consequence | C = 1 |
| Major Administrative Consequence | C = 2 |
| Minor Environmental Consequence | C = 3 |
| Minor Health Consequence | C = 4 |
| Medium Environmental Consequence | C = 5 |
| Major Environmental Consequence | C = 6 |
| Medium Health Consequence | C = 7 |
| Major Health Consequence | C = 8 |

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4×8) and the lowest would be 0 (0×1).

Table 3 presents a sample question showing the risk rating determination process.

| TABLE 3: | | | | | | | |
|---|----------------------------------|---------------------------------|--------------------------|----------------------------------|---------------------------------|---------------------------|--------------------------|
| Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated? | | | | | | | |
| Risk = Likelihood × Consequence | | | | | | | |
| C=1 | C=2 | C=3 | C=4 | C=5 | C=6 | C=7 | C=8 |
| Medium Administrative Consequence | Major Administrative Consequence | Minor Environmental Consequence | Minor Health Consequence | Medium Environmental Consequence | Major Environmental Consequence | Medium Health Consequence | Major Health Consequence |
| L=4 (Almost Certain) | L=1 (Unlikely) | L=2 (Possible) | L=3 (Likely) | L=3 (Likely) | L=1 (Unlikely) | L=3 (Likely) | L=2 (Possible) |
| R=4 | R=2 | R=6 | R=12 | R=15 | R=6 | R=21 | R=16 |

Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions related to regulatory compliance and input their “yes”, “no” or “not applicable” responses into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone); type of inspection (i.e., focused, detailed); and source type (i.e., groundwater, surface water).

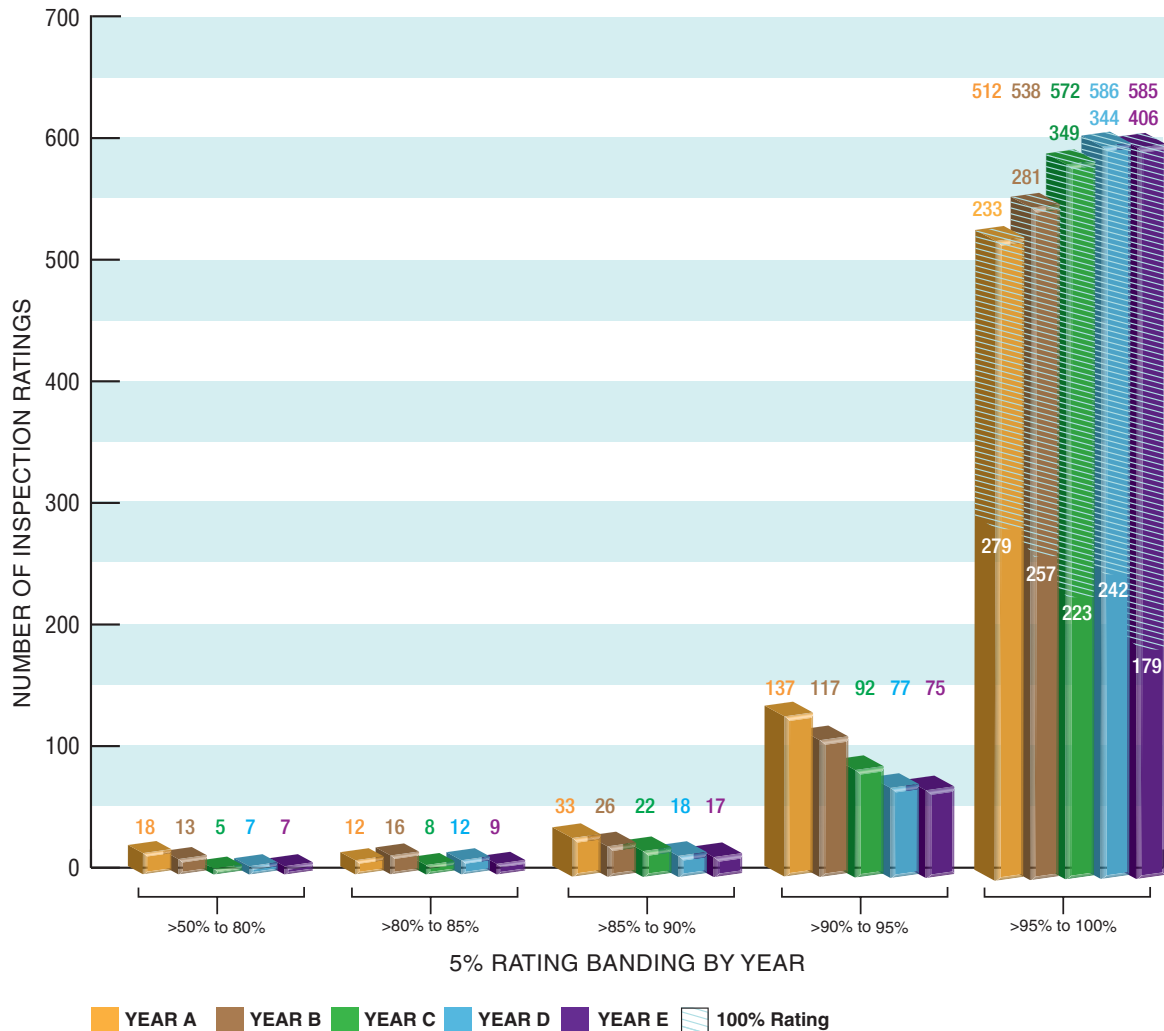
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry’s Chief Drinking Water Inspector’s Annual Report.

Figure 1 presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

Figure 1: Year Over Year Distribution of MRDWS Ratings



Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 15 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 15 modules are:

- | | | | |
|-------------------------|---------------------------------|--|--|
| 1. Source | 5. Treatment Process Monitoring | 9. Logbooks | 13. Water Quality Monitoring |
| 2. Permit to Take Water | 6. Process Wastewater | 10. Contingency and Emergency Planning | 14. Reporting, Notification and Corrective Actions |
| 3. Capacity Assessment | 7. Distribution System | 11. Consumer Relations | 15. Other Inspection Findings |
| 4. Treatment Processes | 8. Operations Manuals | 12. Certification and Training | |

For further information, please visit www.ontario.ca/drinkingwater

DATE: February 16, 2021

REPORT NO: PW-05-2021

SUBJECT: **The Township of West Lincoln 2020 DWQMS Management Review Summary**

CONTACT: Steve McGean CRSI, ORO, Manager of Operations

OVERVIEW:

DWQMS Element 20 Management Review

- Management Reviews shall be conducted on an annual basis prior to completion of the annual budget process wherever possible.
- Top Management, as defined in the Operational Plan, shall perform the Management Review.
- The DWQMS Representative shall schedule the Management Review meeting, and arrange for attendees. A minimum of two hours shall be set aside by the participants to ensure a thorough review of the DWQMS is conducted.
- The DWQMS Representative shall prepare an agenda for the meeting.
- The DWQMS Representative shall prepare summaries of the following information, as it pertains to the waterworks, prior to the meeting:
 - incidents of regulatory non-compliance
 - incidents of adverse drinking water tests
 - deviations from critical control point limits and response actions
 - the effectiveness of the risk assessment process
 - results of internal and 3rd party audits
 - results of relevant emergency response testing operational performance and water quality trends
 - follow-up on actions items from previous management reviews
 - status of management action items (if any) identified between reviews
 - changes in resource requirements, infrastructure, process, personnel, the Drinking Water Quality Management Standard or regulations that could affect the DWQMS
 - consumer feedback
 - the resources needed to maintain the DWQMS
 - the results of the infrastructure review
 - Operational Plan currency, content and updates, and staff suggestions

RECOMMENDATION:

1. That report PW-05-2021, re: The Township of West Lincoln 2020 DWQMS Management Review Summary dated February 16, 2021, be received for information.

ALIGNMENT TO STRATEGIC PLAN:

Theme #5

- Community Health and Safety

Theme #6

- Efficient, Fiscally Responsible Operations

BACKGROUND:

Subsequent to the results of the Walkerton Inquiry in 2002, the Province of Ontario made sweeping changes to the legislation governing water systems in Ontario. As part of this change, the Province developed a Drinking Water Quality Management Standard (DWQMS). The DWQMS has been developed to integrate quality management into the operation of all municipal drinking water systems in Ontario, and is mandated through the Safe Drinking Water Act, 2002.

The DWQMS has 21 elements which relate to quality management and risk assessment. The Operating Authority, in consultation with the Owner (Council), must comply with the Operational Plan, which will outline how we are meeting the requirements of the Standard. The Operational Plan establishes that the management review must be communicated to the Owner.

CURRENT SITUATION:

Under the requirements of the Township of West Lincoln's Quality Management System, the Owner of the drinking water system shall be updated as required through the Operational Plan. The management review was conducted on December 10, 2020. Highlights of the review findings are:

- All water quality testing programs meet regulation
- Staff is following procedures and showing a commitment to continual improvement
- We had no major non-conformances with our QMS this year
- We had one adverse water quality issue that was a sampling error
- We have a 10 year financial plan in place that was endorsed by Council in 2020 and is a requirement of our Drinking Water License

FINANCIAL IMPLICATIONS

There are no financial implications as a result of this report.

INTER-DEPARTMENTAL COMMENTS

Not applicable

CONCLUSION

In conclusion, The Township of West Lincoln 2020 DWQMS Management Review Summary is being provided to Council for information and to advise them that the Township of West Lincoln is meeting its obligation under the DWQMS by way of the QMS Operational Plan. The Management Review meeting minutes are attached.

Prepared by:



Steve McGean, CRSI, ORO
Manager of Operations

Submitted and Approved by:



Beverly Hendry
Chief Administrative Officer

Attachment A: 2020 Management Review

Click or tap here to enter text.

TOWNSHIP OF WEST LINCOLN

DWQMS

MANAGEMENT REVIEW 2020

The management review is conducted on an annual basis and the results are documented and implemented to ensure continued Top Management involvement in the overall maintenance and continual improvement of the Quality Management Standard.

DWQMS MANAGEMENT REVIEW

Summary of Items

The following is a summary of information that Top Management and the QMS representative must review annually in accordance with the DWQMS. The current review considers the entire 2020 auditing year.

Through the management review process, Top Management shall identify deficiencies and action items by following the procedure specified in the OP, the findings will then be reported to the Owner (Council)

The following 15 items are the aspects considered in the review process:

- Incidents of regulatory non-compliance
- Incidents of adverse drinking water tests
- Deviations from critical control point limits and response actions
- The efficacy of the risk assessment process
- Results of internal and 3rd party audits
- Results of relevant emergency response testing
- Operational performance and water quality trends
- Follow-up on action items from previous management reviews
- Status of management action items (if any) identified between reviews
- Changes in resource requirements, infrastructure, process, personnel, the DWQMS or regulations that could affect the QMS
- Customer feedback
- Resources needed to maintain the QMS
- Results of the infrastructure review
- Current status of the operational; plan, content and updates
- Staff suggestions

The DWQMS is the key tool that supports and ensures that Council, as the Owner of the drinking water system is meeting its duties and responsibilities under the Safe Drinking Water Act and Standard of Care.

Township of West Lincoln – Drinking Water Distribution System

DWQMS 2020 Management Review: Meeting Minutes

Meeting Date: Thursday December 10, 2020

Time: 12:00 pm – 2:00 pm

Invitees: Mike DiPaola (MD) (Top Management)

Chair: Steve McGean (SM) (QMS Rep)

Abbreviations:

- CAR – Corrective Action Report
- CMMS - Computerized Maintenance Management System
- DWQMS - Drinking Water Quality Management System
- OFI – Opportunity for Improvement
- PRV – Pressure Relief Valve
- QMS – Quality Management System
- RA – Risk Assessment
- Region – Region of Niagara
- SOP – Standard Operating Procedure

Agenda

1. incidents of regulatory non-compliance
 - no issues to date in 2020
 - had an external audit done by SAI who accredits our water license
 - we were audited to the new version 2 of the DWQMS
 - had an internal audit done by Blu Metric with no issues found
2. incidents of adverse drinking water tests
 - in 2020, there was 0 adverse water quality incidents in the distribution system to date
3. deviations from critical control point limits and response actions
 - none
4. the effectiveness of the risk assessment process
 - risk assessment was done and reviewed with operators in December 2020 for continued improvement

- current process is valid and up to date

5. results of internal and 3rd party audits

- March 30, 2020 BluMetric Environmental did an internal audit. A recommendations was put forward to correct a formatting issue with numbering of bullets in WW-SOP-01
- BluMetric has been enlisted to help with continual improvement opportunities.
- June 29, 2020 SAI Global did a Surveillance System Audit. We had two opportunities for improvement mentioned. We changed one table to explain why a chlorine residual of less than 20 PPM is a critical control point for us. The other OFI was not acted on as it was already dealt with in another procedure.
- We have yet to have our annual external MOECP Audit, which usually happens before the end of November. Last year's was not done until the following January 24th. We achieved a mark of 100% in last year's audit, which shows that the Township is meeting all standards associated with Drinking Water Systems in Ontario

6. results of relevant emergency response testing

- mock emergency response training done within our own municipality. The area municipalities and the Region of Niagara usually do a joint training session for response to emergency situations in the water system, however, because of COVID this did not happen.
- emergency training confirms the need for on-going relations with area municipalities
- the DWQMS working group which includes all of the municipalities has regular meetings with Public Health to go over responsibilities and expectations
- on-going talks will continue with the MOH
- policies and procedures were reviewed in 2020 for emergencies

7. Operational Performance and water quality trends

- the DWS is producing high quality water exceeding all standards, we receive a consistent supply of high quality water from the region
- maintenance activities for hydrants and valves is on-going. We are continuing the flow testing program which is done with water main flushing, this meets standards for water regulations and fire code
- Our operators have been subjected to an increase in hands on and theory training, which has proved to be very beneficial for the Township
- We had 2 water main breaks in 2020
- we had 4 water service repairs due to leaks
- one main valve needed repair in 2020

8. follow-up on action items from previous management reviews
 - No new CAR's, all previous CAR's have been addressed
 - New regulations require all OFI's to be documented as CAR's and a documented decision made with them, this was done for all previous OFI's
 - DWQMS will be updated accordingly when new changes occur
9. status of management action items (if any) identified between reviews
 - Operators are now getting more training than in the past to ensure continual improvement, which is being addressed through the training budget
 - No previous issues to address currently
 - Using water contract money in the budget to assist with the QMS
10. changes in resource requirements, infrastructure, process, personnel, the Drinking Water Quality Management Standard or regulations that could affect the QMS
 - Resource changes
 - Shaun Emery took a job in Grimsby and Zach Lane was hired as his replacement
 - Lino and Don are current back up operators
 - Process
 - Hydrant flow testing and flushing is complete for 2020
 - all up to date forms are being used
 - all maintenance programs are on-going
 - Infrastructure changes
 - Water main lengths
 - 754 Metres of new water pipe commissioned
 - Meters
 - 108 new meters installed by Township staff to date
 - Hydrants
 - 6 new hydrants from development
 - Valves
 - Approx. 10 new valves
 - Changes in DWQMS
 - Minor updates to the DWQMS

Changes in Regulations

 - MOECP Watermain Disinfection Procedure version 2 now in effect
11. consumer feedback
 - had five water quality complaints throughout the year

- all complaints were investigated and nothing wrong with the water quality
- two were odor complaint, two were low pressure complaint and the other was an air in water line complaint
- all complaints are tracked on watertrax

12. the resources needed to maintain the QMS

- Outside sources are needed to help maintain the DWQMS because the DWQMS is maintained by the Operations Manager. This position carries many duties outside of the DWQMS. It is not possible to give the attention necessary for the DWQMS while managing all of the other departments. There is sufficient money budgeted for this help from outside sources.

13. the results of the infrastructure review

- The infrastructure for the distribution system is in good shape overall. Having no metal water mains in the system helps to eliminate problems. Capital budget will continue to be used to update the system as needed.

14. Operational Plan currency, content and updates, and staff suggestions

- Operational plan is up to date and with the help of BluMetric Environmental, we are working on the plan for continual improvement. All policies and procedures relating to DWQMS will be reviewed and updated as necessary

15. Complete Summary of Action Items Identified:

| Action Item Identified | Who is Responsible | Due Date | WW-TAB-05 Updated? |
|------------------------|--------------------|----------|--------------------|
| None | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Next Meeting: **Scheduled for** December 2021

Not Discussed: **None**

DWQMS MANAGEMENT REVIEW

Conclusion

The current review considered the year 2020 and follows a mandatory list of 15 items that are to be examined.

Highlights of the review findings are:

- All water quality testing programs meet regulation;
- Staff are following procedures and showing a commitment to continual improvement;
- We had no major non-conformance issues with our QMS, with the aid of an outside company, we are adjusting our QMS on an on-going basis to show continual improvement
- Our water license is up for renewal in June 2021.
- We have a financial Plan for 10 years and council has endorsed it

The 2020 Management Review shows the DWQMS has been successfully implemented and reinforces the fact that the Town of West Lincoln supplies high quality, safe drinking water.

Council (Owner) can feel secure that the Town of West Lincoln is committed to meeting the *Standard of Care* under the *Safe Drinking Water Act* by having a Municipal Drinking Water License in place for its drinking water system.

The requirements needed to meet Licensing include:

- a) A Permit to Take Water;
- b) A Drinking Water Works Permit;
- c) An Operational Plan;
- d) A Financial Plan; and
- e) An Accredited Operating Authority

The annual review shows that we are within legislative standards and that we are continually striving for improvement. The main goal of DWQMS is to continually improve, and that is where our efforts will be focused on in the year 2021. We have committed staff and great support from upper management and council.

As a Township, we can be proud of the service and the quality drinking water that we supply.